DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

CATALOGUE AND INDEX
OF THE
PUBLICATIONS
OF THE
HAYDEN, KING, POWELL, AND WHEELER SURVEYS

NAMELY
GEOLOGICAL AND GEOGRAPHICAL SURVEY OF THE TERRITORIES
GEOLOGICAL EXPLORATION OF THE FORTIETH PARALLEL
GEOGRAPHICAL AND GEOLOGICAL SURVEYS OF THE ROCKY MOUNTAIN REGION
GEOGRAPHICAL SURVEYS WEST OF THE ONE HUNDREDTH MERIDIAN

BY
L. F. SCHMECKEBIER

WASHINGTON
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# CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter of transmittal</td>
<td>5</td>
</tr>
<tr>
<td>Introduction</td>
<td>7</td>
</tr>
<tr>
<td>Catalogue</td>
<td>9</td>
</tr>
<tr>
<td>United States Geological and Geographical Survey of the Territories</td>
<td></td>
</tr>
<tr>
<td>(Hayden)</td>
<td>9</td>
</tr>
<tr>
<td>Annual reports</td>
<td>9</td>
</tr>
<tr>
<td>Final reports or monographs</td>
<td>20</td>
</tr>
<tr>
<td>Bulletins</td>
<td>21</td>
</tr>
<tr>
<td>Miscellaneous publications</td>
<td>31</td>
</tr>
<tr>
<td>Unclassified publications</td>
<td>32</td>
</tr>
<tr>
<td>Maps</td>
<td>35</td>
</tr>
<tr>
<td>Atlas of Colorado</td>
<td>35</td>
</tr>
<tr>
<td>General</td>
<td>35</td>
</tr>
<tr>
<td>Colorado</td>
<td>35</td>
</tr>
<tr>
<td>Idaho</td>
<td>36</td>
</tr>
<tr>
<td>Montana</td>
<td>36</td>
</tr>
<tr>
<td>Utah</td>
<td>36</td>
</tr>
<tr>
<td>Wyoming</td>
<td>37</td>
</tr>
<tr>
<td>United States Geological Exploration of the Fortieth Parallel (King)</td>
<td>38</td>
</tr>
<tr>
<td>Annual reports</td>
<td>38</td>
</tr>
<tr>
<td>Final reports or monographs</td>
<td>39</td>
</tr>
<tr>
<td>Atlas</td>
<td>39</td>
</tr>
<tr>
<td>Special publication</td>
<td>40</td>
</tr>
<tr>
<td>United States Geographical and Geological Survey of the Rocky Mountain Region (Powell)</td>
<td>41</td>
</tr>
<tr>
<td>Early reports by J. W. Powell</td>
<td>41</td>
</tr>
<tr>
<td>Final reports</td>
<td>42</td>
</tr>
<tr>
<td>Contributions to North American Ethnology</td>
<td>43</td>
</tr>
<tr>
<td>United States Geographical Surveys West of the One Hundredth Meridian (Wheeler)</td>
<td>44</td>
</tr>
<tr>
<td>Annual reports</td>
<td>44</td>
</tr>
<tr>
<td>Final reports or monographs</td>
<td>52</td>
</tr>
<tr>
<td>Unclassified publications</td>
<td>57</td>
</tr>
<tr>
<td>Maps</td>
<td>60</td>
</tr>
<tr>
<td>Atlas sheets</td>
<td>60</td>
</tr>
<tr>
<td>Topographic maps</td>
<td>60</td>
</tr>
<tr>
<td>Geologic maps</td>
<td>63</td>
</tr>
<tr>
<td>Land classification maps</td>
<td>64</td>
</tr>
<tr>
<td>Special maps</td>
<td>65</td>
</tr>
<tr>
<td>Index</td>
<td>67</td>
</tr>
</tbody>
</table>
LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
UNITED STATES GEOLOGICAL SURVEY,
Washington, D. C., November 11, 1903.

Sir: I transmit herewith the manuscript for a "Catalogue and Index of the Publications of the Hayden, King, Powell, and Wheeler Surveys," prepared by Mr. L. F. Schmeckebier, of the editorial division of the Geological Survey, and recommend that it be published in the Bulletin series of the Survey.

The publications of these early Government organizations constitute a storehouse of geographic, geologic, ethnologic, and archaeologic information concerning the western portion of the United States; and though their usefulness may have diminished as a result of more detailed surveys and more precise work, I believe that this complete catalogue and consolidated index will be welcomed by many students, investigators, and librarians.

Very respectfully,

P. C. Warman,
Editor.

Hon. Charles D. Walcott,
Director United States Geological Survey.

5
INTRODUCTION.

The field work of the four great surveys whose publications are catalogued and indexed herein was done between 1867 and 1879, when the United States Geological Survey was organized. The office work, such as the preparation of maps and reports, continued until several years later.

As far as known to the writer, no complete list of the publications of these surveys has been issued. The last edition of the catalogue of the Hayden survey was published in 1879, and the last edition of the catalogue of the Wheeler survey was issued in 1881. These catalogues are necessarily incomplete, as all the publications of these surveys had not been issued at the time the catalogues were printed.

The index is general in character, giving a bird's-eye view of the publications, and is not a compilation of details such as would be found in the indexes to the individual reports. For instance, it has been found impracticable to index generic and specific names in botany and zoology. The few specific or generic names appearing in the index are portions of the titles of papers. However, in order to give a general view of publications on zoology and botany, all entries referring to these subjects are subordinated under the headings: "Vertebrates;" "Vertebrates, fossil;" "Invertebrates;" "Invertebrates, fossil;" "Plants;" and "Plants, fossil." Likewise, all entries relating to ethnologic and archæologic subjects are included in the group "Ethnology and Archeology." All geographic entries are classified under names of States and Territories.

The United States Geological Survey has no copies of these publications for distribution.

For many suggestions at various stages of the work the writer is indebted to Mr. P. C. Warman.

L. F. S.
CATALOGUE AND INDEX OF THE PUBLICATIONS OF THE
HAYDEN, KING, POWELL, AND WHEELER SURVEYS.

By L. F. SCHMECKEBIER.

CATALOGUE.

UNITED STATES GEOLOGICAL AND GEOGRAPHICAL SURVEY OF
THE TERRITORIES (HAYDEN).

ANNUAL REPORTS.

1867.

[First Annual Report of the United States Geological Survey of the
Territories, embracing Nebraska, by F. V. Hayden, U. S. geologist.
Conducted under the authority of the Commissioner of the General
Land Office. 1867.] Pages 124–177 of the Report of the Commissioner
of the General Land Office for the year 1867. Washington: Govern­
ment Printing Office. 1867.

[Note.—Reprinted in 1873 in "First, Second, and Third Annual Reports of the United
States Geological Survey of the Territories." See page 10.]

1868.

[Second Annual Report of the United States Geological Survey of
the Territories, embracing Wyoming, by F. V. Hayden, U. S. geolo­
gist. Conducted under the authority of the Commissioner of the
General Land Office. 1868.] Pages 220–255 of the Report of the
Commissioner of the General Land Office for the year 1868. Wash­

[Note.—Reprinted in 1873 in "First, Second, and Third Annual Reports of the United
States Geological Survey of the Territories." See page 10.]

Geological explorations in Wyoming Territory [by F. V. Hayden], pp. 229–255.

1869.

[Third Annual] Preliminary Field Report of the United States Geo­
logical Survey of Colorado and New Mexico, conducted under the

8°. 155 pp.
Letter to the Secretary, pp. 3–5.
Mines and minerals of Colorado [and New Mexico], by Persifor Frazer, jr., pp. 101–130.
Agriculture of Colorado, by Cyrus Thomas, pp. 131–155.

[Note.—Reprinted in 1873 in First, Second, and Third Annual Reports of the Geological Survey of the Territories (see next entry).]


8°. 261 pp., 1 l.
Prefatory note, by F. V. Hayden, p. 3.


Report of F. V. Hayden on the geography of the Missouri Valley, pp. 67–76.
Geological explorations in Wyoming Territory [by F. V. Hayden], pp. 76–102.


Letter to the Secretary, pp. 105–107.
Mines and minerals of Colorado [and New Mexico], by Persifor Frazer, jr., pp. 201–228.
Index, pp. 253–261.
Table of contents.

1870.

[Fourth Annual] Preliminary Report of the United States Geological Survey of Wyoming and portions of contiguous Territories (being a second annual report of progress), conducted under the authority of

[Note.—Though called in the title a Second Annual Report, this is really the Fourth Annual Report, as the informal reports for 1867 and 1868 were considered the first and second of the series. There is another edition of this report, exactly identical, but with the date 1872.]

8°. 511 pp.
Letter to the Secretary, pp. 3–8.
Part II. Geology of the Missouri Valley [by F. V. Hayden], pp. 83–188.
Agriculture [in Wyoming and adjacent territory], pp. 189–264.
I. Preliminary paleontological report, consisting of lists of fossils, with descriptions of some new types, etc., by F. B. Meek, pp. 287–318.
VI. On the fossil reptiles and fishes of the Cretaceous rocks of Kansas, by Prof. E. D. Cope, pp. 385–424.
VII. On the fishes of the Tertiary shales of Green River, Wyoming Territory, by Professor Edward D. Cope, pp. 425–432.
VIII. Recent reptiles and fishes. Report on the reptiles and fishes obtained by the naturalists of the expedition, by E. D. Cope, A. M., pp. 432–442.
I. Mammals and birds. A list of mammals and birds collected in Wyoming Territory, by Mr. H. D. Smith and Mr. James Stevenson, during the expedition of 1870, by James Stevenson, pp. 461–467.
III. Coleoptera. A list of Coleoptera collected by C. Thomas, in eastern Colorado and northeastern New Mexico, during the survey of 1869, by Dr. G. H. Horn, pp. 469–470.
IV. Hemiptera. A list of Hemiptera collected in eastern Colorado and northeastern New Mexico, by C. Thomas, during the expedition of 1869, by P. R. Uhler, Esq., pp. 471–472.
VI. Catalogue of plants. A list of plants collected by C. Thomas, in eastern Colorado and northeastern New Mexico, during the survey of 1869, by Dr. C. C. Parry, pp. 484–487.
Appendix. Meteorology, etc., by Mr. J. W. Beaman, pp. 488–501.
Index, pp. 503–511.

[Note.—This volume was also issued in quarto, only 30 copies being printed. The only annual issued in quarto.]

8°. vi, 3–538 pp., 2 l., 5 maps, 2 pls.
Letter to the Secretary, pp. 3–9.
Part I. Report of F. V. Hayden, pp. 11–204, 5 maps.
Part II. Agricultural resources of the Territories, by Professor Cyrus Thomas, pp. 205–279.
Short descriptions of some of the valleys of Nevada, by Mr. Haskell, of Reno, Nevada, pp. 271–273.
Experiments in cultivation on the plains along the line of the Kansas Pacific Railway, by R. S. Elliott, pp. 274–279.
Fossil flora, by Leo Lesquereux, pp. 283.
I. Enumeration and description of the fossil plants from the specimens obtained in the explorations of Dr. F. V. Hayden, 1870 and 1871, pp. 283–303.
II. Remarks on the Cretaceous species described above, pp. 303–304.
Preliminary list of the fossils collected by Dr. Hayden's exploring expedition of 1871, in Utah and Wyoming Territories, with descriptions of a few new species, by F. B. Meek, pp. 373–377.
Notice of some worms collected during Professor Hayden's expedition to the Yellowstone River in the summer of 1871, by Prof. Joseph Leidy, of Philadelphia, pp. 381–382.
Notices of the Hemiptera of the western Territories of the United States, chiefly from the surveys of Dr. F. V. Hayden, by P. R. Uhler, pp. 392–423.
Notes on the saltatorial Orthoptera of the Rocky Mountain regions, by Professor Cyrus Thomas, pp. 423–466, pls. i–ii.
Index, pp. 525–538.

8°. 22 pp.
An enumeration with descriptions of some Tertiary fossil plants, from specimens procured in the explorations of Dr. F. V. Hayden, in 1870, by Leo Lesquereux, pp. 5-22.

1872.


8°. xi, 844 pp., 12 pls., 5 maps, 4 leaves containing figs. 10, 14, 15, 34.
Letter to the Secretary, 1-10 pp.
Part I. 11-313 pp., 5 maps, 4 leaves containing figs. 10, 14, 15, 34.
Report of F. V. Hayden [on explorations in Yellowstone Valley and adjacent region], pp. 11-85, 3 maps, 3 leaves containing figs. 10, 14, 15.
Means of access to the Yellowstone National Park by railroad, by R. Hering, pp. 92-95.
Report of A. C. Peale, M. D., [on explorations in Colorado, Utah, and Wyoming], pp. 97-187, 1 leaf containing fig. 34.
Physical geography and agricultural resources of Minnesota, Dakota, and Nebraska, by Cyrus Thomas, Ph. D., pp. 273-313.
Part II. Special reports on geology and paleontology, pp. 315-658, pls. 1-12.
Lignitic formation and fossil flora, by Leo Lesquereux, pp. 317-427.
Preliminary paleontological report, consisting of lists and descriptions of fossils, with remarks on the ages of the rocks in which they were found, etc., by F. B. Meek, paleontologist, pp. 429-518.
Report of a geological reconnaissance along the Union Pacific Railroad, by H. M. Bannister, M. D., pp. 519-541.
Part III. Special reports on zoology and botany, pp. 659-792.
Coleoptera, by George H. Horn, M. D., Philadelphia, p. 717.
Notes on Orthoptera, by Cyrus Thomas, Ph. D., pp. 719-725.
Odonata from the Yellowstone, by Dr. H. Hagen, pp. 727-729.

Description of new parasitic worms found in the brain and other parts of birds, by A. S. Packard, jr., M. D., pp. 735-737.


Insects inhabiting Great Salt Lake and other saline or alkaline lakes in the West, by A. S. Packard, jr., M. D., pp. 744-746.

Botany, by John M. Coulter, pp. 747-792.


Notes on the climate of Montana, by Mr. Granville Stuart, of Deer Lodge, Montana Territory, pp. 809-817.

Index, pp. 819-844.

1873.


8°. xii, 718 pp., 54 pls. and maps, 44 leaves containing figures and other illustrations.

Letter to the Secretary, pp. 1-14.

Part I. Geology, mineralogy, and mining industry, pp. 15-361.

Report of F. V. Hayden, United States geologist, [on geology of central portion of Colorado], pp. 17-82, figs. 1-18, sections i–iv.

Report of Arch. R. Marvine, assistant geologist directing the Middle Park division, pp. 83–192, pls. i–iii, figs. 1–17 (fig. 4 misnamed pl. 4; fig. 6 misnamed fig. 4; fig. 17 misnamed fig. 16).


Part II. Special reports on paleontology, pp. 365–533, pls. i–viii.


List of species of Coleoptera, collected by Lieut. W. L. Carpenter, United States Army, for the United States geological survey of Colorado, 1873, pp. 567–571.
List of leeches collected by Hayden’s expedition, 1873, by A. E. Verrill, p. 623.

Part IV. Geography and topography, pp. 625–681, 3 maps.
Sketch of the methods of survey in the geographical department, by James T. Gardner, geographer, pp. 627–628, 1 map.
The elevations of certain datum-points on the Great Lakes and rivers and in the Rocky Mountains, by James T. Gardner, geographer, pp. 629–659, 1 map.
Appendix, pp. 683–691, 1 map.
Gold Hill mining region, its position and general geology, by Arch. R. Marvin, pp. 685–687, 1 map.
The telluride ores of the Red Cloud and Cold Spring mines, Gold Hill, by B. Silliman, pp. 689–691.
Index, pp. 693–718.

1874.

8°. ix, 515 pp. 82 leaves containing illustrations, 8 leaves containing plate descriptions.
Letter to the Secretary, pp. 1–17.
[Geology, mineralogy and mining industry], pp. 19-269.

* Report of F. V. Hayden on lignitic group, geology of eastern base of Front Range, and geography and geology of Elk Mountains], pp. 19-71; 34 leaves.


Report of A. C. Peale, M. D., geologist of Middle division, pp. 73-180, 20 leaves containing illustrations.

Report of F. M. Endlich, S. N. D., 1874 [geologist of San Juan division], pp. 181-240, figs. 1-3, sections i-viii.


On the Tertiary flora of the North American lignitic, considered as evidence of the age of the formation, pp. 275-315.


[Archaeology], pp. 367-381.


Topography and geography. Reports of Henry Gannett, S. B. Ladd, and A. D. Wilson, pp. 411-496, 1 map.

Geographical report of Henry Gannett, M. E., topographer directing Middle division, pp. 413-433, 1 map.

Topographical report of Northern division, 1874; by Story B. Ladd, M. E., pp. 435-442.

Means of communication between Denver and San Juan mines, by A. D. Wilson, topographer directing, pp. 443-449.

Report on the topography of the San Juan country, by Franklin Rhoda, assistant topographer, pp. 451-496.

Index, pp. 497-515.

1875.


8°. vii, 827 pp., 10 ll. unpaged, 75 pls. and maps.


Report of F. M. Endlich, S. N. D., geologist of the Southeastern division, 1876, on the Southeastern district, pp. 103-235, pls. ix-xxii, xxiv, xxvi-xxxiii.


Report of A. D. Wilson, topographer of the Southeastern division, 1875, on the Southeastern district, pp. 297-333.
Topographical report on the Southeastern district, by Franklin Rhoda, assistant topographer, pp. 302-333, pl. 1.
Report of George B. Chittenden, topographer of the San Juan division, 1875, on the San Juan district, pp. 351-368, pls. liii-lvi.
Report of Gustavus R. Bechler, topographer, 1873, '74, '75, on the Middle and South Parks, Colorado, and adjacent country, pp. 369-440, pls. lvii-lxi, 2 maps.
Part III. Zoology, pp. 441-815, pls. lxii-lxx, 5 maps.
History of the American bison, Bison americanus, by J. A. Allen, pp. 443-587, 1 l. errata.
Report on the Rocky Mountain locust and other insects now injuring or likely to injure field and garden crops in the western States and Territories, by A. S. Packard, jr., M. D., pp. 589-809, 9 unpaged leaves, pls. lxii-lxx.
Appendix.
List of Coleoptera collected in 1875, in Colorado and Utah, by A. S. Packard, jr., M. D., pp. 811-815.
Index, pp. 817-827.

1876.


8°. xxix, 546 pp., 79 pls., 3 maps.
Letter to the Secretary, pp. xiii-xxix.
Part I. Geology, pp. 1-272, pls. i-xvi.
Report of C. A. White, M. D., on the geology of a portion of northwestern Colorado, pp. 3-60, pls. i-ii.
Report of Henry Gannett, M. E., on the arable and pasture lands of Colorado, pp. 311-347.
Bull. 222—04——2
Report of George B. Chittenden, C. E., topographer of the White River division, 1876, on the White River district, pp. 349-357.

Report of Gustavus R. Bechler, topographer of the Yampa division, 1876, on the Yampa River district, pp. 359-378, pls. xxii-xxix.


Report of William H. Holmes on the ancient ruins of southwestern Colorado, examined during the summers of 1875 and 1876, pp. 381-408, pls. xxx-xlvi.


Part IV. Paleontology and zoology, pp. 479-531.

Report of Leo Lesquereux: Remarks on specimens of Cretaceous and Tertiary plants secured by the Survey in 1877, with a list of the species hitherto described, pp. 481-520.

Report of A. S. Packard, jr.: Insects affecting the cranberry, with remarks on other injurious insects, pp. 521-531.

Index, pp. 533-546.

[Geologic, economic, and drainage maps of Colorado west of one hundred and second meridian, at end.]

1877.


8°. xxviii, 720 pp., 10 ll., 89 pls. and maps.

Letter to the Secretary, pp. ix-xxviii.


Report of F. M. Endlich, S. N. D., on the geology of the Sweetwater district, pp. 3-158, pls. i-vi.

Report of C. A. White, M. D., on the paleontological field work for the season of 1877, pp. 159-272.

Contributions to invertebrate paleontology, No. 1: Cretaceous fossils of the western States and Territories, by C. A. White, M. D., pp. 273-319, pls. 1-10.


Part II. Topography, pp. 647-710, 1 map.

Report of A. D. Wilson, chief topographer, on the primary triangulation of 1877 and 1878, pp. 649-671, 1 map.


Index, pp. 711-720.

8°. 2 pts. and case for maps. xviii, 809 pp., 32 ll., 155 pls. and maps; xxv, 503 pp. 2 ll., 151 pls., figs., and maps; map case containing 10 maps.

Part I. Geology, paleontology, and zoology, xviii, 809 pp., 32 ll., 155 pls. and maps.

Letter to the Secretary, pp. xiii-xviii.

Part I. Geology and paleontology, pp. 1—293, 32 ll., pls. 11—42, i—xl, 2 maps, 7 unnumbered illustrations.

Contributions to invertebrate paleontology, No. 2: Cretaceous fossils of the western States and Territories, by C. A. White, M. D., pp. 3—39, pls. 11—18.


Contributions to invertebrate paleontology No. 4: Fossils of the Laramie group, by C. A. White, M. D., pp. 49—103, pls. 20—30.

Contributions to invertebrate paleontology No. 5: Triassic fossils of southeastern Idaho, by C. A. White, M. D., pp. 105—118, pls. 31—32.

Contributions to invertebrate paleontology No. 6: Certain Carboniferous fossils from the western States and Territories, by C. A. White, M. D., pp. 119—141, pls. 33—36.

Contributions to invertebrate paleontology No. 7: Jurassic fossils from the Western Territories, by C. A. White, M. D., pp. 143—153, pls. 37—38.

Contributions to invertebrate paleontology No. 8: Fossils from the Carboniferous rocks of the Interior States, by C. A. White, M. D., pp. 155—171, pls. 39—42.

Report of Orestes St. John, on the geology of the Wind River district, pp. 173—269, pls. i—xl, 1 map, and 6 unnumbered illustrations.

The Tertiary Lake basin at Florissant, Colo., between South and Hayden parks, by Samuel H. Scudder, pp. 271—293, map.

Section II. Zoology, pp. 295—806, pls. i—xxxix, i—xxiv, 1 map, 1 illustration unnumbered.


Appendix A.—On Artemia fertillis Verrill, from Great Salt Lake, Utah Territory, by Prof. C. Th. von Siebold, of Munich. Translated by Dr. Phil. Carl F. Gissler, of Providence, R. I., pp. 459—463.


D.—Contribution to a knowledge of the influence of external conditions of life upon the organization of animals, by Wladimir Schmankewitsch, pp. 473–514.

Osteology of Speotyto cunicularia hypogsea, by R. W. Shufeldt, M. D., captain, Medical Department, United States Army, pp. 593–626, pls. i–iii.

Osteology of Eremophila alpestris, by R. W. Shufeldt, M. D., captain, Medical Department, United States Army, pp. 627–652, pl. iv.

Osteology of the North American Tetraonide, by R. W. Shufeldt, M. D., captain, Medical Department, United States Army, pp. 653–718, pls. v–xiii.

Osteology of Lanius ludovicianus excubitorides, by R. W. Shufeldt, M. D., captain, Medical Department, United States Army, pp. 719–725, pl. xiv.

Osteology of the Cathartide, by R. W. Shufeldt, M. D., captain, Medical Department, United States Army, pp. 727–806, pls. xv–xxiv, 1 unnumbered illustration.

Index, pp. 807–809.

Part II. Yellowstone National Park. xxv, 503 pp., 2 ll., 151 pls. and other illustrations.

Letter to the Secretary, pp. xvii–xxiv.

Section I. Geology, pp. xxv, 1–62, 2 ll., pls. A, B, i–xxii, and map.


Section III. Topography, pp. 455–490, 8 pls.

Geographical field work of the Yellowstone Park division, by Henry Gannett, E. M., pp. 455–490, 8 pls.

Index, pp. 491–503.

FINAL REPORTS OR MONOGRAPHS.


4°. 12 vols.


II. The vertebrata of the Cretaceous formations of the West, by E. D. Cope. 1875. 302 pp., 58 ll., 57 pls.

III. The vertebrata of the Tertiary formations of the West. Book I. By Edward D. Cope, member of the National Academy of Sciences. 1883. xxxiv, 1009 pp., 136 ll., 134 pls.

a When the series was commenced it was intended to complete it in five volumes.

b No other part.
IV. Not published.
VIII. Contributions to the fossil flora of the Western Territories. Part III. *The Cretaceous and Tertiary floras*, by Leo Lesquereux. 1883. xii, 283 pp., 60 ll., 60 pls.
IX. A report on the invertebrate Cretaceous and Tertiary fossils of the upper Missouri country, by F. B. Meek. 1876. lxiv, 629 pp., 45 ll., 45 pls.
X. A monograph of the geometrid moths or Phalænidae of the United States, by A. S. Packard, jr., M. D. 1876. iv, 607 pp., 15 ll., 13 pls.
XI. Monographs of North American Rodentia, by Elliott Coues, captain and assistant surgeon, United States Army, secretary and naturalist of the survey; and Joel Asaph Allen, assistant in the Museum of Comparative Zoology, Cambridge, special collaborator of the survey. 1877. xii*, x, 1,091 pp., 1 l. (265 bis), 7 pis.
XIII. The Tertiary insects of North America, by Samuel H. Scudder. 1890. 734 pp., 28 pls.

**BULLETINS.**


8°. xiii, 28, 77, 499 pp., 26 ll., 25 pls., 2 maps.
[First series], No. 1. 1874. 28 pp., 1 ll.
  List of members and collaborators of the survey for 1873, pp. 3-4.
  List of the publications of the Geological Survey of the Territories, pp. 5-6.
[First series], No. 2. April 9, 1874. 77 pp., 2 ll.
  Review of the vertebrata of the Cretaceous period found west of the Missis­sippi River, by Edward D. Cope, A. M., pp. 3-48.
  Supplementary notices of fishes from the freshwater Tertiaries of the Rocky Mountains [by E. D. Cope], pp. 49-51.
  On the general character and relation of the flora of the Dakota group, by Leo Lesquereux, pp. 52-62.
  Descriptions of some new Orthoptera, and notes on some species but little known, by Cyrus Thomas, pp. 63-71.
  Notes on the Rocky Mountain ranges in Colorado Territory, [by James T. Gardner], pp. 72-77.

*No other part.*
Second series, No. 1. 1875. 47 pp., 1 ll., 3 pls.
On the fishes of the Tertiary shales of the South Park [Colorado], by E. D. Cope, pp. 3-5.
On the cranial and dental characters of Mephitinae, with description of Mephitis frontata, n. sp. foss., by Dr. Elliott Cones, U. S. A., pp. 7-15.
Ancient ruins in southwestern Colorado, by W. H. Jackson, pp. 17-38, pls. i-iii.
Note on some fossils from near the eastern base of the Rocky Mountains, west of Greeley and Evans, Colorado, and others from about two hundred miles farther eastward, with descriptions of a few new species, by F. B. Meek, palaeontologist, pp. 39-47.

No. 2, second series. May 14, 1875. 49-142 pp., 1 ll.
A monograph on the genus Leucosticte, Swainson; or gray-crowned purple finches, by Robert Ridgway, pp. 51-82.
Synopsis of insectivorous mammals, by Theodore Gill, pp. 91-120.
Special report on the Mollusca, by Ernest Ingersoll, zoologist, pp. 125-142.

No. 3, second series. May 15, 1875. 143-211 pp., 2 ll., 2 maps, vii-viii pls., 2 other illustrations.
Means of communication between Denver and the San Juan mines, by A. D. Wilson, topographer directing, pp. 145-149, 1 map.
Report on the mines and geology of the San Juan country, by F. M. Endlich, S. N. D., pp. 151-164, 1 map.
Report on the topography of the San Juan country, by Franklin Rhoda, assistant topographer, pp. 165-209, 2 illustrations.
Note on some peculiar forms of erosion in eastern Colorado, with heliotype illustrations, by F. V. Hayden, pp. 210-211, pls. vii-viii.

Notes on the surface features of the Colorado or Front Range of the Rocky Mountains, by F. V. Hayden, pp. 215-220, pls. ix-x.

No. 5, second series. January 8, 1876. 233-414 pp., 3 ll., 19-21 pls.
Notes on the geology of some localities near Cañon City, Fremont Co., Colo., by S. G. Williams, pp. 249-251.
Some account, critical, descriptive, and historical, of Zapus hudsonius, by Dr. Elliott Cones, U. S. Army, pp. 253-262.
On the breeding-habits, nest, and eggs of the white-tailed ptarmigan (Lagopus leucurus), by Dr. Elliott Cones, U. S. Army, pp. 263-266.
List of Hemiptera of the region west of the Mississippi River, including those collected during the Hayden explorations of 1873, by P. R. Uhler, pp. 267-361, pls. 19-21.
On some new species of fossil plants from the Lignitic formations, [by Leo Lesquereux], pp. 363-389.
New species of fossil plants from the Cretaceous formation of the Dakota group, [by Leo Lesquereux], pp. 391-400.
Notes on the Lignitic group of eastern Colorado and portions of Wyoming, by F. V. Hayden, pp. 401-411.

No. 6, second series. February 8, 1876. 415-499 pp., 6 ll., 22-26 pls.
An account of the various publications relating to the travels of Lewis and Clarke, with a commentary on the zoological results of their expedition, by Dr. Elliott Coues, U. S. A., pp. 417-444.
Notice of a very large goniatite from eastern Kansas, by F. B. Meek, p. 445.
Fossil Orthoptera from the Rocky Mountain Tertiaries, by Samuel H. Scudder, pp. 447-449.
Studies of the American Falconidae, by Robert Ridgway, pp. 451-473, 22-26 pls.
Index. 475-499 pp.


8°. xii, 392 pp., 13 ll., 55 pls., 2 maps.

No. 1. March 21, 1876. 1-87 pp., 1 ll., 1-29 pls., 1 map.
A notice of the ancient ruins of southwestern Colorado, examined during the summer of 1875, by W. H. Holmes, pp. 3-24, pls. 1-14.
A notice of the ancient ruins in Arizona and Utah lying about the Rio San Juan, by W. H. Jackson, pp. 25-45, pls. 15-22, 1 map.
The human remains found among the ancient ruins of southwestern Colorado and northern New Mexico, by Dr. Emil Bessels, pp. 47-63, pls. 23-29.
Ancient art in northwestern Colorado, by Edwin A. Barber, pp. 65-66.
Bead ornaments employed by the ancient tribes of Utah and Arizona, by E. A. Barber, pp. 67-69.
Language and utensils of the modern Utes, by E. A. Barber, pp. 71-76.
Fossil Coleoptera from the Rocky Mountain Tertiaries, by Samuel H. Scudder, pp. 77-87.

No. 2. April 1, 1876. 89-195 pp., 2 ll., 30-31 pls.
Studies of the American Falconidae, by Robert Ridgway, pp. 91-182.

No. 3. June 5, 1876. 197-277 pp., 2 ll., i-x pls., 1 map.
Notes descriptive of some geological sections of the country about the headwaters of the Missouri and Yellowstone rivers, by F. V. Hayden, pp. 197-209, pls. i-x.
Notes on the Tertiary and Cretaceous periods of Kansas, by B. F. Mudge, pp. 211-221.
Notes in relation to the accompanying contour-map of the United States, by Henry Gannett, M. E., pp. 223-226, 1 map.
List of the Orthoptera collected by Dr. A. S. Packard, in Colorado and the neighboring Territories, during the summer of 1875, by Samuel H. Scudder, pp. 261-267.
Notice of a small collection of butterflies, made by Dr. A. S. Packard, in Colorado and Utah, in 1875, by Samuel H. Scudder, pp. 269-270.
No. 4. August 4, 1876. 279-378 pp., 8 ll., 42-49 pls., i-vi.
Notes on the geology of northeastern New Mexico, by O. St. John, pp. 279-308, pls. 42-49.
Descriptions and illustrations of fossils from Vancouver’s and Sucia islands, and other northwestern localities, by F. B. Meek, palaeontologist, pp. 351-374, pls. i-vi.
Note on the new genus Uintacrinus, Grinnell, by F. B. Meek, pp. 375-378.
Index. 379-392 pp.


8°. ix, 856 pp., 4 ll., 39 pls., 1 map.
No. 1. April 5, 1877. 1-185 pp., 1 l., 1-26 pls.
   Art. II. Researches in the kjökenmöddings and graves of a former population of the coast of Oregon, by Paul Schumacher, pp. 27-35, pls. 2-8.
   Art. III. Researches in the kjökenmöddings and graves of a former population of the Santa Barbara Islands and the adjacent mainland, by Paul Schumacher, pp. 37-56, pls. 9-22.
   Art. VI. The Tineina of Colorado, by V. T. Chambers, pp. 121-142.
   Art. VIII. On the distribution of Tineina in Colorado, by V. T. Chambers, pp. 147-150.
   Art. XII. Notes on some artesian borings along the line of the Union Pacific Railroad in Wyoming Territory, by F. V. Hayden, pp. 181-185, pl. 26.
   Art. XIII. Western Diptera: Descriptions of new genera and species of Diptera from the region west of the Mississippi, and especially from California, by C. R. Osten Sacken, pp. 189-354.
Art. XIV. Report upon the insects collected by P. R. Uhler during the explorations of 1875, including monographs of the families Cydnidæ and Saldæ, and the Hemiptera collected by A. S. Packard, jr., M. D., by P. R. Uhler, pp. 355-475, pls. 27-28. [Continued on p. 765.]

Art. XV. Descriptions of the Araneæ collected in Colorado in 1875 by A. S. Packard, jr., M. D., by T. Thorell, Ph. D., junior professor of zoology in the University of Upsala, Sweden, pp. 477-529.

No. 3. May 15, 1877. 531-737 pp., 1 l., 29-39 pls.

Art. XVI. Comparative vocabulary of Utah dialects, by Edwin A. Barber, pp. 533-545.

Art. XVII. Methods of making stone weapons, by Paul Schumacher, pp. 547-549, pl. 29.

Art. XVIII. On a peculiar type of eruptive mountains in Colorado, by A. C. Peale, pp. 551-564.

Art. XIX. Report on the geology of the region of the Judith River, Montana, and on vertebrate fossils obtained on or near the Missouri River, by E. D. Cope, pp. 565-597, pls. 30-34.

Art. XX. Paleontological papers No. 1.—Descriptions of Unionidæ and Physidæ, collected by Professor E. D. Cope from the Judith River group of Montana Territory during the summer of 1876, by C. A. White, M. D., pp. 599-602.


Art. XXII. Paleontological papers No. 3.—Catalogue of the invertebrate fossils hitherto published from the fresh- and brackish-water deposits of the western portion of North America, by C. A. White, M. D., pp. 607-614.

Art. XXIII. Paleontological papers No. 4.—Comparison of the North American Mesozoic and Cenozoic Unionidæ and associated mollusks with living species, by C. A. White, M. D., pp. 613-624.

Art. XXIV. Paleontological papers No. 5.—Remarks on the paleontological characteristics of the Cenozoic and Mesozoic groups as developed in the Green River region, by C. A. White, M. D., pp. 625-629.


Art. XXVII. Catalogue of the land and fresh-water shells of Nebraska, by Samuel Aughey, Ph. D., pp. 697-704.

No. 4. August 15, 1877. 739–856 pp., 11.


Art. XXX. Description of two species of Carabidæ found in the inter-glacial deposits of Scarboro Heights, near Toronto, Canada, by Samuel H. Scudder, pp. 763–764.

Art. XXXI. Report upon the insects collected by P. R. Uhler during the explorations of 1875, including monographs of the families Cydnidæ and Saldae and the Hemiptera collected by A. S. Packard, jr., M. D., by P. R. Uhler, pp. 765–801. [Continued from p. 475.]


Art. XXXIII. On a carnivorous dinosaurian from the Dakota beds of Colorado, by E. D. Cope, pp. 805–806.


Index. 825–856 pp.


8°. vii, 908 pp., 8 ll., 1 pl.

No. 1. February 5, 1878. 1–311 pp., 2 ll.

Art. I. Notes on the ornithology of the lower Rio Grande of Texas, from observations made during the season of 1877, by George B. Sennett, of Erie, Pa., edited, with annotations, by Dr. Elliott Coues, U. S. A., pp. 1–66.

Art. II. Descriptions of fishes from the Cretaceous and Tertiary deposits west of the Mississippi River, by E. D. Cope, pp. 67–77.

Art. III. Descriptions of new Tineina from Texas, and others from more northern localities, by V. T. Chambers, pp. 79–106.


Art. V. Index to the described Tineina of the United States and Canada, by V. T. Chambers, pp. 125–167.


Art. X. Notice of the butterflies collected by Dr. Edward Palmer in the arid regions of southern Utah and northern Arizona during the summer of 1877, by Samuel H. Scudder, pp. 253-258.


Art. XIV. Professor Owen on the Pythonomorpha, by E. D. Cope, pp. 299-311.


Art. XVI. Descriptions of new extinct vertebrata from the upper Tertiary and Dakota formations, by E. D. Cope, pp. 379-396.


Art. XVIII. A catalogue of the fishes of the fresh waters of North America, by David S. Jordan, M. D., pp. 405-442.


Art. XX. The Coleoptera of the alpine regions of the Rocky Mountains, by John L. Le Conte, M. D., pp. 447-480.


Art. XXIV. An account of some insects of unusual interest from the Tertiary rocks of Colorado and Wyoming, by Samuel H. Scudder, pp. 519-543.

No. 3. July 29, 1878. 545-745 pp., 2 ll.

Art. XXV. Field notes on birds observed in Dakota and Montana along the forty-ninth parallel during the seasons of 1873 and 1874, by Dr. Elliott Coues, U. S. A., late surgeon and naturalist, U. S. Northern Boundary Commission, pp. 545-661.


Art. XXX. On some dark shale recently discovered below the Devonian limestones, at Independence, Iowa; with a notice of its fossils and description of new species, by S. Calvin, professor of geology, State University of Iowa, pp. 725-730.

Art. XXXI. On the mineralogy of Nevada, by W. J. Hoffman, M. D., pp. 731-745.

No. 4. December 11, 1878. 747-908 pp., 2 ll.


Art. XXXIV. Catalogue of phanerogamous and vascular cryptogamous plants collected during the summers of 1873 and 1874 in Dakota and Montana along the forty-ninth parallel, by Dr. Elliott Coues, U. S. A.; with which are incorporated those collected in the same region at the same times by Mr. George M. Dawson, by Prof. J. W. Chickering, pp. 801-830.


Art. XXXVI. Paleontological papers No. 8: Remarks upon the Laramie group, by C. A. White, M. D., pp. 865-876.

Art. XXXVII. Synonymatic list of American Sciur, or arboreal squirrels, by J. A. Allen, pp. 877-887.

Index. 889-908 pp.


8°. vii, 1072 pp., 8 ll., 4 pls.

No. 1. February 28, 1879. 1-152 pp., 4 ll., i-ii pls.

Art. I. Notes on the Aphididae of the United States, with descriptions of species occurring west of the Mississippi, by Chas. V. Riley and J. Monell, pp. 1-32, pls. i-ii.

Art. II. The relations of the horizons of extinct vertebrata of Europe and North America, by E. D. Cope, pp. 33-54.


Art. IV. Notes on the birds of Fort Sisseton, Dakota Territory, by Chas. E. McChesney, acting assistant surgeon, U. S. A., pp. 71-103.


Art. VI. Jura-Trias section of southeastern Idaho and western Wyoming, by A. C. Peale, M. D., pp. 119-123.

Art. VIII. Paleontological Papers No. 10: Conditions of preservation of invertebrate fossils, by C. A. White, M. D., pp. 133-141.


No. 2. September 6, 1879. 153-330 pp., 2 ill., iii-iv pls.
Art. XI. On the present status of Passer domesticus in America, with special reference to the Western States and Territories, by Dr. Elliott Coues, U. S. A., pp. 175-193.

No. 3. November 30, 1879. 331-520 pp., 1 l.
Art. XXI. Further notes on the ornithology of the lower Rio Grande of Texas, from observations made during the spring of 1878, by George B. Sennett; edited, with annotations, by Dr. Elliott Coues, U. S. A., pp. 371-440.
Art. XXII. Additional lists of elevations, by Henry Gannett, pp. 441-470.
Art. XXIV. Annotated list of the birds of Michigan, by Dr. Morris Gibbs, pp. 481-497.
Art. XXV. The Coleoptera of the alpine Rocky Mountain regions.—Part II, by John L. Le Conte, M. D., pp. 499-520 [continued from vol. 4, p. 480].

No. 4. September 30, 1880. 521-1072 pp., 1 l.
Index, pp. 1067-1072.

Department of the Interior. Bulletin of the United States Geological and Geographical Survey of the Territories. F. V. Hayden,
30

PUBLICATIONS OF HAYDEN SURVEY.


8°. vi, 598 pp., 10 ill., 14 pls., 2 maps, 3 illustrations.

No. 1. February 11, 1881. 1–202 pp., 6 ill., i–iv pls.

Art. I. The vegetation of the Rocky Mountain region and a comparison with that of other parts of the world, by Asa Gray and Joseph D. Hooker, pp. 1–77.

Art. II. On some new Batrachia and Reptilia from the Permian beds of Texas, by E. D. Cope, pp. 79–82.

Art. III. On a wading bird from the Amyzon shales, by E. D. Cope, pp. 83–85.


Art. VI. Preliminary list of the North American species of Agrotis, with descriptions, by A. R. Grote, pp. 149–164.

Art. VII. On the Nimravidae and Canidae of the Miocene period, by E. D. Cope, pp. 165–181.


Art. IX. Annotated list of the birds of Nevada, by W. J. Hoffman, M. D., pp. 203–256, 1 map, 2 illustrations.


Art. XI. The Tertiary lake-basin at Florissant, Colorado, between South and Hayden parks, by Samuel H. Scudder, pp. 279–300, 1 map.


No. 3. August 30, 1882. 399–598 pp., 2 ill.

Art. XVIII. Preliminary list of works and papers relating to the mammalian orders Cete and Sirenia, by Joel Asaph Allen, pp. 399–562.


Art. XX. New moths, principally collected by Mr. Roland Thaxter in Maine, with notes on noxious species and remarks on classification, pp. 579–591.

Index. 593–598 pp.
MISCELLANEOUS PUBLICATIONS.


8°. 15 vols.

1. Lists of elevations in that portion of the United States west of the Mississippi River. [Second edition.\textsuperscript{a}] Collated and arranged by Henry Gannett, Assistant. 1873. 47 pp.


2. Meteorological observations during the year 1872 in Utah, Idaho, and Montana, prepared for publication by Henry Gannett, Assistant. 1873. 120 pp.


6. Meteorological observations made during the year 1873 and the early part of the year 1874 in Colorado and Montana Territories. Prepared for publication by George B. Chittenden. 1874. 57 pp.


8. Fur-bearing animals: A monograph of North American Mustelidae, in which an account of the wolverine, the martens or sables, the ermine, the mink and various other kinds of weasels, several species of skunks, the badger, the land and sea otters, and numerous exotic allies of these animals, is contributed to the history of North American mammals. By Elliott Coues, captain and assistant surgeon, United States Army, secretary and naturalist of the Survey. Illustrated with sixty figures on twenty plates. 1877. xiv, 348 pp., 20 pls.


\textsuperscript{a}The first edition of this publication was by Cyrus Thomas, and is catalogued under unclassified publications, p. 32.


UNCLASSIFIED PUBLICATIONS.


Index, pp. 263-264.


Note.—Only quasi-extracted from the report of which it ostensibly forms part. It was published in advance of the Seventh Annual Report as a separate pamphlet, and finally appears in that report so much modified as to be in effect a different article.

*Numbered arbitrarily for convenience in reference.*
8°. 20 pp.

18mo. 51 pp.

Oblong folio. 1 p. 1., 2 il of text, 1 illustration, 1 map.

8°. 38 pp.

8°. 12 pp.

8°. 15 pp.

8°. 15 pp.

Note.—Somewhat modified from the first edition.

Bull. 222—04——3

Note.—Somewhat modified from the first edition.


*The Second Annual Report of the Entomological Commission was published by the Department of the Interior; the Third Annual Report was published by the Department of Agriculture.*
SCHMECKEBIER.] PUBLICATIONS OF HAYDEN SURVEY. 35

MAPS.

ATLAS OF COLORADO.

[First Edition.]


Folio, 2 ll. (title page and legend), 20 double folio atlas sheets.

Sheets I-IV are triangulation, drainage, land classification, and geologic maps of Colorado west of longitude 102°, on the scale of 12 miles to the inch.

Sheets V-XVI are topographic (contour) and geologic maps of Colorado and adjacent States, between meridians 104° 30' and 109° 30' and parallels 36° 45' and 40° 30', on the scale of 4 miles to the inch.

Sheets XVII and XVIII contain three geologic sections across the State, west of the longitude 104° 30'.

Sheets XIX and XX are panoramic views of the Pikes Peak group, Sawatch Range, central portion of West Elk Mountains, Twin Lakes, southwestern border of the Mesa Verde, San Juan Mountains, and La Plata Mountains.

[Second Edition.]


Folio, 2 ll. (title page and legend), 20 double folio atlas sheets. Contents same as first edition.

SEPARATE MAPS. 6

GENERAL.

Map showing primary triangulation of 1877.

General geologic map of area explored from 1869 to 1880. Limiting meridians, 90° and 114°; limiting parallels, 35° and 48°. Scale, 41.03 miles to the inch.

COLORADO.

Land survey work in Colorado. Scale, 4 miles to the inch. Published for field use of Survey only.

Central Colorado, showing regions surveyed in 1873. Shows drainage only. Scale, 8 miles to the inch. Also in report for 1873.

6 In the list below are given the maps issued independent of other publications. Maps accompanying the reports are listed in the "Index," pages 134-139.
Map showing primary and secondary triangulation of 1873. Limiting meridians, $104^\circ 15'$ and $107^\circ$; limiting parallels, $38^\circ$ and $40^\circ 30'$. Scale, 8 miles to the inch. Also in report for 1873.

Preliminary map of the San Juan country. Shows drainage only. Limiting meridians, $106^\circ 10'$ and $108^\circ$; limiting parallels, $37^\circ 15'$ and $38^\circ 15'$. Scale, 4 miles to the inch. Also in Bull., vol. i, No. 3, 2d series.

Preliminary map of central Colorado, showing region surveyed in 1873 and 1874. Limiting meridians, $104^\circ 30'$ and $107^\circ 30'$; limiting parallels, $37^\circ$ and $40^\circ 30'$. Also in report for 1874.

Drainage map of Colorado. Portion of State west of one hundred and second meridian. Scale, 12 miles to the inch. Also in Atlas of Colorado.

Economic map of Colorado, showing areas of arable, pasture, timber, desert, coal, and other lands. Portion of State west of one hundred and second meridian. Scale, 12 miles to the inch. Published also in Atlas of Colorado.

General geologic map of Colorado. Portion west of one hundred and second meridian. Scale, 12 miles to the inch. Also in Atlas of Colorado.

**IDAHO.**

Parts of Idaho, Montana, and Wyoming. Limiting meridians, $109^\circ$ and $114^\circ$; limiting parallels, $43^\circ$ and $46^\circ$. Hachure. Scale, 10 miles to the inch.

Sources of Snake River and portions of headwaters of Madison and Yellowstone rivers. Topography shown by brush work. Scale, 5 miles to the inch.

Geologic map on above base.

Drainage map of portions of Wyoming, Idaho, and Utah. Limiting meridians, $107^\circ$ and $112^\circ 30'$; limiting parallels, $42^\circ 45'$ and $44^\circ$. Scale, 8 miles to the inch.

**MONTANA.**

Parts of Idaho, Montana, and Wyoming. Limiting meridians, $109^\circ$ and $114^\circ$; limiting parallels, $43^\circ$ and $46^\circ$. -Hachure. Scale, 10 miles to the inch.

Montana and Wyoming Territories, embracing most of the country drained by Madison, Gallatin, and Upper Yellowstone rivers. Contour interval, 100 feet. Scale, 4 miles to the inch.

Geologic map on same base.

**UTAH.**

Drainage map of portions of Wyoming, Idaho, and Utah. Limiting meridians, $107^\circ$ and $112^\circ 30'$; limiting parallels, $42^\circ 45'$ and $44^\circ$. Scale, 8 miles to the inch.
YELLOWSTONE NATIONAL PARK. Limiting meridians, 110° and 111°; limiting parallels, 44° 10' and 45°. Scale, 2 miles to the inch. Contour interval, 100 feet.

Geologic map on above base.

YELLOWSTONE NATIONAL PARK. Hachure map. Scale, 10 miles to the inch. Also in report for 1871.

Upper Geyser Basin. Hachure. Scale, 600 feet to the inch.
Upper Geyser Basin. Hachure. Scale, 880 feet to the inch.
Upper Geyser Basin. Hachure. Scale, 500 feet to the inch.
Lower Geyser Basin. Hachure. Scale, 1,500 feet to the inch.
Lower Geyser Basin. Hachure. Scale, 880 feet to the inch.
Lower Geyser Basin. Hachure. Scale, 800 feet to the inch.
Gibbon Geyser Basin. Hachure. Scale, 200 feet to the inch.
Gibbon Geyser Basin. Hachure. Scale, 400 feet to the inch.
Shoshone Geyser Basin. Hachure. Scale, 125 feet to the inch.
Egeria Springs, Firehole River. Hachure. Scale, 250 feet to the inch.

Mammoth Hot Springs. Hachure. Scale, 400 feet to the inch.
Hot Springs on Witch Creek. Scale, 1,600 feet to the inch.
Yellowstone Lake. Scale, 2 miles to the inch.

Parts of Idaho, Montana, and Wyoming. Limiting meridians, 109° and 114°; limiting parallels, 43° and 46°. Hachure. Scale, 10 miles to the inch.

Geologic map on same base.

Sources of Snake River and portions of headwaters of Madison and Yellowstone rivers. Topography shown by brush work. Scale, 5 miles to the inch.

Geologic map on above base.

Geologic map of parts of central Wyoming. Limiting meridians, 107° and 109° 30'; limiting parallels, 41° 45' and 43°. Scale, 4 miles to the inch.

Map showing primary triangulation of 1877-78. Scale, 12 miles to the inch.

Drainage map of portions of Wyoming, Idaho, and Utah. Limiting meridians, 107° and 119° 30'; limiting parallels, 42° 45' and 44°. Scale, 8 miles to the inch.
UNITED STATES GEOLOGICAL EXPLORATION OF THE FORTIETH PARALLEL (KING).

ANNUAL REPORTS.

1871.


1872.

Geological Exploration of the 40th Parallel, from the Sierra Nevada to the eastern slope of the Rocky Mountains. Annual Report of Chief of Engineers to the Secretary of War for the year 1872, pp. 101–102.

1873.

Report of Mr. Clarence King, geologist, in charge of the Geological Exploration of the Fortieth Parallel, from Sierra Nevada to the eastern slope of the Rocky Mountains. Annual Report of the Chief of Engineers to the Secretary of War for 1873, Appendix DD, pp. 1203–1210.

1874.

Annual Report of Mr. Clarence King, geologist, for the fiscal year ending June 30, 1874. Annual Report of the Chief of Engineers to the Secretary of War for 1874, Part II, Appendix EE, pp. 477–480.

1875.

Annual Report of Mr. Clarence King, geologist, for the fiscal year ending June 30th, 1875. Annual Report of the Chief of Engineers to the Secretary of War for 1875, Part II, Appendix KK, pp 919–920.

1876.

1877.

Annual Report of Mr. Clarence King, geologist, for the fiscal year ending June 30, 1877. Annual Report of the Chief of Engineers to the Secretary of War for 1877, Part II, Appendix MM, p. 1207.

1878.


FINAL REPORTS OR MONOGRAPHS.


-Volume I [-VII].

4°. 7 vols.
I. Systematic geology, by Clarence King, U. S. Geologist. 1878. xii, 803 pp., 16 tables, 28 pls. (2 pls. marked "Plate I," 1 pl. not numbered), 12 maps and atlas of 12 sheets folio.
II. Descriptive geology, by Arnold Hague and S. F. Emmons. 1877. xiii, 890 pp., 26 pls.
III. Mining industry, by James D. Hague, with geological contributions by Clarence King. 1870. xv, 647 pp., 37 pls, frontispiece, and atlas of 14 sheets folio.
V. Botany, by Sereno Watson, aided by Prof. Daniel C. Eaton and others. 1871. liii, 525 pp., 1 map, 40 pls.
VI. Microscopical petrography, by Ferdinand Zirkel. 1876. xv, 297 pp., 12 pls.

ATLAS.

[Vignette] Engineer Department, U. S. A., Geological and Topographical Atlas accompanying the report of the Geological Exploration of the Fortieth Parallel, made by authority of the Honorable Secretary of War, under the direction of Brig. and Bvt. Major General

*See p 40.

Folio, 2 ll., (title and legend), 1 single and 11 double folio sheets (1 single folio map, 10 double folio maps, 1 double folio section).

Contains topographic (shaded) map of Cordilleran region, limiting meridians 104° and 124°; limiting parallels 29° and 50°. Scale, 60 miles to the inch.

Also contains four geologic and four topographic (shaded) maps, on scale of 4 miles to the inch, of the following areas:

Sheet I. Longitude, 104° 30'-107° 37'; latitude, 40° 20'-41° 54'.
Sheet II. Longitude, 107° 37'-110° 43'; latitude, 40° 16'-41° 50'.
Sheet III. Longitude, 110° 43'-113° 50'; latitude, 40° 13'-41° 46'.
Sheet IV. Longitude, 113° 50'-116° 56'; latitude, 39° 55'-41° 29'.


Folio, 1 ll. (title page), 14 pls.

SPECIAL PUBLICATION.

UNITED STATES GEOGRAPHICAL AND GEOLOGICAL SURVEY OF THE ROCKY MOUNTAIN REGION (POWELL).

EARLY REPORTS BY J. W. POWELL.

Forty-second Congress, second session, House of Representatives, Mis. Doc. No 173. Survey of the Colorado River of the West. Letter from the Secretary of the Smithsonian Institution, transmitting report preliminary for continuing the survey of the Colorado of the West and its tributaries, by Professor Powell. April 5, 1872.—Referred to the Committee on Appropriations and ordered to be printed. 8°. 12 pp.


Forty-third Congress, first session, House of Representatives, Mis. Doc. No 265. Professor Powell's Report on the survey of the Colorado of the West. Letter from the Secretary of the Smithsonian Institution, transmitting a report of Professor Powell on the survey of the Colorado River of the West and its tributaries, etc., etc. May 2, 1874. Referred to the Committee on Appropriations and ordered to be printed. 8°. 29 pp.

Report of explorations in 1873 of the Colorado of the West and its tributaries, by Professor J. W. Powell, under the direction of the Smithsonian Institution. Washington: Government Printing Office. 1874. 8°. 36 pp. (Same as House Mis Doc. 265, 43d Cong., 1st sess.).


*These reports were issued before the Powell survey was organized, but they are preliminary to the publications of that organization.*
FINAL REPORTS.

4°, vii, 218 pp., 4 illustrations and atlas of 8 sheets folio.

8°. 19 pp., 1 map.

8°. 49 pp.

4°. x, 160 pp.; 27 ll. containing illustrations

4°. xv, 195 pp., 5 maps.

4°. xvii, 566 pp., 23 ll., frontispiece, 28 illustrations and atlas containing 3 sheets folio.


a First edition was published as a document of Congress.
4°. xxxii, 307 pp., 11 heliotypes, 2 pls., 2 unnumbered illustrations, atlas of 8 sheets folio.

CONTRIBUTIONS TO NORTH AMERICAN ETHNOLOGY.

4° 9 vols.

Part I. Tribes of the extreme Northwest, by W. H. Dall, pp. 1-106.
Appendix to Part I. Linguistics.
Notes on the natives of Alaska (communicated to the late George Gibbs, M. D., in 1862), by his excellency J. Furuhelm, late governor of the Russian-American colonies, pp. 111-116.
Terms of relationship used by the Innuit: A series obtained from natives of Cumberland Inlet, by W. H. Dall, pp. 117-119.
Comparative vocabularies [by George Gibbs and W. H. Dall], pp. 121-153.
Note on the use of numerals among the T'sim Si'lan', by George Gibbs, M. D., pp. 155-156.
Appendix to Part II. Linguistics, pp. 243-361.
Comparative vocabularies [by George Gibbs, W. F. Tolmie, and Gregory Mengarini], pp. 243-283.

II. The Klamath Indians of southwestern Oregon, by Albert Samuel Gatschet. 1890. 2 parts. cvii, 711 pp., 1 map; iii, 711 pp.

III. Tribes of California, by Stephens Powers. 1877. 3 ll., 645 pp., frontispiece, 46 ll. containing illustrations, pocket map.

IV. Houses and house life of the American aborigines, by Lewis H. Morgan. 1881. xiv, 281 pp., frontispiece, 28 ll. containing figures.

V. 1881. iii, 112, 32, xxxvii, 237 pp., 18 pls., 35 ll. containing figures.
Observations on cup-shaped and other lapidarian sculptures in the Old World and in America, by Charles Rau, iii, 112 pp., 35 ll.
A study of the manuscript Troano, by Cyrus Thomas, Ph. D., with an introduction by D. G. Brinton, M. D., xxxvii, 237 pp., 9 pls.

VI. The Çegiha language, by James Owen Dorsey. 1890. xviii, 794 pp.


VIII. Not published.

UNITED STATES GEOGRAPHICAL SURVEYS WEST OF THE ONE HUNDREDTH MERIDIAN (WHEELER).

ANNUAL REPORTS.

1869.

4°. 72 pp.

1871.

4°. 96 pp., 1 map.
[Progress report], pp. 11-62.

1872.

4°. 56 pp., 5 pls. and 1 map.
[Progress report], pp. 7-43, pls. i-v, map.
Appendix D. Preliminary geological report, by G. K. Gilbert, chief geological assistant, expedition of 1872, pp. 48-52.
Appendix E. Report upon natural history collections, by Acting Assistant Surgeon H. C. Yarrow, surgeon and naturalist, pp. 52-55.
Appendix F. Preliminary ethnological report by M. S. Severance, pp. 55-56.

1873.

8°. 11 pp., 1 map.

1874.

8°. 130 pp., 1 map.
[Progress report], pp. 3-112, map.
Plan for publication of reports and maps, with estimates. Summary of publications to present time, pp. 112-114.
Notes on the Eocene and Pliocene lacustrine formations of New Mexico, including descriptions of certain new species of vertebrates, by Prof. E. D. Cope, paleontologist to the expedition, pp. 115-130.

1875.

8°. iv, 196 pp., 2 ll., 9 pls., 2 maps, 1 diagram.
[Progress report], pp. 3-37, pl. i, 2 maps.
Appendix A. Executive report of Lieutenant William L. Marshall, Corps of Engineers, on the operations of party No. 1, division 1, field season of 1874, pp. 37-40.
Appendix B. Executive report of Lieutenant P. M. Price, Corps of Engineers, on the operations of party No. 1, second division, field season of 1874, pp. 40-41.
Appendix C. Executive report of Lieutenant R. Birnie, jr., Thirteenth United States Infantry, on the operations of party No. 2, first division, field season of 1874, pp. 41-43.

Appendix D. Executive report of Lieutenant Stanhope E. Blunt, Ordnance Corps, on the operations of party No. 2, second division, field season of 1874, pp. 43-44.

Appendix E. Executive report of Lieutenant C. W. Whipple, Third United States Artillery, on the operations of party No. 1, first division, and subparties, field season of 1874, pp. 44-46.

Appendix F. Meteorology and hypsometry, field season of 1874, by Lieutenant W. L. Marshall, Corps of Engineers, pp. 47-60, diagram.

Appendix G 1. Report on the geology of that part of northwestern New Mexico examined during the field season of 1874, by E. D. Cope, paleontologist and geologist, pp. 61-97, pls. ii-vi.

Appendix G 2. Geological and mineralogical report on portions of Colorado and New Mexico, by Dr. O. Loew, mineralogist and chemist, pp. 97-116.

Appendix H 1. Preliminary botanical report, with remarks upon the general topography of the region traversed in New Mexico and Arizona; its climatology, forage plants, timber, irrigation, sanitary conditions, etc., by Dr. J. T. Rothrock, acting assistant surgeon, United States Army, pp. 117-129, pls. vii, viii.

Appendix H 2. Report upon the agricultural resources of northern New Mexico and southern Colorado, with analyses of soils, plants, etc., by Dr. O. Loew, pp. 129-139.

Appendix I 1. Zoological report, field season of 1874.
   II. Notes upon the ornithology of the regions traversed, by H. W. Henshaw, ornithological assistant, pp. 149-150.
   III. Notes on the ornithology observed by Mr. C. E. Aiken, assistant, pp. 150-153.

Appendix I 2. Annotated list of the birds of Arizona, by H. W. Henshaw, ornithological assistant, pp. 153-166.

Appendix J. Ethnology, philology, and ruins.
   1. Report on the remains of population observed on and near the Eocene Plateau of northwestern New Mexico, by Prof. E. D. Cope, pp. 166-173.
   4. Report on the Pueblo languages of New Mexico and of the Moquis in Arizona; their affinity to each other and to the languages of the other Indian tribes, by Alb. S. Gatchet, philologist, pp. 180-187.

Appendix K. Publications, maps, reports, photographs, pp. 187-188.

Index, pp. 189-196.

1876.


8°. vi, 355 pp., 2 ll., 11 illustrations and maps.
[Progress report], pp. 1-79, 3 maps.
Appendix A. Executive and descriptive report of Lieutenant William L. Marshall, Corps of Engineers, on the operations of party No. 1, Colorado section, field season of 1875, pp. 80-109.

Appendix B. Preliminary report upon the operations of party No. 3, California section, season of 1875-76, with a view to determine the feasibility of diverting the Colorado River for purposes of irrigation, by Lieutenant Eric Bergland, Corps of Engineers, pp. 109-125, 7 maps and illustrations.

Appendix C. Executive and descriptive report of Lieutenant W. L. Carpenter, Ninth Infantry, on the operations of party No. 3, Colorado section, field season of 1875, pp. 126-130.

Appendix D. Executive report of Lieutenant R. Birnie, jr., Thirteenth United States Infantry, on the operations of party No. 2, California section, field season of 1875, pp. 130-135.

Appendix E. Executive and descriptive report of Lieutenant C. C. Morrison, Sixth Cavalry, on the operations of party No. 2, Colorado section, field season of 1875, pp. 136-147.

Appendix F. Executive report of Lieutenant C. W. Whipple, Ordnance Corps, on the operations of special party, California section, field season of 1875, pp. 147-150.

Appendix G 1. Meteorology and hypsometry, field season of 1875, by Lieutenant W. L. Marshall, Corps of Engineers, pp. 150-152.

Appendix G 2. On the meteorological conditions of the Mohave Desert, [by Oscar Loew], pp. 152-157.


Appendix H 3. Report on the alkaline lakes, thermal springs, mineral springs, and brackish waters of southern California and adjacent country [by Oscar Loew], pp. 188-199.


Appendix H 5. Report upon the operations of a special natural-history party and main field party No. 1, California section, field season of 1875, being the results of observations upon the economic botany and agriculture of portions of southern California, by Dr. J. T. Rothrock, acting assistant surgeon, United States Army, pp. 202-213.

Appendix H 6. Report on the physical and agricultural features of southern California, and especially of the Mohave Desert, [by Oscar Loew], pp. 214-222.


Appendix H 13. Report on the operations of a special party for making ethnological researches in the vicinity of Santa Barbara, Cal., with an historical account of the region explored, by Dr. H. C. Yarrow, acting assistant surgeon, United States Army, pp. 312-321.

Appendix H 14. Notes upon ethnology of southern California and adjacent regions, by Dr. O. Loew, pp. 321-327, 1 illustration.

Appendix H 15. On the physiological effects of a very hot climate, by Dr. O. Loew, pp. 328-330.


Index, pp. 345-355.

1877.


8°. iv, 1209-1334, v pp., 3 illustrations.

[Progress Report], pp. 1211-1250, 3 illustrations.

Appendix A. Executive and descriptive report of Lieutenant Eric Bergland, Corps of Engineers, on the operations of party No. 1, Colorado section, field season of 1876, pp. 1250-1252.

Appendix B. Executive and descriptive report of Lieutenant Saml. E. Tillman, Corps of Engineers, on the operations of party No. 1, California section, field season of 1876, pp. 1253-1256.

Appendix C. Executive and descriptive report of Lieutenant Thomas W. Symons, Corps of Engineers, on the operations of party No. 3, California section, field season of 1876, pp. 1257-1262.

Appendix D. Executive and descriptive report of Lieutenant R. Birnie, jr., Thirteenth Infantry, on the operations of party No. 4, California section, field season of 1876, pp. 1262-1272.

Appendix E. Executive and descriptive report of Lieutenant Charles C. Morrison, Sixth Cavalry, on the operations of party No. 2, Colorado section, field season of 1876, pp. 1273-1278.

Appendix F. Executive and descriptive report of Lieutenant M. M. Macomb, Fourth Artillery, on the operations of party No. 2, California section, field season of 1876, pp. 1278-1284.

Appendix G. Preliminary report on examination at the Comstock lode, by John A. Church, pp. 1284-1285.

Appendix H. Geological report on the portions of western Nevada and eastern California between the parallels of 39° 30' and 38° 30', explored in the field season of 1876, by Mr. A. R. Conkling, pp. 1285-1295.


Appendix H 2. Report on the foothills facing the plains from latitude 35° 30' to 38° approximately, by Mr. A. R. Conkling, pp. 1298-1303.
Appendix I. Report on the ornithology of portions of Nevada and California, by Mr. H. W. Henshaw, pp. 1303-1322.

Appendix J. Report upon the hemiptera collected during the years 1874 and 1875, by Mr. P. R. Uhler, pp. 1322-1334.

Index, i-v.

1878.


8°. x, 234 pp., 8 illustrations and maps.

[Progress report], pp. 1-103, map.

Appendix A. Executive and descriptive report of Lieutenant Eric Bergland, Corps of Engineers, on the operations of party No. 1, Colorado section, field season of 1877, pp. 103-106.

Appendix B. Executive and descriptive report of Lieutenant Samuel E. Tillman, Corps of Engineers, on the operations of party No. 1, Utah section, field season of 1877, pp. 107-112.

Appendix C. Executive and descriptive report of Lieutenant Thomas W. Symons, Corps of Engineers, on the operations of party No. 1, California section, field season of 1877, pp. 113-120.

Appendix D. Brief executive and descriptive report of Lieutenant Willard Young, Corps of Engineers, on the operations of party No. 1, Utah section, field season of 1877, pp. 120-122.

Appendix E. Executive and descriptive report of Lieutenant R. Birnie, jr., Ordnance Department, on the operations of party No. 2, Utah section, field season of 1877, pp. 122-131.

Appendix F. Executive and descriptive report of Lieutenant Charles C. Morrison, Sixth Cavalry, on the operations of party No. 2, Colorado section, field season of 1877, pp. 131-139, 2 illustrations.

Appendix G. Executive and descriptive report of Lieutenant M. M. Macomb, Fourth Artillery, on the operations of party No. 2, California section, field season of 1877, pp. 139-145.

Appendix H. Report upon examination of the Comstock lode, by John A. Church, pp. 145-166.

Appendix I. Geological report on portions of western Nevada and eastern California, including part of the Sierra Nevada Range, by A. R. Conkling, field season of 1877, pp. 167-183.


Appendix J. Preliminary report on the ornithology of portions of California and Nevada, by H. W. Henshaw, field season of 1877, pp. 185-186.

Appendix K. Report upon the fishes collected during the year 1875, 1876, and 1877, in California and Nevada, by Prof. David S. Jordan and H. W. Henshaw, pp. 187-200, pls. i-v.

Bull. 222—04——4
Appendix K 1. List of marine fishes collected on the coast of California, near Santa Barbara, in 1875, with notes by Dr. H. C. Yarrow, acting assistant surgeon, U. S. A., and H. W. Henshaw, pp. 201–205.

Appendix L. Report upon the reptiles and batrachians collected during the years of 1875, 1876, and 1877 in California, Arizona, and Nevada, by Dr. H. C. Yarrow, acting assistant surgeon, U. S. A., and H. W. Henshaw, pp. 206–226.

Appendix M. Notes upon the first discoveries of California and the origin of its name, by Prof. Jules Marcou, pp. 226–229, map.

Index, pp. 231–234.

1879.


8°. vi, 340 pp., 4 maps.

[Progress report], pp. i–vi, 1–209, 3 maps.


Appendix D. Report of Lieutenant Willard Young, Corps of Engineers, in charge of party No. 2, Utah section, field season of 1878, pp. 228–235.

Appendix D (sub). Report of Lieutenant Willard Young, Corps of Engineers, in charge of a special party engaged in the survey of great Salt Lake and vicinity, field season of 1879, pp. 235–237.


Appendix H. Report of special astronomical party at Ogden, Utah, season of 1878, by T. H. Safford, Ph. D., assistant, pp. 264–265.


Appendix J. Report of special astronomical party operating in New Mexico and Texas, field season of 1878, by Miles Rock, assistant, pp. 268–270.

Appendix K. Preliminary report of a special geological party operating in Colorado and New Mexico, from Spanish Peaks to the south, field season of 1878, by Professor John J. Stevenson, assistant, pp. 271–281.

Appendix K (sub). Preliminary report of a special geological party operating in Colorado and New Mexico, field season of 1879, by Prof. John J. Stevenson, assistant, p. 281,
Appendix L. Ornithological report from observations and collections made in portions of California, Nevada, and Oregon, by Assistant H. W. Henshaw, pp. 282-335.
Index, pp. 337-340.

1880.

8°. v, 40 pp., 1 map.

1881.

8°. iv, 2805-2808 pp., 1 map.

1882.

8°. 2821-2824 pp., 2 ll.

1883.

Annual report upon the geographical and topographical surveys of the territory of the United States west of the 100th meridian, in the States and Territories of California, Colorado, Kansas, Nebraska, Nevada, Oregon, Texas, Arizona, Idaho, Montana, New Mexico, Utah,

8°. 2379-2381 pp., 2 11.

1884.


8°. v, 2375-2378 pp.

FINAL REPORTS OR MONOGRAPHS.


4°. 8 Vols.

I. Geographical Report. 1889, 780 pp., 24 pls., 17 illustrations (maps, etc.).

[Part I], pp. 9-512.

Introduction, pp. 9-20.

Areas occupied, pp. 21-146, pls. i-xv.

Itinerary of Colorado Grand Canyon and River trip of 1871, pp. 147-171, pls. xvi-xxiv, map.
Indians, pp. 211–222.
Appendix A. Special list of latitudes, longitudes, altitudes, etc., of certain military posts west of the 100th meridian, pp. 229–233.
Appendix B. Description of atlas sheets, pp. 235–329.
Appendix C. Methods of survey, pp. 331–404, 4 illustrations.
Appendix D. Notes on the survey and disposal of the public lands, pp. 405–413, map.
Appendix E. Considerations upon National Government land and marine surveys, pp. 415–479, map.
Appendix F. Memoir upon the voyages, discoveries, explorations, and surveys to and at the west coast of North America and interior of the United States west of the Mississippi River, between 1500 and 1880, including later bibliographical and other references to determine latitudes, longitudes, and altitudes available for the basis of the permanent official topographic atlas of the United States, pp. 481–512, 10 maps.
Appendix G. Synoptical table of contents of quarto reports, in eight volumes, including vol. iii, Geology (supplement), pp. 747–755.
Synoptical list of maps, pp. 757–760.
Appendix H. Geographic-topographic surveys west of the one hundredth meridian, pp. 761–764.
Index, pp. 765–780.

II. Astronomy and barometric hypsometry. 1877. xiii, 571 pp, 15 ll, 22 pls.
Part I. Reports upon the astronomical determinations at main stations in Nevada, Utah, Montana, Wyoming, Nebraska, Colorado, and New Mexico, occupied in the years 1872, 1873, and 1874, by Dr. F. Kampf, John H. Clark, Wm. W. Maryatt, and Prof. T. H. Safford, pp. 1–491, pls. 1–6.
Part II. Results in barometric hypsometry, obtained during the years 1871, 1872, 1873, 1874, and 1875, reported by First Lieutenant Wm. L. Marshall, Corps of Engineers, U. S. Army, pp. 493–566, pls. vii–xxii.
Index, pp. 567–571.

III. Geology. 1875. 681 pp, 13 pls., and 4 ll., containing figs. 82, 101, 145, 167.
Part VI. Report upon mineralogical, agricultural, and chemical conditions observed in portions of Colorado, New Mexico, and Arizona in 1873, by Oscar Loew, Ph. D., pp. 569–661, pl. xiii.
Index, pp. 663–681.
III. Supplement—Geology. 1881. 420, xxxviii pp., 2 ll., 4 pls., and 3 maps.
Report upon geological examinations in southern Colorado and northern New Mexico during the years 1878 and 1879, by John J. Stevenson, Ph. D., professor of geology in the University of the city of New York, geological assistant to expeditions of 1873, 1878, and 1879, pp. 3–420, 3 maps.

IV. Paleontology. 1877. xv, 3–219, iv, 1–36, 36a, 36b, 37–370 pp., 83 ll., 83 pls.
Part I. Report upon the invertebrate fossils collected in portions of Nevada, Utah, Colorado, New Mexico, and Arizona by parties of the expeditions of 1871, 1872, 1873, and 1874, by Charles A. White, M. D., xv, pp. 3–219, pls. 1–21.
Part II. Report upon the extinct vertebrata obtained in New Mexico by parties of the expedition of 1874, by Prof. E. D. Cope, pp. i–iv, 1–36, 36a, 36b, 37–370 pls. 22–83.

V. Zoology. 1875. 1021 pp., 3 ll., 45 pls.
Notes upon geographical distribution and variation with regard to the zoology of the Western United States, as relates more particularly to mammals and birds, by Dr. H. C. Yarrow, pp. 23–34, 2 ll.
Report upon the collections of mammals made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during the years 1871, 1872, 1873, and 1874 by Dr. Elliott Cones and Dr. H. C. Yarrow, pp. 35–129.
Report upon the ornithological collections made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during the years 1871, 1872, 1873, and 1874, by H. W. Henshaw, pp. 131–507, pls. i–xv.
Report upon the collections of batrachians and reptiles made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during the years 1871, 1872, 1873, and 1874, by Dr. H. C. Yarrow, pp. 509–584.
Synopsis of the reptiles and batrachians of Arizona, with critical and field notes and an extensive synonymy, by Dr. Elliott Cones, U. S. Army, pp. 585–633, pls. xvi–xxv.
Report upon the collections of fishes made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during the years 1871, 1872, 1873, and 1874, by Prof. E. D. Cope and Dr. H. C. Yarrow, pp. 635–703, pls. xxvi–xxxii.
Report upon the collections of Hymenoptera made in portions of Nevada, Utah, Colorado, New Mexico, and Arizona during the years 1872, 1873, and 1874, by E. T. Cresson, with list of Formicidae by Edward Norton, pp. 705–736, pls. xxxiii–xxxiv.
Report upon the collections of diurnal Lepidoptera made in portions of Colorado, Utah, New Mexico, and Arizona during the years 1871, 1872, 1873, and 1874, with notes upon all species known to inhabit Colorado, by Theodore L. Mead, and a list of all species collected, by W. H. Edwards, pp. 737–794, pls. xxxv–xl.
Report upon new species of Zygenidae and Bombycidse collected in portions of California and Arizona during the years 1871, 1872, and 1873, by Richard H. Stretch, pp. 795–802.
Report upon the collections of Coleoptera made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during the years 1871, 1872, 1873, and 1874, by Henry Ulke, pp. 809–827, pl. xli.
Report upon the collections of Hemiptera made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during the years 1871, 1873, and 1874, by Prof. P. R. Uhler, pp. 829–842, 1 l., pl. xlii.
Report upon the collections of Orthoptera made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during the years 1871, 1872, 1873, and 1874, by Prof. Cyrus Thomas, pp. 843-908, pls. xliii-xlv.

Report upon the collections of Neuroptera and Pseudo-Neuroptera, made in portions of Colorado, New Mexico, and Arizona during the years 1872, 1873, and 1874, by Dr. H. A. Hagen, pp. 909-922.

Report upon the collections of terrestrial and fluvial Mollusca made in portions of Colorado, Utah, New Mexico, and Arizona during the years 1872, 1873, and 1874, by Dr. H. C. Yarrow, pp. 923-954.

Report upon the collections of fresh-water leeches made in portions of Nevada, Utah, Colorado, New Mexico, and Arizona during the years 1872, 1873, and 1874, by Prof. A. E. Verrill, pp. 955-967.

Index, pp. 969-1021.

VI. Botany. 1878. xx, 404 pp., 30 pls.
Notes on Colorado, by J. T. Rothrock, surgeon and botanist to the expeditions of 1873, 1874, and 1875, pp. 1-14.

Notes on New Mexico, by J. T. Rothrock, surgeon and botanist to the expeditions of 1873, 1874, and 1875, pp. 15-37.

Notes on economic botany, by J. T. Rothrock, surgeon and botanist to the expeditions of 1873, 1874, and 1875, pp. 39-52.


[Notes on that portion of California traversed by the botanists of the expeditions of 1875, with enumeration of plants collected during that year], pp. 353-378.

Table of orders, p. 379.

Index, pp. 381-400.

Description of plates, pp. 401-404.

VII. Archaeology. 1879. xxi, 497 pp., 20 pls., frontispiece. 1 map.


The southern Californians, pp. 1-31.

Report on the operations of a special party for making ethnological researches in the vicinity of Santa Barbara, Cal., with a short historical account of the region explored, by Dr. H. C. Yarrow, acting assistant surgeon, United States Army, pp. 32-47.

Chipped stone implements, by C. C. Abbott, pp. 49-69, pls. i-iv.

Mortars and pestles, by C. C. Abbott, pp. 70-92, pl. v.

Steatite cooking pots, plates, and food vessels, by C. C. Abbott, pp. 93-116, pl. vi.

The method of manufacture of soapstone pots, by Paul Schumacher, pp. 117-121.

Articles made of wood, by C. C. Abbott, pp. 122-124.
Smoking pipes of stone, by C. C. Abbott, pp. 125-134, pl. vii-ix.
Perforated stones, pp. 135-189, pl. x.
Miscellaneous objects made of stone, by C. C. Abbott, pp. 190-217.
Sculptures, pp. 218-221.
 Implements and weapons made of bone and wood, by C. C. Abbott and
F. W. Putnam, pp. 222-233, pl. xi.
Musical instruments made of bones, by C. C. Abbott, pp. 234-238.
Textile fabrics, basket work, etc., pp. 239-250, pl. xiv.
Ornaments, pp. 251-262, pl. xii.
Iron implements and other articles obtained by contact with Europeans,
pp. 272-276, pl. xv.
Observations on the crania from the Santa Barbara Islands, California, by
Lucien Carr, assistant curator of the Peabody Museum American Archae­
ology and Ethnology, pp. 277-292.
Translation from the Spanish of the account by the pilot Ferrel of the voyage
of Cabrillo along the west coast of North America in 1542, with introduc­
tory notes by H. W. Henshaw, pp. 293-314. 1 map.
Part II. The pueblo ruins and the interior tribes, by Frederick W. Putnam,
Notes on the pueblos and their inhabitants, by G. Thompson, topographer,
pp. 319-324.
The pueblo of Acoma, by Dr. Oscar Loew, pp. 325-326.
The pueblo of Taos, by H. C. Yarrow, assistant surgeon, U. S. A., pp.
327-330.
The pueblo of San Juan, by H. C. Yarrow, assistant surgeon, U. S. A.,
p. 331.
The cachina, a dance at the pueblo of Zuñi, by Francis Klett, assistant
United States Geographical Surveys west of the one hundredth meridian,
pp. 332-336.
Report on the ruins in New Mexico, by Dr. Oscar Loew, pp. 337-345.
Report on ruins visited in New Mexico, by Lieut. Rogers Birnie, jr., Thir­
Report on the remains of population observed in northwestern New Mexico,
by Prof. E. D. Cope, paleontologist of expedition of 1874, pp. 351-361.
Notice of a ruined pueblo and an ancient burial place in the valley of the
Notice of the pueblo Pintado and of other ruins in the Chaco Canyon, by
Cliff house and cave on Diamond Creek, New Mexico, by H. W. Henshaw,
Ruins in the Cañon de Chelle, pp. 372-373, pl. xx.
Notes on the implements of stone, pottery, and other objects obtained in
New Mexico and Arizona, pp. 374-390, pls. xvi-xix.
Notes upon human crania and skeletons collected by the expeditions of
1872-1874, by Mark Sibley Severance and Dr. H. C. Yarrow, pp. 391-397.
Appendix. Linguistics, pp. 399-485.
Classification into 7 linguistic stocks of western Indian dialects contained in
40 vocabularies, by Albert S. Gatschet, pp. 403-485.
Index, pp. 487-497.
UNCLASSIFIED PUBLICATIONS.\(^a\)


4°. 20 double pages, 1 l., map.


4°. 82 pp.


Report upon and list of birds collected by the expedition for explorations west of the one hundredth meridian in 1872; Lieut. Geo. M. Wheeler, Corps of Engineers, in charge, by Dr. H. C. Yarrow and Henry W. Henshaw, pp. 5–38.


Botanical report, by Sereno Watson, pp. 5–19.


\(^a\)Numbered arbitrarily for convenience in reference.

8°. 27 pp.


8°. 37 pp.

[10] Engineer Department, U. S. Army. Instructions for taking and recording meteorological observations and for preserving and repairing the instruments; prepared for the use of field and astronomical parties of the expeditions for geographical surveys and explorations west of the one hundredth meridian. Compiled from Colonel Williamson’s Use of the Barometer, and from the published instructions of the United States lake survey, with such additions and modifications as have been suggested by the experience of this survey; by First Lieutenants R. L. Hoxie and Wm. L. Marshall, Corps of Engineers, U. S. Army. To which are appended barometrical Tables I to XI, inclusive, of Professional Papers Corps of Engineers, No. 12. Washington: Government Printing Office. 1875.

16°. 64 pp.


8°. 30 pp.

8°. 88 pp.


8°. 13 pp.


4°. 22 pp., with blank tables.


4°. 207 pp., 1 l.


MAPS.

The following maps were issued in addition to those accompanying the annual reports and other publications. The greater part of these constitute parts of an atlas which it was intended should embrace all of the United States west of the one hundredth meridian. These sheets include topographic, geologic, and land-classification maps. The others are maps of special areas. All the atlas sheets and special maps issued are listed below.

**ATLAS SHEETS.**

**TOPOGRAPHIC MAPS.**

*Topographic atlas sheets, arranged by States.*

**ARIZONA.**

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<tr>
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<td>18,302</td>
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</table>

**CALIFORNIA.**

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*a Geologic map also issued for this area.
b Land classification map also issued for this area.
### COLORADO.

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<th>Scale</th>
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<td>Hachure map, 3 editions.</td>
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<td>69 B ...</td>
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<td>70 A b...</td>
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<td>1:506880</td>
<td>Hachure map; 4 editions.</td>
</tr>
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</table>

* Land classification map also issued for this area.
* Land classification and geologic maps also issued for this area.
**NEW MEXICO.**

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<td>70 A...</td>
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<td>76 A...</td>
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<td>17,952</td>
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**OREGON.**

| 38 B... | 119 15 0 to 120 37 30 | 41 30 to 42 20 | 4,075 | 1:253440 | Hachure map. |

**UTAH.**

| 41 A... | 112 22 30 to 113 34 0 | 41 30 to 42 20 | 4,075 | 1:253440 | Hachure map. |
| 41 B... | 111 0 0 to 112 22 30 | 40 30 to 42 20 | 4,075 | 1:253440 | Do. |
| 49... | 113 45 0 to 116 30 0 | 39 0 to 40 40 | 16,814 | 1:506880 | 2 editions; hachure and shaded. |
| 50... | 111 0 0 to 113 34 0 | 39 0 to 40 40 | 16,814 | 1:506880 | 4 editions; hachure shaded. |
| 58... | 113 45 0 to 116 30 0 | 37 20 to 39 0 | 17,208 | 1:506880 | Do. |
| 59... | 111 0 0 to 113 34 0 | 37 20 to 39 0 | 17,208 | 1:506880 | 6 editions; hachure shaded. |
| 66... | 113 45 0 to 116 30 0 | 35 40 to 37 20 | 17,588 | 1:506880 | Hachure map; 4 editions. |
| 67... | 111 0 0 to 113 34 0 | 35 40 to 37 20 | 17,588 | 1:506880 | Hachure and shaded. |

**WYOMING.**

| 32 D... | 110 0 0 to 112 22 30 | 42 20 to 43 10 | 4,023 | 1:253440 | Hachure map. |

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a Land classification map also issued for this area.
b Land classification and geologic maps also issued for this area.
c Geologic maps also issued for this area.
## GEOLOGIC MAPS.

Geologic maps, arranged by States.

### ARIZONA.

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<td>1:506880</td>
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### COLORADO.

| 69 B  | 105 30 0 to 105 50 0 | 36 35 to 37 20 | 988  | 1:253440 | On sheet with parts of 69 D, 77 B, and 78 A. |
| 70 A**| 104 7 30 to 105 30 0 | 36 30 to 37 20 | 4,374| 1:253440 |          |

### NEVADA.

| 58   | 113 45 0 to 114 50 40 | 37 20 to 39 0  | 6,860| 1:506880 | On sheet with portion of 66. |
| 66   | 113 45 0 to 114 48 40 | 35 40 to 37 20 | 6,960| 1:506880 | On sheet with portion of 58. |

### NEW MEXICO.

| 69 B  | 105 30 0 to 105 50 0 | 36 35 to 37 20 | 988  | 1:253440 | On sheet with parts of 69 D, 77 B, and 78 A. |
| 69 D  | 105 30 0 to 105 58 0 | 36 40 to 36 30 | 935  | 1:253440 |          |
| 70 A**| 104 7 30 to 105 30 0 | 36 30 to 37 20 | 4,374| 1:253440 |          |
| 70 C  | 104 7 30 to 105 30 0 | 35 40 to 36 30 | 4,420| 1:253440 |          |
| 76   | 108 15 0 to 111 0 0  | 34 0 to 35 40   | 17,952| 1:506880 |          |
| 77 B  | 105 5 0 to 106 15 0  | 35 15 to 35 40  | 1,834| 1:253440 | On sheet with parts of 69 B and 69 D. |
| 78 A  | 108 15 0 to 111 0 0  | 32 20 to 34 0   | 18,302| 1:506880 |          |

### UTAH.

| 50   | 111 0 0 to 113 45 0  | 39 0 to 40 40   | 16,814| 1:506880 | On sheet with portion of 66. |
| 58   | 113 45 0 to 114 50 40| 37 20 to 39 0   | 6,860 | 1:506880 |          |
| 59   | 111 0 0 to 113 45 0  | 37 20 to 39 0   | 17,208| 1:506880 |          |
| 66   | 113 45 0 to 114 48 40| 35 40 to 37 20  | 6,960 | 1:506880 |          |
| 67   | 111 0 0 to 113 45 0  | 35 40 to 37 20  | 17,588| 1:506880 |          |

* Topographic maps issued for all these areas.

** Land classification map also issued for this area.
## California

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<td>120 37 30 to 122 0 0</td>
<td>39 50 to 40 40</td>
<td>4,127</td>
<td>1 : 253440</td>
<td>Hachure map.</td>
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<td>122 37 30 to 124 0 0</td>
<td>34 50 to 35 40</td>
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## Colorado

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## Idaho

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## Nevada

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## New Mexico

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*Geologic map also issued for these areas.*
### Land classification maps, arranged by States—Continued.

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#### WYOMING.

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### SPECIAL MAPS.

- **Map of the United States west of the Mississippi River**, showing drainage areas. Scale, 1 : 6,000,000.
- **Yosemite Valley, California**. Hachure map. Limiting meridians, 119° 28' and 119° 43'; limiting parallels, 37° 40' and 37° 48'. Scale, 1 : 42,240.
- **Lake Tahoe region, California-Nevada**. Hachure map. Limiting meridians, 119° 33' and 120° 22' 30”; limiting parallels, 38° 45' and 39° 32'. Scale, 1 : 84,480.
- **Lake Tahoe region, California-Nevada**. Hachure map. Limiting meridians, 119° 33' and 120° 22' 30”; limiting parallels, 38° 45' and 39° 32'. Scale, 1 : 126,720.
- **Washoe district, Nevada**, showing Comstock lode. Limiting meridians, 119° 34' and 119° 41' 30”; limiting parallels, 39° 13' 30” and 39° 20' 20”. Scale, 1 : 24,000.
- **Washoe district, Nevada**. Contour map. Limiting meridians, 119° 32' 30” and 119° 43'; limiting parallels, 39° 10' 10” and 39° 21' 15”. Scale, 1 : 24,000.
- **Washoe mining region, Nevada**. Contour map, 2 sheets. Limiting meridians, 119° 32' 30” and 119° 43'; limiting parallels, 39° 10' 10” and 39° 21’. Scale, 1 : 18,000.
- **Reconnaissance map of southeastern Nevada**. Scale, 1 : 760,320.
- **Map showing extent of Lake Bonneville, Utah-Nevada**. Shaded map. Limiting meridians, 111° 45' and 115° 15'; limiting parallels, 37° 30' and 42°. Scale, 1 : 887,040.
- **Map showing distances, camps, etc., in Utah, field season of 1872**. Scale, 1 : 950,400.
- **Map of part of southwestern New Mexico**. Limiting meridians, 106° 36' and 109°; limiting parallels, 32° 20' and 34°. Scale, 1 : 633,600.

Bull. 222—04—5
INDEX.

AL=Lands of the Arid region (see p. 42).
BH=Geology of Black Hills of Dakota (see p. 42).
ECR=Exploration of Colorado River of the West (see p. 41).
Eth, i, etc=Contributions to American Ethnology, vol. i, etc. (see p. 43).
HM=Geology of Henry Mountains of Utah (see p. 42).
HP=Geology of High Plateaus of Utah (see p. 42).
H, Ann 1, etc=Annual Reports of Hayden Survey (see pp. 9-20).
H, Bull, vol i, etc=Bulletins of the Hayden Survey (see pp. 21-30).
H, Misc 1, etc=Miscellaneous publications of the Hayden Survey (see pp. 31-32).
H, Mon i, etc=Monographs or final reports of the Hayden Survey (see pp. 20-21).
H, Uncl 1, etc=Unclassified publications of the Hayden Survey, numbered arbitrarily (see pp. 32-34).
K, 1871 etc=Administrative reports of the King Survey for the year mentioned (see pp. 38-39).
LOR=Land Office Report for the year mentioned.
UM=Geology of Uinta Mountains (see p. 42).
W, 1869, etc=Annual reports of Wheeler Survey for the year mentioned (see pp. 44-52).
W, i, etc=Volumes of Final Reports of Wheeler Survey (see pp. 52-56).
W, Uncl 1, etc=Unclassified publications of the Wheeler Survey, numbered arbitrarily (see pp. 57-59).

Abajo Mountains, Utah, geology of.................................H, Ann 10, pp 189-193, 239; H, Bull, vol iii, No 3, p 558
Abbott (C. C.), articles made of wood, found in graves in southern California.................................W, vii, pp 122-124
miscellaneous objects made of stone, from graves of southern California.................................W, vii, pp 190-217
mortars and pestles from graves in southern California.....................................................W, vii, pp 70-92
musical instruments made of bone.........................W, vii, pp 234-238
steatite cooking pots, plates, and food vessels.....................W, vii, pp 93-116
stone implements of southern California.....................W, vii, pp 49-69
Abbott (C. C.) and Putnam (E. W.), implements and weapons made of bone and wood.................................W, vii, pp 222-233
Abiquiu region, New Mexico, geology of...............................W, 1875, pp 101-103
Aborigines, houses and house-life of the American...............Eth, iv of southern California.................................W, vii, pp 1-31
(See, also, Ethnology and archaeology.)
Acoma, New Mexico, pueblo at........................................W, vii, pp 325-326
Acrididae of North America, synopsis of..........................H, Mon v
(See, also, Invertebrates.)
Agricultural resources of Arizona, eastern, and New Mexico, western.................................W, iii, pp 573-597
southern, and New Mexico, northern.................................W, iii, Supp, pp 360-388; W, 1875, pp 129-139
of Colorado and Wyoming.........................................H, Ann 4, pp 191-264
of New Mexico, northern, and Colorado, southern....................W, iii, Supp, pp 360-388; W, 1875, pp 129-139
western, and Arizona, eastern.................................W, iii, pp 573-597

67
Agricultural resources of Territories ........................................... H, Ann 5, pp 205-279
of Wyoming and Colorado ...................................................... H, Ann 4, pp 191-264
Agricultural and physical features of southern California, especially of the
Mohave Desert ................................................................. W, 1876, pp 214-222
Agriculture and economic botany of portions of southern California ...... W, 1876, pp 202-213

(See, also, Plants.)

Aiken (C. E.), notes on ornithology of portions of New Mexico and Ari­
 zona ....................................................... W, 1875, pp 150-153
Ainslie (G.), notes on the grammar of the Nez Perces language ......... H, Bull, vol ii, No 3, pp 271-277
Alaska, Aleutian Islands, shell heaps of ................................... Eth, i, pp 41-91
Indian tribes of ................................................................. Eth, i, pp 1-106
natives of, notes on ......................................................... Eth, i, pp 111-116
Aleutian Islands, shell heaps of, on succession in ......................... Eth, i, pp 41-91
Alida district, Nevada, notes on .............................................. W, 1871, p 47
Alkali, analysis of, from Wyoming, Independence Rock, Pacific Springs, and
Sweetwater Valley .............................................................. H, Ann 4, pp 187, 188
Alkaline efflorescences, analysis of, from Wyoming, Sweetwater district . H, Ann 11, p 150
Allen (G. N.), irrigation in Santa Clara Valley, California ............ H, Ann 5, pp 269-271
Allen (J. A.), description of a fossil passerine bird from the insect-bearing
shales of Colorado ......................................................... H, Bull, vol iv, No 2, pp 443-445
geographical distribution of the Mammalia, considered in relation to the
principal ontological regions of the earth, and the laws that
govern the distribution of animal life .................................... H, Bull, vol iv, No 2, pp 313-377
geographical variation among North American mammals, especially in
respect to size ................................................................. H, Bull, vol ii, No 4, pp 308-344
history of North American Pinnipeds ....................................... H, Misc 12
history of the American bison ................................................ H, Ann 9, pp 443-558
on the Coatis (genus Nasua Storr) ......................................... H, Bull, vol v, No 2, pp 153-174
on the species of the genus Bassaris ....................................... H, Bull, vol v, No 3, pp 331-340
preliminary list of works and papers relating to the mammalian orders
Cete and Sirenia .............................................................. H, Bull, vol vi, No 3, pp 399-562
sexual, individual, and geographical variation in Leucosticte tephrocotis
H, Bull, vol ii, No 4, pp 345-350
synonymatic list of American Sciuri or arboreal squirrels ......... H, Bull, vol iv, No 4, pp 877-887
Allen (J. A.) and Cones (E.), monograph of North American Rodentia .. H, Mon xi
Alluvium, analyses of, from Nebraska, Blue River, Dakota City, Elkhorn
River, Platte River, and Republican River .............................. H, Ann 8, p 258
of Nebraska ................................................................. H, Ann 8, pp 256-259
of New Mexico, north-central .............................................. W, iii, Supp, pp 182-188
(See, also, Soils.)
Alpheus, synopsis of North American species of ......................... H, Bull, vol iv, No 1, pp 189-199
(See, also, Invertebrates.)
Alpine district, California, notes on ....................................... W, 1878, pp 85-86
Alpine regions of Rocky Mountains, Coleoptera of ................... H, Bull, vol iv, No 2, pp 447-480
Altaite, analysis of, from Colorado, Gold Hill, Red Cloud mine .. H, Ann 10, p 136
Altitude, logarithm and traverse tables .................................. W, Uncl 11
Altitudes, determination of, by means of the barometer ................. W, Uncl 10, pp 29-64; W, Uncl 12, pp 43-88
Altitudes, determination of, methods of .................................. H, Ann 10, pp 299-303
in Black Hills .............................................................. BH, pp 551-553
Sangre de Cristo Range ........................................... H, Ann 9, pp 299-300
in Dakota, Minnesota, and Nebraska ...................... H, Ann 6, pp 283-297
in Yellowstone Park ....................................................... H, Ann 12, ii, pp 457-463
list of ................................................................. W, 1878, pp 68-78; W, Uencl 16, pp 121-261; H, Bull, vol v, No 3, pp 441-470
of datum points on the Great Lakes and in the Rocky Mountains ... H, Ann 7, pp 629-659
west of Mississippi River ............................................ H, Miscl 1
west of one hundredth meridian ........................................ W, ii, pp 556-566
Aumm, analysis of, from Utah, Benada Peak, vicinity of .......... K, ii, p 424
Amargosa mines, California, notes on ............................... W, 1871, p 52
American aborigines, houses and house life of ...................... ETH, iv
(See, also, Ethnology and archaeology.)
Amulets, cranial, and prehistoric trephining ........................ ETH, v
(See, also, Ethnology and archaeology.)
Amyzon beds, vertebrata of ........................................ H, Miscl 1, pp 742-757
Amyzon shales, wading-bird from .................................. H, Bull, vol vi, No 1, pp 83-90
Analyses. (See name of substance.)
Ancient art. (See Art, ancient.)
Ancient ruins. (See Ruins, ancient.)
Andesite, analysis of, from Cziffar ................................... K, vi, p 124
analysis of, from Germany, Siebengebirge .............................. K, vi, p 124
from Hungary, Maceska and Tokay .................................. K, vi, p 124
from Italy, Monte Sieva ............................................... K, vi, p 124
from Java, Gunung Patna ........................................... K, vi, p 124
from Nevada, Comstock lode ......................................... K, iii, p 90
Gold Hill Peak ............................................................ K, vi, p 123
Pappoose Peak region .................................................. K, ii, p 582
Wachoé Mountains ...................................................... K, i, p 576; K, ii, p 477
Washoe, Cortez Mountains, and Palisade Canyon .................. K, i, p 576
from Utah, Cedar Mountains ......................................... K, i, p 576; K, ii, p 464
Grass Valley ............................................................ W, iii, p 650
of Colorado, occurrence and character of ....................... H, Ann 10, pp 213-214
of Nevada, Washoe district .......................................... K, iii, pp 30-33
Andesite and propylite, characteristics of ......................... HP, pp 108-110
Animals, organization of, influence of external conditions of life upon... H, Ann 12, i, pp 473-514
Animas region, Colorado, physical features of ..................... W, 1876, pp 100-102
Antelope district, Nevada, notes on ................................ W, 1871, p 39
Antelope Hills, Nevada, geology of .................................. K, ii, pp 483-486
Aphididæ of the United States, notes on, with descriptions of species occurring west of the Mississippi River ................ H, Bull, vol v, No 1, pp 1-32
(See, also, Invertebrates.)
Apishpa Creek, Colorado, geology near ........................... H, Ann 3, p 53; H, Ann 1-3, p 153
Appalachian Mountains, elevations in ................................ H, Miscl 1 (4th ed), pp 112-116
Aquarius Plateau, Utah, geology of ............................... HP, pp 284-298
Aquí Mountains, Utah, geology of .................................. K, ii, pp 456-460
Arachnida, description of new ...................................... H, Ann 6, p 740
(See, also, Invertebrates.)
Araneae collected in Colorado in 1875, report on...H, Bull, vol iii, No 2, pp 477-529
(See, also, Invertebrates.)

Archean rocks of Basin Ranges...W, iii, pp 186-187
of Black Hills...BH, pp 45-65
of Colorado, Eagle, Grand, and Gunnison rivers...H, Ann 8, pp 106-109
of Grand River district...H, Ann 9, pp 18-21
of south-central, and New Mexico, north-central...W, iii, Supp, pp 66-72
Spanish Peaks region...W, 1879, p 274
of Fortieth Parallel region...K, i, pp 15-98
of Idaho, eastern, and Wyoming, western...H, Ann 11, pp 474-477
of New Mexico, north-central, and Colorado, south-central...W, iii, Supp, pp 66-72
of Utah, Grand River district...H, Ann 9, pp 64-69
of Wyoming, Green River region...H, Ann 11, p 613
Laramie Hills...K, ii, pp 7-18
western, and Idaho, eastern...H, Ann 11, pp 474-477
Archean topography of Fortieth Parallel area...K, i, pp 122-126
Archaeology. (See Ethnology and Archaeology.)

Ardeidae, synopsis of American genera of Ciconiidae and...H, Bull, vol iv, No 1, pp 219-251
(See, also, Vertebrates.)

Arfvedsonite, analysis of, from Colorado, El Paso County...H, Ann 10, p 138
Argillite, analysis of, from Nevada, Cottonwood Canyon...K, ii, p 720
Arid region, lands of...AL
Arizona, agricultural capacities of western New Mexico and eastern...W, iii, pp 573-597
bats...W, v, pp 285-289
of portions of New Mexico and...W, v, pp 131-507
of western and eastern New Mexico...W, Uncl 4, pp 95-148
Bombycidae and Zygenidae collected in portions of California and...W, v, pp 795-802
Bradshaw district, notes on...W, 1871, p 55
butterflies collected in southern Utah and northern...H, Bull, vol iv, No 1, pp 253-258
Camp Apache, geology between Gila Valley and...W, iii, pp 218-225
geology between Little Colorado River and...W, iii, pp 215-218
Camp Verde, geology between St. George, Utah, and...W, iii, pp 193-208
climates, timber, irrigation, etc., in portions of New Mexico and...W, 1875, pp 117-129
Chelly Canyon, ruins and cliff dwelling in...H, Ann 10, pp 420-425
Coleoptera collected in portions of California, Nevada, Utah, Colorado, New
Mexico, and...W, v, pp 809-827
Diptera collected in Colorado and...W, v, pp 803-807
eruptive rocks of New Mexico and...W, iii, pp 638-651
explorations in Nevada and...W, 1871, pp 635-703
fishes collected in portions of California, Nevada, Utah, Colorado, New
Mexico, and...W, v, pp 635-703
Arizona, geologic map of... See Map, geologic, Arizona
gеologic section in... See section, geologic, in Arizona
gеologic of portions of Nevada, Utah, New Mexico, and... W, III, pp 227-301
of portions of New Mexico and... W, III, pp 503-587
Gila Valley, climate of... W, III, pp 598-601
gеologie between Camp Apache and... W, III, pp 218-225
Hemiptera collected in California, Nevada, Utah, New Mexico, Colorado,
and portions of... W, V, pp 829-841
collected in Colorado, New Mexico, California, and... W, 1877, pp 1322-1334
Hualapais district, Arizona, notes on... W, 1871, pp 53-54; W, 1876, pp 55-56
Hymenoptera collected in portions of New Mexico, Colorado, Utah, Ne­
vada, and... W, V, pp 705-736
Indians of Nevada and... W, 1871, pp 27-29, 74-76
of Nevada, California, and, ethnographic observations on... H, Ann 10,
pp 461-478
invertebrate fossils of portions of Nevada, Utah, Colorado, New Mexico,
and... W, IV, pp 1-219
leeches, fresh-water, collected in portions of Nevada, Utah, Colorado, New
Mexico, and... W, V, pp 955-967
Little Colorado River, geology between Camp Apache and... W, III, pp 215-218
gеologie between Verde River and... W, III, pp 209-215
mammals collected in portions of California, Nevada, Utah, New Mexico,
Colorado, and... W, V, pp 35-129
map, geologic, of. (See Map, geologic, Arizona.)
map, topographic, of. (See Map, topographic, Arizona.)
Martinez district, notes on... W, 1871, p 56
Maynard district, notes on... W, 1871, p 54
mining districts of... W, 1871, pp 53-59; W, 1876, pp 55-56, 60-61
Mollusca, terrestrial and fluviatile, collected in portions of Utah, New
Mexico, Colorado, and... W, V, pp 923-954
Neuroptera and pseudo-Neuroptera collected in portions of Colorado, New
Mexico, and... W, V, pp 909-922
Orthoptera collected in portions of California, Nevada, Utah, Colorado,
New Mexico, and... W, V, pp 843-908
Pinal Mountains, mines in, notes on... W, 1871, pp 56-59
plants of... W, III, pp 603-609
of Nevada, Utah, Colorado, New Mexico, and, catalogue of, with
descriptions of new species... W, VI, pp 53-297
of Utah, Nevada, and... W, Unc 5, pp 5-19
plateau region of New Mexico and, geology of... W, III, pp 842-867
pottery, implements, etc., obtained in New Mexico and... W, VII, pp 374-390
range region in New Mexico and, geology of... W, III, pp 507-524
reptiles and batrachians collected in California, Nevada, and... W, 1878,
pp 206-226
collected in portions of California, Nevada, Utah, Colorado, New
Mexico, and... W, V, pp 509-584
synopsis of... W, V, pp 585-633
ruins, ancient, near San Juan River... H, Bull, vol II, No 1, pp 25-45
section, geologic, in... (See Section, geologic, in Arizona.)
Tiger district, notes on... W, 1871, pp 54-55
topographic map of. (See Map, topographic, Arizona.)
tribes, ancient, of, bead ornaments used by... H, Bull, vol II, No 1, pp 67-69
Verde River, geology between Little Colorado River and... W, III, pp 209-215
volcanic region in New Mexico and, geology of... W, III, pp 525-541
Arizona, Vulture mine, notes on ........................................ W, 1871, p 56
Weaver district, notes on ........................................... W, 1871, p 55
Zygenidae and Bombycidae collected in portions of California and .... W, v, pp 795-802

(See, also, Basin ranges.)

locusts in ......................................................................................... H, Unc 14, p 64
Arkansas River, Colorado, agriculture near .................................. H, Ann 4, pp 213-217
cultivable areas in basin of ....................................................... H, Ann 10, pp 326-328
glaciation in upper ................................................................. H, Ann 8, pp 47-53
Art, ancient, in Colorado, northwestern ........................................ H, Bull, vol ii, No 1, pp 65-66
in Wyoming, Bridger Basin .......................................................... H, Ann 6, pp 651-653
(See, also, Ethnology and archaeology.)

Artemia fertilis Verrill from Great Salt Lake, Utah, notes on ........ H, Ann 12, i, pp 459-463
(See, also, Invertebrates.)

Artemia muehhausenii, relation of Artemia salina and, to genus Branchipus Schaeffer ........................................ H, Ann 12, i, pp 466-473
(See, also, Invertebrates.)

Artemia salina, parthenogenesis in ............................................... H, Ann 12, i, pp 463-466
relation to Artemia muehhausenii and to genus Branchipus Schaefer .. H, Ann 12, i, pp 466-473
(See, also, Invertebrates.)

Artesian borings in Wyoming, along line of Union Pacific Railroad .... H, Bull, vol iii, No 1, pp 181-185
Artesian wells of Great Basin ........................................................... W, iii, pp 115-117
of Western States and Territories ........................................... W, i, pp 206-210
Ashley Creek Basin, Utah, geology of ............................................... K, ii, pp 291-298
Asia and Asia Minor, springs, thermal, of ........................................ H, Ann 12, ii, pp 339-344
Aspen Mountain district, Colorado, structure of ................................ UM, pp 209-210
Aspen Ridge, Idaho, geology of ...................................................... H, Ann 11, pp 558-559
Asphaltum in California, San Fernando Range ................................ W, 1876, pp 164-166
Astronomical observations at Colorado Springs, Colorado, and Cheyenne, Wyoming ................................................................. W, Unc 3
in Colorado, Utah, Wyoming, Nevada, Montana, and New Mexico ...... W, 1874, pp 13-102
in Nevada, Utah, Montana, Wyoming, Nebraska, Colorado, and New Mexico ................................................................. W, ii, pp 1-491
Astrophyllite, analysis of, from Colorado .......................................... H, Ann 10, p 138
Atlas sheets, description of ............................................................. W, 1876, pp 42-46
list of. (See pages 60-62 of this bulletin.)
Aubrey group, exposures of ............................................................ UM, pp 54-55
of Uinta Mountains ........................................................................ UM, pp 148-150
Aubrey limestone of Basin Ranges ...................................................... W, iii, pp 177-178
Aubrey (S.), catalogue of land and fresh-water shells of Nebraska .......... H, Bull, vol iii, No 3, pp 697-704
notes on the nature of the food of the birds of Nebraska ............... H, Unc 14, App, pp 13-62
superficial deposits of Nebraska ...................................................... H, Ann 8, pp 243-269
Aughe (S.), analysis of, from Nevada, Palisade Canyon ....................... K, ii, p 587
of Nevada, microscopical petrography of ......................................... K, vi, pp 222-228
of Nevada Plateau .......................................................................... K, i, pp 571-577
Augite-trachyte, analysis of, from Nevada, Sheep Corral Canyon .......... K, ii, p 838
Augite-trachyte, analysis of, from Nevada, Truckee Ferry .......... K, ii, p 833
analysis of, from Norway ........................................ K, vi, p 146
Augusta Mountains, Nevada, geology of.......................... K, ii, pp 649-659
granite of......................................................... K, i, pp 79-80
Austin (C. F.), list of Hepaticse collected in the Southwest ... W, vi, p 350
plants determined by........................................... W, Uncl 5, p 62
Austin (E. P.), report of....................................... W, 1871, pp 91-92
Austria, primitive lapidarian sculptures in ..........T............. Eth, v, pp 22-25
Awapa Plateau, Utah, geology of.................................. HP, pp 272-276
Aztec district, New Mexico, notes on................................ W, 1876, pp 66-67
Bannock Range, Idaho, geology of.................................. H, Ann 11, pp 570-572
Banner district, California, notes on............................ W, 1876, pp 57-58
Bannister (H. M.), report of a geological reconnaissance along the Union Pacific Railroad ........................................ H, Ann 6, pp 519-541
Barber (E. A.), ancient art in northwestern Colorado.......... H, Bull, vol iii, No 1, pp 65-66
bead ornaments employed by ancient tribes of Utah and Arizona...... H, Bull, vol ii, No 1, pp 67-69
comparative vocabulary of Utah dialects............................... H, Bull, vol iii, No 3, pp 533-545
language and utensils of the modern Utes............................. H, Bull, vol ii, No 1, pp 71-76
Barometer, use of, in determining altitudes........................ W, Uncl 10, pp 29-64; W, Uncl 12, pp 43-88
Barometric hypsometry, results of, 1871-1875...................... W, ii, pp 493-506
Basalt, analysis of, from Arizona, Canyon Butte.................... W, iii, pp 647, 651
analysis of, from Arizona, Peloncillo Mountains.................... W, iii, pp 647, 651
from California, El Paso Mountain................................. W, iii, pp 650, 651
from Colorado, Buffalo Peak ...................................... K, i, p 676
from Nevada, Diabase Hills ...................................... K, ii, p 812
Ombe Range ................................................................ K, i, p 676; K, ii, p 500
Wadsworth .............................................................. K, i, p 676
from New Mexico, Abiquiu .......................................... W, 1875, p 101
characteristics of..................................................... HP, pp 110-112
of Arizona and New Mexico........................................ W, iii, pp 639-640
of Basin Ranges ................................................................ W, iii, pp 253-255
of Colorado, Eagle, Grand, and Gunnison rivers, adjacent to ...... H, Ann 8, pp 171-174
occurrence and character of........................................ H, Ann 10, pp 246-251
Sawatch Range ................................................................................................................................. H, Ann 9, pp 162-163
of Fortieth Parallel region.............................................. K, i, pp 653-676
microscopical petrography of ...................................... K, vi, pp 229-258
of New Mexico, north-central.......................................... W, iii, Supp, pp 167-172
thin section of, from Colorado, North Park, vicinity of .... K, vi, pl xi
from Nevada, Augusta Mountains .................................. K, vi, pl xi
Truckee Valley .......................................................... K, vi, pl x
Washoe ........................................................................ K, vi, pl x
Basaltic rock, thin section of, from Nevada, River Range........ K, vi, pl xi
Basin Ranges, glaciation in.......................................... W, iii, pp 86-104
minerals of............................................................... W, iii, pp 257-264
mountain systems of.................................................... W, iii, pp 231-248
mountains of.............................................................. W, iii, pp 21-42
valleys of .................................................................. W, iii, pp 249-252
valleys and canyons of................................................ W, iii, pp 63-85
Basket work, textile fabrics, etc., of Indians of southern California W, vii, pp 239-250

(See, also, Ethnology and archeology.)
INDEX TO HAYDEN, KING, [Bull. 222.]

Bassaris, species of, descriptions of .................. H, Bull, vol v, No 3, pp 331-340
(See, also, Vertebrates.)

Batrachians and reptiles collected in California, Arizona, and Nevada .......... W, 1878, pp 206-226
collected in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona ........................................ W, v, pp 509-584
of Arizona, synopsis of ........................................ W, v, pp 585-633
of Permian beds of Texas, some new .................. H, Bull, vol vi, No 1, pp 79-82.
(See, also, Vertebrates; Vertebrates, fossil.)

Battle Mountain district, Nevada, mining in .......... K, iii, pp 317-319; W, 1871, p 40
Battle Mountains, Nevada, geology of ......................... K, ii, pp 666-672
Bead ornaments employed by ancient tribes of Utah and Arizona ............. H, Bull, vol ii, No 1, pp 67-69
(See, also, Ornaments; Ethnology and archaeology.)

Beads of Indians of southern California ..................... W, vii, pp 263-271
(See, also, Ornaments; Ethnology and archaeology.)

Beaman (J. W.), meteorological observations in Wyoming ............ H, Ann 4, pp 488-501
meteorological report on Yellowstone region ........................................ H, Ann 5, pp 501-524

Bear Lake Plateau and Valley, Idaho-Utah, geology of ....................... H, Ann 11, pp 582-589

Bear Lodge region, South Dakota, geology of ...................... BH, pp 283-289

Bear River, geology from Salt Lake Valley to ..................... H, Ann 4, pp 147-161
topography of basin of ......................................... H, Ann 11, pp 697-702

Bear River group, character and fauna of ...................... H, Mon ii, pp 36-41
extent and age of ........................................ H, Ann 7, pp 439-442; H, Ann 8, p 144
of Wyoming ................................................... H, Bull, vol i, pp 13-16

Bear River Range, Idaho-Utah, geology of ...................... H, Ann 11, pp 598-600
Bear River region, geology of ................................ H, Ann 4, pp 44-54;

Bear Valley mining district, California, notes on .................... W, 1879, p 191
Beaver, Utah, astronomical determinations at ..................... W, ii, pp 57-71
Beaver Creek, Wyoming, geology near ......................... H, Ann 11, p 553

Bechler (G. R.), geographical report on Middle and South Parks, Colorado, and adjacent region ...................... H, Ann 9, pp 369-440
topographical report on Yampa River district ..................... H, Ann 10, pp 359-378
Bees allied to Melissodes and Anthophora, generic arrangement of ........ H, Bull, vol v, No 3, pp 471-479
(See, also, Invertebrates.)

Beetles collected in Colorado, list of ...................... H, Ann 9, pp 811-815
(See, also, Invertebrates.)

Belchowsa language, vocabulary of ............................. Eth, i, pp 267-283
(See, also, Ethnology and archaeology.)

Belmont, Nevada, mining at ..................................... K, iii, pp 394-404
Bembecideae, description of tribe Stizini ...................... H, Bull, vol v, No 3, pp 341-347
(See, also, Invertebrates.)

Benton group. (See Fort Benton group.)

Bergland (E.), report on proposed diversion of Colorado River........ W, 1876, pp 109-125
surveys by, report on ......................................... W, 1877, pp 1250-1252; W, 1878, pp 103-106

Bessels (E.), the human remains found among the ancient ruins of southwestern Colorado and northern New Mexico .............. H, Bull, vol ii, No 1, pp 47-63

Bibliography of birds of Nevada .............................. H, Bull, vol vi, No 2, pp 252-256
of Cete and Sirenia ........................................... H, Bull, vol vi, No 3, pp 399-562
of Crustaceans, phyllopod ..................................... H, Ann 12, i, pp 453-457
of invertebrate paleontology, North American ...................... H, Bull, vol v, No 1, pp 149-152; H, Miscl 10
Bibliography of Klamath Indians ........................................ Eth, ii, pt 1, pp xii-xv
of locusts of America ............................................... H, Uncl 14, App, pp 273-279
of mammals, North American ........................................ H, Mon xi, pp 951-1081
of minerals of Colorado .................................................. H, Ann 10, pp 158-159
of Muridse .......................................................... H, Mon xi, pp 255-284
of Phalenidse of the United States .................................. H, Mon x, pp 297-319
of Rhizopods, fresh-water .............................................. H, Mon xi, pp 951-1081
of springs, thermal, and geysers ....................................... H, Ann 12, p 70-71
Bighorn Range, Wyoming, geology of ................................... LOR, 1868, pp 224-225; H, Ann 2, No 2, pp 70-71
Binney (W. G.), list of terrestrial mollusks collected by Lieut. W. L. Carpen­
Biotite, thin section of, from propylite of Nevada, Cortez Range ..... K, vi, p 5
Bird, fossil, from Amyzon shales ........................................ H, Bull, vol vi, No 1, pp 83-85
from insect-bearing shales of Colorado, description of............. H, Bull, vol iv, No 2, pp 443-445
Birds of Arizona, annotated list of ..................................... W, 1875, pp 153-166
of Arizona, eastern, and New Mexico, western ........................ W, Uncl 4, pp 98-148
portions of New Mexico and Colorado .................................. W, 1875, pp 149-153
of Arizona and adjacent States ......................................... W, v, pp 131-507
of California, portion of ............................................. W, 1876, pp 224-278
portions of Nevada and, preliminary report on ....................... W, 1878, pp 185-186
of California and adjacent States ...................................... W, v, pp 131-507
of California, Oregon, and Nevada ...................................... W, 1879, pp 282-335
of Colorado, Denver, vicinity of ...................................... W, Uncl 4, pp 56-69
Fort Garland, vicinity of ............................................. W, Uncl 4, pp 69-95
of Colorado and adjacent States ........................................ W, v, pp 131-507
of Colorado Valley, a repository of scientific and popular information con­cerning North American ornithology .................................. H, Miscel 11
of Dakota, Fort Sisseton, notes on ..................................... H, Bull, vol v, No 1, pp 71-103
of Dakota and Montana, along forty-ninth parallel, field notes on .. H, Bull, vol iv, No 3, pp 549-661
of Great Basin .................................................................. K, iv, pp 303-643
of Guadeloupe Island ........................................................ H, Bull, vol ii, No 2, pp 183-195
of Michigan, annotated list of ........................................... H, Bull, vol v, No 3, pp 481-497
of Montana and Dakota, along forty-ninth parallel, field notes on .. H, Bull, vol iv, No 3, pp 549-661
of Nebraska, food of, notes on ........................................... H, Uncl 14, App, pp 13-62
of Nevada, annotated list of ............................................. H, Bull, vol vi, No 2, pp 203-256
bibliography of ........................................................... H, Bull, vol vi, No 2, pp 252-256
Carson City, vicinity of .................................................. W, 1877, pp 1307-1322
portions of California and, preliminary report on ..................... W, 1878, pp 185-186
of Nevada and adjacent States ........................................... W, v, pp 131-507
of Nevada and Utah .......................................................... W, Uncl 4, pp 5-33
of New Mexico, and portions of Arizona ................................ W, 1875, pp 149-163
western, and Arizona, eastern ........................................... W, Uncl 4, pp 95-148
of New Mexico and adjacent States ..................................... W, v, pp 131-507
of Northwest ............................................................... H, Miscel 3
INDEX TO HAYDEN, KING, [BULL. 222.]

Birds of Texas, Red River region.................. H, Bull, vol iii, No 3, pp 655-695
of United States, western, geographical distribution and variation in........ H, v, pp 23-34
of Utah, annotated list of....................... W, Uncl 4, pp 39-54; W, Uncl 7
of Utah and adjacent States........................ W, v, pp 131-507
of Utah and Nevada.................................. W, Uncl 4, pp 5-33
of Utah, Wyoming, and Idaho........................ H, Ann 6, pp 670-715
of Wyoming, list of.................................. H, Ann 4, pp 462-466
of Wyoming, Idaho, and Utah........................ H, Ann 6, pp 670-715
worms, parasitic, found in the brain and other parts of...................... H, Ann 6, pp 735-737

(See, also, Ornithology; Vertebrates.)

Birnie (R. jr.), report on ruins visited in New Mexico..................... W, vii, pp 346-350; W, 1875, pp 178-180
work in charge of, reports on.................................... W, 1875, pp 41-43;
W, 1876, pp 130-135; W, 1877, pp 1262-1272;
W, 1878, pp 122-131; W, 1879, pp 237-253
Bishop Mountain conglomerate, exposures of............................... UM, p 44
of Uinta Mountains........................................ UM, pp 169-171
Bison, American, history, habits, range, etc., of......................... H, Ann 9, pp 443-588
(See, also, Vertebrates.)

Bitter Creek, Wyoming, Cretaceous uplift of............................... K, ii, pp 227-238
Bitter Creek series, character and fauna of.............................. H, Mon ii, pp 30-36
exposures of.............................................. UM, pp 45-47
of Uinta Mountains....................................... UM, pp 162-166
of Western Territories...................................... H, Bull, vol i, ser, 1, No 2, pp 8-13
of Wyoming.............................................. H, Ann 6, pp 455-462
Black Butte quartzite of Uinta Mountains................................. UM, pp 160-161
Black Hills, botany of...................................... BH, pp 529-537
gerography and geology of.............................. LOR, 1868, pp 222-223; H, Ann 2, pp 68-69
gEOLOGY AND RESOURCES OF, REPORT ON........................................... BH
mineral resources of................................................................BH, pp 233-324
paleontology of................................................BH, pp 325-468; PBH
Black Rock Mountains, Nevada, geology of................................. K, ii, pp 790-797
topography of.................................................. H, Ann 11, pp 695
Blackfoot Range, Idaho, geology near......................................... H, Ann 11, pp 338-349
Blackmore, analysis of, from Montana, Mount Blackmore.................. H, Ann 6, p 169
Blind Spring district, California, notes on............................... W, 1871, p 46; W, 1876, pp 47-48
Blue River Valley, Colorado, geology of................................. H, Ann 7, pp 184-187
topographic features of..................................... H, Ann 9, pp 399-407
Bluff formation of Nebraska.............................................. LOR, 1867, pp 139-140; H, Ann 1, pp 18-19
Blunt (S. E.), report of........................................ W, 1875, pp 43-44
Bodie district, California, notes on..................................... W, 1878, pp 80-81
Bombycidae and Zygenidae collected in portions of California and Arizona........ W, v, pp 795-802

(See, also, Invertebrates.)

Bone, implements and weapons made of wood and......................... W, vii, pp 222-233
(See, also, Ethnology and archaeology.)

Bones, musical instruments made of, from southern California.............. W, vii, pp 234-238
(See, also, Ethnology and archaeology.)
Bonneville, Lake, discussion of .................................................K, i, pp 490-504
extent of ..............................................................................W, iii, pp 88-93
Bonneville beds of Great Basin ..................................................W, iii, pp 94-97
Book Cliffs. (See Roan Cliffs.)
Botanical notes on Colorado .........................................................W, vi, pp 1-14
on New Mexico ........................................................................W, vi, pp 15-37
Botany, notes on economic ..........................................................W, vi, pp 39-52
(See, also, Plants.)
Boulder Creek, Colorado, geology near ....................................H, Ann 3, pp 29-33; H, Ann 1-3, pp 129-133
Box Elder Creek, Colorado, geology near ........................................H, Ann 3, p 19; H, Ann 1-3, p 119
Box Elder region, Utah, geology of .............................................K, ii, pp 403-406
Bozeman, Montana, astronomical determinations at ......................W, ii, pp 371-384
meteorological observations at .................................................H, Misc 2, pp 47-59
Bradley (F. H.), report of .......................................................H, Ann 6, pp 189-271
Bradshaw district, Arizona, notes on .............................................W, 1871, p 55
Branchiopodidae, reproductive habits of, notes on .................H, Ann 12, i, pp 420-452
Brandegee (T. S.), the flora of southwestern Colorado .................H, Bull, vol ii, No 3, pp 227-248
Bridger Basin, Wyoming, art, primitive, in....................................H, Ann 6, pp 651-653
goology of ..............................................................................K, ii, pp 238-241
Bridger group, invertebrates of, list of ...........................................H, Bull, vol iii, No 3, p 611
occurrences and character of .......................................................H, Ann 8, pp 149, 156-158; H, Mon iii, pp 11-12; UM, p 45
of Colorado, northwestern .........................................................H, Ann 10, p 37
of Fortieth Parallel region .........................................................K, i, pp 394-405
of Puerco and Wasatch groups, vertebrata of .................................H, Mon iii, pp 49-742
of Uinta Mountains ...............................................................UM, pp 167-168
of Wyoming .............................................................................H, Ann 11, p 132
Bridger Basin ............................................................................K, ii, pp 244-250
Green River region .....................................................................H, Ann 11, pp 639-640
vertebrata of ............................................................................H, Mon ii, pp 15-194
Bridger Pass region, Wyoming, geology of .................................K, ii, pp 156-160
Brinton (D. G.), the graphic system and ancient records of the Mayas ..........................Eth, v, pp xvii-xxxvii
British America, locusts in .........................................................H, Uncl 14, pp 108-112; App, pp 145-149
Browns Park, Colorado, structure of ............................................UM, pp 208-209
Browns Park and Yampa Valley, Colorado, geology of .................K, ii, pp 222-225
Browns Park group, exposures of ................................................UM, p 44
of Uinta Mountains ....................................................................UM, pp 168-169
Buffalo. (See Bison.)
Buffalo Fork Mountains, Wyoming, geology of .........................H, Ann 11, pp 468-479
Bull Lake Fork, Wyoming, geology near .......................................H, Ann 12, i, pp 245-248
Bull Run district, Nevada, notes on .............................................W, 1871, p 34
Butterflies collected in Colorado in 1873 ....................................H, Ann 7, p 542
collected in Colorado and Utah in 1875, notice of .......................H, Bull, vol ii, No 3, pp 269-270
in Montana and Wyoming, list of species of ...............................H, Ann 5, pp 466-467
in southern Utah and northern Arizona in 1877 .........................H, Bull, vol iv, No 1, pp 253-258
Cabrillo, voyage of, account of ..................................................W, viii, pp 293-314
INDEX TO HAYDEN, KING, [BULL. 222.

Cache la Poudre Creek, Colorado, geology near .......................... H, Ann 3, pp 21-23; H, Ann 1-3, pp 121-123
mines on ........................................... H, Ann 3, p 108; H, Ann 1-3, p 106
Cache Valley, Utah, geology of ........................................ H, Ann 5, pp 19-21
goal of ........................................... H, Ann 11, pp 603-606
Cachina, a dance at the pueblo of Zuñi, description of ............... W, vii, pp 332-336
Calaverite, analysis of, from Colorado ........................................ H, Ann 10, p 139
Calciferous group of Colorado, Eagle and Grand rivers ............... H, Ann 8, pp 111-113
 Cache Valley, Utah, geology of ........................................ H, Ann 11, pp 603-606
Wind River Range .................................................. H, Ann 11, pp 71-73
Calendar of the Dakota nation ......................................... H, Bull, vol in, No 1, pp 3-25
California, aboriginal inhabitants of southern agricultural and physical features of southern, especially of the Mohave Desert .................................................. W, 1876, pp 214-222
alpine district, notes on ........................................ W, 1878, pp 85-86
Amargosa mines, notes on .............................................. W, 1871, p 52
asphaltum in San Fernando Range ........................................ W, 1876, pp 164-166
astronomical work in Oregon, Washington, and ...................... W, 1879, pp 265-268
Banner district, notes on .............................................. W, 1876, pp 57-58
batrachians of. (See Reptiles and batrachians.)
Bear Valley mining district, notes on .................................... W, 1879, p 191
birds collected in Nevada, Utah, Colorado, New Mexico, Arizona, and .......................... W, v, pp 131-507
birds collected in portions of Nevada, Utah, Colorado, New Mexico, Arizona, and .................. W, v, pp 131-507
of portion of .............................................. W, 1876, pp 224-273
of Nevada and, preliminary report on .............................. W, 1878, pp 185-186
of Nevada, Oregon, and ........................................... W, 1879, pp 282-335
Blind Spring district, notes on ...................................... W, 1871, p 46; W, 1876, pp 47-48
Bodie district, notes on .............................................. W, 1878, pp 80-81
Bombycidae and Zygentidae collected in portions of Arizona and... W, v, pp 795-802
botany and agriculture of portions of southern ...................... W, 1876, pp 202-213
Castle Peak district, notes on ....................................... W, 1878, pp 84-85
Cerro Gordo district, notes on ........................................ W, 1876, pp 62-63
Charlotte district, notes on .......................................... W, 1876, p 51
Clarke district, notes on .............................................. W, 1871, p 53; W, 1876, pp 53-54
Coleoptera collected in portions of Nevada, Arizona, New Mexico,
 Colorado, and .................................................. W, v, pp 809-827
of New Mexico, Colorado, and ...................................... W, 1876, pp 296-300
Confidence district, notes on ........................................... W, 1878, pp 86-87
Deep Spring Valley district, notes on ................................ W, 1871, p 49-50
discovery of and origin of name, notes on ............................. W, 1878, pp 226-229
El Paso district, notes on .............................................. W, 1871, p 52
H, Miscl 1 (4th ed), pp 56-62
ethnological researches in southern .................................. W, vii, pp 1-314
ethnology of southern, notes on ...................................... W, 1876, pp 321-327
fishes collected in Nevada and, report on ............................ W, 1878, pp 187-205
fished collected in portions of Nevada, Utah, Arizona, New Mexico, Colorado, and .................. W, v, pp 635-703
Fresno, astronomical work at .............................................. W, 1879, pp 41-47
gologic map. (See Map, geologic, California.)
gologic section. (See Section, geologic, California.)
geological and mineralogical character of southeastern ................ W, 1876, pp 173-188
geology of southern portion of ...................................... W, 1876, pp 158-172
of western Nevada and eastern, portions of ....................... W, 1878, pp 167-183
between parallels 39° 30' and 38° 30' .............................. W, 1877, pp 1285-1295
California, geysers of ........................................... H, Ann 12, ii, pp 321-323
Granite Mountain district, notes on ........................................... W, 1871, p 51
Green Mountain district, notes on ........................................... W, 1876, pp 52-53
Hemiptera collected in Colorado, New Mexico, Arizona, and .............. W, 1877, pp 1322-1334

collected in portions of Nevada, Utah, Arizona, New Mexico, Colorado, and ........................................... W, v, pp 829-841

Hetch Hetchy Valley, description of ........................................... W, 1879, pp 259-260
Holcomb Valley mining district, notes on ........................................... W, 1879, p 190
Indian tribes of ......................................................... Eth, in
Indians of Nevada, Arizona and, ethnographic observations on ........... H, Ann 10, pp 461-478
irrigation in Santa Clara Valley ........................................... H, Ann 5, pp 269-271
Julian district, notes on ........................................... W, 1876, pp 59-60
Kearsarge district, notes on ........................................... W, 1871, p 50
kjökkennöddings and graves of a former population of Santa Barbara islands ........................................... H, Bull, vol iii, No 1, pp 37-56
lakes, alkaline, thermal springs, mineral springs, and brackish waters of southern ........................................... W, 1876, pp 188-199
Lassen Peak region, topography, geology, etc., of ........................................... W, 1879, pp 209-214
lithology and mineralogy of portions of Nevada and .............................. W, 1878, pp 184-185
Lone Pine district, notes on ........................................... W, 1871, p 50
Lone Valley mining district, notes on ........................................... W, 1879, p 192
Lookout district, notes on ........................................... W, 1876, pp 67-68
Los Angeles, geology of vicinity of ........................................... W, 1876, pp 158-159
mammals collected in portions of Nevada, Utah, Arizona, New Mexico, Colorado and ........................................... W, v, pp 35-129; W, 1876, pp 305-312
map, geologic. (See Map, geologic, California.)
map, topographic. (See Map, topographic, California.)
Meadow Lake district, notes on ........................................... W, 1878, pp 81-82
mining districts of ........................................... W, 1871, pp 48-52;
W, 1876, pp 47-54, 56-60, 62-70; W, 1878, pp 80-88
Mohave Desert, meteorological conditions of ........................................... W, 1876, pp 152-157
physical and agricultural features of ........................................... W, 1876, pp 216-219
vegetation of, geographical distribution of ........................................... W, 1876, pp 222-224
Monitor district, notes on ........................................... W, 1878, pp 87-88
New Almaden mercury mines, notes on ........................................... W, 1876, p 64
New Coso district, notes on ........................................... W, 1876, pp 56-57
New Eldorado district, notes on ........................................... W, 1876, pp 58-59
Noctuidae of ......................................................... H, Bull, vol iv, No 1, pp 169-187
Oneata district, notes on ........................................... W, 1871, p 48
ornithology of portions of ........................................... W, 1876, pp 224-278
of portions of Nevada and, preliminary report on ........................................... W, 1878, pp 185-186
Orthoptera collected in Colorado, New Mexico, and ........................................... W, 1876, pp 278-295
collected in portions of Nevada, Utah, Arizona, New Mexico, Arizona and ........................................... W, v, pp 843-908
Owens Lake, description of ........................................... W, 1876, pp 189-190
Panamint district, notes on ........................................... W, 1876, pp 49-51
Placerville district, notes on ........................................... W, 1878, pp 82-84
Quaternary lakes of southeastern ........................................... W, 1876, pp 177-179
reptiles and batrachians collected in Arizona, Nevada, and ........................................... W, 1878, pp 206-226
collected in portions of Nevada, Utah, Arizona, New Mexico, Colorado, and ........................................... W, v, pp 509-584
Ridge Bar mining camp, notes on ........................................... W, 1879, p 188
Rose Spring district, notes on ........................................... W, 1876, pp 65-66
INDEX TO HAYDEN, KING,

California, San Antonio mining district, notes on ........................................ W, 1879, p 190
San Emidio district, notes on .................................. W, 1876, pp 51-52
San Fernando, geology of vicinity of ........................................ W, 1876, pp 160-166
San Gabriel mining district, notes on ........................................ W, 1879, p 189
Santa Barbara, ethnological researches near ........................................ W, vii, pp 32-47; W, 1876, pp 312-321
Santa Barbara Island, crania from, observations on .................................. W, vii, pp 277-292
kiokkenmoddings and graves of a former population of ................................ H, Bull, vol iii, No 1, pp 37-56
Santa Clara Valley, irrigation ............................................................. H, Ann 5, pp 269-271
Santa Cruz Island, physical features of ............................................... W, 1876, pp 215-216
Santa Monica Range, geology of .......................................................... W, 1876, pp 159-160
section, geologic. (See Section, geologic, California.)
Silver Era Peak, geology of ............................................................... W, 1878, pp 181-183
Silver Mountain district, notes on ...................................................... W, 1878, pp 88-89
Summer district, notes on ................................................................. W, 1876, p 65
Tahoe, Lake, general features of .......................................................... W, 1877, pp 1287-1288
Temescal tin mines, notes on ............................................................... W, 1876, pp 68-70
topographic map. (See map, topographic, California.)
Ubehebe district, notes on ................................................................. W, 1876, pp 64-65
Washington district, notes on .............................................................. W, 1878, p 84
West Walker River district, notes on .................................................... W, 1878, p 86
Zygenidae and Bombycidae collected in portions of Arizona and ............... W, v, pp 795-802

(See, also, Basin Ranges.)
Calvin (S.), on some dark shale recently discovered below the Devonian limes-
stones at Independence, Iowa; with a notice of its fossils and
description of new species ................................................................. H, Bull, vol iv, No 3, pp 725-730
Camburus cones, description of ......................................................... H, Bull, vol iii, No 4, pp 803-804
(See, also, Invertebrates.)
Cambrian fossils of Utah and Nevada, list of ......................................... K, i, p 231
(See, also, Invertebrates, fossils; Vertebrates, fossil.)
Cambrian rocks of Colorado, Eagle and Grand rivers ................................ H, Ann 8, pp 111-113
of Wyoming, Green River region ....................................................... H, Ann 11, p 614
Cambrian and Silurian rock of Great Basin ........................................... K, i, pp 184-221
Camp Apache, Arizona, geology between Gila Valley and ........................................ W, iii, pp 218-225
geology between Little Colorado River and ........................................... W, iii, pp 215-218
Campe Verde, Arizona, geology between St. George, Utah, and .......................... W, iii, pp 193-208
Campbells Fork, Wyoming, geology near ............................................ H, Ann 12, 1, pp 240-245
Camps, location of, distances between, etc ........................................ W, Unc 1; W, Unc 2
Canadian group, invertebrate fossils of, from Utah and Nevada........................ W, iv, pp 50-61; W, Unc 6, pp 8-12
of Colorado, Eagle and Grand rivers .................................................. H, Ann 8, pp 111-113
Canadian River region, New Mexico, agricultural resources of ................. W, iii, Supp, pp 374-379
geology of ......................................................................................... W, iii, Supp, pp 225-282
Canadian Valley, New Mexico, geology of, notes on ................................ H, Bull, vol ii, No 4, pp 279-285
Canidae of the Loup Fork epoch ........................................................... H, Bull, vol vi, No 2, pp 387-390
(See, also, Vertebrates.)
Canidae and Nimravidae of the Miocene period, descriptions of ................... H, Bull, vol vi, No 1, pp 165-181
(See, also, Vertebrates.)
Canyon, Colorado, geology near .......................... H, Bull, vol i, ser 2, No 5, pp 249-251
meteorological observations at ................................ H, Misc 6, pp 40-56
Caribidse, description of two species of, from Toronto, Canada............. H, Bull,
vol iii, No 4, pp 763-764

(See, also, Invertebrates.)
Carboniferous fossils, invertebrates of Arizona and adjacent States.......... H, Bull,
vol v, No 2, pp 209-220; W, iv, pp 79-161; W, Unc 6, pp 15-23
invertebrates of Colorado, Arizona, Utah, Idaho, and Wyoming, remarks
on certain.............................................. H, Bull, vol v, No 2, pp 209-220
of Fortieth Parallel region................................ K, iv, pp 50-99, 251-280
of Idaho, Wyoming, Utah, Colorado, Arizona, and adjacent States... H, Bull,
vol v, No 2, pp 209-220
of Interior States........................................ H, Ann 12, i, pp 155-171
of Nevada and adjacent States.................................. W, iv, pp 79-161; W, Unc 6, pp 15-23
of New Mexico........................................... W, iii, Supp, pp iii-xxxvi
of New Mexico and adjacent States.. W, iv, pp 79-161; W, Unc 6, pp 15-23
of Plateau province......................................... UM, pp 88-92, 107-109
of Southwest............................................. W, iv, pp 79-161
of Utah and adjacent States................................... H, Bull,
vol v, No 2, pp 209-220; W, iv, pp 79-161
of Utah and Wyoming, list of, collected in 1871.................. H, Ann 5, pp 373-374
of Western States and Territories............................. H, Ann 12, i, pp 119-141
of Wyoming, Idaho, Utah, and Arizona.. H, Bull, vol v, No 2, pp 209-220
of Wyoming and Utah, list of................................ H, Ann 5, pp 373-374
(See, also, Invertebrates, fossil.)
of Idaho, eastern, and Wyoming, western, list of........... H, Ann 11, pp 619-620
of Utah and Wyoming, list of.............................. H, Ann 5, pp 373-374
of Wyoming, western, and Idaho, eastern, list of........ H, Ann 11, pp 619-620
vertebrates, Batrachia and Reptilia of Permian beds of Texas, some
new................................................................ H, Bull, vol vi, No 1, pp 79-82
fishes of Kansas, notice of some................................ H, Mon i, pp 311-314
(See Invertebrates, fossil; Vertebrates, fossil; Plants, fossil.)
Carboniferous rocks of Basin Ranges................................ W, iii, pp 176-180
of Black Hills............................................... BH, pp 107-130
of Colorado, central........................................... W, iii, pp 301-377
Eagle and Grand rivers........................................ H, Ann 8, pp 114-120
Front Range.................................................. H, Ann 8, p 42
Grand River district........................................ H, Ann 9, pp 70-79; H, Ann 10, p 178
northwestern................................................ H, Ann 10, pp 24-26
San Juan region.............................................. H, Ann 8, pp 214-221
Sangre de Cristo Range......................................... H, Ann 9, pp 114-123
south-central, and New Mexico, north-central................................ W, iii, Supp, pp 73-84
Spanish Peaks region........................................ W, 1879, p 275
of Colorado Plateau........................................... W, iii, pp 285-287
of Idaho, Bear River region..................................... H, Ann 11, pp 616-621
eastern, and Wyoming, western................................ H, Ann 11, pp 485-490
of New Mexico, north-central, and Colorado, south-central ................ W, iii,
Supp, pp 73-84
of Utah, Grand River district................................ H, Ann 9, pp 70-79; H, Ann 10, p 178
Uinta Mountains............................................... UM, pp 146-153
of Wyoming, Green River region................................ H, Ann 11, pp 616-621
Bull. 222—04—6
Carboniferous rocks of Wyoming, Rawlings Peak, vicinity of..........H, Ann 11, pp 120-121
of Wyoming, Sweetwater Valley..........................H, Ann 11, pp 103-105
western, and Idaho, eastern.............................H, Ann 11, pp 485-490
Wind River Range, vicinity of..............................H, Ann 11, pp 73-79
(See, also, Names of formations.)
Caribou Range, Idaho, geology of.........................H, Ann 11, pp 360-405
Carpenter (W. L.), destruction of pine timber in Rocky Mountains........H, Ann 7, pp 538-539
report on alpine insect fauna of Colorado ..................W, 1876, pp 539-542
report on alpine insect fauna of Colorado and New Mexico...W, 1876, pp 301-305
work in charge of, report on................................W, 1876, pp 126-130
Carr (L.), observations of the crania from Santa Barbara Islands, California...W, vii, pp 277-292
Carrioso Mountains, Colorado, geology of..........................H, Ann 9, pp 274-276
Carson City, Nevada, birds observed near........................K, ii, pp 744-751
Carson Valley, Nevada, geology of.........................W, 1877, pp 1285-1286; W, 1878, pp 168-173
Castle Creek district, South Dakota, mineral resources of..............H, pp 261-266
Castle Dome district, Nevada, notes on..........................W, 1876, pp 60-61
Castle Peak district, California, notes on.....................W, 1878, pp 84-85
Caswell (J. H.), microscopic petrography of Black Hills..............H, Bull, vol vi, pp 469-527
Cathartidte, osteology of.................................H, Ann 12, i, pp 727-806
(Can be also, Vertebrates.)
Cave fauna in Utah...........................................H, Bull, vol iii, No 1, pp 157-169
(Can be also, Invertebrates.)
Çegiha language, myths, stories, etc., in..................K, vi, pp 12
(Can be also, Ethnology and archaeology.)
Cenomanian formation, plants of, table showing distribution of........H, Mon viii, pp 93-103
Cenozoic and Mesozoic Unionidee of North America, comparison with living species......................................H, Bull, vol iii, No 3, pp 615-624
Central City district, Colorado, mines of........................H, Ann 7, pp 280-293
Cerro Gordo district, California, notes on..........................W, 1876, pp 62-63
Cete, bibliography of Sirenia and................................H, Bull, vol vi, No 3, pp 366-369
Chaco Canyon, New Mexico, ruins in............................H, Ann 10, pp 431-449; W, vii, pp 386-395
skull from, report on........................................H, Ann 10, pp 453-457
Chaledony, thin section of, from Nevada, Pahtson Mountains........K, vi, pp 12
Chalk, analysis of, from Kansas...............................H, Ann 9, p 282; H, Bull, vol iv, No 3, p 215
Chama River, New Mexico, pueblo and burial place in valley of...W, vi, pp 362-365
Chambers (V. T.), descriptions of new Tineina from Texas, and others from more northern localities......................H, Bull, vol iv, No 1, pp 79-106
index to the described Tineina of the United States and Canada........H, Bull, vol iv, No 1, pp 125-167
new Entomostraca from Colorado................................H, Bull, vol iii, No 1, pp 151-155
notes on a collection of Tineid moths made in Colorado in 1875, by A. S. Packard, jr..............................H, Bull, vol iii, No 1, pp 143-145
Tineina and their food plants..................................H, Bull, vol iv, No 1, pp 107-123
Tineina in Colorado, distribution of..........................H, Bull, vol iii, No 1, pp 147-150
Tineina of Colorado.............................................H, Bull, vol iii, No 1, pp 121-142
Charlotte district, California, notes on............................W, 1876, p 51
Chemistry of the Washoe process...............................K, iii, pp 273-293
Chert, analysis of, from Colorado, Vermilion Creek .......... K, i, p 143
analysis of, from Nevada, Cottonwood Canyon, vicinity of .... K, ii, p 720
Cheyenne, Wyoming, astronomical observations at ....... W, Uncl 3, pp 2-45
between Fort Fetterman and ................. H, Ann 4, pp 11-24
between Omaha, Nebraska, and .............. H, Ann 4, pp 98-112
Cheyenne Lake (Tertiary), extent of ..................... K, i, pp 455-456
Chickering (J. W.), catalogue of phanogamous and vascular cryptogamous
plants collected during the summers of 1873 and 1874 in Dakota and Montana along the forty-ninth parallel by Dr. Elliott
Coues, with which are incorporated those collected in the same region by Mr. George M. Dawson ... H, Bull, vol iv, No 4, pp 801-830
Chittenden (G. B.), meteorological observations in Colorado and Montana,
1873

.... H, Misc 6
topographical report on the San Juan district ............. H, Ann 9, pp 351-368
topographical report on White River district .............. H, Ann 10, pp 349-357
Chloride mining district, New Mexico, notes on ............ W, 1879, p 193
Chrysolite, analysis of, from New Mexico, Fort Defiance .... W, 1875, p 105
Chugwater River, Wyoming, geology near ................... LOR, 1868,
pp 233-234; H, Ann 2, pp 79-80; H, Ann 4, pp 12-18
Church (J. A.), preliminary report on examination at the Comstock
lode .................................................. W, 1877, pp 1284-1285
report on examination of the Comstock lode .............. W, 1878, pp 145-166
Chut-sin-ni language, vocabulary of ....................... Eth, i, pp 135-142
Ciconiidae, synopsis of American genera of Ardeidae and ........ H, Bull,
vol iv, No 1, pp 219-251
Cimarron, New Mexico, astronomical determinations at ....... W, ii, pp 403-415
Cimarron Creek region, New Mexico, geology of ............ W, iii, Supp, pp 231-248
Cinnabar Mountain, Wyoming, geology near ............... H, Ann 5, pp 60-63
Clark (J. H.), report of ......................... W, 1872, pp 44-45; W, 1879, pp 265-268
Clark (J. H.) and Kampf (F.), report on astronomical observations at Chey-

enne, Wyoming ........................................ W, Uncl 3, pp 2-45
Clark (J. H.), Maryatt (W. W.), Safford (T. H.), and Kampf (F.), astro-
nomical determinations in Nevada, Utah, Montana, Wyoming,
Nebraska, Colorado, and New Mexico, 1872-74 ........ W, ii, pp 1-491
Clark Fork, Montana, geology near ....................... H, Ann 6, pp 46-48
Clarke. See Lewis and Clarke.
Clarke district, California, notes on ..................... W, 1871, p 53; W, 1876, pp 53-54
Clay, analyses of, from Nevada, Comstock lode .......... K, iii, p 89
Clay, blue, analysis of, from Yellowstone Park, Geyser Basin .... H, Ann 6, p 151
Cliff dwellings. See Ruins.
Climate, physiological effects of a very hot ................ W, 1876, pp 328-330
of Arizona, Gila Valley .............................. W, iii, pp 598-601
of Black Hills ........................................ BFH, pp 301-311
of Colorado ........................................... H, Ann 10, pp 315-317
eastern, and Kansas, western ........................ H, Ann 4, pp 453-456
south-central, and New Mexico, north-central ........ W, iii, Supp, pp 357-360
of Kansas, western, and Colorado, eastern .............. H, Ann 4, pp 453-456
of Montana, notes on ................................ H, Ann 6, pp 809-812
of New Mexico, north-central, and Colorado, south-central. W, iii, Supp, pp 357-360
northern, notes on .................................... W, 1875, pp 111-116
of Tertiary time as represented in its flora .............. H, Ann 7, pp 419-425
of Utah, Salt Lake City .................................. H, Ann 5, p 236
INDEX TO HAYDEN, KING,

Climate of western States ........................................... H, Uncl 14, pp 185-210
of Yellowstone Park .................................................... H, Ann 12, ii, pp 486-488
Coal, analysis of, from British Columbia, Nanaimo ............... H, Ann 3, p 99;
H, Ann 1-3, p 199; H, Ann 7, p 113
analysis of, from British Columbia, Souris Valley ................. H, Ann 7, pp 112, 114
from California, Mount Diablo ........................................... H, Ann 3, p 99; H, Ann 1-3, p 199;
from Colorado, Animas region ........................................... H, Ann 9, p 202; H, Ann 10, p 141
Anthracite Creek ... H, Ann 8, p 176; H, Ann 9, p 203; H, Ann 10, p 137
Boulder ................................................................. H, Ann 4, pp 182-183;
H, Ann 9, p 203; H, Ann 10, p 141; W, iii, p 633
Boulder County ........................................................... H, Ann 4, p 321; H, Ann 6, p 371
Boulder Creek ............................................................. H, Uncl 1, p 62
Canyon ................................................................. H, Ann 6, p 370; H, Ann 7,
pp 112, 114; H, Ann 9, p 203; H, Ann 10, p 141; W, iii, p 633
Cebolla Creek ............................................................ H, Ann 9, p 203
Coal Creek (Elk Mountains) ............................................. H, Ann 8, p 175; H, Ann 9, p 203
Coal Creek, Golden ....................................................... H, Ann 3, pp 94, 98; H, Ann 1-3, pp
194, 198; H, Ann 7, p 112; H, Ann 9, p 203; H, Uncl 1, p 62
Colorado Springs ......................................................... H, Ann 6, p 370; H, Ann 7,
p 112; H, Ann 9, p 203; H, Ann 10, p 141; W, iii, p 633
Cuchara River ............................................................ H, Ann 9, p 202
Denver, vicinity of ..................................................... H, Ann 3, p 98; H, Ann 1-3, p 198
Elk Mountains ............................................................. H, Ann 9, p 203; H, Ann 10, p 137
Golden ................................................................. H, Ann 4, p 321; H, Ann 6, p 371; H, Ann 7,
p 112; H, Ann 9, p 203; H, Ann 10, p 141; W, iii, p 633
Gunnison River ............................................................ H, Ann 9, p 203
Hamiton, vicinity of .................................................... W, iii, p 391
Oh-be-joyful Creek ....................................................... H, Ann 8, p 176; H, Ann 9, p 203
Ralston Creek ............................................................ H, Ann 4,
p 321; H, Ann 6, p 371; H, Ann 7, p 112; H, Ann 9, p 203
Red Creek ............................................................... W, iii, p 634
Rock Creek ............................................................... H, Ann 8, p 177; H, Ann 9, p 203
South Boulder Creek, Marshall mine ... H, Ann 7, p 112; H, Ann 9, p 203
Trinidad region ........................................................... H, Ann 7, p 112;
H, Ann 9, pp 200, 201, 202; H, Ann 10, p 141; W, iii, p 634
Uncompahgre River ....................................................... H, Ann 9, pp 99, 203
Walsenburg, vicinity of ................................................ H, Ann 9, pp 201, 202
from Iowa, Des Moines and Ottumwa ................................. H, Ann 4, p 184
from Montana, Bozeman, vicinity of ................................ H, Ann 7, p 113
Fort Ellis, vicinity of .................................................. H, Ann 6, p 114
from New Mexico, Los Cerillos and Placer Mountains ............ W, iii, p 635
Nacimiento ............................................................... W, iii, p 632
Placer Mountains ........................................................ W, iii, p 632
Raton Mountains ......................................................... H, Ann 6, p 370; H, Ann 7, p 112
San Lazaro Mountains ................................................... H, Ann 4, pp 181-182
Silver City ............................................................... W, iii, p 633
Vermejo Canyon ... H, Ann 3, p 98; H, Ann 1-3, p 198; H, Ann 7, p 112
from Oregon, Coos Bay ................................................ H, Ann 3,
p 99; H, Ann 1-3, p 199; H, Ann 7, pp 113, 114
from Utah, Coalville .................................................... H, Ann 4, p 321; H, Ann 4,
pp 115, 371; H, Ann 7, p 113; K, iv, pp 467-472, 473
Johnsons ............................................................... H, Ann 7, p 113
Robinsons ............................................................... H, Ann 7, p 113
Coal, analysis of, from Utah, Spragues ............................H, Ann 7, p 113
analysis of, from Utah, Wasatch ..............................H, Ann 7, p 113; K, iii, p 473
from Utah, Weber River ........................................H, Ann 7, pp 113, 114
from Washington, Bellingham Bay ...............................H, Ann 3, p 99; H, Ann 1-3, p 199; H, Ann 7, p 113
Cooper Creek .......................................................K, ii, p 80
Cooper station ......................H, Ann 4, p 185; H, Ann 7, p 112
Hallville ................H, Ann 4, p 321; H, Ann 6, p 371; H, Ann 7, p 112
Rock Creek ..............................H, Ann 3, p 98; H, Ann 1-3, p 198
in Colorado .............................................................H, Ann 4, pp 322-326; K, iii, pp 481-485
Front Range, east of, character, distribution, etc., of ......H, Ann 7, pp 110-128
Trinidad region ......................................................H, Ann 9, pp 195-207; W, iii, Supp, pp 102-126, 389-393
in Colorado and New Mexico ........................................W, iii, pp 631-636
in Montana, Fort Ellis, vicinity of ................................H, Ann 6, pp 113-114
in Nebraska ...............................................................LOR, 1867, pp 134, 137, 142-143, 154-155; H, Ann 1, pp 13, 17, 22-23, 36
in New Mexico, Galistéo field ..................................W, iii, Supp, pp 126-130
Trinidad field .........................................................W, iii, Supp, pp 102-126, 389-393
in New Mexico and Colorado ......................................W, iii, pp 631-636
in Utah .....................................................................H, Ann 4, pp 328-329
in Wyoming ..............................................................H, Ann 4, pp 326-328
(See, also, Lignitic formation.)
Coals of the Rocky Mountains ..................................H, Ann 4, pp 179-186
Coals, Tertiary, of the West ......................................H, Ann 4, pp 318-329
Coal fields of Colorado .............................................H, Uncl 1, pp 44-65
Coal Measures. (See Upper Coal Measures.)
Coalville, Utah, strata at ...........................................H, Ann 6, pp 437-450
Coalville district, Utah, coal at ..................................K, iii, pp 467-472
Coatis, character, distribution, etc., of .......................H, Bull, vol v, No 2, pp 153-174
(See, also, Vertebrates.)
Coleoptera collected in 1871, list of ...........................H, Ann 5, pp 382-392
of Arizona and adjacent States ..................................W, v, pp 809-827
of California, New Mexico, and Colorado, new species of ....W, 1876, pp 296-300
of California and adjacent States ...............................W, v, pp 809-827
of Colorado, eastern, and New Mexico, northeastern, list of ..........................H, Ann 4, pp 469-470
lists of species collected ............................................H, Ann 7, pp 566-571; H, Ann 9, pp 811-815
of Colorado and adjacent States ..................................W, v, pp 809-827
of Colorado, New Mexico, and California, new species of ....W, 1876, pp 296-300
of Idaho and Wyoming .............................................H, Ann 6, p 717
of Nevada, Utah, California, Colorado, New Mexico, and Arizona ..........W, v, pp 809-827
Coleoptera of New Mexico, northeastern, and Colorado, eastern...... H, Ann 4, pp 469-470
of New Mexico and adjacent States............................... W, v, pp 809-827
of New Mexico, Colorado, and California, new species of... W, 1876, pp 296-300
of Rocky Mountains, alpine regions..................... H, Bull, vol iv, No 2, pp 447-480;
H, Bull, vol v, No 3, pp 499-520
Tertiary rocks............................................. H, Bull, vol ii, No 1, pp 77-87
of Utah and adjacent States.................................. W, v, pp 809-827
of Wyoming and Idaho........................................... H, Ann 6, p 717
Colorado, agricultural resources of north-central New Mexico and south-
central....................................................... W, 111, Supp, pp 360-388; W, 1875, pp 129-139
of Wyoming and............................................. H, Ann 4, pp 191-264
Animas region, physical features of............................. W, 1876, pp 100-102
Apishpa Creek, geology near...................................... H, Ann 3, p 53; H, Ann 1-3, p 153
arable and pasture lands of, report on.............. H, Ann 10, pp 311-357
Aranee collected in, report on.......................... H, Bull, vol iii, No 2, pp 477-529
Arkansas River, agriculture in vicinity of.................... H, Ann 4, pp 213-217
cultivable areas in basin of...................................... H, Ann 10, pp 326-328
Arkansas Valley, geology of...................................... H, Ann 7, pp 299-242; W, 1875, pp 97-98
 glaciation in upper........................................ H, Ann 8, pp 47-53
art, ancient, in northwestern................................. H, Bull, vol ii, No 1, pp 65-66
Aspen Mountain district, structure of...................... UM, pp 209-210
astronomical determinations in New Mexico, Nevada, Utah, Montana, Wyoming, Nebraska, and........ W, ii, pp 1-491
batrachians of. (See Reptiles and batrachians.)
beetles collected in, list of................................ H, Ann 9, pp 811-815
Big Thompson Creek, geology near............................. H, Ann 3,
bird, fossil, from insect-bearing shales of Colorado, description of........ H, Bull,
vol iv, No 2, pp 443-445
birds collected in California, Nevada, Utah, Arizona, New Mexico, and...... W, v,
pp 301-307
 collected in vicinity of Denver.......................... W, Unc 4, pp 58-69
 in vicinity of Fort Garland.......................... W, Unc 4, pp 69-95
Blue River Valley, topographic features of.............. H, Ann 9, pp 399-407
botanical notes on.................................................. W, vi, pp 1-14
botany of central, preliminary report on............ W, Unc 5, pp 23-62
Boulder Creek, geology near...................................... H, Ann 3, pp 29-33; H, Ann 1-3, pp 129-133
Box Elder Creek, geology near...................................... H, Ann 3, p 19; H, Ann 1-3, p 119
Browns Park, structure of....................................... UM, pp 208-209
Browns Park and Yampa Valley, geology of...................... K, ii, pp 222-225
butterflies collected in........................................... H, Ann 7, pp 542
 collected in Utah and, notice of.............................. H, Bull, vol ii, No 3, pp 269-270
Cache la Poudre Creek, geology near...................... H, Ann 3, pp 21-23;
H, Ann 1-3, pp 121-123
mines on.......................................................... H, Ann 3, p 108; H, Ann 1-3, p 106
Canyon, geology near............................................. H, Bull, vol i, ser 2, No 5, pp 249-251
meteorological observations at.............................. H,Miscel 6, pp 40-56
Carriso Mountains, geology of............................... H, Ann 9, pp 274-276
central, climate and agricultural resources of............. W, 111, pp 327-342
streams of...................................................... W, 111, pp 320-327
topography of...................................................... W, 111, pp 307-327
Central City, mines of........................................ H, Ann 3, i, pp 114-116; H, Ann 1-3, pp 112-114
Colorado, Central City-district, mines of .......................... H, Ann 7, pp 280-293
climates of ....................................... H, Ann 10, pp 315-317
of Denver district ............................... H, Ann 3, pp 139-142; H, Ann 1-3, pp 135-138
of Kansas, western, and eastern ....................... H, Ann 4, pp 453-456
coal in Boulder Creek and Pole Creek ........................... H, Ann 4, pp 322-326; W, iii, pp 631-636
east of Front Range, character, distribution, etc., of ........ H, Ann 7, pp 110-128
Trinidad field ..................................... W, iii, Supp, pp 102-126, 389-393
coal and iron in .................................. K, iii, pp 481-485
collected in Coleoptera collected in .................................. H, Ann 7, pp 566-571
collected in California, Nevada, Utah, Arizona, New Mexico and ........................................ W, v, pp 809-827
in New Mexico, California and ............................. W, 1876, pp 296-300
Colorado City, geology between Denver and .................... H, Ann 3, pp 37-46; H, Ann 1-3, pp 137-146
geology between Fort Union and ................................ H, Ann 3, pp 47-58
springs near ...................................... H, Ann 3, pp 118-120; H, Ann 1-3, pp 116-118
Colorado Springs, astronomical observations at ............... W, Uncl 3, pp 47-82
geonotropy near .................................... H, Ann 6, pp 100-104
Colorado Range, geology of ................................ K, ii, pp 2-72
geology of east slope of, from Cache la Poudre River to Pikes Peak ................................. H, Ann 7, pp 17-36
Denver, birds of vicinity of .................................. W, Uncl 4, pp 55-69
climates of vicinity of .................................. H, Ann 3, pp 139-142; H, Ann 1-3, pp 135-138
communication between San Juan mines and, means of ........ H, Bull, vol i, ser 2, No 3, pp 145-149
between Colorado City and ................................ H, Ann 3, pp 37-46; H, Ann 1-3, pp 137-146
Diamond Peak, structure of .................................. UM, pp 204-206
Dinosaurian from Dakota beds of ................................. H, Bull, vol iii, No 4, pp 805-806
Diptera collected in Arizona and ................................ W, v, pp 803-807
Dolores River, geology near .................................. H, Ann 9, pp 53-58, 263-267
Dry Mountains, structure of ................................ UM, pp 206-208
Eagle River, geology along .................................. H, Ann 7, pp 70-78
Eagle River Mountains, topographic features of .................. H, Ann 7, pp 383-384
Elk Mountains, eruptive masses in .............................. H, Bull, vol iii, No 3, pp 555-557
geology of .......................................... H, Ann 7, pp 58-69, 250-261; H, Ann 8, pp 54-71
mines in ............................................. H, Ann 7, pp 304-305
Elkhead Mountains, geology of ................................ K, ii, pp 167-180
Empire, mines at ...................................... H, Ann 3, p 114; H, Ann 1-3, p 112
Entomostraca from .................................... H, Bull, vol iii, No 1, pp 151-155
erosion in eastern, peculiar forms of .......................... H, Bull, vol i, ser 2, No 3, pp 210-211
some striking products of ................................ H, Bull, vol iv, No 4, pp 831-864
eruptive mountains in, on a peculiar type of ..................... H, Bull, vol iii, No 3, pp 551-564
Escalante Hills, geology of ................................ K, ii, pp 287-288
INDEX TO HAYDEN, KING, [Bull. 222.

Fairplay, meteorological observations at ..................................................H, Miscl 6, pp 35-39
formations of, synopsis of ........................................H, Ann 10, pp 123-131
fishes of portion of California, Nevada, Utah, Arizona, New Mexico, and . . . . . W, v, pp 635-703
of Tertiary shales of South Park ........................................H, Bull, vol 1, ser 2, No 1, pp 3-5
flora of southwestern ......................................................H, Miscl 4
geologic map of. (See Map, geologic, Colorado.)
geologic section in. (See Section, geologic, in Colorado.)
geological and mineralogical report on portions of New Mexico and .... W, 1875, pp 97-116
gold mining in Gilpin County .............................................K, i, pp 493-588
golden, geology near .....................................................K, i, pp 493-588
golden, geology near .....................................................K, i, pp 493-588
Grand River Basin, cultivable areas in ..................................H, Ann 10, pp 332-337
topographical report on .....................................................H, Ann 9, pp 337-350
Hardscrabble district, note on ..................................................W, 1876, pp 48-49
Hemiptera collected in New Mexico, Arizona, California, and . . . . . W, 1877, pp 1322-1334
igneous rocks of, distribution, character, origin, etc., of . . . . . H, Ann 10, pp 199-272
industrial resources of western Kansas and eastern ...............H, Ann 4, pp 442-458
Hughes, astronomical determinations at ........................................W, ii, pp 239-263
human remains found among ancient ruins in northern New Mexico and
southwestern ......................................................H, Bull, vol ii, No 1, pp 47-63
Hymenoptera collected in portions of New Mexico, Arizona, Nevada,
Utah, and ......................................................W, v, pp 705-736
indices, Tertiary rocks of portions of California, Nevada, Utah, Arizona, New Mexico, and .... W, v, pp 635-703
Colorado, insect fauna, alpine, of ........................................... H, Ann 7, pp 539-542
insect fauna of New Mexico and ........................................... W, 1876, pp 301-305
insects from Tertiary rocks of Wyoming and, account of same ........... H, Bull, vol iv, No 2, pp 519-542
invertebrate fossils of portions of New Mexico, Arizona, Nevada, Utah,
and ....................................................... W, iv, pp 1-219
irrigation in ............................................ H, Ann 3, pp 149-150;
H, Ann 1-3, pp 145-146; H, Ann 10, pp 339-343
Julesburg, astronomical determinations at ................................ W, ii, pp 433-448
Kenoshia Range, topographic features of ................................ H, Ann 9, pp 410-411
La Plata River, ruins on ......................................... H, Bull, vol ii, No 1, pp 6-7
La Plata Valley, geology of ......................................... H, Ann 9, pp 245-248, 268-272
La Veta Pass, mountain ranges between the head of the Pecos and,
geology of .................................................. W, 1876, pp 199-202
Labran, astronomical determinations at .................................. W, ii, pp 265-268
Lake Fork, physical features near ...................................... W, 1876, pp 93-95
Las Animas mining district, notes on .................................. W, 1879, p 196
leeches collected in, list of ...................................... H, Ann 7, p 623
leeches, fresh-water, collected in portions of Nevada, Utah, Arizona,
New Mexico, and .............................................. W, v, pp 955-967
Lignitic formation, distribution and thickness of, of Wyoming and eastern H, Bull, vol i, ser 2, No 5, pp 401-411
lithology of portions of northern Mexico and southern .................. W, 1877, pp 1295-1298
Little Book Cliffs, geology of ....................................... H, Ann 10, pp 176-177
Little Snake River, geology near ...................................... K, ii, pp 219-222
Little Yampa River, geology of valley of ................................ K, ii, pp 187-189
mammals collected in portions of California, Nevada, Utah, Arizona,
New Mexico, and .............................................. W, v, pp 35-129
Mancos River, cliff houses and ruins on ................................ H, Ann 10, pp 391-399;
map, geologic of. (See Map, geologic, Colorado.)
map, topographic, of. (See Map, topographic, Colorado.)
Medicine Bow Range, Archean rocks of .................................. K, i, pp 28-36
geology of ................................................................ K, ii, pp 94-111
Mesa Verde, geology of .................................................. H, Ann 9, pp 253-257
meteorological observations in Montana and, in 1873 .................. H, Misc 6
Middle Park, eruptive mountains near ................................... H, Bull, vol iii, No 3, pp 552-553
geology of ....................................................... H, Ann 3, pp 81-86; H, Ann 7, pp 83-192
topographic features of ............................................ H, Ann 9, pp 391-398
minerals of, bibliography of .......................................... H, Ann 10, pp 158-159
catalogue of ................................................................ H, Ann 7,
p 382-381; H, Ann 9, pp 226-235; H, Ann 10, pp 135-139
collected in South Park district .......................................... H, Ann 7, pp 267-270
mines and minerals of .................................................. H Ann 3, pp 103-130; H, Ann 1-3, pp 201-228
mining districts of, report on .......................................... H, Ann 7, pp 275-361
Mollusca of, report on ................................................ H, Ann 8, pp 389-410
Mollusca, terrestrial and fluviatile, collected in portions of Utah, New
Mexico, Arizona, and .............................................. W, v, pp 923-954
mollusks, terrestrial, collected in, list of ................................ H, Ann 7, p 523
moths of, geographical distribution of ................................ H, Ann 7, pp 543-559
moths, noctuid, collected in, in 1875, notes on ....................... H, Bull, vol iii, No 1, pp 115-120
Colorado, moths, tineid, collected in, in 1875, notes on..........................H, Bull, vol iii, No 1, pp 143-145
Mount Lincoln, meteorological observations at........................................H, Misc 6, pp 22-34
Muddy Valley, geology of.................................................................H, Ann 7, pp 178-184
Myriopoda of..............................................................H, Ann 7, p 607
Neuroptera and pseudo-Neuroptera collected in, report on..............................H, Ann 7, pp 571-606
collected in portions of Arizona, New Mexico, and Nevada City, mines at and near.............................................W, v, pp 909-922
North Park, geology of.................................................................H, Ann 7, pp 114-116
orthwestern, report on portion of......................................................H, Ann 10, pp 3-60
Orthoptera collected in California, New Mexico, and................................W, 1876, pp 278-295
collected in, list of........................................................................H, Bull, vol ii, No 3, pp 261-267
Park province, structure of.................................................................K, ii, pp 112-129
Park Range, Archean rocks of..............................................................H, Ann 7, pp 130-141
geology of..............................................................H, Ann 7, pp 125-129; K, ii, pp 130-141
topographic features of.................................................................H, Ann 9, pp 378-381
trachyte of..............................................................H, Ann 9, pp 582-585
passes in the high mountains............................................................H, Ann 7, p 675
physical features of........................................................................K, iii, pp 476-480
Physopoda, Tertiary of.................................................................H, Bull, vol i, ser 2, No 4, pp 221-223
plants collected in Nevada, Utah, Arizona, New Mexico and, catalogue of, with descriptions of new species..................W, vi, pp 53-297
collected in Wyoming, New Mexico and, catalogue of....................................H, Ann 4, pp 472-487
precious metals in..............................................................H, Ann 4, pp 485-492
Purgatory River region, agricultural resources of........................................W, iii, Supp, pp 379-381
geology of..............................................................W, iii, Supp, pp 195-224
Red Creek, Archean rocks of...............................................................K, ii, pp 269-271
reptiles and batrachians collected in portions of California, Nevada, Utah, Arizona, New Mexico, and..............................................................W, v, pp 509-584
Rio Grande drainage basin, geology of.....................................................H, Ann 9, pp 153-167
Rio Grande region, geology of...............................................................W, iii, Supp, pp 313-321
roads and trails in........................................................................H, Ann 9, pp 347-350
Rocky Mountains, notes on.....................................................................H, Bull, vol i, ser 1, No 2, pp 72-77
Rocky Mountains, topographic features of crest of, south of Tennessee Pass........................................................................H, Ann 9, pp 373-377
Saguache Range. (See Sawatch Range.)
St. Vrain Creek, geology near...............................................................H, Ann 3, pp 27-28; H, Ann 1-3, pp 127-128
San Juan Mountains, geology of.............................................................W, 1875, pp 100-101
San Juan region, communication between Denver and, means of......................H, Ann 8, pp 443-449
geology of..............................................................H, Ann 8, pp 187-240;
H, Ann 9, pp 241-276; H, Bull, vol i, ser 2, No 3, pp 135-164
mines of..............................................................H, Ann 8, pp 229-238;
H, Bull, vol i, ser 2, No 3, pp 151-164
topography of........................................................................H, Ann 8, pp 451-496;
San Juan River, ruins and cave dwellings on...............................................H, Bull, vol ii, No 1, pp 7-10
San Juan Valley, geology of.................................................................H, Ann 9, pp 248-251
San Luis district, geology of.................................................................H, Ann 7, pp 305-351
San Luis Valley, cultivable areas in. H, Ann 10, pp 328-330
geology and topography of. H, Ann 9, pp 140-149
physical features of. W, 1876, pp 86-88
San Miguel region, physical features of. W, 1876, pp 98-100
Sangre de Cristo Range, geology of. H, Ann 9, pp 108-139
Sawatch Range, geology of. H, Ann 9, pp 150-175
section, geologic, in. (See Section, geologic, in Colorado.)
Sierra El Late, geology of. H, Ann 9, pp 272-274
silver mining in Georgetown district. K, iii, pp 589-605
Snake River region, silver mines in. K, iii, pp 617-624
Sneffels, Mount, ascent of. H, Bull, vol i, ser 2, No 3, pp 193-199
Sopris Peak, geology of. H, Ann 8, pp 61-63
South Park, fishes of Tertiary shales of. H, Bull, vol 1, ser 2, No 1, pp 3-5
topographic features of. H, Ann 9, pp 419-431
South Platte drainage basin, cultivable areas on. H, Ann 10, pp 323-326
Spanish Peaks, description of. H, Bull, vol iii, No 3, pp 551-552
volcanic rocks of. H, Ann 9, pp 131-136
Spanish Peaks region, geology of. W, 1879, pp 271-281
spiders from, descriptions of two new. H, Bull, vol iii, No 2, pp 528-529
stratigraphy and Pliocene vertebrate paleontology of northern. H, Bull, vol i, ser 1, No 1, pp 9-28
Tarryall Range, topographic features of. H, Ann 9, pp 411-412
temperature in, compared with eastern cities. H, Ann 9, p 555
Tertiary lake basin at Florissant. H, Bull, vol vi, No 2, pp 279-300
Tineina of. H, Bull, vol vii, No 2, pp 121-142
distribution of. H, Bull, vol iii, No 1, pp 147-150
topographic map of. (See Map, topographic, Colorado.)
Trinidad, astronomical determinations at. W, ii, pp 289-312
Trinidad region, geology of. H, Ann 9, pp 192-207
Uinta Mountains, geology of eastern portion of. UM, pp 202-203
Uncompahgre region, physical features of. W, 1876, pp 95-97
Vermillion Creek, rocks exposed on. K, i, pp 142-144
Vermillion Creek Basin, geology of. K, ii, pp 225-227, 275-277
vertebrate paleontology of. H, Ann 7, pp 427-533
water resources of western Kansas and eastern. H, Ann 4, pp 448-452
West Plum Creek, geology near. H, Ann 3, p 40; H, Ann 1-3, p 140
White River district, geology of. H, Ann 10, pp 61-131
topographical report on. H, Ann 10, pp 349-357
Williams River Mountains, geology of. H, Ann 7, pp 189-192
Yampa Plateau, geology of. K, ii, pp 282-286
structure of. UM, pp 202-203
Yampa River district, topographical report on. H, Ann 10, pp 359-378
Yampa Valley and Brownes Park, geology of. K, ii, pp 222-225
(See, also, Fortieth Parallel region.)
Colorado City, Colorado, geology between Fort Union and ...........H, Ann 3, pp 47-58
springs near ........................................H, Ann 3, pp 118-120; H, Ann 1-3, pp 116-118
Colorado district, Nevada, notes on ...........................................W, 1876, pp 61-62
Colorado group, fossils of, from Bear River Valley, Colorado, list of...H, Ann 11, p 266
of Colorado,Colorado Range ....................................................K, II, pp 41-45
Huerfano Park .............................................................H, Ann 9, pp 126-127
northwestern ..............................................................H, Ann 10, pp 30-31
San Juan drainage basin .....................................................H, Ann 9, pp 183-187
south central, and New Mexico, north central .................W, III, Supp, pp 195-201
Spanish Peaks region ..........................................................W, 1879, pp 276-277
White River district ......................................................H, Ann 10, pp 75-76, 109
of Fortieth Parallel region ...............................................K, I, p 303-320
of Utah, White River district .........................................H, Ann 10, pp 74-75, 109
of Wyoming, Colorado Range ..............................................K, II, pp 41-45
Sweetwater Valley ...........................................................H, Ann 11, p 109
Whisky Gap, vicinity of ....................................................H, Ann 11, pp 122-123
Wind River Range, vicinity of ...........................................H, Ann 11, p 85
(See also, Cretaceous No. 2.)
Colorado Plateau, geology of ...............................................W, III, pp 227-301
Colorado Plateau system, description of ..............................W, III, pp 43-57
Colorado or Front Range, Colorado-Wyoming, Archean rocks of ....K, I, pp 17-28
of east slope, geology of, from Cache la Poudre River to Pikes Peak .H, Ann 7, pp 17-36
from Denver to Colorado Springs ................................................H, Ann 7, pp 194-212
Jurassic rocks of ..........................................................K, I, pp 285-289
surface features of, notes on ............................................H, Bull, vol 1, ser 2, No 4, pp 216-220
topographic features of ....................................................H, Ann 9, pp 414-417
Triassic rocks of ..........................................................K, I, pp 249-258
Colorado River, canyons of ..................................................W, III, pp 67-85
diversion of, proposed .......................................................W, 1876, pp 76-77, 109-125
explorations of, account of ................................................W, I, pp 147-171; ECR, pp 3-145
irrigable lands in basin of, in Utah ........................................AL, pp 150-164
Colorado Valley, birds of, a repository of information concerning North Amer­...H, Misc 11
ican ornithology ..............................................................ECR, pp 149-214
physical features of ........................................................ECR, pp 149-214
Colorado Springs, Colorado, astronomical observations at ...........W, Uncl 3, pp 47-82
geology near ..............................................................H, Ann 6, pp 100-104
Coloradoadoite, analysis of, from Colorado, Ballarat district, Smuggler mine, and
Boulder County, Keystone mine ............................................H, Ann 10, p 142
Columbus district, Nevada, notes on ........................................W, 1871, p 48
Comstock lode, mines of, workings of ....................................K, III, pp 97-191
ores of, treatment of ........................................................K, III, pp 193-272
reports on .................................................................W, 1877, pp 1284-1285; W, 1878, pp 145-166
structure, ores, etc., of ..................................................K, III, pp 37-96
Confidence district, California, notes on ..................................W, 1878, pp 86-87
Conglomerate, analysis of, from Wyoming, Blacks Fork, vicinity of ..K, II, p 248
Conglomerates, formation of ................................................HP, pp 214-224
of Utah, high plateaus ......................................................HP, pp 74-77
Conklin (A. R.), geological report on portions of western Nevada and eastern
California .................................................................W, 1878, pp 167-183
Cenclin (A. R.), geological report on the portions of western Nevada and eastern California between the parallels of 39° 30' and 38° 30' explored in the field season of 1876............W, 1877, pp 1285-1295
report on the foothills facing the plains from latitude 35° 30' to 38°..W, 1877, pp 1298-1303
report on the geology of the mountain ranges from La Veta Pass to the head of the Pecos.........................W, 1876, pp 199-202
report on the lithology of southern Colorado and northern New Mexico, W, 1877, pp 1295-1298
report on the lithology and mineralogy of portions of Nevada and California.....................W, 1878, pp 184-185
Conrad (T. A.), descriptions of new mollusks from Cretaceous beds of Colorado.. H, Ann 7, pp 455-456
Contour map of United States, notes on............H, Bull, vol ii, No 3, pp 223-226
Coopers Creek, Wyoming, geology near.....................LOR, 1868, pp 242-243;
H, Ann 2, pp 89-90
Cope (E. D.), contribution to the knowledge of the ichthyological fauna of the Green River shales.............H, Bull, vol iii, No 4, pp 806-819
descriptions of fishes from the Cretaceous and Tertiary deposits west of the Mississippi River.............H, Bull, vol iv, No 1, pp 67-77
descriptions of new extinct vertebrata from the upper Tertiary and Dakota formations................H, Bull, vol iv, No 2, pp 379-396
notes on the Eocene and Pliocene lacustrine formations of New Mexico, including descriptions of certain new species of vertebrates.. W, 1874, pp 115-130
observations on the faunæ of the Miocene Tertiaries of Oregon.....H, Bull, vol v, No 1, pp 55-69
on a carnivorous Dinosaurian from the Dakota beds of Colorado.....H, Bull, vol iii, No 4, pp 805-806
on a wading bird from the Amyzon shales...........H, Bull, vol vi, No 1, pp 83-85
on some new batrachia and reptilia from the Permian beds of Texas.
H, Bull, vol vi, No 1, pp 79-82
on the Canidæ of the Loup Fork epoch.............H, Bull, vol vi, No 2, pp 387-390
on the extinct species of Rhinoceridæ of North America and their allies.
H, Bull, vol v, No 2, pp 227-237
on the extinct vertebrata of the Eocene of Wyoming, observed by the expedition of 1872, with notes on the geology.........H, Ann 6, pp 543-649
on the fishes of the Tertiary shales of Green River, Wyoming.............H, Ann 4, pp 425-431
on the fishes of Tertiary shales of the South Park .............H, Bull, vol i, ser 2, No 1, pp 3-5
on the fossil reptiles and fishes of the Cretaceous rocks of Kansas.....H, Ann 4, pp 385-425
on the genus Erisichte........................................H, Bull, vol iii, No 4, pp 821-823
on the geology and paleontology of the Cretaceous strata of Kansas.....H, Ann 5, pp 318-349
on the Nimravidæ and Canidæ of the Miocene period........H, Bull, vol vi, No 1, pp 165-181
on the Plagopterinæ and the ichthyology of Utah..........................W, Uncl 8
on the vertebrata of the Wind River Eocene beds of Wyoming.....H, Bull, vol vi, No 1, pp 183-202
on the vertebrate fossils of the Wahsatch strata..................H, Ann 5, pp 350-353
Professor Owen on the Pythonomormpha................H, Bull, vol iv, No 1, pp 299-311
INDEX TO HAYDEN, KING,

Cope (E. D.), recent reptiles and fishes; report on the reptiles and fishes obtained by the naturalists of the expedition...H, Ann 4, pp 432-442

report on geology of northwestern New Mexico..................W, 1875, pp 61-97

report on geology of the region of the Judith River, Montana, and on vertebrate fossils obtained on or near the Missouri River.......H, Bull, vol iii, No 3, pp 565-597

report on the recent reptiles and fishes of the survey, collected by Campb ell Carrington and C. M. Dawes..............H, Ann 5, pp 467-476

report on the remains of population observed in northwestern New Mexico........................................W, vii, pp 351-361

report on the remains of population observed on and near the Eocene plateau of northwestern New Mexico ............W, 1875, pp 166-173

report on the stratigraphy and Pliocene vertebrate paleontology of northern Colorado ..................H, Bull, vol i, ser 1, No 1, pp 9-28

report on the vertebrate paleontology of Colorado ........H, Ann 7, pp 427-533

report upon the extinct vertebrata obtained in New Mexico by parties of the expedition of 1874......................W, iv, part ii

report upon the extinct vertebrata of Europe and North America............................ .H, Bull, vol v, No 1, pp 33-54

supplementary notices of fishes from the fresh-water Tertiaries of the Rocky Mountains..................H, Bull, vol i, ser 1, No 2, pp 49-51

systematic catalogue of the vertebrata of the Eocene of New Mexico...W, Uncl 9

the relations of the horizons of extinct vertebrata of Europe and North America..................H, Bull, vol v, pp 427-533

the vertebrata of the Cretaceous formations of the West..H, Mon ii

the vertebrata of the Tertiary formations of the West.........H, Mon iii

Cope (E. D.) and Yarrow (H. C.), report upon the collections of fishes made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, 1871-1874..................................................W, v, pp 635-703

Cope district, Nevada, notes on..................W, 1871, p 34

Copper ore, analysis of, from Arizona, San Francisco River........................................W, iii, p 636

analysis of, from New Mexico, Springhill district...W, iii, p 636

Coprolite, analysis of, from Kansas...H, Ann 9, p 286; H, Bull, vol ii, No 3, p 217

Correlation of Archean rocks exposed in Fortieth Parallel area..........................K, i, pp 99-111

Cortez district, Nevada, mining in..................K, iii, pp 405-407

Cortez Range, Nevada, geology of..........................K, ii, pp 570-589

granite of........................................K, i, pp 70-74

Cottonwood Canyon, Utah, Paleozoic rocks of..........................K, i, pp 165-172

Coues (E.), abstract of a study of the genera Geomys and Thomomys........ECR, pp 217-279

an account of the various publications relating to the travels of Lewis and Clarke, with a commentary on the zoological results of their expedition..........................H, Bull, vol i, ser 2, No 6, pp 417-444

bibliography of American ornithology ..................H, Bull, vol v, No 2, pp 239-330;

H, Bull, vol v, No 3, pp 521-1066

birds of the Colorado Valley..........................H, Misc 11

birds of the Northwest..........................H, Misc 3

field notes on birds observed in Dakota and Montana along the forty-ninth parallel during seasons of 1873 and 1874..H, Bull, vol iv, No 3, pp 545-661

fur-bearing animals........................................H, Misc 8

on a breed of solid-hoofed pigs, apparently established in Texas..H, Bull, vol iv,

No 1, pp 295-297
Coues (E.), on consolidation of the hoofs in the Virginian deer. H, Bull, vol iv, No 1, pp 293-294

on the breeding habits, nest, and eggs of the white-tailed ptarmigan (Lagopus leucurus).................. H, Bull, vol i, ser 2, No 5, pp 263-266

on the cranial and dental characters of Mephitime, with descriptions of Mephitis frontata.................. H, Bull, vol i, ser 2, No 1, pp 7-15

on the present status of Passer domesticus in America, with special reference to the Western States and Territories... H, Bull, vol v, No 2, pp 175-193

precursory notes on American insectivorous mammals, with descriptions of new species.................. H, Bull, vol iii, No 3, pp 631-653

some account, critical, descriptive, and historical, of Zapus hudsonius.. H, Bull, vol i, ser 2, No 5, pp 253-262

the cranial and dental characters of Geomyide. H Bull, vol i, ser 2, No 2, pp 83-90

synopsis of the reptiles and batrachians of Arizona .............. W, v, pp 585-633

Coues (E.) and Allen (J. A.), monographs of North American Rodentia. H, Mon xi

Coues (E.) and Yarrow (H. C.), notes on the herpetology of Dakota and Montana.......................... H, Bull, vol iv, No 1, pp 259-291

report upon the collections of mammals made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, 1871-1874...... W, v, pp 35-129

Coulter (J. M.), botany, report on [1872]............................ H, Ann 6, pp 747-792

Coulter (J. M) and Porter (T. C.), synopsis of the flora of Colorado....... H, Miscl 4

Cranberry, insects affecting............................................. H, Ann 10, pp 521-526

Crania from Santa Barbara Islands, California, observations on...... W, vii, pp 277-292

(See, also, Ethnology and archaeology.)

Crania and skeletons collected in 1872-1874, notes on...................... W, vii, pp 391-397

(See, also, Ethnology and archaeology.)

Craniid amulets and prehistoric trephining............................................ Eth, v

(See, also, Ethnology and archaeology.)

Cranium from Chaco Canyon, New Mexico, report on.................. H, Ann 10, pp 453-457

(See, also, Ethnology and archaeology.)

Crayfish from Lower Tertiary beds of western Wyoming.................. H, Bull, vol vi, No 2, pp 391-397

Cresson (E. T.), report on the collections of Hymenoptera made in portions of Nevada, Utah, New Mexico, Colorado, and Arizona, 1872-1874.. W, v, pp 705-736

Cretaceous No. 1 of Colorado, east of Front Range............... H, Ann 7, pp 100-101

of Colorado, San Juan region........................................ H, Ann 8, pp 222-224

(See, also, Dakota group.)

Cretaceous No. 2 of Colorado, east of Front Range............... H, Ann 7, pp 101-102

of Colorado, San Juan region........................................ H, Ann 8, pp 224-228

(See, also, Colorado group.)

Cretaceous No. 2 and No. 3 of Colorado; Eagle, Grand, and Gunnison rivers... H, Ann 8, pp 135-137

Cretaceous No. 3 of Colorado, east of Front Range............... H, Ann 7, pp 102-103

Cretaceous No. 4 and No. 5 of Colorado, east of Front Range... H, Ann 7, pp 103-105

Cretaceous fossils, geographical distribution of, table showing... H, Ann 11, pp 252-253

invertebrates, corals of Colorado, remarks on...H, Bull, vol v, No 2, pp 220-221

mollusks of Colorado........................................... H, Ann 7, pp 455-456

of Arizona, Utah, Colorado, and New Mexico............ W, iv, pp 169-205

of Black Hills................................................... BH, pp 383-459; PBH, pp 27-46

of Colorado.................................................. H, Ann 11, pp 175-177, 197, 205-207, 224-225, 265-266
INDEX TO HAYDEN, KING,

Cretaceous fossils; invertebrates of Colorado, Bear Creek Valley, list of...H, Ann 11, pp 265-266

invertebrates of Colorado, Cache la Poudre Valley and Fossil Ridge...H, Ann 11, pp 175-177

of Colorado, Golden and Morrison, list of ....................H, Ann 11, p 197
Greeley, vicinity of ..............................................H, Ann 11, p 266
Sage Creek ..........................................................H, Ann 11, pp 205-207
White River Indian Agency, vicinity of .........................H, Ann 11, pp 224-225
of Colorado, New Mexico, Utah, and Arizona ..................W, iv, pp 169-205
of Fortieth Parallel region ......................................K, iv, pp 140-182
of Fox Hills group of Colorado, east of Rocky Mountains ....H, Ann 11, pp 179-186, 266
of New Mexico, list of ............................................H, Ann 11, pp 267-268
of New Mexico and Utah ..........................................W, Uncl 6, pp 24-27
of New Mexico, Utah, Arizona, and Colorado ..................W, iv, pp 169-205
of Plateau province ................................................UM, pp 94-101, 112-124
of Southwest .........................................................W, iv, pp 169-205
of Texas; Denison, Hilotés, and Salado, list of ............H, Ann 11, pp 268-270
of Utah, Ashley Fork ...............................................H, Ann 11, p 229
Coalville .............................................................H, Ann 11, pp 232-239
of Utah and New Mexico ..........................................W, Uncl 6, pp 24-27
of Utah and Wyoming, list of, collected in 1871 .............H, Ann 5, pp 375-376
of Utah, Colorado, New Mexico, and Arizona .................W, iv, pp 169-205
of western States and Territories ..............................H, Ann 11, pp 273-319;
H, Ann 12, i, pp 3-39

descriptions of new species of ................................H, Ann 4, pp 300-318
list of .................................................................H, Bull, vol iii, No. 3, p 610
of Wyoming, Bear-River Valley and Hilliard station .......H, Ann 11, pp 248-250
of Wyoming and Utah, list of ....................................H, Ann 5, pp 375-376
(See, also, Invertebrates, fossil.)
of Colorado, various localities .................................H, Ann 11, pp 175-177, 197, 205-207, 224-225, 265-266
of New Mexico, Cimarron, list of ................................H, Ann 11, pp 267-268
of Utah and Wyoming, list of ....................................H, Ann 5, pp 375-376
of western States and Territories ..............................H, Ann 4, pp 300-318; H, Ann 11, pp 273-319; H, Ann 12, i, pp 3-39
of Wyoming, Bear River Valley .................................H, Ann 11, pp 248-249
Hilliard station ......................................................H, Ann 11, pp 249-250
of Wyoming and Utah ..............................................H, Ann 5, pp 375-376
(See, also, Vertebrates, fossil; Invertebrates, fossil.)

terrestrial plants of Cretaceous and Tertiary formations of Kansas and Nebraska...H, Ann 4, pp 370-385

of Territories, illustrations of ................................H, Uncl 15
of Dakota group, general characters and relation of ...........H, Bull, vol i, ser 1, No 2, pp 52-62
new species of .....................................................H, Bull, vol i, ser 2, No 5, pp 391-400
of western Territories ............................................H, Mon vi
of North America, review of ....................................H, Ann 8, pp 316-365
(See, also, Plants, fossil.)
terrestrial, Dinosaurian, carnivorous, from Dakota beds of Colorado...H, Bull, vol iii, No 4, pp 805-806
Cretaceous fossils, vertebrates, fishes of Cretaceous and Tertiary west of Mississippi River .......................................................... H, Bull, vol iv, No 1, pp 67-77
vertebrates of Colorado ....................................................... H, Ann 7, pp 444-456
of Dakota and upper Tertiary formations ................................ H, Bull, vol iv, No 2, pp 379-396
of Kansas .............................................................................. H, Ann 5, pp 327-349
of Missouri River region ...................................................... H, Bull, vol iii, No 3, pp 577-597
of North America, synopsis of .............................................. H, Mon ii, pp 245-302
of West ................................................................................. H, Mon ii; H, Bull, vol i, ser 1, No 2, pp 5-48
reptiles and fishes of interior region ...................................... H, Mon i, pp 266-310
of Kansas .............................................................................. H, Ann 4, pp 385-425

(See, also, Vertebrates, fossil.)
(See, also, Laramie fossils; Cretaceous and Tertiary fossils.)

Cretaceous rocks, classification and distribution of ...................... H, Mon ii, pp 15-41
of Basin Ranges ........................................................................ W, iii, p 174
of Black Hills ........................................................................... BH, pp 169-186
of Colorado, central .......................................................... H, Ann 7, pp 382-403
Eagle, Grand, and Gunnison rivers ................................ ....... H, Ann 8, pp 128-139
Front Range .............................................................................. H, Ann 8, pp 45-46
east of ...................................................................................... H, Ann 7, pp 100-105
Grand River district ............................................................. H, Ann 9, pp 87-92; H, Ann 10, pp 180-181
Huerfano Park ......................................................................... H, Ann 1, pp 123-127
Middle Park ............................................................................ H, Ann 7, pp 154-156
northwestern ........................................................................... H, Ann 10, pp 28-32
San Juan drainage basin ....................................................... H, Ann 9, pp 180-189
San Juan region ................................................................. H, Ann 8, pp 221-228; H, Ann 9, pp 257-263
south-central, and New Mexico, north-central ......................... W, iii, Supp, pp 88-130
White River district ............................................................. H, Ann 10, pp 74-77
of Colorado Plateau ............................................................. W, iii, pp 274-280
of Fortieth Parallel region .................................................... K, i, pp 296-339, 347-357
of Idaho, eastern, and Wyoming, western .............................. H, Ann 11, p 497
of Kansas .............................................................................. H, Ann 9, pp 231-294
geology and paleontology of .................................................... H, Ann 5, pp 318-349
notes on ..................................................................................... H, Bull, vol ii, No 3, pp 214-221
of Missouri River region, upper .............................................. H, Mon ix, pp xxi-xxxxiii
parallelism with Cretaceous of Europe ........................................ H, Mon ix, pp xliii-xlvii
relation to beds of the Mississippi ............................................ H, Mon ix, pp xxxviii-xliv
of Nebraska ................................................................. LOR, 1897, pp 167-173; H, Ann 1, pp 49-55
of New Mexico, north-central, and Colorado, south-central ........ W, iii, Supp, pp 88-130
of Utah, Henry Mountains ........................................................... HM, pp 4-5
high plateaus .......................................................................... HP, pp 154-158
Uinta Mountains .................................................................... UM, pp 153-158
of West, mutual relations of Tertiary and ................................ H, Ann 7, pp 431-444
western ..................................................................................... H, Ann 11, p 629
western, and Idaho, eastern ................................................... H, Ann 11, p 497
Wind River Range, east of ................................................... H, Ann 11, pp 84-87

(See, also, Laramie; names of formations.)
Cretaceous uplift of Bitter Creek, Wyoming .............................. K, ii, pp 227-236
of Oyster Ridge, Wyoming .................................................... K, ii, pp 250-253
Cretaceous and Tertiary fossils, fishes west of Mississippi River H, Bull, vol iv, No 1, pp 67-77

Bull. 222-04—7
Cretaceous and Tertiary fossils, invertebrates of upper Missouri country...H, Mon ix
plants of Kansas and Nebraska, fossil..........................H, Ann 4, pp 370–385
of western Territories........................................H, Mon viii
illustrations of........................................H, Uncl 15
(See, also, Invertebrates, fossil; Vertebrates, fossil; Plants, fossil.)
Cretaceous and Tertiary periods of Kansas, notes on........H, Ann 9, pp 277–294
Cretaceous and Tertiary formations of the West, mutual relations of........H, Bull,
voll, ser 1, No 2, pp 5–16
Crow Creek, Wyoming, geology near..........................H, Ann 11, p 554
Crustacean, Lernaean, of Colorado, description....................H, Ann 7, p 612
Crustaceans, amphipod, report on................................H, Ann 7, pp 608–611
fresh-water phyllopod, of North America, synopsis of.........H, Ann 7, pp 613–622
phyllopod, bibliography of....................................H, Ann 12, i, pp 453–457
of North America, monograph of................................H, Ann 12, i, pp 295–457
of the West, descriptions of new..........................H, Bull, voll, i, No 1, pp 171–185
(See, also, Invertebrates.)
Cultivation, experiments in, on the plains along the line of the Kansas Pacific
Railway.........................................H, Ann 5, pp 274–279
Cup-shaped and lapidarian sculptures in the Old World and America........Eth, v
(See, also, Ethnology and archaeology.)
Crystalline schists of Fortieth Parallel region, microscopic petrography of......K, vi,
pp 14–38
Dakota, ancient mounds of..................................H, Ann 6, pp 655–658
birds of Fort Sisseton, notes on..................................H, Bull, voll, i, No 1, pp 71–103
of Montana and along forty-ninth parallel, field notes on...............H, Bull,
voll, i, No 3, pp 545–661
fishes of Montana and, collected in 1873 and 1874, report on........H, Bull,
voll, i, No 4, pp 777–799
Hemiptera collected in Montana and, in 1873–74..........................H, Bull,
voll, i, No 2, pp 503–512
herpetology of Montana and..............................H, Bull, voll, i, No 1, pp 259–291
mammals of Fort Sisseton..................................H, Bull, voll, i, No 1, pp 201–218
physical geography and agricultural resources of Nebraska, Minnesota,
and.................................................................H, Ann 6, pp 273–313
Orthoptera collected in Montana and, in 1873, discussion of........H, Bull,
voll, i, No 2, pp 481–501
plants collected in Montana and, along forty-ninth parallel, catalogue of
H, Bull, voll, i, No 4, pp 801–830
Dakota group, considered as a marine formation................H, Mon vi, pp 25–28
flora of............................................H, Mon vi; H, Mon vii, pp 2–107
general characters and relation of................H, Bull, voll, i, ser 1, No 2, pp 52–62
invertebrate fossils of, from the West, list of................H, Bull, voll, iii, No 3, p 610
of Black Hills........................................BH, pp 174–180
of Colorado, Colorado Range..................................K, ii, pp 39–41
Dinosaurian from..............................................H, Bull, voll, iii, No 4, pp 805–806
Eagle, Grand, and Gunnison rivers............................H, Ann 8, pp 128–135
Grand River district........................................H, Ann 9, pp 88–91; H, Ann 10, p 180
Huerfano Park..............................................H, Ann 9, pp 124–126
northwestern................................................H, Ann 10, pp 29–30
San Juan drainage basin......................................H, Ann 9, pp 181–183
south-central, and New Mexico, north-central....................W, iii, Supp, pp 88–94
Dakota group of Colorado, Spanish Peak region
- W, 1879, p 276
- of Colorado, White River district
  - H, Ann 10, pp 74-75, 108
- of Fortieth Parallel region
  - K, i, pp 298-305
- of Kansas
  - H, Ann 9, pp 290-294
- of Missouri country, upper
  - H, Mon ix, pp xxvi-xxviii
- of Nebraska
  - LOR, 1867, pp 168-171; H, Ann 1, pp 50-53
- of New Mexico, north-central, and Colorado, south-central
  - W, iii, Supp, pp 88-94
- of Utah, White River district
  - H, Ann 10, pp 74-75, 108
- of Wyoming, Colorado Range
  - K, ii, pp 39-41
  - Seminole Hills, vicinity of
    - H, Ann 11, p 121
  - Sweetwater Valley
  - Wind River Range, vicinity of
    - H, Ann 11, p 84
- plants of, new species of
  - H, Bull, vol 1, ser 2, No 5, pp 391-400
- vertebrata from upper Tertiary and
  (See, also, Cretaceous No 1.)
- Dakota nation, calendar of
  - H, Bull, vol iii, No 1, pp 3-25
  (See, also, Ethnology and archaeology.)
- Dakota-English dictionary
  - Eth, vii
  (See, also, Ethnology and archaeology.)
- Dacite, analysis of, from Italy, Monte Alto
  - K, vi, p 137
- analysis of, from Karinthia, New Prevali
  - K, vi, p 137
- from Nevada, American City
  - K, vi, p 136
- Shoshone Peak
  - K, ii, p 621
- Washoe and Shoshone Peak
  - K, i, p 576
- from Transylvania, various localities
  - K, vi, p 137
- of Nevada, microscopic petrography of
  - K, vi, pp 134-142
- of Nevada Plateau
  - K, i, pp 567-571
- Dall (W. H.), terms of relationship used by the Innuit
  - Eth, i, pp 117-119
- tribes of the extreme Northwest
  - Eth, i, pp 1-106
- Dance at the pueblo of Zuñi, description of
  - W, vii, pp 332-336
  (See, also, Ethnology and archaeology.)
- Deep Spring Valley district, California, notes on
  - W, 1871, pp 49-50
- Deer, Virginian, consolidation of hoofs of
  - H, Bull, vol iv, No 1, pp 293-294
  (See, also, Vertebrates.)
- Denmark, primitive lapidarian sculptures in
  - Eth, v, pp 25-28
- Denver, Colorado, birds collected in vicinity of
  - W, Und 4, pp 55-69
- communication between San Juan mines and, means of
  - H, Bull, vol 1, ser 2, No 3, pp 145-149
- geology between Cheyenne and
- between Colorado City and
- Deposit at Soda Lakes, Nevada
  - analysis of
    - K, ii, p 748
- Deposit, mineral, analysis of, from Nevada, Bardmass Pass, vicinity of
  - K, ii, p 687
- Deposit, spring, analysis of, from Nevada, Shoshone Range
  - K, ii, p 634
- Desatoya Mountains, Nevada, geology of
  - K, ii, pp 644-649
- Triassic rocks of
  - K, i, pp 282-284
- Desert Mountains, Utah, granite of
  - K, i, p 55
- Desiccation products, analysis of, from Lake Bonneville
  - K, i, p 602
- analysis of, from Lake Lahontan
  - K, i, p 528
- Devonian fossils, invertebrates of Fortieth Parallel region
  - K, iv, pp 25-50, 246-251
- Devonian rocks of Colorado, San Juan region
  - H, Ann 8, pp 211-214
- of Wyoming, Wind River Range
  - H, Ann 11, p 73
Diabase, analysis of, from Nevada, Diabase Hills
analyses of, from Nevada, Wadsworth, vicinity of
of Nevada, microscopic petrography of
Diamond Creek, New Mexico, cliff house and cave on
Diamond district, Nevada, notes on
Diamond Peak, Colorado, structure of
Diamond Range, Nevada, geology of
Diastrophism, displacements in Colorado, northwestern
faulting in Yellowstone Park
faulting and folding in Colorado, Elk Range
folds and folds of Colorado Plateau
folds in Utah, Henry Mountains
faulting and folding in Colorado, Elk Range
folding in Colorado, northwestern
uplifts in Colorado, northwestern
Dictionary, Dakota-English
of Hidatsa language
of Klamath language
(See, also, Ethnology and archaeology; Vocabulary.)
Dikes of Colorado, Spanish Peaks region
of Colorado and Utah, White River district
Dinosaurian, carnivorous, from Dakota of Colorado
Diorite, analysis of, from Nevada, Agate Pass
analysis of, from Nevada, Shoshone Range and Mount Davidson
of Fortieth Parallel region, microscopic petrography of
Diptera collected in Colorado in 1873
collected in Colorado and Arizona
descriptions of new genera and species of, from the West
(See, also, Invertebrates.)
Dirty Devil River, report on a trip to the mouth of
Displacements in Colorado, northwestern
Dolomite, analysis of, from Nevada, Shoshone Mesa
of Colorado, occurrence and character of
Dolores River, Colorado, geology near
Dorsey (J. O.), the Chegah language
Drift in Colorado, northwestern
in Colorado, Sangre de Cristo Range
in Nebraska
Dry Mountains, Colorado, structure of
Drummond (W., jr.), land grants in aid of internal improvements
Dutton (C. E.), irrigable lands of the valley of the Sevier River
petrographic notes on the volcanic rocks of the Yellowstone Park
report on the geology of the high plateaus of Utah
report on the lithologic character of the Henry Mountain intrusives
Earth, infusorial. (See, Infusorial earth.)
Earwigs, synopsis of North American
(See, also, Invertebrates.)
East Fork Canyon, Utah, geology of ........................................... HP, pp 243-248
East Gallatin Mountains, Wyoming, geology of ............................ H, Ann 12, n, pp 19-27
East Humboldt Range, Nevada, geology of .................................. K, n, pp 523-541
Eaton (D. C.), descriptions of plants by ........................................ K, v, pp 136-208, 394-397
ferns of the Southwest ......................................................... W, vi, pp 299-340
list of species of butterflies collected by Campbell Carrington and William B. Logan in 1871 .................. H, Ann 5, pp 466-467
list of species of butterflies collected by W. H. Carpenter in Colorado in 1873 ......................................................... H, Ann 7, p 542
on the Lepidoptera collected by Dr. Elliott Cones in Montana during 1874 ......................................................... H, Bull, vol iv, No 2, pp 513-517
Eels (M.), the Twana Indians of the Skokomish Reservation in Washington Territory ......................................................... H, Bull, vol iii, No 1, pp 57-114
Efflorescence, analysis of, from Lake Bonnevile ................................ K, i, p 502
analysis of, from Lake Lahontan ............................................. K, i, p 528
from Nevada, Buffalo Peak, vicinity of .................................... K, ii, p 731
Hot Springs station .............................................................. K, ii, p 773
from New Mexico, Ojo de Taf ................................................ W, iii, p 628
from Utah, Benada Peak, vicinity of ...................................... K, ii, p 432
Egan Canyon district, Nevada, geology of, and mining in ............... K, iii, pp 445-449
Egan Range, Nevada, geology of ............................................. K, ii, pp 486-489
El Paso district, California, notes on ...................................... W, 1871, p 52
Elevation of Rocky Mountains near Missouri River, period of .......... H, Uncl 16, pp 9-13
Elevations in Black Hills .......................................................... BH, pp 551-553
in Colorado ................................................................. H, Ann 7, pp 667-669, 678-681; H, Ann 8, pp 429-433; H, Bull, vol i, ser 1, No 2, pp 75-77
Sangre de Cristo Range ......................................................... H, Ann 9, pp 299-300
in Dakota, Minnesota, and Nebraska ........................................ H, Ann 6, pp 286-297
in Idaho, Wyoming, and Utah .................................................. H, Ann 6, pp 799-802
in Minnesota, Dakota, and Nebraska ....................................... H, Ann 6, pp 286-297
in Yellowstone Park ............................................................. H, Ann 12, n, pp 457-463
lists of .............................................................................. H, Bull, vol v, No 3, pp 441-470; W, 1878, pp 68-78; W, Uncl 16, pp 121-261
methods of determining ......................................................... H, Ann 10, pp 299-303
of certain datum points on the Great Lakes and rivers and in the Rocky Mountains ........................................... H, Ann 7, pp 629-659
west of Mississippi River ......................................................... H, Misc 1
of one hundredth meridian ..................................................... W, ii, pp 556-566
Elk Mountain region, Wyoming, geology of ................................. LOR, 1868, pp 244-245; H, Ann 2, pp 91-92; K, ii, pp 148-152
Elk Mountains, Colorado, eruptive masses in ............................. H, Bull, vol iii, No 3, pp 555-557
geology of ............................................................................. H, Ann 7, pp 58-69, 250-261; H, Ann 8, pp 54-71
mines in ................................................................................ H, Ann 7, pp 304-305
Elkhead Mountains, Colorado, geology of ................................. K, ii, pp 167-180
Ellen, Mount, Utah, geology of ............................................... HM, pp 38-49
Elliott (H. W.), profiles, sections, and other illustrations ............. H, Uncl 3
Elliott (R. S.), experiments in cultivation on the plains along the line of the Kansas Pacific Railway ................. H, Ann 5, pp 274-279
report on the industrial resources of western Kansas and eastern Colorado ......................................................... H, Ann 4, pp 442-458
Ellsworth, Mount, Utah, geology of ........................................... HM, pp 22-27
Ely district, Nevada, notes on .................................................. W, 1871, pp 42-43
Emerton (J. H.), descriptions to two new spiders from Colorado .... H, Bull, vol iii, No 2, pp 528-529
Empire, Colorado, mines at .................................... H, Ann 3, p 114; H, Ann 1-3, p 112
Emmons (S. F.), geology of Egan Canyon district ..................... K, ii, pp 445-449
geology of Toyabe Range ......................................... K, ii, pp 320-348
Emmons (S. F.), and Hague (A.), descriptive geology of Fortieth Parallel region ........................................... K, ii
Endlich (F. M.), mineralogical report of ................................ H, Ann 10, pp 133-159
on some striking products of erosion in Colorado ...................... H, Bull, vol iv, No 4, pp 831-864
on the erupted rocks of Colorado .................................. H, Ann 10, pp 199-272
report on geology of Sweetwater district, Wyoming .................. H, Ann 11, pp 3-158
report on geology of the White River district ......................... H, Ann 10, pp 61-131
report on mining districts of Colorado ................................ H, Ann 7, pp 275-361
report on southeastern district of Colorado ......................... H, Ann 9, pp 105-235
report on the mines and geology of the San Juan country ............. H, Bull, vol i, ser 2, No 3, pp 151-164
work by, report on, 1874 ............................................ H, Ann 8, pp 181-240
Engelmann (G.), Cactaceae of Great Basin ........................... K, v, pp 115-120
England, primitive lapidarian sculptures in ................................ Eth, v, pp 15-17
Entomological Commission, report of .................................. H, Uncl 14
Entomostraca, new, from Colorado ................................... H, Bull, vol iii, No 1, pp 151-155
(See, also, Invertebrates.)
Eocene fossils, plants, American, general characters of ............. H, Ann 6, pp 343-350
(See, also, Plants, fossils.)
vertebrata of Colorado ............................................. H, Ann 7, pp 456-461
of New Mexico ........................................................ W, iv, pt 2,
pp 37-282; W, 1874, pp 115-130; W, 1875, pp 93-96
systematic catalogue of ............................................. W, Uncl 9
of Wyoming ............................................................. H, Ann 6, pp 543-649
Wind River .............................................................. H, Bull, vol vi, No 1, pp 183-202
(See, also, Vertebrates, fossil.)
Eocene plateau of New Mexico, geology of ............................... W, iv, pt ii, pp 15-20; W, 1875, pp 88-93
Eocene rocks of Fortieth Parallel region ................................ K, i, pp 359-407
(See, also, Tertiary rocks.)
Eocene and Pliocene lacustrine formations of New Mexico, notes on, including descriptions of certain new species of vertebrates .............................................. W, 1874, pp 115-130
Epidote, thin section of, from diorite of Nevada, Winnemucca Peak ......................................................... K, vi, pl 3
Eremophila alpestris, osteology of ...................................... H, Ann 12, i, pp 627-652; H, Bull, vol vi, No 1, pp 119-147
(See, also, Vertebrates.)
Erisichte, discussion of genus .......................................... H, Bull, vol iii, No 4, pp 821-823
(See, also, Vertebrates.)
Erosion in Colorado, central ............................................. W, iii, pp 471-477
in Colorado, eastern, peculiar forms of ................................ H, Bull, vol i, ser 2, No 3, pp 210-211
Elk Mountains .......................................................... H, Ann 8, pp 57-58
in Grand Canyon ........................................................ W, iii, pp 67-85
in Uinta Mountains .................................................... UM, pp 181-198
methods of ............................................................. ECR, pp 202-208
principles of .......................................................... HM, pp 99-114
products of ............................................................ H, Bull, vol iv, No 4, pp 831-864
Eruptive mountains in Colorado, peculiar type of ...................... H, Bull, vol iii, No 3, pp 551-564
Eruptive rocks of Arizona and New Mexico .................. W, iii, pp 638-651
of California, southeastern ........................... W, 1876, pp 179-183
(See, also, Igneous rocks; Volcanic rocks.)
Escalante Hills, Colorado, geology of .................. K, ii, pp 287-288
Ethnological examinations in California, Santa Barbara, vicinity of ... W, 1876,
pp 312-321
in California, southern ................................. W, vii, pp 1-314
Ethnology of California, southern, and adjacent regions, notes on .... W, 1876,
pp 321-327.
Ethnology and archaeology; aboriginal inhabitants of southern California... W, vii,
pp 1-31
aborigines, houses and house-life of American .................. Eth, iv
Alaska, natives of, notes on ............................. Eth, i, pp 111-116
amulets, cranial, and prehistoric trephining ............... Eth, v
art, ancient, in Colorado, northwestern ............ H, Bull, vol ii, No 1, pp 65-66
in Wyoming, Bridger Basin ......................... H, Ann 6, pp 651-653
basket work, textile fabrics, etc., of Indians of southern California...... W, vii,
pp 239-250
bead ornaments used by ancient tribes of Arizona .......... H, Bull,
vii, No 1, pp 67-69
beads of Indians of southern California .................. W, vii, pp 263-271
bone, implements and weapons made of wood and ......... W, vii, pp 222-233
musical instruments made of, from southern California... W, vii, pp 234-238
kachina, a dance at the pueblo of Zuñi, description of .......... W, vii, pp 332-336
calendar of Dakota Nation ............................... H, Bull, vol iii, No 1, pp 3-25
Chegihla language, myths, stories, etc., in .............. Eth, vi
cliff dwelling in Arizona, Chelly Canyon ................ H, Ann 10, pp 420-425
crania from Santa Barbara Islands, California, notes on .... W, vii, pp 277-292
crania and skeletons collected in 1872-1874, notes on .......... W, vii, pp 391-397
cranial amulets and prehistoric trephining .................. Eth, v
cranium from New Mexico, Chaco Canyon, report on .... H, Ann 10, pp 453-457
cup-shaped and lapidarian sculpture in the Old World and America..... Eth, v
Dakota grammar, texts, and ethnography .................. Eth, ix
Dakota language, dictionary of .......................... Eth, vii
Dakota Nation, calendar of ................................ H, Bull, vol iii, No 1, pp 3-25
dance at the pueblo of Zuñi ............................. W, vii, pp 332-336
dictionary of Dakota language ............................ Eth, vii
of Hidatsa language ....................................... H, Miscel 7, pp 125-139
of Indian languages, comparative ........................ Eth, i,
pp 121-153, 249-285; W, vi, pp 424-485
of Klamath language ................................. Eth, ii, pt 2, pp 13-701
graves, pestles and mortars from ........................ W, vii, pp 70-92
steam cooking pots, plates, and food vessels from .... W, vii, pp 93-116
stone, objects made of, from ................................ W, vii, pp 190-217
stone pipes from ........................................... W, vii, pp 125-134
stones, perforated, from .................................... W, vii, pp 135-189
graves and kjökkenmöddings of Oregon, coast of .... H, Bull, vol iii, No 1, pp 27-35
of Santa Barbara Islands and adjacent mainland .......... H, Bull,
vii, No 1, pp 37-56
Hidatsa Indians, ethnography and philology of .......... H, Miscel 7
houses of mound builders .................................. Eth, iv, pp 198-221
houses and house life of American aborigines ................ Eth, iv
human remains of ruins of Colorado, southwestern, and New Mexico, north­
ern .......................................................... H, Bull, vol iii, No 1, pp 47-63
Ethnology and archaeology; of ruins of New Mexico, Eocene plateau of northwestern
human remains of ruins of New Mexico, northwestern implements, iron, of Indians of southern California implements, stone, of southern California implements and weapons made of bone and wood, from southern California implements, pottery, etc., obtained in New Mexico and Arizona
Indian languages, comparative vocabulary of of southern California, analytical report on idioms of of California
of northwest of Washington, western, and Oregon, northwestern Indians, houses and house life of of Arizona and Nevada of Arizona, California, and Nevada of California, southern, basket work, textile fabrics, etc., of beads of ornaments of of Nevada, southern and southeastern of Nevada and Arizona observations on of Washington, Skokomish Reservation, customs, language, etc., of
of western States and Territories photographs of, catalogue of Inuit, origin of terms of relationship used by iron implements of Indians of southern California kjökkenmöddings and graves of Oregon, coast of of Santa Barbara islands and the adjacent mainland Klamath Indians, ethnographic sketch, grammar, texts, dictionary of language, bibliography, etc., of lapidarian sculptures in the Old World and America, observations on cup-shaped and language, Dakota, dictionary of language, Nez Percé, grammar of, notes on languages, Indian, comparative vocabulary of Mayas, graphic system and ancient records of mortars and pestles from graves in southern California mound builders, houses of mound of Dakota Nez Percé language, grammar of, notes on ornaments of Indians of southern California
Ethnology and archaeology; ornaments, bead, employed by ancient tribes of Utah and Arizona ............ H, Bull, vol ii, No 1, pp 67-69
pestles and mortars from graves in southern California ............. W, vii, pp 70-92
pipes, stone, from graves of southern California ............ W, vii, pp 125-134
pottery of Colorado, San Juan Valley, ancient tribes .......... H, Ann 10, pp 403-408
pottery, implements, etc., obtained in New Mexico and Arizona W, vii, pp 374-390
pueblo languages of New Mexico, report on ............ W, 1875, pp 180-187
pueblo at Acoma, New Mexico .................. W, vii, pp 325-326
pueblos and their inhabitants, notes on .......... W, vii, pp 319-324
ruins, human remains found among, in southwestern Colorado and northern New Mexico .... H, Bull, vol ii, No 1, pp 47-63
San Juan River region .................. H, Bull, vol ii, No 1, pp 25-45
in Colorado, southwestern ............ H, Ann 8, pp 367-381; 
in New Mexico .................. W, vii, pp 337-345; W, 1875, pp 174-178
Las Animas River .......... W, vii, pp 347-350
Las Animas Valley and other places .... W, 1875, pp 178-180
in Utah and Arizona, San Juan River region .......... H, Bull, vol ii, No 1, pp 25-45
sculpture, cup-shaped and lapidarian, in the Old World and America .... Eth, v
shell heaps of Aleutian Islands, Alaska .................. Eth, i, pp 41-91
skeletons and crania collected in 1872-1874, notes on .......... W, vii, pp 391-397
skull from Chaco Canyon, New Mexico ............. H, Ann 10, pp 453-457
skulls from Santa Barbara Islands ............. W, vii, pp 277-292
skulls and skeletons collected in 1872-74, notes on .......... W, vii, pp 391-397
soapstone pots, method of manufacture of .......... W, vii, pp 117-121
steatite cooking pots, plates, and foods vessels from graves of southern California ............. W, vii, pp 93-116
stone, miscellaneous objects made of, from graves of southern California W, vii, pp 190-217
stone implements of southern California ............ W, vii, pp 49-69
stone pipes from graves of southern California ............. W, vii, pp 125-134
stone weapons, methods of making .......... H, Bull, vol iii, No 3, pp 547-549
stones, perforated, from graves of southern California ........ W, vii, pp 135-189
trephining, prehistoric and cranial amulets .......... Eth, v
Troano manuscript, study of ............. Eth, v
Twanas, Indians, customs, language, etc., of .... H, Bull, vol iii, No 1, pp 57-114
utensils and language of modern Utes .......... H, Bull, vol ii, No 1, pp 71-76
weapons, stone, methods of making .......... H, Bull, vol iii, No 3, pp 547-549
wood, articles and utensils of, from graves of southern California .......... W, vii, pp 122-124
implements and weapons made of bone and .......... W, vii, pp 222-233
Euphotide of Colorado, Mount Ouray ............. H, Ann 10, p 209
Eureka district, Nevada, notes on ............. W, 1871, p 37
Europe, springs, thermal, of ............. H, Ann 12, ii, pp 332-337
vertebrata, extinct, of North America and, relations of horizons of .......... H, Bull, vol v, No 1, pp 33-54
Evaporation in Colorado, Los Pinos Agency ............. W, 1878, p 106
Explorations and surveys in western North America, 1500-1880, account of. W, i, pp 481-764
under Lieutenant Wheeler, sketch of. W, i, pp 21-146
Fairplay, Colorado, meteorologic observations at. H, Miscel 6, pp 35-39
Falconidæ, natural arrangement of, outlines of. H, Bull, vol i, ser 2, No 4, pp 225-231
studies of American. H, Bull, vol ii, No 2, pp 91-182
(See, also, Vertebrates.)
Fall Creek region, Idaho, geology of. H, Ann 11, pp 364-371
Faulting in Yellowstone Park. H, Ann 12, ii, pp 5-9
Faulting and folding in Colorado, Elk Range. H, Ann 8, pp 68-71
in southern Colorado and northern New Mexico. W, iii, Supp, pp 39-65
Faults in Utah, high plateaus. HP, pp 25-47
Faults and folds of Colorado Plateau. W, iii, pp 289-297
Feather Creek, Wyoming, geology near. H, Ann 11, pp 530-531
Feldspar, analysis of, from Bavaria. W, 1875, p 111
analysis of, from Colorado, Pikes Peak. W, 1875, p 111
from Nevada, Pine Nut Canyon. K, ii, p 702
thin section of, from Nevada, Havallah Range. K, vi, pi 3
Felsite-porphyry of Fortieth Parallel region, microscopic petrography of. K, vi, pp 71-80
Ferns of the Southwest. W, vi, pp 299-340
(See, also, Plants.)
Finches, gray-crowned purple, monograph of. H, Bull, vol i, ser 2, No 2, pp 51-82
(See, also, Vertebrates.)
Fish Creek Mountains, Nevada, geology of. K, ii, pp 660-666
granite of. K, ii, p 80
Fish Lake Plateau, Utah, geology of. HP, pp 260-267
Fishes of California and Nevada, report on. W, 1878, pp 187-205
of Nevada, Utah, California, Colorado, New Mexico, and Arizona. W, v, pp 635-703
(See, also, Fishes and reptiles; Vertebrates.)
report on. H, Ann 4, pp 432-442
(See, also, Vertebrates.)
Fishes, fossil, of Carboniferous of Kansas, notice of some. H, Mon i, pp 311-314
of Coal Measures, Upper, of Nebraska. H, Uncl i, pp 239-245
of Cretaceous and Tertiary deposits west of Mississippi River. H, Bull, vol iv, No 1, pp 67-77
of Green River shale of Wyoming. H, Mon i, pp 194-197
of South Park. H, Bull, vol i, ser 2, No 1, pp 3-5
of Tertiaries, fresh-water, of the Rocky Mountains. H, Bull, vol i, ser 1, No 2, pp 49-51
(See, also, Vertebrates, fossil.)
Fishes and reptiles, fossil, of Cretaceous of Interior region. H, Mon i, pp 266-310
(See, also, Vertebrates, fossil.)
SCHMECKEBIER.} POWELL, AND WHEELER SURVEYS. 107

Fissure of Comstock lode, Nevada........................................K, iii, pp 64-68
Flaming Gorge group, exposures of........................................UM, p 51
Fletcher (R.), on prehistoric trephining and cranial amulets................Eth, v
Flora. (See Plants.)
Flora, fossil. (See Plants, fossil.)
Florissant, Colorado, Tertiary lake basin at..............................H, Ann 12,
Folding in Colorado, northwestern........................................H, Ann 10, pp 48-51
Folding and faulting in southern Colorado and northern New Mexico ....W, iii,
Supp, pp 39-65
Folds in Arizona and New Mexico, Plateau region.......................W, iii, pp 556-567
Folds and faults of Colorado Plateau..................................W, iii, pp 289-297
Folds in Utah, Henry Mountains.......................................HM, pp 11-13
Fontenelle hogbacks, Wyoming, geology of..............................H, Ann 11, pp 537-538
Food of birds of Nebraska, notes on..................................H, Unc 14, App, pp 13-62
Fort Bayard, New Mexico, astronomical work at........................W, 1879, pp 81-113
Fort Benton group of Black Hills........................................BH, p 174
of Colorado, south-central, and New Mexico, north-central...........W, iii,
Supp, pp 96-97
Spanish Peaks region......................................................W, 1879, p 277
of Missouri country, upper.............................................H, Mon ix, pp xxviii-xxxv
of Nebraska..............................................................LOR, 1867, pp 171; H, Ann 1, p 53
of New Mexico, north-central, and Colorado, south-central...........W, iii, Supp, pp 96-97
Fort Bliss, Texas, astronomical work at..................................W, 1879, pp 47-81
Fort Bridger, Wyoming, geology between South Pass and..............H, Ann 4, pp 35-41
Fort Ellis, Montana, geology between Fort Hall, Idaho, and........H, Ann 5, pp 27-44
gеology between Gardiner River and......................................H, Ann 6, pp 108-125
Fort Fetterman, Wyoming, geology between Cheyenne and..............H, Ann 4, pp 11-24
gеology between South Pass and..........................................H, Ann 4, pp 24-35
Fort Garland, Colorado, birds collected in vicinity of..............W, Unc 4, pp 69-95
Fort Hall, Idaho, geology between Fort Ellis, Montana, and........H, Ann 5, pp 27-44
gеology between Ogden, Utah, and......................................H, Ann 5, pp 13-26; H, Ann 6, pp 197-207
meteorological observations at..........................................H, Misc 2, pp 4-46
Fort Pierre group of Black Hills.........................................BH, pp 172-173
of Colorado, south-central, and New Mexico, north-central...........W, iii,
Supp, pp 99-101
Spanish Peaks region......................................................W, 1879, p 277
of Missouri country, upper.............................................H, Mon ix, pp xxxiii-xxxv
fossil vertebrates of....................................................H, Bull, vol iii, No 3, pp 586-588
of Nebraska..............................................................LOR, 1867, p 172; H, Ann 1, p 54
of New Mexico, north-central, and Colorado, south-central...........W, iii,
Supp, pp 99-101
Fort Sisseton, Dakota, birds of, notes on..............................H, Bull, vol v, No 1, pp 71-103
mammals of............................................................H, Bull, vol iv, No 1, pp 201-218
Fort Union, New Mexico, astronomical determinations at............W, ii, pp 313-335
gеology between Colorado City and.......................................H, Ann 3, pp 47-58
Fort Union group, extent and age of................................H, Ann 7, pp 432-435; H, Ann 8, pp 141-143
fauna of..............................................................H, Mon ii, pp 25-30
invertebrate fossils of, list of........................................H, Bull, vol iii, No 3, p 612
of Missouri region, upper...............................................H, Mon ix, pp lv-lxi
vertebrata of............................................................H, Ann 7, pp 444-456
(See, also, Lignite formations.)
Forests in the Territories ........................................... H, Ann 5, pp 218-227
Forests and timber in western Territories ......................... W, i, pp 179-181
Forest, fossil, of the volcanic Tertiary formations of the Yellowstone National Park ....... H, Bull, vol v, No 1, pp 125-132

(See, also, Plants, fossil.)

Fortieth Parallel region, birds of ................................... K, iv, pp 303-643

botany of ........................................................................ K, v

géodetical and geographical methods used in survey of .............. K, iv, pp 763-769

invertebrates, fossil of ................................................ K, iv, pp 1-302

lakes, glacial, of .................................................................. K, i, pp 488-529

mining districts and mining industry in ................................... K, iii

microscopical petrography of ................................................ K, vi

orography of ........................................................................ K, i, pp 727-761

Quaternary rocks of .......................................................... K, i, pp 459-529

volcanic rocks of .................................................................. K, i, pp 545-725

Fortieth Parallel survey, area explored by .................................. K, i, pp 1-14

Fossil forest. (See, Forest, fossil.)

Fossils. (See, Invertebrates, fossil; Vertebrates, fossil; Plants, fossil.)

Fountain Head Hills, Nevada, geology of ................................ K, vii, pp 1-14

Fox Hills fossils, geographical distribution of, table showing .... H, Ann 11, pp 252-253

of Colorado, Bear Creek Valley and Greeley, list of .............. H, Ann 11, pp 265-266

east of Rocky Mountains .................................................. H, Ann 11, pp 179-190

Fox Hills group of Black Hills ............................................. BH, pp 171-172

of Colorado, northwestern .................................................. H, Ann 10, pp 31-32

San Juan drainage basin ..................................................... H, Ann 9, pp 187-189

White River district ........................................................... H, Ann 10, pp 76-77, 109

of Fortieth Parallel area ..................................................... K, i, pp 320-330

of Missouri country, upper .................................................. H, Mon ix, pp xxxv-xxxviii

of Utah, White River district .............................................. H, Ann 10, pp 76-77, 109

of Wyoming, Rawlings Peak, vicinity of ...................... H, Ann 11, pp 123-124

Sweetwater Valley ............................................................. H, Ann 11, pp 109

Wind River Range, vicinity of ........................................... H, Ann 11, pp 85-87

France, primitive lapidarian sculptures in .................. Eth, v, pp 18-20

Franklin Buttes, Nevada, geology of .................................. K, ii, pp 491-493

granite of .......................................................................... K, i, p 62

Frazer (P.), mines and minerals of Colorado ......................... H, Ann 3, pp 103-130; H, Ann 1-3, pp 201-228

Frazier Basin, Colorado, geology of .................................... H, Ann 7, pp 161-162

French Creek district, South Dakota, mineral resources of ........ BH, pp 226-238

Fresno, Cal., astronomical work at .................................................. W, 1879, pp 41-47

Front Range. (See Colorado Range.)

Frost (C. C.) Hepatices of Great Basin............................... K, v, p 411

Fur-bearing animals: a monograph of North American Mustelidae ........................................ H, Miscel, 8

(See, also, Vertebrates.)

Furuhelm (-J.), notes on the natives of Alaska .................. Eth, i, pp 111-116

Gabbro, analysis of, from Wyoming, East Iron Mountain ........... K, i, p 110

analysis of, from Wyoming, Iron Mountain ...................... K, vi, p 109

from Wyoming, Laramie Hills ............................................ K, ii, p 14

of Wyoming, Iron Mountain, microscopical petrography of .... K, vi, pp 107-109

Galisteo Creek region, New Mexico, geology of .................. W, iii, Supp, pp 328-346

Galisteo group of New Mexico, Galisteo Creek .................... W, iii, Supp, pp 159-162

Gallatin River, Montana, geology near .................................. H, Ann 5, pp 44-49

Gallatin Valley and canyon, Montana, geology of ................. H, Ann 6, pp 26-28, 76-81

Gallinas Creek, New Mexico, geology near .......................... H, Ann 3, pp 61-64; H, Ann 1-3, pp 161-164
SCHMECKEBIER.]

POWELL, AND WHEELER SURVEYS. 109

Gallfly, pitch pine, description of......................... H, Ann 10, pp 527–528
(See, also, Invertebrates.)

Galls collected in Colorado, notes on....................... H, Ann 7, p 567

Gannett (H.), additional lists of elevations........... H, Bull, vol v, No 3, pp 441–470
geographical field work of the Yellowstone Park division..... H, Ann 12, ii, pp 455–490

lists of elevations in that portion of the United States west of the Missis-
sippi River........................................... H, Misc 1
meteorological observations during the year 1872, in Utah, Idaho, and
Montana.................................................. H, Misc 2
report on astronomy and hypsometry for 1872........... H, Ann 6, pp 796–807
notes in relation to contour map of the United States....... H, Bull, vol ii, No 3, pp 223–226

report on arable and pasture lands of Colorado........... H, Ann 10, pp 311–357
topographic report on Grand River district............... H, Ann 9, pp 335–350
work in charge of, report on................................ H, Ann 7, pp 670–681;

Gardiners River, Wyoming, geology between Fort Ellis, Montana, and... H, Ann 6, pp 108–125
g eo logy of upper..................................... H, Ann 12, ii, pp 27–32
hot springs near........................................ H, Ann 5, pp 64–75

Gardner (J. T.), elevations of certain datum points on the Great Lakes and
rivers and in the Rocky Mountains......................... H, Ann 7, pp 629–659
goedetical and geographical methods used on the Geological Explorations
of the Fortieth Parallel................................ K, i, pp 763–769
notes on the Rocky Mountain ranges in Colorado Territory.... H, Bull, vol 1, ser 1, No 2, pp 72–77

sketch of methods of survey in the geographical department...... H, Ann 7, pp 627–628

Garnets, analyses of, from New Mexico, Nacimiento Desert and from Bohemi-
.......................................................... W, 1875, p 105

Gatschet (A. S.), analytical report on 11 idioms spoken in southern California,
Nevada, and on the lower Colorado River, their phonetic ele-
ments, grammatical structure, and mutual affinities........ W, 1876, pp 330–343
classification in seven linguistic stocks of western Indian languages contained
in 40 vocabularies...................................... W, viii, pp 403–485

Klamath Indians of southwestern Oregon..................... Eth, ii report on the pueblo languages of New Mexico and of the Moquis in Ari-
 zona, their affinity to each other, and to the languages of the
other Indian tribes....................................... W, 1875, pp 180–187

Gaylussite, analysis of, from Nevada, Soda Lakes............ K, ii, p 749
Goedetical and geographical methods used in survey of Fortieth Parallel
region..................................................... K, i, pp 763–769
Geographic positions in Black Hills........................... BH, pp 551–553
lists of................................................................ W, 1876, pp 6–35;
W, 1877, pp 1214–1217; W, 1878, pp 6–14; W, Uncl 16, pp 10–12

Geographical and geodetical methods used in survey of Fortieth Parallel
region..................................................... K, i, pp 763–769
Geometrid moths or Phalenide of the United States, monograph on...... H, Mon x
(See, also, Invertebrates.)

Geomyidae, cranial and dental characters of.................... H, Bull, vol 1, ser 2, No 2, pp 83–90
(See, also, Vertebrates.)
INDEX TO HAYDEN, KING, [BULL. 222.

Geomys, abstract of study of Thomomys and .................................................. ECR, pp 217-279
(See, also, Vertebrates.)
Geomys tuza, notes on .................................................. ECR, pp 282-285
(See, also, Vertebrates.)
Georgetown, Colorado, astronomical determinations at .................................. W, ii, pp 211-238
mines at ........................................................................... H, Ann 3, pp 111-114
Georgetown district, Colorado, mines of ..................................................... H, Ann 7, pp 293-300
silver mining in ..................................................................... K, iii, pp 589-605
Germany, primitive lapidarian sculptures in ................................................. Eth, v, pp 22-25
Geyserite, analysis of, from Iceland .................................................................. H, Ann 5, p 187; H, Ann 6, p 158
analysis of, from New Zealand ..................................................................... H, Ann 5, p 188; H, Ann 6, p 158
from Yellowstone Park ............................................................................... H, Ann 6, pp 145, 146, 153, 154, 156, 157, 158
from various localities ............................................................................... H, Ann 12, ii, pp 411-413
Geyser, definition of, theories concerning, influences modifying, etc ......... H, Ann 12,
Geysers, definition of, theories concerning, influences modifying, etc ......... H, Ann 12, ii, pp 416-454
of Yellowstone Park ............................................................................... H, Ann 5, pp 104-126,
182-188; H, Ann 6, pp 138-140, 144-148, 234-242, 244-247
Geyser, and thermal springs of various parts of the world ..................... H, Ann 12, ii, pp 304-353
Gibbs (G.), dictionary of the Niskwalli............................................................ Eth, i, pp 285-361
tribes of western Washington and northwestern Oregon .................... Eth, i, pp 157-241
Gibbs (M.), annotated list of the birds of Michigan ........................................ H, Bull,
vol v, No 3, pp 481-497
Gila River, Arizona, geology between St. George, Utah, and .................. W, iii, pp 189-225
Gila Valley, Arizona, climate of ............................................................... W, iii, pp 598-601
geology between Camp Apache and ................................................................ W, iii, pp 218-225
Gilbert (G. K.), geology of the Henry Mountains, Utah ................................ HM
irrigable lands of Salt Lake drainage system ............................................. AL, pp 113-127
report on the geology of portions of Nevada, Utah, California, and Arizona, examined in 1871 and 1872 ...................................................... W, iii, pp 17-187
report on the geology of portions of New Mexico and Arizona ............ W, iii, pp 503-567
water supply in Utah .................................................................................. AL, pp 57-80
work in charge of, report on ..................................................................... W, 1871, pp 92-96; W, 1872, pp 48-52
Gill (T.), synopsis of insectivorous mammals ............................................. H, Bull, vol i, ser 2, No 2, pp 91-120
Gill (T.) and Coues (E.), material for a bibliography of North American mammals, H, Mon xi, pp 951-1081
Gilpin County, Colorado, gold mining in .................................................... K, iii, pp 493-588
Gissler (C. F.), miscellaneous notes on the reproductive habits of Bran-
chiopoda ................................................................. H, Ann 12, i, pp 420-452
Glacial action in Colorado, central ............................................................. W, iii, pp 426-453
Glacial epoch in Basin Range ..................................................................... W, iii, pp 86-104
Glacial phenomena of Plateau region ........................................................ W, iii, pp 300-301
Glacial lakes. (See Lakes, Glacial.)
in New Mexico, Culebra and Taos ranges ............................................... W, iii, Supp, pp 177-178
in Yellowstone Park ............................................................................... H, Ann 12, ii, pp 52-57
Glaciers, ancient, of Colorado, southern ..................................................... H, Ann 9, pp 216-226
of Fortieth Parallel region ....................................................................... K, i, pp 467-488
Glauconite, analysis of, from Black Hills, Canada, and New Jersey ........ BH, p 96
Gneiss, analysis of, from Colorado, Park Range ......................................... K, i, p 110
analysis of, from Utah, Ogden Canyon ..................................................... K, ii, p 398
from Utah, Ogden Point .......................................................................... K, vi, p 25
Wasatch Mountains .................................................................................. K, i, p 110
from Wyoming, Elk Mountain .................................................................. K, i, p 110
Gold in Black Hills ..................................................................................... BH, pp 231-238, 241-251
Gold in New Mexico, Placer and Cimarron mountains ........... W, iii, Supp, pp 398-402
in Wyoming, Sweetwater district ................................ H, Ann 11, pp 142-148
Gold mining in Colorado, Gilpin County ....................... K, iii, pp 493-588
Gold Mountain district, Nevada, notes on ....................... W, 1871, p 47
Gold ores, treatment of, in basin ................................ K, iii, pp 547-588
Gold Hill mining region, Colorado, geology of ............... H, Ann 7, pp 685-687
Goniatite, fossil, from Kansas, eastern, notice of ........... H, Bull, vol 1, ser 2, No 6, p 445
(See, also, Invertebrates, fossil.)
Goode (G. B.), notes on the salamander (Geomyys tuza) of Florida........................................... ECR, pp 282-285
Goose Creek Hills, Nevada, geology of ......................... K, ii, pp 515-517
porphyry in ................................................................ K, i, pp 55-56
Gosite Lake (Tertiary), extent of ................................ K, i, pp 446-447
Gosite Range, Nevada, geology of ................................ K, ii, pp 502-505
granite of .................................................................. K, i, p 57
Grand Canyon. (See Colorado River.)
Grand Canyon group, exposures of ................................ UM, p 61
topographical report on ............................................. H, Ann 9, pp 337-350
Grand River drainage basin, Colorado, cultivable areas in ..... H, Ann 10, pp 332-337
Granite, analysis of, from California, Yosemite Valley .......... K, i, p 110
analysis of, from Colorado, Longs Peak ......................... K, i, p 110; K, ii, p 23
from Nevada, Agate Pass region .................................. K, ii, p 577
Cortez Mountains .................................................. K, i, p 110
Egans Canyon ....................................................... K, i, p 110
Egan Range .......................................................... K, ii, p 489
Granite Creek station ............................................. K, ii, p 798
west of ...................................................................... K, i, p 110
Granite Peak .......................................................... K, i, p 110; K, ii, p 779
Nannies Peak ......................................................... K, i, p 110; K, ii, p 603
Shoshone Range ...................................................... K, i, p 110
Wachoe Mountains .................................................. K, i, p 110; K, ii, p 477
West Humboldt Range ............................................. K, ii, p 715
Wrights Canyon, vicinity of ..................................... K, i, p 110
from Utah, Cottonwood Canyon ................................ K, i, p 110; K, ii, p 356
from Wyoming, Black Hills ....................................... K, i, p 110
Granite Canyon ...................................................... K, i, p 110
Iron Mountain .......................................................... K, i, p 110; K, ii, p 13
Laramie Hills ........................................................ K, i, p 110
genesis of crystalline schists and ............................... K, i, pp 112-121
of Black Hills ....................................................... BH, pp 65-80
of Colorado, occurrence and character of ...................... H, Ann 10, pp 210-211
of Fortieth Parallel region, character and distribution of .... K, i, pp 107-111
microscopical petrography of .................................... K, vi, pp 39-59
of Nevada, Washoe district ....................................... K, iii, pp 19-21
thin section of, from Nevada, Havallah Range ................. K, vi, pl 2
Granite Mountain, Nevada, geology of vicinity of ............. K, ii, pp 689-712
Granite Mountain district, California, notes on ............... W, 1871, p 51
Granite Range, Nevada, geology of ................................ K, ii, pp 797-800
granite of .......................................................... K, i, pp 93-94
Granite-porphyry of Fortieth Parallel region, microscopical petrography of... K, vi, pp 60-70

Graphite, analysis of, from Wyoming, Laramie Hills........ K, i, p 110; K, ii, p 17

Grass, analysis of, from New Mexico, Jemez Mountains, Abiquiu Mountains, and Las Vegas...................................... W, 1875, p 138

Grasses, analysis of, from New Mexico, Jemez Mountains.................. W, vi, p 32

Grass Valley, Utah, geology of .................................. HP, pp 248-251

Gravel Creek, Idaho, geology near.................................. H, Ann 11, pp 342-344

Graves and kjokkenmödlings of Oregon, coast of... H, Bull, vol iii, No 1, pp 27-35 of Santa Barbara Islands and the adjacent mainland........ H, Bull, vol iii, No 1, pp 37-56

(See, also, Ethnology and archeology.)

Gray (A.), botany of Black Hills................................... BH, pp 529-537

Eriogonum of Great Basin........................................ K, v, pp 298-313

Polemoniaceae of Great Basin.................................. K, v, pp 259-272

Gray (A.) and Hooker (J. D.), the vegetation of the Rocky Mountain region and a comparison with that of other parts of the world........ H, Bull, vol vi, No 1, pp 1-77

Great Basin, birds of.................................. K, iv, pp 316-328, 377-386

botany of..................................................................... K, v

genographical notes on.............................................. K, v, pp xiii-xvi

geologic features of............................................... K, iii, pp 1-4

meteorology of, notes on.......................................... K, v, pp xvii-xxii

mountain ranges of............................................... W, iii, pp 21-42

orographic structure of.......................................... UM, pp 23-25

Paleozoic rocks of................................................... K, i, pp 481-497

physical features of............................................... K, iv, pp 313-316

topographic features and agricultural prospects in....... H, Ann 5, pp 227-237

water supply of.................................................... W, iii, pp 105-117

(See, also, Nevada; Utah; Fortieth Parallel region; names of mountain ranges, etc.)

Great Plains, cultivation experiments on, along the line of the Kansas Pacific Railway........................................ H, Ann 5, pp 274-279

physical aspects of............................................... K, ii, pp 2-4

tree growth on.................................................... H, Ann 4, pp 456-457

Great Salt Lake, current, evaporation, etc., of.................. W, 1879, pp 228-231

description of..................................................... H, Ann 5, pp 233-235

gology of vicinity of.............................................. K, ii, pp 431-442

north of ......................................................... K, ii, pp 420-430

south of.......................................................... K, ii, pp 443-461

insects inhabiting................................................ H, Ann 6, pp 743-746

level of, fluctuation in.......................................... K, i, p 497; AL, pp 58-77

outlet of, discussion of supposed ancient... H, Bull, vol 1, ser 2, No 5, pp 413-414

Great Salt Lake drainage system, Utah, irrigable lands of........ AL, pp 113-127

Great Salt Lake Valley, Utah, agriculture in....................... H, Ann 4, pp 237-241

gology from Bear River to........................................ H, Ann 4, pp 147-161

Green Mountain district, California, notes on...................... W, 1876, pp 52-53

Green Mountain district, Nevada, notes on............................ W, 1871, p 47

Green River, Wyoming, astronomical determinations at............ W, ii, pp 129-154


physical features of............................................... K, ii, pp 191-194

topographic features of.......................................... H, Ann 11, pp 689-693

Green River coal basin, geology of................................ K, iii, pp 451-473
Green River district, Wyoming, agriculture in ........................................H, Ann 4, pp 233-237
geology of ..................................................................................H, Ann 11, pp 509-646
Green River group, distribution of .................................................H, Mon viii, pp 127-134
exposures of ..................................................................................UM, p 45
flora of ..........................................................................................H, Mon viii, pp 127-217
invertebrate fossils of, list of .........................................................H, Bull, vol iii, No 3, p 611
occurrences and age of .................................................................H, Ann 8, pp 147-148, 150-158
of Colorado, Grand River district ...................................................H, Ann 10, pp 184-185
northwestern ................................................................................H, Ann 10, pp 35-37
White River district .......................................................................H, Ann 10, pp 82-86, 111
of Fortieth Parallel region .............................................................K, i, p 377-394
of Utah, Grand River district ........................................................H, Ann 10, pp 184-185
Uinta Mountains ..........................................................................UM, pp 166-167
White River district .......................................................................H, Ann 10, pp 82-86, 111
of Wyoming ................................................................................H, Ann 11, pp 130-132
Green River and vicinity ...............................................................K, ii, pp 240-244
Green River region ........................................................................H, Ann 11, pp 637-639

(See, also, Green River shales.)

Green River region, paleontological characteristics of Mesozoic and Cenozoic
groups of ........................................H, Bull, vol iii, No 3, pp 625-629
Green River shales, fishes of .........................................................H, Ann 4, pp 425-431; H, Mon i, pp 194-197
ichthyological fauna of, contribution to knowledge of .....................H, Bull, vol iii, No 4, pp 806-819
insects of ........................................................................................H, Bull, vol iv, No 4, pp 747-776
Greensand. (See Glauconite.)
Griffin (E.), report of .......................................................................W, 1879, pp 223-228
Groom district, Nevada, notes on ..................................................W, 1871, pp 44-45
Gros Ventre Basin, Wyoming, geology of .....................................H, Ann 12, i, pp 219-227
new moths, principally collected by Mr. Roland Thaxter in Maine, with
notes on noxious species and remarks on classification ...................H, Bull, vol vi, No 3, pp 579-591
new moths, with partial catalogue of Noctuidæ ..............................H, Bull, vol vi, No 3, pp 563-575
North American moths with a preliminary catalogue of the species of
Hadena and Polia ........................................................................H, Bull, vol vi, No 2, pp 257-277
notes on a collection of noctuid moth made in Colorado in 1875 by Dr.
A. S. Packard, jr. ........................................................................H, Bull, vol vi, No 1, pp 115-120
on Lithophane and new Noctuidæ ................................................H, Bull, vol v, No 2, pp 201-208
preliminary list of the North American species of Agrostis, with descrip-
tions .........................................................................................H, Bull, vol vi, No 1, pp 149-164
Guadaloupe Island, ornithology of ................................................H, Bull, vol ii, No 2, pp 183-195
Gunnison, Utah, astronomical determinations at ...........................W, ii, pp 99-125
Gypsum, analysis of, from Wyoming, Red Valley .........................K, i, p 253; K, ii, p 37
Hagen (H. A.), Odonata from the Yellowstone ...............................H, Ann 6, pp 727-729
report on the pseudo-Neuroptera and Nèuroptera collected by Lieut. W. L.
Carpenter in 1873, in Colorado .....................................................H, Ann 7, pp 571-606

Bull. 222—04——8
Hagen (H. A.), report upon the collections of Neuroptera and pseudo-Neuroptera made in portions of Colorado, New Mexico, and Arizona, 1872-1874 ........................................W, v, pp 909-922

Hague (A.), chemistry of the Washoe process ........................................K, iii, pp 273-293
geology of the White Pine district ........................................K, iii, pp 409-422

Hague (A.) and Emmons (S. F.), descriptive geology of Fortieth Parallel region ........................................K, ii

Hague (J. D.), mining industry in Fortieth Parallel region ........................................K, iv, pp 199-202


Hardscrabble district, Colorado, notes on ........................................W, 1876, pp 48-49

Haskell (—.), short descriptions of some of the valleys of Nevada ........................................H, Ann 5, pp 271-273

Havallah Range, Nevada, geology of ........................................K, ii, pp 673-688

Hall (J.) and Whitfield (R. P.), paleontology of Fortieth Parallel region ........................................K, iv, pp 199-302

Ha-it-zukh language, vocabulary of ........................................Eth, i, pp 143-153

(See, also, Ethnology and archeology.)

Haldeman (S. S.), beads of Indians of southern California ........................................W, vii, pp 263-271

Hams Fork, Wyoming, geology near ........................................H, Ann 11, pp 532, 534-535

Helena, Montana, geology between Three Forks and ........................................H, Ann 6, pp 81-82

Hemiptera of Arizona, Colorado, New Mexico, and California ........................................W, 1877, pp 1322-1334
Hemiptera of Arizona and adjacent States........................................W, v, pp 829–841
of California and adjacent States..............................................W, v, pp 829–841
of California, Colorado, and Arizona........................................W, 1877, pp 1322–1334
of Colorado and adjacent States.............................................W, v, pp 829–841
of Colorado, eastern, and New Mexico, northeastern, list of........H, Ann 4, pp 471–472
of Colorado, New Mexico, Arizona, and California....................W, 1877, pp 1322–1334
of Dakota and Montana.........................................................H, Bull, vol iv, No 2, pp 503–512
of Nevada, Utah, California, Colorado, New Mexico, and Arizona.....W, v, pp 829–841
of Montana and Dakota.........................................................H, Bull, vol iv, No 2, pp 503–512
of New Mexico and adjacent States..........................................W, v, pp 829–841
of New Mexico, Colorado, Arizona, and California......................W, 1877, pp 1322–1334
of New Mexico, northeastern, and Colorado, eastern, list of........H, Ann 4, pp 471–472
of Utah and adjacent States....................................................W, v, pp 829–841
of western States.......................................................................H, Ann 5, pp 392–423

(See, also, Invertebrates.)

Henry Mountains, Utah, geology of........................................HM

Henryite, analyses of, from Colorado, Gold Hill, Red Cloud mine.H, Ann 7, p 353; H, Ann 10, p 144

Henrys Fork, Wyoming, geology near.......................................H, Ann 4, pp 56–63


Henrys Fork group, exposures of............................................UM, p 50

of Uinta Mountains...................................................................UM, pp 153–154

Henshaw (H. W.), annotated list of the birds of Arizona.........W, 1875, pp 153–166

annotated list of the birds of Utah..............................................W, Uncl 4, pp 39–54; W, Uncl 7

cliff house and cave on Diamond Creek, New Mexico..............W, vii, pp 370–371

introductory notes to the account of the voyage of Cabrillo.W, vii, pp 293–298

list of birds collected in Colorado, New Mexico, and Arizona....W, Uncl 4, pp 55–148

notes on ornithology of portions of New Mexico and Arizona......W, 1875, pp 149–150

notes on the mammals taken and observed in California in 1875...W, 1876, pp 305–312

ornithological report from observations and collections made in portions of California, Nevada, and Oregon............W, 1879, pp 282–335

preliminary report on the ornithology of portions of California and Nevada........................................W, 1878, pp 185–186

report on the ornithology of portions of Nevada and California....W, 1877, pp 1303–1322

report on the ornithology of the portions of California visited in 1875W, 1876, pp 224–278

report upon the ornithological collections made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, 1871–1874.........................................................W, v, pp 131–507

Henshaw (H. W.) and Jordan (D. S.), report upon fishes collected in California and Nevada........................................W, 1878, pp 187–205

Henshaw (H. W.) and Yarrow (H. C.), report upon and list of birds collected in Utah and Nevada in 1872.........................................................W, Uncl 4, pp 5–33

report upon the reptiles and batrachians collected in 1875–1877 in California, Arizona, and Nevada.........................W, 1878, pp 206–226
Hering (R.), means of access to the Yellowstone National Park by railroads. . H, Ann 6, pp 92-95

Herodiones, studies of the American ............... H, Bull, vol iv, No 1, pp 219-251
   (See, also, Vertebrates.)

Herpetology of Dakota and Montana ............... H, Bull, vol iv, No 1, pp 259-291
   (See, also, Vertebrates.)

Hessite, analysis of, from Colorado, Gold Hill, Red Cloud mine ........ H, Ann 10, pp 144,145

Hetch Hetchy Valley, California, description of. ........ W, 1879, pp 259-260

Hidatsa Indians, ethnography and philology of ......... H, Miscl 7
   (See, also, Ethnology and archaeology.)

Highams Peak Ridge, Idaho, geology near ............ H, Ann 11, pp 330, 335-337

Hilgard, Mount, Utah, geology of ....................... HP, pp 269-271

Hillers, Mount, Utah, geology of ....................... HM, pp 30-35

Hoback Canyon Ridge, Wyoming, geology of ............... H, Ann 12, i, pp 178-187

Hodge (J. T.), on the Tertiary coals of the West ........ H, Ann 4, pp 318-329

Hoffman (W. J.), annotated list of the birds of Nevada .......... H, Bull, vol vi, No 2, pp 203-256
   miscellaneous ethnographic observations on Indians inhabiting Nevada, California, and Arizona ........... H, Ann 10, pp 459-478
   on the mineralogy of Nevada ....................... H, Bull, vol iv, No 3, pp 731-745
   report on the Chaco cranium ....................... H, Ann 10, pp 451-457

Holcomb Valley mining district, California, notes on .......... W, 1879, p 190

Holmes (W. H.), geological report on San Juan district, Colorado ........ H, Ann 9, pp 237-276

fossil forests of the volcanic Tertiary formations of the Yellowstone National Park ........ H, Bull, vol v, No 1, pp 125-132
   notice of the ancient ruins of southwestern Colorado examined during the summer of 1875 ........ H, Bull, vol ii, No 1, pp 3-24
   report on ancient ruins of southwestern Colorado, examined during the summers of 1875 and 1876 ........ H, Ann 10, pp 383-408
   report on geology of northwestern portion of the Elk Range ........... H, Ann 8, pp 59-71
   report on geology of the Sierra Abajo and West San Miguel Mountains ........ H, Ann 10, pp 187-195

   report on the geology of Yellowstone National Park ........ H, Ann 12, ii, pp 1-64

Holmes, Mount, Utah, geology of ....................... HM, pp 27-30

Hoofs of Virginian deer, consolidation of ............... H, Bull, vol iv, No 1, pp 293-294
   (See, also, Vertebrates.)

Hooker (J. D.) and Gray (A.), the vegetation of the Rocky Mountain region, and a comparison with that of other parts of the world ........ H, Bull, vol vi, No 1, pp 1-77

Horn (G. H.), Coleoptera [collected in Wyoming and Idaho in 1872, report on] ......................... H, Ann 6, p 717

Coleoptera, list of .................................. H, Ann 5, pp 382-392

list of Coleoptera collected by C. Thomas in eastern Colorado and north­eastern New Mexico during the survey of 1869 ........ H, Ann 4, pp 469-470

Hornblende, thin section of, from diorite of Nevada, Winnemucca Peak .... K, vi, pl 3
   thin section of, from granite-porphry of Utah, Bingham Canyon, vicinity of .................. K, vi, pl 3
   from hornblende-porphyry of Nevada, Augusta Canyon .................. K, vi, pl 5
   from hornblende-andesite of Nevada, Augusta Mountains, .................. K, vi, pl 4

Hornblende-andesite of Nevada, microscopic petrography of .......... K, vi, pp 122-133

of Nevada Plateau .................................. K, i, pp 562-567

thin section of, from Nevada, Cortez Range ............ K, vi, pl 5
Hornblende-porphyry of Nevada, Augusta Mountains, microscopic petrography of. K, vi, pp 94-96
Hornblende rock, thin section of, from Nevada, Havallah Range. K, vi, pl 4
Horse Creek, Wyoming, geology near. H, Ann 11, pp 527-528
Horses of Nevada, Comstock lode. K, iii, pp 68-71
Houses and house life of the American aborigines. Eth, iv
(See, also, Ethnology and archeology.)
Howell (E. E.), report on the geology of portions of Utah, Nevada, Arizona, and New Mexico. W, iii, pp 227-301
Hoxie (R. L.), report of. W, 1874, pp 6-7
Hoxie (R. L.) and Marshall (W. L.), meteorological observations, instructions for taking. W, Uncl 10; W, Uncl 12
Hualapais district, Arizona, notes on. W, 1871, pp 53-54; W, 1876, pp 55-56
Hughes, Colorado, astronomical determinations at. W, 11, pp 239-263
Human remains of Colorado, southwestern, and New Mexico, northern, ancient ruins of. H, Bull, vol ii, No 1, pp 47-63
of New Mexico, Eocene plateau of northwestern of. W, 1879, pp 166-173
of northwestern. W, vii, pp 351-361
(See, also, Ethnology and archeology.)
Humboldt group of Fortieth Parallel region. K, i, pp 434-443
Humboldt Range, Nevada, Archean rocks of. K, 1, pp 62-70
glaciers, extinct, of. K, r, pp 475-476
Humboldt River, Nevada, region north of, geology of. K, ii, pp 590-617
Humboldt Valley, Nevada, geology of. K, ii, pp 740-744
Hydrographic surveys, organization, cost, etc., of. W, 1, pp 468-479
collected in Nevada, Utah, Colorado, New Mexico, and Arizona, portions of. W, v, pp 705-736
(See, also, Invertebrates.)
Hypsometry, barometric, results of, 1871-75. W, ii, pp 493-566
Hypsometry and meteorology, methods of. W, 1875, pp 47-54
Ibenpah Mountains, Utah, geology of. K, 11, pp 472-476
Iceland, springs, thermal, and geysers of. H, Ann 12, 11, pp 304-312
Ichthyological fauna of the Green River shales, contributions to knowledge of. H, Bull, vol iii, No 4, pp 806-819
(See, also, Invertebrates; Invertebrates, fossil.)
Idaho, agriculture in eastern. H, Ann 5, pp 244-248
Aspen Ridge, geology of. H, Ann 11, pp 558-559
Bannock Range, geology of. H, Ann 11, pp 570-572
Bear Lake Plateau, geology of. H, Ann 11, pp 582-587
Bear Lake Valley, geology of. H, Ann 11, pp 587-589
Bear River, geology near. H, Ann 5, pp 150-156
Bear River Range, geology of. H, Ann 11, pp 598-600
Bear River region, geology of. H, Ann 11, pp 573-603
birds collected in Wyoming, Utah, and, in 1872. H, Ann 6, pp 670-715
topography of. H, Ann 11, p 686
Caribou Range, geology of. H, Ann 11, pp 360-405
explorations in Wyoming and. H, Ann 11
Idaho, explorations in parts of Montana, Wyoming, Utah, and, for year
1872 .......................... H, Ann 6
Fall Creek region, geology of ..................................... H, Ann 11, pp 364-371
Fort Hall, geology between Fort Ellis, Montana and ............................. H, Ann 5, pp 27-44
ground water. .......................... H, Ann 5, pp 13-26; H, Ann 6, pp 197-207
meteorological observations at ........................................... H, Misc, 2, pp 4-46
fossils of Juratirias of southeastern ........................................ H, Bull, vol v, No 1, pp 105-117
of Triassic of southeastern ........................................... H, Ann 12, pp 101-118
Fort Hall, geology between Fort Ellis, Montana and ............................. H, Ann 5, pp 342-344
Green River district, geology of ........................................... H, Ann 11, pp 509-646
Highams Peak Ridge, geology near ........................................ H, Ann 11, pp 330, 335-337
Iowa district, notes on .................................................. W, 1878, p 86
John Gray Lake, geology near ........................................... H, Ann 11, pp 357-358
Juratirias section of western Wyoming and southeastern .................... H, Bull, vol v, No 1, pp 119-123
Lincoln Valley, geology of ........................................... H, Ann 11, pp 330-335
locusts in .................................................. H, Unc, 14, pp 96-97, 158
McCoy Creek, geology near ........................................... H, Ann 11, pp 506-609
Malade Range and Valley, geology of .................................... H, Ann 11, pp 366-369
mammals collected in Wyoming, Utah and, in 1872 ............................. H, Ann 6, pp 661-669
Marsh Creek, geology near ........................................... H, Ann 11, pp 565-567
meteorological observations in Utah, Montana and, in 1872 ............ H, Misc 2
Pierres Hole, geology at and near ............................................ H, Ann 11, pp 438-441
Pierres Mountains, geology of ........................................... H, Ann 11, pp 425-432
plants collected in Montana, Utah, Wyoming and ............................ H, Ann 6, pp 747-792
Portneuf River, geology near ........................................... H, Ann 11, pp 563-567
river, geology of ........................................... H, Ann 11, pp 325, 567-569
Preuss Range, geology of ........................................... H, Ann 11, pp 589-590
Putnam, Mount, geology near ........................................... H, Ann 11, p 328
Ross Fork, geology along ........................................... H, Ann 11, pp 328-329
Snake River, course and character of .................................... H, Ann 6, pp 267-270
Snake River Range, geology of ........................................... H, Ann 11, pp 424-425
Snake River Valley, geology of lower .................................... H, Ann 11, pp 405-410
resources of ........................................... H, Ann 6, pp 86-91
Soda Springs, geology near ........................................... H, Ann 11, pp 590-596
springs in Bear River region ........................................... H, Ann 5, pp 152-154
Thomas Fork, geology near ........................................... H, Ann 11, pp 581-582
Three Pine Canyon, geology near ........................................... H, Ann 11, p 339
Virginia City, geology near ........................................... H, Ann 5, pp 171-172
Willow Creek Basin, geology in ........................................... H, Ann 11, pp 349-351
Willow Creek ridges, geology of ........................................... H, Ann 11, pp 351-360
Igneous rocks of Colorado, central ........................................ W, iii, pp 411-425
of Colorado, distribution, character, origin, etc., of ............................. H, Ann 10, pp 199-272
Eagle, Grand, and Gunnison rivers ........................................ H, Ann 8, pp 163-174
Grand River district ........................................... H, Ann 9, pp 93-98
northwestern .................................................. H, Ann 10, p 39
plains .................................................. H, Ann 7, pp 129-131
San Juan region ........................................... H, Ann 8, pp 193-209; H, Ann 9, pp 288-276
Spanish Peaks region .................................................. W, 1879, p 280
White River district ........................................... H, Ann 10, pp 97-101, 111-114
of Idaho, eastern, and Wyoming, western .................................... H, Ann 11, pp 498-508
of New Mexico, north-central ........................................... W, iii, Supp, pp 164-172
Igneous rocks of Utah, Grand River district.......................H, Ann 9, pp 93-98
of Utah, Henry Mountains, lithologic character of...........HM, pp 61-65
White River district........................................H, Ann 10, pp 97-101, 111-114
of Wyoming, western, and Idaho, eastern...................H, Ann 11, pp 498-508
of Yellowstone Park, petrographic notes on..............H, Ann 12, ii, pp 57-62
(See, also, Eruptive rocks; Volcanic rocks.)
Ilmenite, analysis of; from Wyoming, Iron Mountain.............K, i, p 110
Implements, iron, of Indians of southern California............W, vii, pp 272-276
(See, also, Ethnology and archaeology.)
Implements, stone, of southern California......................W, vii, pp 49-69
(See, also, Ethnology and archaeology.)
Implements and weapons made of bone and wood from southern California..W, vii, pp 222-233
(See, also, Ethnology and archaeology.)
Implements, pottery, etc., obtained in New Mexico and Arizona..W, vii, pp 374-390
(See, also, Ethnology and archaeology.)
Incrustation, analysis of, from Nevada, Humboldt Range........K, ii, p 541
analysis of, from Nevada, Lake Bonneville.....................K, i, p 502
from Nevada, Peko station...................................K, ii, p 594
Ruby Valley................................................K, ii, p 541
Independence, Iowa, dark shale at, fossils of..............H, Bull, vol iv, No 3, pp 725-730
India, primitive lapidarian sculptures in.......................Eth, v, pp 31-39
Indian Creek, Wyoming, laccolite on............................H, Ann 12, ii, pp 24-25
Indian languages, comparative vocabulary of.................Eth, i, pp 121-153, 249-285; W, vii, pp 424-485
of southern California, analytical report on idioms of......W, 1876, pp 330-343
(See, also, Ethnology and archaeology.)
Indian Territory, elevations in..H, Misc 1 (3d ed), p 10; H, Misc 1 (4th ed), p 67
locusts in ............................................H, Uncl 14, pp 63-64
Indian tribes of Alaska.........................................Eth, i, pp 1-106
of California........................................Eth, iii
of Northwest...............................................Eth, i, pp 1-106
of Washington, western, and Oregon, northwestern............Eth, i, pp 157-241
(See, also, Ethnology and archaeology.)
Indians, houses and house life of................................Eth, iv
of Nevada, southern and southeastern......................W, 1869, pp 35-37
of Nevada and Arizona......................................W, 1871, pp 27-29, 74-76
of Nevada, California, and Arizona, miscellaneous ethnographic observations on .....................H, Ann 10, pp 461-478
of Washington, Skokomish Reservation, customs, language, etc., of...H, Bull, vol iii, No 1, pp 57-114
of western States and Territories............................W, i, pp 211-222
photographs of, catalogue of............................H, Misc 5 (1st ed), pp 67-83; H, Misc 9
(See, also, Ethnology and archaeology; name of individual tribes and nations.)
Infusorial earth, analysis of, from Nevada, Fossil Hill and Little Truckee
River......................................................K, i, p 542
Ingersoll (E.), report on the natural history of the United States Geological
and Geographical Survey of the Territories, 1874...............H, Ann 8, pp 385-410; H, Bull, vol i, ser 2, No 2, pp 121-124
special report on the Mollusca .........................H, Bull, vol i, ser 2, No 2, pp 125-142
Innuitt, origin of....................................Eth, i, pp 93-106
terms of relationship used by ................................Eth, i, pp 117-119
(See, also, Ethnology and archaeology.)
Insect fauna, alpine; collected in Colorado and New Mexico...W, 1876, pp 301-305
of Colorado...........................................H, Ann 7, pp 539-542
Insects affecting the cranberry, with remarks on other injurious insects...H, Ann 10,
collected in 1875, report on...H, Bull, vol iii, No 2, pp 355-475; No 4, pp 765-796
of Great Salt Lake and other saline or alkaline lakes in the West.....H, Ann 6,
injuring field and garden crops in western States and Territories.....H, Ann 9,
(See, also, Invertebrates.)
Insects, fossil, of Green River shales......................H, Bull, vol iv, No 4, pp 747-776
of Tertiary, American, first discovered traces of.............H, Bull, vol iii,
of Colorado and Wyoming, an account of some..................H, Bull, vol iv,
of North America..............................................H, Mon xiii
(See, also, Invertebrates, fossil.)
Invertebrates; Acrididae of North America, synopsis of ..........H, Mon v
Alpheus, synopsis of North American species of ................H, Bull,
vol iv, No 1, pp 189-199
Aphididae of the United States, notes on, with descriptions of species
occurring west of the Mississippi River.......................H, Bull,
vol v, No 1, pp 1-32
Arachnida, description of new..........................H, Ann 6, p 740
Aranee collected in Colorado in 1875, report on...............H, Bull,
vol iii, No 2, pp 477-529
Artemia fertilis Verrill from Great Salt Lake, Utah, notes on.....H, Ann 12,
1, pp 459-463
Artemia muehlhausenii, relation of Artemia salina to genus Branchipus
Schaefer and..........................H, Ann 12, 1, pp 466-473
Artemia salina, parthenogenesis in..........................H, Ann 12, 1, pp 463-466
relation of Artemia muehlhausenii to genus Branchipus Schaefer
and..........................H, Ann 12, 1, pp 466-473
bees allied to Melissodes and Anthophora, generic arrangement of......H, Bull,
vol v, No 3, pp 471-479
beetles collected in Colorado, list of......................H, Ann 9, pp 811-815
Bembecida, description of tribe Stizini...............H, Bull, vol v, No 3, pp 341-347
Bombycidae and Zygenidae collected in portions of California and Ariz-
ona..........................................................W, v, pp 796-802
Branchiopodidae, reproductive habits of, notes on......H, Ann 12, 1, pp 420-452
butterflies collected in Montana and Wyoming, list of species of......H, Ann 5,
pp 466-467
collected in Colorado........................................H, Ann 7, p 542
in Colorado and Utah in 1875........H, Bull, vol ii, No 3, pp 269-270
in Utah, southern, and Arizona, northern, in 1877........H, Bull,
vol iv, No 1, pp 253-258
Cambarus couesi, description of..................H, Bull, vol iii, No 4, pp 803-804
Carabidae, description of two species of, from Toronto, Canada........H, Bull,
vol iii, No 4, pp 763-764
Cave fauna in Utah...........................................H, Bull, vol iii, No 1, pp 157-169
Coleoptera collected in 1871, list of ..................H, Ann 5, pp 382-392
of Arizona and adjacent States..........................W, v, pp 809-827
of California, New Mexico, and Colorado, new species of........W, 1876,
pp 296-300
Invertebrates; Coleoptera of California and adjacent States............W, v, pp 809-827
Coleoptera of Colorado, eastern, and New Mexico, northeastern, list of....H, Ann 4, pp 469-470

list of........................................H, Ann 7, pp 566-571; H, Ann 9, pp 811-815
of Colorado and adjacent States........................................W, v, pp 809-827
of Colorado, New Mexico, and California, new species of...............W, 1876, pp 296-300

of Idaho and Wyoming................................................H, Ann 6, p 717
of Nevada, Utah, California, Colorado, New Mexico, and Arizona, portions of........................................W, v, pp 809-827
of New Mexico, northeastern, and Colorado, eastern, list of........H, Ann 4, pp 469-470

of New Mexico and adjacent States...................................W, v, pp 809-827
of New Mexico, Colorado, and Arizona, new species of...............W, 1876, pp 296-300
of Rocky Mountains, alpine regions..................................H, Bull, vol iv, No 2, pp 447-480; H, Bull, vol v, No 3, pp 499-520

of Utah and adjacent States............................................W, v, pp 809-827
of Wyoming and Idaho..................................................H, Ann 6, p 717
Crustacea from the West, descriptions of new phyllopod...............H, Bull, vol iv, No 1, pp 171-175

Crustacea, amphipod, report on......................................H, Ann 7, pp 608-611
Crustacea, fresh-water phyllopod, of North America, synopsis of...H, Ann 7, pp 613-622

Crustacea, Lernæan, of Colorado.......................................H, Ann 7, p 612
Crustaceans, phyllopod, bibliography of..............................H, Ann 12, i, pp 453-457
of North America, monograph on.......................................H, Ann 12, i, pp 295-457
of West, description of new..........................................H, Bull, vol iii, No 1, pp 171-175

Diptera collected in Colorado in 1873................................H, Ann 7, pp 561-566
collected in Colorado and Arizona.....................................W, v, pp 803-807
descriptions of new genera and species of, from the West........H, Bull, vol iii, No 2, pp 189-354

Entomostraca, new, from Colorado.....................................H, Bull, vol iii, No 1, pp 151-155
gall-fly, pitch pine, description of..................................H, Ann 10, pp 527-528

Hemiptera collected in Colorado, eastern, and New Mexico, northeastern, list of........................................H, Ann 4, pp 471-472
collected in Colorado, New Mexico, Arizona, and California........W, 1877, pp 1322-1334

in Dakota and Montana in 1873-74.................................H, Bull, vol iv, No 2, pp 503-512
in Nevada, Utah, California, Colorado, New Mexico, and Arizona, portions of........................................W, v, pp 829-841

of region west of Mississippi River, list of.....................H, Bull, vol 1, ser 2, No 5, pp 269-361

of western Territories..............................................H, Ann 5, pp 392-423
Hymenoptera collected in Kansas, northwestern......................H, Bull, vol v, No 3, pp 349-370
collected in Nevada, Utah, Colorado, New Mexico, and Arizona, portions of........................................W, v, pp 705-736

insect fauna, alpine, of Colorado....................................H, Ann 7, pp 539-542
of Colorado and New Mexico..........................................W, 1876, pp 301-305
insects affecting the cranberry, with remarks on other injurious insects........................................H, Ann 10, pp 521-531
affecting field and garden crops in western States and Territories..H, Ann 9, pp 589-609
Invertebrates; insects collected in 1875, report on .................................. H, Bull, vol iii, No 2, pp 355-475; No 4, pp 765-796
insects, description of new ........................................ H, Ann 6, pp 739-741
of Great Salt Lake and other saline or alkaline lakes in the west .................................. H, Ann 6, pp 743-746
leeches collected in Colorado, list of .................................. H, Ann 7, p 623
leeches, fresh-water, collected in portions of Nevada, Utah, Colorado, New Mexico, and Arizona .................................. W, v, pp 955-967
Lepidoptera collected in Montana in 1874, discussion of .................................. H, Bull, vol iv, No 2, pp 513-517
Lithophane, descriptions of new Noctuidæ and .................................. H, Bull, vol v, No 2, pp 201-208
locust, Rocky Mountain, character, anatomy, enemies, destruction, etc., of .................................. H, Ann 9, pp 589-809; H, Uncl 14, pp 1-476
destruction of young ........................................................ H, Uncl 10
natural history of .......................................................... H, Uncl 12
Mallophaga, descriptions of new species of .................................. H, Ann 6, pp 731-734
Mollusca of Colorado ................................................ H, Ann 8, pp 389-410
of Nebraska, lacustrine deposits, list of .................................. H, Ann 8, pp 269-269
report on .................................. H, Ann 4, pp 467-469; H, Bull, vol i, ser 2, No 2, pp 125-142
Mollusca, alpine, of Colorado .................................. H, Ann 7, p 542
Mollusca, terrestrial, collected in Colorado, list of .................................. H, Ann 7, p 523
Mollusca, terrestrial and fluviatile, collected in portions of Colorado, Utah, New Mexico, and Arizona .................................. W, v, pp 923-954
moth, cranberry, description of ............................................ H, Ann 10, p 522
moths, description of new, with partial catalogue of Noctuidæ .................................. H, Bull, vol vi, No 3, pp 563-578
of Colorado, geographical distribution of .................................. H, Ann 7, pp 543-559
of Maine, new species of, with note on noxious species, and remarks on classification .................................. H, Bull, vol vi, No 3, pp 579-591
of North America, description of, with a preliminary catalogue of the species of Hadena and Polia .................................. H, Bull, vol vi, No 2, pp 257-277
moths, noctuid, collected in Colorado in 1875, notes on .................................. H, Bull, vol iii, No 1, pp 115-120
moths, tineid, collected in Colorado in 1875, notes on .................................. H, Bull, vol iii, No 1, pp 143-145
moths, geometrid, or Phalenidæ of the United States, monograph on .................................. H, Mon x Myriopoda of Colorado ................................................ H, Ann 7, p 607
collected in portions of Colorado, New Mexico, and Arizona .................................. W, v, pp 909-922
Noctuidæ, catalogue, partial, of .................................. H, Bull, vol v, No 3, pp 568-578
Noctuidæ, descriptions of Lithophane and .................................. H, Bull, vol v, No 2, pp 201-208
of California .......................................................... H, Bull, vol iv, No 1, pp 169-187
Odonata from the Yellowstone ................................................ H, Ann 6, pp 727-729
Orthoptera collected in California, New Mexico, and Colorado .................................. W, 1876, pp 278-295
collected in Colorado in 1875, list of .................................. H, Bull, vol ii, No 3, pp 261-267
in Dakota and Montana in 1873, discussion of .................................. H, Bull, vol iv, No 2, pp 481-501
in Nevada, Utah, California, Colorado, New Mexico, and Arizona, portions of .................................. W, v, pp 843-908.
list and description of new species of .................................. H, Ann 4, pp 263-284; H, Bull, vol i, ser 1, No 2, pp 63-71
Invertebrates, Orthoptera of Nebraska, notes on............. H, Uncl 1, pp 249-261
Orthoptera of Rocky Mountain region..................... H, Ann 6, pp 717-735
Orthoptera, saltatorial, of the Rocky Mountain region..... H, Ann 5, pp 423-466
Phaleniidae of the United States, monograph on.......... H, Mon x
Rhizopods, fresh-water, of North America................ H, Mon xii
shells, land and fresh-water of Nebraska, catalogue of... H, Bull, vol iii, No 3, pp 697-704
spiders, descriptions of two new, from Colorado......... H, Bull, vol iii, no 2, pp 528-529
Stizini, description of................................ H, Bull, vol v, no 3, pp 341-347
Tineina of Colorado.................................... H, Bull, vol iii, No 1, pp 121-142
of United States and Canada, index to............... H, Bull, vol iv, No 1, pp 125-167
tineina and their food plants......................... H, Bull, vol iv, No 1, pp 107-123
weevil, cranberry, description of...................... H, Ann 10, pp 525-526
worms collected near Yellowstone River in 1871........ H, Ann 5, pp 381-382
worms, parasitic, found in the brain and other parts of birds.... H, Ann 6, pp 735-737
Zygenidae and Bombycidae collected in portions of California and Arizona... W, v, pp 795-802
Invertebrates, fossil; collected in 1871-1873, preliminary report on..... W, Uncl 6
Coleoptera of Tertiary of Rocky Mountains............... H, Bull, vol ii, No 1, pp 77-87
corals of Cretaceous of Colorado....................... H, Bull, vol v, No 2, pp 220-221
crayfish from Tertiary of western Wyoming............ H, Bull, vol vi, No 2, pp 391-397
goniatite from Kansas, eastern, notice of............. H, Bull, vol i, ser 2, No 6, p 445
insects of Green River shale........................... H, Bull, vol iv, No 4, pp 747-776
of Tertiary rocks of Colorado and Wyoming, an account of some... H, Bull, vol iv, No 2, pp 519-542
of North America...................................... H, Mon xiii
first discovered traces of............................ H, Bull, vol iii, No 4, pp 741-762
Mollusca of Colorado.................................. H, Ann 8, pp 389-410
of Cretaceous of Colorado............................ H, Ann 7, pp 455-456
of Tertiary of Colorado, Utah, and Wyoming............. H, Ann 12, i, pp 41-48
molluscan species of Laramie group, distribution of..... H, Bull, vol iv, No 3, pp 721-724
of Black Hills........................................ BH, pp 325-468; PBH
of Canadian formation of Southwest..................... W, iv, pp 50-61
of Utah and Nevada................................... W, Uncl 6, pp 8-12
of Carboniferous of Arizona, Nevada, and New Mexico..... W, iv, pp 79-161; W, Uncl 6, pp 15-23
of Fortieth Parallel region........................... K, iv, pp 50-99, 251-280
of Interior States.................................. H, Ann 12, i, pp 155-171
of New Mexico....................................... W, iii, Supp, pp iii-xxxvi
of Plateau province.................................. UM, pp 88-92, 107-109
of Southwest......................................... W, iv, pp 79-161
of Utah and Wyoming, list of, collected in 1871.......... H, Ann 5, pp 373-374
of western States and Territories....................... H, Ann 12, i, pp 119-141
Invertebrates, fossil, of Colorado, eastern base of Rocky Mountains, note on. H, Bull, vol 1, ser 2, No 1, pp 39-47
of Colorado, Little Thompson Creek, list of. H, Ann 11, p 177
St. Vrain River, list of. H, Ann 11, p 178
of Cretaceous, geographical distribution of, table showing. H, Ann 11, pp 253-255
of Arizona, Utah, Colorado, New Mexico. W, iv, pp 169-205
of Black Hills. BH, pp 383-459; PBH, pp 27-46
of Colorado. H, Ann 11, pp 175-177, 197, 205-207, 224, 225, 265-266
of Colorado, Arizona, Utah, and New Mexico. W, iv, pp 169-205
of Fortieth Parallel region. K, iv, pp 140-182
of New Mexico, list of. H, Ann 11, pp 267-268
of New Mexico and Utah. W, Uncd 6, pp 24-27
of New Mexico, Colorado, Utah, and Arizona. W, iv, pp 169-205
of Plateau province. UM, pp 94-101, 112-124
of Southwest. W, iv, pp 169-205
of Texas, Denison, Helotes, and Salado, list of. H, Ann 11, p 268-270
of Utah, Ashleys Fork. H, Ann 11, p 229
of Utah and New Mexico. W, Uncd 6, pp 24-27
of Utah and Wyoming, list of, collected in 1871. H, Ann 5, pp 375-376
of Utah, Colorado, New Mexico, and Arizona. W, iv, pp 169-205
of Wyoming and Utah, list of, collected in 1871. H, Ann 5, pp 375-376
of Cretaceous and Tertiary of Upper Missouri country. H, Mon ix
of Fortieth Parallel region. K, iv, pp 1-302
of Fox Hills group of Colorado. H, Ann 11, pp 179-186, 265-266
of Green River group, list of. H, Bull, vol iii, No 3, p 611
of Jurassic of Black Hills. BH, pp 344-382; PBH, pp 13-26
of Fortieth Parallel region. K, iv, pp 130-139, 284-299
of Plateau province. UM, pp 92-94, 110-111
of Southwest. W, iv, pp 162-168
of Utah and Arizona. W, Uncd 6, pp 23-24
of western States. H, Ann 12, i, pp 143-163; H, Bull, vol iii, No 3, p 610
of Juratias of southeastern Idaho. H, Bull, vol v, No 1, pp 105-117
gеographic distribution of, table showing. H, Ann 11, p 255
list of. H, Bull, vol iii, No 3, p 610
of Colorado. H, Ann 11, pp 165-175, 190-197, 207-215
of Nebraska, eastern. H, Uncd 1, pp 140-239
of Nevada, Utah, Colorado, New Mexico, and Arizona in 1871-1874, portions of. W, iv, pp 1-219
of Plateau province. UM, pp 74-135
of Potsdam of Fortieth Parallel region. K, iv, pp 205-231
Invertebrates, fossil, of Primordial of Black Hills. [BH, pp 333-344; PBH, pp 8-11]
of Primordial of Southwest. [W, iv, pp 32-49]
of Utah and Nevada. [W, Uncl 6, pp 6-8]
of shale, dark, of Independence, Iowa. [H, Bull, vol iv, No 3, pp 725-730]
of Silurian of Fortieth Parallel region. [K, iv, pp 17-25, 205-246]
of Southwest. [W, iv, pp 32-78]
of Utah, Nevada, and New Mexico. [W, Uncl 6, pp 6-14]
of Tertiary of Fortieth Parallel region. [K, iv, pp 182-197]
of Plateau province. [UM, pp 102-106, 125-135]
of Southwest. [W, iv, pp 206-216]
of Utah and Wyoming, list of, collected in 1871. [H, Ann 5, pp 376-377]
of Tertiary and Cretaceous of the Upper Missouri country. [H, Mon ix]
of Tertiary lake basin at Florissant. [H, Bull, vol vi, No 2, pp 288-300]
of Trenton group of Nevada and New Mexico. [W, Uncl 6, pp 12-14]
of Southwest. [W, iv, pp 62-78]
of Triassic of Fortieth Parallel region. [K, iv, pp 99-129, 250-283]
of Idaho, southeastern. [H, Ann 12, i, pp 105-108]
of Utah and Wyoming, list of. [H, Ann 5, pp 373-377]
of Vancouver's and Sucia islands. [H, Bull, vol ii, No 4, pp 351-374]
of Wasatch of Colorado, White River Valley. [H, Ann 11, pp 220-229]
of Waverly group of Fortieth Parallel region. [K, iv, pp 251-264]
Orthoptera of Tertiary of Rocky Mountains. [H, Bull, vol i, ser 2, No 6, pp 447-449]
Physidae and Unionidae collected in Montana in 1876, descriptions of. [H, Bull, vol iii, No 3, pp 599-602]
Physopoda, Tertiary of Colorado. [H, Bull, vol i, ser 2, No 4, pp 221-223]
preservation of conditions of. [H, Bull, vol v, No 1, pp 133-141]
Uintacrinus Grinnell, notes on. [H, Bull, vol ii, No 4, pp 375-378]
Uniones of Tertiary of Wyoming and Utah, new species of. [H, Bull, vol iii, No 3, pp 603-606]
Unionidae of Mesozoic and Cenozoic of North America, comparison with living species. [H, Bull, vol iii, No 3, pp 615-624]
Unionidae and Physidae collected in Montana in 1876, descriptions of. [H, Bull, vol iii, No 3, pp 599-602]
Invertebrate paleontology, bibliography of North American. [H, Misc 10, H, Bull, vol v, No 1, pp 143-152]
Iowa, elevations in. [H, Misc 1 (3d ed), pp 6-8; H, Misc 1 (4th ed), pp 68-75]
Independence, dark shale at, fossils of. [H, Bull, vol iv, No 3, pp 725-730]
locusts in. [H, Ann 9, p 617; H, Uncl 14, pp 77-80, App, pp 104-110]
Iowa mining district, Idaho, description of. [W, 1878, p 89]
Ireland, primitive lapidarian sculptures in. [Eth, v, pp 17-18]
Iron in Utah, southwestern. [W, iii, pp 261-263]
Iron implements of Indians of southern California. [W, vii, pp 272-276]
(See, also, Ethnology and Archaeology.)
Iron ore, analyses of, from Colorado. [K, iii, p 483]
analysis of, from Colorado, Golden. [H, Ann 9, p 205]
from Nevada, Palisade Canyon. [K, ii, p 586]
from Utah, southwestern. [W, iii, p 262]
from Wyoming, Iron Mountain. [K, ii, p 151]
Sheep Butte. [K, ii, p 151]
of New Mexico, Galisteo Creek region. [W, iii, Supp, pp 394-395]
Ironstone, analyses of, from Wyoming, Carbon. [K, i, p 542]
Irrigable lands, selection and water supply of, and other questions relating to. [AL, pp 81-92]
Irrigation, advantages of, storage of water, etc ........................................ AL, pp 10-14
in California, Santa Clara Valley .............................................................. H, Ann 5, pp 269-271
in Colorado ..................................................................................................... H, Ann 3, pp 149-150;
H, Ann 1-3, pp 145-146; H Ann 10, pp 339-343
in western Territories ................................................................................... W, i, pp 192-205

Jackson (W. H.), ancient ruins in southwestern Colorado .................. H, Ann 8,
pp 367-381; H, Bull, vol 1, ser 2, No 1, pp 17-30
descriptive catalogue of photographs of North American Indians .......... H, Misc 9

descriptive catalogue of photographs of the United States Geological Sur­
vey of the Territories .................................................................................... H, Misc 5
notice of the ancient ruins in Arizona and Utah lying about the Rio San
Juan .............................................................................................................. H, Bull, vol ii, No 1, pp 25-45
report on ancient ruins examined in 1875 and 1877 ................... H, Ann 10, pp 409-453

Jackson Hole, Wyoming, geology of ......................................................... H, Ann 11, pp 443-448

Jackson Lake, Wyoming, geology near ...................................................... Ann 6, pp 261-264

James (T. P.), Musci of Great Basin ............................................................. K, v, pp 398-411
Muscii of the Southwest .............................................................................. W, vi, pp 341-351
plants determined by ................................................................................... W, Uncl, 5, pp 58-62

Jenney (W. P.), mineral resources of Black Hills ................................. BH, pp 225-324

John Day River, Wyoming, geology near ............................................... H, Ann 11, pp 543-545
John Day group, vertebrates of White River group and ............ H, Mon iii, pp 759-1002
John Gray Lake, Idaho, geology near ...................................................... H, Ann 11, pp 357-358

Jordan (D. S.), catalogue of the fishes of the fresh waters of North America... H, Bull,
vol iv, No 2, pp 407-442
notes on a collection of fishes from the Rio Grande, at Brownsville, Texas. H, Bull,
vol iv, No 2, pp 397-406; H, Bull, vol iv, No 3, pp 663-667
report on collection of fishes made by Dr. Elliott Coues in Dakota and
Montana during seasons of 1873 and 1874 ........................................... H, Bull,
vol iv, No 4, pp 777-799

Jordan (D. S.) and Henshaw (H. W.), report upon fishes collected in Califor­
ia and Nevada, 1875-1877 ........................................................................ W, 1878, pp 187-205

Judith River, Montana, geology of region of ........................................ H, Bull, vol iii, No 3, pp 565-577

Judith River group, geology of .................................................................. H, Bull, vol iii, No 3, pp 565-567
invertebrate fossils of, list of ..................................................................... H, Bull, vol iii, No 3, p 612
of Montana, Physide and Unionide from .................................................. H, Bull, vol iii, No 3, pp 599-602
of Missouri River region, upper ................................................................. H, Mon ix, pp xlvii-lv
fossil vertebrates of .................................................................................... H, Bull, vol iii, No 3, pp 588-597

Julesburg, Colorado, astronomical determinations at ......................... W, ii, pp 433-448

Julian district, California, notes on ......................................................... W, 1876, pp 59-60

Junction Valley, Wyoming, geology of ..................................................... H, Ann 12, ii, pp 42-47
Jurassic fossils; invertebrates of Black Hills ........................................ BH, pp 344-382, PBH, pp 13-26
invertebrates of Fortieth Parallel region .................................................. K, iv, pp 130-139, 284-297
of Plateau province ...................................................................................... UM, pp 92-94, 110-111
of southwest ................................................................................................. W, iv, pp 162-168
of Utah and Arizona .................................................................................... W, Uncl 6, pp 23-24
of Utah and Nevada ..................................................................................... W, iv, pp 162-168
of Utah and Wyoming, list of, collected in 1871 ..................................... H, Ann 5, pp 374-375
of Western States ........................................................................................ H, Ann 12, i, pp 143-153
list of .............................................................................................................. H, Bull, vol iii, No 3, p 610

(See, also, Invertebrates, fossil.)
of Montana and Idaho .................................................................................. H, Ann 6, pp 434-435, 471-474
of Utah and Wyoming .................................................................................. H, Ann 5, pp 374-375
of western States .......................................................................................... H, Ann 12, i, pp 143-153

(See, also, Invertebrates, fossil; Vertebrates, fossil.)
Jurassic rocks of Basin Range ................................................. W, iii, pp 174-175
of Black Hills ........................................................................... BH, pp 151-169
of Colorado, central ................................................................. W, iii, pp 381-382
Eagle, Grand, and Gunnison rivers ........................................... H, Ann 8, pp 124-128
Front Range .............................................................................. H, Ann 8, pp 44-45; K, ii, pp 37-39
east of .......................................................................................... H, Ann 7, pp 98-100
northwestern .............................................................................. H, Ann 10, p 28
of Colorado Plateau ...................................................................... W, iii, pp 280-282
of Fortieth Parallel area ............................................................... K, i, pp 285-295, 343-347
of Idaho, eastern .......................................................................... H, Ann 11, pp 623-624
eastern, and Wyoming, western ................................................ H, Ann 11, pp 494-496
of Utah, high plateaus ................................................................. HP, pp 150-154
of Wyoming, Colorado Range .................................................... H, Ann 11, pp 37-39
Rawlings Peak, vicinity of ......................................................... H, Ann 11, p 121
Sweetwater Valley ....................................................................... H, Ann 11, pp 107-108
western .......................................................................................... H, Ann 11, pp 623-624
western, and Idaho, eastern ........................................................ H, Ann 11, pp 494-496
Wind River Range, vicinity of ..................................................... H, Ann 11, pp 82-84
Juratias rocks of Colorado, Sangre de Cristo Range .................... H, Ann 9, p 123
of Colorado, south-central, and New Mexico, north-central ........ W, iii,
Supp, pp 85-87
Spanish Peaks region .................................................................. W, 1879, p 276
White River district ..................................................................... H, Ann 10, pp 72-74, 107-108
of Idaho, southeastern, fossils of ............................................... H, Bull, vol v, No 1, pp 105-117
of New Mexico, north-central, and Colorado, south-central ......... W, iii,
Supp, pp 85-87
of Utah, Henry Mountains ........................................................... HM, pp 5-8
Uinta Mountains .......................................................................... UM, pp 150-153
White River district ..................................................................... H, Ann 10, pp 72-74, 107-108
of Utah, Henry Mountains ........................................................... HM, pp 5-8
Red beds of Colorado, White River district ................................. H, Ann 10, pp 72-73
Juratias section of southeastern Idaho and western Wyoming .... H, Bull,
vol v, No 1, pp 119-123

(See, also, Triassic; Jurassic.)
Kai-ga-ni language, vocabulary of ............................................ Eth, i, pp 135-142
(See, also, Ethnology and archaeology.)
Kalispelm, language, vocabulary of .......................................... Eth, i, pp 267-283
(See, also, Ethnology and archaeology.)
Kamna Mountains, Nevada, geology of ..................................... K, ii, pp 786-790
Kampf (F.), report on astronomical observations at Colorado Springs .... W, Uncl 3, pp 47-82
Kampf (F.) and Clark (J. H.), report on astronomical observations at Cheyenne, Wyoming ......................... W, Uncl 3, pp 2-45
Kampf (F.), Clark (J. H.), Maryatt (W. W.), and Safford (T. H.), astronomical determinations in Nevada, Utah, Montana, Wyoming, Nebraska, Colorado, and New Mexico, 1872-74 ...... W, ii, pp 1-491
Kaniagmut language, vocabulary of ........................................ Eth, i, pp 136-142
(See, also, Ethnology and archaeology.)
Kansas, climate of eastern Colorado and western ...................... H, Ann 4, pp 453-456
Cretaceous rocks of, fossil reptiles and fishes of ........................ H, Ann 4, pp 385-425
gеology and paleontology of ....................................................... H, Ann 5, pp 318-349
Cretaceous and Tertiary formations of Nebraska and, fossil plants of . . H, Ann 4, pp 370-385
| Kansas, Goniatite from eastern, notice of | Bull, vol 1, ser 2, No 6, p 445 |
| Hymenoptera collected in northwestern | Bull, vol v, No 3, pp 349-370 |
| industrial resources of eastern Colorado and western | Ann 4, pp 442-458 |
| locusts in | Ann 9, pp 615-616; Uncl 14, pp 68-74, App, pp 85-103 |
| law regarding destruction of | Uncl 9, p 10 |
| Tertiary and Cretaceous formations of Nebraska and, fossil plants of | Ann 4, pp 370-385 |
| Tertiary and Cretaceous periods of, notes on | Ann 9, pp 277-294; Bull, vol 11, No 3, pp 211-221 |
| water resources of eastern Colorado and western | Ann 4, pp 448-452 |
| Kansas Pacific Railway, experiments in cultivation on the plains along the line of | Ann 5, pp 274-279 |
| Kaolin, analysis of, from Utah, Sam Pitch Creek | W, iii, p 263 |
| in Utah, Gunnison | W, iii, p 263 |
| Kaolinite, analysis of, from Arizona, San Francisco River | W, iii, p 637 |
| analysis of, from Utah, Gunnison | W, iii, p 637 |
| Kawsoh Mountains, Nevada, geology of | Ann 9, pp 277-294; Bull, vol 11, No 3, pp 211-221 |
| Kearsarge district, California, notes on | W, 1871, p 50 |
| Kanoaha Range, Colorado, topographic features of | Ann 9, pp 410-411 |
| King (C.), reports by | pp 38-39 of this bulletin |
| systematic geology of Fortieth Parallel region | K, 1 |
| Kingsley (J. S.), a synopsis of the North American species of the genus Alpheus | Bull, vol iv, No 1, pp 189-199 |
| Kinsley district, Nevada, granite and Archean rocks of | K, 1, pp 60-62 |
| Kittistzu language, vocabulary of | Eth, i, pp 143-153 |
| Kjokkenmöddings and graves of California, Santa Barbara Islands and the adjacent mainland | Bull, vol iii, No 1, pp 37-56 |
| of Oregon, coast of | Bull, vol iii, No 1, pp 27-35 |
| Klamath Indians, ethnographic sketch, grammar, text, dictionary of language, bibliography, etc., of | Eth, ii |
| Klamath region, Oregon, geography, flora, and fauna, etc., of | Eth, ii, pt 1, pp xv-xxvii |
| Klett (F.), the cachina: a dance at the pueblo of Zuñi | W, vii, pp 332-336 |
| Komookhs language, vocabulary of | Eth, i, pp 269-283 |
| (See, also, Ethnology and archaeology.) | |
| Kulleeespelm language, vocabulary of | Eth, i, pp 267-283 |
| (See, also, Ethnology and archaeology.) | |
| Kuwalitsk language, vocabulary of | Eth, i, pp 269-283 |
| (See, also, Ethnology and archaeology.) | |
| Kwa-kiutl language, vocabulary of | Eth, i, pp 143-153 |
| (See, also, Ethnology and archaeology.) | |
| La Plata River, Colorado, ruins on | Bull, vol 11, No 1, pp 6-7 |
| La Plata Valley, Colorado, geology of | Ann 9, pp 245-248, 268-272 |
| La Veta Pass, Colorado, mountain ranges between head of the Pecos and, geology of | W, 1876, pp 199-202 |
| Labradorite, analysis of, from Canada, Chateau Richer | K, ii, p 14 |
| Labran, Colorado, astronomical determinations at | W, ii, pp 265-288 |
| Laccolite, definition and cross sections of | HM, pp 19-20 |
| in Wyoming, Indian Creek | Ann 12, ii, pp 24-25 |
| natural history of | HM, pp 51-60 |
| Ladd (S. B.), topographical reports of | Ann 7, pp 661-669; Ann 8, pp 435-442 |
Lagopus leucurus, breeding habits, nests, and eggs of.................H, Bull, vol i, ser 2, No 5, pp 263-266

(See, also, Vertebrates.)

Lakhsont, glacial lake, discussion of..........................K, i, pp 504-529
Lake basin, Tertiary, at Florissant, Colorado..................H, Ann 12, i, pp 271-293
Lake Fork, Colorado, physical features near....................W, 1876, pp 93-95
Lake Range, Nevada, geology of................................K, ii, pp 814-816
granite rocks of.............................................K, i, pp 96-97
Lakes, elevation of...........................................H, Misc 1, p 46;
Lakes, ancient, of western America, deposits and drainage of...H, Ann 4, pp 329-339
Lakes, glacial, of Colorado, central
of Fortieth Parallel region........................................K, i, pp 488-529
Lakes, Quaternary, of California, southeastern..............W, 1876, pp 177-179
of Fortieth Parallel region....................................K, i, pp 488-529
Land grants in aid of internal improvements.....................AL, pp 165-182
Land sculpture in Utah, Henry Mountains.........................HM, pp 99-150
Land system needed for arid region................................AL, pp 25-45
Langford (N. P.), Report on resources of Snake River Valley...H, Ann 6, pp 86-91
Language and utensils of modern Utes.........................H, Bull, vol ii, No 1, pp 71-76
(See, also, Ethnology and archaeology.)

Lanius ludovicianus excubitorides, osteology of...............H, Bull, vol vi, No 2, pp 351-359
(See, also, Vertebrates.)

Lapidarian sculptures in the Old World and America, observations on cup-shaped and..............................Eth, v
(See, also, Ethnology and archaeology.)

Laramie group, age, conditions of deposition, etc., of....H, Ann ii, pp 259-265
flora of.........................................................H, Mon viii, pp 109-126
invertebrate fossils of........................................H, Ann 12, i, pp 49-103
from Colorado, Bijou Creek....................................H, Ann 11, pp 190-197
Crow Creek Valley.............................................H, Ann 11, pp 165-175
Danforth Hills..................................................H, Ann 11, pp 211-215
Yampa Valley...................................................H, Ann 11, pp 207-211
from Wyoming, Bear River Valley...............................H, Ann 11, pp 241-248
Bitter Creek Valley.............................................H, Ann, ii, pp 215-224
Point of Rocks station, list of................................H, Ann 11, p 216
Rock Springs, list of.........................................H, Ann 11, p 215
geographic distribution of, table showing........................H, Ann 11, p 255
list of.........................................................H, Bull, vol iii, No 3, p 610
new species of, descriptions of................................H, Bull, vol iv, No 3, pp 707-719
molluscan species of, distribution of............................H, Bull, vol iv, No 3, pp 721-724
of Colorado, northwestern.......................................H, Ann 10, pp 33-34
south-central and New Mexico, north-central..................W, iii, Supp, pp 102-130
Spanish Peaks region..........................................W, 1879, pp 277-279
White River district............................................H, Ann 10, pp 77-78
of Fortieth Parallel region....................................K, i, pp 331-339, 350-357
of New Mexico, north-central, and Colorado, south-central......W, iii,
Supp, pp 102-130
of Utah, Bear River region.....................................H, Ann 11, pp 629-632
White River district............................................H, Ann 10, pp 77-78
of Wyoming, Green River region................................H, Ann 11, pp 629-632
Rawlings, vicinity of..........................................H, Ann 11, pp 124-127
Laramie group, of Wyoming, western, and adjacent regions.................H, Bull, vol v, No 2, pp 195-200
of Wyoming, Wind River Range, vicinity of..................................................H, Ann 11, p 88
relations of..............................................................................................................W, iii, Supp, pp 131-158
remarks on................................................................................................................H, Bull, vol iv, No 4, pp 865-876
Laramie Hills, geology of.......................................................................................K, ii, pp 7-26
physical aspects of..................................................................................................K, ii, pp 4-7
Laramie Plains, Wyoming, agriculture on.........................................................H, Ann 4, pp 220-223
geology of................................................................................................................K, ii, pp 73-93; H, Ann 4, pp 121-133
Las Animas mining district, Colorado, notes on..............................................W, 1879, p 196
Las Animas River, New Mexico, ruins along.......................................................W, viii, pp 347-350
Las Vegas, New Mexico, astronomical determinations at.........................W, ii, pp 385-401
Lassen Peak region, California, topography, geology, etc., of.....................W, 1879, pp 209-214
Le Conte (J. L.), Coleoptera of the alpine regions of the Rocky Mountains.....H, Bull, vol iv, No 2, pp 437-480; H, Bull, vol v, No 3, pp 499-520
new species of Coleoptera from New Mexico, Colorado, and California........W, 1876, pp 296-300
Lead Creek, Wyoming, geology near.................................................................H, Ann 11, p 527
Leeches collected in Colorado, list of.................................................................H, Ann 7, p 623
(See, also, Invertebrates.)
Leeches, fresh-water, collected in portions of Nevada, Utah, Colorado, New Mexico, and Arizona..............................W, v, pp 955-967
(See, also, Invertebrates.)
Leidy (J.), Contributions to the extinct vertebrate fauna of the western Ter-
ritories.....................................................................................................................H, Mon i
fresh-water Rhizopods of North America..............................................................H, Mon xii
notice of some worms collected near Yellowstone River in 1871...................H, Ann 5, pp 381-382
on the fossil vertebrates of the early Tertiary formation of Wyoming............H, Ann 5, pp 353-372
report on the vertebrate fossils of the Tertiary formations of the West............H, Ann 4, pp 340-370
Leidy, Mount, Wyoming, geology near..............................................................H, Ann 11, pp 456-461
Lepidoptera collected in Montana in 1874, discussion of...............................H, Bull, vol iv, No 2, pp 513-517
(See, also, Invertebrates.)
Lesquereux (L.), Cretaceous flora of the western Territories.......................H, Mon vi Cretaceous and Tertiary floras of the western Territories....................H, Mon vii enumeration and description of the fossil plants, from the specimens obtained in the explorations of Dr. F. V. Hayden, 1870 and 1871........................................................................................................................................................................H, Ann 5, pp 283-303 enumerations, with descriptions, of some Tertiary fossil plants, from speci-
Lesquereux (L.), on the fossil plants of the Cretaceous and Tertiary formations of Kansas and Nebraska

H, Ann 4, pp 370-385

on the general characters and relation of the flora of the Dakota group.

H, Bull, vol i, ser 1, No 2, pp 52-62

on the Tertiary flora of the North American Lignitic considered as evidence of the age of the formation.

H, Ann 8, pp 275-315

remarks on specimens of Cretaceous and Tertiary plants secured by the Survey in 1878, with a list of species hitherto described

H, Ann 10, pp 481-520

review of the Cretaceous flora of North America

H, Ann 8, pp 316-365

review of the fossil flora of North America

H, Bull, vol i, ser 2, No 5, pp 233-248

Tertiary flora of North America

H, Ann 5, pp 304-318

Tertiary flora of the western Territories

H, Mon vii

Leucite rock, analysis of, from Wyoming, Green River Basin

K, ii, p 237

of Wyoming, Leucite Hills, microscopic petrography of

K, vi, pp 259-261

thin section of, from Wyoming, Leucite Hills

K, vi, pl 5

Leucitophyre, analysis of, from Wyoming, Leucite Hills

H, Ann 11, p 135

Leucosticte, monograph of

H, Bull, vol i, ser 2, No 2, pp 51-82

(Lee, also, Vertebrates.)

Leucosticte tephrocotis, sexual, individual, and geographical variation in

H, Bull, vol ii, No 4, pp 345-350

(See, also, Vertebrates.)

Lewis and Clarke, travels of, account of publications relating to, with a commentary on the zoological results of their expedition

H, Bull, vol i, ser 2, No 6, pp 417-444

Lignite, analysis of, from Colorado, Boulder, Marshall mine

K, iii, p 483

analysis of, from Colorado, South Boulder Creek

H, Ann 3, p 94; H, Ann 1-3, p 194

deposits of, in the upper Missouri region

H, Mon ix, pp xlvii-ixi

formation of

H, Ann 6, pp 350-358

of Colorado, age of

W, iii, pp 404-410

Lignitic formation, age of

H, Ann 7, pp 367-379

age of, as determined by fossil plants

H, Mon viii, pp 309-355

exposures, study, etc., of

H, Ann 8, pp 19-33

of Colorado

H, Ann 8, pp 28-35

eastern, and portions of Wyoming

H, Bull, vol i, ser 2, No 5, pp 401-411

front range, east of

H, Ann 7, pp 106-110

Middle Park

H, Ann 7, pp 156-157

of North America, distribution, age, stratigraphy, etc., of

H, Mon vii, pp 3-31

Tertiary flora of, considered as evidence of the age of the formations

H, Ann 8, pp 275-315

of Rocky Mountain region

H, Ann 6, pp 317-427

plants of, some new species of

H, Bull, vol i, ser 2, No 5, pp 363-389

(See, also, Fort Union group.)

Lignititic formation and its fossil flora

H, Ann 7, pp 365-425

Lillowat language, vocabulary of

Eth, i, pp 268-283

(See, also, Ethnology and archaeology.)

Limestone, analysis of, from Colorado

K, ii, p 39

analysis of, from Colorado, Browns Park

K, ii, p 274

from Colorado, Green River

K, i, p 542

North Park

K, i, p 542; K, ii, pp 112-129

from Nevada, Carson River, vicinity of

K, i, p 542
Limestone, analysis of, from Nevada, Clover Peak Range.........K, i, p 542
analysis of, from Nevada, Cottonwood Canyon, vicinity of........K, ii, p 723
from Nevada, East Humboldt Range........................K, i, p 542; K, ii, p 530
Fossil Hill..................................................K, i, p 542; K, ii, p 767
Humboldt Mountains........................................K, i, p 542
Kawsoh Mountains..........................................K, ii, p 773
Kinsley district..........................................K, i, p 110
Maggie Creek Gap.........................................K, i, p 542
Pequot Range.............................................K, i, p 542
Pine Valley................................................K, ii, p 563
Pyramid Lake.............................................K, i, p 110
Star Canyon.............................................K, ii, p 723
Tenabo Peak............................................K, i, p 542; K, ii, p 572
Truckee region..........................................K, ii, p 821
White Pine district....................................K, iii, p 413
White Pine Mountains.................................K, i, p 542
Wrights Canyon........................................K, i, p 542
from Utah, Bear River, vicinity of........................K, i, p 542
Brush Creek..............................................K, i, p 542
City Creek..............................................K, ii, p 376
Cottonwood Canyon, vicinity of........................K, i, p 542
Duchesne Fork..........................................K, ii, p 304
Uinta Mountains.......................................K, i, p 542
Ute Peak.................................................K, ii, p 411
Wasatch Range..........................................K, ii, p 373
Weber Canyon..........................................K, ii, p 389
from Wyoming, Henrys Fork.............................K, i, p 542
Laramie Plains.........................................K, i, p 542
Red Butte................................................K, i, p 542; K, ii, p 78
Lincoln, Mount, Colorado, meteorological observations at....H, Misc 6, pp 22-34
Lincoln Valley, Idaho, geology of........................H, Ann 11, pp 330-335
Lionite, analysis of, from Colorado, Magnolia district, Mountain Lion mine........H, Ann 10, p 146
Lithology and mineralogy of portions of Nevada and California....W, 1878, pp 184-185
Lithophane, descriptions of new Noctuidae and.............H, Bull, vol v, No 2, pp 201-208
(See, also, Invertebrates.)
Little Book Cliffs, Colorado, geology of..................H, Ann 10, pp 176-177
Little Cedar Mountains, Nevada, geology of..............K, ii, pp 512-514
Little Colorado River, Arizona, geology between Camp Apache and........W, iii, pp 215-218
geology between Verde River and..........................W, iii, pp 209-215
Little Snake River, Colorado, geology of valley of.........K, ii, pp 187-189
geology near..............................................K, ii, pp 219-222
Lockwood (D. W.), reports of.........................W, 1869, pp 62-71; W, 1871, pp 62-76
Locust, Rocky Mountain, character, anatomy, enemies, destruction, etc., of.......H, Undc 14, pp 1-476
distribution, habits, etc., of............................H, Ann 9, pp 589-698
natural history of.......................................H, Undc 12
report on, and other insects injuring or likely to injure field and garden
crops in the Western States and Territories..............H, Ann 9, pp 589-809
destruction of young.....................................H, Undc 9; H, Undc 11
Lodes and veins, formation of, search for, etc...............H, Ann 7, pp 278-280
Lodi mining district, Nevada, description of..............W, 1877, pp 1270-1271
Lodore Canyon, Utah, geology near..........................K, ii, pp 288-290
LODOROE GROUP OF UINTA MOUNTAINS. ........................................................................................................... UM, p. 147
Loess, analysis of, from Germany, Rhine .......................................................... H, Ann 8, p. 246; H, Uncl r, p 12
analysis of, from Missouri, Hannibal ................................................................................. H, Ann 8, p. 246
from Nebraska, Loup River .............................................................................................................................. H, Ann 8, p. 246
Omaha, vicinity of .................................................................................................................................................. H, Ann 8, p. 246
Kearney, vicinity of .............................................................................................................................................. H, Ann 8, p. 246
Sutton ....................................................................................................................................................................... H, Ann 8, p. 246
in Nebraska, origin, scenery, age, etc., of .......................................................................................... H, Ann 8, pp 245-255
Loew (O.), agricultural resources of northern New Mexico and southern Colorado .................................................................................................................. W, 1875, pp 129-139
alkaline lakes, thermal springs, mineral springs, and brackish waters of southern California and adjacent country ................................................................................................................................. W, 1876, pp 188-199
greater distribution of vegetation in the Mohave Desert.................................................................................. W, 1876, pp 222-224
greater and mineralogical character of southeastern California and adjacent regions ........................................................................................................ W, 1876, pp 173-188
greater and mineralogical report on portions of Colorado and New Mexico ..................................................................................................................... W, 1875, pp 97-116
mineralogical, agricultural, and chemical conditions observed in portions of Colorado, New Mexico, and Arizona in 1873 ................................................................................................................................. W, iii, pp 569-661
notes upon ethnology of southern California and adjacent regions........................................................................ W, 1876, pp 321-327
physical and agricultural features of southern California, and especially of the Mohave Desert ................................................................................................................................. W, 1876, pp 214-222
physiological effects of a very hot climate ................................................................................................. W, 1876, pp 328-330
pueblo of Acoma .................................................................................................................................................. W, vii, pp 325-326
ruins in New Mexico ........................................................................................................................................... W, vii, pp 337-346; W, 1875, pp 174-178
Lone mining district, New Mexico, notes on ................................................................................................. W, 1879, p 192
Lone Mountain district, Nevada, notes on .......................................................................................................... W, 1871, p 35
Lone Pine district, California, notes on ......................................................................................................... W, 1871, p 50
Lone Valley mining district, California, notes on ............................................................................................... W, 1879, p 192
Logarithm, traverse, and altitude tables ........................................................................................................... W, Uncl 11
Longitude determinations in southern and southeastern Nevada .................................................................................. W, 1869, pp 30-35
Lookout district, California, notes on .............................................................................................................. W, 1876, pp 67-68
Los Angeles, California, geology of vicinity of .................................................................................................... W, 1876, pp 158-159
Los Cerillos mines, New Mexico, notes on ....................................................................................................... W, 1879, p 197
Loup Fork group, Canide of ............................................................................................................................... H, Bull, vol vi, No 2, pp 387-390
occurrence and character of ............................................................................................................................... H, Mon iii, pp 16-19
of Colorado, vertebrates of ................................................................................................................................. H, Ann 7, pp 518-532
of New Mexico, Rio Grande Valley .................................................................................................................. W, iv, pp 20-25
vertebrates of ....................................................................................................................................................... W, iv, pt ii, pp 283-365
Ludlow (H. H.), report of ................................................................................................................................. W, 1879, pp 261-265
Lyle (D. A.), report of ........................................................................................................................................... W, 1871, pp 76-90
Macomb (M. M.), report of ................................................................................................................................. W, 1877, pp 1278-1284; W, 1878, pp 139-145; W, 1879, pp 253-261; W, 1881; W, 1882; W, 1883
tables of geographic positions, azimuths, and distances ............................................................................... W, Uncl 16
McCauley (C. A. H.), notes on the ornithology of the region about the source of the Red River of Texas ................................................................................................................................. H, Bull, vol iii, No 3, pp 655-695
McChesney (C. E.), notes on the birds of Fort Sisseton, South Dakota ................................................................................................................................. H, Bull, vol v, No 1, pp 71-103
notes on the mammals of Fort Sisseton, South Dakota ..................................................................................... H, Bull, vol iv, No 1, pp 201-218
McCoy Creek, Idaho, geology near ...................................................................................................................... H, Ann 11, pp 391-402
Madison River, Montana, geology along ........................................................................................................ H, Ann 6, pp 160-167
INDEX TO HAYDEN, KING,

Madison Valley, Montana, explorations and geology of ..........H, Ann 6, pp 55-66
Malade Range and Valley, Idaho and Utah, geology of ..........H, Ann 11, pp 606-609
Mallery (G.), a calendar of the Dakota Nation ...........H, Bull, vol iii, No 1, pp 3-25
Mallophaga, descriptions of new species of ..........H, Ann 6, pp 731-734
(See, also, Invertebrates.)
Mammals collected in California in 1875.............W, 1876, pp 305-312
in Nevada, Utah, California, Colorado, New Mexico, and Arizona,
1871-74, report on ............W, v, pp 35-129
in Wyoming, list of .........................H, Ann 4, pp 461-462
geographical distribution of ..................H, Bull, vol iv, No 2, pp 313-377
geographical variation among North American, especially in respect to
size ........................................H, Bull, vol iv, No 4, pp 308-344
of Fort Sisseton, South Dakota ...........H, Bull, vol iv, No 1, pp 201-218
of western United States, geographical distribution and variation in ........W, v, pp 23-34
synopsis of insectivorous .....................H, Bull, vol 1, ser 2, No 2, pp 91-120
(See, also, Vertebrates.)
Mammals, American insectivorous, notes on ..........H, Bull, vol iii, No 3, pp 631-653
(See, also, Vertebrates.)
Mammoth mining district, Nevada, description of ............W, 1877, pp 1269-1270
Mancos River, Colorado, cliff houses and ruins on ..........H, Ann 10, pp 391-399;
........H, Bull, vol ii, No 1, pp 10-18
ruins, ancient, in valley of ..............H, Bull, vol 1, sec 2, No. 1, pp 17-30
Map, geologic, of Arizona, northeastern, portions of Colorado, New Mexico,
Utah and ........................................H, Atlas, sheet xv
(See, also, p 63 of this bulletin.)
Arkansas Valley, Upper, showing moraines ................H, Ann 8, p 48
central ..................................H, Atlas, sheet xiii; see, also, p 36 of this bulletin
Central City mining region ........................H, Ann 7, p 280
Colorado Springs and vicinity .............H, Ann 8, p 40
Eagle River, vicinity of ...................H, Ann 8, p 84
Elk Mountains ................................H, Ann 8, p 73
Florissant, Tertiary lake basin at ........H, Mon xir, frontispiece;
........H, Ann 12, 1, p 293; H, Bull, vol vi, No 2, p 300
Front Range, eastern slope, from Big Thompson Creek to South
Platte River ................................H, Ann 7, p 147
Grand River Valley ................................H, Ann 10, p 176
Hot Springs ..................................H, Ann 7, p 163
showing moraines ........................H, Ann 7, p 159
Grand and Gunnison rivers, basaltic plateaus between ........H, Ann 8, p 174
Green River Basin ..........................K, Atlas
showing orographic disturbances ....................K, 1, p 760
Gunnison region, showing areas of rhyolite and breccia ....H, Ann 8, p 170
Gunnison River ................................H, Ann 8, p 100
south side of ................................H, Ann 9, p 38
vicinity of, showing areas of porphyritic trachyte ........H, Ann 8, p 166
Middle Park ................................H, Ann 7, p 155
Mount Lincoln mining region ..............H, Ann 7, p 302
north central ................................H, Atlas, sheet xii
northwestern, portion of ................H, Ann 10, p 80
northeastern Utah, and ..................H, Atlas, sheet xi
Park View Peak and vicinity, showing trachyte dikes ..........H, Ann 7, p 174
Map; geologic, of Colorado, Purgatory River region........... W, iii, Supp, pocket
of Colorado, Rio Grande region........................................ W, iii, Supp, pocket
Rocky Mountains in Wyoming and............................................. K, Atlas
showing orographic disturbances................................................. K, i, p 760
San Miguel Plateau................................................................. H, Ann 10, p 185
showing general orographic features........................................ H, Ann 9, p 242
south-central, portion of New Mexico and.............................. H, Atlas, sheet xvi
southwestern portions of New Mexico, Arizona, Utah, and........ H, Atlas,

Spanish Peaks region.......................................................... H, Ann 9, p 132
Trinidad region..................................................................... H, Ann 9, p 196
Unaweep Canyon.................................................................... H, Ann 9, p 58
Weeminuche glacier............................................................... H, Ann 9, p 216
western part of Utah and....................................................... H, Atlas, sheet xiv

(See, also, p 63 of this bulletin.)
of Dakota and Nebraska.......................................................... H, Uncl 1, at end
of Fortieth Parallel area, Archean and granitic exposures......... K, i, p 126
Archean, granitic, and Paleozoic rocks................................. K, i, p 248
Mesozoic and pre-Mesozoic rocks........................................... K, i, p 356
Tertiary rocks...................................................................... K, T, p 458
volcanic rocks..................................................................... K, i, p 676

of Idaho, portions of Utah, Wyoming, and......................... H, Ann 12, map case
Snake River, sources of. (See p 36 of this bulletin.)
of Montana, Gallatin, Madison, and Yellowstone basins. (See p 36 of this bulletin.)
of Nebraska and Dakota.......................................................... H, Uncl 1, at end
of Nevada, Lake Bonneville. (See p 65 of this bulletin.)
Lake Lahontan...................................................................... K, i, p 528
Toyabe Mountains................................................................... K, iii, Atlas, pl xiii
Washoe mining district.......................................................... K, iii, Atlas, pl ii
White Pine district.................................................................. K, iii, Atlas, pl xiv

(See, also, p 63 of this bulletin.)
of Nevada Basin...................................................................... K, Atlas
of Nevada Desert, showing orographic disturbances............... K, i, p 760
of Nevada Plateau................................................................... K, Atlas
showing orographic disturbances............................................ K, i, p 760
of New Mexico, Canadian River and Cimarron Range, vicinity of..... W, iii,
Canadian and Mora rivers, vicinity of...................................... W, iii, Supp, pocket
Galisteo Creek region.............................................................. W, iii, Supp, pocket
northern portion of Colorado and........................................ H, Atlas, sheet xvi
northwestern portions of Colorado, Utah, Arizona, and............... H, Atlas, sheet xvi
Rio Grande, upper region of................................................ W, iii, Supp, pocket
Taos Valley and Upper Pecos region................................. W, iii, Supp, pocket
Zuni Range, vicinity of......................................................... W, iii, p 501

(See, also, p 63 of this bulletin.)
of South Dakota, Black Hills.................................................. BH, Atlas
of Utah, Book Cliffs and Grand River Valley.............................. H, Ann 10, p 176
eastern part of Colorado and................................................... H, Atlas, sheet xiv
Henry Mountains...................................................................... HM, at end
high plateaus......................................................................... HP, Atlas
Lake Bonneville................................................................. K, i, p 528; see, also, p 65 of this bulletin
northeastern, northwestern Colorado and.............................. H, Atlas, sheet xi
portions of Colorado, New Mexico, Arizona, and..................... H, Atlas, sheet xvi
of Idaho, Wyoming, and....................................................... H, Ann 12, map case
Map, geologic, of Utah, Salt Lake Basin ........................................ K, Atlas of Utah, Salt Lake Basin, showing orographic disturbances ........................................ K, i, p 760
Uinta Mountains ........................................ UM, Atlas
(See, also, p 63 of this bulletin.)
- of Wyoming, central ........ H, Ann 12, map case; see, also, p 37 of this bulletin
Green River Basin ........................................ K, Atlas showing orographic disturbances ........................................ K, i, p 760
Junction Valley ........................ H, Ann 12, ii, p 42
portions of Idaho, Utah, and ......................... H, Ann 12, map case
Rocky Mountains in Colorado and ......................... K, Atlas showing orographic disturbances ........................................ K, i, p 760
Snake River, sources of. (See p 37 of this bulletin.)
Yellowstone Lake, showing former extent ........ H, Ann 12, ii, p 56
Yellowstone Park ........ H, Ann 12, map case; see, also, p 37 of this bulletin showing distribution of glacial bowlders ........ H, Ann 11, p 52
Map, topographic, of Alaska ........................................ Eth, i, pocket of Arizona, Colorado River, vicinity of ........ W, i, p 170; W, 1876, p 112
Jemez Basin ........................................ W, iii, p 616
Moqui Mesas ........................................ H, Ann 10, p 453
-northeastern parts of Colorado, Utah, New Mexico, and ........ H, Atlas, sheet ix portions of Arizona, California, and ......................... W, 1871, p 96
portions of Colorado, New Mexico, Utah, and, showing locations of ancient ruins and modern pueblos ........ H, Ann 10, p 453;
H, Bull, vol ii, No 1, p 46
portions of Utah, Nevada, and ......................... W, Uncl 2, at end (See, also, p 60 of this bulletin.)
of California, east central ......................... W, 1879, p 211
Klamath River, headwaters of ......................... Eth, ii, pt 1, frontispiece
Lake Tahoe region. (See p 65 of this bulletin.)
Los Angeles to Colorado River ......................... W, 1876, p 112
portions of Arizona, Nevada, and ......................... W, 1871, p 96
Santa Barbara Islands ......................... H, Bull, vol iii, No 1, p 38
Santa Barbara Islands and vicinity ......................... W, vii, p 298
Santa Cruz Island ......................... H, Bull, vol iii, No 1, pp 42, 44, 46, 48, 50 showing distribution of Indian tribes ......................... Eth, iii, pocket southeastern, showing depressed area in Colorado Desert ........ W, 1876, p 118 southern, and Nevada, southwestern, map of ......................... W, 1876, p 72
Tallac Peak, vicinity of ......................... W, i, p 353
Truckee River, vicinity of ......................... W, i, p 397
Yosemite Valley. (See p 65 of this bulletin.) (See, also, pp 60-64.)
of Colorado ........ H, Atlas; H, Ann 10, at end; see, also, p 36 of this bulletin
Bakers Park and vicinity ......................... H, Bull, vol i, ser 2, No 3, p 164 central portion ........ H, Atlas, sheet vii; H, Ann 7, p 682; H, Ann 8, p 413; see, also, p 35 of this bulletin
Front Range ......................... H, Ann 8, p 40 east of, showing location of coal mines ......................... H, Ann 7, p 121
Gilpin County gold region ......................... K, iii, p 493 -Gold Hill mining region, vicinity of ......................... H, Ann 7, p 685
Map, topographic, of Colorado, portions of Utah, New Mexico, Arizona, and, showing location of ancient ruins and modern pueblos... H, Ann 10, p 453

of Colorado, Rocky Mountains in Wyoming and... K, Atlas
San Juan region... H, Bull, vol i, ser 2, No 3, p 145;
see, also, p 36 of this bulletin
San Luis Valley... H, Ann 9, p 148
Sierra La Sal... H, Ann 9, p 60
South Park region... H, Ann 9, p 440
south-central, northern New Mexico, and... H, Atlas, sheet x
southwestern, parts of New Mexico, Arizona, Utah, and... H, Atlas, sheet ix
ancient ruins in, showing location of... H, Bull, vol i, No 1, p 36
Spanish Peaks region... H, Ann 10, p 306; H, Bull, vol iii, No 3, p 728
Twin Lakes... W, iii, p 442; H, Ann 7, p 52
Uncompahgre Plateau... H, Ann 9, p 42
western part of Utah and... H, Atlas, sheet viii
Yampa River region... H, Ann 10, p 378

(See, also, pp 61, 64 of this bulletin.)
of Cordilleran region... K, Atlas
of Great Basin... K, v, p 1
of Iceland, southern Geyser areas... H, Ann 12, ii, p 304
of Idaho, Bear Lake region... H, Ann 11, p 588
Blackfoot Basin... H, Ann 11, p 564
Cliff Lake... H, Ann 6, p 61
Henry Lake, vicinity of... H, Ann 6, p 56
portions of Utah, Wyoming, and... H, Ann 12, map case
of Wyoming, Montana, and. (See p 36 of this bulletin.)
of Wyoming, Utah, and... H, Ann 11, p 324; H, Ann 12, i, p 270; see, also, p 36 of this bulletin
of Wyoming, Utah, and (land classification)... H, Ann 12, map case
Portneuf region... H, Ann 11, p 566
Snake River, sources of... H, Ann 6, p 255; see, also, p 37 of this bulletin
soda springs on Bear River... H, Ann 11, p 590
(See, also, pp 61, 64 of this bulletin.)
of Montana, Clark Fork, vicinity of... H, Ann 6, p 47
Madison, Gallatin, and Upper Yellowstone basins. (See p 36 of this bulletin.)
portions of Wyoming, Idaho, and. (See p 37 of this bulletin.)
of Nevada... H, Bull, vol vi, No 2, p 256
Lake Bonneville. (See p 65 of this bulletin.)
Lake Tahoe region. (See p 65 of this bulletin.)
portions of California, Arizona, and... W, 1871, p 96
of Utah, Arizona, and... W, Uncl 2, at end
southeastern. (See p 65 of this bulletin.)
southwestern, and Colorado, southern... W, 1876, p 72
Washoe district... W, 1879, p 188; see, also, p 65 of this bulletin
(See, also, pp 61, 64 of this bulletin.)
of Nevada Basin... K, Atlas
of Nevada Plateau... K, Atlas
of New Mexico, northern, and Colorado, south-central... H, Atlas, sheet x
northwestern, parts of Colorado, Utah, Arizona, and... H, Atlas, sheet ix
portions of Colorado, Utah, Arizona, and, showing locations of ancient
ruins and modern pueblos... H, Ann 10, p 453; H, Bull, vol ii, No 1, p 46
southwestern. (See p 65 of this bulletin.)
Map, topographic, of New Mexico, Portolita Peak. W, i, p 356
of New Mexico. (See, also, pp 62, 64 of this bulletin.)
of New Zealand, geyser and hot spring areas. H, Ann 12, ii, p 313
of North America, zoo-geographical. H, Ann 12, i, p 593
of Oregon, Klamath River, headwaters of. Eth, ii, pt 1, frontispiece
(See, also, p 62 of this bulletin.)
of South Dakota, Black Hills. HP, Atlas
of Texas, El Paso, vicinity of. W, 1879, p 81
of United States. W, i, p 436;
showing distribution of Hessian fly, wheat midge, chinch bug, northern army worm, cotton army worm, joint worm. H, Ann 9, p 810
hot-spring localities. W, iii, p 148
land grants. AL, pocket
rainfall, amount of. AL, pocket
Rocky Mountain locust, distribution of. H, Uncl 14, frontispiece
migration of, in 1874 and 1876. H, Uncl 14, p 152
surveys, progress of. W, 1879, p 140
of Utah. HP, Atlas
Bear Lake region. H, Ann 11, p 588
Beaver Range and vicinity. W, 1872, p 10
Henry Mountains. HM, at end
high plateaus. HP, Atlas
Lake Bonneville. (See p 65 of this bulletin.)
Ogden and vicinity. W, ii, p 471
Pioche. W, iii, p 258
portion of Arizona, Nevada, and. W Uncl 2, at end
of Colorado, Arizona, New Mexico, and, showing location of ancient ruins. H, Ann 10, p 453; H, Bull, vol. ii, No 1, p 46
showing locations of modern pueblos. H, Ann 10, p 453
of Colorado, northwestern, and. H, Atlas, sheet v
of Idaho, Wyoming, and. H, Ann 12, i, p 270; see, also, p 36 of this bulletin
showing land classification. H, Ann 12, map case
Salt Lake Basin. K, Atlas
showing irrigable and timber lands. AL, pocket
Sierra La Sal. H, Ann 9, p 60
southeastern. HP, Atlas
parts of Colorado, New Mexico, Arizona, and. H, Atlas, sheet ix
(See, also, pp 62, 65 of this bulletin.)
of Washington, showing distribution of Indian tribes. Eth, i, pocket
of western States and Territories. K, iii,
Atlas, pl 1; W, 1872, p 43; W, 1873, p 12; W, 1874, p 130;
W, 1875, p 22; W, 1876, p 36; W, 1877, p 1244; W, 1878,
p 38; W, 1880, p 40; W, 1881, p 2808; W, 1882, p 2824
showing public land, Indian reservations, areas surveyed, etc. W, i, p 412
of Wyoming, Bear River region. H, Ann 11, p 588
central. H, Ann 12, map case
Green River Basin. K, Atlas
west side of northern portion of. H, Ann 11, p 528
of southern portion of. H, Ann 11, p 530
Madison, Yellowstone, and Gallatin basins. (See p 37 of this bulletin.)

Rocky Mountains in Colorado and K, Atlas

Shoshone Lake H, Ann 6, p 244

Snake River, sources of H, Ann 6, p 255; see, also, p 37 of this bulletin

(Eve, also, pp 62, 65 of this bulletin.)

of Yellowstone Park H, Ann 5, p 162; H, Ann 12, p 270; see, also, p 37 of this bulletin

Crater Hill, springs at H, Ann 12, p 84

Egeria Springs, Firehole River H, Ann 12, p 300

Gibbon Geyser Basin H, Ann 12, p 278; see, also, p 37 of this bulletin

Lower Geyser Basin H, Ann 12, p 104; H, Ann 12, p 178; see, also, p 37 of this bulletin

Mammoth Hot Springs H, Ann 12, p 106

Rustic Geyser group H, Ann 12, p 300

Shoshone Geyser Basin H, Ann 12, p 278; see, also, p 37 of this bulletin

showing distribution of hot springs H, Ann 12, p 67

Upper Geyser Basin H, Ann 12, p 112; H, Ann 12, p 240; see, also, p 37 of this bulletin

White Mountain Hot Springs H, Ann 12, p 240

Witch Creek, hot springs on H, Ann 12, p 290; see also p 37 of this bulletin.

Yellowstone Lake H, Ann 5, p 101; see also p 37 of this bulletin.

Marcou (J.), notes upon the first discoveries of California and the origin of its name W, 1878, pp 226-229

report on the geology of a portion of southern California W, 1876, pp 158-172

Markagunt Plateau, Utah, geology of HP, pp 188-210

Marl, analysis of, from Missouri, Hannibal H, Uncl 1, p 12

analysis of, from Wyoming, Turtle Bluffs K, vii, p 247

Marsh (O. C.), Odontornithes, monograph on K, vii

Marsh Creek, Idaho, geology near H, Ann 11, pp 565-567

Marsh Creek, Wyoming, geology near H, Ann 11, pp 528-529

Marshall (W. L.), report of W, 1872, pp 47-48;

W, 1874, pp 7-10; W, 1875, pp 37-40; W, 1876, pp 80-109

report on meteorology and hypsometry W, 1876, pp 150-152

results of barometric hypsometry, 1871-1875 W, 1876, pp 493-566

Marshall (W. L.) and Hoxie (R. L.), meteorological observations, instructions for taking W, Uncl 10; W, Uncl 12

Martinez district, Arizona, notes on W, 1871, p 56

Marvine (A. R.), Gold Hill mining region; its position and general geology H, Ann 7, pp 685-687

report on geology of Middle Park, Colorado H, Ann 7, pp 83-192

report on geology of route from St. George, Utah, to Gila River, Arizona W, iii, pp 189-225

Marvine, Mount, Utah, geology of HP, p 289

Maryatt (W. W.), report of W, 1872, pp 45-47

Maryatt (W. W.), Safford (T. H.), Kampf (F.), and Clark (J. H.), astronomical determinations in Nevada, Utah, Montana, Wyoming, Nebraska, Colorado, and New Mexico, 1872-1874 W, ii, pp 1-491
INDEX TO HAYDEN, KING, [BULL. 222.

Matthews (W.), ethnography and philology of the Hidatsa Indians. H, Misc 7

Mayas, graphic system and ancient records of. Eth, v, pp xvii–xxxvii

(See, also, Ethnology and archaeology.)

Maynard district, Arizona, notes on. W, 1871, p 64

Meade Lake district, California, notes on. W, 1878, pp 81–82


geology of. K, ii, pp 94–111

Paleozoic rocks of. K, i, p 136


Meek (F. B.), descriptions and illustrations of fossils from Vancouver and Sucia islands; and other northwestern localities. H, Bull, vol ii, No 4, pp 351–374

lists of fossil from Utah, with some notes. K, iii, pp 459–466

note on some fossils from near the eastern base of the Rocky Mountains. H, Bull, vol i, ser 2, No 1, pp 39–47


notice of a very large Goniatite from eastern Kansas. H, Bull, vol i, ser 2, No 6, p 445

palaeontology of Fortieth Parallel region. K, iv, pp 1–197

preliminary list of the fossils collected by Doctor Hayden’s expedition of 1871, in Utah and Wyoming Territories, with descriptions of a few new species. H, Ann 5, pp 373–377


preliminary palaeontological report, consisting of lists and descriptions of fossils, with remarks on the ages of the rocks in which they were found. H, Ann 6, pp 429–518

report on the invertebrate Cretaceous and Tertiary fossils of the Upper Missouri country. H, Mon ix

report on the palaeontology of Nebraska, with some remarks on the Carboniferous rocks of that district. H, Und 1, pp 83–245

Melaphyre of Nevada, Virginia Range, microscopic petrography of. K, vi, pp 103–106

thin section of, from Nevada, Virginia Range. K, vi, pl 4

Mephitine, cranial and dental characters of. H, Bull, vol i, ser 2, No 1, pp 7–15

(See, also, Vertebrates.)


Mesozoic rocks of Colorado, central. W, iii, pp 378–409

of Colorado, Eagle, Grand, and Gunnison rivers. H, Ann 8, pp 120–139


northwestern. H, Ann 10, pp 26–32

of Fortieth Parallel area. K, i, pp 249–357


of New Mexico, northern. W, iv, pt ii, pp 1–25


western. H, Ann 11, pp 621–629

and Idaho, eastern. H, Ann 11, pp 491–497


(See, also, Cretaceous; Jurassic; Triassic.)

Mesozoic vertebrata of New Mexico. W, iv, pt ii, pp 26–30b
Mesozoic and Cenozoic rocks of Green River region, paleontological characteris-
tics of ........................................ H, Bull, vol iii, No 3, pp 625-629
Mesozoic and Cenozoic Unionidae of North America, comparison with living
species ......................................... H, Bull, vol iii, No 3, pp 615-624
Metamorphic rocks of Colorado, central ........................................ W, iii, pp 343-355
of Colorado, Front Range ........................................ H, Ann 7, pp 137-144
San Juan region ........................................ H, Ann 8, pp 187-192; H, Ann 9, pp 268-276
Sangre de Cristo Range ........................................ H, Ann 9, pp 110-113
of Fortieth Parallel region, character and distribution of ................... K, i, pp 101-107
of Wyoming, Rawlings Peak, vicinity of ........................................ H, Ann 11, p 119
Sweetwater Valley ........................................ H, Ann 11, pp 98-101
Wind River Range ........................................ H, Ann 11, pp 66-70
Meteorological conditions of Mohave Desert, California ...................... W, 1876, pp 152-157
Meteorological observations in Colorado and Montana in 1873 ..................... H, Misc 6
in Colorado, southern and southeastern ........................................ W, 1869, pp 50-52
in Utah, Idaho, and Montana in 1872 ........................................ H, Misc 2
in Wyoming ........................................ H, Ann 4, pp 488-501
instructions for taking ........................................ W, Uncl 10; W, Uncl 12
Meteorology of Great Basin, notes on ........................................ K, v, pp xvii-xxii
of Yellowstone region ........................................ H, Ann 5, pp 501-524
Meteorology and hypsometry, methods of ...................................... W, 1875, pp 47-54
Mexico, springs, thermal, of ........................................ H, Ann 12, ii, p 327
Mica-schist of Black Hills, petrography of .................................... BH, pp 476-483
thin sections of, from Nevada, Humboldt Range and Spruce Mountain .......... K, vi, pl 2
Michigan, birds of, annotated list of ........................................ H, Bull, vol v, No 3, pp 481-497
Microscopic petrography of Black Hills ........................................ BH, pp 469-527
of Fortieth Parallel region ........................................ K, vi
Middle Park, Colorado, eruptive mountains near ................................ H, Bull, vol iii, No 3, pp 552-553
gEOLOGY OF ........................................ H, Ann 3, pp 81-86; H, Ann 7, pp 53-92
topographic features of ........................................ H, Ann 9, pp 391-398
Military posts, altitudes of ........................................ W, Uncl 16, pp 127-128
Milling and mining in Nevada, western ........................................ K, iii, pp 295-319
Mimbres silver mining district, New Mexico, notes on ......................... W, 1879, p 194
Mineral Hill district, Nevada, notes on ...................................... W, 1871, pp 35-36
Mineral resources of Black Hills ........................................ BH, pp 223-324
Mineralogy of Nevada ........................................ H, Bull, vol iv, No 3, pp 731-745
Mineralogy and lithology of portions of Nevada and California .............. W, 1878, pp 184-185
South Park district ........................................ H, Ann 7, pp 267-270
of Comstock lode ........................................ K, iii, pp 75-76
of Wyoming, Sweetwater district ........................................ H, Ann 11, pp 157-158
Mines and minerals of Colorado and New Mexico ................................ H, Ann 3, pp 103-130; H, Ann 1-3, pp 201-228
Mining in western Territories ........................................ W, i, pp 179-181
in Fortieth Parallel region ........................................ K, iii
Mining and milling in Nevada, western ........................................ K, iii, pp 295-319
Mining districts in Fortieth Parallel region ................................ K, iii, pp 1-9
locusts in ........................................ H, Ann 9, pp 617-621; H, Uncl 14, pp 80-87, App, pp 3-12
law regarding destruction of ........................................ H, Uncl 9, pp 11-12
physical geography and agricultural resources of Dakota, Nebraska, and .... H, Ann 6, pp 273-313
Minot (C. S.), report on the fine anatomy of the locust. H, Uncl 14, pp 273-279
Miocene fossils, Canideae and Nimravidea. H, Bull, vol vi, No 1, pp 165-181
fauna of Oregon, observations on. H, Bull, vol v, No 1, pp 55-69
plants of Western Territories. H, Mon viii, pp 219-278
Rodentia of North America, review of. H, Bull, vol vi, No 2, pp 381-386
vertebrata of Colorado. H, Ann 7, pp 461-518
Miocene rocks of Fortieth Parallel region. K, i, pp 408-424
locusts in. H, Uncl 14, pp 64-68, App, pp 83-84
law regarding destruction of. H, Uncl 9, p 9
Missouri River, geological sections near headwaters of, notes on. H, Bull, vol ii, No 3, pp 197-209
Rocky Mountains near, period of elevation of. H, Uncl 16, pp 9-13
tributaries of upper. LOR, 1868, pp 225-229; H, Ann 2, pp 72-76
Missouri River region, birds of. H, Misc 3
explorations in. BH, pp 5-21
Missouri and Yellowstone rivers, geology about headwaters of, sketch of. H, Uncl 16, pp 21-29
Missouri Valley, geography of. LOR, 1868, pp 220-229; H, Ann 2, pp 67-76
geology of. H, Ann 4, pp 85-188
Mohave Desert, California, meteorological conditions of. W, 1876, pp 152-157
physical and agrucultural features of. W, 1876, pp 216-219
vegetation of, geographical distribution of. W, 1876, pp 222-224
Mokelumne Valley region, California, reconnaissance in. W, 1879, pp 254-258
Mollusca, reports on. H, Ann 4, pp 467-469; H, Bull, vol i, ser 2, No 2, pp 125-142
(See, also, Invertebrates.)
Mollusca, alpine, of Colorado. H, Ann 7, p 542
(See, also, Invertebrates.)
Mollusks, terrestrial, collected in Colorado, list of. H, Ann 7, p 523
(See, also, Invertebrates.)
Mollusca, terrestrial and fluviatile, collected in portions of Colorado, Utah, New Mexico, and Arizona. W, v, pp 923-954
(See, also, Invertebrates.)
of lacustrine deposits of Nebraska, list of. H, Ann 8, pp 266-269
of Tertiary of Colorado, Utah, and Wyoming. H, Ann 12, i, pp 41-48
(See, also, Invertebrates, fossil.)
Monell (J.) and Riley (C. V.), notes on the Aphididse of the United States, with descriptions of species occurring west of the Mississippi. H, Bull, vol v, No 1, pp 1-32
Monitor district, California, notes on. W, 1878, pp 87-88
Monohammas pine, description of. H, Ann 10, pp 528-531
(See, also, Plants.)
Montana, agriculture in. H, Ann 5, pp 248-269
astronomical determinations in Wyoming, Nebraska, Colorado, New Mexico, Nevada, Utah, and. W, ii, pp 1-491
birds of Dakota and, along forty-ninth parallel, field notes on. H, Bull, vol iv, No 3, pp 545-661
Bozeman, astronomical determinations at. W, ii, pp 371-384
meteorological observations at. H, Misc 2, pp 47-59
Clark Fork, geology on. H, Ann 6, pp 46-48
climates of, notes on. H, Ann 6, pp 809-812
explorations in.......................................................... H, Ann 5
in parts of Idaho, Wyoming, Utah, and, for year 1872............................... H, Ann 6
fishes of Dakota and, collected in 1873 and 1874, report on...................... H, Bull, vol iv, No 4, pp 777-779
Fort Ellis, geology between Fort Hall, Idaho, and.............................. H, Ann 5, pp 27-44
g eology between Gardiner River and...................................... H, Ann 6, pp 108-125
Gallatin River, geology near............................................. H, Ann 5, pp 44-49
Gallatin Valley and Canyon, geology of........................................... H, Ann 6, pp 26-28, 76-81
Gardiner River, geology between Fort Ellis and.................................. H, Ann 6, pp 108-125
g eological sections near headwaters of Missouri and Yellowstone rivers,
notes on........................................................................ H, Bull, vol ii, No 3, pp 197-209
Helena, geology between Three Forks and.............................................. H, Ann 6, pp 81-82
Hemiptera collected in Dakota and, in 1873-74..................................... H, Bull, vol iv, No 2, pp 503-512
herpetology of Dakota and.......................................................... H, Bull, vol iv, No 1, pp 259-291
Judith River region, geology of.................................................... H, Bull, vol iii, No 3, pp 565-577
Lepidoptera collected in, in 1874, discussion of.................................... H, Bull, vol iv, No 2, pp 513-517
locusts in.............................................................................. H, Ann 9, pp 623-629;
Madison River, geology along.......................................................... H, Ann 6, pp 160-167
meteorological observations in Colorado and........................................ H, Misc 6
in Utah, Idaho, and, in 1872................................................................ H, Misc 2
Missouri River, geologic sections near headwaters of, notes on................ H, Bull, vol iii, No 3, pp 197-209
Missouri and Yellowstone rivers, geology about headwaters of, sketch of..... H, Uncl 16, pp 21-29
Orthoptera collected in Dakota and, in 1873, discussion of........................... H, Bull, vol iv, No 2, pp 481-501
plants collected in Dakota and, along forty-ninth parallel, catalogue of...... H, Bull, vol iv, No 4, pp 801-830
 collected in Idaho, Utah, Wyoming, and........................................... H, Ann 6, pp 747-792
Rock Canyon. (See Spring Canyon.)
Spring Canyon, geology of...................................................................... H, Ann 6, pp 109-115
temperature at Fort Ellis........................................................................ H, Ann 6, p 811
Three Forks, geology between Helena and................................................ H, Ann 6, pp 81-82
Yellowstone River, geologic sections near headwaters of, notes on............. H, Bull, vol ii, No 3, pp 197-209
g eology near.............................................................................H, Ann 5, pp 51-63, 81-92
Yellowstone and Missouri rivers, geology about headwaters of, sketch of..... H, Uncl 16, pp 21-29
Montezuma district, Nevada, notes on.................................................. W, 1871, p 46
Montezuma Range, Nevada, Archean rocks of........................................ K, i, pp 87-90
g eology of............................................................................. K, ii, pp 751-766
Monument Creek group in Colorado...................................................... H, Ann 8, pp 30-37
Mopung Hills, Nevada, geology of......................................................... K, ii, pp 733-737
Mora River region, New Mexico, geology of........................................... W, iii, Supp, pp 283-312
Mora Valley, New Mexico, geology of.................................................... H, Ann 3, pp 59-61; H, Ann 1-3, pp 159-161
Morainal deposits in Colorado, Arkansas Valley....................................... H, Ann 7, pp 51-57
in Uinta Mountains.................................................................................. UM, pp 171-172
Moraines in Colorado, Arkansas Valley, upper......................................... H, Ann 8, pp 47-53
Moreno Valley, New Mexico, geology of, notes on.................................. H, Bull, vol iii, No 4, pp 289-296
Morey district, Nevada, notes on.......................................................... W, 1871, p 38
Morgan (L. H.), houses and house life of the American aborigines.........Eth, iv, pp 174-177
Mormons in Utah and Nevada.............................................W, i, pp 136-147
Morrison (C. C.), notice of the pueblo Pintado and of other ruins in the Chaco
Canyon .................................................................W, vii, pp 366-369
Mortars and pestles from graves in southern California.................W, vii, pp 70-92
(See, also, Ethnology and archaeology.)
Moths, descriptions of new, with partial catalogue of Noctua..............H, Bull, vol vi, No 3, pp 563-578
Moths, geometrid or Phaleniidae of the United States, monograph on.....H, Mon x
(See, also, Invertebrates.)
Moths, noctuid, collected in Colorado in 1875, notes on......................H, Bull, vol iii, No 1, pp 115-120
(See, also, Invertebrates.)
Mound builders, houses of......................................Eth, iv, pp 198-221
(See, also, Ethnology and archaeology.)
Mounds, ancient, of Dakota...........................................H, Ann 6, pp 655-658
(See, also, Ethnology and archaeology.)
Mountains, elevation of................................................H, Bull, vol v, No 3, pp 465-469;
Mountains, eruptive, in Colorado, on a peculiar type of..................H, Bull, vol iii, No 3, pp 551-564
Mud, analysis of, from California, Colorado River......................W, 1876, p 220
analysis of, from Egypt, Nile River......................................W, iii, pp 577, 578;
W, vi, p 30; W, 1876, p 220
from New Mexico, Rio Grande..............................................W, vi, p 30; W, 1876, p 220
Rio Grande del Norte......................................................W, iii, pp 577, 578
Mud, pink, analysis of, from Yellowstone Park..........................H, Ann 6, pp 146
Muddy Valley, Colorado, geology of......................................H, Ann 7, pp 178-184
Muscii of the southwest..................................................W, vi, pp 341-351
(See, also, Plants.)
Musical instruments, of southern California, made of bones..............W, vii, pp 234-238
(See, also, Ethnology and archaeology.)
Mustelidae, monograph of................................................H, Miscl 8
(See, also, Vertebrates.)
Myriopoda of Colorado...................................................H, Ann 7, p 607
(See, also, Invertebrates.)
Naas language, vocabulary of...........................................Eth, i, pp 143-153
(See, also, Ethnology and archaeology.)
Nacimiento Desert, New Mexico, geology of. W, 1875, pp 103–106
(See, also, Vertebrates.)

Nebraska, astronomical determinations in Colorado, New Mexico, Nevada,
Utah, Montana, Wyoming, and. W, ii, pp 1–491
birds of, notes on food of. H, Uncl 14, App, pp 13–62
building materials in. H, Uncl 1, pp 72–79
coal in. LOR, 1867, pp 134, 137, 142–143, 154–155; H, Ann 1, pp 13, 17, 22–23, 36
explorations in. LOR, 1867, pp 182–181, H, Ann 1, pp 5–64
geology of. H, Uncl 1, pp 7–79
north of Platte River. LOR, 1867, pp 163–166; H, Ann 1, pp 45–48
Niobrara River, course and character of. LOR, 1868, pp 227–229; H, Ann 2, pp 73–76
North Platte, astronomical determinations at. W, ii, pp 449–458
Omaha, geology between Cheyenne, Wyoming, and. H, Ann 4, pp 98–112
paleontology of eastern. H, Uncl 1, pp 81–245
peat in. H, Uncl 1, pp 69–72
physical geography and agricultural resources of Minnesota, Dakota, and. H, Ann 6, pp 273–313
salt basins of Lancaster County. LOR, 1867, pp 130–131; H, Ann 1, pp 8–10
shells of, catalogue of land and fresh-water. H, Bull, vol iii, No 3, pp 697–704
Sidney Barracks, astronomical determinations at. W, ii, pp 417–432
trees, fruit and forest, in cultivation of. LOR, 1867, pp 131–133, 135–136; H, Ann 1, pp 10–12, 14–16
(See, also, Miocene; Pliocene.)

Nephilin-basalt, analysis of, from Colorado, Navesink Peak. K, ii, p 178
collected in portions of Colorado, New Mexico, and Arizona. W, v, pp 909–922
(See, also, Invertebrates.)

Nevada, Alida district, notes on. W, 1871, p 47
Antelope district, notes on. W, 1871, p 39
Antelope Hills, geology of. K, ii, pp 483–486
astronomical determinations in Utah, Montana, Wyoming, Nebraska, Colorado, New Mexico, and. W, ii, pp 1–491
astronomical observations in. W, 1874, pp 24–55
Augusta Mountains, geology of. K, ii, pp 649–659
granite of. K, i, pp 79–80
batrachians of. See Reptiles and batrachians.
Battie Mountain district, note on. K, iii, pp 317–319; W, 1871, p 40
Battle Mountains, geology of. K, ii, pp 666–672
Belmont, mining at. K, iii, pp 394–404
birds of, annotated list of. H, Bull, vol vi, No 2, pp 203–256
bibliography of. H, Bull, vol vi, No 2, pp 252–256
collected in California, Oregon, and. W, 1879, pp 282–335
in Utah and. W, Uncl 4, pp 5–33

Bull. 222—04——10
Nevada, birds of, collected in portions of California, Utah, Colorado, New Mexico, Arizona, and .................................................. W, v, pp 131-507
birds observed near Carson City ........................................ W, 1877, pp 1307-1322
of portions of California and, preliminary report on ........... W, 1878, pp 185-186
Black Rock Mountains, geology of .............................. K, ii, pp 790-797
Bull Run district, notes on ........................................ W, 1871, p 34
Carson City, birds observed near .................................. W, 1877, pp 1307-1322
Carson Desert, geology of ......................................... K, ii, pp 744-751
Carson Valley, geology of ........................................ W, 1877, pp 1285-1286; W, 1878, pp 168-173
Castle Dome district, notes on ................................. W, 1876, pp 60-61
Coleoptera collected in portions of Utah, California, Colorado, New Mexico, Arizona, and .................................................. W, v, pp 809-827
Colorado district, notes on ........................................ W, 1876, pp 61-62
Columbus district, notes on ...................................... W, 1871, p 48
Comstock lode, mines of, workings of ........................................ K, iii, pp 97-191
ores of, treatment of ............................................... K, iii, pp 193-272
structure, ores, etc., of ............................................. K, iii, pp 37-96; W, 1877, pp 1284-1285; W, 1878, pp 145-146
Cope district, notes on ............................................. W, 1871, p 34
Cortez district, mining in ......................................... K, iii, pp 405-407
Cortez Range, geology of .......................................... K, ii, pp 570-589
granite of ................................................................. K, i, pp 70-74
Desatoya Mountains, geology of .................................. K, ii, pp 644-649
Triassic rocks of .............................................................. K, i, pp 282-284
Diamond district, notes on ........................................ W, 1871, p 36
Diamond Range, geology of .......................................... K, ii, pp 549-551
East Humboldt Range, geology of .................................. K, ii, pp 525-541
Egan Canyon district, geology of .................................. K, iii, pp 445-449
Egan Range, geology of .................................................. K, ii, pp 486-489
Ely district, notes on .................................................. W, 1871, pp 42-43
Eureka district, notes on ............................................. W, 1871, p 37
explorations in Arizona and ........................................... W, 1871
Fish Creek Mountains, geology of .................................. K, ii, pp 600-666
granite of ................................................................. K, i, p 80
fishes collected in California and, report on ................. W, 1878, pp 187-205
collected in portions of Utah, California, Colorado, New Mexico, and Arizona .......................................................... W, v, pp 635-703
Fountain Head Hills, geology of .................................. K, ii, pp 520-523
Franklin Buttes, geology of .......................................... K, ii, pp 491-493
granite of ................................................................. K, i, p 62
geology of portions of Utah, New Mexico, Arizona, and ... W, iii, pp 227-301
Gold Mountain district, notes on ................................ W, 1871, p 47
porphyry in ............................................................... K, i, pp 55-56
Goose Creek Hills, geology of ...................................... K, ii, pp 515-517
Gosiute Range, geology of .......................................... K, ii, pp 502-505
granite of ................................................................. K, i, p 57
Granite Mountain, geology of vicinity of ....................... K, ii, pp 689-712
Granite Range, geology of .......................................... K, ii, pp 797-800
granite of ................................................................. K, i, pp 83-94
Green Mountain district, notes on ............................... W, 1871, p 47
Groom district, notes on ............................................ W, 1871, pp 44-45
Havallah Range, geology of .......................................... K, ii, pp 673-688
Nevada, Havallah Range, granite of........................................ K, i, pp 80-83
Havallah Range, Triassic rocks of........................................ K, i, pp 280-281
Hemiptera collected in portions of California, Utah, Arizona, New Mex-
ico, Colorado, and........................................ W, v, pp 829-841
Humboldt Range, Archean rocks of........................................ K, i, pp 62-70
glaciers, extinct of........................................ K, i, pp 475-476
Humboldt River, region north of, geology of............................ K, ii, pp 590-617
Humboldt Valley, geology of........................................ K, ii, pp 740-744
Hymenoptera collected in portions of Utah, Colorado, New Mexico, Ari-
izona, and........................................ W, v, pp 705-736
Indians of Arizona and........................................ W, 1871, pp 27-29, 74-76
of California, Arizona, and, miscellaneous ethnographic observations
on........................................ H, Ann 10, pp 461-478
invertebrate fossils of portions of Utah, Colorado, New Mexico, Arizona,
and........................................ W, iv, pp 1-219
Jurassic rocks of western........................................ K, i, pp 293-295
Kamma Mountains, geology of........................................ K, ii, pp 786-790
Kawsoh Mountains, geology of........................................ K, ii, pp 776-774
Kinsley district, granite and Archean rocks of......................... K, i, pp 60-62
Lake Range, geology of........................................ K, ii, pp 814-816
granite rocks of........................................ K, i, pp 96-97
leeches, fresh-water, collected in portions of Utah, Colorado, New Mex-
ico, Arizona, and........................................ W, v, pp 955-967
lithology and mineralogy of portions of California and.............. W, 1878, pp 184-185
Little Cedar Mountains, geology of................................ K, ii, pp 512-514
locusts in........................................ H, Ann 9, pp 604-605; H, Uncl 14, pp 105-106
Lodi mining district, description of................................ W, 1877, pp 1270-1271
Lone Mountain district, notes on.................................... W, 1871, p 35
mammals collected in portions of Utah, California, Colorado, New Mex-
ico, Arizona, and........................................ W, v, pp 35-129
Mammoth mining district, description of.............................. W, 1877, pp 1269-1270
Mineral Hill district, notes on.................................... W, 1871, pp 35-36
mineralogy of........................................ H, Bull, vol iv, No 3, pp 731-745
mining and milling in western........................................ K, iii, pp 296-319
mining districts of.................................................. W, 1871,
pp 34-48; W, 1872, pp 26-28; W, 1876, pp 54-55, 61-62
Montezuma district, notes on........................................ W, 1871, p 46
Montezuma Range, Archean rocks of................................ K, i, pp 87-90
geology of........................................ K, ii, pp 751-766
Mopung Hills, geology of........................................ K, ii, pp 733-737
Morey district, notes on.......................................... W, 1871, p 38
mountain ranges in, features of.................................. W, iii, pp 240-248
Ombe Range, geology of........................................ K, ii, pp 494-501
granite of........................................ K, i, pp 56-57
ornithology of portions of California and, preliminary report on..... W, 1878,
pp 185-186
Orthoptera collected in portions of California, Arizona, Utah, Colorado,
New Mexico, and........................................ W, v, pp 843-908
Pah Ute range, granite of.......................................... K, i, pp 83-85
Triassic rocks of........................................ K, i, pp 278-280
Pahranagat Lake district, notes on................................ W, 1871, pp 43-44
Pahsupp Mountains, geology of..................................... K, ii, pp 801-803
granite of........................................ K, i, pp 92-93
If 1

INDEX TO HAYDEN, KING, [BULL. 222.]

Nevada, Pahtson Mountains, Archean rocks of ...................... K, i, pp 90-92
Pahtson Mountains, geology of ........................................ K, ii, pp 775-786
Palmetto district, notes on ........................................... W, 1871, p 47
Peavine Mountain, Archean rocks of ................................ K, i, p 97
Pequop Range, geology of ............................................ K, ii, pp 505-512
granite of. .................................................................. K, i, pp 58-59
Pi Fion Range, geology of ............................................. K, ii, pp 551-564
Pioche, astronomical determinations at.......................... W, n, pp 75-96
plants collected in Arizona, Utah, and, list of .............. W, Uncl 5, pp 5-19
of Utah and, catalogue of........................................ W, vi, pp 53-297
of Utah and, catalogue of........................................ W, v, pp 509-584
Rattlesnake Canyon district, notes on ....................... W, 1871, p 39
reconnaissance in southern and southeastern................. W, 1869
Red Mountain and Silver Peak districts, notes on ........... W, 1871, pp 48-49
Reese River, mining and milling at .............................. K, iii, pp 349-408
region east of, geology of ........................................ K, ii, pp 627-635
reptiles and batrachians collected in Arizona, California, and .. W, 1878, pp 206-226
collected in portions of California, Utah, Arizona, New Mexico, Colorado, and....... W, v, pp 509-584
Reveille district, notes on .......................................... W, 1871, p 42
Ruby Range, geology of ............................................. K, ii, pp 489-491
San Antonio district, notes on ...................................... W, 1871, pp 45-46
Secret Canyon district, notes on .................................. W, 1871, p 37
Seetoya Mountains, granite of .................................... K, i, pp 74-75
Shoshone Range, geology of ........................................ K, ii, pp 618-624, 631-643
granite of. .................................................................. K, i, pp 77-79
Silver Bend district, notes on ...................................... W, 1871, pp 41-42
Silver Peak and Red Mountain districts, notes on ............ W, 1871, pp 48-49
Smoky Valley Range, geology and mines of .................... K, iii, pp 393-404
Soda Lakes, description of ......................................... K, i, pp 510-514
Spring Valley district, notes on .................................. W, 1871, p 39
springs, thermal, in .................................................. H, Ann 12, ii, pp 321-323
Star district, mining in ............................................... K, iii, pp 314-316
Sweetwater Mountains, geology of .............................. W, 1878, pp 173-175
Timpanahute district, notes on .................................. W, 1871, pp 44
Toano group of mountains, geology of ......................... K, ii, pp 517-520
Toyabe Range, geology of .......................................... K, ii, pp 627-631; K, iii, pp 320-348
granite in. .................................................................. K, i, pp 75-77
Triassic rocks of western .......................................... K, ii, pp 266-268
Trinity Mountains, mining and milling in ..................... K, iii, pp 297-308
Truckee River region, geology of ................................ K, ii, pp 817-853
Truckee Range, Archean rocks of ................................. K, i, pp 94-96
geology of. ............................................................ K, ii, pp 803-811
Tucubits Mountains, geology of ................................. K, ii, pp 523-527
Tucarora district, notes on ......................................... W, 1871, p 35
Tyboe district, notes on .............................................. W, 1871, p 40
Union mining district, descriptions of ......................... W, 1877, p 1269
Unionville, mining at .................................................. K, iii, pp 308-314
valleys of, short descriptions of some of the............... H, Ann 5, pp 271-273
vegetation in, distribution of, as affecting that of the avi-fauna. .......... H, Bull, vol vi, No 2, pp 204-208
Virginia City, astronomical determinations at............... W, ii, pp 183-210
Virginia Range, geology of ........................................ K, ii, pp 824-826; K, iii, pp 11-36
Nevada, Wachoe Mountains, geology of ........................................ K, ii, pp 476-483
Wachoe Mountains, granite of ........................................ K, i, pp 59-60
Wahweah Range, geology of ........................................ K, ii, pp 566-569
granite of ........................................................................ K, i, p 74
Washoe district, geology of ........................................ W, iii, pp 11-36
map of ............................................................................. W, 1879, p 188
notes on ............................................................................. W, 1876, pp 54-55
West Humboldt Range, Archean rocks of .......................... K, i, pp 85-87
geology of ........................................................................ K, ii, pp 713-731
mining in ........................................................................... K, iii, pp 308-316
Triassic rocks of .................................................................. K, i, pp 267-278
western, geology of eastern California and, between parallels of 39° 30' and
38° 30'.............................................................................. W, 1877, pp 1285-1295
geology of portions of eastern California and .......................... W, 1878, pp 167-183
White Pine district, geology of, and mining and milling in .... K, ii, pp 542-547; K, iii, pp 409-444
notes on ............................................................................. W, 1871, p 39
Winnemucca, astronomical determinations at ..................... W, ii, pp 157-182
Winnemucca Lake region, geology of ................................ K, ii, pp 801-816
Yellow Pine district, notes on ........................................... W, 1871, pp 52-53
(See, also, Great Basin; Fortieth Parallel region; Basin Ranges.)
Nevada Basin, geology of ................................................ K, ii, pp 627-853
Nevada Plateau, augite-andesite of .................................... K, i, pp 571-577
dacite of ............................................................................. K, i, pp 567-571
geology of ........................................................................... K, ii, pp 469-625
hornblende-andesite of .................................................... K, i, pp 562-567
propylite of ......................................................................... K, i, pp 550-557
quartz-propylite of ............................................................ K, i, pp 557-561
trachyte of ............................................................................ K, i, pp 595-605
New Almaden mercury mines, California, notes on ............. W, 1876, p 64
New Coso district, California, notes on ............................... W, 1876, pp 50-57.
New Eldorado district, California, notes on ......................... W, 1876, pp 58-59
New Mexico, Abiquiu region, geology of .............................. W, 1875, pp 101-103
Acoma, pueblo at .................................................................. W, vii, pp 325-326
agricultural resources of eastern Arizona and western ....... W, iii, pp 573-597
of southern Colorado and northern ................................. W, 1875, pp 129-139
of south-central Colorado and north-central ...................... W, iii, Supp, pp 360-388
astronomical determinations in Nevada, Utah, Montana, Wyoming,
Nebraska, Colorado, and ................................................. W, ii, pp 1-491
in Texas and ........................................................................ W, 1879, pp 268-270
Aztec mining district, description of .................................. W, 1876, pp 66-67
batrachians. (See Reptiles and batrachians.)
birds collected in Arizona and portions of ......................... W, 1875, pp 149-153
collected in Colorado, Utah, Arizona, Nevada, California, and ... W, v, pp 131-507
..of eastern Arizona and western ....................................... W, Uncl 4, pp 95-148
botanical notes on ............................................................... W, vi, pp 15-37
Canadian River region, agricultural resources of ............... W, iii, Supp, pp 374-379
geology of ........................................................................... W, iii, Supp, pp 225-282
Canadian Valley, geology of, notes on .............................. H, Bull, vol ii, No 4, pp 279-285
skull from, report on .......................................................... H, Ann 10, pp 453-457
INDEX TO HAYDEN, KING,

New Mexico, Chama River, pueblo and burial place on..............W, vii, pp 362-365
Chelley Canyon, ruins in........................................W, vii, pp 372-373
Chloride mining district, notes on................................W, 1879, p 193
Cimarron, astronomical determinations at..........................W, ii, pp 403-415
Cimarron Creek region, geology of..............................W, iii, Supp, pp 231-248
climate of, notes on............................................W, 1875, pp 111-116
climate, timber, irrigation, etc., in portions of Arizona and...W, 1875, pp 117-129
coal from.....................................................................W, iii, pp 631-636
coal in Galisteo field..................................................W, iii, Supp, pp 126-130
in Trinidad field.......................................................W, iii, Supp, pp 102-126, 389-393
Coleoptera collected in portions of California, Nevada, Utah, Colorado,
Arizona, and.........................................................W, v, pp 809-827
from Colorado, California, and, new species of..................W, 1876, pp 296-300
Diamond Creek, cliff house and cave on............................W, vii, pp 370-371
elevations in.........................................................H, Miscl 1 (3d ed), p 13;
Eocene and Pliocene lacustrine formations of, notes on, including descrip­
tions of certain new species of vertebrates.......................W, 1874, pp 115-130
Eocene plateau of, geology of....................................W, 1875, pp 88-93
eruptive rocks of Arizona and....................................W, iii, pp 638-651
explorations in northern..............................................W, 1876, pp 130-147; H, Ann 3; H, Ann 1-3, pp 103-261
fishes collected in portions of California, Nevada, Utah, Colorado, Arizona,
and.................................................................W, v, pp 635-703
foothills facing plains, geology of................................W, 1877, pp 1298-1303
Fort Bayard, astronomical work in................................W, 1879, pp 81-113
Fort Union, astronomical determinations at......................W, ii, pp 313-335
Galisteo Creek region, geology of...............................W, iii, Supp, pp 328-346
Gallinas Creek, geology near....................................H, Ann 3, pp 61-64; H, Ann 1-3, pp 161-164
genealogic and mineralogic report on portions of Colorado and...W, 1875, pp 97-116
goldeology of portions of Arizona and........................W, iii, pp 503-567
of portions of Arizona, Utah, Nevada, and......................W, iii, pp 227-301
gold in Placer and Cimarron mountains..........................W, iii, Supp, pp 398-402
Hemiptera collected in Colorado, Arizona, and.................W, 1877, pp 1322-1334
collected in portions of California, Nevada, Utah, Arizona,Colorado,
and.................................................................W, v, pp 829-841
human remains of ancient ruins in southwestern Colorado and northern....H,
Bull, vol ii, No 1, pp 47-63
of Eocene plateau of northwestern..............................W, 1875, pp 166-173
Hymenoptera collected in portions of Colorado, Utah, Arizona, Nevada,
and.................................................................W, v, pp 705-736
Indians of, houses of..............................................Eth, iv, pp 132-153
insect fauna, alpine, collected in Colorado and..................W, 1876, pp 301-305
invertebrate fossils of portions of Arizona, Nevada, Utah, Colorado, and...W, iv,
pp 1-219
iron ore of Galisteo Creek........................................W, iii, Supp, pp 394-395
Las Animas River, ruins along....................................W, vii, pp 347-350
Las Vegas, astronomical determinations at......................W, ii, pp 385-401
leeches, fresh-water, collected in portions of Nevada, Arizona, Utah,
Colorado, and....................................................W, v, pp 955-967
Lignitic formation in, distribution and thickness of............H, Ann 6, pp 362-364
lithology of portions of southern Colorado and northern...W, 1877, pp 1295-1298
New Mexico, Lone mining district, notes on............................................. W, 1879, p 192
Los Cerillos mines, notes on........................................................................ W, 1879, p 197
mammals collected in portions of California, Nevada, Arizona, Utah, Colorado, and.............................................................. W, v, pp 35-129
Mesozoic beds of northern.......................................................................... W, iv, pt ii, pp 1-25
Mimbres silver mining district, notes on.................................................... W, 1879, p 194
mines and minerals of............................................................................... H, Ann 1-3, pp 119-123
Mollusca, terrestrial and fluvial, collected in portions of Utah, Colorado, Arizona, and.......................................................... W, v, pp 923-954
Mora River region, geology of.................................................................... W, iii, Supp, pp 283-312
Mora Valley, geology of............................................................................... H, Ann 3, pp 59-61; H, Ann 1-3, pp 159-161
Moreno Valley, geology of, notes on......................................................... H, Bull, vol ii, No 4, pp 299-296
Nacimiento Desert, geology of.................................................................... W, 1875, pp 103-106
Neuroptera and pseudo-Neuroptera collected in portions of Arizona, Colorado, and................................................................. W, v, pp 909-922
north-central, geology of south-central Colorado and............................ W, iii, Supp, pp 3-420
northeastern, geology of, notes.................................................................. H, Bull, vol ii, No 4, pp 279-308
northwestern, geology of portion of................................................................ W, 1875, pp 61-97
ornithology of portions of Arizona and, notes on........................................ W, 1875, pp 149-153
Orthoptera collected in California, Colorado, and.................................... W, 1876, pp 278-295
collected in California, Nevada, Utah, Arizona, Colorado, and................ W, v, pp 843-908
Pecos River, mountain ranges between La Veta Pass and the head of, geology of.................................................................................. W, 1876, pp 199-202
Pecos Valley, agriculture in......................................................................... H, Ann 4, pp 207-208
Pinos Altos mining district, notes on......................................................... W, 1879, p 195
Placiere Mountains, geology of................................................................... H, Ann 3, pp 66-68; H, Ann 1-3, pp 166-168
plants collected in Colorado and, catalogue of........................................... H, Ann 4, pp 484-487
collected in Nevada, Utah, Arizona, Colorado, and, catalogue of, with
descriptions of new species....................................................................... W, vi, pp 53-297
of Arizona and............................................................................................ W, iii, pp 603-609
plateau region of Arizona and, geology of.............................................. W, iii, pp 542-567
pottery, implements, etc., obtained in Arizona and.................................... W, vii, pp 374-390
pueblo languages of, report on................................................................. W, 1875, pp 180-187
Purgatory River region in Colorado and, geology of.............................. W, iii, Supp, pp 195-224
range region in Arizona and, geology of.................................................. W, iii, pp 507-524
reptiles and batrachians collected in portions of California, Nevada, Utah, Arizona, Colorado, and.......................... W, v, pp 509-584
Rio Grande del Norte, agriculture in valley of.......................................... W, iii, pp 574-578
Rio Grande, upper region of, agricultural resources of.......................... W, iii, Supp, pp 362-373
geology of................................................................................................. W, iii, Supp, pp 313-353
Rio Grande Valley, agriculture in............................................................ H, Ann 4, pp 204-207
geology of................................................................................................. W, 1875, pp 64-68, 76-78
Rocky Mountains, eastern slope of, geology of......................................... W, 1875, pp 62-64
ruins in....................................................................................................... W, vii, pp 337-345; W, 1875, pp 174-178
in Las Animas Valley and other places.................................................. W, 1875, pp 178-180
San Juan, pueblo of, description of........................................................ W, vii, pp 331
San Juan River, ruins of houses of Indians on........................................... Eth, iv, pp 154-197
Santa Fe, astronomical determinations at.............................................. W, ii, pp 337-369
mines near.................................................................................................. H, Ann 3, pp 121-123; H, Ann 1-3, pp 119-121
Sierra Madre, geology of........................................................................... W, 1875, pp 78-88
Mesozoic beds of western slope of.......................................................... W, iv, pt ii, pp 1-13
silver near Santa Fe.................................................................................. W, iii, Supp, pp 403-404
southwestern, reconnaissance in............................................................. W, 1879, pp 237-253
New Mexico, Taos, geology near .................. H, Ann 3, pp 70-72; H, Ann 1-3, pp 170-172

Taos, mines near ........................................ H, Ann 3, p 123; H, Ann 1-3, p 119

pueblo of .................................................. W, vii, pp 327-330

Taos Valley, agriculture in ................................ H, Ann 4, pp 202-204

turquois in Los Cerillos ...................................... W, iii, Supp, pp 403-404

Vermejo Creek region, geology of .......................... W, iii, Supp, pp 248-262

Vermejo Park, geology of, notes on ...................... H, Bull, vol ii, No 4, pp 296-305

vertebrata, fossil, collected in .................................. W, iv, pt ii

of Eocene of, systematic catalogue of ...................... W, Uncl 9

volcanic region in Arizona and, geology of ............... W, iii, pp 525-541

New York of Green River, Wyoming, geology near ............ H, Ann 11, p 526

New Zealand, springs, thermal, and geysers of ............. H, Ann 12, ii, pp 313-320

Newberry (J. S.), the ancient lakes of western America: their deposits and drainage ...................... H, Ann 4, pp 329-339

Newton (H.), geology of the Black Hills ..................... BH, pp 1-222

Nez Percés language, grammar of, notes on ................. H, Bull, vol ii, No 3, pp 271-277

(See, also, Ethnology and archaeology.)

Niagara group in Idaho, eastern, and Wyoming, western .... H, Ann 11, pp 484-485

Nicholson (H. A.) and White (C. A.), bibliography of North American invertebrate paleontology .... H, Misc 10

supplement to the bibliography of North American invertebrate paleontology ...................... H, Bull, vol v, No 1, pp 143-152

Nikutemuuk language, vocabulary of .......................... Eth, i, pp 247-265

(See, also, Ethnology and archaeology.)

Nimravidae and Canidae of the Miocene period, descriptions of ...................................... H, Bull, vol vi, No 1, pp 165-181

(See, also, Vertebrates, fossil.)

Niobrara group, distribution and character of ................ H, Mon ii, pp 16-24

fossils, vertebrate, of ...................................... H, Ann 5, pp 327-347

of Black Hills .............................................. BH, pp 173-174

of Colorado, south-central, and New Mexico, north-central . W, iii, Supp, pp 97-99

Spanish Peaks region ........................................... W, 1879, p 277

of Fortieth Parallel region ..................................... K, i, pp 425-431

of Kansas ...................................................... H, Ann 8, pp 281-289; H, Bull, vol ii, No 3, pp 214-221

Missouri country, upper ...................................... H, Mon ix, pp xxx-xxxiii

of Missouri River region, fossil vertebrates from .......... H, Bull, vol iii, No 3, pp 577-586

of Nebraska .................................................... LOR, 1867, pp 171-172; H, Ann 1, p 54

of New Mexico, north-central, and Colorado, south-central . W, iii, Supp, pp 97-99

Niobrara River, course and character of .................... LOR, 1868, pp 227-229; H, Ann 2, pp 73-76

Niskwalli language, dictionary of ............................ Eth, i, pp 285-361

(See, also, Ethnology and archaeology.)

Noctuae, catalogue, partial, of ............................. H, Bull, vol v, No 3, pp 568-578

(See, also, Invertebrates.)

Noctuid moths collected in Colorado in 1875, notes on .......... H, Bull, vol iii, No 1, pp 115-120

(See, also, Invertebrates.)

Noctuidae, descriptions of Lithophane and new ............. H, Bull, vol v, No 2, pp 201-208

of California .................................................. H, Bull, vol iv, No 1, pp 169-187

(See, also, Invertebrates.)

North America, Acridid of, synopsis of ...................... H, Mon v

Cretaceous flora of, review of ............................ H, Ann 8, pp 316-365
North America, Crustacea, fresh-water phyllopod, of, synopsis of. H, Ann 7, pp 613-622
fishes of fresh waters of, catalogue of. H, Bull, vol iv, No 2, pp 407-442
invertebrate paleontology; bibliography of. H, Misc 10
Lignitic formation of, distribution, age, stratigraphy, etc., of. H, Mon vii, pp 3-31

Tertiary flora of, considered as evidence of the age of the forma-
tion. H, Ann 8, pp 275-315
Pinnipeds of, history of. H, Misc 12
Rhizopods, fresh water, of. H, Mon xii
Tertiary flora of. H, Ann 5, pp 304-318
vertebrata, extinct, of Europe and, relations of horizons of. H, Bull, vol v, No 1, pp 33-54

North Park, Colorado, geology of. K, ii, pp 112-129;
North Park group of Fortieth Parallel region K, i, pp 431-434
North Platte, Nebraska, astronomical determinations at. W, ii, pp 449-450
North Platte Valley, Wyoming, geology of. K, ii, pp 152-155
Northwest, tribes of. Eth, i, pp 1-106
Norton (E.), report upon the collections of Formicidae made during years
1872, 1873, and 1874. W, v, pp 729-736
Obsidian, thin section of, from Nevada, Truckee Ferry. K, vi, pl 8
thin section of, from Utah, Ombe Butte. K, vi, pl 10
Odonata from the Yellowstone. H, Ann 6, pp 727-729

(See, also, Invertebrates.)

Odontornithes, monograph on. K, vii
(See, also, Vertebrates, fossil.)

Ogden, Utah, astronomical determinations at. W, ii, pp 7-55
g eo l og y between Fort Hall and. H, Ann 5, pp 13-26; H, Ann 6, pp 197-207
meteorological observations at. H, Misc 2, pp 60-63
Ogden Canyon, Utah, Paleozoic rocks of. K, i, pp 174-177
Ogden region, Utah, geology of. K, ii, pp 394-403
Oil, analysis of, from Colorado, Canyon City. H, Ann 3, p 120
Okinawake language, vocabulary of. Eth, i, pp 248-265
(See, also, Ethnology and archeology.)

plants determined by. W, Uncl 5, pp 52-54
Omaha, Nebraska, geology between Cheyenne, Wyoming, and. H, Ann 4, pp 98-112

Ombe Mountains, Nevada, geology of. K, ii, pp 494-501
granite of. K, i, pp 56-57
Oneata district, California, notes on. W, 1871, p 48
Oquirrh Mountains, Utah, geology of. K, ii, pp 443-454
Ore, analyses of, from Nevada, Comstock lode. K, iii, p 80
analysis of, from Nevada, Trinity Mountains. K, iii, p 299
from Nevada, Washoe district, Kentuck, and Savage mines. K, iii, p 274
White Pine. K, iii, p 420
from Wyoming, Chugwater district, Kentuck, and Savage mines K, iii, p 193-272
Oregon, astronomical work in Washington, California, and. W, 1879, pp 265-268
birds of California, Nevada, and. W, 1879, pp 282-335
Oregon, kjökkenmøddings and graves of a former population on the coast of...H, Bull, vol iii, No 1, pp 27-35

Miocene of, faunae of, observations on..........H, Bull, vol v, No 1, pp 55-69

The Dalles, astronomical work at....................W, 1879, pp 17-41

tribes of western Washington and northwestern...........Eth, i, pp 157-241

Ornament of Indians of southern California..............W, vii, pp 251-262

(See, also, Ethnology and archaeology.)

Ornament, bead, employed by ancient tribes of Utah and Arizona...H, Bull, vol ii, No 1, pp 67-69

(See, also, Ethnology and archaeology.)


repository of information concerning North American..............H, Misc 11

(See, also, Birds; Vertebrates.)

Orographic structure, types of..................................UM, pp 9-18

Orography of Fortieth Parallel region...........................K, i, pp 727-761

Orthoclase, analysis of, from Colorado, Bear Creek............H, Ann 10, p 147

Orthoptera collected in California, New Mexico, and Colorado, report on...W, 1876, pp 278-295

collected in Colorado in 1875, list of...............H, Bull, vol ii, No 3, pp 261-267

in Dakota and Montana in 1873, discussion of....................H, Bull, vol iv, No 2, pp 481-501

in Nevada, Utah, California, Colorado, New Mexico, and Arizona,
portions of........................................W, v, pp 843-908

description of new species of..............................H, Ann 4, pp 263-284; H, Bull, vol i, ser 1, No 2, pp 63-71

notes on the saltatorial, of the Rocky Mountain region........H, Ann 5, pp 423-466

of Nebraska, notes on................................H, Uncl 1, pp 249-261

of Rocky Mountain region....................................H, Ann 6, pp 717-725

types of Tertiary of Rocky Mountains....................H, Bull, vol i, ser 2, No 6, pp 447-449

(See, also, Invertebrates; Invertebrates, fossil.)

Ostensacken (C. R.), notice on galls collected by Lieut. W. L. Carpenter...H, Ann 7, p 567

report on Diptera collected in Colorado by Lieut. W. L. Carpenter during
the summer of 1873........................................H, Ann 7, pp 561-566

report upon the collection of Diptera made in portions of Colorado and
Arizona during the year 1873................................W, v, pp 803-807

western Diptera, descriptions of new genera and species of Diptera from
the region west of the Mississippi, and especially from Cali­
fornia................................................H, Bull, vol ii, No 2, pp 189-354

Osteology of Cathartidae....................................H, Ann 12, i, pp 727-806

of Ereomphiia alpestris.....................................H, Ann 12, i, pp 627-652

of North American Tetraonidae.............................H, Ann 12, i, pp 653-726

of Speotyto cinucularia hypogaea.........................H, Ann 12, i, pp 593-626

Otoe Indians, condition of, notes on.......................LOR, 1867, pp 151-154; H, Ann 1, pp 32-35

(See, also, Ethnology and archæology.)

Owens Lake, California, description of......................W, 1876, pp 189-190

Owiyukuts Plateau, geology of................................K, ii, pp 271-275

Oyster Ridge, Wyoming, Cretaceous uplift of.................K, ii, pp 250-253

game of..............................................H, Ann 11, pp 533-534

Packard (A. S., jr.), description of a Lernhean Crustacean ( Achtheres carpen­
teri) obtained by Lieut. W. L. Carpenter in 1873 in Colo­
rado..................................................H, Ann 7, p 612
Packard (A. S., jr.), description of new insects.............. H, Ann 6, pp 739-741
description of new parasitic worms found in the brain and other parts of
birds .................................................. H, Ann 6, pp 735-737
descriptions of new phyllopod Crustacea from the West............ H, Bull,
vol 11, No 1, pp 171-185
descriptions of new species of Mallophaga collected by C. H. Merriam
while in the Government Geological Survey of the Rocky
Mountains ........................................ H, Ann 6, pp 731-734
insects affecting the cranberry, with remarks on other injurious in-
sects ............................................. H, Ann 10, pp 521-531
insects inhabiting Great Salt Lake and other saline or arkaline lakes in
the West ........................................ H, Ann 6, pp 743-746
monograph of the geometrid moths, or Phalenide of the United
States ............................................... H, Mon x
monograph on the phyllopod Crustacea of North America, with remarks
on the order Phyllocarida ................................ H, Ann 12, i, pp 295-457
on a crayfish from the Lower Tertiary beds of western Wyoming..... H, Bull,
vol vi, No 2, pp 391-397
on a new cave fauna in Utah ................................ H, Bull, vol iii, No 1, pp 157-169
on the geographical distribution of the moths of Colorado .......... H, Ann 7,
pp 543-559
on the supposed ancient outlet of Great Salt Lake ................. H, Bull,
vol 1, ser 2, No 5, pp 413-414
report on the Myriapods collected by Lieut. W. L. Carpenter in 1873 in
Colorado ............................................. H, Ann 7, p 607
report on the Rocky Mountain locust and other insects now injuring or
likely to injure field and garden crops in the western States
and Territories ....................................... H, Ann 9, pp 589-809
synopsis of the fresh-water phyllopod Crustacea of North America.... H, Ann 7,
pp 613-622
Pagosa Springs, Colorado, geology of ......................... H, Ann 9, pp 183-185
Pahranagat Lake district, Nevada, notes on ..................... W, 1871, pp 43-44
Pahsupp Mountains, Nevada, geology of ....................... K, 11, pp 801-803
granite of ............................................. K, 1, pp 92-93
Pahson Mountains, Nevada, Archean rocks of ..................... K, 1, pp 90-92
geology of ............................................. K, 11, pp 775-786
Pah-Ute Lake (Tertiary), extent of ............................. K, 1, pp 454-455
Pah-Ute Range, Nevada, granite of ............................ K, 1, pp 83-85
Triassic rocks of ...................................... K, 1, pp 278-280
Palagonite, analysis of, from Galapagos, Java, and Iceland.. K, 1, p 417; K, 11, p 770
analysis of, from Nevada, Carson River ......................... K, 11, p 769
from Nevada, Hanes station: ................................ K, 1, p 417
Palagonite-tufa, thin section of, from Nevada, Hanes station..... K, vi, pl 12
Paleontology, general significance of ........................ H, Mon 11, pp 7-14
(See, also, Plants, fossil; Vertebrates, fossil; Invertebrates, fossil.)
Paleozoic rocks of California, southeastern ...................... W, 1876, p 174
of Colorado, central .................................. W, 11, pp 355-377
Eagle, Grand, and Gunnison rivers .......................... H, Ann 8, pp 110-120
Grand River district .................................... H, Ann 9, pp 70-79; H, Ann 10, p 178
of Fortieth Parallel area, exposures of ........................ K, 1, pp 127-248
of Idaho, Bear River Range ................................ H, Ann 11, pp 613-621
eastern, and Wyoming, western ................................ H, Ann 11, pp 477-490
of Nevada, Pinyon Range ................................ K, 11, pp 552-558
of Utah, Bear River region ................................ H, Ann 11, pp 613-621
of Utah, high plateaus. H, Ann 10, pp 143-148
of Wyoming, Colorado Range. K, pp 29-33
Rawlings Peak, vicinity of. H, Ann 11, pp 119-121
Sweetwater Valley. H, Ann 11, pp 101-105
Wind River Range, vicinity of. H, Ann 11, pp 70-80
(See also, Carboniferous, Cambrian, etc.)
Palmetto district, Nevada, notes on. W, 1871, p 47
Panamint district, California, notes on. W, 1876, pp 49-51
Paragenesis in Nevada, Comstock lode. K, 11, pp 91-93
Paria amphitheater, Utah, geology of. HP, pp 253-256
Park Province, Colorado, structure of. UM, pp 26-29
Park Range, Colorado, Archean rocks of. K, 1, pp 36-42
topographic features of. H, Ann 9, pp 378-381
trachyte of. K, 1, pp 582-585
Parthenogenesis in Artemia salina. H, Ann 12, 1, pp 463-466
Partzite, analysis of, from California, Blind Spring district. W, 1876, p 185
Pass Creek, Wyoming, geology near. LOR, 1868, pp 246-247; H, Ann 2, pp 93-94
Passer domesticus, status of, in America, with special reference to the Western
States and Territories. H, Bull, vol v, No 2, pp 175-193
(See also, Vertebrates.)
in Colorado, central. W, 111, pp 310-318
Patton (W. H.), generic arrangement of the bees allied to Melissodes and
list of a collection of aculeate Hymenoptera made by Mr. S. W. Williston
the American Bembecidae, tribe Stizini. H, Bull, vol v, No 3, pp 341-347
Paunsagunt Plateau, Utah, geology of. HP, pp 251-253
Peale (A. C.), geological report on Grand River district. H, Ann 9,
pp 31-101; H, Ann 10, pp 161-185
goalogy of Green River district. H, Ann 11, pp 509-646
Juratrias section of southeastern Idaho and western Wyoming. H, Bull,
vol v, No 1, pp 119-123
Laramie group of western Wyoming and adjacent regions. H, Bull,
vol v, No 2, pp 195-200
mines noted by South Park division of United States Geological Survey,
1873. H, Ann 7, pp 301-305
on a peculiar type of eruptive mountains in Colorado. H, Bull,
vol v, No 3, pp 551-564
report of, for 1874. H, Ann 8, pp 75-180
report of, for 1872. H, Ann 6, pp 97-187
Pealite, analyses of, from Yellowstone Park. H, Ann 12, ii, pp 413-415
Pearlite, thin section of, from Nevada, Pahtson Mountains. K, vi, pl 9
Pearlitic rock, thin section of, from Nevada, Montezuma Range. K, vi, pl 9
Peat in Nebraska. H, Uncl 1, pp 69-72
Peavine Mountain, Nevada, Archean rocks of. K, 1, p 97
Pecos River, New Mexico, mountain ranges between La Veta Pass and the head of, geology of ........................................... W, 1876, pp 199-202
Pecos Valley, New Mexico, agriculture in........................... H, Ann 4, pp 207-208
Pennell, Mount, Utah, geology of ..................................... HM, pp 35-38
Peoquop Range, Nevada, geology of ..................................... K, ii, pp 505-512
granite of .................................................................. K, i, pp 58-59
Permian rocks of Colorado, Eagle and Grand Rivers .............. H, Ann 8, pp 117-120
of Texas, Batrachia and Reptilia of, some new... H, Bull, vol vi, No 1, pp 79-82
of Wyoming, Wind River Range, vicinity of......................... H, Ann 11, pp 78-79
Pestles and mortars from graves in southern California.......... W, vii, pp 70-92
(See, also, Ethnology and archaeology.)
Petrographic notes on the volcanic rocks of Yellowstone Park........ H, Ann 12, ii, pp 57-62
Petrography, microscopic, of Black Hills............................ BH, pp 469-527
of Fortieth Parallel region ............................................ K, vi
Petzite, analysis of, from Colorado .................................... H, Ann 10, p 148
Phonolite of Black Hills, petrography of...................... BH, pp 492-494, 503-505
thin section of, from Black Hills.................................. BH, p 528
Phaleniidae of the United States, monograph on..................... H, Mon x
(See, also, Invertebrates.)
Photographs, descriptive catalogue of................................. H, Miscl 5 (2 editions)
of Indians, catalogue of........................................... H, Miscl 5 (1st ed), pp 67-83; H, Miscl 9
Phyllopod Crustacea of North America, monograph of............ H, Ann 12, i, pp 295-457
of the West, descriptions of new.................................... H, Bull, vol iii, No 1, pp 171-185
(See, also, Invertebrates.)
Physide and Unionide, fossil, collected in Montana in 1876, descriptions of............................... H, Bull,
vol iii, No 3, pp 599-602
(See, also, Invertebrates, fossil.)
Physiological effects of a very hot climate.............................. W, 1876, pp 328-330
Pickerinzite, analysis of, from Colorado, Monument Park.......... H, Ann 10, p 148
Pierre group. (See Fort Pierre group.)
Pierres Hole, Idaho, geology near.................................... H, Ann 11, pp 438-441
Pierres Mountains, Idaho, geology of................................. H, Ann 11, pp 425-432
Pigs, solid-hoofed, apparently established in Texas, discussion of... H, Bull,
vol iv, No 1, pp 295-297
(See, also, Vertebrates.)
Pinal Mountains, Arizona, mines in, notes on...................... W, 1871, pp 56-59
Pine, insects injuring.............................................. H, Ann 16, pp 527-531
Pine timber, destruction of, in Rocky Mountains.................. H, Ann 7, pp 538-539
Piney Creek, Wyoming, geology near.................................. H, Ann 11, p 529
Pinnipeds, history of North American.................................. H, Miscl 12
(See, also, Vertebrates.)
Píon Range, Nevada, geology of...................................... K, ii, pp 551-564
Pinos Altos mining district, New Mexico, notes on................. W, 1879, p 195
Pioche, Nevada, astronomical determinations at.................. W, ii, pp 75-96
Pipes, stone, from graves of southern California.................. W, vii, pp 125-134
(See, also, Ethnology and archaeology.)
Piskwaus language, vocabulary of................................... Eth, i, pp 249-265
(See, also, Ethnology and archaeology.)
Placers in Idaho, Iowa Gulch.......................................... H, Ann 11, pp 404-405
Placerville district, California, notes on......................... W, 1878, pp 82-84
Placiere Mountains, New Mexico, geology of....................... H, Ann 3, pp 66-68;
H, Ann 1-3, pp 166-168
Plagopterinae and ichthyology of Utah ................................................. W, Und 8
(See, also, Vertebrates.)
Plains. (See Great Plains.)

Plants; Agrostis, North American species of, preliminary list and descriptions
of ....................................................... H, Bull, vol vi, No 1, pp 149-164
collected in Dakota and Montana in 1873 and 1874, along forty-ninth
parallel, catalogue of ................................ H, Bull, vol iv, No 4, pp 801-830
in Colorado, Wyoming, and New Mexico, catalogue of ........ H, Ann 4, pp 472-487
in Nevada, Arizona, and Utah, list of .......................... W, Und 5, pp 5-19
in Nevada, Utah, Colorado, New Mexico, and Arizona, catalogue of,
with descriptions of new species ................................ W, Und 6, pp 53-297
in Idaho, Utah, Montana, and Wyoming .................. H, Ann 6, pp 747-792
near Yellowstone River, in 1871, catalogue of ............... H, Ann 5, pp 477-498
ferns of the Southwest ........................................ W, vi, pp 299-340
Musci of the Southwest ........................................ W, vi, pp 341-351
of Arizona and New Mexico, geographical distribution of .... W, iii, pp 603-605
of medical and technical use, list of ......................... W, iii, pp 607-609
of Black Hills ............................................... BH, pp 529-537
of California, Mohave Desert, geographical distribution of .. W, 1876, pp 222-224
of Colorado .................................................. W, vi, pp 1-14
of central, preliminary report on and list of ............ W, Und 5, pp 23-62
southwestern ............................................... H, Bull, vol ii, No 3, pp 227-248

Plants, fossil, enumeration and description of, from specimens obtained in
1870 and 1871 .............................................. H, Ann 5, pp 283-303
forest in volcanic Tertiary formation of Yellowstone Park ..... H, Bull,
vol v, No 1, pp 125-132
of Black Hills ............................................... BH, pp 331-333; PBH, pp 7-9
of Colorado; Denver, Golden, Raton Pass, and Purgatory Canyon ... H, Ann 3,
pp 96-97; H, Ann 1-3, pp 196-197
of Cretaceous of North America, review of ............... H, Ann 8, pp 316-365
of Cretaceous and Tertiary formations of Kansas and Nebraska ... H, Ann 4,
pp 370-385
of North America, catalogue of ....................... H, Ann 10, pp 487-520
of western Territories ......................................... H, Mon vii
illustrations of ............................................ H, Und 15
of Dakota group, general characters and relation of ........ H, Bull,
vol 1, ser 1, No 2, pp 52-62
new species of ............................................ H, Bull, vol 1, ser 2, No 5, pp 391-400
of western Territories ........................................ H, Mon vi
of Eocene, general characters of ............................. H, Ann 6, pp 343-350
of Green River group ....................................... H, Mon viii, pp 127-217
of Lignitic formation ...................................... H, Ann 7, pp 365-425;
of North America, review of .............................. H, Bull, vol 1, ser 2, No 5, pp 233-248
of Primordial rocks of Arizona ............................ W, Und 6, pp 5-6
of Tertiary ............................................... H, Ann 5, Supp
Plants, fossil, of Tertiary, distribution in different groups. H, Ann 7, pp 378-390
of Tertiary of North America H, Ann 5, pp 304-318
of western Territories H, Mon vi
enumeration and description of H, Ann 6, pp 571-427
of Tertiary and Cretaceous of the western Territories H, Mon viii
of Wyoming, Rock Creek H, Ann 3, p 95; H, Ann 1-3, p 195
preservation of, mode of H, Ann 4, pp 370-373
relation to actual domain of man and to our present civilization H, Ann 4,
p 373-377
Plateau province, invertebrate paleontology of UM, pp 74-135
sedimentary rocks of UM, pp 37-73
structure of UM, pp 25-28
Plateau region of Arizona and New Mexico, geology of W, iii, pp 542-567
Pliocene rocks of Colorado, northern, vertebrate paleontology of H, Bull,
vol 1, ser 1, No 1, pp 9-28
of Fortieth Parallel region K, i, pp 425-443
of Wyoming, plains K, ii, pp 67-71
Pliocene and Eocene lacustrine formations of New Mexico, notes on, including
descriptions of certain new species of vertebrates... W, 1874, pp 115-130
Point of Rocks group, exposures of UM, pp 47-49
of Uinta Mountains UM, pp 155-157
Polybori, monograph on H, Bull, vol 1, ser 2, No 6, pp 451-473
(See, also, Vertebrates.)
Porter (T. C.), catalogue of plants collected in Wyoming and Colorado. H, Ann 4,
pp 472-483
catalogue of plants collected near Yellowstone River in 1871 H, Ann 5,
pp 477-498
descriptions of plants collected in Nevada, Utah, Arizona, New Mexico,
and Colorado W, vi,
Porter (T. C.) and Coulter (J. M.), synopsis of the flora of Colorado H, Misc 4
Portneuf River, Idaho, geology near H, Ann 11, pp 563-567
Portneuf Range, Idaho, geology of H, Ann 11, pp 328, 567-569
Porphyroid, analysis of, from Nevada, Cottonwood Canyon K, i, p 722
Porphyry of Colorado H, Ann 11, p 209
of Nevada, Goose Creek Hills K, i, pp 55-56
Potsdam group, invertebrates of Fortieth Parallel region K, iv, pp 205-231
of Black Hills BH, pp 80-107
of Colorado, Eagle and Grand rivers H, Ann 8, pp 110-111
of Wyoming, Rawlings Peak, vicinity of H, Ann 11, p 119
Sweetwater Valley H, Ann 11, pp 101-102
Wind River Range H, Ann 11, pp 70-71
Pottery, implements, etc., obtained in New Mexico and Arizona W, vii, pp 374-390
(See, also, Ethnology and archaeology.)
Pottery of Colorado, San Juan Valley, of ancient tribes of H, Ann 10, pp 403-408
of Colorado, southwestern H, Bull, vol 11, No 1, pp 21-24
(See, also, Ethnology and archaeology.)
Pewell (J. W.), exploration of the Colorado River of the West and its tribu-
taries ECR
geology of the eastern portion of the Uinta Mountains UM
lands of the arid region AL
Powers (S.), tribes of California Eth, viii
Preuss Range, Idaho, geology of H, Ann 11, pp 589-590
Price (P. M.), report of .............................................. W, 1875, pp 40-41

Primitive art in the Bridger Basin of southern Wyoming .......... H, Ann 6, pp 651-653

(See, also, Ethnology and archaeology.)

Primordial invertebrate fossils of Black Hills ........ BH, pp 333-344; PBH, pp 8-11

of Southwest .................................................. W, iv, pp 32-49

of Utah and Nevada ........................................... W, Uncl 6, pp 6-8

Profiles of mountain ranges along the fortieth parallel ....... K, i, p 16

Profiles, sections, and other illustrations in Rocky Mountain region .... H, Uncl 3

Propylite, analyses of, from Nevada, Comstock lode ........ K, ii, pp 89, 90

analysis of, from Nevada, Montezuma Range .................... K, ii, p 763

from Nevada, Ragans Valley .................................. K, ii, p 679

Sheep Corral Canyon ........................................ K, ii, p 839

Storm Canyon .................................................. K, ii, p 662

Washoe, Fish Creek Mountains, Virginia Range, and near Truckee Range ........................................ K, i, p 560

Virginia Range ................................................ K, vi, p 116

from Utah, Sevier Plateau .................................... W, iii, p 650

of Nevada, microscopic petrography of ......................... K, vi, pp 110-116

Washoe district ............................................... K, iii, pp 25-30

of Nevada Plateau ............................................. K, i, pp 550-557

thin section of, from Nevada, Tuscarora ......................... K, vi, pl 4

Propylite and andesite, characteristics of ................... HP, pp 108-110

Prozoic rocks of Wyoming, Sweetwater Valley ................. H, Ann 11, pp 96-98

of Wyoming, Wind River Range ................................ H, Ann 11, p 66

Ptarmigan, white-tailed, breeding habits, nests and eggs of .... H, Bull, vol I, ser 2, No 5, pp 203-266

(See, also, Vertebrates.)

Public lands, organization, cost, survey, etc., of .......... W, i, pp 405-413

Pueblo at Acorna, New Mexico ................................ W, vii, pp 325-326

(See, also, Ethnology and archaeology.)

Pueblos and their inhabitants, notes on ....................... W, vii, pp 319-324

(See, also, Ethnology and archaeology.)

Pueblo languages of New Mexico, report on ................... W, 1875, pp 180-187

(See, also, Ethnology and archaeology.)

Puerco group, distribution of ................................. H, Mon iii, pp 4-5

vertebrata of Wasatch and Bridger groups and ............... H, Mon iii, pp 49-742

Purgatory River region, Colorado, agricultural resources of W, iii, Supp, pp 379-381

geology of .................................................... W, iii, Supp, pp 185-224

Putnam (F. W.), Pueblo ruins and the interior tribes .......... W, vii, pp 315-397

reports upon archaeological and ethnological collections ...... W, vii, pp 1-314

Putnam, Mount, Idaho, geology near ........................ H, Ann 11, p 328


(See, also, Vertebrates.)

Pythonomorpha, discussion of Owen's paper on .............. H, Bull, vol iv, No 1, pp 299-311

(See, also, Vertebrates.)

Quartz, analysis of, from Colorado, Elk Mountain ............. K, ii, p 103

Quartz-propylite, analysis of, from Nevada, Cortez Peak .... K, ii, p 578; K, vi, p 119

analysis of, from Nevada, Golconda ................................ K, vi, p 118

from Nevada, Pyramid Lake region ................................ K, ii, p 845

Virginia Range and vicinity of Havallah Mountain and American Flat ........................................ K, i, p 560
Quartz-propylite of Nevada, microscopic petrography of .................................................. K, vi, pp 117-121
of Nevada Plateau ............................................................................................................. K, i, pp 557-561
Quartzite, analysis of, from Nevada, Antler Peak, vicinity of ................................................. K, ii, p 669
analysis of, from Nevada, Carico Point ............................................................... K, i, p 542
from Nevada, Pilot Peak .............................................................................................. K, i, p 542
from Utah, Farmington ................................................................................................ K, ii, p 380
La Motte Peak ............................................................................................................... K, ii, p 324
various localities .............................................................................................................. K, i, p 542
of Black Hill, petrography of ...................................................................................... BH, pp 471-476
Quaternary lakes of California, southeastern ................................................................. W, 1876, pp 177-179
Quaternary rocks of Basin Ranges .................................................................................. W, iii, p 172
of Fortieth Parallel region ............................................................................................ K, i, pp 459-529
Quebec group of Colorado, Eagle and Grand rivers ......................................................... H, Ann 8, pp 111-113
of Wyoming, western ..................................................................................................... H, Ann 11, pp 481-484
Rabbit Valley, Utah, geology of ...................................................................................... HP, pp 276-279
Raft River Mountains, Utah, granite of ................................................................. K, i, pp 54-55
Railroads, elevations along ......................................................................................... H, Bull, vol v, No 3, pp 441-453; H, Misc I, pp 5-17;
Rainfall in western portion of United States ..................................................................... AL, pp 46-56
Rapid Creek, South Dakota, mineral resources of ......................................................... BH, pp 267-272
Rattlesnake Canyon district, Nevada, notes on ............................................................. W, 1871, p 39
Rau (C.), observations on cup-shaped and other lapidarian sculptures in the
Old World and in America ............................................................................................... Eth, v
Rawlings Peak, Wyoming, geology near ........................................................................... K, ii, pp 160-164
Paleozoic rocks of ............................................................................................................ K, i, pp 138-138
Rawlings Springs, Wyoming, geology near ...................................................................... LOR, 1888,
pp 249-250; H, Ann 2, pp 96-97
Red Beds of Black Hills .................................................................................................. BH, pp 131-151
of Colorado, Front Range ............................................................................................ H, Ann 8, pp 42-44
White River district ........................................................................................................ H, Ann 10, pp 72-73
Red Creek, Colorado, Archean rocks of ........................................................................... K, ii, pp 269-271
Red Creek, Wyoming, geology near .............................................................................. H, Ann 4, pp 66-68
Red Mountain and Silver Peak districts, Nevada, notes on ............................................. W, 1871, pp 48-49
Red Wall group, exposures of ......................................................................................... UM, p 55
of Uinta Mountains ........................................................................................................ UM, pp 147-148
Red Wall limestone of Basin Ranges ................................................................................ W, iii, pp 178-179
Reese River, Nevada, mining and milling at .................................................................... K, iii, pp 349-408
region east of, geology of ............................................................................................... K, ii, pp 627-635
Reptiles and batrachians collected in California, Arizona, and Nevada ......................... W, 1878,
pp 206-226
collected in portions of Nevada, Utah, California, Colorado, New Mexico,
and Arizona ...................................................................................................................... W, v, pp 509-584
of Arizona, synopsis of .................................................................................................. W, v, pp 585-633
of Permian beds of Texas, some new ............................................................................ H, Bull, vol vi, No 1, pp 79-82
(See, also, Vertebrates; Vertebrates, fossil.)
Reptiles and fishes collected in Idaho, Montana, Wyoming, and Utah ............................ H, Ann 5,
pp 467-476
of Cretaceous rocks of Kansas ....................................................................................... H, Ann 4, pp 385-425
report on ......................................................................................................................... H, Ann 4, pp 432-442
(See, also, Vertebrates; Vertebrates, fossil.)
Reveille district, Nevada, notes on .................................................................................. W, 1871, p 42
Rhinoceridæ of North America, extinct species of, and their allies ................................. H, Bull,
vol v, No 2, pp 227-237
(See, also, Vertebrates, fossil.)
Bull. 222—04——11
Rhizopods, fresh-water, of North America ........................................ H, Mon xii
(See, also, Invertebrates.)
Rhoda (F.), report on topography of the San Juan country ............... H, Ann 8,
pp 451-496; H, Bull, vol 1, ser 2, No 3, pp 165-210
topographical report on southeastern district...................... H, Ann 9, pp 302-333
Rhyolite, analysis of, from Arizona, Peloncillo Mountains ........ W, iii, pp 648, 651
analyzes of, from California, Lassen Peak ......................... K, i, p 652
from Nevada, Bayless Canyon ........................................ K, ii, p 763
Belmont .................................................. W, iii, pp 649, 651
McKinney's Pass ........................................... K, ii, p 695
Montezuma Range ........................................... K, ii, p 758
Montezuma, Pah-Ute, Fish Creek, and West Humboldt ranges .... K, i,
p 652
Mopung Hills .................................................. K, ii, p 736
Mount Moses .................................................. K, ii, p 664
Sou Spring Hills ........................................... K, ii, p 698
from New Mexico, Burro Mountains .................. W, in, pp 649, 651
of Arizona and New Mexico ..................................... W, iii, pp 640-644
of Basin Ranges ........................................... W, iii, pp 255-256
of Black Hills, petrography of ...................... BH, pp 484-488, 495-503, 511
of Colorado, occurrence and character of ............... H, Ann 10, pp 229-232
of Nevada .................................................. K, i, pp 608-652
of Nevada and Utah, microscopic petrography of .......... K, vi, pp 163-205
of Rocky Mountains ......................................... K, i, pp 605-608
thin section of, from Black Hills .......................... BH, p 528
from Nevada, various localities ......................... K, vi, pls 6, 7, 8, 12
Rhyolites, characteristics of .................................... HP, pp 103-104
Ridgway (R.), monograph of the genus Leucosticte Swainson, or gray-crowned
purple finches .............................................. H, Bull, vol 1, ser 2, No 2, pp 51-82
ornithology of Fortieth Parallel region ...................... K, iv, pp 303-643
ornithology of Guadeloupe Island, based on notes and collections made
by Dr. Edward Palmer ...................................... H, Bull, vol 11, No 2, pp 183-189
outlines of a natural arrangement of the Falconidae ............... H, Bull,
vol 1, ser 2, No 4, pp 225-231
studies of the American Falconidae ........................ H, Bull, vol 11, No 2, pp 91-182
studies of the American Falconidae: Monograph of the Polybori ...... H, Bull,
vol 1, ser 2, No 6, pp 451-473
studies of the American Herodiones: Part I. Synopsis of the American
genera of Ardeidae and Ciconiidae; including descriptions of three
new genera, and a monograph of the American species of the
genus Ardea, Linn ......................................... H, Bull, vol 11, No 1, pp 219-251
Riggs (S. R.), Dakota-English dictionary .......................... Eth, vn
Dakota grammar, texts and ethnography ...................... Eth, ix
Riley (C. V.) and Monell (J.), Notes on the Aphididae of the United States,
with descriptions of species occurring west of the Mississippi.. H, Bull,
vol 11, No 1, pp 1-32
Rio Grande, Texas, birds of .............................................. H, Bull,
Rio Grande region, New Mexico, agricultural resources of .. W, iii, Supp, pp 302-373
geology of .............................................. W, iii, Supp, pp 318-353
Rio Grande Valley, New Mexico, agriculture in ............... H, Ann 4, pp 204-207
geology of .................................................. W, 1875, pp 64-68, 76-78
Rio Grande del Norte, New Mexico, agriculture in valley of ...... W, iii, pp 574-578
Rivers, profiles of ........................................ H, Misc l, pp 37-46;
in Wyoming, Sweetwater district ......... H, Ann 11, pp 57-58
Roan or Book Cliffs, Utah, geology of ........................................ H, Ann 10, pp 173-176
Robbins (J. W.), Potamogeton of Great Basin .................................. K, v, pp 337-340
Roberts (S. R.), report on Mollusca ........................................ H, Ann 4, pp 467-469
Rock (Miles), report of ........................................ W, 1879, pp 268-270
Rock Canyon. (See Spring Canyon.)
Rocky Mountains, coals of ........................................ H, Ann 4, pp 179-186
elevation of, near Missouri River, period of ........................................ H, Uncl 16, pp 9-13
flora of ........................................ H, Bull, vol vi, No 1, pp 1-77
geological formations along eastern margins of ........................................ H, Uncl 16, pp 13-16
of Colorado, notes on ........................................ H, Bull, vol vi, ser 1, No 2, pp 72-77
Paleozoic rocks of ........................................ K, r, pp 127-139
Primordial sandstone of, in northwestern Territories ........................................ H, Uncl 16, pp 16-21
structure and age of ........................................ W, iii, pp 488-501
topographic features of crest of, south of Tennessee Pass . . H, Ann 9, pp 373-377
Rodentia, North American, monograph on ........................................ H, Mon xi
of Miocene of North America, review of ........................................ H, Bull, vol vi, No 2, pp 361-386
(See, also, Vertebrates; Vertebrates, fossil.)
Roscoelite, analysis of, from Colorado, Boulder County ........................................ H, Ann 10, pp 150
Rose Spring district, California, notes on ........................................ W, 1876, pp 65-66
Ross Fork, Idaho, geology along ........................................ H, Ann 11, pp 328-329
Rothrock (J. T.), preliminary botanical report on portions of New Mexico and Arizona ........................................ W, 1875, pp 117-129
preliminary report on the botany of central Colorado ........................................ W, Uncl 5, pp 23-62
report upon economic botany and agriculture of portions of southern California ........................................ W, 1876, pp 202-213
reports upon the botanical collections made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, 1871-1875 ........................................ W, vi
Ruby Range, Nevada, geology of ........................................ K, vi, pp 489-491
Ruins, ancient, human remains found among, in southwestern Colorado and northern New Mexico ........................................ H, Bull, vol ii, No 1, pp 47-63
in New Mexico ........................................ W, vii, pp 337-345; W, 1875, pp 174-178
Chaco Canyon ........................................ W, vii, pp 366-369
Las Animas River region ........................................ W, vii, pp 347-350; W, 1875, pp 178-180
in Utah and Arizona, San Juan River region ........................................ H, Bull, vol ii, No 1, pp 25-45
(See, also, Ethnology and archaeology.)
Safford (T. H.), Catalogue of the mean declination of 2,018 stars ........................................ W, Uncl 15
Safford (T. H.), Kampf (F.), Clark (J. H.), and Maryatt (W. W.), astron-omical determinations in Nevada, Utah, Montana, Wyoming, Nebraska, Colorado, and New Mexico, 1872-1874 ........................................ W, ii, pp 1-491
Saguache Range, Colorado. (See Sawatch Range.)
St. George, Utah, geology between Gila River, Arizona, and ........................................ W, iii, pp 189-225
St. John (O.), notes on the geology of northeastern New Mexico ........................................ H, Bull, vol ii, No 4, pp 279-308
report of the geological field work of Teton division ........................................ H, Ann 11, pp 323-508
report on the geology of the Wind River district ........................................ H, Ann 12, i, pp 173-269
164 INDEX TO HAYDEN, KING,

St. John (O. H.), Descriptions of fossil fishes from the Upper Coal Measures of Nebraska..........................H, Uncl 1, pp 239-245
St. Marys, Wyoming, geology near..............................LOR, 1868, pp 248-249; H, Ann 2, pp 93-96
St. Vrain Creek, Colorado, geology near.....................H, Ann 3, pp 27-28; H, Ann 1-3, pp 127-128
Salamander of Florida, notes on................................ECR, pp 282-285
Salt, analysis of, from California, southeastern............W, 1876, p 176
Salt of, from Colorado, Bear Creek..........................H, Ann 7, p 102; H, Ann 9, p 203
Salt from Nevada, Columbus....................................W, 1876, p 176
Salt from New Mexico........................................K, ii, p 148
Salt in Utah....................................................W, iii, p 629
Salt basins of Nebraska, Lancaster County..................LOR, 1867, pp 130-131; H, Ann 1, pp 8-10
Salt deposit, analysis of, from Arizona, Sunset Crossing W, iii, pp 628
Salt efflorescence, analysis of, from Arizona, Croton Springs, and Santa Catalina.........................W, iii, pp 628
Salt Lake. (See Great Salt Lake.)
Salt River, Wyoming, geology near............................H, Ann 11, pp 551-556
Salt River Range, Wyoming, geology of......................H, Ann 11, pp 545-551
Salt Wells group, exposures of................................UM, pp 49-50
Salt of Uinta Mountains.......................................UM, p 154
San Antonio mining district, California, notes on........W, 1879, p 190
San Antonio mining district, Nevada, notes on................W, 1871, pp 45-46
San Emidio district, California, notes on...................W, 1876, pp 51-52
San Fernando, California, geology of vicinity of.........W, 1876, pp 160-166
San Gabriel mining district, California, notes on..........W, 1879, p 189
San Juan, pueblo of, description of..........................W, vii, p 331
San Juan Mountains, Colorado, geology of..................W, 1875, pp 100-101
San Juan region, Colorado, communication between Denver and, means of......................H, Bull, vol i, ser 2, No 3, pp 145-149
San Juan River, Colorado, geology of.........................H, Ann 9, pp 167-171, 176-191, 248-251
San Juan River, Colorado, ruins and cave dwellings near H, Ann 9, pp 229-238; H, Bull, vol i, ser 2, No 3, pp 151-164
San Juan River, New Mexico, ruins of houses of Indians on......Eth, iv, pp 154-197
San Luis district, Colorado, geology of......................H, Ann 7, pp 305-351
San Luis Valley, Colorado, agriculture in.................H, Ann 4, pp 197-202
cultivable areas in........................................H, Ann 10, pp 328-330
features of................................................W, 1876, pp 86-88
San Miguel Mountains, Colorado, geology of................H, Ann 9, pp 140-149
San Miguel region, Colorado, physical features of........W, 1876, pp 98-100
Sand, analysis of, from Utah, Great Salt Lake..K, ii, p 345
Sand hills of Nebraska, description of.....................H, Ann 4, pp 108-115
Sandstone, analysis of, from Colorado, Big Thompson Canyon K, ii, p 35
from Colorado, Browns Hole.................................K, ii, p 223
Sandstone, analysis of, from Nevada, Battle Mountain

analysis of, from Nevada, West Humboldt Mountains

from Utah, Ashley Creek

Cache Valley

Cottonwood Canyon, vicinity of

Duchesne Fork

Parleys Canyon

Three Lakes

Uinta Mountains

Weber Canyon

from Wyoming, Black Butte

Bridger Basin

Cathedral Bluffs

St. Marys Peak

Wahbanch Spring

Sangre de Cristo Range, Colorado, geology of

Sanidine-trachyte of Black Hills, petrography of

thin section of, from Black Hills

Santa Barbara, California, ethnological researches near

Santa Barbara Islands, California, crania from, observations on

cjokkenmoeddings and graves of a former population of

Santa Clara Valley, California, irrigation in

Santa Cruz Island, California, physical features of

Santa Fe, New Mexico, astronomical determinations at

mornings near

Santa Fe marls of New Mexico, Galisteo Creek region

vertebrate paleontology of

Santa Monica Range, California, geology of

Savory Plateau region, Wyoming, geology of

Sawatch Range, Colorado, geology of

Schirmerite, analysis of, from Colorado, Gold Hill

Schists, crystalline, genesis of granite and

of Fortieth Parallel region, microscopical petrography of

Schit-zui language, vocabulary of

(See, also, Ethnology and archeology.)

Schmankewitsch (W. J.), contribution to a knowledge of the influence of external conditions of life upon the organization of animals

on the relation of Artemia salina Milne-Edwards to Artemia muehlhausenii

Milne-Edwards and to the genus Branchipus Schaefer

Schumacher (P.), method of manufacture of soapstone pots

methods of making stone weapons

researches in the cjokkenmoeddings and graves of a former population of the coast of Oregon

researches in the cjokkenmoeddings and graves of a former population of the Santa Barbara Islands and the adjacent mainland

Sciuri, synonymatic list of American

(See, also, Vertebrates.)

Sciurus, revision of the genus

(See, also, Vertebrates.)
Scotland, primitive lapidarian sculptures in........................ Eth, v, pp 9-15
Scudder (S. H.), account of some insects of unusual interest from the Tertiary
rocks of Colorado and Wyoming..... H, Bull, vol iv, No 2, pp 519-543
brief synopsis of North American earwigs, with an appendix on the fossil
species................................. H, Bull, vol ii, No 3, pp 249-260
description of two species of Carabidæ found in the interglacial deposits of
Scarboro Heights, near Toronto, Canada........ H, Bull, vol iii, No 4,
pp 763-764
first-discovered traces of fossil insects in the American Tertiaries........... H, Bull,
vol iii, No 4, pp 741-762
fossil Coleoptera from the Rocky Mountain Tertiaries........ H, Bull, vol ii,
pp 77-87
fossil insects of the Green River shales........ H, Bull, vol iv, No 4, pp 747-776
fossil Orthoptera from the Rocky Mountain Tertiaries........ H, Bull, vol i, ser 2,
No 6, pp 447-449
list of Orthoptera collected by Dr. A. S. Packard in Colorado and the
neighboring Territories in 1875...... H, Bull, vol ii, No 3, pp 261-267
notes on Orthoptera collected in Nebraska........ H, Undl 1, pp 249-261
notice of a small collection of butterflies, made by Dr. A. S. Packard in
Colorado and Utah in 1875........ H, Bull, vol ii, No 3, pp 289-290
notice of the butterflies collected by Dr. Edward Palmer in the arid regions
of southern Utah and northern Arizona during summer of
1877....................................... H, Bull, vol iv, No 1, pp 253-258
report on Orthoptera collected in California, New Mexico, and Colorado.... W, 1876,
pp 278-295
Tertiary insects of North America................................ H, Mon xiii
Tertiary lake basin at Florissant, Colorado, between South and Hayden
parks....H, Ann 12, i, pp 271-293; H, Bull, vol vi, No 2, pp 279-300
Tertiary Physopoda of Colorado........ H, Bull, vol i, ser 2, No 4, pp 221-223
Scultures made by Indians of California........... W, vii, pp 218-221
Sea bears, seals, walruses, and sea lions, monograph of............... H, Miscel 12
Secret Canyon district, Nevada, notes on....................... W, 1871, p 37
Section of a laccolite................................ HM, fig 8 (p 19), fig 9 (p 20), fig 10 (p 21)
of Shinarump group................................ UM, p 53
of Vermillion Cliff group............................. UM, p 53
of White Cliff group................................ UM, p 53
Section, geologic, in Alabama, Cretaceous rocks.................. H, Mon ix, pp xxxix-xl
in Arizona.................................................. H, Ann 8, p 134
Apache and Final mountains.............................. W, iii, fig 93 (p 221)
Aubrey Cliff........................................ W, iii, fig 67 (p 163)
Pink Cliff to........................................ W, iii, fig 22 (p 47)
Boulder Canyon.......................................... W, iii, fig 15 (p 55)
Camp Apache, Gila River to.......................... W, iii, pl 4 (p 227)
Little Colorado River to.............................. W, iii, pl 4 (p 227)
vicinity of............................................ W, iii, fig 70 (p 165)
Canyon Creek........................................... W, iii, fig 68 (p 164)
Carriso Mountains, vicinity of...................... H, Atlas, sheet xvii
Carrizo Creek.......................................... W, iii, fig 69 (p 164)
Chiricahui Range...................................... W, iii, figs 146-148 (p 511), pp 512, 513
Colorado River, near Camp Mohave.................... W, 1876, p 122
Rio Grande, New Mexico to............................... W, iii, figs 119-122 (p 288)
Diamond Creek fault................................ W, iii, fig 31 (p 55)
Ewell Spring........................................... W, iii, fig 512
Fort Wingate to Zahi Bluff............................. W, iii, fig 118 (p 288)
Gila River to Camp Apache...................... W, iii, pl 4 (p 227)
Section, geologic, in Arizona, Grand Canyon .......................... H, Ann 9, p 83; 
W, iii, fig 66 (p 162); UM, p 43, fig 10 (p 57), p 59
in Arizona, Grand Canyon district ........................................ UM, fig 3 (p 14)
Grand Wash fault ............................................................... W, iii, fig 30 (p 54)
Kaibab Plateau ............................................................... W, iii, fig 29 (p 53)
Kanab Canyon .................................................................. W, iii, fig 65 (p 161)
Labyrinth Canyon ............................................................... H, Ann 9, p 71
Little Colorado River, Camp Apache to ........................................ W, iii, pl iv (p 227)
Verde River to ....................................................................... W, iii, pl iv (p 227)
Natanes Plateau .................................................................. W, iii, fig 150 (p 528)
New River .............................................................................. W, iii, fig 89 (p 201)
Oraybe ........................................................................ W, iii, p 277
Painted Desert ................................................................. H, Ann 8, p 127
Paria fold ........................................................................ W, iii, figs 27, 28 (p 52)
San Carlos Valley ................................................................. W, iii, fig 92 (p 220)
San Francisco Mountain ......................................................... W, iii, fig. 42 (p 81)
Tinnakhah Springs ................................................................ W, iii, fig 87 (p 199), fig 88 (p 200)
Truxton Springs .................................................................. W, iii, fig 90 (p 203), p 204
Verde River to Little Colorado ................................................. W, iii, pl iv (p 227)
Verde Valley ........................................................................ W, iii, fig 16 (p 50)
Virgin Range to Paria fold ....................................................... W, iii, fig 26 (p 51)
Zuni Bluff to Fort Wingate ...................................................... W, iii, fig 118 (p 288)
Zuni Mountains .................................................................. W, iii, figs 115-117 (p 286)
Zuni Valley ........................................................................ W, iii, fig 152 (p 533)
in California, Canyon Springs ................................................... W, 1876, fig 1 (p 175)
Colorado River at Fort Yuma .................................................... W, 1876, p 124
Fort Tejon, vicinity of .............................................................. W, 1876, fig 6 (p 168)
Funeral Mountains ................................................................ W, iii, fig 13 (p 34), fig 80 (p 170)
Grapevine Canyon ............................................................... W, 1876, fig 3 (p 162), fig 4 (p 163)
Inyo Range ........................................................................ W, iii, fig 14 (p 34)
Owens Lake, vicinity of .......................................................... W, 1876, fig 3 (p 180)
Pilot Mountain ...................................................................... W, iii, fig 51 (p 124)
Red Rock Canyon .................................................................. W, iii, fig 56 (p 142)
San Fernando, vicinity of ....................................................... W, 1876, fig 2 (p 160)
Santa Monica Range ............................................................... W, 1876, fig 1 (p 159)
in Canada .............................................................................. H, Bull, vol 1, ser 2, No 5, p 372
Porcupine Creek ................................................................... H, Bull, vol 1, ser 2, No 5, p 373
in Colorado, Alpine Plateau to Great Sage Plain, Utah .............. H, Atlas, sheet xvii
Animas River ................................................................. H, Ann 9, pi xxviii (p 189); H, Mon iii, fig 2 (p 5)
Antelope Park to Abajo Mountains, Utah ................................. H, Atlas, sheet xvii
Arapahoe Peak to Park Range ................................................ H, Ann 9, pl lviii (p 408)
Arkansas River ...................................................................... W, iii, pp 369, 396; H, Ann 8, p 31
Fairplay to ........................................................................ H, Ann 9, pl lx (p 438)
Arkansas Valley ................................................................. H, Ann 6, p 323; H, Ann 8, p 48; W, 1875, fig 1 (p 98)
Aspen Mountain uplift ........................................................... UM, Atlas
Bald Peak ........................................................................ W, iii, p 357
Battlement Mesa .................................................................. H, Ann 10, p 183
Battlement Mesa to Book Cliffs ............................................... H, Ann 10, pl xii (p 184)
Bear Canyon ....................................................................... H, Ann 7, pl 1 (p 93), pp 99, 101, 103
Bear Creek ........................................................................ H, Ann 7, pl 1 (p 93), p 100
Beaver Creek ....................................................................... H, Ann 12, 1, p 271; W, iii, p 379
Bergen Park ........................................................................ H, Ann 7, p 207
Big Thompson Creek ............................................................ H, Ann 7, p 98; K, 1, p 300
vicinity of ........................................................................ H, Ann 3, p 25; H, Ann 1-3, p 125
Bijou Creek ........................................................................ H, Ann 11, p 189
| Section, geologic, in Colorado, Blue River Valley | H, Ann 7, p 187 |
| Boulder, Marshall mine | K, iii, pp 481-483 |
| Box Elder mine | H, Ann 7, p 196 |
| Box Elder Creek | H, Ann 3, p 19; H, Ann 1-3, p 119; K, i, p 251; K, ii, p 38 |
| Buckskin Gulch | H, Ann 7, p 228 |
| Buffalo Peak | H, Ann 7, pl vi (p 212), p 237 |
| Canyon vicinity of | H, Ann 3, p 50; H, Ann 1-3, p 151; H, Ann 7, pl x (p 314); H, Bull, vol i, ser 2, No 5, pp 249, 250; W, iii, p 398 |
| Capitol Peak to Sopris Peak | H, Ann 7, pl xx (p 265) |
| Carr station, vicinity of | K, ii, p 61 |
| Carriso Mountains | H, Ann 9, pl xlvi (p 274) |
| Central City, vicinity of | H, Ann 7, pl ii (p 280) |
| Cheyenne Mountain | H, Ann 9, pl lxi (p 360) |
| Cochectopa Creek | H, Ann 7, pl xiv (p 339) |
| Colorado Springs, vicinity of | H, Ann 8, p 40 |
| Corral Peak to Park Range | H, Ann 9, pl lvii (p 408) |
| Cottonwood Park | W, iii, p 388 |
| Crow Creek | H, Ann 11, p 164 |
| Dawson Butte to South Platte River | H, Ann 9, pl lx (p 438) |
| Denver vicinity of | H, Ann 7, p 109 |
| Dolores Valley, showing relation of San Juan Valley to | H, Ann 9, pl xliii (p 266) |
| Douglas Creek | H, Ann 10, pl v (p 81) |
| Dry Creek | H, Ann 7, fig 1 (p 96) |
| Eagle River | H, Ann 7, pl xx (pp 243-245); H, Ann 8, pl i (p 80), pl iii (p 83), pp 113, 115, 118, 122, 125, 129; W, iii, pp 368-370 |
| Hamilton to | H, Ann 9, pl lx (p 438) |
| Ute Peak to | H, Ann 9, pl lviii (p 408) |
| Elk Mountains | H, Ann 7, pl xviii (p 258); H, Ann 8, fig 9 (p 69), p 73 |
| Grand River Valley to | H, Atlas, sheet xvii |
| Elkhad Mountains to Great Plains | K, Atlas |
| Evans Range to South Platte River | H, Ann 9, pl lx (p 438) |
| Fairplay to Arkansas River | H, Ann 9, pl lx (p 438) |
| Florissant vicinity of | H, Ann 7, p 210; H, Bull vol vi, No 2, pp 284-285, 288 |
| Fourmile Creek to Horseshoe Mountain | H, Ann 7, pp 229-233 |
| Frazier Canyon | H, Ann 7, pl xiv (p 208); K, i, p 305 |
| Front Range | H, Ann 7, pl vi (p 208); K, i, p 305 |
| Frying Pan Creek to Roaring Fork | H, Ann 7, pl xx (p 265) |
| Georgia Pass | H, Ann 7, p 213 |
| Homestake Peak to | H, Ann 9, pl lx (p 438) |
| Glen Eyrie | H, Ann 7, pl iii (p 200), p 201, pl iv (p 204); H, Ann 8, pl vii (p 42) |
| Golden | H, Ann 7, pl i (p 93), pp 109, 126, 127 |
| Gothic Mountain | H, Ann 8, pl xiv (p 54) |
| Grand Mesa to Book Cliffs | H, Ann 10, pl xii (p 184) |
| Grand River | H, Ann 8, pl iv (p 88), pl vi (p 92), pp 113, 136, 137-138; H, Ann 10, p 171 |
| Elk Mountain to | H, Atlas, sheet xvii |
| Grand River district | H, Ann 10, pl xii (p 184) |
Greeley, vicinity of ........................................... H, Ann 8, p 34
Gunnison River .............................................H, Ann 8, pl vii (p 97), pl viii (p 102), pl ix (p 105), pp 126, 131, 132, 133, 138, pl xiv (p 169); H, Ann 9, pl i (p 38)
Gunnison Valley .............................................H, Ann 10, pl xii (p 184)
Hamilton, vicinity of ....................................... W, iii, pp 391, 454
Eagle River to .................................................. H, Ann 9, pl ix (p 438)
Homestake Peak to Georgia Pass ....................... H, Ann 9, pl ix (p 438)
Hoosier Pass, vicinity of ................................... H, Ann 7, pl vi (p 212)
Huerfano Park .................................................. H, Ann 9, pl xiv (p 124)
Iowa Gulch ..................................................... H, Ann 7, pl xi (p 234), pp 234–235; W, iii, p 371
Italian Mountain .............................................. H, Ann 7, pp 251–252
James Peak to Whiteface Peak ........................... H, Ann 9, pl lviii (p 408)
Junction Mountain ............................................. UM, figs 1, 2 (p 10)
La Plata Mountains ........................................... H, Ann 9, pl xxxv (p 244), pl xlv (p 270)
Laporte, vicinity of ........................................... H, Ann 3, p 17; H, Ann 1–3, p 117
Little Book Cliffs ............................................. H, Ann 10, p 177
Little Fountain Creek ......................................... W, iii, p 379
Little Platte River ............................................ H, Ann 7, pl vi (p 212), pp 221–223, 224
Little Thompson Creek ...................................... H, Ann 7, pl i (p 93), pp 102, 103
lodore, canyon of ............................................. UM, fig 14 (p 145)
Longs Canyon ................................................. W, iii, Supp, pp 211, 212
coal bed in ...................................................... W, iii, Supp, pp 111, 113, 116
Longs Peak to Mount Powell .............................. H, Ann 9, pl lviii (p 408)
Mancos Canyon ................................................. H, Ann 9, p 255
Marshall .......................................................... H, Mon vii, pp 16–17
Mesa Verde ...................................................... H, Ann 9, p 248, pl xl (p 254), pl lii (p 360)
Mesa Verde group in Great Hogback ...................... H, Ann 9, p 252
Middle Park, Blue River Valley ........................... H, Ann 7, pl iii (p 192)
Grand River .................................................... H, Ann 3, p 85; H, Ann 1–3, p 185
Hot Springs ...................................................... H, Ann 7, pl iii (p 192)
Hot Springs and Grand Lake roads, near junction ... H, Ann 7, fig 11 (p 163)
Muddy River Valley ........................................... H, Ann 7, pl iii (p 192)
Montgomery, vicinity of ...................................... H, Ann 7, p 225
Monument Creek ................................................ H, Ann 6, p 325
Gehrung’s mine ................................................ H, Ann 7, p 202
vicinity of ...................................................... H, Ann 8, p 30
Mosquito Gulch ................................................ H, Ann 7, pp 228–229, pl vii (p 229)
Mount Bross ..................................................... H, Ann 7, pl vi (p 212), p 302
vicinity of ...................................................... H, Ann 7, p 225
Mount Guyot, east of ........................................ H, Ann 7, pl vi (p 212)
Mount Lincoln ................................................... H, Ann 7, p 227
Mount Ouray ..................................................... H, Ann 7, p 338
Mount Powell to Longs Peak ................................ H, Ann 9, pl lviii (p 408)
Mount Silverheels ............................................. H, Ann 7, pp 214–215
Navajo River ..................................................... H, Ann 9, pl xxvi (p 186), pl xxxvii (p 274)
North Table Mountain ...................................... H, Ann 7, p 130
northern .......................................................... K, ii, p 41
northwestern ..................................................... H, Ann 10, p 60
Nutria River ..................................................... H, Ann 9, pl xxvii p 188
O-Be Joyful Creek ........................................... H, Ann 8, p 138
Oil Creek Valley ................................................ H, Ann 7, pl xii (p 316), fig 7 (p 317)
INDEX TO HAYDEN, KING,

170

Section, geologic, in Colorado, Pagosa Springs
   H, Ann 9, pl xxiv (p 168)

in Colorado, Pagosa Springs, vicinity of
   H, Ann 9, pl xxvi (p 186)

Park Range
   H, Ann 9, pl lxvii (p 408); UM, Atlas

Park Range
   H, Atlas, sheet xvi

Great Plains to
   H, Ann 9, pl xxix (p 194), p 196; W, m, Supp, pp 208, 213, 214, 215, 216, 217, 218, 219

cal fuel on
   W, m, Supp, pp 109, 112, 118

vicinity of
   H, Ann 9, pl xxxii (p 198)

Ralston Creek
   H, Ann 7, pl x (p 93), p 99

Raton Creek
   W, m, Supp, pp 201, 202, 203, 204, 205, 207

cal fuel on
   W, m, Supp, pp 117, 118

Reillys Canyon
   W, m, Supp, pp 208, 209, 210

cal fuel on
   W, m, Supp, pp 115, 116

Roan Cliffs
   H, Ann 10, p 183

Roaring Fork
   H, Ann 7, pl xix (p 263), pp 263–264; H, Ann 8, pl iv (p 88), p 125

Frying Pan Creek to
   H, Ann 7, pl xx (p 265)

Rock Creek
   H, Ann 7, p 258; W, m, pp 362–364

Rocky Mountains, eastern base
   H, Ann 7, pl xii (p 136)

Roubideau Creek
   H, Ann 8, p 136

Saginache Creek, vicinity of
   W, m, p 419

St. Vrain Creek
   H, Ann 7, p 99

San Juan Mountains, Great Plains to
   H, Atlas, sheet xviii

San Juan Valley, Utah, to
   H, Atlas, sheet xvii

San Juan region
   H, Ann 8, pp 214, 217, 218, 219, 223, 224, 226, 227

San Juan River
   H, Mon m, fig 3 (p 7)

Great Hogback to
   H, Ann 9, p 251, pl xxxvii (p 252)

San Juan Valley
   H, Ann 9, pls xxxv and xxxvi (p 244)

showing relation of Dolores Valley to
   H, Ann 9, pl xlvii (p 266)

San Luis district
   H, Ann 7, pl vi (p 311), pl x (p 314), pl xii (p 327)

San Miguel Mountains
   H, Ann 9, pl xxxvi (p 244)

vicinity of
   H, Atlas, sheet xvii

San Miguel Plateau
   H, Ann 10, pl ix (p 188)

Sangre de Cristo Range
   H, Atlas, sheet xviii; H, Ann 7, pl xiii (p 327); H, Ann 9, pl ix (p 114), pl x (p 118), pl xiv (p 122), pl xvi (p 124)

Sawatch Range to Great Plains
   H, Atlas, sheet xviii

showing relations of sedimentary rocks of plains to Archean rocks of mountains
   H, Ann 7, fig 1 (p 96)

Sierra El Late, showing intrusion of trachyte
   H, Ann 9, pl lxxv (p 272)

Sierra La Sal
   H, Ann 9, pl vi (p 62)

Sopris Peak
   H, Ann 8, p 61; fig 3 (p 62)

Capitol Peak to
   H, Ann 7, pl xx (p 265)

South Boulder Creek

Marshall mine
   H, Ann 7, pp 123–124

BULL. 222.
Section, geologic, in Colorado, South Platte River

in Colorado, South Platte River, Dawson Butte to

Spanish Peaks

Spanish Peaks region

Sultan Mountain, vicinity of

Sunny Point

Taylor River

Teocalli Creek

Teocalli Mountain

Thompson Creek, vicinity of

Toussand

Trinidad, coal groups near

Trinidad coal field, Laramie group

Trout Creek

Turkey Creek

Uinta Range to Little Snake River

Unaweep Canyon

Uncompahgre Plateau

in Grand Canyon of Colorado River

in Idaho, Bannock Range
INDEX TO HAYDEN, KING, [BULL. 222.

Section, geologic, in Idaho, eastern............................ H, Ann 11, p 623 in Idaho, Fall Creek, vicinity of.............................. H, Ann 11, pl xxii (p 378)

Fall Creek, between Mosquito Creek and.................... H, Ann 11, pl xvii (p 364)

northeast border of........................................... H, Ann 11, pl xix (p 366), pp 366-370

Grouse Creek, vicinity of..................................... H, Ann 11, pl xx (p 372), p 377

Highams Peak.................................................... H, Ann 11, p 336, pl ii (p 336)

John Gray Creek, north of................................. H, Ann 11, pl xxviii (p 364)

John Gray Lake, vicinity of................................ H, Ann 11, p 358

Lincoln Valley.................................................. H, Ann 11, p 331

Malade Range................................................... H, Ann 11, p 606, pl lxvi (p 608)

McCoy Creek...H, Ann 11, pl xxvii (p 392), pp 393-400, pl xxviii (p 394)

Middle Creek Valley............................................. H, Ann 11, pl li (p 558)

Mosquito Creek, between Fall Creek and .................. H, Ann 11, pl xviii (p 364)

Mount Putnam Ridge.............................................. H, Ann 11, pl viii (p 328)

Pierre Mountains............................................ H, Ann 11, pl xxxviii (p 426), pp 426-427, 430-431

Portneuf Range................................................ H, Ann 11, p 568

Portneuf region................................................ H, Ann 11, pl lxv (p 566)

Portneuf River to Blackfoot River............................ H, Ann 11, pl x (p 334)

Ross Fork....................................................... H, Ann 11, pl viii (p 328), pp 333-334, pl x (p 334)

Smith Fork to Thomas Fork.................................. H, Ann 11, pl lxx (p 566)

Snake River, vicinity of..................................... H, Ann 11, pl xlix (p 582)

Snake River Valley, Lower.................................... H, Ann 11, pl xxxii (p 408)

South Pyramid Creek........................................... H, Ann 11, pp 385-386, pl xxxiii (p 408)
southeastern and Wyoming, western.......................... H, Bull, vol v, No.1, p 120

Thomas Fork to Bear River.................................... H, Ann 11, pl lxxi (p 586)

Three Deer Creek, vicinity of................................ H, Ann 11, pl xx (p 372), pp 372-374, pl xxx (p 378), pp 379-381

Willow Creek Basin............................................. H, Ann 11, pl xv (p 350), pl xvi (p 352)

Willow Creek Ridge............................................. H, Ann 11, pp 352-353, 354-356

in Kansas, Atchison.......................................... H, Uncl 1, pp 121-122

Riverside...................................................... H, Uncl 1, pp 119-120

St. Joseph...................................................... H, Uncl 1, pp 117-118

in Mississippi, Cretaceous rocks............................ H, Mon ix, p xxxviii

in Montana, Cinnabar Mountain............................... H, Ann 6, pp 41-42

Cinnabar Mountain, Gardiner River to..................... H, Ann 6, fig 30 (p 121)

Flathead Pass................................................... H, Ann 6, fig 24 (p 84)

Fort Ellis, coal bed near.................................... H, Ann 6, fig 28 (p 114)

Fort Union...................................................... H, Mon ix, pl lix

Gallatin City, vicinity of................................. H, Ann 6, pp 172-174

Gallatin River, Madison River to........................... H, Ann 6, fig 42 (p 164)

Gardiner River, Cinnabar Mountain to..................... H, Ann 6, fig 30 (p 121)

Jackass Creek.................................................. H, Ann 6, fig 41 (p 162), p 163

Judith River................................................... H, Mon ix, pl lxvi

Madison River, Gallatin River to.......................... H, Ann 6, fig 42 (p 164)

Missouri Valley, below Three Forks......................... H, Ann 6, figs 20, 21, 22 (pp 71, 72, 73)

Soda Butte..................................................... H, Ann 6, fig 6 (p 46)

Spring Canyon.................................................. H, Ann 6, fig 27 (p 110), pp 111-112

Bridge Peak to............................................... H, Ann 6, fig 27a (p 113)

in Nebraska, Ashland, vicinity of......................... H, Uncl 1, p 38

Aspinwall...................................................... H, Uncl 1, pp 112-113

Beatrice, vicinity of........................................ H, Ann 1, p 146; H, Ann 1, p 27

Bellevue............................ H, Uncl 1, p 89

vicinity of........................................... LOR, 1867, p 159; H, Ann 1, p 41; H, Uncl 1, p 8
Section, geologic, in Nebraska, Bennetts Mill ..............................H, Uncl 1, p 100
in Nebraska, Big Blue River, vicinity of...........................H, Uncl 1, p 28
Blue Spring........................................LOR, 1867, p 146; H, Ann 1, p 26; H, Uncl 1, p 27
Brownville........................................H, Uncl 1, pp 110, 111-112
Cedar Bluff........................................H, Uncl 1, p 98
Coal Creek........................................H, Uncl 1, p 30
Cretaceous rocks .....................................LOR, 1867, p 107; H, Ann 1, p 49;
H, Ann 7, p 104; H, Mon ix, pp xxiv-xxv
Decatur, vicinity of................LOR, 1867, p 164; H, Ann 1, p 46; H, Uncl 1, pp 40, 41
Iowa Creek ........................................LOR, 1867, p 165; H, Ann 1, p 48; H, Uncl 1, p 43
Little Blue River..............LOR, 1867, p 148; H, Ann 1, p 29; H, Uncl 1, pp 29-30
Nebraska City, at and near ........................................H, Uncl 1, pp 101, 103, 105-107
Nemaha River........................................H, Uncl 1, p 22
Omaha................................................H, Uncl 1, p 87
Otoe Agency .................................LOR, 1867, p 145; H, Ann 1, p 5; H, Uncl 1, p 26
Otoe City..........................................H, Uncl 1, pp 107-108
Pawnee City, vicinity of..............................H, Uncl 1, p 23
Platte River........................................H, Uncl 1, pp 99-91
vicinity of................................LOR, 1867, pp 160, 161; H, Ann 1, pp 42, 43
Plattsbrook........................................H, Uncl 1, p 93
Rock Bluff........................................H, Uncl 1, pp 95-96
Rulo, vicinity of..............................H, Uncl 1, pp 114, 115
Salem................................................H, Uncl 1, p 21
Tecumseh........................................H, Uncl 1, p 34
Tertiary formations ..........LOR, 1867, p 173; H, Ann 1, p 56; H, Ann 4, p 93
Turners Branch.....................................H, Uncl 1, p 22
Weeping Water......................................LOR, 1867, p 158; H, Ann 1, p 40; H, Uncl 1, p 14
Weeping Water River..........................H, Uncl 1, p 14
White River........................................H, Mon ix, pp 14-15
White River group..................................H, Mon ix, p lxiii
in Nebraska and Wyoming..........................H, Uncl 1, pp 99-100
in Nevada, Amargosa Range.........................W, iii, fig 12 (p 33), p 169, fig 78 (p 170)
Battle Mountains to Virginia Range ....................K, Atlas
Callville, vicinity of ................................W, 1876, fig 5 (p 182)
Coal Creek........................................K, ii, p 605
Colorado River at Stones Ferry ......................W, 1876, p 120
Cortez Range to Gosiute Range .....................K, Atlas
Inyo Range........................................W, iii, p 169, fig 79 (p 170)
Kawsoh Mountains.................................K, i, pp 415-416; K, ii, p 766
Mokomoke Ridge to Treasure Peak ....................K, ii, p 544
Mount Worthington.................................W, iii, fig 17 (p 87)
Ombe Mountains to Shoshone Mesa....................K, Atlas
Pahranagat Range.................................W, iii, fig 18 (p 38), fig 76 (pp 168-169)
Pine Mountains to Virgin Mountains ............W, iii, fig 99 (pp 247-248)
Piñon Range........................................K, ii, p 554
Schell Creek Range...............................W, iii, fig 9 (p 31), fig 75 (pp 167-108)
Shoshone Mesa to Ombe Mountains..................K, Atlas
Shoshone Range to Virginia Range..................K, Atlas
Snake Range........................................W, iii, fig 98 (p 241)
Spring Mountain Range..........................W, iii, fig 10 (p 32), fig 71 (p 166)
Timpanahute Range................................W, iii, fig 19 (p 38), p 169
Toyabe Range.......................................K, iii, pl xxvi (p 327)
Treasure Peak to Mokomoke Ridge ..................K, ii, p 544
INDEX TO HAYDEN, KING,

Section, geologic, in Nevada, Virgin Mountains to Pine Mountains

in Nevada, Virginia Range, Battle Mountains to
Virginia Range, Shoshone Range to
Washoe district
Comstock lode
Gold Hill mines
Virginia mines
White Pine district

in New Jersey, Cretaceous rocks.
in New Mexico.

Acoma, vicinity of.
Arroyo de los Angeles
Arroya San Cristobal
Bear Spring
Canadian River
coal bed on
Cebolla Creek
Covero, buttes near
Coyote Creek
Crow Creek
coal bed on
Datil Range
Tres Hermanos Buttes to
Dillons Canyon
coal bed in
Fort Union, vicinity of.
Fort Wingate, vicinity of.
Galisteo coal field
Galisteo Creek
coal beds on
vicinity of
Gallinas Creek
Gallinas Mountains, vicinity of
Gallinas River, vicinity of.
Guadalupe River
Manco Burro Pass
Manuelitos Creek
Mora Creek
Mora and Manuelitos creeks
Moreno Valley
northwestern
Nutria, vicinity of.
Nutria fold
Pinos Creek
Purgatory River
Raton Hills
Raton Mountains
Raton Pass
Rio Grande, Canadian Plains to

W, III, fig 99 (pp 247-248)
K, Atlas
K, Atlas, pl i (p 18)
K, iii, Atlas, pl xii
K, iii, pl xxviii (p 417)
H, Mon ix, p xli
H, Mon ix, p xxxvii
W, iii, pp 553-554
W, iii, Supp, p 162
W, iii, Supp, fig 2 (p 50)
W, iii, pp 551-552
W, iii, Supp, fig 34 (p 253), fig 35 (p 254), fig 36 (p 255), fig 37 (p 256)
W, iii, Supp, fig 39 (p 266), pp 267, 268, fig 40 (p 268), fig 41 (p 269), fig 42 (p 270), fig 43 (p 271)
W, iii, Supp, pp 107, 108, 117, 121
W, iii, Supp, fig 9 (p 57)
W, iii, fig 155 (p 535)
W, iii, Supp, figs 4, 5, 6 (pp 55, 56), pp 76, 291, 293
W, iii, Supp, fig 38 (p 263), pp 264-265
W, iii, Supp, pp 119, 121
W, iii, fig 151 (p 532)
W, iii, pp 549-550
W, iii, Supp, fig 44 (p 273), fig 45 (p 274), p 275, fig 46 (p 276), fig 47 (p 277)
W, iii, Supp, pp 116, 120
W, 1877, p 1298
W, iii, Supp, pp 127-128
W, iii, Supp, fig 1 (p 50), pp 330-332; 333-334
W, iii, Supp, pp 129, 130
H, Ann 3, p 67; H, Ann 1-3, p 167
H, Mon iii, fig 1 (p 4)
W, iv, pt ii, fig 1 (p 11)
W, 1875, fig 2 (p 104)
W, iii, Supp, p 196
W, iii, Supp, fig 10 (p 58), pp 307-308, 310
W, iii, Supp, fig 7 (p 57), pp 298-299
W, iii, Supp, pp 77-78
W, iii, Supp, fig 3 (p 54)
W, 1875, p 87
W, iii, pp 552-553
W, iii, figs 163-166 (p 569)
W, iii, Supp, p 176
H, Mon vii, p 14
H, Atlas, sheet xviii
H, Mon vii, p 13
W, iii, Supp, p 206
W, iii, Supp, pl 1 (p 406)
Section, geologic, in New Mexico, Rio Grande, Colorado River, Arizona, to . W, iii, figs 119-122 (p 288)

in New Mexico, Rio Puerco ........................................... W, 1875, p 104
Río San José ......................................................... W, 1875, fig 3 (p 106)
Río Torreon .......................................................... W, 1875, p 104
San José River, head of ........................................... W, iii, fig 153 (p 534)
Santa Rita Range ..................................................... W, iii, fig 149 (p 516), p 517
Sixmile Creek, vicinity of ........................................ W, iii, Supp, p 243
Stinking Spring ...................................................... W, iii, fig 123 (p 290), pp 550-551
Tecolote Valley ..................................................... W, iii, Supp, fig 12 (p 59)
Turkey Mountain ...................................................... W, iii, Supp, p 92
Vermejo Creek ........................................................ W, iii, Supp, fig 29 (pp 248-249), fig 30 (p 250), fig 31 (p 251), fig 32 (p 252), figs 33 and 34 (p 253), pp 257, 258-259; W, 1877, p 1300
coal bed on ......................................................... W, iii, Supp, pp 106, 108, 109, 110, 121, 122
vicinity of .......................................................... H, Ann 3, p 57; H, Ann 1-3, p 157
Vermejo Park, coal bed in ......................................... W, iii, Supp, p 114
Willow Creek .......................................................... W, iii, Supp, fig 48 (p 279)
Zuni Range ........................................................... W, iii, fig 168 (p 563)

in North Dakota, Fargo ............................................. H, Ann 6, p 301
in Northwest, Cretaceous rocks of ................................ H, Ann 4, p 87; H, Mon vi, p 14
in Plateau Province .................................................. H, Ann 9, p 85; UM, pp 40-42
in South Dakota, Amphibious Creek ...................... BH, fig 17 (p 122), fig 20 (p 141), p 158
Bear Butte ............................................................ BH, p 196
Bear Lodge, vicinity of ........................................... BH, p 180
Beaver Creek ........................................................ BH, p 33, fig 3 (p 34), p 182
vicinity of .......................................................... BH, p 155
Beaver Creek Gap .................................................. BH, p 178
Belle Fourche Creek .............................................. BH, p 165
vicinity of .......................................................... BH, p 180
Belle Fourche Valley .............................................. BH, fig 24 (p 147)
Black Hills ............................................................ H, Ann 3, p 12; H, Ann 1-3, p 112; H, Uncl 16, p 17; BH, p 40, fig 25 (p 206)
Carboniferous rocks .............................................. BH, p 108
Red Beds ............................................................. BH, p 131
Box Elder Creek ................................................... BH, fig 13 (p 91), p 126
Castle Creek ........................................................ BH, p 120
Cheyenne River ................................................... BH, pp 31, 33
vicinity of .......................................................... BH, pp 183, 184
Custer Peak, Carboniferous plateau at ...................... BH, fig 15 (p 117)
French Creek ........................................................ BH, fig 12 (p 90), pp 181, 234
Minne Katta Creek ................................................ BH, p 121
Missouri River ........................................................ H, Mon ix, p xxiii
Cretaceous rocks ................................................... BH, p 171
Old Woman Butte .................................................. BH, p 30
Rapid Creek ........................................................ BH, fig 10 (p 85), fig 14 (p 94), fig 18 (p 124), p 125, fig 21 (p 142)
Red Canyon Creek ................................................ BH, fig 10 (p 85), fig 14 (p 94), fig 18 (p 124), p 125, fig 21 (p 142)
Red Valley .......................................................... BH, pp 140, 157, 182
Carboniferous plateau near ...................................... BH, fig 16 (p 119)
Redwater Valley ...................................................... BH, pp 160, 163
Slate Creek .......................................................... BH, p 99
Spearfish Creek .................................................... BH, p 161
vicinity of .......................................................... BH, fig 22 (p 144)
Spring Creek ........................................................ BH, fig 9 (p 82), fig 11 (p 87), p 241, fig 28 (p 244), p 257
INDEX TO HAYDEN, KING,

Section, geologic, in South Dakota, Spring Creek, vicinity of.......................... BH, p 185
in South Dakota, Sundance, vicinity of................................................. BH, p 154
Sundance Hills ............................................................................................ BH, fig 23 (p 146)
in Utah, Abajo Mountains ............................................................................... H, Ann 9, p 85
Abajo Mountains to Antelope Park, Colorado.............................................. H, Atlas, sheet xvii
Aquarius Plateau ............................................................................................ HP, Atlas
Aspen Plateau to the Desert ............................................................................ K, Atlas
Awapa Plateau ................................................................................................ HP, Atlas
Bear River, vicinity of ................................................................................. H, Ann 4, pp 150-151, 152
Bear River City ............................................................................................... H, Ann 4, figs 1, 2 (p 153)
Bear River Range ........................................................................................... H, Ann 11, pp 598, 599
Beaver Creek Range .................................................................................... W, iii, fig 7 (p 28)
Book Cliffs, vicinity of .................................................................................. H, Ann 10, pl xii (p 184), p 185
Bowl Creek Arch ............................................................................................ HM, fig 46 (p 45)
Castle Valley .................................................................................................. W, iii, figs 124-130 (pp 292-293), fig 132 (p 295)
Cataract Canyon ............................................................................................. UM, fig 10 (p 57), pp 58-59
Cliff Spring ..................................................................................................... H, Ann 10, p 184
Coal Creek ...................................................................................................... K, i, pp 211-212
Coalville ......................................................................................................... H, Ann 6, pp 437-454
Echo Canyon to ............................................................................................ H, Ann 6, fig 52 (p 439), pp 439-440
Cottonwood Canyon ...................................................................................... K, i, pp 165-172
Desert Creek .................................................................................................. H, Ann 10, p 174
Dirty Devil River ........................................................................................... W, iii, p 281; W, iii, Supp, pp 136-137
East Fork Canyon ......................................................................................... HP, fig 4 (p 244)
Echo Canyon, Coalville to ........................................................................... H, Ann 6, fig 52 (p 439), p 440
Evanston ........................................................................................................ H, Ann 5, p 194
Flaming Gorge .............................................................................................. K, i, p 260
Grand River .................................................................................................. H, Ann 9, p 83; H, Ann 10, pp 171, 172
Grand River Valley ....................................................................................... H, Ann 10, pl xii (p 184)
Green River Valley to White River Plateau, Colorado .................................. H, Atlas, sheet xvii
Gunnison, vicinity of ..................................................................................... HP, p 164
Henry Mountains, Cretaceous rocks ............................................................ HM, p 4
Juratrias rocks ............................................................................................... HM, p 6
Pulpit Arch ..................................................................................................... HM, fig 31 (p 33), fig 73 (p 148)
high plateaus .................................................................................................. HP, Atlas
House Range .................................................................................................. W, iii, figs 3-5 (p 27), fig 73 (p 167)
Jacobs Pool ................................................................................................... W, iii, fig 64 (p 160)
Joes Valley ..................................................................................................... W, iii, fig 107 (p 268)
Kaiparowits Plateau ....................................................................................... HP, Atlas
Kanab region ................................................................................................... HP, p 151
Lewis Creek Canyon ...................................................................................... HM, fig 40 (p 40)
Lewis Creek Plain .......................................................................................... HM, fig. 61, (p 128)
Manti, vicinity of ........................................................................................... W, iii, fig 106 (pp 267-268)
Markagunt Plateau ......................................................................................... HP, Atlas
Mineral Range ............................................................................................... W, iii, fig 8 (p 29)
Monroe Amphitheater ...................................................................................... HP, pp 240-242
Mount Hillers ................................................................................................ HM, fig 25 (p 30)
Mount Pennell ................................................................................................ HM, fig 35 (p 35)
Mount Thurber .............................................................................................. HP, p 239
Ogden Canyon ............................................................................................... H, Ann 6, fig 45 (p 195); K, i, pp 174-177
Ogden Peak .................................................................................................... H, Ann 6, fig 44 (p 193)
Ophir City ...................................................................................................... W, iii, fig 72 (p 166)
Oquirrh Range ............................................................................................... W, iii, figs 1 and 2 (p 26)
Pahvan Butte ................................................................................................. W, iii, fig 52 (p 137)
Pahvan Range ............................................................................................... W, iii, fig 33 (p 59)
Section, geologic, in Utah, Paria

in Utah, Paria, vicinity of...........................................W, iii, p 279

Paria Creek..............................................................................W, ii, fig 63 (p 159); W, iii, Supp, p 136

Paunsagunt Plateau..........................................................HP, Atlas

Pine Valley Mountains to Le Verken Creek.........................W, iii, fig 110 (p 273)

Price River...............................................................................W, iii, fig 108 (p 269)

Provo Valley, vicinity of...................................................W, iii, fig 32 (p 58)

Red Canyon..............................................................................UM, fig 12 (p 143)

Sage Plain to Alpine Plateau, Colorado...............................H, Atlas, sheet xvii

Salina, vicinity of....................................................................HP, p 164; W, iii, fig 132 (p 296), fig 133 (p 296)

Salt Creek..................................................................................H, Ann 9, pp 71, 82

San Juan Valley to San Juan Mountains, Colorado................H, Atlas, sheet xvii

San Pete Valley to San Rafael Swell........................................HP, p 160

Sam Pitch Plateau...............................................................W, iii, fig 60 (p 157)

Sevier fault..............................................................................W, iii, fig 25 (p 50)

Sevier Plateau........................................................................HP, pp 242, Atlas

Sevier River, vicinity of....................................................W, iii, fig 61 (p 158)

Sierra La Sal............................................................................H, Ann 9, pl vi (p 62), pl viii (p 96)

Stansbury Range......................................................................W, iii, fig 97 (p 239)

Toquerville, vicinity of..........................................................W, iii, figs 111-114 (p 284)

Tushar Plateau..........................................................................HP, Atlas

Uinta Mountains......................................................................HP, pp 57-151, Atlas; ECR, fig 51 (p 155)

desert to..................................................................................K, Atlas

Juratrias rocks........................................................................UM, pp 152-153

Vermilion Cliff.........................................................................HP, fig 3 (p 150)

Virgin River............................................................................W, iii, fig 60 (p 158)

Wasatch Plateau......................................................................HP, p 166

Wasatch Range........................................................................K, ii, pp 155-156;

Washington, vicinity of......................................................W, iii, fig 95 (p 234), fig 96 (p 235)

Waterpocket flexure................................................................HM, fig 2 (p 12)

Weber River............................................................................H, Ann 6, p 444; K, ii, pp 157-165

Whirlpool Canyon...................................................................UM, fig 13 (p 145)

in Wyoming, Almy

Amethyst Mountain................................................................H, Ann 11, pl xxvii (p 46)

Antelope Creek.......................................................................K, i, p 257

Bear River, vicinity of........................................................H, Ann 11, pl lxvii (p 574)

Big Sandy River......................................................................H, Ann 11, p 526

Bitter Creek.............................................................................H, Bull, vol iii, No 1, pl xxvi (p 186)

Bitterroot Creek, vicinity of.............................................H, Ann 11, pl xlix (p 526), pl lii (p 540)

Black Butte..........................................................................H, Ann 6, p 334, fig 54 (p 526), pp 527-528; H, Ann 7, p 373

Black Buttes station............................................................H, Ann 11, p 222

Box Elder Creek.....................................................................K, ii, p 34

Bridger station, vicinity of..................................................H, Ann 6, p 537

Buffalo Fork............................................................................H, Ann 11, p 462

vicinity of...............................................................................H, Ann 12, i, pl xx (p 227)

Buffalo Fork Mountains........................................................H, Ann 11, pl xliv (p 470)

Bull Lake..................................................................................H, Ann 12, i, p 262

Bull Lake Fork.................................................................H, Ann 12, i, pl xxx

(p 238), pl xxxviii (p 245), pp 246-248, pl xl (p 248)

Campbells Fork, vicinity of...............................................H, Ann 12, i, pl xxxiii, (p 241), pp 242, 244

Carbon....................................................................................H, Ann 6, pp 331-521; H, Mon vii, p 18; K, ii, pp 145-146

Chugwater Creek...................................................................K, ii, p 34

Colorado group.................................................................K, ii, pp 42

Bull. 222—04—12
INDEX TO HAYDEN, KING, [BULL. 222.]

Section, geologic, in Wyoming, Como Ridge.................................K, ii, p 91
in Wyoming, Crow Creek ....................................................H, Ann 11, pl lx (p 554)
Dry Creek Canyon .........................................................H, Ann 12, i, pl xxxvii (p 244)
East Gallatin Range ....................................................H, Ann 12, ii, pl xiv (p 26)
Electric Peak, Sepulchre Mountain, and Mount Evarts...................H, Ann 12, ii, pl x (p 20)

Evanston .........................................................H, Ann 6, p 338; H, Mon, vii, p 19
Evarts, Mount .........................................................H, Ann 12, ii, pl vi (p 10), pl vii (p 12), p 13
Fillmore, east of ....................................................H, Ann 11, p 125
Fontenelle Creek, vicinity of ......................................H, Ann 11, pl lii (p 540)
Fontenelle Valley ......................................................H, Ann 11, pp 537-538
Fort Steele, vicinity of ...........................................H, Ann 4, p 136; K, ii, p 154
Granite Canyon .........................................................K, i, p 130; K, ii, p 30
Great Plains to Rawlings Peak ........................................K, Atlas
Green River ...............................................................H, Ann 4, p 61; H, Ann 11, p 532, UM, pp 156-158
Rawlings Springs to, along Union Pacific Railroad ......................H, Bull, vol iii, No 1, pl xxvi (p 186)
Green River Basin to Wyoming Range ....................................H, Ann 11, pl lxxix (p 526), pl liii (p 540)
Green River Canyon ......................................................H, Ann 12, i, pl xxvi (p 233)
Green River station .....................................................H, Ann 6, pp 336, 536
Gros Ventre Basin ......................................................H, Ann 11, p 454; H, Ann 12, i, pl xx (p 227)
Gros Ventre Canyon ....................................................H, Ann 6, p 266
Gros Ventre Mountains ..................................................H, Ann 11, pl xl (p 450), pl xli (p 456); H, Ann 12, i, pl xiii (p 208)
Gros Ventre River .......................................................H, Ann 6, p 21; H, Ann 12, i, p 221
Hams Fork, vicinity of ....................................................H, Ann 11, p 532
Hoback Canyon Ridge to John Day Ridge ................................H, Ann 12, i, pl iv (p 189)
Horse Creek, vicinity of ..............................................H, Ann 11, pl lxxix (p 526), pl liii (p 540); H, Ann 12, i, pl xxxi (p 239); K, i, p 129
John Day River to Hoback Canyon Ridge ................................H, Ann 12, i, pl iv (p 189)

Mount Leidy, vicinity of ................................................H, Ann 12, ii, pl xvi (p 542)
Junction Valley .............................................................H, Ann 11, pl lv (p 544), p 545
Lake Creek, vicinity of ..............................................H, Ann 11, pl lii (p 540)
Laramie Plains .............................................................K, ii, p 80
La Barge Creek, vicinity of ..............................................H, Ann 11, pl lii (p 540)
Laramie Hills ..........................................................H, Uncl 16, p 17
Marsh Creek, vicinity of ...............................................H, Ann 11, p 529
Mount Washburn ..........................................................K, i, p 334
Mount Leidy, vicinity of ................................................H, Ann 11, pl lxxix (p 526), pl lii (p 540)
Mount Washburn, headwaters of .....................................BH, fig 2 (p 28)
Niobrara River, headwaters of .......................................H, Ann 12, pl lviv (p 252), pl lv (p 253), pp 253-254
North Fork Little Wind River ..........................................H, Ann 12, pl lviv (p 252), pl lv (p 253), pp 253-254
North Platte River .....................................................K, ii, p 155
Oyster Ridge ...............................................................H, Ann 11, pl lii (p 532), p 533
Point of Rocks, vicinity of ...........................................H, Bull, vol iii, No 1, pl xxvi (p 188)
Red Desert to ............................................................K, Atlas
Washburn, vicinity of ....................................................H, Ann 11, pl lxx (p 526), pl lii (p 540)
Section, geologic, in Wyoming, Pumpkin Butte. H, Mon vii, p 11
In Wyoming, Rawhide Butte. BH, fig 1 (p 27)
Rawlings Peak. H, Ann 11, pl v (p 124)
Great Plains to. K, Atlas
Rawlings Springs to Green River, along Union Pacific Railroad. H, Bull, vol iii, No 1, pl xxvi (p 186)
Red Canyon. H, Ann 12, i, pl xxx (p 238), pl xxxiv (p 243), pl xlii (p 250)
Red Desert. H, Bull, vol iii, No 1, pl xxvi (p 186), K, Atlas
Rock Cut. H, Ann 6, p 538
Rock Springs. H, Ann 6, p 335; H, Bull, vol iii, No 1, pl xxvi (p 186)
Sage Creek, vicinity of. H, Ann 12, i, pl xlii (p 250)
Salt River Range. H, Ann 11, pl lv (p 546), p 574, pl lvii (p 548), pl lviii (p 550), pl lix (p 552)
Salt Wells, vicinity of. H, Ann 6, p 532; H, Ann 11, pl vi (p 128)
Separation. H, Bull, vol iii, No 1, pl xxvi (p 186)
Sheep Mountain. H, Ann 11, pl i (p 80)
Signal Peak. K, i, p 130
Simpson's Ridge. K, i, p 323
Slate Creek, vicinity of. H, Ann 11, pl lii (p 540)
Smiths Fork, geology of. H, Ann 11, p 577, pl lxviii (p 578), pl 579
Snake River. H, Ann 12, i, pp 197, 199
Sulphur Creek. H, Ann 6, fig 53 (p 451), p 452; UM, pp 158-160
Sweetwater Valley. H, Ann 11, pl ii (p 100), pl iii (p 104), pl iv (p 108)
Table Mountain. K, ii, p 30
Table Rock. H, Ann 6, p 525
Teton district, Paleozoic formations in. H, Ann 11, p 480
Teton Range. H, Ann 6, fig 46 (p 218)
Thomas Fork to Smith Fork. H, Ann 11, pl lix (p 582)
Torreys Creek, vicinity of. H, Ann 12, i, pl xxxi (p 239)
Twin Creek. H, Ann 11, pl lxvii (p 574)
Warm Spring Creek, vicinity of. H, Ann 12, i, pl xxix (p 236)
Washakie. H, Bull, vol iii, No 1, pl xxvi (p 186)
western. H, Ann 11, p 623
Idaho, southeastern, and. H, Bull, vol v, No 1, p 120
Wind River, vicinity of. H, Ann 12, i, pp 238-239
Wind River Range. H, Ann 6, p 20; H, Ann 11, pl i (p 80); H, Ann 12, i, pl xxvi (p 233), pl xxviii (p 235)
Wyoming Range. H, Ann 11, p 541, pl liv (p 542); H, Ann 12, i, pl lxix (p 540)
Green River Basin to. H, Ann 11, pl lxxix (p 556), pl lxx (p 550)
Yellowstone Park, Amethyst Mountain. H, Bull, vol v, No 1, fig 1 (p 126)
Tower Falls. H, Ann 6, p 127
White Mountain Hot Springs. H, Ann 5, fig 21 (p 73)
Yellowstone Valley. H, Ann 12, ii, pl ii (p 4), pl iv (p 8)
Section, thin. (See name of rock.)
Sections, profile, and other illustrations in Rocky Mountain region. H, Uncl 3
Sedimentary rocks of Colorado, central. W, iii, pp 356-403
of Colorado; Eagle, Grand, and Gunnison rivers. H, Ann 8, pp 110-162
Front Range, east of. H, Ann 7, pp 93-137
Grand River district. H, Ann 9, pp 70-92
San Juan drainage basin. H, Ann 9, pp 180-190
San Juan region. H, Ann 8, pp 210-228
Sangre de Cristo Range. H, Ann 9, pp 113-127
White River district. H, Ann 10, pp 71-86, 93-97, 105-111
INDEX TO HAYDEN, KING,

Sedimentary rocks of Colorado, Plateau Province.......................... UM, pp 37-73
of Utah, Grand River district......................................... H, Ann 9, pp 70-92
White River district.................................................. H, Ann 10, pp 71-86, 93-97, 105-111
(See, also, Silurian; Devonian, etc.)
Seetoya Mountains, Nevada, granite of.................................... K, i, pp 74-75
Selish language, vocabulary of........................................ Eth, i, pp 267-283
(See, also, Ethnology and archaeology.)
Sennett (G. B.), further notes on the ornithology of the lower Rio Grande of Texas, from observations made during the spring of 1878.... H, Bull, vol v, No 3, pp 371-440
notes on the ornithology of the lower Rio Grande of Texas, from observations made during the season of 1877... H, Bull, vol iv, No 1, pp 1-66
Severance (M. S.), report of............................................ W, 1872, pp 55-56
Severance (M. S.) and Yarrow (H. C.), notes upon human crania and skeletons collected by the expeditions of 1872-1874 .... W, vii, pp 391-397
Sevier Plateau, Utah, geology of......................................... HP, pp 225-251
Sevier River Basin, Utah, agriculture in ............................ H, Ann 4, pp 244-247
Sevier Valley, Utah, geology of......................................... HP, pp 211-224
irrigable lands of................................................................... AL, pp 128-149
Shale, analysis of, from Wyoming, Green River......................... K, ii, p 243
Shell heaps of Aleutian Islands, on succession in .................. Eth, i, pp 41-91
(See, also, Ethnology and archaeology.)
Shells of Nebraska, catalogue of land and fresh-water................ H, Bull, vol iii, No 3, pp 697-704
Shihwapmukh language, vocabulary of.................................... Eth, i, pp 247-265
(See, also, Ethnology and archaeology.)
Shinarump group, exposures of........................................... UM, p 54
of Uinta Mountains....................................................... UM, pp 150-151
.of Utah, high plateaus ................................................ HP, pp 144-148
Shooswapaap language, vocabulary of.................................... Eth, i, pp 247-265
(See, also, Ethnology and archaeology.)
Shoshone Lake (Tertiary), extent of...................................... K, i, pp 456-457
Shoshone Range, Nevada, geology of.................................... K, ii, pp 618-624, 631-643
granite of........................................................................... K, i, pp 77-79
Shufeldt (R. W.), osteology of Cathartidae.............................. H, Ann 12, i, pp 727-806
osteology of Eremophila alpestris........................................ H, Ann 12,
, i, pp 627-652; H, Bull, vol vi, No 1, pp 119-147
osteology of Lanius ludovicianus excubitorides........................ H, Ann 12,
osteology of North American Tetraonidae .............................. H, Ann 12,
osteology of Speotyto cunicularia hypogea ................................ H, Ann 12,
, i, pp 593-626; H, Bull, vol vi, No 1, pp 87-117
Shwoyelpi language, vocabulary of....................................... Eth, i, pp 248-265
(See, also, Ethnology and archaeology.)
Sickle Creek, Wyoming, geology near.................................... H, Ann 11, p 546
Sidney Barracks, Nebraska, astronomical determinations at........ W, ii, pp 417-432
Siebold (C. T. von), on Artemia fertilis Verrill from Great Salt Lake, Utah
Territory................................................................. H, Ann 12, i, pp 459-463
on parthenogenesis in Artemia salina.................................. H, Ann 12, i, pp 463-466
Sierra El Late, Colorado, geology of.................................... H, Ann 9, pp 272-274
Sierra Madre, New Mexico, geology of.................................. W, 1875, pp 78-88
beds of western slope of.................................................. W, iv, pt ii, pp 1-13
Silica, infusorial, analysis of, from Nevada, Kawsoh Mountains...........K, ii, p 768
Siliman (B.), the telluride ores of the Red Cloud and Cold Spring mines, Gold Hill.................H, Ann 7, pp 688-691
Silurian fossils; invertebrates of Fortieth Parallel region....K, iv, pp 17-25, 205-249
    invertebrates of Nevada and New Mexico.................W, Uncl 6, pp 6-14
    of Nevada, Utah, New Mexico, and Arizona..............W, iv, pp 32-78
    of Southwest...........................................W, iv, pp 32-78
    (See, also, Invertebrates, fossil.)
    (See, also, Vertebrates, fossil; Invertebrates, fossil.)
Silurian rocks of Basin Range..............................W, iii, pp 180-186
    of Black Hills...........................................BH, pp 80-107
    of Colorado, central......W, iii, pp 355-361
    Eagle and Grand rivers.....................................H, Ann 8, pp 110-114
    northwestern.............................................H, Ann 10, p 23
    Sangre de Cristo Range..................................H, Ann 9, p 113
    of Idaho, Bear River Range...............................H, Ann 11, p 613
    of Wyoming, Sweetwater Valley............................H, Ann 11, pp 101-103
    Wind River Range.........................................H, Ann 11, pp 70-73
Silurian and Cambrian rocks of Great Basin.....................K, i, pp 184-221
Silver in New Mexico, Santa Fe, vicinity of................W, iii, Supp, pp 403-404
Silver Bend district, Nevada, notes on......................W, 1871, pp 41-42
Silver Era Peak, California, geology of......................W, 1878, pp 181-183
Silver Mountain district, California, notes on...............W, 1878, pp 88-89
Silver ore, treatment of, in Colorado.........................K, iii, pp 606-616
Silver Peak and Red Mountain districts, Nevada, notes on......W, 1871, pp 48-49
Silver mining in Colorado, Georgetown district..............K, iii, pp 589-605
    in Colorado, Snake River region..........................K, iii, pp 617-624
Sinter, siliceous, analysis of, from Nevada, Virginia Range.....K, ii, p 826
    (See, also, Ethnology and archaeology.)
Sinte-, siliceous, analysis of, from Nevada, Virginia Range.....K, ii, p 826
    (See, also, Ethnology and archaeology.)
Skat-kwan language, vocabulary of............................Eth, i, pp 121-133
    (See, also, Vertebrates.)
Siskiyou language, vocabulary of..............................Eth, i, pp 121-133
    (See, also, Ethnology and archaeology.)
Skeletons and crania collected in 1872-1874, notes on..........W, vii, pp 391-397
    (See, also, Ethnology and archaeology.)
Skin-a-get language, vocabulary of............................Eth, i, pp 136-142
    (See, also, Ethnology and archaeology.)
Skokomish Reservation, Washington, Twana Indians of, customs, language, etc., of........................H, Bull, vol iii, No 1, pp 57-114
    (See, also, Ethnology and archaeology.)
Skoylpele language, vocabulary of............................Eth, i, pp 248-265
    (See, also, Ethnology and archaeology.)
Skull from Chaco Canyon, New Mexico, report on................H, Ann 10, pp 453-457
    (See, also, Human remains; Cranium; Ethnology and archaeology.)
Skulls from Santa Barbara Islands, California, observations on...W, vii, pp 277-292
    (See, also, Human remains; Cranium; Ethnology and archaeology.)
Skulls and skeletons collected in 1872-1874, notes on........W, vii, pp 391-397
    (See, also, Human remains; Cranium; Ethnology and archaeology.)
Slate of Black Hills, petrography of................................BH, pp 476-483
Slate Creek, Wyoming, geology near...........................H, Ann 11, pp 531-532
INDEX TO HAYDEN, KING, [BULL. 222.

Smith (S. L.), report on the amphibid crustaceans ........... H, Ann 7, pp 608-611
Smiths Fork, Wyoming, geology near ................................ H, Ann 11, pp 577-580
Smoking Creek, Wyoming, geology near ................................ H, Ann 11, p 554
Smoky Valley Range, Nevada, geology and mines of ........ K, i, pp 393-404
Snake River, Idaho-Wyoming, course and character of ........ H, Ann 6, pp 267-270
Grand Canyon of, geology of ................................ H, Ann 11, pp 437-438
geology along ........................................... H, Ann 12, i, pp 196-201
Snake River region, Colorado, silver mining in ............... K, i, pp 617-624
Snake River Valley, Wyoming-Idaho, geology of lower ........ H, Ann 11, pp 405-410
resources of ........................................... H, Ann 6, pp 86-91
Sneffels, Mount, Colorado, ascent of ....................... H, Bull, vol i, ser 2, No 3, pp 193-199
Soapstone pots, method of manufacture of .................... W, vii, pp 117-121
(See, also, Ethnology and archaeology.)
Soda, analysis of, from Colorado, Soda Lake .................. H, Ann 4, p 187
Soda Lakes, Nevada, description of .......................... K, i, pp 510-514
Soda Springs, Idaho, geology near .......................... H, Ann 11, pp 590-596
Soil, analysis of, from Arizona, Big Dry Fork ................. W, iii, pp 587, 597
analysis of, from Arizona, Camp Grant ....................... W, iii, pp 592, 597
from Arizona, Chevelons Fork .............................. W, iii, pp 586, 597
Ehrenberg, vicinity of .................................. W, 1876, p 220
Gila River .............................................. W, iii, pp 594, 597
Mogollon or Black Mesa .................................. W, vi, p 23
San Francisco Mountain region .............................. W, iii, pp 589, 597
San Pedro River, vicinity of ................................ W, iii, pp 590, 597
from California, Point of Rocks ........................... W, 1876, p 221
from Colorado, Carlisle .................................. W, 1875, pp 130, 131
Culebra Valley .......................................... W, 1875, p 132
from Kansas, Smoky Hill Valley ............................ H, Ann 9, p 289; H, Bull, vol ii, No 3, p 218
Nebraska, Blue River (alluvium) .............................. H, Ann 8, p 258
Dakota City (alluvium) ................................... H, Ann 8, p 258
Elkhorn River (alluvium) .................................. H, Ann 8, p 258
Fort Kearney, vicinity of ................................ H, Ann 8, p 261
Kearney (loess) ......................................... H, Ann 8, p 246
Lincoln, vicinity of ..................................... H, Ann 8, p 261
Loup River (loess) ....................................... H, Ann 8, p 246
North Platte, vicinity of .................................. H, Ann 8, p 261
Omaha, vicinity of (loess) ................................ H, Ann 8, p 246
Platte River (alluvium) ................................... H, Ann 8, p 258
Republican River (alluvium) ................................ H, Ann 8, p 258
Republican Valley (loess) .................................. H, Ann 8, p 246
Sutton (loess) ........................................... H, Ann 8, p 246
from Missouri, Hannibal (loess) .............................. H, Ann 8, p 246
from Nevada, Brown station .................................. K, ii, p 744
from New Mexico, Abiquiu, vicinity of ....................... W, 1875, p 132
Las Vegas ................................................ W, 1875, p 136
Mimbres .................................................. W, iii, pp 581, 597
northwestern ............................................. W, iii, pp 582, 597
Trinidad .................................................. W, 1875, p 137
from Utah, Dugway station .................................. K, ii, p 467
Ibenpah Mountains ......................................... K, ii, p 474
Salt Lake City, vicinity of ................................ K, ii, p 434
White Rock Pass ......................................... K, ii, p 467
of Black Hills ............................................ BH, pp 313-315
(See, also, Loess; Alluvium.)
Sopris Peak, Colorado, geology of ......................................................... H, Ann 8, pp 61-63
South America, springs, thermal of ................................................... H, Ann 12, ii, pp 329-332
South Dakota, Bear Lodge region, geology of ....................................... BH, pp 283-289
  Castle Creek district, mineral resources of ........................................ BH, pp 261-266
  French Creek district, mineral resources of ........................................ BH, pp 226-238
  Rapid Creek, mineral resources of ..................................................... BH, pp 267-272
Spring Creek district, mineral resources of .......................................... BH, pp 238-260
topographic features of .............................................................................. H, Ann 9, pp 419-431
South Pass, Wyoming, geology between Fort Bridger and ...................... H, Ann 4, pp 35-41
grology between Fort Fetterman and ......................................................... H, Ann 4, pp 24-35
South Platte drainage basin, Colorado, cultivable areas on ................ H, Ann 10, pp 323-326
Southwest, ferns of ...................................................................................... W, vi, pp 299-340
Span worm, cranberry, description of ...................................................... H, Ann 10, p 521
Spanish Peaks, Colorado, description of ................................................. H, Bull, vol iii, No 3, pp 551-552
  volcanic rocks of ....................................................................................... H, Ann 9, pp 131-136
Spanish Peaks region, Colorado, geology of .......................................... W, 1879, pp 271-281
Spanish Peaks region, Colorado, geology of .......................................... W, 1879, pp 271-281
Spraw, English, status of, in America, with special reference to Western
  States and Territories ................................................................................. H, Bull, vol v, No 2, pp 175-193
(See, also, Vertebrates.)
Speotyto cunicularia hypogsea, osteology of ............................................ H, Ann 12, i, pp 593-626; H, Bull, vol vi, No 1, pp 87-117
(See, also, Vertebrates.)
Spiders, descriptions of two new, from Colorado ..................................... H, Bull, vol iii, No 2, pp 528-529
(See, also, Invertebrates.)
Spokan language, vocabulary of ................................................................ Eth, i, pp 249-265
(See, also, Ethnology and archaeology.)
Spring Canyon, Montana, geology of ....................................................... H, Ann 6, pp 109-115
Spring Creek district, South Dakota, mineral resources of ...................... BH, pp 238-260
Spring Valley district, Nevada, notes on ................................................... W, 1871, p 39
Springs, altitudes of lakes and ................................................................. W, Unc 16, pp 172-180
deposit from, analysis of, from Yellowstone Park, Alum Creek ............ H, Ann 6, p 137
analysis of, from Yellowstone Park, Gardiners River .......................... H, Ann 6, p 125
in Colorado, Colorado City ............................................................ H, Ann 3, pp 118-120; H, Ann 1-3, pp 116-118
in Idaho, Bear River, vicinity of ......................................................... H, Ann 5, pp 152-154; H, Ann 11, pp 590-596
in Wyoming, Gardiners River ................................................................. H, Ann 5, pp 64-75
Sweetwater district ....................................................................................... H, Ann 11, pp 54-55
Springs, thermal, definition, geological features, therapeutics, physical condi-
tion, etc., of .................................................................................................. H, Ann 12, ii, pp 355-426
deposits of, physical and chemical features of ........................................ H, Ann 12, ii, pp 398-416
in Colorado, Colorado Springs, vicinity of ............................................ H, Ann 6, pp 102-103, 175
in United States .......................................................................................... W, iii, pp 145-155
in Utah ........................................................................................................ W, iii, pp 256-257
  Ogden and Brigham, vicinity of .............................................................. H, Ann 6, p 175
  in Yellowstone Park .................................................................................. H, Ann 6, pp 91-97, 197-198; H, Ann 6, pp 122-125, 128-130, 135-143, 176-178; H, Ann 12, ii pp 63-453
Springs, thermal, and geysers of various portions of the world ............. H, Ann 12, ii, pp 304-353
Springs, mineral, of Colorado, central ..................................................... W, iii, pp 478-487
  of New Mexico, Las Vegas ...................................................................... W, iii, Supp, pp 405-406
Ojos Calientes ............................................................................................... W, iii, pp 613-616
(See, also, Water, mineral.)
Squirrels, arboreal, synonymatic list of America ... H, Bull, vol iv, No 4, pp 877-887
(See, also, Vertebrates.)

Stakhin-kwan language, vocabulary of .................................. Eth, i, pp 121-133
(See, also, Ethnology and archaeology.)

Star district, Nevada, mining in ......................................... K, iii, pp 314-316
Stars, declination of 2018, catalogue of .................................. W, Uncl 15
Staurolite, thin section of, from Colorado, Red Creek .................. K, vi, pl 2
Stearne cooking pots, plates, and food vessels, from graves of southern California........ W, vii, pp 93-116
(See, also, Ethnology and archaeology.)

Stevenson (J.), list of mammals and birds collected in Wyoming, 1879 ........ H, Ann 4,
preliminary report on Spanish Peaks region ......................... W, 1879, pp 271-281
report on the geology of a portion of Colorado examined in 1873........ W, iii, pp 303-501
report upon geological examinations in southern Colorado and northern New Mexico...................... W, iii, Supp, pp 3-420
Stone, miscellaneous objects made of, from graves of southern California........ W, vii, pp 190-217
(See, also, Ethnology and archaeology.)

Stone implements of southern California................................ W, vii, pp 49-69
(See, also, Ethnology and archaeology.)

Stone pipes from graves of southern California.............................. W, vii, pp 125-134
(See, also, Ethnology and archaeology.)

Stone weapons, methods of making.............................. H, Bull, vol iii, No 3, pp 547-549
(See, also, Ethnology and archaeology.)

Stones, perforated, from graves of southern California....................... W, vii, pp 135-189
(See, also, Ethnology and archaeology.)

Stratigraphy of Colorado, Eagle, Grand, and Gunnison rivers... H, Ann 8, pp 106-162
of Colorado, Front Range, east slope of................................. H, Ann 7, pp 144-153
Grand River district........................................... H, Ann 9, pp 64-92; H, Ann 10, pp 178-185
White River district........................................... H, Ann 10, pp 71-86
of Colorado Plateau............................................. W, iii, pp 156-187, 265-289
of Utah, Grand River district...................................... H, Ann 9, pp 64-92; H, Ann 10, pp 178-185
White River district............................................. H, Ann 10, pp 71-86
(See, also, Sedimentary rocks.)

Streets (T. H.), description of Cambarus couesi, a new species of crawfish
from Dakota.......................................................... H, Bull, vol iii, No 4, pp 803-804

Stretch (R. H.), report upon new species of Zygaenidae and Bombycidae collected in portions of California and Arizona, 1871-1873........ W, v, pp 795-802

Stuart (G.), notes on the climate of Montana........................ H, Ann 6, pp 809-812

Sublette Creek, Wyoming, geology near................................... H, Ann 11, p 576
Sucia Islands, fossils from ........................................ H, Bull, vol ii, No 4, pp 351-374
Sulphur Creek groups, exposures of.................................. UM, p 50
Sumner district, California, notes on ................................ W, 1876, p 65
Survey, methods of...................................................... W, i, pp 331-404
under Lieutenant Wheeler, sketch of .................................. W, i, pp 21-146

Surveys, national, origins, functions, progress, cost, etc., of........ W, i, pp 415-479
Surveys and explorations in western North America, 1500-1800, account of....... W, i,
pp 481-764

Sweden, primitive lapidarian sculptures in............................... Eth, v, pp 28-31
Sweetwater group of Wyoming, Sweetwater Valley.......................... H, Ann 11, pp 110-112
Sweetwater Mountains, Nevada, geology of.............................................W, 1878, pp 173-175
Sweetwater region, Wyoming, agriculture in...........................................H, Ann 4, pp 223-226
geology of..................................................................................H, Ann 11, pp 3-158
Sweetwater River, Wyoming, geology near.................................................H, Ann 4, pp 29-34
Switzerland, primitive lapidarian sculptures in...........................................Eth, v, pp 21-22
(See, also, Ethnology and archaeology.)

Syenite of Nevada, Cortez Range, microscopic petrography of.................K, vi, pp 81-82
of Nevada, Washoe district........................................................................K, iii, pp 21-25
Sylvanite, analysis of, from Colorado, Gold Hill, Red Cloud mine.........H, Ann 10, p 152
Symons (T. W.), report of........................................................................W, 1877, pp 1257-1262;
H, 1878, pp 113-120; W, 1879, pp 214-223

Tahoe, Lake, California, general features of........................................W, 1877, pp 1287-1288
Tait language, vocabulary of..................................................................Eth, i, pp 268-283
(See, also, Ethnology and archaeology.)

Taku-kwau language, vocabulary of......................................................Eth, i, pp 121-133
(See, also, Ethnology and archaeology.)

Talcose rock, analysis of, from Nevada, Star Canyon.............................K, ii, p 726
Tanta-kwau language, vocabulary of......................................................Eth, i, pp 135-142
(See, also, Ethnology and archaeology.)

Taos, New Mexico, geology near..............................................................H, Ann 3, pp 70-72; H, Ann 1-3, pp 170-172
Taos Valley, New Mexico, agriculture in................................................H, Ann 4, pp 202-204
Tarryall Range, Colorado, topographic features of.....................................H, Ann 9, pp 411-412
Telluride ores of Red Cloud and Cold Spring mines, Gold Hill, Colorado.H, Ann 7, pp 688-691

Tellurium, analysis of, from Colorado, Magnolia district........................H, Ann 10, p 152
Temescal tin mines, California, notes on................................................W, 1876, pp 68-70
Temperature of Colorado, compared with eastern cities........................H, Ann 9, p 355
of Comstock lode........................................................................K, iii, pp 84-86
of Great Basin, notes on.........................................................................K, v, pp xvii-xxii
of western States....................................................................................H, Uncl 14, pp 185-201
oscillations, diurnal, diagram showing..................................................W, iv, pls xi-xiii
Temperature and wind movement in western States east of Rocky Mountains...H, Ann 9, pp 677-683

Terrill, Mount, Utah, geology of...............................................................HP, pp 267-268
Tertiary coals of the West..........................................................................H, Ann 4, pp 318-329
Tertiary fossils collected in Wyoming and Utah in 1871, list of................H, Ann 5, pp 375-376
invertebrates; Coleoptera of Rocky Mountains.................................H, Bull, vol ii, No 1, pp 77-87
crayfish from Wyoming........................................................................H, Bull, vol vi, No 2, pp 391-397
insects, first-discovered traces of.........................................................H, Bull, vol iii, No 4, pp 741-762
from Colorado and Wyoming, account of some.................................H, Bull, vol iv, No 2, pp 519-542
Mollusca from Colorado, Utah, and Wyoming..................H, Ann 12, i, pp 41-48
of Fortieth Parallel region.....................................................................K, iv, pp 182-197
of North America...................................................................................H, Mon xiii
of Plateau province................................................................................UM, pp 102-106, 125-135
of Southwest.........................................................................................W, iv, pp 206-216
of Utah.....................................................................................................W, iv, pp 206-216
of Utah and Wyoming, list of, collected in 1871..............................H, Ann 5, pp 376-377
of West, list of......................................................................................H, Bull, vol iii, No 3, pp 611-614
Orthoptera of Rocky Mountains.........................................................H, Bull, vol i, ser 2, No 6, pp 447-449
Physopoda of Colorado........................................................................H, Bull, vol i, ser 2, No 4, pp 221-223
Tertiary fossils; invertebrates; Uniones of Wyoming and Utah, new species of. H, Bull, vol iii, No 3, pp 603-606

invertebrates. (See, also, Invertebrates, fossil.)

plants, description of some obtained in 1870 H, Ann 5, Supp pp 378-390
distribution of, in different groups of H, Ann 7, pp 378-390

forests of Yellowstone Park H, Bull, vol v, No 1, pp 125-132

of North America H, Ann 5, pp 304-318

of North American Lignitic, considered as evidence of the age of the formation H, Ann 8, pp 275-315

of the West H, Mon vii; H, Ann 6, pp 371-427

(See, also, Plants, fossil.)

vertebrates, description of H, Bull, vol iv, No 2, pp 379-396

fishes of shales of Colorado, South Park H, Bull, vol i, ser 2, No 1, pp 3-5

of shales of Green River, Wyoming H, Ann 4, pp 425-431

fishes, fresh-water, of Rocky Mountains, supplementary notices of H, Bull, vol i, ser 1, No 2, pp 49-51

mammals from Wyoming, Sweetwater River, remains of H, Mon i, pp 197-209

of Oregon, John Day River H, Mon i, pp 210-226


(See, also, Vertebrates, fossil; Invertebrates, fossil; Plants, fossil.)

Tertiary lake basin at Florissant, Colorado H, Ann 12, i, pp 271-293; H, Bull, vol vi, No 2, pp 279-300

Tertiary orography of Fortieth Parallel region K, i, pp 754-761

Tertiary period, American, climate of, as represented in its flora H, Ann 7, pp 419-425

relations of North American to European H, Mon iii, pp 21-45

Tertiary rocks of Basin Ranges W, iii, pp 172-173

of California, southeastern W, 1876, p 175

of Colorado, Eagle, Grand, and Gunnison rivers H, Ann 10, pp 140-161

Grand River district H, Ann 10, pp 182-185

North Park K, ii, pp 127-129

northwestern H, Ann 10, pp 34-39

San Juan drainage basin H, Ann 9, pp 189-190

south-central, and New Mexico, north-central W, iii, Supp, pp 159-174

White River district H, Ann 10, pp 78-86, 110-111

of Fortieth Parallel region K, i, pp 359-458

of Idaho, Bear River region H, Ann 11, pp 634-641


of Missouri region, upper H, Mon ix, pp lxii-lxxiv

of Nebraska LOR, 1867, p 173; H, Ann 1, pp 55-56

of New Mexico, north-central, and Colorado, south-central W, iii, Supp, pp 159-174

of Utah, Bear River region H, Ann 11, pp 634-641

of Utah, eastern W, iii, pp 265-274

Grand River district H, Ann 10, pp 182-185

high plateaus HP, pp 158-159

White River district H, Ann 10, pp 78-86, 110-111

of Western States, mutual relations of Cretaceous and H, Ann 7, pp 431-444

of Wyoming, Green River district H, Ann 11, pp 634-641

Salt Wells, vicinity of H, Ann 11, pp 127-133

Sweetwater Valley H, Ann 11, pp 110-114

Wind River Range H, Ann 11, p 88
SCHMECKEBIER.]

POWELL, AND WHEELER SURVEYS. 187

Tertiary and Cretaceous formations of the West, mutual relations of...H, Bull, vol i, ser 1, No 2, pp 5-16
Tertiary and Cretaceous fossils, fishes of, from west of Mississippi River...H, Bull, vol iv, No 1, pp 67-77
invertebrates of the Upper Missouri country..........................H, Mon ix
plants of Kansas and Nebraska........................................H, Ann 4, pp 370-385
of North America, catalogue of.....................................H, Ann 10, pp 487-520
of the western Territories.............................................H, Mon viii
illustrations of....................................................................H, Uncl 15

(See, also, Vertebrates, fossil; Invertebrates, fossil; Plants, fossil.)

Tertiary and Cretaceous periods of Kansas, notes on................H, Ann 9, pp 277-294
Teton River, course and character of................................LOR, 1868, p 227; H, Ann 2, p 73
Texas, astronomical work in New Mexico and.........................W, 1879, pp 268-270
of Red River region......................................................H, Bull, vol iii, No 3, pp 655-695
elevations in........................................................................H, Bull, vol v, No 3, pp 461-463;
fishes of Rio Grande at Brownsville, notes on........................H, Bull, vol iv, No 2, pp 397-406; H, Bull, vol iv, No 3, pp 663-667
Fort Bliss, astronomical work at........................................W, 1879, pp 47-81
locusts in............................................................................H, Uncl 14, pp 57-63; App, pp 63-82
Permian beds of, Batrachia and Reptilia of, some new...............H, Bull, vol vi, No 1, pp 79-82
pigs, solid hoofed, apparently established in, discussion of a breed of...H, Bull, vol iv, No 1, pp 295-297
Tineina from.......................................................................H, Bull, vol iv, No 1, pp 79-106
Textile fabrics, basket-work, etc., of Indians of southern California...W, vii, pp 239-250
The Dalles, Oregon, astronomical work at.............................W, 1879, pp 17-41
Thin section. (See name of rock.)

Thomas (C.), agricultural resources of the Territories...........H, Ann 5, pp 205-279
agriculture of Colorado..................................................H, Ann 3, pp 131-155; H, Ann 1-3, pp 229-251
agriculture of Wyoming..................................................H, Ann 4, pp 191-264
ancient mounds of Dakota................................................H, Ann 6, pp 655-658
descriptions of some new Orthoptera and notes on some species but little
known.................................................................H, Bull, vol i, ser 1, No 2, pp 63-71
list and description of new species of Orthoptera.................H, Ann 4, pp 263-284
notes on Orthoptera.....................................................H, Ann 6, pp 719-725
notes on the saltatorial Orthoptera of the Rocky Mountain regions..H, Ann 5, pp 423-466
on the Orthoptera collected by Dr. Elliott Coues in Dakota and Montana
during 1873..........................................................H, Bull, vol iv, No 2, pp 481-501
Thomas (C.), physical geography and agricultural resources of Minnesota, Dakota, and Nebraska........................................H, Ann 6, pp 273-313
report upon the collections of Orthoptera made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, 1871-1874........................................W, v, pp 843-908
synopsis of the Acrididae of North America.................................H, Mon v
study of the manuscript Troano................................................Eth, v
Thomas (H. G.), ancient mounds of Dakota................................................H, Ann 6, pp 666-658
Thomas Fork, Idaho, geology near................................................H, Ann 11, pp 581-582
Thomomyst, abstract of study of Geomys and.................................ECR, pp 217-279
Thompson (A. H.), irrigable lands of that portion of Utah drained by the Colorado River and its tributaries................................................AL, pp 150-164
report on a trip to the mouth of the Dirty Devil River..........................ECR, pp 134-145
Thompson (G.), notes on the pueblos and their inhabitants.................W, vii, pp 319-324
Thompson Plateau, geology of......................................................H, Ann 11, pp 538-539
Thorell (T.), descriptions of the Aranese collected in Colorado in 1875 by A. S. Packard, jr................................................H, Bull, vol iii, No 2, pp 477-529
Thousand Lake Mountain, Utah, geology of........................................HP, pp 279-283
Three Forks, Montana, geology between Helena and........................................H, Ann 6, pp 81-82
Three-Pine Canyon, Idaho, geology near........................................H, Ann 11, p 339
Tiger district, Arizona, notes on...............................................W, 1871, pp 54-55
Tillman (E.), report of.........................................................W, 1877, pp 1253-1256
Tillman (S. E.), report of.........................................................W, 1878, pp 107-112; W, 1879, pp 209-214
Timber in the Territories..................................................H, Ann 5, pp 218-227
Timber line, elevation of.........................................................H, Ann 6, p 751; H, Miscl 1, p 38; H, Miscl 1 (3d ed), p 29; H, Miscl 1 (4th ed), p 140
Timber, pine, destruction of, in Rocky Mountains.............................H, Ann 7, pp 538-539
Timphahute district, Nevada, notes on........................................W, 1871, p 44
Tin ore, analysis of, from California, Temescal.................................W, 1876, p 185
Tineina of Colorado...................................................H, Bull, vol iii, No 1, pp 121-142
of Colorado, distribution of..................................................H, Bull, vol iii, No 1, pp 147-150
of Texas and more northern localities..............................H, Bull, vol iv, No 1, pp 79-106
of United States and Canada, index to........................................H, Bull, vol iv, No 1, pp 125-167
(See, also, Invertebrates.)
Tineina and their food plants..................................................H, Bull, vol iv, No 1, pp 107-123
Toano group of mountains, Nevada, geology of..................................K, ii, pp 517-520
Tongas language, vocabulary of................................................Eth, i, pp 135-142
(See, also, Ethnology and archaeology.)
Tonto group, exposures of.......................................................UM, pp 56-57
Topographic work, methods of..................................................W, i, pp 331-404; H, Ann 10, pp 298-310
origin, functions, progress, cost, etc., of....................................W, i, pp 438-468
Topography, relation of structure to, in Black Hills..........................BH, pp 210-214
Tortrix, Cranberry, description of..............................................H, Ann 10, p 523
Toyobe Range, Nevada, geology of................................................K, ii, pp 627-631; K, iii, pp 320-348
granite in.................................................................K, i, pp 75-77
Trachorheites of Colorado, Grand River district..............................H, Ann 9, pp 93-94
of Colorado, Gunnison River....................................................H, Ann 8, pp 168-171
occurrence and character of...................................................H, Ann 10, pp 213-232
White River district..........................................................H, Ann 10, pp 111-112
Trachyte, analysis of, from Arizona, Sierra Caliuro.........................W, iii, pp 648, 651
analysis of, from California, Mount Shasta..................................K, i, p 604
from Colorado, North Park........................................................K, ii, p 125
between North and Middle parks................................................K, i, p 604
Steves Fork.................................................................K, ii, p 176
Trachyte, analysis of, from Idaho, Shoshone Falls .......... K, i, p 604
analysis of, from Idaho, Snake River, vicinity of .......... K, i, p 604
from Nevada, Eulid Peak ...................................... K, ii, p 522
Pine Nut Canyon .............................................. K, ii, p 701
Truckee Ferry ............................................... K, ii, p 833
Truckee Ferry, Truckee Canyon, Washoe, Virginia Mountains,
Peoquop range ............................................... K, i, p 604
from Oregon, Mount Hood ..................................... K, i, p 605
from Utah, Midway, vicinity of ............................ K, i, p 320
Wasatch Mountains ........................................... K, i, p 604
from Washington, Mount Rainier ............................. K, i, p 604
from Wyoming, Leucite Hills ................................ K, i, p 604
characteristics of .......................................... HP, pp 104-108
of Basin Ranges ............................................ W, iii, pp 255-256
of Black Hills, petrography of .............................. BH, pp 488-492
of Colorado, El Late Mountains ............................... H, Ann 9, pp 272-273
Gunnison region ............................................. H, Ann 8, pp 163-168
occurrence and character of ................................ H, Ann 10, pp 214-229, 232-245
Rio Grande .................................................... H, Ann 9, pp 156-157
White River district ......................................... H, Ann 10, p 112
of Fortieth Parallel region ........................................ K, i, pp 578-605
microscopic petrography of .................................. K, vi, pp 143-162
of Nevada, Washoe district ................................... K, iii, pp 33-36
of New Mexico, north central ................................. W, iii, Supp, pp 164-167
of Utah, Grand River district .................................. H, Ann 9, pp 94-98
White River district ......................................... H, Ann 10, p 112
Traverse, logarithm, and altitude tables ...................... W, Uncl 11
Tree growth on the plains ..................................... H, Ann 4, pp 456-457
Trees, fruit and forest, in Nebraska, cultivation of .......... LOR, 1867, pp 131-133, 135-136; H, Ann 1, pp 10-12, 14-16
Trenton group, invertebrate fossils of, from Nevada and New Mexico .......... W, iv, pp 62-78; W, Uncl 6, pp 15-23
invertebrates of, of southwest ................................ W, iv, pp 62-78
Trehpinning, on cranial amulets and prehistoric ............... Eth v
(See, also, Ethnology and archaeology.)
in Fortieth Parallel region .................................. K, i, pp 764-708
in Wyoming ..................................................... H, Ann 11, pp 651-672
Triassic fossils, invertebrates of Fortieth Parallel region .... K, iv, pp 99-129, 259-283
of southeastern Idaho ......................................... H, Ann 12, i, pp 105-118
(See, also, Vertebrates, fossil; Invertebrates, fossil; Plants, fossil.)
Triassic rocks of Basin Ranges ................................. W, iii, pp 175-176
of Black Hills .............................................. BH, pp 131-151
of Colorado, central ........................................... W, iii, pp 378-381
Eagle, Grand and Gunnison rivers .................................. H, Ann 8, pp 121-124
Front Range .................................................... H, Ann 8, pp 42-44; K, ii, pp 33-37
east of ......................................................... H, Ann 7, pp 95-98
Grand River district ........................................ H, Ann 9, pp 80-86; H, Ann 10, pp 178-180
northwestern .................................................. H, Ann 10, pp 26-28
of Colorado Plateau .......................................... W, iii, pp 282-285
of Fortieth Parallel area ..................................... K, i, pp 249-284
of Idaho, eastern ............................................. H, Ann 11, pp 492-494, 622-623
of Utah, Grand River district ................................... H, Ann 9, pp 80-86; H, Ann 10, pp 178-180
high plateaus .................................................. HP, pp 148-150
of Wyoming, Colorado Range ................................... K, ii, pp 33-37
Triassic rocks of Wyoming, Rawlings Peak, vicinity of............H, Ann 11, p 121
of Wyoming, Sweetwater Valley..............................H, Ann 11, pp 105-107
western ......................................................H, Ann 11, pp 492-494, 622-623
Wind River Range, vicinity of ................................H, Ann 11, pp 80-82
Red beds of Colorado, Front Range..............................H, Ann 8, pp 42-44
Trinidad, Colorado, astronomical determinations at ..........W, II, pp 289-312
Trinidad region, Colorado, geology of.........................H, Ann 9, pp 192-207
Trinity Mountains, Nevada, mining and milling in...........K, III, pp 297-308
Troano, study of the manuscript .........................................Eth, v
(See, also, Ethnology and archaeology.)
Trouessart (E. L.), revision of the genus Sciurus...H, Bull, vol vi, No 2, pp 301-307
Truckee group of Fortieth Parallel region.....................K, i, pp 412-424
Truckee Range, Nevada, Archean rocks of ......................K, i, pp 94-96
gleology of ..................................................K, II, pp 803-811
Truckee River region, Nevada, geology of.......................K, II, pp 817-853
Tsim-sian Indians, use of numerals among ......................Eth, I, pp 155-156
(See, also, Ethnology and archaeology.)
Tsim-sian language, vocabulary of ...................................Eth, I, pp 143-153
(See, also, Ethnology and archaeology.)
Tuckerman (E.), Lichenes of Great Basin.........................K, v, pp 412-413
list of Lichenes collected in the Southwest....................W, vi, pp 350-351
Tucubits Mountains, Nevada, geology of.........................K, II, pp 523-527
Tufa, analysis of, from Nevada, Carson Desert....................K, II, p 745
analysis of, from Nevada, Carson River ......................K, II, p 709
from Nevada, Pyramid Lake ..................................K, II, p 823
Truckee Valley ...........................................K, II, p 819
from Utah, Ibenpah Mountains.................................K, II, p 473
Medway ..................................................K, II, p 519
of Colorado, Florissant ......................................H, Ann 12, i, pp 276-278
of Utah, high plateaus ........................................HP, pp 71-74
Tuff, analysis of, from Arizona, Peloncillo Mountains, vicinity of ......W, III, p 643
Turquois, analysis of, from New Mexico, Los Cerillos, and from Persia ....W, III, Supp, p 405; W, 1875, p 108
of New Mexico, Los Cerillos ...................................W, III, Supp, pp 404-405
Tuscarora district, Nevada, notes on............................W, 1871, p 35
Tushar Plateau, Utah, geology of ................................HP, pp 188-189
Tuttle (H. P.), astronomy and barometric hypsometry of the Black Hills......BH, pp 539-555
Tuwana Indians of the Skokomish Reservation, Washington, customs, language, etc., of.......................H, Bull, vol III, No 1, pp 57-114
(See, also, Ethnology and archaeology.)
Twin Creek, Wyoming, geology near.........................H, Ann 11, pp 575-576
Two Ocean Pass, Wyoming, discussion of.......................H, Bull, vol v, No 2, pp 229-225
Tyboe district, Nevada, notes on................................W, 1871, p 40
Ubehebe district, California, notes on.........................W, 1876, pp 64-65
Uinta group, character of.....................................H, Mon IV, pp 12
exposures of ................................................UM, p 61
of Colorado, northwestern ......................................H, Ann 10, pp 37-39
of Fortieth Parallel region ...................................K, I, pp 405-407
of Uinta Mountains .........................................UM, pp 141-144
Uinta Lake (Tertiary), extent of ................................K, I, pp 449-450
Uinta Mountains, Archean rocks of..............................K, I, pp 42-44
east slope of, geology of....................................K, II, pp 277-282
 Uinta Mountains, eastern portion of, geology of ........................................ UM, pp 41-54
 geology of .................................................. H, Ann 4, pp 41-54
 glaciers, extinct, of ...................................... K, 1, pp 470-473
 Jurassic rocks of ........................................... K, 1, pp 290-293
 northern slopes of, geology of ........................ K, 11, pp 254-261
 Paleozoic rocks of ......................................... K, 1, pp 139-154
 physical features of ....................................... K, 11, pp 194-197
 southern flanks of, geology of ........................... K, 11, pp 298-306
 Triassic rocks of .......................................... K, 11, pp 299-306
 western portion of, geology of ........................... K, 11, pp 311-325
 Uinta uplift, Utah, geology of ........................................ UM, pp 198-206
 Uinta structure, features of ................................ UM, pp 11-14
 Uinta Valley, Utah, Tertiary rocks ........................ K, 11, pp 307-310
 Union Pacific Railroad, geology along route of, Leavenworth to Fort Hays 
 in Montana, Wyoming, Nebraska, Colorado, New Mexico, Nevada, Utah, Abajo Mountains, geology of 
 pp 189-193; H, Bull, vol 11, No 3, p 558
 agriculture in northeastern ................................ H, Ann 5, pp 237-248
 Aquarius Plateau, geology of ............................... HP, pp 284-298
 Aqui Mountains, geology of ................................ K, 11, pp 456-460
 Ashley Creek Basin, geology of .......................... K, 11, pp 291-298
 astronomical observations in ................................ W, 1874, pp 55-68
 in Montana, Wyoming, Nebraska, Colorado, New Mexico, Nevada, 
 and ............................................................... W, 11, pp 1-491
 Awapa Plateau, geology of .................................. HP, pp 272-276
 batrachians of. (See Reptiles and batrachians.)
 Bear Lake Plateau, geology of ................................ H, Ann 11, pp 582-587
 Bear Lake Valley, geology of ................................ H, Ann 11, pp 587-589
 Bear River, geology from Salt Lake Valley to .......... H, Ann 4, pp 147-161
 Bear River Basin, topography of ......................... H, Ann 11, pp 697-702
 Bear River Range, geology of .............................. H, Ann 11, pp 598-600
 Bear River region, geology of ............................. K, 11, pp 328-339
 Beaver, astronomical determinations at .................. W, 11, pp 57-71
 birds, annotated list of .................................... W, Uncl 4, pp 39-54; W, Uncl 7
 collected in California, Nevada, Arizona, New Mexico, Colorado, 
 and ............................................................... W, v, pp 57-71
 in Nevada and ................................................ W, Uncl 4, pp 5-33
 in Wyoming, Idaho, and, in 1872 ....................... H, Ann, 6, pp 670-715
 Book Cliffs. (See Roan Cliffs.)
 Box Elder region, geology of ............................... K, 11, pp 403-406
 butterflies collected in Colorado and, in 1875, list of.... H, Bull, 
 vol 11, No 3, pp 269-270
 collected in northern Arizona and southern, in 1877 ..... H, Bull, 
 vol 11, No 1, pp 253-258
 cave fauna in ................................................ H, Bull, vol 11, No 1, pp 157-169
 climate at Salt Lake City .................................. H, Ann 5, p 236
 coal in ................................................................H, Ann 4, pp 328-329
 Coalville district, coal in .................................. K, 11, pp 467-472
 Coleoptera collected in portions of California, Nevada, Arizona, New 
 Mexico, Colorado, and ....................................... W, v, pp 809-827
 Colorado River drainage basin, irrigable lands in .......... AL, pp 150-164
 Desert Mountains, granite of ............................... K, 1, p 55
 Desert region, geology of ................................... K, 11, pp 462-468
Utah, dialects of, comparative vocabulary of.................. H, Bull, vol ii, No 3, pp 533-545

East Fork Canyon, geology of.......................... HP, pp 243-248

Ellen, Mount, geology of.................................. HM, pp 38-49
Ellsworth, Mount, geology of.............................. HM, pp 22-27

explorations in parts of Montana, Idaho, Wyoming, and, for the year
1872.................................................. H, Ann 6

Fish Lake Plateau, geology of.............................. HP, pp 260-267
fishes collected in portions of California, Nevada, Arizona, New Mexico,
Colorado, and........................................ W, v, pp 635-703
gеology of portions of Nevada, Arizona, New Mexico, and.................. W, iii, pp 227-301

topography of.......................................... H, Ann 9, pp 337-350

Grass Valley, geology of.................................. HP, pp 248-251
Great Salt Lake, current, evaporation, etc., of................. W, 1879, pp 228-231
description of........................................ H, Ann 5, pp 233-235
gеology of vicinity of.................................. K, ii, pp 431-442
insects inhabiting.......................................... H, Ann 6, pp 743-746
level of, fluctuation of.................................. AL, pp 58-77; K, i, p 497
region north of, geology of.................................. K, ii, pp 420-430
region south of, geology of.................................. K, ii, pp 443-446

Great Salt Lake drainage system, irrigable lands of................. AL, pp 113-127

Great Salt Lake Valley, agriculture in...................... H, Ann 4, pp 237-241
gеology from Bear River to................................ H, Ann 4, pp 147-161

Green River district, geology of.................................. H, Ann 11, pp 509-646

Gunnison, astronomical determinations at.......................... W, ii, pp 99-125

Hemiptera collected in portions of California, Nevada, Arizona, New
Mexico, Colorado, and........................................ W, v, pp 829-841

Henry Mountains, geology of.................................. HM

Hilgard, Mount, geology of................................. HP, pp 260-271

Hillers, Mount, geology of.................................. HM, pp 30-35

Holmes, Mount, geology of.................................. HM, pp 27-30

Hymenoptera collected in portions of Colorado, New Mexico, Arizona,

Nevada, and.............................................. W, v, pp 705-736

Ibenpah Mountains, geology of.................................. K, ii, pp 472-476

invertebrate fossils of portions of Colorado, New Mexico, Arizona, Nevada,
and...................................................... W, iv, pp 1-219

iron in southwestern.............................................. W, iii, pp 261-263

kaolin near Gunnison............................................. W, iii, p 263

lands of, discussion of........................................ AL, pp 93-112

leeches, fresh water, collected in portions of Colorado, New Mexico, Arizona,
zona, Nevada, and.............................................. W, v, pp 955-967

locusts in............................................... H, Ann 9, pp 602-604; H, Uncl 14, pp 102-105, 158, App, pp 253-259

Lodore Canyon, geology near..................................... K, ii, pp 288-290

Malade Range and Valley, geology of.......................... H, Ann 11, pp 606-609

mammals collected in Idaho, Wyoming, and, in 1872.................. H, Ann 6, pp 661-669
collected in portions of California, Nevada, Colorado, New Mexico,
Arizona, and.............................................. W, v, pp 35-129

Markagunt Plateau, geology of.................................. HP, pp 188-210

Marvine, Mount, geology of.................................... HP, p 269

meteorological observations in Idaho, Montana, and, in 1872................ H, Misc i 2

mining districts of............................................. W, 1872, pp 14-28
Utah, Mollusca, terrestrial and fluviatile, collected in portions of Colorado, New
Mexico, Arizona, and .................................................. W, v, pp 923-954
mountain ranges in, features of ........................................ W, ii, pp 231-240
Ogden, astronomical determinations at .................................. W, ii, pp 7-55
geology between Fort Hall and ......................................... H, Ann 5, pp 13-26; H, Ann 6, pp 197-207
meteorological observations at ........................................ H, Misc 2, pp 60-63
Ogden Canyon, Paleozoic rocks of ..................................... K, i, pp 174-177
Ogden region, geology of ................................................ K, ii, pp 394-403
Ombe Range, granite of ................................................ K, i, pp 56-57
Oquirrh Mountains, geology of ........................................ K, ii, pp 443-454
Orthoptera collected in portions of California, Nevada, Arizona, New
Mexico, Colorado, and ................................................ W, v, pp 843-908
Paria amphitheater, geology of ........................................ HP, pp 253-256
Paunsagunt Plateau, geology of ...................................... HP, pp 281-283
Pennell, Mount, geology of .......................................... HM, pp 35-38
Plagopterinee and ichthyology of Utah ................................ W, Uncl 8
plants collected in Arizona, Nevada, and ..................... W, Uncl 5, pp 5-19
in Nevada, Arizona, New Mexico, Colorado, and, catalogue of, with descriptions of new species ................ W, vi, pp 53-297
of Nevada and, catalogue of ........................................ K, v, pp 1-496
plateaus, high, geology of ........................................ HP
Rabbit Valley, geology of .......................................... HP, pp 276-279
Raft River Mountains, granite of .................................. K, i, pp 54-55
reptiles and batrachians collected in portions of Nevada, Arizona, New
Mexico, Colorado, California, and .................. H, Ann 6, pp 747-792
St. George, geology between Gila River, Arizona, and .......... W, iii, pp 189-225
salt in ........................................................................ W, iii, p 263
San Juan River, ruins, ancient, on ....................... H, Bull, vol ii, No 1, pp 25-45
Sevier Plateau, geology of ....................................... HP, pp 225-251
Sevier River Valley, agriculture in ......................... H, Ann 4, pp 244-247
glacial features of ................................................ HP, pp 211-224
irrigable lands of ................................................ AL, pp 128-149
Terrill, Mount, geology of ...................................... HP, pp 267-268
Thousand Lake Mountain, geology of ......................... HP, pp 279-283
tribes, ancient, of, bead ornaments used by .................. H, Bull, vol ii, No 1, pp 67-69
Tushar Plateau, geology of ...................................... HP, pp 169-180
Uinta Mountains, Archean rocks of .......................... K, i, pp 42-44
east slope of, geology of ........................................ K, ii, pp 277-282
eastern portion of, geology of ........................................ UM
features of .......................................................... H, Ann 4, pp 41-54
Jurassic rocks of ...................................................... K, i, pp 470-473
northern slopes of, geology of ...................................... K, ii, pp 254-261
Paleozoic rocks of ...................................................... K, i, pp 139-154
northern portion of, geology of ...................................... K, ii, pp 194-197
triassic rocks of ...................................................... K, i, pp 298-306
western portion of, geology of ...................................... K, ii, pp 311-325
Uinta uplift, geology of .............................................. K, ii, pp 198-206

Bull. 222—04 — 13
Utah, Uinta Valley, Tertiary rocks of .................................................. K, ii, pp 307-310
Wasatch Plateau, geology of................................................................. HP, pp 160-168
Wasatch Range, Archean rocks of ....................................................... K, i, pp 44-54
features of............................................................................................ W, iii, pp 233-237
glacial features of..............................................................H, Ann 6, pp 192-197; K, ii, pp 340-391
Jurassic rocks of............................................................................... K, i, pp 473-474
Jurassic rocks of............................................................................... K, i, pp 473-474
Paleozoic rocks of........................................................................... K, i, pp 154-181
trachytes of................................................................................... K, i, pp 580-591
Triassic rocks of........................................................................... K, i, pp 264-266
Wasatch region, northern, geology of .................................................. K, ii, pp 399-419
water supply in.................................................................................. AL, pp 57-80
White River district, geology of.......................................................H, Ann 10, pp 61-131
Weber Canyon, geology of............................................................ K, ii, pp 384-392

(See, also, Fortieth Parallel region; Basin Ranges; Great Basin.)

Utah Lake Valley, agriculture in......................................................... H, Ann 4, pp 241-244

Uhler (P. R.), list of Hemiptera of the region west of the Mississippi River,
including those collected during the Hayden explorations of 1873........ H, Bull, vol 1, ser 2, No 5, pp 269-361

list of Hemiptera collected in eastern Colorado and northeastern New Mexico, by C. Thomas, during the expedition of 1869...... H, Ann 4, pp 471-472

notices of the Hemiptera of the western Territories....................... H, Ann 5, pp 399-423
on the Hemiptera collected by Dr. Elliott Coues in Dakota and Montana
during 1873-74.......................................................... H, Bull, vol iv, No 2, pp 503-512
report upon Hemiptera collected in 1874 and 1875................... W, 1877, pp 1322-1334
report upon the collections of Hemiptera made in portions of Nevada,
Utah, California, Colorado, New Mexico, and Arizona, 1871-74... W, v, pp 829-841
report upon the insects collected by P. R. Uhler during the explorations of
1875, including monographs of the families Cynidae and Saltae
and the Hemiptera collected by A. S. Packard, jr.................. H, Bull,
vol iii, No 2, pp 355-475, No 4, pp 763-796

Uintacrinus Grinnell, notes on....................................................... H, Bull, vol ii, No 4, pp 375-378

(See, also, Invertebrates, fossil; Vertebrates, fossil.)

Ulke (H.), list of species of Coleoptera collected by Lieut. W. L. Carpen
ter.............................................................. H, Ann 7, pp 566-571
report upon the collections of Coleoptera made in portions of Nevada,
Utah, California, Colorado, New Mexico, and Arizona, 1871-
1874.............................................................. W, v, pp 809-827

Uncompahgre Plateau, Colorado, geology and topography of.............. H, Ann 9, pp 40-43, 49-50
Uncompahgre region, Colorado, physical features of...................... W, 1876, pp 95-97
Union mining district, Nevada, description of......................... W, 1877, pp 1269
Union Pacific Railroad, artesian borings along line of............... H, Bull,
vol iii, No 1, pp 181-185
geologic reconnaissance along, report of...................................... H, Ann 6, pp 519-541
Unionidae of Tertiary of Wyoming and Utah, new species of........ H, Bull, vol iii,
No 3, pp 603-606

(See, also, Invertebrates, fossil.)

Unionidae of Mesozoic and Cenozoic of North America, comparison with
living species................................................................. H, Bull, vol iii, No 3, pp 615-624

(See, also, Invertebrates; Invertebrates, fossil.)
Unionidae and Physide collected in Montana in 1876, descriptions of......H, Bull, vol iii, No 3, pp 599-602

(See, also, Invertebrates; Invertebrates, fossil.)

Unionville, Nevada, mining at......................................K, iii, pp 308-314

United States, springs, thermal, of............................H, Ann 12, ii, pp 320-327

United States Geographical Survey west of one hundredth meridian, work of,

sketch of............................................................W, i, pp 21-146

Uplifts in Colorado, northwestern..............................H, Ann 10, pp 41-48

Upper Coal Measures of Great Basin............................K, i, pp 221-226, 241-246

Uraninite, analysis of, from Colorado, Leavenworth Gulch.....H, Ann 10, p 153

Ute Lake, extent of..................................................K, i, pp 445-446

Utensils and language of modern Utes................................H, Bull, vol ii, No 1, pp 71-76

(See, also, Ethnology and archaeology.)

Utes, language and utensils of ....................................H, Bull, vol ii, No 1, pp 71-76

(See, also, Ethnology and archaeology.)

Valleys, classification of............................................ECR, pp 160-161

Vancouvers Island, fossils from.................................H, Bull, vol ir, No 4, pp 351-374

Vasey (G.), Graminete collected in Colorado, Nevada, Arizona, Utah, and New Mexico..................................W, vi, pp 281-297, 377-378

plants determined by..............................................W, Univ 5, pp 54-57

Vegetation of Rocky Mountain region............................H, Bull, vol vi, No 1, pp 1-77

Veins, metaliferous, of California................................W, 1876, p 184

Veins and lodes, formations, search for, etc....................H, Ann 7, pp 278-280

Verde River, Arizona, geology between Little Colorado River and......W, iii, pp 209-215

Vermejo Creek region, New Mexico, geology of..................W, iii, Supp, pp 248-282

Vermejo Park, New Mexico, geology of, notes on ................H, Bull, vol ii, No 4, pp 296-305

Vermilion Cliff group, exposures of................................UM, p 54

of Fortieth Parallel region........................................K, i, pp 360-377

Vermilion Creek, Colorado, geology of basin of................K, i, pp 225-227, 275-277

rocks exposed on....................................................K, i, pp 142-144

Verrill (A. E.), list of leeches collected by Hayden's expedition, 1873..H, Ann 7, p 623

report upon the collections of fresh-water leeches made in portions of Nevada, Utah, Colorado, New Mexico, and Arizona, 1872-74..W, v, pp 955-967

Vertebrate paleontology of Colorado..............................H, Ann 7, pp 427-533

Vertebrates; Ardeidae, synopsis of American genera of Ciconiidae and......H, Bull, vol iv, No 1, pp 219-251

Bassaris, species of, descriptions of............................H, Bull, vol v, No 3, pp 381-340

batrachians and reptiles collected in California, Arizona, and Nevada..W, 1875, pp 206-226

collected in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona........................................W, v, pp 509-584

of Arizona, synopsis of............................................W, v, pp 585-633


of Arizona, annotated list of......................................W, 1875, pp 153-166

eastern, and New Mexico, western................................W, Univ 4, pp 95-148

portions of New Mexico and........................................W, 1875, pp 149-153

of Arizona and adjacent States....................................W, v, pp 131-507

california, portion of...............................................W, 1876, pp 224-278

portions of Nevada and, preliminary report on..................W, 1878, pp 185-186

of California and adjacent States................................W, v, pp 131-507

of California, Oregon, and Nevada.................................W, 1879, pp 282-335
INDEX TO HAYDEN, KING, 

Vertebrates; birds of Colorado, Denver, vicinity of. W, Uncl 4, pp 55-69
birds of Colorado, Fort Garland, vicinity of. W, Uncl 4, pp 69-95
of Colorado and adjacent States. W, v, pp 131-507
of Colorado Valley, a repository of scientific and popular information

concerning North American ornithology H, Misc 11
of Dakota, Fort Sisseton, notes on H, Bull, vol v, No 1, pp 71-103
of Dakota and Montana, along forty-ninth parallel, field notes on. H, Bull, vol iv, No 3, pp 545-661
great Basin K, iv, pp 303-643
of Guadeloupe Island H, Bull, vol ii, No 2, pp 183-195
of Michigan, annotated list of. H, Bull, vol v, No 3, pp 481-497
of Montana and Dakota, along forty-ninth parallel, field notes on. H, Bull, vol iv, No 3, pp 545-661
of Nebraska, food of, notes on H, Uncl 14, App, pp 13-62
of Nevada, annotated list of. H, Bull, vol vi, No 2, pp 203-256
bibliography of H, Bull, vol vi, No 2, pp 252-256
Carson City, vicinity of W, 1877, pp 1307-1322
portions of California and, preliminary report on W, 1878, pp 185-186
of Nevada and adjacent States W, v, pp 131-507
of Nevada and Utah W, Uncl 4, pp 5-33
of New Mexico, portions of Arizona and W, 1875, pp 149-153
western, and Arizona, eastern W, Uncl 4, pp 95-148
of New Mexico and adjacent States W, v, pp 131-507
of Northwest H, Misc 3
of Texas, Red River region H, Bull, vol iii, No 3, pp 655-695
Rio Grande, lower H, Bull, vol iv, No 1, pp 371-440
of United States, western, geographical distribution and variation in W, v, pp 23-34
of Utah, annotated list of. W, Uncl 4, pp 39-54; W, Uncl 7
of Utah and adjacent States W, v, pp 131-507
of Utah and Nevada W, Uncl 4, pp 5-33
of Utah, Wyoming, and Idaho H, Ann 6, pp 670-715
of Wyoming, list of H, Ann 4, pp 462-466
of Wyoming, Idaho, and Utah H, Ann 6, pp 670-715
(See, also, Ornithology.)

bison, American, history, habits, range, extermination, etc., of. H, Ann 9, pp 443-508
Cathartidae, osteology of H, Ann 12, i, pp 727-806
Cete, bibliography of Sirenia and. H, Bull, vol vi, No 3, pp 399-562
Ciconiidae, synopsis of American genera of Ardeidae and H, Bull, vol iv, No 1, pp 219-251
Coatis, character, distribution, etc., of. H, Bull, vol v, No 2, pp 153-174
deer, Virginian, consolidation of hoofs of. H, Bull, vol iv, No 1, pp 293-294
Eremophila alpestris, osteology of H, Ann 12, i, pp 627-652;
H, Bull, vol vi, No 1, pp 119-147
Falconidae, natural arrangement of, outlines of H, Bull, vol i, ser 2, No 4, pp 225-231

studies of American H, Bull, vol ii, No 2, pp 91-182
finches, gray-crowned purple, monograph of. H, Bull, vol i, ser 2, No 2, pp 51-82
fishes of California and Nevada, report on. W, 1878, pp 187-205
of Montana and Dakota, report on H, Bull, vol iv, No 4, pp 777-799
Vertebrates; fishes of Nevada, Utah, California, Colorado, New Mexico, and Arizona, portions of .................. W, v, pp 635-703

fishes of North America, catalogue of fresh-water .................. H, Bull, vol iv, No 2, pp 407-442


fishes and reptiles collected in Idaho, Wyoming, Montana, and Utah,

H, Ann 5, pp 467-476

of Wyoming and contiguous territories, report on ...... H, Ann 4, pp 432-442

fur-bearing animals, monograph on ......................... H, Misc 8

Geoemyidae, cranial and dental characters of ...... H, Bull, vol i, ser 2, No 2, pp 83-90

Geomyons, study of Thromomyons and .................. ECR, pp 217-279

Geomyons tuza, notes on .................................. ECR, pp 282-285

Herodiones, studies of the American .............. H, Bull, vol iv, No 1, pp 219-251

Herpetology of Dakota and Montana .............. H, Bull, vol iv, No 1, pp 259-291

Lagopus leucurus, breeding habits, nests, and eggs of ................. H, Bull, vol i, ser 2, No 5, pp 263-266

Lanius lodovicianus excubitorides, osteology of .................. H, Bull, vol vi, No 2, pp 351-359

Leucosticte, monograph on .................. H, Bull, vol i, ser 2, No 2, pp 51-82

Leucosticte tephrocotis, sexual, individual, and geographical variation in ........ H, Bull, vol ii, No 4, pp 345-350

mammals collected in California in 1875 .................. W, 1876, pp 305-312

collected in portions of Nevada, Utah, California, Colorado, New-

Mexico, and Arizona, 1871-1874, report on .......... W, v, pp 35-129

collected in Wyoming, list of ....................... H, Ann 4, pp 461-462

geographical distribution of .................. H, Bull, vol iv, No 2, pp 313-377

geographical variation among North American, especially in respect

to size ........................................ H, Bull, vol ii, No 4, pp 308-344

of Fort Sisseton, Dakota ....................... H, Bull, vol iv, No 1, pp 201-218

of western United States, geographical distribution and variation in

W, v, pp 23-34

mammals, American insectivorous .................. H, Bull, vol iii, No 3, pp 631-653

synopsis of .................................. H, Bull, vol i, ser 2, No 2, pp 91-120

mammals and birds collected in Utah, Idaho, and Wyoming in 1872 .... H, Ann 6,

pp 661-715

Mephitis, cranial and dental characters of .................. H, Bull, vol i,

ser 2, No 1, pp 7-15

Mustelidea, monograph of .................. H, Misc 8

Nasus, character, distribution, etc., of ........ H, Bull, vol v, No 2, pp 153-174

Passer domesticus, status of, in America, with special reference to the

western States and Territories .................. H, Bull, vol v, No 2, pp 175-193

pigs, solid-hoofed, apparently established in Texas, discussion of ...... H, Bull, vol iv,

No 1, pp 295-297

Pinnipeds, history of North American .................. H, Misc 12

Plagopterine and ichthyology of Utah .................. W, Unc 8

Polybori, monograph of .................. H, Bull, vol i, ser 2, No 6, pp 451-473

ptarmigan, white-tailed, breeding habits, nests, and eggs of .......... H, Bull, vol i,

ser 2, No 5, pp 263-266

Pythonomorpha, discussion of Owen's paper on ........ H, Bull, vol iv,

No 1, pp 299-311

reptiles and batrachians of Arizona, synopsis of ........ W, v, pp 585-633

of California, Arizona, and Nevada .................. W, 1878, pp 206-226
INDEX TO HAYDEN, KING,

Vertebrates; reptiles and batrachians of Nevada, Utah, California, Colorado, New Mexico, and Arizona, portions of............. W, v, pp 509-584
of Wyoming and contiguous Territories............. H, Ann 4, pp 432-442
Rodentia, monograph of North American.................... H, Mon xi
Sciurus, revision of genus .................... H, Bull, vol vi, No 2, pp 301-307
Sciuri, synonymatic list of American ............ H, Bull, vol iv, No 4, pp 877-887
sea bears, seals, walruses, and sea lions, monograph on............. H, Misc 12
Sirenia, bibliography of Cete and..... H, Bull, vol vi, No 3, pp 399-562
Sparrow, English, status of, in America, with special reference to western
States and Territories............... H, Bull, vol v, No 2, pp 175-193
Speotyto cunicularia hypogaea, osteology of...... H, Ann 12, i, pp 593-626; H, Bull, vol vi, No 1, pp 87-117
squirrels, arboreal, synonymatic list of American.....................H, Bull,
vii, No 4, pp 877-887
Thomomys, study of Geomys and ............ ECR, pp 217-279
Zapus hudsonius, account, critical, descriptive, and historical, of....... H, Bull,
vol i, ser 2, No 5, pp 254-262
Vertebrates, fossil; Batrachia and Reptilia of Permian beds of Texas, some
new................................ H, Bull, vol vi, No 1, pp 79-82
bird from insect-bearing shales of Colorado, description of............. H, Bull,
vii, No 2, pp 443-445
bird, wading, from Amyzon shales ............. H, Bull, vol vi, No 1, pp 83-85
Canide of the Loup Fork epoch..................... H, Bull, vol vi, No 2, pp 387-390
Canide and Nimravide of Miocene period .... H, Bull, vol vi, No 1, pp 165-181
Dinosaurian, carnivorous, from Dakota beds of Colorado.................. H, Bull,
vii, No 4, pp 805-806
Erisichte, discussion of genus..................... H, Bull, vol iii, No 4, pp 821-823
fishes of Carboniferous of Kansas, notice of some............ H, Mon i, pp 311-314
of Coal Measures, Upper, of Nebraska...................... H, Unel 1, pp 239-245
of Cretaceous and Tertiary deposits west of Mississippi River .... H, Bull,
vii, No 1, pp 67-77
of Green River shale of Wyoming..................... H, Mon i, pp 194-197
of Tertiaries of the Rocky Mountains, supplementary notice of..... H, Bull,
vol i, ser 1, No 2, pp 49-51
of Tertiary shales of South Park ............. H, Bull, vol i, ser 2, No 1, pp 3-5
of Green River, Wyoming..................... H, Ann 4, pp 425-431
fishes and reptiles of Cretaceous formations of Interior region..... H, Mon i,
pp 266-310
of Cretaceous of Kansas..................... H, Ann 4, pp 385-425
ichthyological fauna of the Green River shales, contributions to knowl-
edge of..................... H, Bull, vol iii, No 4, pp 806-819
Nimravides and Canide of the Miocene period... H, Bull, vol vi, No 1, pp 165-181
OdontornitheS, monograph on.......................... K, viii
of Amyzon beds ............. H, Mon, iii, pp 742-757
of Bridger formation of Wyoming............... H, Mon, i, pp 15-194
of Bridger, Puerco, and Wasatch groups............. H, Mon, iii, pp 49-742
of Colorado..................... H, Ann 7, pp 427-533
of Cretaceous of Kansas..................... H, Ann 5, pp 327-349
of Missouri River region..................... H, Bull, vol iii, No 3, pp 577-597
of North America, synopsis of..................... H, Mon ii, pp 245-302
of West..................... H, Mon ii; H, Bull, vol i, ser 1, No 2, pp 5-48
Vertebrates, fossil of Dakota and upper Tertiary formations .......................... H, Bull, vol iv, No 2, pp 379-396
of Eocene of Colorado ......................................................... H, Ann 7, pp 456-461
of New Mexico ................................................................. W, iv, pt ii, pp 37-282
systematic catalogue of ......................................................... W, Uncl 9
of Wyoming ................................................................. H, Ann 6, pp 543-649
of Wind River ................................................................. H, Bull, vol vi, No 1, pp 189-202
of Eocene and Pliocene formations of New Mexico .......................... W, 1874, pp 115-130
of Eocene plateau of New Mexico, list of .................................. W, 1875, pp 93-96
of Europe and North America, relations of horizons of ....................... H, Bull, vol v, No 1, pp 33-54
of John Day and White River groups ........................................ H, Ann 7, pp 518-532
of Pliocene of Colorado, northern ........................................ H, Bull, vol i, ser 1, No 1, pp 9-28
of Pliocene and Eocene of New Mexico ....................................... W, 1874, pp 116-130
of Puerco, Wasatch, and Bridger groups .................................... H, Ann 7, pp 49-742
of Santa Fe marls .................................................................. W, 1875, pp 68-76
of Tertiary of Oregon, John Day River ....................................... H, Mon i, pp 210-226
of western States and Territories ............................................... H, Ann 4, pp 340-370; H, Mon i, pp 227-265, H, Mon iii
of Wyoming ............................................................................ H, Ann 5, pp 353-372
Sweetwater River .................................................................... H, Mon i, pp 197-209
of Tertiary, upper, and Dakota formations .................................... H, Bull, vol iv, No 2, pp 379-396
of Vermilion Creek group, list of ............................................. K, i, pp 376-377
of Wasatch strata ...................................................................... H, Ann 5, pp 350-353
of Wasatch, Puerco, and Bridger groups ....................................... H, Ann 7, pp 49-742
of western Territories ................................................................ H, Mon 1
of White River and John Day groups ........................................... H, Mon iii, pp 759-1002
reptiles and fishes of the Cretaceous rocks of Kansas ....................... H, Ann 4, pp 385-425
of Cretaceous formations of Interior region ................................. H, Mon 1, pp 206-310
Reptilia and Batrachia of Permian beds of Texas, some new .............. H, Bull, vol vi, No 1, pp 79-82
Rhinoceridid of North America, extinct species of, and their allies ...... H, Bull, vol vi, No 2, pp 227-237
Rodentia of Miocene of North America, review of ......................... H, Bull, vol vi, No 2, pp 361-386
Virginia City, Nevada, astronomical determinations at ..................... W, ii, pp 183-210
Virginia City, Idaho, geology near ........................................... H, Ann 5, pp 171-172
Virginia Range, Nevada, geology of ......................................... K, ii, pp 824-826; K, iii, pp 11-36
Vocabulary of forty Indian languages ........................................... W, vii, pp 424-485
(See, also, Ethnology and archeology.)
Volcanic action, causes of ..................................................... HP, pp 113-142
Volcanic region in Arizona and New Mexico, geology of ................. W, iii, pp 525-541
Volcanic rocks, classification of ............................................... HP, pp 82-112
correlation and succession of ................................................... K, i, pp 678-696
fusion, genesis, and classification of ........................................... K, i, pp 696-725
of Basin Ranges ........................................................................ W, iii, pp 118-155, 233-257
of Black Hills ............................................................................ BH, pp 189-203
of Colorado, Huerfano Park and Spanish Peaks ............................. H, Ann 9, pp 127-136
North Park .............................................................................. K, ii, pp 112-127
Volcanic rocks of Colorado, San Juan region .......... H, Ann 8, pp 193-209
of Colorado Plateau ........................................ W, iii, pp 297-299
of Fortieth Parallel region ................................... K, i, pp 545-725
of Green River Basin ........................................... K, ii, pp 236-238
of Nevada, Piñon Range ........................................... K, ii, pp 558-562
of Utah, high plateaus ........................................... HP, pp 55-142
quantitative chemical relations of ................................... K, i, pp 678-681
Vulture mine, Arizona, notes on ................................... W, 1871, p 56
Wachoe Mountains, Nevada, geology of ......................... K, ii, pp 476-483
granite of ..................................................... K, i, pp 59-60
Wahweah Range, Nevada, geology of ......................... K, ii, pp 566-569
granite of ..................................................... K, i, p 74
Wakynakaine language, vocabulary of .............................. Eth, i, pp 248-265
(W, in, pp 233-237)
Wasatch group, extent and character of ...................... H, Mon iii, pp 7-11
fossils of, from White River Valley, Colorado .......... H, Ann 11, pp 226-229
fossils, invertebrate, of, list of .............................. H, Bull, vol iii, No 3, p 611
fossils, vertebrate, of ........................................ H, Ann 5, pp 350-353
of Bridger group and ............................................. H, Mon iii, pp 49-742
from New Mexico ..................................................... W, iv, pt ii, pp 269-282
occurrences and age of ........................................ H, Ann 8, p 147
of Colorado, Grand River district ............................. H, Ann 10, p 184
northwestern ..................................................... H, Ann 10, p 35
White River district ............................................. H, Ann 10, pp 79-82, 110
of Utah, White River district .................................. H, Ann 10, pp 79-82, 110
of Wyoming, Green River region .............................. H, Ann 11, pp 635-636
Salt Wells, vicinity of ........................................... H, Ann 11, pp 127-133
Wind River Range, vicinity of ................................... H, Ann 11, p 88
Wasatch limestone of Great Basin .............................. K, i, pp 195-212, 235-240
Wasatch Plateau, Utah, geology of .............................. HP, pp 160-168
Wasatch Range, Utah, Archean rocks of ....................... K, i, pp 44-54
features of ..................................................... W, iii, pp 233-237
geology of ..................................................... K, ii, pp 340-391; H, Ann 6, pp 192-197
glaciers, extinct, of ........................................... K, i, pp 473-474
Jurassic rocks of .................................................. K, i, p 293
Paleozoic rocks of ............................................. K, i, pp 154-181
trachytes of ..................................................... K, i, pp 586-591
Triassic rocks of .................................................. K, i, pp 264-266
Wasatch region, northern, Utah, geology of ..................... K, ii, pp 383-419
Waschakie, Wyoming, Vermilion Creek group near .......... K, ii, pp 362-365
Waschakie Basin, Wyoming, geology of ......................... K, ii, pp 207-222
Waschakie group, occurrences and age of ...................... H, Ann 8, p 146
Waschakie Lake (Tertiary), extent of .......................... K, i, pp 447-449
topographic features of ........................................... H, Ann 12, ii, p 478
Washington, astronomical work in California, Oregon, and .... W, 1879, pp 265-268
tribes of northwestern Oregon and western ................. Eth, i, pp 157-241
Washington, Twana Indians of Skokomish Reservation, customs, language, etc., of ......................... H, Bull, vol iii, No 1, pp 57-114

Walla Walla, astronomical work at ........................................ W, 1879, pp 10-17

Washington district, California, notes on .............................. W, 1878, p 84

Washoe district, Nevada, geology of ........................................ K, iii, pp 11-36

notes on .............................. W, 1876, pp 54-55

Water, analysis of, from Arizona, Mineral Park ............................ W, 1876, p 197

analysis of, from Arizona, northwestern, gypsum spring .................. W, 1876, p 197

from Arizona, San Francisco River (mineral) .......................... W, iii, p 616

from Atlantic Ocean .................................................................. K, ii, p 436

from Bavaria, Isar River .................................................. W, iii, p 576

from California, Black Lake .................................................. W, 1876, p 191

Cabezon Valley (hot spring) ............................................... W, 1876, p 193

Coahuila Valley ...................................................................... W, 1876, p 196

Coso Range (thermal spring) ................................................ W, 1876, p 194

Inyo County (thermal spring) .............................................. W, 1876, p 194

Little Yosemite (soda spring) .............................................. W, 1876, p 195

Mohave River, saline flats of ............................................. W, 1876, p 197

Owens Lake ........................................................................... W, 1876, p 190

San Bernardino ................................................................. W, 1876, p 193

San Diego (thermal springs) ................................................ W, 1876, p 193

San Fernando Mountain (sulphur spring) ................................ W, 1876, p 195

San Fernando Valley (mineral spring) .................................... W, 1876, p 195

Santa Barbara (thermal springs) ............................................ W, 1876, p 192

from Colorado, Canyon (mineral) ........................................ W, iii, p 617

Carlisle Springs (mineral) .................................................... W, iii, p 622

Idaho Springs (mineral) ..................................................... W, iii, p 485

Manitou (mineral) ..................................................................... W, iii, p 619

Bathing Spring (mineral) ..................................................... H, Ann 6, p 102

Pagosa Springs (mineral) ..................................................... H, Ann 9, p 185; W, iii, p 627

Parnassus Springs (mineral) ................................................ W, iii, p 620

Wagon Wheel Gap (mineral) ................................................. H, Ann 9, p 155; W, iii, p 623

from Idaho, Soda Springs (mineral) ....................................... H, Ann 11, p 592

from Mediterranean Sea ..................................................... W, iii, p 436

from Nevada, Comstock vein ................................................ W, 1878, p 156

Humboldt Lake ...................................................................... K, i, p 528; K, ii, p 743

Pyramid Lake ......................................................................... K, i, p 528

Soda Lakes ............................................................................. K, i, p 528; K, ii, p 747

Stones Ferry, salt well near ................................................. W, 1876, p 192

Virgin River ........................................................................... W, 1876, p 191

Virginia Range ........................................................................ K, ii, p 824

Washoe district, Savage mine................................................ K, iii, p 87

from New Mexico, Abiquiu (mineral) ...................................... W, iii, p 625

Las Vegas (mineral) .............................................................. W, iii, p 624; W, iii, Supp, pp 405-406

Ojos Calientes (mineral) ....................................................... W, iii, p 614

Pajarito River (mineral) ......................................................... W, iii, p 626

Rio Grande del Norte ............................................................ W, iii, p 576

San Isidro (mineral) .............................................................. W, iii, p 616

from Palestine, Dead Sea ...................................................... K, ii, p 436

from Persia, Oroomiah Sea ..................................................... K, ii, p 436

from Utah, Great Salt Lake ................................................... K, i, p 502; K, ii, pp 433-436

Salt Lake City (mineral) ........................................................ K, ii, p 438
Water, analysis of, from Utah, Sevier Lake.............................................. K, ii, p 436
analysis of, from various localities (mineral)................................. H, Ann 12, ii, pp 387-398
deposit from, analysis of, from Colorado, Idaho Springs................... W, iii, p 485
analysis of, from Colorado, Manitou................................................. H, Ann 5, p 159
from Idaho, Soda Springs.............................................................. H, Ann 11, p 590
Water supply of Black Hills.............................................................. BH, pp 311-313
of Great Basin........................................................................ W, iii, pp 105-117
of Kansas, western, and Colorado, eastern......................................... H, Ann 4, pp 448-452
of Utah................................................................................ AL, pp 57-80
Watson (S.), botany of Fortieth Parallel region............................... K, v
catalogue of plants collected in Utah, Nevada, and Arizona.............. W, Unc1 5, pp 5-19
descriptions of plants collected in the Southwest.............................. W, vi, pp 358-359
Waverly group, invertebrate fossils of, of Fortieth Parallel region... K, iv, pp 151-264
Weapons, stone, methods of making............................................... H, Bull, vol iii, No 3, pp 547-549
(See, also, Implements; Ethnology and archaeology.)
Weaver district, Arizona, notes on................................................. W, 1871, p 55
Weber Canyon, Utah, geology of...................................................... K, ii, pp 384-392
Paleozoic rocks in........................................................................... K, i, pp 156-165
Weber quartzite of Colorado, northwestern...................................... H, Ann 10, p 23
of Great Basin...................................................................................... K, i, pp 213-221, 240-241
Weevil, cranberry, description of.................................................... H, Ann 10, pp 525-526
Wells, artesian. (See Artesian wells.)
West Humboldt Range, Nevada, Archean rocks of............................... K, i, pp 85-87
geology of......................................................................................... K, ii, pp 713-731
mining in......................................................................................... K, iii, pp 308-310
Triassic rocks of.................................................................................. K, i, pp 267-278
West Indies, springs, thermal, in...................................................... H, Ann 12, ii, p 328
West Plum Creek, Colorado, geology near........................................ H, Ann 3, p 40; H, Ann 1-3, p 140
West Walker River district, California, notes on............................... W, 1878, p 86
Wheeler (G. M.), reconnaissance through southern and southeastern Nevada... W, 1869
surveys in charge of, reports on....................................................... See pp. 44-65.
Wheeler Survey, work of, sketch of.................................................... W, i, pp 21-146
Wheelerite, analysis of, from New Mexico........................................ H, Ann 10, p 153
Whipple (C. W.), report of............................................................... W, 1875, pp 44-46; W, 1876, pp 147-150
White (C. A.), catalogue of the invertebrate fossils hitherto published from
the fresh and brackish water deposits of the western portion of
North America.............................................................................. H, Bull, vol iii, No 3, pp 607-614
certain Carboniferous fossils from the Western States and Territories... H, Ann 12, 1, pp 119-141
certain Tertiary Mollusca from Colorado, Utah, and Wyoming............ H, Ann 12, 1, pp 41-48
comparison of the North American Mesozoic and Cenozoic Unionide and
associated mollusks with living species.......................................... H, Bull, vol iii, No 3, pp 615-624
conditions of preservation of invertebrate fossils............................ H, Bull, vol v,
No 1, pp 133-141
Cretaceous fossils of Western States and Territories........................ H, Ann 11, pp 273-319; H, Ann 12, 1, pp 3-39
descriptions of new species of invertebrate fossils from the Laramie group
H, Bull, vol iv, No 3, pp 707-719
descriptions of new species of Uniones and a new genus of fresh-water
Gasteropoda from the Tertiary strata of Wyoming and Utah
H, Bull, vol iii, No 3, pp 603-606
White (C. A.), descriptions of Unionidae and Physidae collected by Prof. E. D. Cope from the Judith River group of Montana Territory during the summer of 1876. H, Bull, vol iii, No 3, pp 599-602.


Jurassic fossils from the western Territories. H, Ann 12, i, pp 143-153.


Invertebrate paleontology of the Plateau province. UM, pp 74-135.

Jurassic fossils from the western Territories. H, Ann 12, i, pp 143-153.

Jurassic fossils from the western Territories. H, Ann 12, i, pp 143-153.


Remarks upon the Laramie group. H, Bull, vol iv, No 4, pp 865-886.


Triassic fossils of southeastern Idaho. H, Ann 12, i, pp 105-118.


White Cliff group, exposures of. UM, pp 51-52.


Whitfield (R. P.) and Hall (J.), paleontology of Fortieth Parallel region. K, iv, pp 199-301.


Willow Creek Basin, Idaho, geology in .................................. H, Ann 11, pp 349-351
Willow Creek ridges, Idaho, geology of .................................. H, Ann 11, pp 351-360
Wilson (A. D.), means of communication between Denver and San Juan
mines ................................................................. H, Ann 8
pp 449-449; H, Bull, vol 1, ser 2, No 3, pp 146-149
notes on the geographical work of the United States Geological and Geo-
 graphical Survey of the Territories .................................. H, Bull,
vol IV, No 3, pp 705-737
topographical report on southeastern district......................... H, Ann 9, pp 299-333
reports on primary triangulation .................................. H, Ann 10, pp 275-310; H, Ann 11, pp 649-672
Winatsa language, vocabulary of .................................... Eth, 1, pp 249-265
(See, also, Ethnology and archaeology.)
Wind movements in western States .................................. H, Unc 14, pp 187-210
Wind River, Wyoming, Eocene beds of, vertebrata of .................. H, Bull,
vol VI, No 1, pp 183-202
Wind River district, Wyoming, geology of .......................... H, Ann 12, pp 175-269
Wind River group, invertebrate fossils of ................. H, Mon IX, pp 148-149
occurrences and age of ........................................ H, Ann 8, pp 148-149
of Missouri region, Upper .................................. H, Mon IX, p lx
Wind River Range, Wyoming, geology of .................................. H, Ann 12, pp 228-254
Wind River Mountains, Wyoming, strata exposed in............... H, Ann 6, pp 19-21
Winnemucca, Nevada, astronomical determinations at .................. W, vi, pp 157-182
Winnemucca Lake region, Nevada, geology of ....................... K, vi, pp 801-816
Wood, articles and utensils of, from graves of southern California.. W, vii, pp 122-124
implements and weapons made of bone and ....................... W, vii, pp 222-233
(See, also, Ethnology and archaeology.)
Woods (H. C.), algae of Great Basin .................................. K, v, p 415
Worms collected near Yellowstone River in 1871 ....................... H, Ann 5, pp 381-382
(See, also, Invertebrates.)
Worms, parasitic, found in the brain and other parts of birds.. H, Ann 6, pp 735-737
(See, also, Invertebrates.)
Wyoming, agriculture of Colorado and .................................. H, Ann 4, pp 191-264
art, primitive, in the Bridger Basin .................................. H, Ann 6, pp 651-653
artesian borings in, along line of Union Pacific Railroad ............ H, Bull, vol IV, No 1, pp 181-185
astronomical observations in .................................. W, 1874, pp 74-101
in Nebraska, Colorado, New Mexico, Nevada, Utah, Montana, and ... W, vi, pp 1-491
Bear River, geology near head of .................................. H, Ann 4, pp 44-54
Beaver Creek, geology of .................................. H, Ann 11, p 583
birds collected in, list of .................................. H, Ann 4, pp 462-466
collected in Utah, Idaho, and .................................. H, Ann 6, pp 670-715
Bitter Creek, Cretaceous uplift of .................................. K, ii, pp 227-238
Bridger Basin, geology of .................................. K, ii, pp 238-241
Bridger Pass region, geology of .................................. K, ii, pp 156-160
Buffalo Fork, geology of .................................. H, Ann 11, pp 461-467
Buffalo Fork Mountains, geology of .................................. H, Ann 11, pp 468-470
Carbon Basin, geology of .................................. K, ii, pp 143-148
Cheyenne, astronomical observations at .................................. W, Unc 3, pp 2-45
ground between Denver and .................................. H, Ann 3, pp 11-37; H, Ann 1-3, pp 111-137
between Fort Fetterman and .................................. H, Ann 4, pp 21-24
between Omaha, Nebraska, and .................................. H, Ann 4, pp 98-112
Chugwater River, geology near .................................. H, Ann 4, pp 12-18
Wyoming, Cinnabar Mountain, geology of ........................................ H, Ann 5, pp 60-63
coal in ....................................................................................... H, Ann 4, pp 326-328
Crow Creek, geology near .......................................................... H, Ann 11, p 554
East Gallatin Mountains, geology of ........................................ H, Ann 12, ii, pp 15-19
elavations in .................................................................................. H, Bull, vol v, No 3, p 464;
Elk Mountain region, geology of .................................................. LOR, 1868, pp 244, 245; H, Ann 2, pp 91-92; K, ii, pp 148-152
Eocene beds of Wind River, vertebrata of .................................. H, Bull, vol vi, No 1, pp 183-202
Evarts, Mount, geology of ....................................................... H, Ann 12, ii, pp 9-15
explorations in Idaho and ......................................................... H, Ann 11
in parts of Montana, Idaho, Utah, and, for the year 1872 .............. H, Ann 6
Feather Creek, geology near ..................................................... H, Ann 11, pp 530-531
Firehole River, geyser basins of ................................................ H, Ann 6, pp 141-158
Fontenelle hogbacks, geology of ............................................. H, Ann 11, pp 537-538
Fort Bridger, geology between South Pass and ....................... H, Ann 4, pp 35-41
Fort Fetterman, geology between Cheyenne and ....................... H, Ann 4, pp 11-24
gology between South Pass and ............................................. H, Ann 4, pp 24-35
Front Range, Archean rocks of ............................................... K, i, pp 17-28
geology of ..................................................................................... H, Ann 4, pp 112-119; K, ii, pp 2-72
Jurassic rocks of ........................................................................ K, i, pp 285-289
Triassic rocks of .......................................................................... K, i, pp 249-258
Gardiner River, hot springs near ............................................. H, Ann 5, pp 64-75
Gardiner River, upper, geology of ............................................ H, Ann 12, ii, pp 27-32
gological explorations in .............................................................. LOR, 1868, pp 229-255; H, Ann 2, pp 76-102
gold in Sweetwater district ....................................................... H, Ann 11, pp 142-148
Green River, astronomical determinations at .................................. W, ii, pp 129-154
fishes of Tertiary shales of ....................................................... H, Ann 4, pp 425-431
physical features of ...................................................................... K, ii, pp 191-194
topographic features of .............................................................. H, Ann 11, pp 689-693
Green River coal basin, geology of .......................................... K, ii, pp 451-473
Green River district, agriculture in .......................................... H, Ann 4, pp 233-237
gology of ..................................................................................... H, Ann 11, pp 509-646
Gros Ventre Basin, geology of ................................................ H, Ann 12, i, pp 219-227
Gros Ventre Range, geology of .............................................. H, Ann 11, pp 448-456; H, Ann 12, i, pp 208-218
Hams Fork, geology near ............................................................ H, Ann 11, pp 532, 534-535
Henry Fork, geology near .......................................................... H, Ann 4, pp 56-63
Henry Fork Basin, geology of .................................................... K, ii, pp 261-269
Hoback Canyon Ridge, geology of .......................................... H, Ann 12, i, pp 178-187
Horse Creek, geology near ...................................................... H, Ann 11, pp 527-528
Indian Creek, laccolite on ......................................................... H, Ann 12, ii, pp 24-25
insects from Tertiary rocks of Colorado and, account of some .............. H, Bull, vol iv, No 2, pp 519-542
Jackson Hole, geology of ......................................................... H, Ann 11, pp 443-448
Jackson Lake, geology near ..................................................... H, Ann 6, pp 261-264
John Day Ridge and Basin, geology of ..................................... H, Ann 12, i, pp 187-199
Junction Valley, geology of ...................................................... H, Ann 12, ii, pp 42-47
Juratrias section of southeastern Idaho and western ...................... H, Bull, vol v, No 1, pp 117-123
Laramie group of ................................................................. H, Bull, vol v, No 2, pp 195-200
Laramie Hills, physical aspects of ........................................... K, ii, pp 4-7
Wyoming, Laramie Plains, agriculture on ........................................ H, Ann 4, pp 220-223
Laramie region, geology of ........................................ LOR, 1868, pp 235-236;
H, Ann 2, pp 81-83; H, Ann 4, pp 121-133; K, ii, pp 73-93
Lead Creek, geology near ........................................ H, Ann 11, p 527
Lignitic formation in, distribution and thickness of ............... H, Ann 6,
pp 327-339, 367-368
of Colorado, eastern, and portions of .................................. H, Bull,
vol 1, ser 2, No 5, pp 401-411
locusts in ........................................ H, Und 14, pp 97-99, 156-157
mammals collected in, list of ........................................ H, Ann 4, pp 461-462
collected in Utah, Idaho, and ......................................... H, Ann 6, pp 661-669
Marsh Creek, geology near ........................................ H, Ann 11, pp 528-529
Medicine Bow Range, Archean rocks of .......................... K, i, pp 28-36; K, ii, pp 94-111
Paleozoic rocks of ........................................ H, Ann 11, pp 533-534
Park Range, Archean rocks of ........................................ K, i, pp 36-42
Pass Creek, geology near ........................................ LOR, 1868, pp 246-247; H, Ann 2, pp 93-94
Piney Creek, geology near ........................................ H, Ann 11, p 529
plants collected in Colorado and, catalogue of ............... H, Ann 4, pp 472-483
collected in Idaho, Utah, Montana, and ................................ H, Ann 6, pp 747-792
Rawlings Peak, geology near ........................................ K, ii, pp 160-164
Paleozoic rocks of ........................................ K, ii, pp 136-138
Rawlings Springs, geology near ..................................... LOR, 1868, pp 249-250; H, Ann 2, pp 96-97
Red Creek, geology near ........................................ H, Ann 4, pp 66-68
roads in Sweetwater district ........................................ H, Ann 11, pp 57-58
St. Marys, geology near ........................................ LOR, 1868, pp 248-249; H, Ann 2, pp 95-96
Salt River, geology near ........................................ H, Ann 11, pp 551-556
Salt River Range, geology of ........................................ H, Ann 11, pp 545-551
Savory Plateau region, geology of .................................... K, ii, pp 164-166
Sepulchre Mountain, geology of ...................................... H, Ann 12, pp 15-19
Sickle Creek, geology of ........................................ H, Ann 11, p 546
Slate Creek, geology near ........................................ H, Ann 11, pp 531-532
Smiths Fork, geology near ........................................ H, Ann 11, pp 577-580
Smoking Creek, geology near ........................................ H, Ann 11, p 554
Snake River, geology along ........................................ H, Ann 12, i, pp 196-201
Grand Canyon of, geology of ...................................... H, Ann 11, pp 437-438
Snake River Range, geology of ...................................... H, Ann 11, pp 424-425
South Pass, geology between Fort Bridger and .................... H, Ann 4, pp 35-41
gеology between Fort Fetterman and ................................ H, Ann 4, pp 24-35
Sublette Creek, geology near ........................................ H, Ann 11, p 576
Sublette Range, geology of ........................................ H, Ann 11, pp 580-581
Sweetwater region, agriculture in .................................. H, Ann 4, pp 223-226
gеology of ........................................ H, Ann 11, pp 3-158
Sweetwater River, geology near ...................................... H, Ann 4, pp 29-34
Tertiary of, fossil vertebrates of .................................. H, Ann 5, pp 353-372
Teton River, course and character of.................................LOR, 1868, p 227; H, Ann 2, p 73
Thompson Plateau, geology of ........................................H, Ann 11, pp 538-539
Togwotee Pass, geology near ........................................H, Ann 11, pp 471-473
triangulation in .......................................................H, Ann 11, pp 651-672
Twin Creek, geology near ...........................................H, Ann 11, pp 575-576
Two Ocean Pass, discussion of ....................................H, Bull, vol v, no 2, pp 223-225
Uinta Mountains, geology of .......................................H, Ann 4, pp 41-54
vertebrata, fossil, of the Eocene of ................................H, Ann 6, pp 543-649
Warm Springs Creek, geology near ................................H, Ann 12, i, pp 235-237
Washakie Basin, geology of ..........................................K, n, pp 207-222
Washburn Range, geology of ........................................H, Ann 12, ii, pp 32-35
topographic features of ..............................................H, Ann 12, ii, p 478
Wind River Basin, geology of .......................................H, Ann 12, i, pp 255-269
Wind River district, geology of ....................................H, Ann 12, i, pp 175-269
Wind River Range, geology of ......................................H, Ann 11, pp 64-94, 524-525; H, Ann 12, i, pp 228-254
strata exposed in ......................................................H, Ann 6, pp 19-21
Wyoming Range, geology of ..........................................H, Ann 11, pp 540-542; H, Ann 12, i, pp 178-201
topographic features of ..............................................H, Ann 11, pp 693-694
Yellowstone River, course and character of ......................LOR, 1868, p 226; H, Ann 2, p 72
topography near .........................................................H, Ann 12, ii, pp 475-478
Yellowstone Valley, geology of ....................................H, Ann 12, ii, pp 35-42
(See, also, Fortieth Parallel region; Yellowstone Park.)
Wyoming conglomerate in Wyoming ..................................H, Ann 11, p 133; K, ii, pp 71-72
topographic features of ..............................................H, Ann 11, pp 693-694
Yakutat language, vocabulary of ....................................Eth, i, pp 121-133
(See, also, Ethnology and archaeology.)
Yampa Plateau, Colorado, geology of ...............................K, ii, pp 282-286
structure of .............................................................UM, pp 202-203
Yampa River, Colorado, geology of valley of upper .............K, ii, pp 181-187
Yampa River district, Colorado, topographic report on .........H, Ann 10, pp 359-378
Yampa Valley and Browns Park, Colorado, geology of ..........K, ii, pp 222-225
Yarrow (H. C.), notes upon geographical distribution and variation with regard to the zoology of the Western United States as relates more particularly to mammals and birds .............W, v, pp 23-34
notice of a ruined pueblo and an ancient burial place in the valley of the Rio Chama ..................................................W, vii, pp 362-365
pueblo of San Juan ....................................................W, vii, p 331
pueblo of Taos ..........................................................W, vii, pp 327-330
report on ethnological examinations in the vicinity of Santa Barbara, California ..................................W, 1876, pp 312-321
report upon ethnological researches near Santa Barbara, California ..................................W, vii, pp 52-47
report upon the collections of batrachians and reptiles made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, 1871-1874 .........................................................W, v, pp 509-584
report upon the collections of terrestrial and fluviatile Mollusca made in portions of Colorado, Utah, New Mexico, and Arizona, 1872-1874 .........................................................W, v, pp 923-954
work in charge of .....................................................W, 1872, pp 52-55; W, 1874, pp 107-110; W, 1875, pp 139-149
Yarrow (H. C.) and Cope (E. D.), report upon the collections of fishes made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, 1871-1874. 

Yarrow (H. C.) and Coues (E.), notes on the herpetology of Dakota and Montana. 

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Yarrow (H. C.) and Severance (M. S.), notes upon human crania and skeletons collected by the expeditions of 1872-1874. 

Yellow Pine district, Nevada, notes on. 

Yellowstone Park, access to, by railroads, means of. 

Yellowstone region, meteorology of. 

Yellowstone River, course and character of. 

Zapus hudsonius, account, critical, descriptive, and historical of. 

Zeolite, analysis of, from New Mexico, Abiquiu. 

Zircon, analysis of, from Colorado. 

Zirkel (F.), microscopical petrography of Fortieth Parallel region. 

Zoology of Western United States, geographical distribution and variation in. 

Young (W.), report of. 

Zuni, pueblo of, cachina (a dance) at. 

Zygaenidae and Bombycidae collected in portions of California and Arizona.

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