

**Selected Research Publication Series of the
U.S. Fish and Wildlife Service, 1889–1985**

Compiled by Thomas J. Cortese
Barbara A. Groshek



UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Resource Publication 159
Washington, DC • 1987

Preface

This bibliography provides a detailed record of publications in 10 selected Research and Development series produced by the U.S. Fish and Wildlife Service and its predecessor agencies in the Department of the Interior or the Department of Agriculture. Some of the series, published before the establishment of the Service, are primarily of historical interest. The more than 2,000 citations referenced demonstrate the variety, scope, and depth of research undertaken by the Service, and reflect the changing emphases in fish and wildlife research since 1889—from husbandry and predator control to sophisticated applications of new technologies.

The annotated list of publications in each series is preceded by a short introduction that includes a brief history of the series. Listings are complete through December 1985, after which some series titles were changed. Author, species, and subject indexes are provided under a separate cover.

Thomas J. Cortese
Barbara A. Groshek

Acknowledgments

We are grateful to Marla Chenot and Mark Schaefer, Fort Collins, Colorado, for collecting information for this compilation; to Joyce Mann, National Fisheries Center–Leetown, West Virginia, for preparing the *Fish Disease Leaflet* portion; and to Dora Ibarra, National Ecology Center, Fort Collins, Colorado, for helping to prepare the *FWS/OBS* section for the now inactive Office of Biological Services.

Contents

	Page
Preface	ii
Acknowledgments	iii
Abstract	1
History of the Fish and Wildlife Service	1
Research and Development Series	3
Series and Availability	3
Series Description	4
Bibliography	7
<i>North American Fauna</i>	8
<i>Wildlife Research Report</i>	14
<i>Research Report</i>	17
<i>Special Scientific Report—Wildlife</i>	24
<i>Technical Paper</i>	41
<i>Resource Publication</i>	52
<i>Wildlife Leaflet</i>	65
<i>Fish Disease Leaflet</i>	92
<i>Investigations in Fish Control</i>	95
<i>FWS/OBS</i>	104
Appendix A. Research and Development Facilities	158
Appendix B. Federal Government Regional Depository Libraries	161

Selected Research Publication Series of the U.S. Fish and Wildlife Service, 1889–1985

compiled by

Thomas J. Cortese

*Office of Information Transfer
U.S. Fish and Wildlife Service
1025 Pennock Place, Suite 212
Fort Collins, Colorado 80524*

Barbara A. Groshek

*Department of Fishery and Wildlife Biology
Wagar Building
Colorado State University
Fort Collins, Colorado 80523*

Abstract

This bibliography includes annotated citations for 2,037 scientific and technical publications from 10 selected series issued by the U.S. Fish and Wildlife Service. Included are a history of the evolution of the Service, information on publication availability, description of the series, and addresses of Research and Development facilities. Indexes to authors, species, and subjects are provided under a separate cover.

History of the U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service is the principal agency through which the Federal Government carries out its responsibilities to conserve, protect, and enhance the Nation's fish and wildlife and their habitats for the continuing benefit of the people. Specifically, the Service manages migratory birds, endangered species, certain marine mammals, and freshwater and anadromous fishes.

The Service's origin can be traced back to the creation of the U.S. Commission on Fish and Fisheries in 1871 and the Office of Economic Ornithology, Division of Entomology, Department of Agriculture in 1885 (Fig. 1). The U.S. Commission on Fish and Fisheries was established to study the decrease of the Nation's food fishes and to recommend ways of reversing the decline. It was transferred to the

Department of Commerce in 1903 and renamed the Bureau of Fisheries. The Division of Economic Ornithology and Mammalogy was established primarily to study the food habits, distribution, and migration of birds and mammals—especially those that had an impact on agriculture. The Division gradually accumulated responsibilities and underwent several name changes before it was renamed the Bureau of Biological Survey in 1905. In addition to studying the abundance, distribution, and habitats of birds and mammals, the Survey managed the Nation's first wildlife refuges, controlled predators, enforced wildlife laws, and conserved dwindling populations of ducks, and geese, and other migratory birds.

The Bureau of Fisheries of the Department of Commerce and the Bureau of Biological Survey of the Department of Agriculture were transferred to the Department of the Interior in 1939; the two

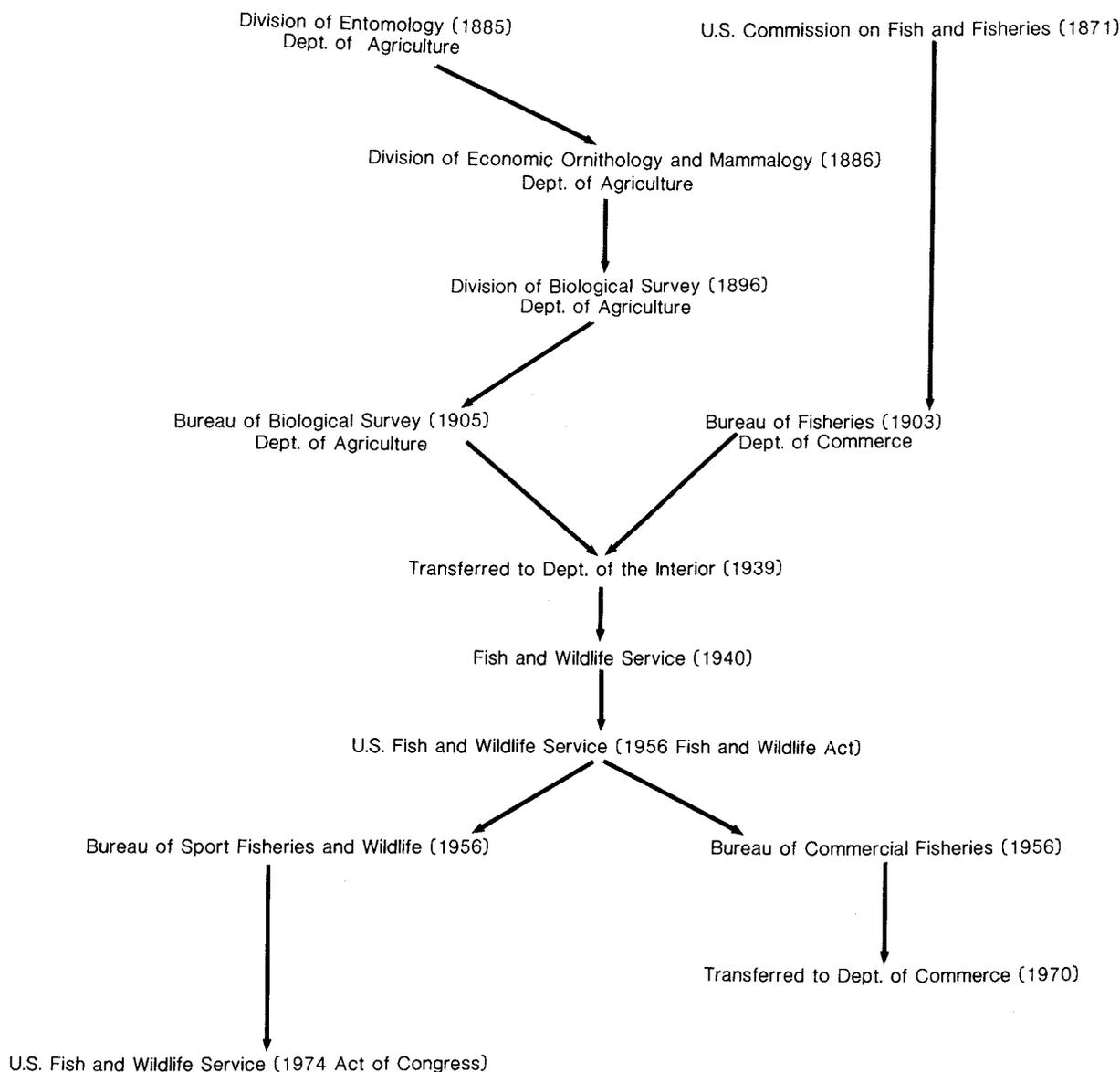


Fig. 1. History of the U.S. Fish and Wildlife Service. (Adapted from W.J. Chandler. 1985. *The U.S. Fish and Wildlife Service*. Audubon Wildlife Report 1985. The National Audubon Society, New York.)

bureaus were combined and named the Fish and Wildlife Service in 1940. Further reorganization came in 1956 when the Fish and Wildlife Act created the U.S. Fish and Wildlife Service. The conflict between sport and commercial fishing led to compromise legislation that divided the U.S. Fish and Wildlife Service into two bureaus—Commercial Fisheries and Sport Fisheries and Wildlife. The

Bureau of Commercial Fisheries was transferred to the Department of Commerce in 1970 to put all marine fishery activities—commercial and sport—into one agency. The Bureau of Sport Fisheries and Wildlife remained in the Department of the Interior. In accordance with the 1974 Act of Congress, the agency retained the earlier name, U.S. Fish and Wildlife Service.

In 1987, The Service consisted of a headquarters office in Washington, D.C., 8 regional offices, 13 major research centers, more than 40 cooperative research units, a variety of field offices, other installations that included national wildlife refuges and National Fish Hatcheries, and a nationwide law enforcement network.

Research and Development Series

Many of the publications listed are out of print; others may be available only in limited quantities. (In 1985, two pairs of series publications were combined and the names of two others were changed, as shown in Table 1; a description of the series as arranged in 1985 is shown in Table 2.)

Series Titles

North American Fauna
Special Scientific Report—Wildlife
Technical Paper
Research Report
Wildlife Research Report
Wildlife Leaflet
Resource Publication
Investigations in Fish Control
Fish Disease Leaflet
FWS/OBS

Availability of Publications

Many of the publications cited in this bibliography are out of print. Copies of most are available on loan from any of the Federal Government Regional Depository Libraries listed in Appendix B (p. 161), and from other Federal Government Depository Libraries throughout the United States. For more information contact:

U.S. Government Printing Office
 Library Program Services (SLLA)
 Jackson Alley, Room A-150
 Washington, DC 20401
 (202) 275-1040 or FTS 275-1040

Copies of certain publications listed here are available for purchase (photocopies or microform) from the National Technical Information Service: *FWS/OBS* beginning with 76/01.1; *Resource Publication* beginning with number 152; and all Research and Development series publications, except *Investigations in Fish Control* and *Fish Disease*

Leaflet, beginning in 1984. For information contact:

U.S. Department of Commerce
 National Technical Information Service
 5285 Port Royal Road
 Springfield, VA 22161
 (703) 487-4650 or FTS 737-4650

The following Research Centers have limited supplies of the series indicated for free distribution:

Investigations in Fish Control: U.S. Fish and Wildlife Service, National Fisheries Research Center, Office of Technical Information, P.O. Box 818, LaCrosse, WI 54601. (608) 783-6451.

Fish Disease Leaflet: U.S. Fish and Wildlife Service, National Fisheries Center—Leetown, Technical Information Service, Box 700, Kearneysville, WV 25430. (304) 725-8461 or FTS 925-5211.

FWS/OBS: U.S. Fish and Wildlife Service, Office of Information Transfer, Research and Development Publications Management Coordinator, 1025 Pennock Place, Suite 212, Fort Collins, CO 80524. (303) 493-8401 or FTS 323-5401.

Some series publications, except *Biological Report*, *Fish Disease Leaflet*, and *Investigations in Fish Control*, are available at no charge from:

U.S. Fish and Wildlife Service
 Publications Unit
 Matomic Building, Room 148
 Washington, DC 20240
 (202) 253-6306 or FTS 254-6306

Publication Requests

When making request for publications please include the series name, number, author(s), and complete title. (Where telephone numbers are given above, FTS refers to the Federal Telecommunications Network.)

Table 1. Changes in names of Research and Development publications in 1985.

Former Name	New Name
<i>Wildlife Leaflet</i>	<i>Fish and Wildlife Leaflet</i>
<i>Research Report</i>	<i>Fish and Wildlife</i>
<i>Wildlife Research Report</i>	<i>Research</i>
<i>Technical Paper</i>	<i>Fish and Wildlife</i>
<i>Special Scientific Report—Wildlife</i>	<i>Technical Report</i>
<i>FWS/OBS</i>	<i>Biological Report</i>

Table 2. Description of publication series in Research and Development, 1985.

Series	Intended audience	Content	Presentation, format, and distribution
<i>North American Fauna</i>	Scientists, resource managers with technical background	Monographs; reports on long-term or basic research on life history, distribution, population dynamics, and taxonomy of animals, usually vertebrates.	Usually lengthy or may contain several titles under a single cover. Typeset. Presentation often includes much tabular and graphic material. Distributed to FWS, resource biologists, and author's distribution plan.
<i>Fish and Wildlife Research</i>	Scientists, resource managers with technical background	Scientific and technical reports; original research of scholarly quality; interpretive literature reviews or theoretical presentations.	Usually more than 25 printed pages per title; may contain several titles under a single cover. Typeset. Halftones or line drawings on blue, coated cover stock. Distributed to FWS, resource biologists, and author's distribution plan.
<i>Fish and Wildlife Technical Report</i>	Scientists, management personnel with technical background	Reports of investigations related to fish or wildlife; more limited in scope than those in <i>Fish and Wildlife Research</i> series. Typical subjects include advances in knowledge arising as by-products of broader studies, status or data reports, surveys, and techniques; and proceedings of technical conferences.	Usually less than 25 printed pages per title. Normally only one title per issue. Usually typeset, but lengthy tabular material or appendixes might be produced from typewritten copy. Halftones or line drawings on mauve, coated cover stock. Distributed to FWS, resource biologists, and author's distribution plan.
<i>Resource Publication</i>	Scientists, resource management personnel, lay public	Semitechnical or instructional material, lengthy reports, or material that requires numerous halftone or color illustrations. Typical products are guides, handbooks, bibliographies, manuals, historical reports, popular articles, and proceedings of nontechnical workshops or conferences.	Often lengthy. Usually typeset but extensive tables may be produced from typewritten copy. Halftones or line drawings on orange, coated cover stock. Distribution to FWS, resource biologists, public sale, and wildlife extension agents as depending on subject matter.

<i>Fish and Wildlife Leaflet</i>	Resource management personnel, technical personnel, lay public	Informational articles, primarily summaries of technical information for nontechnical readers. Each leaflet deals with a single subject. Typical subjects include topics of current interest, inventory and survey results, management techniques, and descriptions of imported fish or wildlife and their diseases.	Usually less than 12 pages with a single title per issue. May be either typeset or produced from typewritten copy. Distribution to FWS, short request list, and through fish and wildlife extension agents or public affairs officers.
<i>Investigations in Fish Control</i>	Scientists, management personnel with technical background	Technical reports on fish control research conducted primarily at the National Fishery Research Center-LaCrosse, Wisconsin.	Usually several brief papers in one issue. Typeset on matte paper. Tabular presentation frequent, but usually without halftones or line drawings. Distributed by National Fishery Research Center-LaCrosse, Wisconsin.
<i>Fish Disease Leaflet</i>	Management personnel with technical background	Summaries on specific fish disease problems (usually with an annotated bibliography); prepared mainly by the National Fish Health Research Center-Leetown, Kearneysville, West Virginia.	Usually brief, single-topic treatment in each issue. May be either typeset or produced from typewritten copy. Usually descriptive with no tables, halftones, or line drawings. Distribution by the National Fish Health Research Center-Leetown, Kearneysville, West Virginia.
<i>Biological Report</i>	Resource management personnel, technical personnel, lay public	Reports on the results of applied research, developments in technology, and ecological surveys and inventories of effects of land-use changes on fishery and wildlife resources. May include proceedings of workshops, technical conferences, or symposia; and interpretive bibliographies. Includes resource and wetland inventory maps.	Length variable. Usually a single title or subject per issue. Usually produced from word-processed copy, but may be typeset. Maps may be produced in multiple colors. A standard cover and format are used, although individual sub-series may have a distinctive format. Distributed according to author's distribution plan and responses to product announcements sent throughout the Service.

Table 3. Research and Development Centers of the U.S. Fish and Wildlife Service, September 1987.

Cooperative Fish and Wildlife Research Units Center Matomic Building Room 527 Washington, DC 20240	National Wetlands Research Center (Formerly National Coastal Ecosystems Team) NASA-Slidell Computer Complex 1010 Gause Boulevard Slidell, LA 70458
National Fisheries Center-Great Lakes (Formerly Great Lakes Fishery Laboratory) 1451 Green Road Ann Arbor, MI 48105	Alaska Fish and Wildlife Research Center 1011 East Tudor Road Anchorage, AK 99503
National Fisheries Center-Gainesville 7920 N.W. 21st Street Gainesville, FL 23606	National Ecology Research Center (Formerly Western Energy and Land Use Team) 2627 Redwing Road, Creekside One Fort Collins, CO 80526-2899
National Fisheries Center-Leetown Box 700 Kearneysville, WV 25430	National Wildlife Health Center (Formerly National Wildlife Health Laboratory) 6006 Schroeder Road Madison, WI 53711
National Fisheries Contaminant Research Center (Formerly Columbia National Fishery Research Laboratory) Route 1 Columbia, MO 65201	Northern Prairie Wildlife Research Center P.O. Box 2096 Jamestown, ND 58402
National Fishery Research Center-LaCrosse (Formerly National Fishery Research Laboratory) P.O. Box 818 LaCrosse, WI 54602-0818	Patuxent Wildlife Research Center Laurel, MD 20708
National Fishery Research Center-Seattle (Formerly Seattle National Fishery Research Center) Building 204, Naval Station Seattle, WA 98115	

Bibliography

North American Fauna

The *North American Fauna* series includes monographs and other reports of scientific investigations relating to North American vertebrates, invertebrates, plants, and biogeography. Investigation topics include basic research about life history, distribution, population dynamics, and taxonomy. Several titles may be included under a single cover. Publications are typeset and include tabular material and graphics. Standard size is 15 × 23 cm (6 × 9 in.) and length varies. The intended audience is research scientists. First issued in 1889 by the Division of Economic Ornithology and Mammalogy (Department of Agriculture) the series was continued by the Bureau of Biological Survey, and later, the Bureau of Sport Fisheries and Wildlife (Department of the Interior).

1. MERRIAM, C. H. 1889. Revision of the North American pocket mice. 40 pp.
Reviews taxonomy of pocket mice (genus *Perognathus*) and provides key based on cranial characteristics. Introduces 12 new (1889) species: *P. bimaculatus*, *P. apache*, *P. inornatus*, *P. olivaceus*, *P. formosus*, *P. intermedius*, *P. fallax*, *P. obscurus*, *P. spinatus*, *P. paradoxus*, *P. californicus*, and *P. armatus*; three new subspecies are: *P. fasciatus flavescens*, *P. olivaceus amoenus*, and *P. paradoxus spilotus*.
2. MERRIAM, C. H. 1889. Descriptions of fourteen new species and one new genus of North American mammals. 52 pp.
Describes and discusses 1 new (1889) genus, 13 new species, and 1 new subspecies of North American mammals: *Onychomys longipes*, *O. longicaudus*, *O. leucogaster melanophrys*, *Arctomys dacota*, *Lagomys schisticeps*, *Spermophilus mohavensis*, *S. neglectus*, *Tamias leucurus*, *Nyctinomys femorosaccus*, *N. mohavensis*, *Phenacomys*, *P. intermedius*, *P. celatus*, *P. latimanus*, and *P. ungava*. Provides diagnosis of genus *Onychomys*.
3. MERRIAM, C. H., AND L. STEINEGER. 1890. Results of a biological survey of the San Francisco Mountain Region and Desert of the Little Colorado, Arizona. 208 pp.
Discusses general physical features of the San Francisco Mountain Region of Arizona, its zones, species and origin of flora and fauna in each zone, and climate. Makes generalizations concerning distribution of flora and fauna in North America. Includes annotated list of mammals, birds, reptiles, and amphibians of the San Francisco Mountain Plateau and Little Colorado Desert, with new (1890) species described. Describes Grand Canyon area and lists its mammals and birds.
4. MERRIAM, C. H. 1890. Descriptions of twenty-six new species of North American mammals. 67 pp.
Revises the genus *Spilogale* (little striped skunks) and describes six new (1890) species: *S. ringens*, *S. indianola*, *S. lucasana*, *S. leucoparia*, *S. saxatilis*, and *S. phenax*, and one new subspecies: *S. p. latifrons*. Also describes new species and subspecies of other genera: *Tamias castanuris*, *T. chrysoideirus*, *T. cinerascens*, *T. interpres*, *T. minimus melanurus*, *Evotomys galei*, *E. occidentalis*, *E. californicus*, *Mustela caurina*, *Molossus californicus*, *Cynomys leucurus*, *Spermophilus canescens*, *S. spilosoma macrospilatus*, *S. s. major*, *Dipodomys ambiguus*, *D. spectabilis*, *D. californicus*, *Geomys bursarius lutescens*, and *Hesperomys macropus*.
5. MERRIAM, C. H., AND L. STEINEGER. 1891. Results of a biological reconnaissance of south-central Idaho.
MERRIAM, C. H. Descriptions of a new genus and two new species of North American mammals. 138 pp.
Describes flora and fauna of the region and includes six life zones for Idaho. Provides annotated lists of mammals, birds, reptiles, and amphibians. Describes a new (1891) genus and two new species of mammals: *Microdipodops*, *M. megacephalus*, and *Evotomys gapperi brevicaudus*.
6. [Not issued]
7. FISHER, A. K., L. STEINEGER, C. H. GILBERT, C. V. RILEY, R. E. C. STEARNS, C. H. MERRIAM, AND T. S. PALMER. 1893. The Death Valley expedition: a biological survey of parts of California, Nevada, Arizona, and Utah. Part II: 1) Birds, 2) Reptiles and batrachians, 3) Fishes, 4) Insects, 5) Mollusks, 6) Desert trees and shrubs, 7) Desert cactuses and yuccas, 8) Lists of localities. 438 pp.
Describes birds, reptiles, amphibians, fishes, insects, mollusks, trees, shrubs, cacti, and yuccas; and the localities of California, Nevada, and western Utah and Arizona in which they are found.

8. MERRIAM, C. H. 1895. Revision of the pocket gophers, family Geomyidae (exclusive of the species of *Thomomys*). 264 pp.
Describes the taxonomy, biology, food habits, distribution in the United States and Mexico, and color phases of the family Geomyidae. Includes extensive sections on skull morphology and dentition. Provides systematic descriptions of genera and species.
9. [Not issued]
10. MERRIAM, C. H. 1895. Revision of the shrews of the American genera *Blarina* and *Notiosorex*. MILLER, G. S., JR. The long-tailed shrews of the eastern U.S. MERRIAM, C. H. Synopsis of the American shrews of the genus *Sorex*. 124 pp.
Reviews taxonomy, distribution, and description of genera *Blarina*, *Notiosorex*, and *Sorex*. Provides keys for *Blarina* and *Sorex*.
11. MERRIAM, C. H. 1896. Synopsis of the weasels of North America. 54 pp.
Provides a key to the subgenera *Putorius* (ferrets) and *Ictis* (weasels), and offers a list of North American weasels. Describes species of subgenera and includes table of cranial measurements.
12. MILLER, G. S., JR. 1896. The genera and subgenera of voles and lemmings. 89 pp.
Describes the subfamily Microtinae and its main divisions, lists genera and subgenera, and discusses distribution, habits, nomenclature, historical taxonomy, and characters on which 1896 classification of *Microtus* was based. Provides key and descriptions of genera and subgenera.
13. MILLER, G. S., JR. 1897. Revision of the North American bats of the family Vespertilionidae. 147 pp.
Discusses specimens; color variation as a result of preservation; sexual, age, and geographic variation; geographic distribution and migration; and measurements. Provides names and descriptions of genera, subgenera, species, and subspecies.
14. NELSON, E. W., L. STEINEGER, M. J. RATHBURN, J. N. ROSE, AND E. W. NELSON. 1899. Natural history of the Tres Marias Islands, Mexico: general account of the Islands with reports on mammals and birds. 1) Reptiles, 2) Note on crustacea, 3) Plants, 4) Bibliography. 97 pp.
Provides a general description of Tres Marias Islands and annotated lists of mammals, birds, reptiles, crustaceans, and plants.
15. PREBLE, E. A. 1899. Revision of the jumping mice of the genus *Zapus*. 43 pp.
Describes the genus *Zapus* and discusses history, distribution, and habits. Provides a list of genera, species, and subspecies; a key to subgenera, including two new (1899) subgenera (*Napaeozapus* and *Eozapus*); and descriptions of species.
16. MERRIAM, C. H. 1899. Results of a biological survey of Mount Shasta, California. 179 pp.
Describes topography, forests, slope exposure, and life zones of the Shasta Mountain region. Contrasts the flora and fauna with those of the Sierra and Cascade regions. Briefly covers forest fire effects on zones; Klamath Gap as a barrier; and faunal origins of the Shasta, Sierra, and Cascade regions. Provides annotated lists of mammals and birds, and notes on distribution of plants.
17. BAILEY, V. 1900. Revision of American voles of the genus *Microtus*. 88 pp.
Discusses breeding, food habits, and the economic status of the genus *Microtus*. Provides keys to subgenera, species, and subspecies, and describes the species.
18. OSGOOD, W. H. 1900. Revision of the pocket mice of the genus *Perognathus*. 81 pp.
Discusses history, specimens, distribution, color, pelages, habits, classification, and new (1900) species of the genus *Perognathus*. Provides a key to species and subspecies, their descriptions, and locations.
19. OSGOOD, W. H. 1900. Results of a biological reconnaissance of the Yukon region; general account of the region. BISHOP, L. B. Annotated list of birds. 100 pp.
Describes faunal districts and new (1900) species, and provides annotated lists of birds and mammals.
20. HOWELL, A. H. 1901. Revision of the skunks of the genus *Chincha* [*Mephitis*]. 80 pp.
Discusses history, distribution, habits, morphology, specimens, and nomenclature of the genus *Mephitis* (formerly *Chincha*). Provides a key to species and subspecies, their descriptions, and locations.
21. OSGOOD, W. H. 1901. Natural history of the Queen Charlotte Islands, British Columbia; and natural history of the Cook Inlet region, Alaska. 87 pp.
Discusses physiography, flora, fauna, and life zones of Queen Charlotte Islands and Cook Inlet region. Provides annotated bird and mammal lists for both regions.
22. PREBLE, E. A. 1902. A biological investigation of the Hudson Bay region. 140 pp.
Briefly describes the region traversed and discusses life zones, previous work, and new species. Provides annotated lists of mammals, birds, and amphibians, and a bibliography.

10 North American Fauna

23. PALMER, T. S. 1904. Index generum mammalium: a list of the genera and families of mammals. 984 pp.
Discusses history of taxonomy and provides: 1) annotated list of generic names of mammals, 2) alphabetical list of families of mammals, and 3) classified list of generic names, arranged by orders and families.
24. OSGOOD, W. H. 1904. A biological reconnaissance of the base of the Alaska Peninsula. 86 pp.
Describes author's journey, area studied, life zones, and previous work. Provides annotated lists of birds and mammals.
25. BAILEY, V. 1905. Biological survey of Texas: life zones, with characteristic species of mammals, birds, reptiles, and plants. 222 pp.
Describes life zones and lists their mammals, birds, lizards, snakes, and plants. Provides a report on the Biological Survey collection of lizards, and an annotated mammals list.
26. HOWELL, A. H. 1906. Revision of the skunks of the genus *Spilogale*. 65 pp.
Discusses history, specimens, distribution, habits, food, morphology, and nomenclature of the genus *Spilogale*. Provides a key to species and subspecies, their descriptions, and locations.
27. PREBLE, E. A. 1908. A biological investigation of the Athabaska-Mackenzie region. 574 pp.
Describes the geography and climate of the Mackenzie Basin, Canada, and the life zones of the entire Athabaska-Mackenzie region. Discusses previous explorations and collections, and describes the route covered by Biological Survey parties of 1901, 1903, and 1904. Provides annotated lists of mammals, birds, reptiles, amphibians, fishes, trees, and shrubs. Includes a bibliography.
28. OSGOOD, W. H. 1909. Revision of the mice of the American genus *Peromyscus*. 285 pp.
Discusses specimens, history, nomenclature, variation, pelages, colors, measurements, habits, economic status, keys, specimen records, and subgenera of white-footed or deer mice. Describes and gives locations of species and subspecies.
29. NELSON, E. W. 1909. The rabbits of North America. 314 pp.
Discusses the following aspects of North American rabbits: 1) relations with agriculture, 2) distribution, 3) habits, 4) diseases, 5) color, 6) dichromatism, 7) molts, 8) variation, 9) skull characters, and 10) genera and subgenera. Provides a key to species and subspecies, their descriptions, and locations.
30. OSGOOD, W. H. 1909. Biological investigations in Alaska and Yukon Territory: 1. East-central Alaska; 2. Ogilvie Range, Yukon; 3. Macmillan River, Yukon. 96 pp.
Provides a general description and annotated bird and mammal lists for east-central Alaska; and the Ogilvie Range and Macmillan River, Yukon Territory.
31. GOLDMAN, E. A. 1910. Revision of the wood rats of the genus *Neotoma*. 124 pp.
Discusses specimens, history, distribution, habits, economic status, and morphology of wood rats. Provides keys to subgenera, species, and subspecies; lists species and subspecies and their locations; and describes species.
32. HOLLISTER, N. 1911. A systematic synopsis of the muskrats. 47 pp.
Discusses history, distribution, habits, economic status, morphology, and fossils of Muskrats (*Neofiber* or *Fiber*). Provides a key to species and subspecies, lists their locations, and describes existing and fossil species.
33. CARY, M. 1911. A biological survey of Colorado. 256 pp.
Characterizes five life zones, defines their extent and limits, and discusses their agricultural and economic possibilities. Lists Colorado mammals and provides notes on their habits, distribution, and economic relations. Lists principal observed trees and shrubs of Colorado. Includes mammal distribution maps.
34. GOLDMAN, E. A. 1911. Revision of the spiny pocket mice (genera *Heteromys* and *Liomys*). 70 pp.
Discusses history, specimens, habits, economic status, color, pelages, measurements, and subgenera of spiny pocket mice. Provides keys to genera, subgenera, species, and subspecies; lists species and subspecies locations; and describes species.
35. BAILEY, V. 1913. Life zones and crop zones of New Mexico. 100 pp.
Discusses geography, climate, agricultural practices, and crops of each life zone in New Mexico. Provides mammal, breeding bird, reptile, amphibian, and plant species list for each zone. Includes a life zone map.
36. HOWELL, A. H. 1914. Revision of the American harvest mice (genus *Reithrodontomys*). 97 pp.
Discusses history, specimens, habits, economic status, food, and pelages of American harvest mice. Lists locations and provides a key to species and subspecies, and provides species descriptions.
37. HOWELL, A. H. 1915. Revision of the American marmots. 80 pp.

- Discusses history, nomenclature, common names, habits, external characters, and specimens of American marmots. Describes, lists locations, and provides a key to species and subspecies.
38. JACKSON, H. H. T. 1915. A review of the American moles. 100 pp.
Discusses habits; economic status; characteristics and development of young; pelages and molts; and geographic, individual, sexual, and age variation. Describes subfamilies, history, and generic names of the family Talpidae. Describes, lists locations, and provides a key for genera, species, and subspecies.
39. BAILEY, V. 1915. Revision of the pocket gophers of the genus *Thomomys*. 136 pp.
Describes habits, predators, morphology, sexual variation, pelages, and distribution of pocket gophers. Describes genera and group relations. Describes, lists locations and distribution, and provides a key for species and subspecies.
40. HOLLISTER, N. 1916. A systematic account of the prairie-dogs. 37 pp.
Discusses distribution, habits, economic status, predators, nomenclature, specimens, and pelages of prairie dogs. Describes, lists locations, and provides a key for species and subspecies.
41. MERRIAM, C. H. 1918. Review of the grizzly and big brown bears of North America (genus *Ursus*), with description of a new genus, *Vetularctos*. 136 pp.
Discusses distribution, sexual and age differences, specimens, and classification of North American grizzly and big brown bears. Describes and lists locations of species and subspecies. Mentions *Vetularctos*, a new genus related to *Ursus*.
42. CARY, M. 1917. Life zone investigations in Wyoming. 95 pp.
Characterizes five transcontinental life zones in Wyoming; defines their extent and limits; lists mammal, breeding bird, reptile, amphibian, and plant species; and provides notes on distribution and abundance of trees observed during the survey.
43. GOLDMAN, E. A. 1918. The rice rats of North America (genus *Oryzomys*). 100 pp.
Discusses habits, economic status, morphology, variation, history, and specimens of North American rice rats. Provides a key and descriptions for species and subspecies.
44. HOWELL, A. H. 1918. Revision of American flying squirrels. 64 pp.
Discusses habits, nests, breeding, food, economic status, pelage, molt, and specimens of American flying squirrels (*Glaucomys*). Describes history, nomenclature, and characters of *Glaucomys*. Provides a list of locations, descriptions, and a key to species and subspecies.
45. HOWELL, A. H. 1921. A biological survey of Alabama: I. Physiography and life zones. II. The mammals. 88 pp.
Briefly discusses physiography, life zones, and mammals of Alabama. Provides an annotated species list of mammals.
46. PREBLE, E. A., W. L. MCATEE, ET AL. 1923. A biological survey of the Pribilof Islands, Alaska: I. Birds and mammals. II. Insects, arachnids, and chilopods. 255 pp.
Describes region and life zone relations of species found on Pribilof Islands, Alaska. Provides annotated species lists of birds, mammals, insects, arachnids, and chilopods.
47. HOWELL, A. H. 1924. Revision of the American pikas (genus *Ochotona*). 67 pp.
Discusses distribution, habitat, habits, pelage, molt, specimens, history, and nomenclature of pikas. Provides descriptions, locations, and a key for species and subspecies.
48. HOWELL, A. B. 1926. Voles of the Genus *Phenacomys*: I. Revision of the genus *Phenacomys*. II. Life history of the red tree mouse (*Phenacomys longicaudus*). 82 pp.
Discusses distribution, habits, specimens, history, morphology, and variations of voles of the genus *Phenacomys*. Describes, lists locations, and provides a key for species and subspecies. Describes and discusses nests, food habits of young, and predators of the red tree mouse.
49. BAILEY, V. 1926. A biological survey of North Dakota: I. Physiography and life zones. II. The mammals. 247 pp.
Discusses the physiography and life zones of North Dakota, with a map of life zones. Provides a list of mammals, which includes a brief description of each animal, its distribution, abundance, habitat, and habits.
50. HOWELL, A. B. 1927. Revision of the American lemming mice (genus *Synaptomys*). 51 pp.
Discusses distribution, habits, specimens, history, morphology, and variation of American lemming mice. Provides a subgenera key. Provides descriptions, locations, and a key for species and subspecies.
51. JACKSON, H. H. T. 1928. A taxonomic review of the American long-tailed shrews (genera *Sorex* and *Microsorex*). 275 pp.
Briefly discusses distribution, habitat, habits, food, economic status, young, and specimens of

12 North American Fauna

- American long-tailed shrews. Describes pelages, molts, history, and variation of long-tailed shrews, and mentions family Soricidae. Lists locations and provides a key to genera, species, and subspecies. Includes descriptions of species and subspecies.
52. HOWELL, A. H. 1929. Revision of the American chipmunks (genera *Tamias* and *Eutamias*). 157 pp.
Discusses geographic distribution, life history, history, nomenclature and morphology of American chipmunks. Provides keys to genera, subgenera, species, and subspecies. Includes species and subspecies descriptions and locations.
53. BAILEY, V. 1931. Mammals of New Mexico. 412 pp.
Discusses mammal collectors and collections, geographic variation, useful and injurious species, game protection, control of noxious species, and problems in mammalian study. Provides annotated list of mammal species.
54. MURIE, O. J. 1935. Alaska-Yukon caribou. 93 pp.
Describes the caribou (*Rangifer tarandus*), its relation to man, status, abundance, breeding, food, migratory habits, habitat, distribution, and taxonomic status. Briefly discusses the caribou of British Columbia and Alberta.
55. BAILEY, V. 1936. The mammals and life zones of Oregon. 416 pp.
Describes life zones and their characteristic mammals, birds, and plants. Provides annotated list of mammal species.
56. HOWELL, A. H. 1938. Revision of the North American ground squirrels, with a classification of the North American Sciuridae. 256 pp.
Describes distribution of ground squirrels and discusses habits and economic status of individual species. Provides a classification of Sciuridae and descriptions of species and subspecies.
57. LEHMANN, V. W. 1941. Attwater's prairie-chicken—its life history and management. 65 pp.
Describes taxonomic distinction, former abundance, and former and present distributions of Attwater's prairie-chicken (*Tympanuchus cupido attwateri*). Discusses habits, habitat requirements, and limiting factors; and management, including protection, habitat improvement, predator control, harvest, and restocking.
58. NEFF, J. A. 1947. Habits, food, and economic status of the band-tailed pigeon. 76 pp.
Describes the band-tailed pigeon (*Columba fasciata*) and its habits, predators, diseases, and distribution. Discusses food habits in detail, including mineral salt use, results of stomach and crop analysis, gravel use, and seasonal food preferences.
- Discusses the value of the band-tailed pigeon as a game bird, and its effect on crop depredations.
59. GOLDMAN, E. A. 1947. The pocket gophers (genus *Thomomys*) of Arizona. 39 pp.
Discusses Arizona pocket gopher groups and their economic status. Provides species and subspecies descriptions.
60. GOLDMAN, E. A., AND H. T. JACKSON. 1950. Raccoons of North and Middle America. 153 pp.
Discusses history, habits, economic status, morphology, and specimens of raccoons (*Procyon*). Provides a key to subgenera, species, and subspecies; and descriptions and locations for species and subspecies.
61. MURIE, O. J. 1959. Fauna of the Aleutian Islands and Alaska Peninsula.
SCHEFFER, V. B. Invertebrates and fishes collected in the Aleutians, 1936-38. 406 pp.
Discusses geography, geology, climate, environment, biotic distribution, and vegetation of the Aleutian Islands and Alaska Peninsula. Provides annotated species lists for birds, mammals, and marine, freshwater, and land invertebrates.
62. STEWART, R. E., AND C. S. ROBBINS. 1958. Birds of Maryland and the District of Columbia. 401 pp.
Discusses history, bird-land-use relations, and distribution of birds in Maryland and the District of Columbia. Birds are listed for oak-pine, oak-chestnut, and mixed mesophytic forest regions. Status and migration data are included for each species. A map is provided.
63. BANKO, W. E. 1960. The trumpeter swan: its history, habits, and population in the U.S. 214 pp.
Discusses trumpeter swan (*Cygnus buccinator*) distribution, status, habitats, description, behavior, nesting, food, development, longevity, limiting factors, and population dynamics. Describes management—particularly National Park Service investigations and Red Rock Lakes National Wildlife Refuge (Montana) management. Makes management recommendations.
64. SCHEFFER, V. B. 1961. Pelage and surface topography of the northern fur seal. 206 pp.
Structure and body covering of the northern fur seal (*Callorhinus ursinus*) are discussed in great detail. Pelages of different ages and sexes are described and variation is mentioned. The sealskin industry is reviewed.
65. SAUNDERS, G. B. 1968. Seven new white-winged doves from Mexico, Central America, and southwestern United States. 30 pp.
Seven new subspecies of *Zenaida asiatica* are described: *Z. a. peninsulae* of the Yucatan Peninsula,

- Mexico; *Z. a. grandis* of the upper Big Bend area, central western Texas; *Z. a. monticola* of the Mexican interior plateaus and highlands; *Z. a. palustris* of the central and southern Pacific coastal plains of Mexico; *Z. a. insularis* of the Tres Marias Islands, Nayarit, Mexico; *Z. a. collina* of Central America, chiefly on the Pacific Piedmont and coastal plain from the Isthmus of Tehuantepec, Mexico, to Costa Rica; and *Z. a. panamensis* of the northeast coast of the Azuero Peninsula, Panama.
66. PARADISO, J. L. 1969. Mammals of Maryland. 193 pp.
Discusses area, temperature, precipitation, effects of civilization, principal biotic or natural areas, and mammalian fauna of Maryland. Includes keys and brief species accounts.
67. MEANLEY, B. 1969. Natural history of the king rail. 108 pp.
Describes the king rail (*Rallus elegans*) and discusses its history, taxonomy, distribution, migration, habitats, breeding biology, feeding behavior, and mortality. Includes sections on development and behavior of captive rails, and value as a game bird.
68. KENYON, K. W. 1969. The sea otter in the eastern Pacific Ocean. 352 pp.
Describes the sea otter (*Enhydra lutris*), and discusses its behavior in general, when feeding, and in captivity. Discusses taxonomy, habitat requirements, distribution and numbers, limiting factors, and reproduction. Suggests future management and research needs.
69. MEANLEY, B. 1971. Natural history of the Swainson's warbler. 90 pp.
Describes the Swainson's warbler (*Limnothlypis swainsonii*), its breeding biology, song, feeding behavior, and food. Discusses history, distribution, migration, habitat, and factors affecting population.
70. BROWNING, M. R. 1975. The distribution and occurrence of the birds of Jackson County, Oregon, and surrounding areas. 69 pp.
Describes topography, climate, vegetation, and avian communities of the area. Abundance, frequency, and seasonal occurrence information is provided for each species.
71. VANCAMP, L. F., AND C. J. HENNY. 1975. The screech owl: its life history and population ecology in northern Ohio. 65 pp.
Presents basic life history and population data for screech owls (*Otus asio*) in northern Ohio, as a result of capture and banding and food habit studies, during 1944-73. Includes discussions of food habits, migration and dispersal, breeding biology, population dynamics, pesticides and pollution, and polymorphism.
72. WILBUR, S. R. 1978. The California condor, 1966-76: a look at its past and future. 136 pp.
The California condor (*Gymnogyps californianus*) was studied on about 900 field days between 1966 and 1976. In addition, about 1,000 items of literature, specimen records from 56 museums, and 3,500 reports of condor sightings by cooperators were analyzed. Distribution, seasonal movements, and population numbers were studied and described. Causes of decline and low production are discussed. Describes condor recovery plan.
73. FAANES, C. A. 1981. Birds of the St. Croix River Valley: Minnesota and Wisconsin. 196 pp.
Presents and discusses results of avian distribution and abundance survey in the St. Croix River Valley from 1966 to 1980. Includes published and unpublished observations by ornithologists. Species accounts include status, migration, nesting season distribution, and habitat information.
74. FAY, F. H. 1981. Ecology and biology of the Pacific Walrus, *Odobenus rosmarus divergens*, Il-liger. 279 pp.
The distribution, physical development, pelage, dentition, feeding behavior, reproduction, causes of mortality, and population structure of the Pacific walrus were studied intermittently from 1952 to 1979.