Biology of the Rio Grande Border Region: A Bibliography

Information and Technology Report
USGS/BRD/ITR--1997-0001
Technical Report Series

The U. S. Geological Survey publishes two technical report series in the biological sciences.

Series Descriptions

*Biological Science Reports*  
ISSN 1081-292X

Papers published in this series record the significant findings resulting from USGS-sponsored and cosponsored research programs. They may include extensive data or theoretical analyses. These papers are the in-house counterpart to peer-reviewed journal articles, but with less stringent restrictions on length, tables, or raw data, for example. We encourage authors to publish their findings in the most appropriate journal possible. However, the *Biological Science Reports* represent an outlet in which USGS authors may publish papers that are difficult to publish elsewhere due to the formatting and length restrictions of journals. At the same time, papers in this series are held to the same peer-review and high quality standards as their journal counterparts.

*Information and Technology Reports*  
ISSN 1081-2911

These reports are intended for the publication of important reference material such as handbooks and manuals; data compilations such as critical tables, bibliographies, professional seminar, conference, or workshop presentations; book-length monographs, synthesis documents, and compilations of conference and workshop papers. Papers and compilations published as *Information and Technology Reports* are held to the same peer review standards as the *Biological Science Reports*.

Copies of this publication are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161 (1-800-553-6847 or 703-487-4650). Copies also are available to registered users from the Defense Technical Information Center, Attn.: Help Desk, 8725 Kingman Road, Suite 0944, Fort Belvoir, Virginia 22060-6218 (1-800-225-3842 or 703-767-9050).

Printed on recycled paper
Biology of the Rio Grande Border Region: A Bibliography

Information and Technology Report
USGS/BRD/ITR--1997-0001
July 1997

by

Lynne E. Johnson,
Linda J. Jacobs,
and
Diana Papoulas
Funding to compile and produce this bibliography was provided by the U.S.G.S. Biological Resources Division’s National Biological Information Infrastructure (NBII) and by the Lower Rio Grande Ecosystem Initiative which is administered and coordinated by the Environmental and Contaminants Research Center (formerly Midwest Science Center) in Columbia, Missouri.

Suggested citation:


## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Acknowledgments</td>
<td>2</td>
</tr>
<tr>
<td>Bibliography on the Biology of the Rio Grande Border Region</td>
<td></td>
</tr>
<tr>
<td>A. Overview</td>
<td>3</td>
</tr>
<tr>
<td>B. Botany</td>
<td></td>
</tr>
<tr>
<td>1. General Botany</td>
<td>5</td>
</tr>
<tr>
<td>2. Non-Woody Plants</td>
<td>12</td>
</tr>
<tr>
<td>3. Woody Plants</td>
<td>16</td>
</tr>
<tr>
<td>C. Invertebrate Zoology</td>
<td></td>
</tr>
<tr>
<td>1. General Invertebrate Zoology</td>
<td>19</td>
</tr>
<tr>
<td>2. Terrestrial Invertebrate Zoology</td>
<td>19</td>
</tr>
<tr>
<td>3. Aquatic Invertebrate Zoology</td>
<td>24</td>
</tr>
<tr>
<td>D. Vertebrate Zoology</td>
<td></td>
</tr>
<tr>
<td>1. General Vertebrate Zoology</td>
<td>27</td>
</tr>
<tr>
<td>2. Fish</td>
<td>27</td>
</tr>
<tr>
<td>3. Amphibians and Reptiles</td>
<td>35</td>
</tr>
<tr>
<td>4. Birds</td>
<td>41</td>
</tr>
<tr>
<td>5. Mammals</td>
<td>53</td>
</tr>
<tr>
<td>E. Ecology</td>
<td></td>
</tr>
<tr>
<td>1. General Ecological Surveys</td>
<td>67</td>
</tr>
<tr>
<td>2. Terrestrial Ecology</td>
<td>68</td>
</tr>
<tr>
<td>3. Aquatic/Wetland/Riparian Ecology</td>
<td>70</td>
</tr>
<tr>
<td>4. Coastal Ecology</td>
<td>72</td>
</tr>
<tr>
<td>F. Natural History</td>
<td>74</td>
</tr>
<tr>
<td>G. Soils, Forestry, and Agriculture</td>
<td>75</td>
</tr>
<tr>
<td>H. Geology, Hydrology, and Water Resources</td>
<td>77</td>
</tr>
<tr>
<td>I. Protected Areas</td>
<td>81</td>
</tr>
<tr>
<td>J. Endangered and Threatened Species</td>
<td>83</td>
</tr>
<tr>
<td>K. General Environmental Quality</td>
<td>84</td>
</tr>
<tr>
<td>L. Hydraulic Engineering</td>
<td>86</td>
</tr>
<tr>
<td>M. Water Quality</td>
<td>88</td>
</tr>
<tr>
<td>N. Environmental Contaminants and Toxicology</td>
<td>92</td>
</tr>
<tr>
<td>O. Air Quality</td>
<td>100</td>
</tr>
<tr>
<td>P. Bibliographies and Directories</td>
<td>102</td>
</tr>
<tr>
<td>Author Index</td>
<td>105</td>
</tr>
<tr>
<td>Key Word Index</td>
<td>125</td>
</tr>
<tr>
<td>Journals List</td>
<td>143</td>
</tr>
<tr>
<td>Information Sources</td>
<td>149</td>
</tr>
</tbody>
</table>
Biology of the Rio Grande Border Region: A Bibliography

by

Lynne E. Johnson
ASCI Corporation
1365 Beverly Road, McLean, Virginia 22101

Linda J. Jacobs
U.S. Geological Survey, Biological Resources Division
Environmental and Contaminants Research Center,
4200 New Haven Road, Columbia, Missouri 65201

Diana Papoulias
U.S. Geological Survey, Biological Resources Division
Environmental and Contaminants Research Center,
4200 New Haven Road, Columbia, Missouri 65201

Abstract. This bibliography includes 1,913 references to the literature of the Rio Grande (Río Bravo del Norte). The specific geographic area covered extends 100 km on either side of the river from Elephant Butte Dam in New Mexico to the Gulf of Mexico. The bibliography focuses on the biological literature, divided into major subject areas, and also includes supporting literature from the physical and environmental sciences. The database is available in a searchable format on the Internet home page of the U.S. Geological Survey, Biological Resources Division, Environmental and Contaminants Research Center.

Key words: Big Bend National Park, botany, Chihuahuan Desert, ecology, Mexico, New Mexico, pollution, Texas, water quality, zoology

Introduction

The Rio Grande (Río Bravo del Norte) border area evokes images of wilderness; however, the realities of present-day population pressures are rapidly transforming this formerly wild frontier. In 1995, the National Biological Service (now the Biological Resources Division of the U.S. Geological Survey) funded an initiative along the Lower Rio Grande from Elephant Butte Reservoir to the Gulf of Mexico to address the ecosystem-level changes. As part of this effort, we have compiled this bibliography for researchers, resource managers, planners and policy makers to make accessible what is known about the biology of this region. We have concentrated on references to the biotic literature recognizing that works from the physical sciences, as well as historical treatments, may provide additional biological insight.

Several comprehensive bibliographies provided us with a starting point. References from the National Park Service's Big Bend National Park natural resources bibliography, the Texas General Land Office's Rio Grande Coastal Impact Monitoring Program bibliography, and the USGS Biological Resources Division's Biomonitoring of Environmental Status and Trends Program analysis of contaminant impacts in the lower Rio Grande were particularly helpful. The Fish and Wildlife Reference Service provided many additional references.

1 Formerly Midwest Science Center
not available through other online sources. Sections of the bibliography were then reviewed by experts in their respective fields, and their suggestions were incorporated. In addition, many individuals, agencies and organizations throughout the country were contacted for their contributions.

The bibliography is organized into 25 subject areas with author and keyword indexes. Coarse taxonomic categories of plants and animals, which predominantly include works on species biology, form the core of the collection. Historical and popular accounts in the Natural History section, as well as citations in the Ecology sections, provide important supportive information. Several smaller sections contain references that are not strictly biological in nature, but which are specific to the region and are significant to the ecosystem as a whole. We have also included two special sections. The first of these, the Overview, is intended to provide a few key references, while the Bibliographies and Directories section points the reader to more diverse and comprehensive collections of references.

This bibliography is in no way intended as a comprehensive listing of references to the biological literature of the Rio Grande border region. For the most part, we tried to include only information that was collected from, or directly pertinent to, the geographic area 100 km north and south of the Rio Grande between Elephant Butte Dam and the Gulf of Mexico. We attempted to include only those references which were complete and, as such, could be obtained through a library or some other information service. Citations generally follow the guidance in Scientific Style and Format: the CBE Manual for Authors, Editors, and Publishers. Where possible, we have provided addresses for obtaining publications that are more difficult to access. For those who identify errors or omissions, we welcome your suggestions and contributions to this continually expanding database. It is our intention that this bibliography will be periodically updated. A current, searchable version of the bibliography database can be found on the Internet home page of the U.S. Geological Survey, Biological Resources Division, Environmental and Contaminants Research Center.

The richness of the literature reflects the diversity of the natural resources of the Rio Grande. We hope this bibliography will be of value to those who are interested in preserving and protecting the ecosystems of these borderlands.

Acknowledgments

We are indebted to those who compiled the bibliographies from which we selected references to form the core of this bibliography: Marilyn Ostergren, Arnold Van Pelt and Kevin McDonough who worked on the Big Bend National Park Natural Resource Bibliography; Don Hockaday, Gayle Robinson and Cheryl Salaiz of the Texas Coastal Impact Monitoring Program; and Miguel Mora and Susan Wainwright of the USGS Biological Resources Division Brazos Field Research Station. We are especially grateful to the experts who took time to review the various sections: David E. Bowles, Texas Parks and Wildlife Department; Robert D. Bradley, Texas Tech University; Tim Brush, University of Texas - Pan American; Mark Flora, National Park Service, Water Resources Division; Gary P. Garrett, Texas Parks and Wildlife Department; Frank Judd, University of Texas - Pan American; Chris Onuf, USGS Biological Resources Division Texas Gulf Coast Field Research Station; A. Michael Powell, Sul Ross State University; Alfred Richardson, University of Texas at Brownsville and Texas Southmost College; and Arnold Van Pelt of Greensboro, North Carolina. Their input significantly strengthened this document.

Richard D. Worthington of the University of Texas at El Paso furnished additional references. Vincent Burke of the Environmental and Contaminants Research Center and David Diamond of the Missouri Resource Assessment Partnership provided valuable advice. Kate Kase of the USGS National Center and Beth Vairin and Susan Lauritzen of the USGS, Biological Resources Division National Wetlands Research Center generously provided assistance in the production. We appreciate the cooperation of the numerous other individuals throughout the nation who contributed their knowledge and expertise to this effort, particularly those in numerous Texas state government offices.

---

Bibliography on the Biology of the Rio Grande Border Region

A. Overview


18. POWELL AM. 1988. Trees and shrubs of Trans-Pecos Texas including Big Bend and Guadalupe Mountains national parks. Big Bend National Park (TX): Big Bend Natural History Association, Inc. 536 p.


B. Botany

1. General Botany


41. CHEATHAM S, JOHNSTON MC. 1995. The useful wild plants of Texas, the southeastern and southwestern United States, the southern plains, and northern Mexico. Volume 1, Abronia to Arundo. Austin (TX): Useful Wild Plants, Inc. 568 p.


44. CONNER MD. 1979. The endangered plants of Texas [MA thesis]. Austin (TX): University of Texas at Austin. 117 p.


B. 1. General Botany


49. CROSSWHITE FS. 1980. Dry country plants of the South Texas plains. Desert Plants 2:141-79.


69. GOULD FW. 1975. Texas plants: a checklist and ecological summary. College Station (TX): Texas Agricultural Experiment Station. (Texas agricultural Experiment Station. Miscellaneous publication: 585/Revised) 121 p.

B. 1. General Botany


96. LONARD RI, JUDD FW. 1981. The terrestrial flora of South Padre Island, Texas. Austin (TX): University of Texas at Austin. (Miscellaneous papers (Texas Memorial Museum)) 74 p.


103. MCDougall WB. 1935. Preliminary report on a plant ecological survey of the Big Bend area of Texas. 27 p. Located at: Big Bend National Park.


117. POOLE JM, RISKIND DH. 1987. Endangered, threatened, or protected native plants of Texas. [Austin (TX)]: Texas Parks and Wildlife Department. 1 v.

B. 1. GENERAL BOTANY


B.1. General Botany


169. WONDZELL SM. 1984. Recovery of desert grasslands in Big Bend National Park following 36 years of protection from grazing by domestic livestock [MSc thesis]. Las Cruces (NM): New Mexico State University. 94 p.


B. 1. GENERAL BOTANY
Available from: Floristic Inventories of the Southwest Program.


2. Non-Woody Plants


179. [ANONYMOUS]. [date unknown]. The cacti of Carlsbad Caverns, Guadalupe Mountain, Big Bend national parks and White Sands National Monument. 2 p. Located at: Big Bend National Park.


188. BOKE NH. 1957. Evidence for the recognition of two species of Epithelanthna in the Big Bend of Texas. Located at: Big Bend National Park.


212. **HENDERSHOTT AJ. 1992.** Distribution and plant association of the threatened Chisos pitaya (*Echinocereus chisoensis*) in Big Bend National Park, Texas. Located at: Big Bend National Park.


216. **JONES RW, CATE JR, BURKE HR. 1989.** Phenology and ecology of wild cotton (Malvales: Malvaceae) and the boll weevil (Coleoptera: Curculionidae) in Tamaulipas, México. J. Econ. Entomol. 82(6):1626-32.


B. 2. NON-WOODY PLANTS


280. WAUER RH. 1970. Cactaceae (other than Opuntia) of Big Bend National Park, Texas. 30+ p. Located at: Big Bend National Park.

281. WAUER RH. [date unknown]. Cacti of Big Bend National Park, Texas. 30+ p. Located at: Big Bend National Park.


3. Woody Plants

293. ALEX BL, STEWART SE. 1988. A survey of the hydrophilous trees along a three-mile section of Cottonwood Creek, Big Bend National Park, Texas. 9 p. Located at: Big Bend National Park.


311. POWELL AM. 1988. Trees and shrubs of Trans-Pecos Texas including Big Bend and Guadalupe Mountains national parks. Big Bend National Park (TX): Big Bend Natural History Association, Inc. 536 p.


314. POWELL J, BOX TW. 1967. Mechanical control and fertilization as brush management practices affect forage production in South Texas. J. Range Manage. 20:227-36.

315. REID N, MARROQUIN J, BEYER-MUENZEL P. 1990. Utilization of shrubs and trees for browse, fuelwood and timber in the Tamaulipan thornscrub,


B. 3. Woody Plants
C. Invertebrate Zoology

1. General Invertebrate Zoology


2. Terrestrial Invertebrate Zoology


345. ANDERSON RS. [19-]. Curculionoidea of Big Bend National Park, Texas. 4 p. Located at: Big Bend National Park.

346. ANDERSON RS. 1983. Coleoptera (exclusive of Curculionoidea) of Big Bend National Park, Texas. 2 p. Located at: Big Bend National Park.


374. CRAWFORD CS, MATLACK MC. 1979. Water relations of desert millipede larvae, larva-


397. LOOMIS RB, BACCUS JT, WRENN WJ. 1972. The chiggers (Acarina: Trombiculidae) of Big Bend

C. 2. TERRESTRIAL INVERTEBRATE ZOOLOGY
National Park, Texas. 17 p. Located at: Big Bend National Park.


407. PRATT WL. 1969. Checklist of land snails known or believed to occur in Big Bend National Park. Located at: Big Bend National Park.


409. PRATT WL. 1971. Land snails of the Chisos Mountains, Big Bend National Park, Texas. 5 p. Located at: Big Bend National Park.

410. PRATT WL. 1972. Ecological distribution and zoogeography of the land snails of the Chisos Mountains, Big Bend National Park, Texas [MA


422. SISSOM WD. 1990. Systematics of Vaejovis dugesi Pocock, with descriptions of two new related

C. 2. TERRESTRIAL INVERTEBRATE ZOOLOGY

423. SISsom WD, FRANCkE OF. 1981. Scorpions of the
genus Paruroctonus from New Mexico and Texas

424. SMITH BB. 1972. Representatives of the class
Arachnida specific to the Big Bend area. 17 p.
Located at: Big Bend National Park.

425. STAHNKE HL. 1956. A new species of scorpion of
the Buthidae: Centruroides pantheriensis. Entomol.

426. STAHNKE HL. 1967. Diplocentrus bighendensis, a
new species of scorpion. Entomol. News 78(7):

427. STOCKWELL SA. 1986. The scorpions of Texas
(Arachnida, Scorpiones) [MSc thesis]. Lubbock
(TX): Texas Tech University. 193 p.

428. STOPHEr DR II. 1995. Quantitative ecology of the
terrestrial microgastropod fauna of Laguna
Meadow, Big Bend National Park [MSc thesis].

429. SUGDEN EA, MCALLEN RL. 1994. Observations on
foraging, population and nest biology of the
Mexican honey wasp, Brachygastra mellifica (Say)
Soc. 67(2):141-55.

430. TAYlOR DW. 1966. A remarkable snail fauna from

431. THOMPSON M. 1987. A comparison of West Texas
and East Texas populations of Achurum
sumachrasti [MA thesis]. Huntsville (TX): Sam
Houston State University. 61 p.

432. TINKHAM ER. 1941. Biological and faunistic notes
on the Cicadidae of the Big Bend region of Trans-

433. TINKHAM ER. 1943. Description and biological
notes on a new saturnid of the genus Pseudohazis
from the Big Bend region of Texas. Can. Entomol.
75(9):159-62.

434. TINKHAM ER. 1944. Faunistic notes on the diurnal
Lepidoptera of the Big Bend region of Trans-Pecos
Texas, with the description of a new Melitae. Can.
Entomol. 76:11-8.

435. TINKHAM ER. 1948. Faunistic and ecological studies
on the Orthoptera of the Big Bend region of Trans-

436. TRIPLEHORN CA. 1968. Generic classification in
Coniophani and a description of a new species of
61(2):376-80.

from Texas, with notes on the subgenus Promus
(Coleoptera: Tenebrionidae). Ohio J. Sci. 71(1):
56-9.

438. VAN PELT AF. 1969. Ants collected in Big Bend
National Park. 3 p. Located at: Big Bend National
Park.

439. VAN PELT AF. 1971. Trophobiosis and feeding
habits of Liometopum apicalatum (Hymenoptera:
Formicidae) in the Chisos Mountains, Texas. Ann.
Entomol. Soc. Am. 64(5):1186.

440. VAN PELT AF. 1975. 2100 ant colonies collected
from Chisos Mountains, Big Bend National Park,
Brewster County, TX. 8 p. Located at: National
Park Service, Southwest Support Office.

441. VAN PELT AF. 1975. Summary report on field
collections of ants made in the summers of 1969,
Bend National Park.

442. VAN PELT AF. 1976. Nest relocation in the ant
69(3):493.

443. VAN PELT AF. [1977]. The ants of the Chisos
Mountains, Texas (Formicidae: Hymenoptera).

444. VAN PELT AF. 1983. Ants of the Chisos Mountains,
28(2):137-42.

445. VAN PELT AF. 1993. Notes on the termites
(Isoptera) of Big Bend National Park, Texas.
Southwest. Entomol. 18(2):149-50.

446. VAN PELT AF, VAN PELT SA. 1972.
Microdon(Diptera: Syrphidae) in nests of
Monomorium (Hymenoptera: Formicidae) in Texas.

C. 2. TERRRESTRIAL INVERTEBRATE ZOOLOGY
3. **Aquatic Invertebrate Zoology**


457. BOWLES DE, FLINT OS, Jr. 1996. A review of the genus *Phylloicus* Müller (Trichoptera: Calamoceratidae) in the United States with a

C. 2. **Terrestrial Invertebrate Zoology**


488. Thomas RE. 1982. A field study of the movement behavior of the giant water bug, Belostoma confusum, in the Big Bend areas of Texas [MSc


C. 3. AQUATIC INVERTEBRATE ZOOLOGY
D. Vertebrate Zoology

1. General Vertebrate Zoology


2. Fish


511. Chernoff B, Miller RR, Gilbert CR. 1982. Notropis orca and Notropis simus, cyprinid fishes from the American Southwest, with description of

512. Childs MR. 1993. Dynamics of introgressive hybridization between Pecos pupfish (Cyprinodon ptecensis) and sheepshead minnow (C. variegatus) in the Pecos River, Texas. [Stillwater (OK)]: Oklahoma State University. 60 p.


562. HUBBS C. 1958. List of fishes known or expected to belong to the fauna of the Big Bend National Park.

D. 2. FISH


572. HUBBS C, GARRETT GP. 1990. Reestablishment of Cyprinodon extimus (Cyprinodontidae) and status of Diodon diaboli (Cyprinidae) in the vicinity of Dolan Creek, Val Verde Co., Texas. Southwest. Nat. 35:446-78.


583. HUBBS CL. 1940. Fishes from the Big Bend Region of Texas. Trans. Tex. Acad. Sci. 23:3-12.


593. KELSCH SW. 1986. The systematics, ecology and zoogeography of the headwater catfish Ictalurus lupus (Pisces) [dissertation]. [College Station (TX)]: Texas A&M University. 83 p.


D. 2. Fish


644. SCHLATTER JM. 1977. Big Bend gilabia: and then there were three. Nat. Parks Conserv. Mag. 51(11):8-10.

645. SIEMIEN MJ. 1987. The preferred and lethal temperatures of the spotted tilapia (Tilapia mariae Boulenger), and the Rio Grande cichlid (Cichlasoma cyanoguttatum Baird and Girard), and the effect of age on the preferred temperature of the spotted tilapia [MSc thesis]. Frostburg (MD): Frostburg State University. 42 p.


3. **Amphibians and Reptiles**


691. Degenhardt WG, Degenhardt PB. 1965. The host-parasite relationship between Elaphe subocularis (Reptilia: Colubridae) and Aponomma


713. GROSMAIRE AE. 1977. Aspects of the natural history of freshwater turtles within the Lower Rio

D. 3. AMPHIBIANS AND REPTILES
Grande Valley of Texas [MSc thesis]. [College Station (TX)]: Texas A&M University. 102 p.


735. LOOMIS RB, JAHN FC. [1973]. Notes on one juvenile and two adult Coleonyx reticulatus and their ectoparasitic mites. 6 p. Located at: Big Bend National Park.


D.3. AMPHIBIANS AND REPTILES


747. Milstead WW. 1970. Late summer behavior of the lizards *Sceloporus merriami* and *Urosaurus ornatus* in the field. Herpetologica 26(3):343-54.


D. 3. AMPHIBIANS AND REPTILES
4. Birds


D. 4. BIRDS


810. BRODICK HJ. 1960. Check-list of the birds of Big Bend National Park. 7 p. Located at: Big Bend National Park.


812. BRODICK HJ, ALLEN CP, LESSERTIER A. [date unknown]. Check list of the birds of Big Bend National Park. Brewster County (TX): Big Bend Natural History Association and National Park Service. 2 p.


819. CAIN JR, BEASOM SL. 1983. A guide for aging scaled quail. College Station (TX): Texas Agricultural Experiment Station. (Bulletin (Texas Agricultural Experiment Station): 1447) 8 p.


865. GALLUCCI T. The biological and taxonomic status of the white-winged doves of the Big Bend of Texas [MSc thesis]. [Alpine (TX)]: Sul Ross State University. 208 p.


872. GRIFFIN BG. 1986. Habitat correlates of foraging behavior at two levels of temporal resolution in the gray vireo (Vireo vicinior) [MSc thesis]. Toronto,ON (Canada): University of Toronto. 196 p.

Biology of the Rio Grande


D. 4. BIRDS


909. LANNING DV. [1971]. Colima warbler density and
distribution in the Chisos Mountains, Texas. 5 p.
Located at: Big Bend National Park.

distribution and habitat of prairie falcons in

911. LANNING DV, LAWSON PW. 1977. Ecology of the
peregrine falcon in northeastern Mexico, 1977.
Prepared for the National Geographic Society, the
U.S. Fish and Wildlife Service and La Dirección
General de la Fauna Silvestre de Mexico. Alpine
(TX): Chihuahuan Desert Research Institute.
(CDRI contribution: 41) 71 p.

Range and habitat of the Colima warbler. Wilson

913. LASLEY GW, EASTERLA DA, SEXTON CW, BARTOL
DA. 1982. Documentation of the red-faced warbler
(Cardellina rubrifrons) in Texas and review of its
status in Texas and adjacent areas. Bull. Tex.
Ornithol. Soc. 15:8-14.

914. LAWSON PW, FALXA GA. 1979. Peregrine falcon
breeding status in Texas national parks, 1979.
Alpine (TX): Chihuahuan Desert Research Institute.
(CDRI contribution: 82) 9 p.

915. LEHMANN VW. 1944. State-wide wildlife survey,
game management and demonstration project:
bobwhites. Texas Parks and Wildlife Department.
Project nr Tex. W-001-R-05/WK.PL. C/Job 01. 10
p. Available from: Fish and Wildlife Reference
Service; MIN nr 427380801.

916. LEHMANN VW. 1946. Bobwhite quail reproduction
in Southwest Texas. Texas Cooperative Wildlife
Research Unit. 13 p. Available from: Fish and
Wildlife Reference Service; MIN nr 427530326.

917. LEHMANN VW. 1946. Mobility of bobwhite quail
in southwestern Texas. Texas Cooperative Wildlife
Research Unit. 13 p. Available from: Fish and
Wildlife Reference Service; MIN nr 427530327.

plain of Texas. College Station (TX): Texas A&M
University Press. 371 p.

919. LEHMANN VW, WARD H. 1941. Some plants
valuable to quail in southwestern Texas. Texas
Parks and Wildlife Dept. Project nr Texas W-001-
R. 5 p. Available from: Fish and Wildlife Reference
Service; MIN nr 427520840.

920. LIGON JD, HUSER SL. 1974. Notes on the behavioral

wildlife investigations. Nongame investigations -
Texas avian fauna: interior least tern distribution
and taxonomy. Texas Parks and Wildlife Dept.
Project nr TX W-103-R-17/Job 54. 40 p. Available
from: Fish and Wildlife Reference Service; MIN nr
428880077.

922. MARION WR. 1974. Status of the plain chachalaca in

923. MARION WR. 1976. Plain chachalaca food habits in

924. MARSHALL JT, JR. 1967. Parallel variation in North
and Middle American screech-owls. Los Angeles:
Western Foundation of Vertebrate Zoology.
(Western Foundation of Vertebrate Zoology (U.S.).
Monographs: 1) 72 p.

Status report on Vireo atricapillus Woodhouse. Report submitted to U. S. Fish and Wildlife Service,
Office of Endangered Species, Albuquerque, NM.

Oologist 33(172-173).

927. MAXON GE. 1916. A soldier ornithologist. Oologist
33:205-6.

928. MCGREW AD. 1971. Nesting of the ringed

929. MCKINNEY B. 1996. A checklist of Lower Rio

Management Area. Austin (TX): Texas Parks and
Wildlife Dept. Resource Management Section.
12 p.

931. MCKINNEY BR. [1992]. The black-capped vireo in
Trans-Pecos, Texas. In: Proceedings: 5th U.S./Mexico Border States Conference on
Recreation, Parks, and Wildlife; 1992 Sep 17-19;
Las Cruces, NM. [Las Cruces]: [New Mexico State
University]. p 4-6.


National Park Service. Located at: Big Bend National Park.


D. 4. BIRDS


D.4. BIRDS


D. 4. BIRDS


5. Mammals


D. 5. Mammals


D. 5. MAMMALS


D. 5. MAMMALS


and Wildlife Reference Service; MIN nr 307480258.


1222. LLOYD W. 1890. [data from field catalog]. In: U. S. Fish and Wildlife Service Laboratory, National Museum of Natural History, Washington, D.C.


1227. MANNING RW, YANCEY FD II, JONES C. 1996. Nongeographic variation and natural history of two sympatric species of pocket mice, Chaetodipus nelsoni and C. eremicus, from Brewster County,
D. 5. Mammals


1246. PATTERTON BD. 1980. New subspecies of *Eutamias quadrivittatus* (Rodentia: Sciuridae) from the Organ Mountains, New Mexico. New Mexico Dept. of Game and Fish. Project nr New Mexico


1261. RISENVOORER KL, COOKE JL. 1994. Landscape structure and its impact on the interpretation of desert mule deer population behavior in the Chihuahuan Desert. College Station (TX): Texas A&M University, Texas Agricultural Experiment Station, Department of Wildlife and Fisheries Sciences. Cooperative agreement nr 70460080183. 400+ p.


1266. RUTH TK, PACKARD JM, NEIGHBOR DS, SKILES JR. 1991. Mountain lion use of an area of high recreational development in Big Bend National
D. 5. MAMMALS


1305. U.S. FISH AND WILDLIFE SERVICE. NATIONAL FISH AND WILDLIFE LABORATORY. 1980. Selected vertebrate endangered species of the seacoast of the

D. 5. MAMMALS


D. 5. MAMMALS
E. Ecology

1. General Ecological Surveys


1329. DAVIS WB. 1957. Ecological survey of the Big Bend area. College Station (TX): Texas A&M University, Department of Wildlife Management, Texas Agricultural Experiment Station. 123 p.


1340. RADINOVSKY S. 1971. An ecological inventory of Big Bend, Texas and other regions. 20 p. Located at: Big Bend National Park.


1354. WARNock BH. 1970. Summary of the belt transects from the ecological survey of the Big Bend area. Located at: Big Bend National Park.


2. Terrestrial Ecology


E. 2. TERRESTRIAL ECOLOGY


1396. WORTHINGTON RD, CORRAL RD. 1986. Some effects of fire on shrubs and succulents in a Chihuahuan Desert community in the Franklin Mountains, El Paso County, Texas. Alpine (TX): Chihuahuan Desert Research Institute. (Contributed papers of the 2nd Symposium on Resources of the Chihuahuan Desert Region, United States and Mexico: 3) 8 p.


3. Aquatic/Wetland/Riparian Ecology


1401. DAVIS JR. 1986. Faunal characteristics of a saline stream in the northern Chihuahuan Desert. Alpine (TX): Chihuahuan Desert Research Institute. (Contributed papers of the 2nd Symposium on
Resources of the Chihuahuan Desert Region, United States and Mexico: 4) 18 p.


4. Coastal Ecology


1429. KIER RS, FRUH EG, editors. [1976]. Methodology to evaluate alternative coastal zone management policies, application in the Texas coastal zone: example application IV, transferability of methodology to the Lower Rio Grande Valley. Austin (TX): University of Texas at Austin, Division of Natural Resources and Environment, Center for Research in Water Resources. 391 p. Available from: National Technical Information Service (NTIS); PB-282 857/2.

E. 3. Aquatic/Wetland/Riparian Ecology


F. Natural History

1443. BARTLETT JR. 1854. Personal narrative of explorations and incidents in Texas, New Mexico, California, Sonora, and Chihuahua connected with the United States and Mexican Boundary Commission, during the years 1850, '51, '52, and '53. New York: Appleton & Company. 2 v.

1444. BIG BEND NATURAL HISTORY ASSOCIATION. 1984-. Research Newsletter: Big Bend National Park. Big Bend National Park (TX): Big Bend Natural History Association in cooperation with National Park Service.


G. Soils, Forestry, and Agriculture


1486. MILFORD MH. 1959. Some physical, chemical, and mineralogical properties of compacted and adjacent soil layers in selected soils of the Lower Rio Grande Valley [MSc thesis]. [College Station (TX): Agricultural and Mechanical College of Texas. 68 p.


H. Geology, Hydrology, and Water Resources


1536. Henderson TE. [1968]. Major United States water problems along the international boundary reach of the Rio Grande (Bravo). In: Knowlton CS, arr. International water law along the Mexican-American border. A symposium held during the 44th annual meeting of the Southwestern and Rocky Mountain Division of the American Association for the Advancement of Science; 1968.


1561. TURNER, COLLIE & BRADEN, INC., LOWER RIO GRANDE VALLEY DEVELOPMENT COUNCIL, L.L. RODRIGUEZ & ASSOCIATES. [198-]. Reconnaissance level study of water supply and wastewater disposal needs of the colonias of the Lower Rio Grande Valley. Prepared for the Texas Water Development Board. [Houston (TX)]: Turner, Collie & Braden. 1 v.


II. GEOLOGY, HYDROLOGY, AND WATER RESOURCES
I. Protected Areas


1587. UNITED STATES. DEPT. OF THE INTERIOR. 1980. Department of the Interior habitat preservation


I. PROTECTED AREAS
J. Endangered and Threatened Species


1607. New Mexico. Dept. of Game and Fish. 198-. Handbook of species endangered in New Mexico. [Santa Fe (NM)]: The Department. 1 v.


K. General Environmental Quality

1613. [ANONYMOUS]. [1982]. Ecology and development of the border region. 2nd Binational University Symposium on Border Studies; 1982 Feb 16-18; University of Texas. [Austin (TX)]; [University of Texas]. 1 v.


1639. TEXAS LEGISLATURE. JOINT INTERIM COMMITTEE ON THE ENVIRONMENT. 1993. Interim report to the 73rd Legislature. [Austin (TX)]: Joint Interim Committee on the Environment. 84 p.

1640. UNITED STATES. BUREAU OF RECLAMATION. 1995. Lower Rio Grande basin study, Texas: summary of water resources, ecological resources, and socioeconomic conditions. Austin (TX): The Bureau. 1 v.


L. Hydraulic Engineering


1661. INTERNATIONAL BOUNDARY AND WATER COMMISSION, UNITED STATES & MEXICO, UNITED STATES SECTION. [1991]. Operation of Rio Grande international dams and reservoirs. [El Paso (TX)]:


1664. JAMES WP, GIESLER S and others. 1977. Environmental considerations relating to operation and maintenance of the Texas Gulf Intracoastal Waterway. College Station (TX): Texas A&M University, Sea Grant College. TAMU-SG 78-204, Grant 04-6-158-44012. 227 p.


M. Water Quality


1679. BROWN JF. 1974. Water quality considerations in the Coastal Canal-Palmetto Bend Reservoir to the Lower Rio Grande Valley [MSc thesis]. [Austin (TX)]: University of Texas. 121 p.


TEXAS NATURAL RESOURCE CONSERVATION COMMISSION, WATERSHED MANAGEMENT


**M. Water Quality**
N. Environmental Contaminants and Toxicology

1741. AHR WM. 1972. The DDT profile of some South Texas coastal-zone sediments: a study of the mechanisms of pollution dispersal and accumulation in nature. [College Station (TX)]: Texas A&M University. (Environmental quality note: 5) 32 p.


1803. HENRY AL. 1993. Organochlorine levels in aplomado falcon habitat as indicated by residues in great-tailed grackles [MSc thesis]. Las Cruces (NM): New Mexico State University. 44 p.


N. ENVIRONMENTAL CONTAMINANTS AND TOXICOLOGY


O. Air Quality


O. AIR QUALITY
P. Bibliographies and Directories


Geological Survey, Information Services, Open File Reports.


Author Index

Ables, Ernest D. 1205, 1207
Acias, Garcia C. 694
Adams, Michael S. 201
Ahr, Wayne M. 1741, 1742
Aklan, G. 1786
Alaniz, M. A. 203, 1148
Alberico, M. S. 1302, 1371
Albores, A. 1687
Albrecht, L. J. 1615
Aldous, Shaler E. 786
Alex, Betty L. 293
Alex, Thomas C. 180
Alexander, Richard B. 1491
Alexander, Robin 1616, 1743
Alexander, Steve K. 1870
Allen, C. Philip 812
Allen, C. R. 344
Allen, J. A. 1057
Allen, R. K. 452
Allen, Therese M. 235, 1358, 1359, 1360
Allison, T. C. 491
Almada-Villela, P. C. 497
Alston, Edward R. 1058
Altamirano-Perez, R. 1771
Alvarez, T. 1059
Amadon, D. 787
American Association for the Advancement of Science 1572
American Geological Institute 1907
American Rivers 1617
American Society of Range Management 326
American Water Works Association 1908
Ammon, W. L. 29
Amos, Bonnie 30, 31
Andelt, W. F. 1060
Anderholm, Scott K. 1673
Andersen, John M. 1526
Anderson, A. A. 498
Anderson, A. E. 1061, 1062, 1063, 1064, 1065
Anderson, A. W. 1674
Anderson, B. W. 1409
Anderson, D. W. 1787
Anderson, H. Leroy 1320
Anderson, Robert S. 345, 346, 347
Anderson, Sydney 1066, 1067
Anderson, T. E. 1166
Andreasen, James K. 1744
Andrews, Freeman L. 1852
Anthony, Margery S. 181, 182, 183, 184
Aplin, Graeme 1530
Applegate, Howard G. 1618, 1619, 1745, 1746, 1747, 1748, 1749, 1750, 1765, 1825, 1884, 1885
Archer, S. 1361
Armstrong, B. 788
Arnett, Ross H., Jr. 348
Arriaga, L. J. 1675
Arsuffi, T. L. 1511
Ashbaugh, Karen M. 453
Ashe, J. S. 349
Atkinson, Don Eugene 1068
Atkinson, E. 499
Aubry, Francois Xavier 1448
Auffenber, W. 666
Auger, Janene 1276
Ault, John W. III 1909, 1910
Aurelius, Lea A. 1751
Averett, J. 260, 272
Averett, J. E. 185
Axtell, Ralph W. 667
Ayer, M. Y. 493
B.L. Nelson and Associates 1647
Bacak-Clements, Patricia 1398
Baccus, John T. 398, 1069, 1070, 1362
Bach, S. 1752
Bahnick, Donald A. 1753
Bailey, D. K. 294
Bailey, Vernon 1071, 1327
Baird, S. F. 500, 501, 502
Baker, B. 789
Baker, Ernest T., Jr. 1505, 1506
Baker, James K. 703
Baker, R. H. 1072, 1073
Baker, R. J. 1257
Baker, Robert J. 702, 1113, 1114, 1161, 1227, 1374, 1412, 1546
Baker, Roger C. 1507, 1508
Baker, Rollin H. 331, 1074, 1075, 1076, 1077
Balin, Lois A. 790
Ball, John 1676
Baltosser, W. H. 668, 882
Bane, Carol A. 454, 459, 1705, 1706
Barbehem, K. R. 1839
Barcenas, R. T. 213
Barker, David G. 701
Barlow, J. C. 791, 792, 793, 794, 795, 796, 873, 1363, 1387, 1603, 1681, 1905
Barr, D. E. 1677
Barron, J. C. 820
Barta, Red 1892
Bartlett, John Russell 1443
Bartol, Dominic A.  913
Bassham, C. R.  1361
Batemen, H. A.  857
Bath, Richard C.  1885
Baur, J. R.  296
Bayer, Charles W.  1701
Bean, J. R.  1869, 1875
Beardmore, Carol  797, 1237
Beasom, S. L.  798, 819, 1267, 1754, 1862
Beaupre, Steven John  669, 670, 671, 672, 673
Bedinger, M. S.  1466, 1509
Bednarz, J.  503
Belisle, A. A.  1764
Belk, D.  455
Bennett, Peter S.  300
Bennett, B. C.  186
Benning, Douglas S.  842
Benson, D. L.  1078
Benson, Lyman David  187
Bequaert, J. C.  332
Beres, Patrick L.  112
Berger, B. L.  1869
Bernal R., F. A.  1560
Berry, J. F.  681
Berry, Richard L.  350
Best, T. L.  799
Bestgen, K. R.  504, 505, 506, 507, 526
Beyer-Muenzel, P.  315
Beyers, D. W.  1755
Biaggi, V., Jr.  800
Bickham, J. W.  1214
Bieber, Ralph P.  1448
Biever, R. C.  1834
Big Bend Natural History Association  674, 801, 1444
Bissonette, John A.  1079, 1080, 1081, 1206,
    1284, 1285, 1909, 1910
Black, C. C.  1546
Black, Hal L.  1276
Black & Veatch  1756, 1757, 1758
Blacklock, Gene W.  969, 970
Blackman, John N.  1082
Blackwell Environmental Inc.  1759
Blair, W. F.  1083, 1084, 1085, 1086, 1364
Blake, Tupper A.  2, 1445
Blanchard, Andre  351, 352, 353, 354, 355, 356,
    357, 358, 359, 360, 361, 362, 363, 364, 365, 366,
    367, 368, 376
Blankenship, L. H.  1856
Blankinship, D. R.  802, 803, 828
Blaylock, James E.  1620
Blus, L. J.  1760
Boeer, William J.  1087, 1088, 1402, 1416
Bogan, M. A.  1376
Bogusch, E. R.  295
Bohl, W. H.  1089
Boke, N. H.  188
Boldt, David  1562
Boldt, Paul E.  369, 370
Boles, E. G.  837, 1399
Bone, Timothy L.  1510
Bones, Jim  1446
Booker, T. A.  1090
Border Working Group  1621
Borell, Adrey E.  804, 1091
Borja, G.  100
Bovey, R. W.  296
Bowles, D. E.  456, 457, 484, 1511
Bowles, William F., Jr.  805, 1678
Bowman, D. B.  659
Bowman, J. A.  3, 1622
Box, T. W.  54, 312, 313, 314, 518, 1365, 1366,
    1367
Boydston, C. P.  806
Brack, Steven  209, 210, 211
Bragg, Thomas B.  97
Brand, Donald D.  1512
Brandt, Herbert W.  807, 808
Brandvold, D. K.  1842
Brandvold, L. A.  1842
Braun, Clait E.  1092, 1242, 1266
Bray, M.  725
Bray, William L.  32
Breckenridge, F. G.  189
Bremer, John E.  1761
Breuer, J. P.  4, 1420, 1421, 1648
Brisbin, Georgia  809
Bristol, J. R.  1130
Britton, M. C.  1252
Broderick, Harold J.  584
Brodrick, Harold J.  810, 811, 812
Bromaghin, Jeffrey F.  1321
Brooks, J. E.  659
Brown, B. A.  1191
Brown, Bennett A.  1192
Brown, Bryce C.  675
Brown, Carl G.  1093
Brown, Dave E.  33, 34
Brown, G. W.  1065, 1094
Brown, James Frank  1679
Brown, K. W.  1467, 1468
Brown, Kirby L.  106
Brown, R. D.  1093
Brown, Ted L.  676, 677, 690
Brown, W. H.  568
Brown, Wendy M.  842
Brownlee, Sam  1095, 1096, 1097, 1098, 1510
Brownlee, W. C.  813, 814, 829, 1099, 1100
Bruch, T.  977
Brunbaugh, W. G.  1827, 1830, 1847
Hipp, B. W.  1467, 1468
Hitch, Robert K.  1804
Hitchcock, Mark  878
Hitchcock, Mark A.  910
Hobbs, J.  1862
Hobson, M. D.  1111
Hobson, Mike  1182
Hock, R. J.  1183
Hockaday, D. L.  727
Hockaday, Don L.  1916
Hocutt, Charles H.  22, 621, 648
Hoddenbach, Gerard A.  560, 573
Hodge, Larry D.  1805
Hodgson, W.  111
Hodgson, Wendy J.  199, 215
Hoff, C. Clayton  168
Hogan, Kelly M.  879, 1806
Hollander, Andrew  780
Hollander, R. H.  1387
Hollander, R. R.  1185
Hollander, Robert R.  1184
Holman, J. A.  705
Holmes, K. E.  1186
Holmes, William M.  75
Holt, Harold R.  908
Holtz, S. T.  1372
Holz, Robert K.  1628
Holzenthal, R. W.  457
Homerstad, Gary  1016
Hood, R. E.  1187, 1191
Hood, Ronald E.  1192
Hook, Allan W.  385, 386, 387
Hooper, E. T.  1188
Hopkins, Janie  1699, 1700
Hopkins, S. W.  1000
Horgan, Paul  1457
Horizon Environmental Services  1629
Hornig, C. Evan  1701
Hothem, R. L.  1764
Houston, James G.  1807, 1808
Hovore, Frank T.  388
Howard, E. B.  1540
Howden, Henry F.  389, 390
Howe, M. A.  1376
Howell, Donna J.  1189, 1190
Howells, Robert G.  469, 1630, 1631
Howland, Jeffrey M.  715, 716
Hubbard, John P.  668, 880, 881, 882, 883, 884, 1067, 1331
Hubbell, Steven  1911
Hubbs, C.  498, 537, 585, 615, 665
Hubbs, Carl L.  582, 583, 584, 585, 586, 608
Hubbs, Clark  561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 661
Huey, Raymond B.  717, 718
Hughes, Barry Glen  1407, 1408
Hulme, A. E.  1535
Hulse, C. S.  1800
Humphrey, Robert R.  12, 76
Hundertmark, C. A.  885
Hunt, W. G.  976
Hunt, W. Grainger  886, 887, 888, 889, 890, 891, 892, 896, 1048, 1809, 1810, 1811
Hunter, W. C.  1409
Hurlbut, David  1527
Huser, Sandra L.  920
Hutchison, Paul D.  1917
Huysman, Amy Plummer  1812
Ibarra-Diaz, Gregorio E.  372
Ickler, J.  59, 77, 302
Ikenga, Julius O.  334
Inglis, A.  1799
Inglis, Anthony  1797, 1798, 1813
Inglis, J. M.  1187, 1234, 1856
Inglis, Jack M.  78, 1191, 1192, 1918
Ingram, Helen M.  1632
International Boundary and Water Commission,
United States & Mexico  1332, 1541, 1542, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660
International Boundary and Water Commission,
United States & Mexico. United States
Section  1661, 1662, 1663
Ireland, Burdge  1533, 1534
Irwin, Roy J.  1814
Ishinger, L. S.  320
Ishinger, Lee S.  592
Issacs, Dean  1474
J. Angel de la Cruz, C.  100
J. Frank McCormick  1415
Jackson, A. W.  1127, 1193, 1314
Jackson, Gerry  1789
Jackson, Gerry A.  1740
Jacob, James S.  719
Jacobs, J. L.  1501, 1502
Jacobs, Jerry L.  1482
Jahn, Frank C.  735
Jahnsdorfer, Sonja E.  1377
James, D.  1049
James, P.  893
James, Wesley P.  1664
Jameson, D. L.  720
Jameson, John R.  13, 1574
Janka, I. G.  1469
Jarman, W. M.  1787
Jarman, Walter M.  1811
Jauregui O., Ernesto  1894
Jenkins, Robert E.  621
Jennings, William S.  1194
Milstead, E. 576
Milstead, William W. 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 1238
Milstein, Michael 1239
Minkley, C. O. 625
Minkley, W. L. 618, 619, 620, 621, 622, 623, 624, 625
Minton, Sherman A., Jr. 751
Mitchell, C. A. 947, 948, 949, 1767, 1768, 1768, 1783, 1784, 1785, 1832, 1834, 1877, 1879, 1880, 1881, 1882, 1883
Mitchell, Christine A. 1766, 1769, 1770
Miymoto, Sisichi 1709
Mohlenbrock, M. W. 233
Mohn, M. M. 1781
Moir, William H. 310, 1380, 1381, 1382, 1383, 1384
Moll, E. O. 752
Mollies, M.C., Jr. 1411
Mollohan, Cheryl 1212
Monarrez, M. D. C. 1681
Monk, J. G. 1787
Monk, J. Geoffrey 1811
Monte Mucho Soil and Water Conservation Service 1487
Montemayor, Adrian 1690
Montgomery, T. H., Jr. 950
Montoya, Angel B. 951
Moore, R. T. 860, 946, 1375
Moore, Tom D. 1240, 1241, 1339
Moore, W. O. 234
Mora, Miguel A. 1835, 1836, 1837
Morel-Seytoux, Hubert J. 1666
Morgan, R. P. II 1106
Morris, D. J. 558, 577
Morrison, M. L. 952, 1838
Morse, J. 693
Morton, H. L. 296
Morton, R. A. 1566
Morton, Robert A. 1539
Mosauer, W. 753
Moyers, Jarvis L. 1890, 1905
Muehlberger, William R. 1524
Mulhern, B. 1760
Mulhern, B. M. 1822
Mulder, Cornelius H. 108, 109, 110
Muller, Daniel A. 1549
Munroe, Stephen P. 1550
Murphy, Joseph R. 976
Murray, Leo T. 754
Murray, Thomas M. 592
Murvosh, C. M. 452
Nabhan, G. P. 111, 1385
Naiman, Robert J. 613
Nalven, Joseph 1619
Nance, H.S. 1566
National Audubon Society, Sabal Palm Grove Sanctuary 1635
Nault, A. J. 1832
Navarro-Mendoza, Miguel 660
Neck, Raymond W. 388, 478, 479, 755
Neighbor, Douglas S. 953, 954, 1242, 1266
Neill, Robert L. 235, 906, 907, 1360
Nelson, James T. 112, 1243
Nelson, John M. 401
Nelson, Richard C. 955
Nesom, G. L. 236, 237
Netting, M. G. 756
New Mexico. Dept. of Game and Fish 1607
New Mexico State University, Water Resources Research Institute 1551
Newland, L. W. 1677
Newman, G.A. 956
Newman, Robert A. 718, 757, 758
Newton, A. F., Jr. 349
Nickerson, P. R. 1839
Nieuwendaal, H. 727
Niewiarowski, P. H. 759
Nilsson, N. N. 957
Nisbet, I. C. T. 1787
Nochamson, David H. 1897
Nordstrom, Phil 1700
Norland, Jack E. 180
Norman, Colin 402
Norman, J. W., Jr. 1761
Norman, John W. 1840
Norman, John W., Jr. 1841
Northington, David K. 38, 138
Novosad, C. J. 1488
Nunez, F. S. 403
Nymeyer, Lynn Alan 958, 959
O'Brien, Charles W. 404
O'Connor, B. M. 405
O'Neil, Earl W. III 238
Oberholser, H. C. 960, 961
Obregon-Barboza, H. 626
Obregon-Morales, M. E. 1868
Odom, R. R. 1301
Ohmart, R. D. 1409
Ohmart, Robert D. 1404, 1405
Oldenburg, P. W. 1180
Olmos, G. R. 525, 627
Olson, J. K. 480, 1846
Onuf, Chris P. 17, 1433, 1434, 1435, 1436, 1438
Opler, P. A. 1913
Ormsby, Gregory 15, 1634
Ortega, Catherine T. 1675
Ortega, I. M. 1259
Orzell, Steve L. 50
Osburn, H. R. 602
Ottmers, Donald D. 1710
Oubari, D. 1921
Overall, Karen L. 673, 718
Owens, David W. 767
Oyarzabal, Francisco 1711
Ozier, J. C. 1301
Ozuna, Teofilo, Jr. 1636
Packard, Jane M. 1244, 1266
Painter, Charles W. 774
Palmer, Ernest J. 113
Palmer, Neil Meredith 1386
Parfin, S. I. 481
Parish, R. B. 628, 629
Parr, Cynthia 143
Parry, Charles Christopher 1552
Parvin, B. 1637
Patterson, B. D. 1245, 1246
Patterson, T. C. 1489
Paul Garza and Associates 1712
Pause, Paul H. 156, 848, 1516
Payne, Janie 1938
Peekall, D. B. 1820
Pease, Donald Cargill 239
Peden, A. E. 630
Pemberton, J. R. 962
Pence, Danny B. 1247, 1311
Pennak, Robert W. 482
Penrose, Richard L. 388
Peper C. 847
Perdomo, A. 1252
Perez-Bernal, Reynaldo 631
Perez, Claudio 760
Perez Consulting Engineers 1759
Pleslak, John 240
Peterman, P. H. 1850
Petersen, B. E. 1774
Petersen, K. E. 1167
Peterson, Roger Tory 963
Peterson, Russell D. 1437
Pettitt, J. M. 1923
Pezold, F. L. 632
Phillips, A. R. 787
Phillips, J. C. 964
Phillips, J. D. 1713
Phillips, John Wesley 338
Phillips, N. W. 965
Phillips, S. A. 344
Pierce, Frank Cushman 1458
Pilsbry, H. A. 406
Píñero, Chris 1911
Pittman, M. T. 1248, 1249
Plapp, F. W. 1777, 1778
Platania, Steven P. 504, 505, 506, 507, 633
Pleasants, B. Y. 966
Pluhar, Jennifer 71
Plumb, Gregory A. 114, 115, 116
Polhemenus, J. T. 485
Pons, Max, Jr. 1570
Poole, Jackie M. 8, 117, 221, 241, 242, 243, 244, 303, 1606
Pope, John 137
Popp, Carl J. 1714, 1842
Porter, R. D. 1250
Porter, Tom 1892
Powell, A. M. 138, 185, 272, 273, 274, 282, 283
Powell, G. L. 577
Powell, J. 312, 313, 314, 1251, 1366
Powell, Michael A. 1363
Powell, S. 121
Powell, S. Sloan 122
Pratt, William L. 407, 408, 409, 410
Presnall, C. C. 1556
Presnall, Clifford C. 1348
Preston, Richard D. 1715
Price, A. H. 549, 693
Price, Manning A. 411
Price, Robert D. 1549
Propst, D. L. 505
Propst, David L. 526
Prouty, R. M. 1802, 1843, 1882
Puckett, C. E. 17, 1434
Pulich, Warren M., Jr. 967, 1437
Pulich, Warren M., Sr. 967
Pullen, Edward J. 1924
Punzo, Fred 761
Quammen, David 1459
Quammen, M. L 1438
R.J. Branded Co.
R. Roy Johnson 1415
Radell, Mary J. 1673
Radell, Mary Jo 1529
Radinovsky, Syd 1340
Rakestraw, D. L. 1921
Ralston, Barbara E. 265, 266
Ramamoorthy, T. P. 1460
Ramirez Pulido, J. 1577
Ramirez-Pulido, Jose 1252
Ramon Calleros, J. 1560
Ransom, D., Jr 968
Rappole, J. 1862
Rappole, J. H. 1391
Rappole, John H. 969, 970, 971, 972, 1014, 1253
Rapport, David J. 1646
Schmidly, David J. 1088, 1125, 1207, 1269, 1270, 1271, 1272, 1402, 1414, 1415, 1416
Schmidt, Cheryl A. 1273
Schmidt, K. P. 1556
Schmidt, Karl P. 21, 767, 768, 1348
Schmidt, Samuel 1928
Schmitt, C. G. 882, 884, 980, 1331
Schmitt, C. J. 1847, 1848, 1849, 1850
Schmitt, G. 556
Schulman, Edmund 318, 319
Schultz, H. C. 869
Schultz, T. W. 1826, 1851
Schulze, Jean A. 1852
Schwarz, Gregory E. 1491
Scifres, C. 1361
Scifres, C. J. 1754
Scott, N. J., Jr. 850, 981
Scott, Peter E. 982, 983, 984, 1388
Scudday, J. F. 779
Scudday, James F. 769, 770, 1047, 1343, 1344, 1345, 1929
Scullen, Herman A. 420
Secord, M. L. 985
Seagar, W. S. 1801
Seeley, Paul N. 592
Selander, R. K. 986
Selcer, K. W. 771
Selcraig, Bruce 1638
Searf, D. 1490
Sennett, George B. 987, 988
Sexton, Charles W. 913
Shafroth, P. B. 320
Shanley, E. J. 1838
Sharp, Devora 989
Sharpe, P. J. H. 1467, 1468
Shaw, Douglas W. 1417
Shaw, Robert B. 1930
Shelley, Rowland M. 421
Shields, J. 1898
Shiflett, J. T. 912
Shimizu, Yuzuru 1422, 1439, 1441
Shindale, David Brian 1274
Shreve, F. 130, 268
Shull, Alisa M. 875
Shulze, Jean A. 1689
Sides, S. L. 88, 98, 1428
Sidle, John G. 990
Siemien, Michael J. 645, 646
Sikes, S. 261, 262
Silvy, N. J. 1921
Simon, Thomas P. 1701
Singleton, J. R. 991
Sisberro, Daniel Jay 1578
Sisson, W. David 422, 423
Sites, R. W. 484, 485
Skaggs, K. E. 898
Skaggs, R. W. 898
Skiles, J. Raymond 1242, 1244, 1266, 1275, 1276
Slack, K. M. 1921
Slack, R. D. 952, 1838, 1921
Slow, D. L. 892
Smartt, R. A. 799
Smyda, Theodore J. 1422, 1439, 1441
Smeins, Fred E. 1930
Smith, A. P. 992, 993
Smith, Bruce B. 424
Smith, David W. 269, 270
Smith, Donald A. 1853
Smith, Donald D. 749, 1277
Smith, Edgar L. 271
Smith, Hobart M. 772
Smith, Michael L. 22, 647, 648
Smith, Richard A. 1491
Smith, Tarleton F. 21, 768, 996, 1346
Sneed, N. L. 321
Snyder, Dorothy E. 994
Snyder, W. A. 1065, 1278, 1279
Society of Economic Paleontologists and
Mineralogists, Permian Basin Section 172
Soltero, Sergio 1492
Soltz, David L. 613
Sorola, Sylvestre H. 995
Sosebee, Ronald E. 1368
Southwick, L. 272
Sparks, Alton N., Jr. 1761, 1840, 1841
Spears, R. Gay 156, 848, 1516
Speegle, D. J. 1921
Sperling, Carol 143
Sperry, Omer Edison 104, 131, 132, 133, 159
Spicer, R. L. 1472
Spiller, S. F. 1418
Springer, Alan M. 1811
Springer, Victor G. 578
Springfield, H. W. 322
Springs, A. J. 1339
Stahnke, Herbert L. 425, 426
Standley, Paul C. 323
Stanford, J. A. 1411
Stangl, F. B., Jr. 1280, 1281
Stauffer, J. R., Jr. 646
Stauffer, Jay R., Jr. 621
Stearman, Jack 1554
Stearns, Brett C. 774
Steele, G. Earl 692
Stein, A. 327
Steinberger, Y. 1389
Steinhart, Peter 2, 1445
Stephenson, B. C. 1854
Stern, E. M. 477
Sternes, K. L.  1721
Stevenson, James O.  996
Stevenson, M. M.  649, 650
Stewart, Susan E.  293
Stine, Walter Douglas, Jr.  1282
Stockton, C.W.  325
Stockwell, D. A.  1422, 1439
Stockwell, Dean A.  1442
Stockwell, Scott Allen  427
Stokes, Marvin A.  324, 325
Stopher, David Robertson II  428
Stout, W. F.  1781
Strecker, John K., Jr  773
Strenth, N. E.  486
Strong, Paul I.  1283, 1284, 1285
Strong, S.  39
Stuart, David  817
Stuart, J. N.  850
Stuart, James N.  774
Stubbendieck, James  97
Stumpff, W. K.  651
Sturdivant, T. S.  538
Sublette, James E.  652
Sublette, Mary  652
Sugden, E. A.  375, 429
Sul Ross State University  326, 1931, 1937
Sullivan, R. M.  1286
Sullivan, S. A.  1555
Suttle, C. A.  1423
Sutton, G. M.  1013
Sutton, George M.  997
Svirsky, Susan C.  592
Sweehton, Danny A.  998, 999, 1287, 1288, 1289, 1932
Swielik, D.  1709
Swineford, D. M.  1823, 1883
Synatzske, D. R.  1180
Synatzske, David R.  1290
Tacha, T. C.  876, 1855
Tacha, Thomas C.  979
Tamsitt, J. R.  1291
Tanner, G. W.  1856
Tarango, Miguel  1681
Taylor, D. W.  430, 487
Taylor, J. R.  1292
Taylor, Richard B.  1225, 1293, 1294, 1295, 1296
Taylor, W. P.  1126
Taylor, Walter P.  1297, 1347, 1348, 1556
Teel, P. D.  1000
Telfair, R. C.  1001
Telfair, R. C. II  820
Telloz, J.  1899
Tennant, A.  825
Tennant, Alan  1461
Tewes, M. E.  1298, 1299, 1300, 1301
Texas A&M University, Department of Forest Science  1493
Texas A&M University, Texas Agricultural Experiment Station, Texas Water Resources Institute  1933
Texas Agricultural Experiment Station  1349, 1499
Texas Agricultural Extension Service  326
Texas Center for Policy Studies  1579, 1934
Texas Colonial Waterbird Society  1002
Texas Department of Agriculture  1857
Texas Department of Agriculture, Texas Rural Water Quality Network Project  1722
Texas Department of Health  1858
Texas Department of Water Resources  1440, 1557
Texas General Land Office  1859, 1916, 1935
Texas Herpetological Society  775
Texas Legislature. Joint Interim Committee on the Environment  1639
Texas Natural Resource Conservation Commission  1723, 1936
Texas Natural Resource Conservation Commission, Watershed Management Division  1724
Texas Organization for Endangered Species  134, 1608, 1609
Texas Parks and Wildlife Department  1003
Texas Parks and Wildlife Department, Coastal Fisheries Branch  4, 1421
Texas Parks and Wildlife Dept. Research Planning Division. Park Service  135
Texas Water Commission  1725, 1726, 1727, 1728, 1729, 1730, 1731
Texas Water Development Board  1494, 1732, 1938
Texas Water Quality Board, Field Operations Division, Surveillance Section, Special Studies Program  1733
Thaeler, C. S., Jr.  1302
Thayer, W. N.  1558
Thebeau, L. C.  1860
Thelandar, C. G.  1787, 1800
Thelandar, Carl G.  1811
Thenayan, Abdullah T.  1495
Thomas, Harold E.  1559
Thomas, J. W.  1174
Thomas, Rex E.  488
Thomas, Robert A.  776
Thompson, B. C.  820, 921, 1400
Thompson, Ben H.  1350
Thompson, Bruce C.  1932
Thompson, Bruce Carlyle  1004
Thompson, C. M.  1474, 1502
Waggerman, G.  972
Waggerman, G. L.  876, 1015, 1392
Waggerman, Gary L.  979, 1016
Waid, Douglas D.  1247, 1310, 1311, 1312
Waldschmidt, S. R.  759
Walker, B.  707
Walker, Eugene A.  1339
Walker, J. M.  779
Walker, W.  1787
Walker, Wayman II  1811
Wallace, Henry  780
Wallimo, O. C.  841, 1017, 1018, 1019, 1313, 1314, 1351
Walsh, D. F.  1848, 1869
Walsh, S. J.  657
Walter, Hartmut  292
Walters, James W.  149
Walters, Vladimir  616
Walton, Anthony W.  1523
Walton, B. J.  1787
Walton, Brian J.  1811
War, F. P.  1802
War, H.  919
Warner, Ray  1315
Warnock, Barton H.  133, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 277, 278, 279, 1352, 1353, 1354
Warren, Mike  1890
Warren, Robert J.  1247, 1311, 1312
Warshaw, Steve  1737, 1738
Water Resources Council (U.S.)  1565
Waterfall, U. T.  160
Wauer, Roland H.  26, 38, 73, 85, 107, 123, 280, 281, 329, 336, 522, 575, 580, 612, 620, 680, 689, 748, 769, 778, 781, 792, 796, 844, 888, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1046, 1047, 1077, 1153, 1173, 1270, 1309, 1316, 1355, 1393, 1419, 1464, 1602, 1603
Weaver, W. G., Jr.  666
Webb, James W.  1870
Webb, W. L.  1394
Webster, Charles F.  1739
Webster, G. L.  161
Weedon, J. F.  282, 283
Weishuhn, L. L.  1117
Wells, Frank C.  1740
Wells, Philip V.  162, 163, 164
Wells, Stephen G.  1515
Weniger, Del  284, 285
Werler, J. E.  782
Werler, John E.  772
Werne, J. R.  1465
Werner, Floyd G.  447
Wesson, Leo  1048
West, Jan  330
Wetmore, Clifford M.  286, 287, 1903, 1904
Wheeler, Louis Cutter  288
Whitaker, John O.  405, 448, 1140, 1317
White, Burdette E.  449
White, C. M.  1787, 1800
White, Clayton M.  976
White, D. H.  949, 1049, 1764, 1784, 1785, 1834, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883
White, R. S.  1367
White, W. A.  1566
White, W. N.  1533, 1534
Whitefield, Michael Paul  165
Whitford, W. G.  1389
Whitford, Walter, G.  1646
Whiting, William Henry Chase  1448
Whitley, T. E.  1439, 1441
Whitley, Terry E.  1442
Whitson, Paul D.  166, 167, 1604
Whitworth, Molly R.  592
Wieprecht, P. J.  1489
Wiggins, Glenn B.  490
Wilde, G. R.  658
Wiley, E. O.  22, 648
Wilkite, H. S.  491
Wilkins, K. T.  1318
Williams, Dwayne  1496
Williams, Frances  849
Williams, J. L.  375
Williams, J. M.  1881
Williams, John  529, 617, 659, 660
Williams, John D.  529, 617, 660
Williams, John G.  581, 661
Williams, John S.  168, 289
Williams, K. L.  752
Williams, Michael D.  1897
Williams, O. B.  99
Williams, Sartor Otho III  1050
Williames, D.  1502
Wilson, D. E.  1151, 1319, 1376
Wilson, Don E.  1255
Wilson, K. R.  868
Wilson, W. T.  416
Winckler, S.  1051
Winberg, Lamar A.  1320, 1321
Winemiller, K. O.  498
Winkler, C. K.  1119, 1322
Winters, J. Kenneth  1870
Wirth, W. W.  492
Wirth, Willis W.  470
Wiseman, J. S.  1795, 1853
Wolf, David E.  1052
Wolff, Herbert A. 1915
Woltenbarger, Orlie Kenneth III 1395
Wondzell, Steven M. 99, 169, 170
Wood, M. G. 539, 540
Wood, Michael Gray 662
Woodin, M. C. 1053
Woodin, Marc 1790
Woodward, Dennis 1567
Woodward, Dennis G. 1506
Woolman, A. J. 663
Woolman, Albert J. 664
Wooten, R. C., Jr. 450
Wooton, Elmer O. 171
Worthington, Richard D. 141, 172, 173, 174,
175, 222, 290, 291, 292, 778, 1356, 1357, 1396
Wrenn, William J. 398
Wright, Henry A. 1368
Wright, P. G. 1054

Wynd, F. L. 1503
Yancey, F. D. II 1196, 1200, 1227, 1323, 1324,
1325, 1326
Yancey, R. M. 1924
Yarborough, Keith A. 1890, 1905
Yates, T. L. 526, 1167
York, C. L. 1397
York, J. C. 176
Young, D. A. 665
Younger, Victor 330
Zajicek, J. L. 1850
Zerick, H. 1786
Zerr, R. W. 577
Zimmer, Barry 1055
Zimmerman, A. D. 264
Zwank, P. J. 948
Zweifel, Richard G. 783
Key Word Index

Abies durangensis var. coahuilensis 294
Acacia smallii 297
Acari 405
Acarina 398, 448
Accipitridae 894
Acclimatization (Plants) 82
Achurum sumachrasti 431
Acris 756
Aculenta--Big Bend National Park (Tex.) 383
Aedes aegypti 1846
Aedes albopictus 1846
Aeneolamia 372
Agavaceae 201
Agave glomeruliflora 215
Agave havardiana 129, 223, 224, 235, 1189, 1358, 1359, 1360
Agave lechuguilla 129
Agonostomus monticola 519
Agricultural chemicals--Economic aspects 1761
Agricultural chemicals--Environmental aspects 52, 1672, 1750, 1784, 1882
Agricultural geography--Lower Rio Grande Valley (Tex.) 1479
Agricultural laborers 1743
Agricultural pollution 1769
Agricultural resources 1495
Agriculture--Economic aspects 1495
Agrius 394, 396
Air--Pollution 1639, 1885, 1886, 1887, 1888, 1894, 1897, 1899
Air--Pollution--El Paso Metropolitan Area (Tex.) 292, 1884
Air--Pollution--Measurement 1889, 1903
Air quality 1898
Air quality--Big Bend National Park (Tex.) 1892, 1900, 1901, 1902, 1904, 1905
Air quality--Mexico--Ciudad Juarez 1891
Air quality monitoring stations 1889
Air quality--Texas--El Paso 1891
Algae control 1676
Ambyrus hungerfordi 484
Amnatomus icariodes 385
Amphibians--Big Bend National Park (Tex.) 21, 674, 687, 768
Amphibians--Big Bend Region (Tex.) 751
Amphibians--Chihuahuan Desert 680, 745, 769
Amphibians, Fossil 705, 778
Amphibians--Identification 701
Amphibians--Lower Rio Grande Valley (Tex.) 23, 777
Amphibians--Mexico 709, 734
Amphibians--Mexico--Coahuila 767
Amphibians--Texas 541, 675, 776
Amphibians--Texas--Brewster County 667, 739, 773
Amphibians--Texas--Cameron County 760
Amphibians--Texas--Chisos Mountains 754
Amphibians--Texas--Guadalupe Mountains 740, 753
Amphibians--Texas--Southwest 720
Amphibians--Texas--Terrell County 741
Anas diazi 881, 958, 998, 1050
Anas platyrhynchos diazi 959, 981
Anas rubripes 1794
Ancistrocactus tobuschii 219
Anderida poerinella 366
Anencephalus 1615
Animals--Photographs 1350
Anisakidae 737
Anna's hummingbird 1046
Anolis sagrei 732
Anostraca 455
Antelopes (see also Antilocapra americana) 1172
Antilocapra americana 1089, 1155, 1171, 1264
Ants 344, 438, 439, 440, 441, 442, 443, 444, 446
Anura 757, 758
Apicomplexa 1181
Apidae 375, 416
Apis mellifera 416
Aplomado falcon 899, 951
Apodemia 378
Aponomma elaphensis 411, 691
Aquatic ecology 1328, 1403, 1706
Aquatic invertebrates 454, 461, 466, 471, 473, 482
Aquatic microbiology 483
Aquatic plants 89, 220, 991, 1430, 1630, 1631
Aquatic plants--Control--Congress 1488
Aquilegia 229
Arachnida 382, 424, 427
Argemone 250
Arrenonops rufigratus 1054
Arsenic 1687, 1898
Arthropod populations--Lower Rio Grande Valley (Tex.) 380
Ascaridida 737
Ashy dogweed 241
Asteraceae 254, 255, 256, 257, 262, 370
Astragalus 203, 226, 239
Astyanax fasciatus 542
Atherinidae 619
Atmospheric chemistry 1890
Atmospheric ozone--Big Bend National Park (Tex.) 1895, 1896
Audubon's oriole 858
Austroptinos 456
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avicennia germinans</td>
<td>1424</td>
</tr>
<tr>
<td>Awaous tajasica</td>
<td>538</td>
</tr>
<tr>
<td>Aytthya americana</td>
<td>1053</td>
</tr>
<tr>
<td>Aztec thrush</td>
<td>1052</td>
</tr>
<tr>
<td>Baccharis</td>
<td>369, 370</td>
</tr>
<tr>
<td>Bald eagle--New Mexico</td>
<td>882</td>
</tr>
<tr>
<td>Bartlettia</td>
<td>245</td>
</tr>
<tr>
<td>Basins (Geology)</td>
<td>1524</td>
</tr>
<tr>
<td>Bat--falcon--Mexico</td>
<td>824</td>
</tr>
<tr>
<td>Bats--Big Bend National Park (Tex.)</td>
<td>1132, 1133,</td>
</tr>
<tr>
<td></td>
<td>1134, 1140, 1190, 1277</td>
</tr>
<tr>
<td>Bats--Big Bend Region (Tex.)</td>
<td>1101</td>
</tr>
<tr>
<td>Bats--Mexico</td>
<td>1133, 1140, 1195, 1319</td>
</tr>
<tr>
<td>Bats--Parasites</td>
<td>1317</td>
</tr>
<tr>
<td>Bats (see also Chiroptera)</td>
<td>1130, 1131, 1153, 1211,</td>
</tr>
<tr>
<td></td>
<td>1255, 1272, 1303</td>
</tr>
<tr>
<td>Beavers (see also Castor canadensis)</td>
<td>1283, 1285</td>
</tr>
<tr>
<td>Bee culture--Mexico</td>
<td>412</td>
</tr>
<tr>
<td>Bees</td>
<td>375, 383, 416</td>
</tr>
<tr>
<td>Beetles--Big Bend National Park (Tex.)</td>
<td>348, 381</td>
</tr>
<tr>
<td>Beetles (see also Coleoptera)</td>
<td>346</td>
</tr>
<tr>
<td>Belastoma confusus</td>
<td>488</td>
</tr>
<tr>
<td>Benthos</td>
<td>6, 462, 463, 471</td>
</tr>
<tr>
<td>Benthos--Big Bend National Park (Tex.)</td>
<td>454</td>
</tr>
<tr>
<td>Berlandier's tortoise</td>
<td>763</td>
</tr>
<tr>
<td>Big Bend gambusia (see also Gambusia gaigei)</td>
<td>575</td>
</tr>
<tr>
<td>Big Bend National Park--Herbarium</td>
<td>153</td>
</tr>
<tr>
<td>Big Bend National Park (Tex.)</td>
<td>1416, 1590, 1592,</td>
</tr>
<tr>
<td></td>
<td>1593, 1594, 1595</td>
</tr>
<tr>
<td>Big Bend National Park (Tex.)--Bibliography</td>
<td>1909, 1910, 1937</td>
</tr>
<tr>
<td>Big Bend National Park (Tex.)--History</td>
<td>13, 1548, 1574</td>
</tr>
<tr>
<td>Big Bend National Park (Tex.)--Recreational use</td>
<td>1402, 1408, 1414</td>
</tr>
<tr>
<td>Big Bend National Park (Tex.)--Research</td>
<td>1444</td>
</tr>
<tr>
<td>Big Bend National Park (Tex.)--Vegetation surveys</td>
<td>30</td>
</tr>
<tr>
<td>Big Bend Region (Tex.)--History</td>
<td>1463</td>
</tr>
<tr>
<td>Big Bend Region (Tex.)--Periodicals</td>
<td>1931</td>
</tr>
<tr>
<td>Big Bend slider</td>
<td>733, 774</td>
</tr>
<tr>
<td>Big game animals--New Mexico</td>
<td>1164</td>
</tr>
<tr>
<td>Bighorn sheep (see also Ovis canadensis)</td>
<td>1104, 1126</td>
</tr>
<tr>
<td>Bioaccumulation</td>
<td>1769, 1794, 1832, 1835, 1836, 1866, 1877, 1878</td>
</tr>
<tr>
<td>Bioaccumulation--Mexico</td>
<td>1868</td>
</tr>
<tr>
<td>Biogeography--Mexico--Congresses</td>
<td>1460</td>
</tr>
<tr>
<td>Biological diversity conservation</td>
<td>1579</td>
</tr>
<tr>
<td>Biological diversity--Mexico--Congresses</td>
<td>1460</td>
</tr>
<tr>
<td>Biological invasions</td>
<td>295</td>
</tr>
<tr>
<td>Biological monitoring</td>
<td>1701</td>
</tr>
<tr>
<td>Biology--Bibliography</td>
<td>1939</td>
</tr>
<tr>
<td>Biotelmetry</td>
<td>1259</td>
</tr>
<tr>
<td>Biotic communities</td>
<td>8, 33, 1034, 1364, 1373, 1375, 1377, 1394, 1398, 1606, 1609</td>
</tr>
<tr>
<td>Biotic communities--Bibliography</td>
<td>1939</td>
</tr>
<tr>
<td>Bird pests--Control</td>
<td>802, 1834, 1862</td>
</tr>
<tr>
<td>Bird populations</td>
<td>821, 944, 969, 1004, 1014, 1016, 1039, 1041, 1045</td>
</tr>
<tr>
<td>Bird refuges</td>
<td>26, 896, 1419, 1580</td>
</tr>
<tr>
<td>Bird watching</td>
<td>908</td>
</tr>
<tr>
<td>Birds</td>
<td>836, 908</td>
</tr>
<tr>
<td>Birds, Attracting of</td>
<td>850</td>
</tr>
<tr>
<td>Birds--Big Bend National Park (Tex.)</td>
<td>801, 809, 810, 811, 812, 840, 843, 848, 926, 982, 997, 1007, 1022, 1023, 1025, 1026, 1032, 1033, 1040, 1043</td>
</tr>
<tr>
<td>Birds--Big Bend Region (Tex.)</td>
<td>927, 1038</td>
</tr>
<tr>
<td>Birds--Breeding</td>
<td>853, 854</td>
</tr>
<tr>
<td>Birds--Coastal Bend (Tex.)--Geographical distribution</td>
<td>969</td>
</tr>
<tr>
<td>Birds--Counting</td>
<td>784</td>
</tr>
<tr>
<td>Birds--Ecology</td>
<td>235</td>
</tr>
<tr>
<td>Birds--Effect of habitat modification on</td>
<td>1391</td>
</tr>
<tr>
<td>Birds--Effect of insecticides on</td>
<td>1835</td>
</tr>
<tr>
<td>Birds--Effect of pesticides on</td>
<td>1784, 1821</td>
</tr>
<tr>
<td>Birds--Eggs</td>
<td>926, 1838</td>
</tr>
<tr>
<td>Birds--Geographical distribution</td>
<td>845, 970, 1002, 1045, 1409</td>
</tr>
<tr>
<td>Birds--Habitat</td>
<td>839, 867, 897, 904, 960</td>
</tr>
<tr>
<td>Birds--Habitat--Lower Rio Grande Valley (Tex.)</td>
<td>790</td>
</tr>
<tr>
<td>Birds--Identification</td>
<td>804, 848, 1003</td>
</tr>
<tr>
<td>Birds--Lower Rio Grande Valley (Tex.)</td>
<td>860, 874, 929, 987, 988</td>
</tr>
<tr>
<td>Birds--Mexico</td>
<td>787, 861, 883, 946</td>
</tr>
<tr>
<td>Birds--Mexico-Coahuila</td>
<td>945, 1009</td>
</tr>
<tr>
<td>Birds--Mexico-Habitat</td>
<td>867, 1464</td>
</tr>
<tr>
<td>Birds--Mexico-Identification</td>
<td>1035</td>
</tr>
<tr>
<td>Birds--Mexico-Tamaulipas</td>
<td>868, 964</td>
</tr>
<tr>
<td>Birds--Migration</td>
<td>26, 904, 1419</td>
</tr>
<tr>
<td>Birds--Nestings</td>
<td>984</td>
</tr>
<tr>
<td>Birds--Nests</td>
<td>943, 994, 1011</td>
</tr>
<tr>
<td>Birds--New Mexico</td>
<td>880</td>
</tr>
<tr>
<td>Birds--New Mexico--Habits</td>
<td>944</td>
</tr>
<tr>
<td>Birds--Nomenclature</td>
<td>970, 1003</td>
</tr>
<tr>
<td>Birds of prey</td>
<td>894</td>
</tr>
<tr>
<td>Birds, protection of</td>
<td>20, 973, 975</td>
</tr>
<tr>
<td>Birds--Texas</td>
<td>961, 963</td>
</tr>
<tr>
<td>Birds--Texas--Big Bend National Park (Tex.)</td>
<td>156, 1020</td>
</tr>
<tr>
<td>Birds--Texas--Black Gap Wildlife Management Area</td>
<td>930</td>
</tr>
<tr>
<td>Birds--Texas--Brewster County</td>
<td>804, 835, 841, 996, 1013</td>
</tr>
<tr>
<td>Birds--Texas--Brewster County--Seasonal distribution</td>
<td>950</td>
</tr>
<tr>
<td>Birds--Texas--Brooks County</td>
<td>992</td>
</tr>
<tr>
<td>Birds--Texas--Chisos Mountains</td>
<td>807, 808, 864, 1010</td>
</tr>
<tr>
<td>Birds--Texas--Chisos Mountains--Habitat</td>
<td>1034</td>
</tr>
<tr>
<td>Birds--Texas--Chisos Mountains--Seasonal distribution</td>
<td>1028</td>
</tr>
<tr>
<td>Birds--Texas--Culberson County</td>
<td>800</td>
</tr>
</tbody>
</table>
Birds--Texas--Davis Mountains 849, 993
Birds--Texas--Guadalupe Mountains 818, 956
Birds--Texas--Las Palomas Wildlife Management Area 785
Birds--Texas--Presidio County 785
Birds--Texas--Southwest 965
Birds--Texas--Starr County 1051
Bison 1449
Bivalvia 479
Black bear--Big Bend National Park (Tex.) 1179, 1212, 1223, 1230, 1275
Black bear--Mexico 1129
Black bear (see also Ursus americanus) 1157, 1232, 1292
Black-bellied whistling ducks 837
Black-capped vireo (see also Vireo atricapillus) 788, 797, 817, 873, 931, 939
Black ducks 1794
Black-headed snakes 772
Black mangrove 1424
Black skimmer 1767, 1883
Black-tailed jackrabbit 1793
Black-tailed rattlesnake 669
Black-vented oriole 1029
Blue catfish 557, 558
Blue-gray gnatcatcher 984
Blue-throated hummingbird 1012
Blue-winged teal 1877
Bluetongue 1262
Bobcat (see also Lynx rufus) 1218
Bobwhite (see also Colinus virginianus) 918
Boil weevil 216
Botany--Big Bend National Park (Tex.) 27, 29, 30, 101, 102, 104, 131, 132, 142, 143, 151, 153, 155, 157, 159, 1355, 1548
Botany--Chihuahuan Desert 67, 73, 84, 120, 121, 122, 123
Botany--Classification--Photographs 27
Botany--Coastal Bend (Tex.) 82
Botany--Ecology 32, 65, 66
Botany--Ecology--History 12, 64, 76, 1448
Botany--Falcon Reservoir (Mexico and Tex.) 39
Botany--Guadalupe Mountains (N.M. and Tex.) 38, 65, 8
Botany--Lower Rio Grande Valley (Tex.) 42, 62, 125
Botany--Mexico 80, 91, 100
Botany--Mexico--Chihuahua 94, 130
Botany--Mexico--Coahuila 110
Botany--Mexico--Gulf of 136
Botany--Mexico--Nuevo Leon 109
Botany--New Mexico 171, 301
Botany--Rio Grande 85
Botany--Rio Grande Delta (Mexico and Tex.) 19, 124
Botany--South Padre Island (Tex.: Island) 97
Botany--Texas 46, 48, 69, 72, 137, 1404
Botany--Texas--Bibliography 1930
Botany--Texas--Brewster County 118, 132, 133, 162
Botany--Texas--Cameron County 87
Botany--Texas--Chisos Basin 1604
Botany--Texas--Chisos Mountains 103, 108, 113
Botany--Texas--El Paso County 173, 175, 291
Botany--Texas--Franklin Mountains 1356
Botany--Texas--Glass Mountains 150
Botany--Texas--Hughspey County 172
Botany--Texas--Hueco Mountains 174, 1357
Botany--Texas--Presidio County 127, 141
Botany--Texas--Rio Grande Valley State Scenic Park 135
Botany--Texas--Santa Ana National Wildlife Refuge 60, 61
Botany--Texas--South 105
Botany--Texas--South Padre Island 88, 96, 98
Botany--Texas--Southwest 47
Botany--Texas--Statistics 70
Botany--Texas--Terrell County 161
Botany--Texas--Welder Wildlife Refuge 54
Botany--Trans-Pecos (Tex. and N.M.) 119
Brachygastra mellifica 429
Bridge--Texas 1665
Broad-winged hawks 901
Bromeliaceae 233
Bromeliaceae--Big Bend National Park (Tex.) 186, 271
Brongniartia minutifolia 86, 309, 321
Bronzed cowbird 830, 844, 1036
Brown algae 1422, 1423, 1441, 1442
Brown-headed cowbird 933
Brown pelican 903, 1760
Brucellosis 1177
Brush--Control--Texas 312, 313, 314, 1118, 1191, 1251, 1391, 1472, 1918
Brush mouse 1269
Bulimulidae 413
Bunched cory cactus (see also Coryphantha ramillosa) 211
Buprestidae 395, 396
Buteo albonotatus 894
Buthidae 425
Butterflies 391
Cactaceae 178, 189, 234, 259
Cactaceae--Big Bend National Park (Tex.) 280
Cactaceae--Big Bend Region (Tex.) 266
Cactaceae--Classification 265
Cactaceae--Mexican-American Border Region 202
Cactaceae--Texas--Brewster County 270
Cactaceae--Trans-Pecos (Tex. and N.M.) 282, 283
Cactus 179, 187, 207, 208, 211, 219, 221
Cactus--Big Bend National Park (Tex.) 180, 209, 212, 225, 269, 281
Cactus--Big Bend Region (Tex.) 181, 183, 184, 194
Cactus--Chihuahuan Desert 210, 213
Cactus--Texas 267, 285
Cactus--Texas--El Paso 290
Cactus--Texas, South 58
Caddisflies 490
Calamoceratidae 457
California leaf-nosed bat 1255
Callipepla squamata 1017, 1018
Calothorax lucifer 967
Cambaridae 458
Camptostoma 510
Camptostoma ornatum 508
Canals 1663
Canals--Mexico 1667
Candelilla 1447
Canis latrans 1282
Canyon lizards 673, 749
Carabamates 1784
Cardellina rubrifrons 913
Carex--Texas--Brewster County 217
Carmen mountains white-tailed deer (see also Odocoileus virginianus carminis) 1082, 1203, 1205
Carnivora--Big Bend National Park (Tex.) 1224
Carnivora--Chihuahuan Desert 1231
Carpenter bees 1388
Caspian tern 947
Castilleja elongata 199
Castilleja genevieveana 236
Castor canadensis 1088, 1107, 1149, 1284
Catocalinae 360
Caterpillars--Food 392
Catfishes 551, 552, 553, 557, 558, 593, 594, 595, 601, 1920
Catoptrichus semipalmatus 1769
Caudata 737
Cave fauna 559
Caves--Guadalupe Mountains (N.M. and Tex.) 493, 1540
Celtis laevigata 297
Centropomus undecimalis 515
Centruroides pantheriensis 425
Centruroides vittatus 384
Century plant (see also Agave havardiana) 1358
Cerambycidae 388, 390, 397
Ceratopogonidae 492
Cerceris 387
Cercoidea--Mexico 372
Cereus greggii 196
Ceavalita sinuata 263
Chachalaca 822, 922, 923, 1015, 1016, 1831
Chaetodipus 1199
Chaetodipus eremicus 1227
Chaetodipus nelsoni 1227
Chaetodipus penicillatus 1215
Chamaesaracha 260
Chamaelecye 232
Channel catfish 601
Channels (Hydraulic engineering)--Environmental aspects 1653, 1669
Chaparral 125
Chaparral ecology 1366
Charadra ingenua 359
Charadriiformes--Big Bend Region (Tex.) 1047
Chiggers 398, 399
Chihuahua chub 656
Chihuahuan Desert--Conferences 1363, 1387, 1393
Chipmunks--Morphology 1245
Chiroptera 405, 1161, 1326
Chiroptera--Big Bend National Park (Tex.) 1135, 1137
Chisos Mountain hedgehog cactus (see also Echinocereus chisoensis) 221
Chisos pitaya 212
Chrysemys concinna 713
Chrysemys scripta 713
Chrysothemidae 449
Cicadidae 432
Cichlasoma cyanoguttatum 499, 645
Cichlidae 539, 540, 600, 646
Cicindela 381
Clark's nutcracker 864
Climatic changes--Chihuahuan Desert 1369
Climatology--Mexican-American Border Region 1886
Climbing plants 51, 328
Cnemidophorus 684, 686, 742, 746, 748
Cnemidophorus dixoni 779
Cnemidophorus scalaris 736
Cnemidophorus tessellatus 766
Cnemidophorus tigris 736
Coal-fired power plants--Mexico 1893
Coastal ecology 1859
Coastal ecology--Bibliography 1916, 1924
Coastal zone management 1429
Coccida 1181
Coleonyx 682
Coleonyx brevis 761
Coleonyx reticulatus 735
Coleoptera 349, 388, 390, 395, 396, 397, 404, 418, 437, 447, 449
Coleoptera--Big Bend National Park (Tex.) 345, 346, 350
Coleoptera--Mexico 216, 350, 419
Colima warbler (see also Vermivora crissalis) 909, 912, 994, 1021
Colinus virginianus 832, 833, 915, 916, 917
Collared peccary 1079, 1081, 1148, 1180, 1194, 1226
Colonias 1628
Coluber constrictor 708
Colubridae 708
Columbidae 806, 865, 972, 978
Columbine 229
Comanche Springs pupfish 637
Compositae 241, 246, 247, 248, 249, 251, 252, 253, 261, 272
Coniothylla 436
Conservation of natural resources 1485, 1487, 1614
Contracaecum 737
Cosphorus texanus 715, 716
Copper industry and trade--Environmental aspects 1897
Copper--Toxicology 1822, 1868
Cormorants 820, 952, 1001, 1838
Corvus cryptoleucus 786
Corydalidae 460
Coryphaena miniima 208
Coryphaena ramillosa 194, 211
Cossidae 356
Cotton--Diseases and pests 216, 1840, 1841
Cotton rats 1076, 1115, 1166, 1254, 1281
Cottontails 1106
Cottonwood (see also Populus fremontii) 293, 1283
Couch's Mexican jay 920
Couch's spadefoot toad (see also Scaphiopus couchii) 1816
Couchianus 626
Cowbirds 844, 933, 984, 1036
Coyotes (see also Canis latrans) 1060, 1109, 1218, 1320, 1321
Cranes (Birds)--Mexico 842
Crepuscular bush 301, 326
Crotalus atrox 719
Crotalus lepidus lepidus 669
Crotalus molossus molossus 669
Crotalus scutulatus 719
Crotaphythus reticulatus 724
Cruicae 222
Crustacea 459, 475, 486, 1630
Cryptidae 350
Cryptanthus crassipes 244
Ctenuchidae 355
Culicoides 470
Curculionidae 371, 404
Curculionidae--Mexico 216
Curculionoidea 345
Cutthroat trout 550
Cyperaceae 217
Cyprinella lutens 603
Cyprinidae 502, 505, 508, 509, 510, 511, 521, 526, 568, 572, 583, 603
Cypriniformes 636
Cyprinodon 532, 546, 611, 613
Cyprinodon bovinus 533, 544, 596, 640
Cyprinodon elegans 514, 527, 534, 650, 657
Cyprinodon exigus 528, 572, 611
Cyprinodon latifasciatus 609
Cyprinodon pachycephalus 625
Cyprinodon pecosensis 512, 531, 547, 598
Cyprinodon variegatus 512, 534, 544, 650, 657
Cyprinodontidae 514, 527, 531, 532, 534, 572, 582, 616, 637, 640, 650
Cyprinodontidae--Mexico 657
Cyrtinus 390
Cyrtonyx montezumae mexicanus 995
Dams 1659, 1661
Damselflies 465
Dasypus salmocolor 355
Davis' green pitaya cactus 207
DCPA--Environmental aspects 1833
DDT (Insecticide)--Environmental aspects 1741, 1742, 1764, 1778, 1804, 1809, 1811, 1878
Decapoda 458, 486
Deer--Big Bend National Park (Tex.)--Ecology 1202, 1241
Deer--Counting 1098, 1127, 1193, 1314, 1322
Deer--Ecology 1191, 1192, 1204, 1216
Deer--Effect of habitat modification on 1191
Deer--Feeding and feeds 313, 1061, 1062, 1063, 1094, 1105, 1204, 1278, 1307
Deer--Geographical distribution 1061, 1240
Deer--Guadalupe Mountains (N.M. and Tex.)--Feeding and feeds 1279
Deer--Habitat 1090, 1119, 1192, 1233
Deer hunting 1182
Deer--New Mexico 1210
Deer--Nutrition 1278
Deer--Productivity 1064
Deer--Research 1175
Deer--Texas--Control 1117
Dendrochronology 299, 319, 325
Dendrochronology--Big Bend National Park (Tex.) 318, 324
Dermochelys coriacea 727
Desert bighorn sheep (see also Ovis canadensis nelsoni) 1173, 1262
Desert biology 2, 1445, 1461
Desert ecology 471, 659, 839, 1285
Desert ecology--Congresses 1387, 1393
Desert fauna 622, 647, 1338
Desert flora 49, 138, 168, 170
Desert flora--Big Bend National Park (Tex.) 143, 167, 169
Desert flora--Chihuahuan Desert 34
Desert flora--Guadalupe Mountains (N.M. and Tex.) 38
Desert flora--Mexico 100
Desert flora--Trans-Pecos (Tex. and N.M.) 160, 1338
Desert millipede (see also Orthoporus ornatus) 374
Desert mule deer (see also Odocoileus hemionus crooki) 1096, 1109, 1206, 1208, 1209, 1219, 1221, 1240, 1258, 1261
Desertification--Big Bend National Park (Tex.) 1379
Devils River minnow 549
Diamondback water snake 725
Dichromansassa rufescens 943
Dicotyles rajacu 1144, 1146, 1226
Dieldrin--Environmental aspects 1778, 1783
Dionda diaboli 549, 568, 572
Diplomcentrus bigbendensis 426
Diplopora 373
Dipodomys 1160
Dipodomys mirrarensis ambiguus 1121
Dipodomys oridii 1087, 1088, 1102
Diptera 446, 470, 492
Dragonflies 465, 489
Drinking water--Abstracts--Data bases 1908
Drinking water--Contamination 5, 1682, 1687
Drinking water--Texas--Brownsville 1736
Ducks 857
Ducks--Behavior 948
Ducks--Effect of insecticides on 1783
Ducks--Effect of pesticides on 1843, 1877
Ducks--Effect of water pollution on 1790
Ducks--Food 941
Ducks--Laguna Madre (Tex.)--Mortality 942
Ducks--Nests 837
Ducks--Toxicology 1832, 1873, 1876
Dysmycohermes 460
Echinocerus 234
Echinocerus chisoensis 86, 212, 221
Echinocerus coxcanerus 259
Echinocerus enneacanthus 189
Echinocerus reichenbachii chisoensis 177, 180, 275
Echinocerus viridiflorus 207, 227
Echinocerus x lloydii 259, 264
Ecomomiae 456
Ecological surveys--Big Bend National Park (Tex.) 102, 1329, 1339, 1340, 1347, 1349, 1352, 1353, 1354
Ecological surveys--Laguna Madre (Tex.) 1420
Ecological surveys--Lower Rio Grande Valley (Tex.) 1649
Ecological surveys--Mexico--Coahuila 1337, 1348
Ecological surveys--New Mexico--Animas Mountains 1331
Ecological surveys--Texas 1327
Ecological surveys--Texas--Arroyo Colorado 1328
Ecological surveys--Texas--Palo Alto Battlefield National Historic Site 1330, 1341
Ecology--Abstracts--Data bases 1906
Ecology--Big Bend National Park (Tex.) 1351, 1352, 1353, 1390
Ecology--Laguna Madre (Tex.) 1437
Ecology--Lower Rio Grande Valley (Tex.) 1386
Ecology--Texas--Southwest 1397
Ecosystem management--Southwest, New--Congress 1417
Ectemium centralis 386
Ectoparasitic infestations 735, 1000, 1130, 1317
Edwards Aquifer (Tex.)--Bibliography 1922
Egrets (see Herons) 851
Egretta rufescens 1812
Eimeria 1256
Eimeriidae 1181
Elaphes subocularis 691, 780
Eleodes 437
Elephant Butte Reservoir (N.M.) 1675
Elf owl 794, 893
Elk--Habitat 1243
Endangered species 7, 191, 207, 208, 210, 211, 213, 219, 220, 221, 241, 242, 244, 247, 303, 527, 529, 569, 574, 637, 638, 639, 640, 655, 660, 668, 875, 900, 975, 990, 1006, 1237, 1299, 1301, 1304, 1305, 1306
Endangered species--Big Bend National Park (Tex.) 86, 177, 197, 212, 560, 575, 661, 793
Endangered species--Effect of habitat modification on--Bibliography 1921
Endangered species--Law and legislation 588
Endangered species--Lower Rio Grande Valley (Tex.) 59, 1605, 1610, 1611
Endangered species--Mexican-American Border Region 8, 1606
Endangered species--Mexico 524
Endangered species--New Mexico 556, 656, 1607
Endangered species--Texas 117, 134, 218, 267, 537, 545, 548, 665, 775, 1116, 1176, 1197, 1300, 1403, 1608, 1609, 1612
Endemic plants 138, 144, 147
Endemic plants--Big Bend Region (Tex.) 184
Endemic plants--Mexico--Cuatro Cienegas 237
Environmental health 1638
Environmental impact analysis 1580, 1582, 1629
Environmental impact analysis--Big Bend National Park (Tex.) 1590
Environmental impact analysis--Mexico-Sierra Madre Occidental 1484
Environmental impact analysis--Rio Grande Watershed 1671
Environmental impact analysis--Texas--Cameron County 1669
Environmental impact statements 1653, 1655, 1657, 1658
Environmental law 1631, 1639
Environmental monitoring 1402, 1414, 1532, 1646, 1701, 1786, 1849, 1859
Environmental monitoring--Texas 1911
Environmental policy 1620, 1639, 1642, 1893
Environmental protection 1377, 1613, 1621, 1636, 1642
Environmental protection--Lower Rio Grande Valley (Tex.) 1575
Environmental protection--Mexican-American Border Region 1641, 1643, 1644, 1645
Grasslands—Big Bend National Park (Tex.) 169
Grasslands—Mexico 37, 268
Grasslands—Texas—Brewster County 112
Gray vireo (see also Vireo vicinior) 796
Grazing 1378, 1492
Great kiskadee 815, 870
Greater earless lizard 716
Grotella blanchardi 400
Groundwater (see Water, Underground) 1507
Guadalupe Mountains National Park (Tex.) 1374
Guadalupe Mountains National Park (Tex.)—Bibliography 1914, 1917
Guano 405
Guayule 330
Gulf Intracoastal Waterway 1652, 1664, 1667, 1668
Gulls—Breeding 1882
Habitat (Ecology) 1268
Habitat (Ecology)—Bibliography 1939
Habitat (Ecology)—Modification 1376, 1408
Habitat (Ecology)—New Mexico 904
Halaeetus leucocephalus 882
Halodule wrightii 1431
Halophytes—Chihuahuan Desert 73
Harlequin quail 1037
Hawks 901
Hazardous waste management industry 1771
Hazardous wastes—Mexican-American Border Region 1643, 1644, 1645, 1771
Hazardous wastes—Mexico 15, 1634
Heavy metals 1760, 1832, 1869
Hechta scarisoa 205, 233, 271
Heleidae 470
Heliconiidae 391
Helix aspersa 414
Helminthoblogitaeidae 408
Hermidactylus turcicus 700
Hemiptera 464, 484, 485
Herbicidal—Environmental aspects 1754, 1755, 1816, 1833, 1856
Herbolores 1378
Heron 851, 943
Herons—Toxicology 1812
Herpetology—Texas 775
Heteromyidae 1214
Hexorthodes 367
Hinckley oak 303
Historic sites 1342
Holbrookia 684, 686
Holbrookia propinqua 721, 722, 723, 731, 765, 771
Home range—Big Bend National Park (Tex.) 1282
Horned lizard 677, 693
Hot springs 563, 1516, 1537
Huashche 296
Human-animal relationships 1092
Human ecology 1386
Humboldtiana agavaphila 408
Hummingbirds 859, 955, 967, 983, 1012, 1388
Hummingbirds—Big Bend National Park (Tex.) 905, 906, 907, 1027, 1046
Hurricanes 1428, 1532, 1535
Hybognathus amarus 506, 505, 526
Hydrocarbons—Environmental aspects 1789, 1832
Hydrogeology—Big Bend National Park (Tex.) 1506
Hydrogeology—Big Bend Region (Tex.) 1504
Hydrology 1514, 1523
Hydrology—Bibliography 1938
Hydrology—New Mexico 1515
Hymenoptera 344, 375, 386, 387, 401, 416, 420, 439, 443, 444, 446
Ibis 1782, 1823
Ichthyology—Lower Rio Grande Valley (Tex.) 654
Ichthyology—Mexico 604, 610
Ictaluridae 594, 595
Ictalurus furcatus 558
Ictalurus lupus 593, 595
Icterus gularis 966
Icterus wagler 1029
Ictiobus bubalis 587
Iguanidae 695, 696, 697, 698, 710, 715, 716, 731, 732, 771
Insect pests—Control 1841
Insecticides 1471, 1750, 1764, 1765, 1766, 1811, 1840, 1841, 1846
Insecticides—Big Bend National Park (Tex.) 1747, 1748
Insects, Aquatic—Big Bend National Park (Tex.) 454
Insects, Aquatic—Big Bend Region (Tex.) 488
Insects, Aquatic—Texas 473
Insects—Big Bend National Park (Tex.) 25, 331, 338, 339, 340, 341, 343
Insects—Host plants 369, 370
Insects—Texas—Brewster Co. 1819
Intertidal fauna 1860
Introduction of animals 540, 1630
Invertebrates—Big Bend National Park (Tex.) 342
Iron 1868
Irrigation 1399, 1469, 1480, 1494
Irrigation water 1475, 1477, 1478
Irrigation water—Quality 1476, 1483, 1740, 1844
Irrigation water—Return flow 1467, 1468, 1489
Island ecology—South Padre Island (Tex.: Island) 1426, 1427
Isopoda—Big Bend National Park (Tex.) 459
Isoptera 445
Jackrabbits 1389
Jackrabbits—Effect of pesticides on 1793
Jaguars 1297, 1305
Jaguarundi (see also Felis yagouaroundi) 1253, 1300
Javelina (see also Dicotyles tajacu) 1093, 1145
Jays 920
Johnston's frankenia 242
Jumping mice (see Zapus) 1167
Kangaroo rat (see also Dipodomys ordii) 1102
Karst--Edwards Plateau (Tex.) 1511
Keeled earless lizard (see also Holbrookia propinquus) 723
Killifishes 598
Kinetoplastida 334
King snakes 703
Kingbird 1024
Kingfishers 928
Kinosternidae 681
Kinosternon flavescens 713
Kit fox 1287
Lacerlitia 731
Laguna Madre (Tex.) 834, 941, 1422, 1425, 1430, 1431, 1437, 1439, 1441, 1442, 1652, 1752, 1770
Lampornis clemencii 1012
Lampreptus mexicana 703
Land use--Big Bend National Park (Tex.) 1599
Land use--Lower Rio Grande Valley (Tex.) 1493, 1500, 1581, 1583, 1584
Land use--New Mexico--Dona Ana County 1627
Land use, Rural 869
Laphania 252
Largemouth black bass 542
Lasiusus blossevillii 1161
Lasiusus borealis--Big Bend National Park (Tex.) 1277
Laughing gull 1882
Lead 1868
Least tern (see also Sterna antillarum) 1004
Leatherback turtle 727
Lechuquila 201
Leguminosae 274
Leon Springs pupfish (see also Cyprinodon bovinus) 640
Lepidoptera 355, 356, 357, 358, 360, 361, 362, 364, 367, 377, 391, 393, 415
Lepidoptera--Big Bend National Park (Tex.) 351, 353, 376, 378, 379
Lepidoptera--Big Bend Region (Tex.) 433, 434
Lepidoptera--Host plants 392, 1471
Lepomis microlophus 499
Leptonyches nivalis 1237
Leptonyches nivalis--Big Bend National Park (Tex.) 405, 1136, 1184, 1189, 1190
Leptophlebiidae 468
Leptopinara 347
Lepus californicus 1793
Levees--Environmental aspects 1655
Lichens--Big Bend National Park (Tex.) 286, 287, 1903, 1904
Limnology--Big Bend National Park (Tex.) 1705
Limnology--Guadalupe Mountains National Park (Tex.) 1412
Limnology--Texas--Bibliography 1923
Litometopus apiculatum 439
Little Agua pondweed 220
Livestock 226, 1090, 1402, 1407, 1408, 1414
Lizards 695, 697, 716, 722, 742, 744, 746, 1788
Lizards--Age 717
Lizards--Behavior 747, 750
Lizards--Big Bend National Park (Tex.) 676, 684, 685, 686, 688, 689, 715, 736, 749
Lizards--Ecology 698, 702, 710
Lizards--Food 696, 723, 743, 761, 770
Lizards--Locomotion 718
Lizards--Metabolism 673, 711, 721, 759
Lizards--Mexico 783
Lizards--Texas--Brewster County 748
Lloyd's hedgehog cactus 264
Lloyd's mariposa cactus--Big Bend National Park (Tex.) 197
Lloyd's mariposa cactus (see also Neolloydia mariposensis) 210, 284
Loasaceae 263, 273
Locoweed (see also Astragalus) 239
Long-horned beetles (see Cerambycidae) 389
Lower Rio Grande Valley (Tex.)--Ecology 1386
Lower Rio Grande Valley (Tex.)--Economic conditions 1616
Lower Rio Grande Valley (Tex.)--Environmental conditions 1616
Lower Rio Grande Valley (Tex.)--History 1458
Lower Rio Grande Valley (Tex.)--Industries--Directories 1925, 1927, 1926
Lucifer hummingbird (see also Calothorax lucifer) 859, 955, 983
Lycaenidae 391, 415
Lynx rufus 1099
Macrobrachium 467
Macrotus californicus 1255
Malvaceae 216
Mammals--Big Bend National Park (Tex.) 1087, 1088, 1139, 1196, 1201, 1224, 1316
Mammals--Big Bend Region (Tex.) 1091, 1291, 1323, 1324
Mammals--Central America 1058
Mammals--Chihuahuan Desert 1077, 1150, 1270, 1309
Mammals--Guadalupe Mountains (N.M. and Tex.) 1120
Mammals--Guadalupe Mountains National Park (Tex.) 1112, 1114
Mammals--Mexican-American Border Region 16, 1235, 1236
Mammals--Mexico 1057, 1059, 1066, 1074
Mammals--Mexico--Bibliography 1252
Mammals--New Mexico 1071, 1151
Mammals—Texas 1057, 1085, 1116, 1123, 1125, 1197, 1198, 1222, 1238
Mammals—Texas—Brewster County 1370
Mammals—Texas—Chisos Mountains 1069
Mammals—Texas—Culberson County 1124
Mammals—Texas—Davis Mountains 1084
Mammals—Texas—Santa Ana Wildlife Refuge 1159
Mammals—Texas—Southwest 1086
Mammals—Texas—West 1185, 1200
Mammals—Trans-Pecos (Tex. and N.M.) 1271
Mangrove plants 1424
Manihot walkerae 191
Marine fishes—Rio Grande 632
Marine pollution—Gulf Coast 1741
Marine sediments 1566, 1741, 1867
Marsh ecology 1870
Mayflies 452, 472
Meadow-larks 1000
Mearns' quail (see also Cyrtonyx montezumae mearnsi) 862
Medicinal plants 63
Mediterranean fruit fly—Control 1854
Mediterranean gecko 700, 781
Megaloaptera 460
Megathymus 377
Meleagris gallopavo intermedia 863, 968
Melitaea 434
Melodae 447
Mercury—Big Bend Region (Tex.)—Environmental aspects of 1776, 1807, 1808
Mercury—Texas—Brewster Co. 1819
Mercury—Toxicology 1753, 1788, 1798
Mergansers 805, 977
Mergus serrator 805, 977
Metals—Environmental aspects 1714, 1868, 1875
Metazoa 985
Meteorology—Big Bend National Park (Tex.) 1892, 1900, 1901, 1902
Mexican-American Border Region 11, 1332, 1451, 1453
Mexican-American Border Region—Climate 1886
Mexican-American Border Region—Description and travel 1443
Mexican-American Border Region—Environmental conditions 1619, 1638, 1805, 1893, 1894
Mexican-American Border Region—Recreational use 1572
Mexican banded tetra 542
Mexican duck (see also Anas diazi) 881
Mexican honey wasp 429
Mexican long-nosed bat (see also Leptonycteris nivalis) 1184
Mexican stone roller 508
Mexican woodrat 1286
Mexico—Coahuila—Climate 110
Mexico—Coahuila—Ecological surveys 1337
Mexico—Environmental conditions 1568
Mice 1188, 1213, 1214, 1269, 1325
Microbial contamination 1721
Microdon 446
Microorganisms—Big Bend National Park (Tex.) 483
Micropterus salmoides 542
Microtus 1154
Microtus pennsylvanicus 1067
Millipedes 373, 374, 403, 421, 450
Misteltoes 240
Mites 448
Mockingbirds 854
Moles 1072
Mollusks 333, 335, 487, 541, 1630
Mollusks, Fossil 336, 453, 475
Mollusks—Guadalupe Mountains (N.M. and Tex.) 332
Mollusks—Laguna Madre (Tex.) 491
Molothrus ater 933
Molybdenum—Toxicology 1822
Monarch butterfly 402
Monomorium 446
Mosquitoes—Big Bend National Park (Tex.) 480
Mosquitoes—Control 1846
Mosses—Big Bend National Park (Tex.) 230, 231
Moths 352, 354, 356, 357, 359, 365, 367, 400
Moths—Big Bend National Park (Tex.) 363, 366, 368
Mottled rock rattlesnake (see also Crotalus lepidus lepidus) 670, 671, 672
Mountain lions—Big Bend National Park (Tex.) 1103, 1156, 1218, 1244, 1265, 1266, 1308, 1311, 1312, 1313
Mountain lions (see also Felis concolor) 1092, 1242, 1249, 1310
Mountains—Mexico—Coahuila 1556
Mourning dove (see also Zenaida macroura) 866
Mugilidae 519
Mule deer (see also Odocoileus hemionus) 1098, 1110, 1259
Muskrats (see also Ondatra zibethicus) 1288
Mussels, freshwater—Ecology 478
Mussels, freshwater—Mexico—Chihuahua 469
Mussels, freshwater—Pecos River (N.M. and Tex.) 474
Myobatidae 448
Myotis fortis 1153
Myotis lucifugus 1153
Myotis occultus 1153
Nama 237
National parks and reserves—Chihuahuan Desert 1603
National parks and reserves—Law and legislation 1586
National parks and reserves—Mexico 1, 10, 1569, 1571, 1600
National parks and reserves—Texas—Planning 1595
National parks and reserves—Visitors 1087
Natrix 679
Natural areas--Directories 1588
Natural areas--Texas--Presidio County 1343, 1344
Natural areas--Texas--Rio Grande-Falcon Thorn Woodland 1336
Natural areas--Texas--Solitario 1345
Natural history--Big Bend Region (Tex.) 1461
Natural history--Mexican-American Border Region 1461
Natural history--Mexico 1455, 1464
Natural history--Texas 137
Natural resources--Chihuahuan Desert--Congress 1363, 1387
Natural resources--International cooperation 1613
Natural resources--Management--Big Bend National Park (Tex.) 1602
Natural resources--Mexican-American Border Region 1342, 1643, 1644, 1645
Natural resources--Terminology 1935
Nature--Effect of human beings on--Texas--Chisos Basin 1604
Naucoridiae 464, 484, 485
Nellie Cory cactus 208
Nelson pocket mouse 1128
Neochoroterpes 468
Neolithodya marioposensis 210, 284
Neotoma 1113
Neotoma mexicana 1286
Neotropic cormorant 1001
Nerodia rhombifer 725
Neuroptera 481
New Mexico--Description and travel--Early works to 1800 1456
Night-blooming cereus 196
Noctuidae 352, 354, 356, 359, 360, 363, 367, 400
Northern aplomado falcon 900
Notodontidae 353, 356
Notophthalmus meridionalis 724
Notropis chihuahua 509
Notropis lutrensis 521
Notropis orca 505, 511
Notropis ornatus 521
Notropis panarecs 586
Notropis proserpinus 586
Notropis saladensis 565
Notropis simus 511
Notropis simus simus 505
Nycteriglyphus 405
Nymphalidiae 391
Oak 329
Obrum 397
Ocelots 1122, 1176, 1253, 1274, 1299, 1300, 1301, 1304, 1851
Ocotillo 1388
Odocoliues hemionus 1061, 1062, 1063, 1064, 1065, 1094, 1095, 1147, 1175, 1292
Odocoliues hemionus crooki 1097, 1111, 1202, 1216, 1220, 1248
Odocoliues virginianus 1108, 1118, 1142, 1182, 1187, 1234
Odocoliues virginianus carminis 1068, 1202, 1207
Odonata--Big Bend Region 465
Oedemeridae 348
Oil spills and wildlife 1817, 1860
Olive sparrow 1054
Oncoecnemis cottami 354
Oncoecnemis heterogena 354
Oncomorhynchus clarki virginalis 550
Onatra sibethicus 1186, 1288
Onychomys 1160
Opuntia--Big Bend National Park (Tex.) 182
Opuntia--Big Bend Region (Tex.) 181, 183, 184
Opuntia densispina 266
Opuntia schottii 265
Oreonecetes virilis 458
Oreochromis aureus 662
Organochlorine compounds 1762, 1767, 1768, 1770, 1789, 1797, 1799, 1803, 1820, 1829, 1831, 1832, 1835, 1837, 1839, 1843, 1848, 1849, 1850, 1871, 1872, 1873, 1874, 1876, 1879
Organophosphorus compounds--Environmental aspects 1760, 1774, 1785
Orioles 858, 966, 1029
Ortilis vetula 1015
Orthoporus ornatus 373, 403, 450
Orthoptera--Big Bend Region (Tex.) 435
Oryzomys couesi 1078
Oryzomys palustris 1273
Osteichthyes 595
Ovis canadensis 1165, 1217
Ovis canadensis nelsoni 1168, 1169, 1170, 1262
Owls 794, 893, 924
Oxalic angustata 348
Oxycopa howdeni 348
Ozone 1886, 1895, 1896
Palaenontes 486
Palo-Indians--Texas--Val Verde County 1449
Paleobotany 163, 164
Paleoecology 163
Paleoecology 705
Paleoecology--Chihuahuan Desert 778
Paleontology--Guadalupe Mountains (N.M. and Tex.) 493
Paleontology--Guadalupe Mountains National Park (Tex.)--Quaternary 1546
Palms 195
Panthera onca 1305
Panthers (see also Mountain lions) 1141
Papaveraceae 250
Pappothrix 248
Paramiana callaisata 354
Plant communities—Edwards Plateau (Tex.) 327
Plant communities—Lower Rio Grande Valley (Tex.) 87
Plant communities—New Mexico 40
Plant communities—Texas 50, 168, 1609
Plant communities—Texas—Brewster County 1370
Plant communities—Texas—Santa Ana National Wildlife Refuge 145
Plant communities—Texas—Welder Wildlife Refuge 54
Plant diseases—Big Bend National Park (Tex.) 149
Plant names, popular 128
Plant phenology—Lower Rio Grande Valley (Tex.) 146
Plant propagation 199
Plant-soil relationships 1365, 1501
Plant succession 1054
Plants—Big Bend National Park (Tex.) 142, 152
Plants—Big Bend National Park (Tex.)—Analysis 31
Plants—Effect of cold on—Lower Rio Grande Valley (Tex.) 306, 307
Plants—Effect of light on 297
Plants—Effect of salts on 320
Plants—Effect on petroleum waste on 1870
Plants—Extinction 59
Plants—Habitat (Ecology)—Modification 1385, 1428
Plants—Identification 19, 46, 124, 302
Plants—Mexico—Coahuila 237
Plants—Physiological ecology 56, 57
Plants, Useful 41
Playas 1399
Plovers 1031
Plutonium—Environmental aspects 1792
Pocket gophers—Mexico—Coahuila 1073
Pocket gophers—New Mexico 1302
Pocket gophers—Texas 1257
Pocket mice 1083, 1128, 1199, 1213, 1214, 1215, 1227, 1250, 1318
Pocketed free-tailed bat (see also Tadarida femorosaccus) 1133
Poecilia formosa 543
Poecilia latipinna 543
Poeciliidae 535, 626
Poeciliidae—Mexico 618
Pogonomyrmex barbatus 442
Poisoning 1743, 1795, 1853
Polistes—Big Bend National Park (Tex.) 401
Pollen—Big Bend National Park (Tex.) 35, 107
Pollen, Fossil—Amistad Reservoir (Tex.) 80
Pollination 223, 224, 238, 1385, 1388
Pollution—Economic aspects 1620
Pollution—Environmental aspects 1619, 1688, 1758, 1823, 1851, 1864, 1875
Pollution—Environmental aspects—Big Bend National Park (Tex.) 1814
Pollution—Environmental aspects—Lower Rio Grande Valley (Tex.) 1880
Pollution--Measurement 1756, 1757
Pollution--Mexican-American Border Region 1618, 1638
Pollution--Physiological effect 1838, 1883
Polybiinae 429
Polychlorinated biphenyls 1762, 1775, 1835, 1836
Polydesmida 421
Polyplody 122, 262
Pond ecology 542, 1398
Population biology--Methodology 1016
Populus fremontii 320, 1149
Potamogeton clystromuscarpus 220
Potholes 1413, 1418
Prairie flora 45
Predatory animals 1111, 1265, 1308
Prescribed burning--Big Bend National Park (Tex.) 1380
Prietella 559
Probazzia 492
Promus 437
Pronghorn antelope (see also Antilocapra americana) 1174, 1289
Prosapia 372
Protozoa 334, 1256
Pseudemys scripta gaigeae 714, 733
Pseudocellapina 254
Pseudohazis chitamisis 433
Pseudotsuga menziesii var. glauca 294
Pterodophyta 206
Pupfish 527, 532, 546, 611, 613, 625, 640, 647, 658
Pyldicistus olivaris 551, 552, 553, 1920
Pyralidae 355, 356, 357, 366
Quails 819, 832, 862, 919, 1019
Quails--Big Bend National Park (Tex.) 1037
Quercus--Big Bend National Park (Tex.) 329
Quercus kinckleyi 303
Rabbotus schiedeanus 413, 414
Rabies 1195
Radioactive pollution 1792
Radioactive waste disposal in the ground 1509
Range ecology 296, 1365, 1369
Range management 36, 43, 52, 53, 55, 322, 1090, 1119, 1166, 1367, 1372, 1474
Range management--Mexico 1492
Range plants--Texas--Identification 71
Rare animals--Big Bend National Park (Tex.) 1224
Rare fishes 505, 506, 527, 529, 537, 548, 560, 569, 574, 588, 617, 622, 623, 629, 637, 638, 640, 659, 660
Rare fishes--Big Bend National Park (Tex.) 575, 584, 655, 661
Rare fishes--Mexico 497, 524
Rare fishes--New Mexico 556, 628
Rare fishes--Texas, 545, 665
Rare plants 8, 44, 59, 77, 117, 126, 134, 177, 191, 197, 207, 208, 210, 211, 213, 218, 219, 220, 221, 241, 242, 244, 267, 275, 284, 303, 1606, 1609
Rattlesnakes 668, 670, 672, 719
Rattlesnakes--Big Bend National Park (Tex.) 669, 671
Ravens 786
Red bat (see also Lasiusus borealis) 1138
Red-breasted mergansers 977
Red-faced warbler 913
Red shiner 603
Reddish egrets 851, 852, 1812
Redhead ducks 834, 948, 1790, 1832
Refuse and refuse disposal 1759
Reithrodonomys 1188, 1232
Remote sensing 203, 1424, 1646
Reptiles 541, 675, 701, 741, 754, 776, 782, 1238
Reptiles--Big Bend Region (Tex.) 21, 667, 674, 687, 720, 739, 751, 768, 773
Reptiles--Chihuahuan Desert 680, 745, 769
Reptiles--Collection and preservation 494
Reptiles, Fossil 705, 778
Reptiles--Lower Rio Grande Valley (Tex.) 23, 755, 760, 777
Reptiles--Mexico 709, 734, 767
Reptiles--Texas--Gualalupe Mountains 740, 753
Research natural areas--Directories 1588
Reservoir sedimentation 1675
Reservoirs 1525, 1625, 1650, 1651, 1661, 1739
Reticulated gecko 682
Revegetation--Big Bend National Park (Tex.) 93
Rhinanus chiosensis 404
Rhydesmuon chistosis 421
Rice rats 1078, 1273
Ridge-nosed rattlesnake 668
Ringed kingfisher 928
Rio Conchos 1749
Rio Grande 1454, 1567, 1601, 1749
Rio Grande chub (see also Gila pandora) 621
Rio Grande cichlid 645
Rio Grande--History 1450, 1457, 1465
Rio Grande--Photographs 1446
Rio Grande silvery minnow 505
Rio Grande turkey (see also Melaleuca gallopavo intermedia) 863, 869
Rio Grande Valley (Tex.)--Effects of drought on 1559
Riodiniidae 392
Riparian ecology 26, 850, 897, 1285, 1405, 1410, 1411, 1415, 1417, 1419, 1713
Riparian ecology--Big Bend National Park (Tex.) 293, 1087, 1088, 1402, 1407, 1408, 1414, 1416
Riparian flora 140, 327, 850, 1406
River channels 1530, 1531, 1653
River surveys 1465
Rivers--Classification 1617
Rivers--Regulation 1660
Rivers—Texas 1707
Rodents  1160, 1181, 1228, 1246, 1251, 1256
Rodents—Big Bend National Park (Tex.) 1315, 1362, 1395
Rosensteiniidae 405
Rove beetles 349
Runoff 1756, 1757, 1769
Ruppia maritima 1431
Sabal texana 195
Salamanders 706
Saline water conversion plants 1736
Saline waters—Chihuahuan Desert 1401
Salinity 1430, 1709
Salinization—Control 1475, 1481
Salt-bush 322
Sandhill crane—Mexico 842
Sartwellia 254
Saturniidae 433
Sauria 716, 732, 742, 771
Savannas 1361
Scaled quail (see also Callipepla squamata) 819
Scalopus 1072
Scaphius couchii 757, 758, 1816
Scarabaeidae 389, 417, 418, 419
Sceloptherus 449
Sceloporus 676
Sceloporus merriami 673, 695, 696, 697, 698, 710, 711, 712, 718, 747, 749
Sciuridae 1181, 1246
Scorpions 384, 422, 423, 425, 426, 427
Screech owls 924
Scrophulariaceae 236
Sea turtles—Rio Grande 755
Seagrasses—Effect of pollution on 1768
Seagrasses—Laguna Madre (Tex.) 17, 940, 1432, 1433, 1434, 1435, 1436, 1438
Sediment, Suspended 1517, 1531, 1673, 1714, 1861
Sediment transport—New Mexico—Rio Grande 1666
Sedimentation analysis 1842
Selaginella lepidophylla 200, 276
Sennecioneae 245
Sewage—Abstracts—Data bases 1908
Sewage disposal 1732
Sewage disposal—Environmental aspects 1683, 1691
Sewage disposal—Lower Rio Grande Valley (Tex.) 1722
Sewage disposal—Mexico 15, 1634
Sewage disposal plants 1684, 1712
Sheepshead minnow 512
Shellfish 940, 1631
Shore birds 816, 949, 1879
Shore protection—Bibliography 1924
Shrubland ecology 43, 315, 1233, 1234, 1368, 1377
Shrubland ecology—Mexico 1389
Shrubs 18, 58, 298, 311, 328
Shrubs—Mexico—Identification 323
Sierra del Carmen 1556
Sigmodon fulvivent 1076, 1280, 1281
Sigmodon hispidus 1088
Sigmodon ochrognathus 1115
Sika deer 1070
Silky pocket mouse 1213
Siren intermedia 704, 706, 707
Siren intermedia texana 724, 737
Sisyridae 481
Sitta carolinensis oberholseri 807
Smallmouth buffalo 587
Snails 406, 413, 414, 430
Snails—Big Bend National Park (Tex.) 407, 408, 409, 410, 428
Snakes 678, 679, 683, 694, 703, 708, 725, 738, 1778
Snakes—Big Bend National Park (Tex.) 690, 691, 692, 699, 772
Snook (see also Centropomus undecimalis) 602
Soil fungi 190
Soil pollution 1742
Soil surveys 1466, 1482, 1496, 1497, 1499, 1502
Soils 1470, 1498, 1503
Soils—Analysis 1474, 1486
Soils—Gypsum content 138
Soils—Pesticide content 1741, 1825
Soils—Selenium content—Lower Rio Grande Valley (Tex.) 1473
Soils—Trace element content 1815
Solanaceae 185, 260
Solanum 185
Sophora 274
South Padre Island (Tex.: Island) 1426
Southern pocket gopher 1302
Spathedrus depressus 348
Spartina alterniflora 1870
Sphacelidaceae 386, 387, 420
Sphingidae 356
Spirostreptidae 403
Spittlebugs 372
Spotted bat 1134
Spotted tilapia 645
Springs—Texas 1513, 1514
Staphylinidae 349
Starlings (see also Sturnus vulgaris) 1871, 1875
Sterna antillarum 921, 990
Sternothaerus odoratus 752
Storm sewers 1647
Stream channelization—Environmental aspects 1656
Stream fauna—Chihuahuan Desert 1401
Streamflow 1525, 1541, 1542
Streamflow—Bibliography 1919
Streamflow—Big Bend National Park (Tex.) 1553
Streblidae 448
Streptanthus arizonicus 222
Sprentanthus carinatus 222
Sturnus vulgaris 1872
Sustainable development--Mexico--Tamaulipas 1568
Swallow-tailed kite 1030
Swallows 1044
Syringodium filiforme 1431
Syphididae 446
Tachyporinae 349
Tadarida femorosaccia 1132
Tadpoles 757
Tamarin 317
Tamarix--Big Bend National Park (Tex.) 293, 300, 1149
Tamarix chinensis 1409
Tamarix ramosissima 320
Tamaulipas (Mexico)--Environmental conditions 1568
Tamiasciurus 1181
Tantilla cucullata 683, 690
Tantilla diabola 690, 772
Tantilla rubra cucullata 699
Tanyoprymnus monedulae 385
Teiidae 742, 770
Teleostei 526
Teleostomi 636
Tenebrionidae 350, 437
Terlingua Creek cat's-eye 244
Termites--Big Bend National Park (Tex.) 445
Terns 921, 947, 962, 990, 1004
Testudinidae 726, 728, 755
Texas--Description and travel 1448
Texas lyre snake 692
Texas Natural Resource Conservation Commission--
Bibliography--Periodicals 1936
Thamnophis 678, 694
Thermopsphaeroma subequalum 459
Thick-billed kingbird 1024
Thomomys 1073
Thomomys umbrinus emotus 1302
Thrashers 853, 855
Thrashes 1052
Thymophylla tephroleuca 241
Ticks 411, 691
Tidal flat ecology 1570
Tide-waters--Ecological surveys 4, 1421
Tilapia 646
Tilapia mariae 645
Tobusch fishhook cactus 219
Torricicidae 352, 358, 361, 362, 364
Toxaphene 1794, 1880
Toxicity testing 1756, 1757
Trace elements 1709, 1770, 1789, 1832, 1837
Trachemys goaigeae 774
Trans-Pecos rat snake 780
Trans-Pecos (Tex. and N.M.)--Bibliography 1929
Trapping 1155, 1242
Tree-rings 299, 324, 325
Trees 18, 58, 311, 328
Trees--Mexico--Identification 323
Trichophya 349
Trichoptera 456, 457, 490
Trickle irrigation 1468, 1489
Tricorythidae 452
Triniphodon vilkpinsoni 692
Tringa melanoleuca--Parasites 985
Trionyx spiniferus 713
Triozosnural 357
Tripudia chihuahua 363
Triquetrace 217
Trombiculidae 398
Trout 590, 651
Trypanosoma cruzi 334
Tufted flycatcher 1055
Turtles 681, 713, 727, 729, 730, 752, 755, 762, 764
Tyrannidae 870
Ungulata 1268
Unionidae 451, 477, 478
Unionidae, Fossil 476
Upland plover 1031
Uranium mines and mining 1822
Uredinales--Big Bend Region (Tex.) 192, 193
Urosaurus ornatus 695, 697, 698, 747
Ursia furtiva 353
Ursus americanus 1225, 1293, 1295, 1296
Ursus americanus--Big Bend National Park (Tex.) 1056, 1178, 1260, 1276
Vaeviidae 422, 423
Vaeviis dugesi 422
Vegetation classification--Big Bend National Park
(Tex.) 29, 30, 66, 92, 114, 115, 158, 165
Vegetation dynamics 36, 45, 66, 78, 112, 169, 295,
297, 1261, 1361, 1378
Vegetation dynamics--Big Bend National Park (Tex.) 99, 166, 170, 310, 689, 1395
Vegetation dynamics--Big Bend Region (Tex.) 167
Vegetation dynamics--History 12, 76
Vegetation dynamics--Lower Rio Grande Valley (Tex.) 148
Vegetation dynamics--New Mexico--History 176
Vegetation dynamics--Trans-Pecos (Tex. and N.M.) 74
Vegetation mapping--Big Bend National Park (Tex.)
114, 116, 139, 310
Vegetation mapping--Mexico 91, 100
Vegetation mapping--Texas 106
Vegetation surveys--Big Bend National Park (Tex.)
90, 107, 151, 154, 155, 157
Vegetation surveys--Falcon Reservoir (Mexico and
Tex.) 39
Vegetation surveys--Lower Rio Grande Valley (Tex.)
42
Water, Underground 1498, 1507, 1508, 1518, 1519, 1549, 1550, 1554
Water, Underground--Pollution 1751, 1761
Water, Underground--Quality 1483, 1505, 1509, 1677, 1697, 1699, 1700, 1715
Water, Underground--Texas--Hidalgo County 1533, 1534
Water use--Texas--Lower Rio Grande Basin 1640
Waterfowl 805, 1832
Waterfowl--Food 940, 991
Waterfowl--New Mexico 959
Waterfowl--Seasonal distribution 1049
Watershed management 1498
Watershed management--Periodicals 1724
Watersheds 1491, 1523, 1555, 1731
Wax plants 1447, 1462
Weevils (see also Curculionidae) 371
Wells 1507, 1518, 1519, 1554, 1677, 1751
Wetlands 140, 1405, 1418, 1543, 1566
Whiptail lizard (see also Cnemidophorus) 743, 748
White-collared seedeaters 846
White-faced ibis 1768, 1823
White-necked raven 786
White pelican 823
White-tailed deer (see also Odocoileus virginianus) 1070, 1233, 1267, 1268, 1290, 1856
White-winged dove (see also Zenaida asiatica) 802, 803, 865, 972, 978, 979, 1580, 1855
Wild and scenic rivers 24, 1585, 1586, 1596, 1597, 1598, 1601
Wild flowers--Big Bend Region (Tex.) 28, 277, 279
Wild flowers--Lower Rio Grande Valley (Tex.) 198
Wild flowers--Texas--Guadalupe Mountains 278
Wild turkeys 789, 798
Wilderness areas--Big Bend National Park (Tex.) 1589, 1590, 1591, 1592, 1593, 1594
Wilderness areas--Rio Grande Valley 1637
Wildlife conservation 623, 665, 1573, 1614, 1625
Wildlife conservation--Lower Rio Grande Valley (Tex.) 1581, 1583, 1587, 1624
Wildlife conservation--Mexico 495, 524, 1075
Wildlife conservation--United States--Bibliography 1912, 1913
Wildlife diseases 1177
Wildlife habitat improvement 304, 850, 1119, 1399, 1400, 1410, 1413, 1510, 1625
Wildlife habitat improvement--Bibliography 1921
Wildlife habitat improvement--Lower Rio Grande Valley (Tex.) 1376, 1587
Wildlife habitat improvement--Southwest, New--Congresses 1417
Wildlife management 821, 1090, 1092, 1096, 1117, 1170, 1392, 1510
Wildlife management--Big Bend National Park (Tex.) 1284
Wildlife management--New Mexico 1164
Wildlife management--United States--Bibliography 1912, 1913
Wildlife refuges 513, 1459, 1576, 1577, 1581, 1582, 1583, 1584, 1851, 1864
Wildlife refuges--Law and legislation 1578
Wildlife refuges--Mexico 1, 1569
Wildlife research--Bibliography 1939
Wildlife--Water requirements 1400
Willow 293
Woodpeckers 838
Woodrats 1113
Xiphoporus 626
Xystodesmidae 421
Yellow-nosed cotton rat (see also Sigmodon ochrognathus) 1152, 1254
Yellowlegs 985
Yucca carnerosana 238
Zale chisoensis 360
Zamagiria kendalli 355
Zapus 1167
Zenaida asiatica 813, 826, 827, 828, 829, 876, 957, 1392
Zenaida macroura 799, 866
Zinc 1868
Zoology--Big Bend National Park (Tex.) 1333, 1346, 1355
Zoology--Texas--Franklin Mountains 1356
Zoology--Texas--Hueco Mountains 1357
Journals List


Acarologia (Paris)
Agric. Res. (Washington, D.C.)
Am. Bee J.
Am. Birds
Am. Curr.
Am. J. Bot.
Am. Nat.
Am. Zool.
Aquat. Conserv.
Arch. Environ. Contam. Toxicol.
Arch. Hydrobiol.
Arnoldia (Boston)
Audubon
Auk
Baylor Univ. Bull.
Behaviour
Big Bend Paisano
Biol. Conserv.
Bioscience
Birding
Bot. Gaz.
Brittonia
Bromeliad Soc. J.
Bryologist
Bull. Environ. Contam. Toxicol.
Bull. Torrey Bot. Club
Bull. U.S. Fish Comm.
Cactus Succulent J.

Abstracts of the General Meeting of the American Society for Microbiology

Acarologia (Paris)
Acta Zoologica Mexicana Nueva Serie
Agricultural Research
American Bee Journal
American Birds
American Currents
American Journal of Botany
American Midland Naturalist
American Museum Novitates
American Naturalist
American Zoologist
Anales de la Escuela Nacional de Ciencias Biologicas (Mexico)
Annals of the Entomological Society of America
Annals of the Missouri Botanical Garden
Annual Proceedings of the Texas Chapter, American Fisheries Society
Annual Report Western Society of Malacologists
Aquatic Conservation
Archives of Environmental Contamination and Toxicology
Archiv fuer Hydrobiologie
Arnoldia
Audubon
Auk
Baylor University Bulletin
Behaviour
Big Bend Paisano
Biological Conservation
Bioscience
Birding
Boletin de la Oficina Sanitaria Panamericana
Botanical Gazette
Brittonia
Bromeliad Society Journal
Bryologist
Bulletin of the American Malacological Union Incorporated
Bulletin of the American Museum of Natural History
Bulletin of the Chicago Academy of Sciences
Bulletin of the Ecological Society of America
Bulletin of the Entomological Society of America
Bulletin of Environmental Contamination and Toxicology
Bulletin of the Florida State Museum Biological Sciences
Bulletin of the Geological & Geographical Survey of the Territories
Bulletin of Marine Science
Bulletin of the Museum of Comparative Zoology
Bulletin of the Pan American Health Organization
Bulletin Southern California Academy of Sciences
Bulletin of the Texas Memorial Museum
Bulletin of the Texas Ornithological Society
Bulletin of the Torrey Botanical Club
Bulletin of the United States Fish Commission
Cactus and Succulent Journal
Calif. West. Int. Law J.  
Can. Entomol.  
Can. Field-Nat.  
Cattleman  
Chemosphere  
Chihuah. Desert Discov.  
Cicindela  
Coenosces  
Colon. Waterbirds  
Comp. Biochem. Physiol.  
Condor  
Conserv. Biol.  
Contrib. Sci. (Los Angel.)  
Copeia  
Crustacea  
(Uinv. Auton. de Nuevo Leon)  
Desert Plants  
Ecol. Monogr.  
Ecology  
Entomol. News  
Environ. Biol. Fishes  
Environ. Entomol.  
Environ. Pollut.  
Environ. Prof.  
Environ. Sci. & Technol.  
Environ. Toxicol. Chem.  
Estuaries  
Estuarine Coastal Shelf Sci.  
Field Lab.  
Fieldiana Zool.  
Fisheries  
Folia Entomol. Mex.  
For. Ecol. Manage.  
Funct. Ecol.  
Geocarto Int.  
Geog. Rev.  
Geomorphology  
GIS World  
Great Basin Nat.  
Guideb. - New Mexico Geol. Soc.  
Herpetologica  
Herpetol. Rev.  
Hydrobiologia  
Int. Bear News  
California Western International Law Journal  
Canadian Entomologist  
Canadian Field-Naturalist  
Canadian Journal of Zoology  
Cattleman  
Chemosphere  
Chihuahuan Desert Discovery  
Cicindela  
Coenosces  
Coleopterists Bulletin  
Colonial Waterbirds  
Comparative Biochemistry and Physiology  
Condor  
Conservation Biology  
Contributions from Baylor University Museum  
Contributions in Marine Science  
Contributions in Science, Natural History Museum of Los Angeles  
Copeia  
Crustacea  
Cuadernos Instituto Investigaciones Cientificas, Universidad Autonoma Nuevo Leon, Mexico  
Desert Plants  
Ecological Monographs  
Ecology  
Entomological News  
Entomological Society of America Newsletter  
Environmental Biology of Fishes  
Environmental Entomology  
Environmental Monitoring and Assessment  
Environmental Pollution  
Environmental Pollution. Series A, Ecological and Biological  
Environmental Professional  
Environmental Science & Technology  
Environmental Toxicology and Chemistry  
Estuaries  
Estuarine Coastal and Shelf Science  
Federal Register  
Field and Laboratory  
Field Museum of Natural History Publications Zoological Series  
Fieldiana Zoology  
Fisheries  
Folia Entomologica Mexicana  
Forest Ecology and Management  
Functional Ecology  
Geocarto International  
Geographical Review  
Geological Society of America Bulletin  
Geomorphology  
GIS World  
Great Basin Naturalist  
Guidebook - New Mexico Geological Society  
Herpetologica  
Herpetological Review  
Hydrobiologia  
International Bear News
Int. J. Biometeorol.
Int. Ornith. Congr.
Int. Wildl.
J. Air Waste Manage. Assoc.
J. Am. Trophy Hunt.
J. Arachnol.
J. Arid Environ.
J. Big Bend Stud.
J. Biogeogr.
J. Bromeliad Soc.
J. Coastal Res.
J. Econ. Entomol.
J. Field Ornithol.
J. Fish Biol.
J. Geol.
J. Helminthol. Soc. Wash.
J. Herpetol.
J. Hydrol.
J. Kans. Entomol. Soc.
J. Lepid. Soc.
J. Mammal.
J. Med. Entomol.
J. N. Y. Entomol. Soc.
J. Parasitol.
J. Phycol.
J. Protozool.
J. Range Manage.
J. Raptor Res.
J. Wildl. Dis.
J. Wildl. Manage.
Madrono
Memorias
Misc. pap., Texas Mem. Mus.

International Journal of Biometeorology
International Ornithological Congress
International Wildlife
Journal of the Air and Waste Management Association
Journal of the American Mosquito Control Association
Journal of the American Trophy Hunter
Journal of Arachnology
Journal of Arid Environments
Journal of the Arizona-Nevada Academy of Science
Journal of the Arnold Arboretum Harvard University
Journal of the Association of Official Analytical Chemists
Journal of Big Bend Studies
Journal of Biogeography
Journal of the Bromeliad Society
Journal of Coastal Research
Journal of Economic Entomology
Journal of Field Ornithology
Journal of Fish Biology
Journal of Geology
Journal of the Helminthological Society of Washington
Journal of Herpetology
Journal of Hydrology
Journal of Irrigation and Drainage Engineering
Journal of the Kansas Entomological Society
Journal of the Lepidopterists' Society
Journal of Mammalogy
Journal of Medical Entomology
Journal of the New York Entomological Society
Journal of Parasitology
Journal of Phycology
Journal of Protozool.
Journal of Range Management
Journal of Raptor Research
Journal of the Rio Grande Valley Horticultural Society
Journal of Wildlife Diseases
Journal of Wildlife Management
Madrono
Marine Ecology Progress Series
Memorias del Simposio sobre Pesquerias en Aguas Continentales
Memorias
Miscellaneous papers - Texas Memorial Museum
Miscellaneous Publications Museum of Zoology
Univ. of Michigan
Mycologia
North American Fauna
Nature Conservancy News
National Parks and Conservation Magazine
National Parks Magazine
Natural Resources Journal
Nautilus
New Waves
Northeast Gulf Science
Occasional Papers of the Museum of Zoology
Louisiana State University
Occasional Papers, The Museum, Texas Tech University
Oecologia
Ohio J. Sci.
Oologist.
Pac. Coast Avifauna
Pan-Pac. Entomol.
Park Sci.
Pedobiologia
Pestic. Monit. J.
Physiol. Zool.
Phytochemistry (Oxf.)
Phytologia
Plant Syst. Evol.
Proc. Annu. Conf. Southeast Assoc. Fish Wildl. Agencies
Proc. Desert Fishes Counc.
Prof. Geogr.
Psyche
Quaternary Res.
Rangeman's J.
Restor. Manage. Notes
Rhodora
Sabal
Sci. Biol. J.
Science
Sociobiology
South. Med. J.
Southwest. Entomol.
Southwest. Hist. Q.
Southwest. Nat.
Syst. Bot.
Syst. Entomol.
Teratology
Tex. A. I. Univ. Stud.
Tex. Fisherman
Tex. Game Fish
Occasional Papers of the Museum of Zoology University of Michigan
Oecologia
Ohio Journal of Science
Oologist
Pacific Coast Avifauna
Pan-Pacific Entomologist
Park Science
Pearce-Sellards Series Texas Memorial Museum
Pedobiologia
Pesticides Monitoring Journal
Physiological Zoology
Phytochemistry (Oxford)
Phytologia
Plant Systematics and Evolution
Proceedings of the Academy of Natural Sciences of Philadelphia
Proceedings of the Annual Conference Southeastern Association of Fish and Wildlife Agencies
Proceedings of the Biological Society of Washington
Proceedings of the California Academy of Sciences
Proceedings of the Desert Fishes Council
Proceedings of the Entomological Society of Washington
Proceedings of the United States National Museum
Proceedings of the West Virginia Academy of Science
Professional Geographer
Psyche
Publicaciones Biologicas Facultad de Ciencias Biologicas Universidad Autonoma deNuevo Leon
Publicaciones Biologicas Instituto de Investigaciones Cientificas U. A. N. L. (Universidad Autonoma de Nuevo Leon)
Publications of the Institute of Marine Science University of Texas
Quaternary Research
Rangeman's Journal
Research Highlights Noxious Brush and Weed Control, Range and Wildlife Management
Restoration and Management Notes
Rhodora
The Sabal
Science of Biology Journal
Science
SIDA Contributions to Botany
Smithsonian Contributions to Zoology
Smithsonian Miscellaneous Collections
Sociobiology
Southern Medical Journal
Southwestern Entomologist
Southwestern Historical Quarterly
Southwestern Naturalist
Sul Ross State Teachers College Bulletin
Systematic Botany
Systematic Entomology
Teratology
Texas A&I University Studies
Texas Archeological and Paleontological Society Bulletin
Texas Fisherman
Texas Game and Fish
Information Sources

The following list provides addresses for sources referred to within specific references in this bibliography. The Big Bend National Park collection may be accessed; however, this access may be limited by the ability of the park service staff to respond to requests.

**Big Bend National Park**
Division of Science and Resource Management
Box 129
Big Bend National Park, TX 79834
(915) 477-2251
Web site: http://www.nps.gov/bibe/

**Fish and Wildlife Reference Service**
5430 Grosvenor Lane, Suite 110
Bethesda, MD 20814
(800) 582-3421
(301) 492-6403
Fax: (301) 564-4059
Web site: http://www.fws.gov/search/fwrefser.html

**Floristic Inventories of the Southwest Program**
P.O. Box 13331
El Paso, TX 79913

**Guadalupe Mountains National Park**
HC 60 Box 400
Salt Flat, TX 79847
(915) 828-3251
Fax: (915) 828-3269
Web site: http://www.nps.gov/gumo/index.htm

**Knight-Ridder Information, Inc.**
Worldwide Headquarters
2440 W. El Camino Real
Mountain View, CA 94040
(800) 334-2564
(415) 254-8800
Fax: (415) 254-8123
E-mail: customer@corp.dialog.com
Web site: http://www.krininfo.com

**National Park Service**
Southwest Support Office
P.O. Box 728
Santa Fe, NM 87504-0728
(505) 988-6011
Web site: http://www.nps.gov/swso/osftb.htm

**National Technical Information Service (NTIS)**
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650
Fax: (703) 321-8547
E-mail: orders@ntis.fedworld.gov
Web site: http://www.fedworld.gov

**SilverPlatter Information, Inc.**
100 River Ridge Drive
Norwood, MA 02062-5043
(800) 343-0064
(617) 769-2599
Fax: (617) 769-8763
Web site: http://www.silverplatter.com/

**Texas Natural Resource Conservation Commission**
P.O. Box 13087
Austin, TX 78711-0387
(512) 239-0020
Fax: (512) 239-0022
Web site: http://www.tnrcc.state.tx.us

**Texas Organization for Endangered Species**
P.O. Box 12773
Austin, TX 78711
(409) 234-3021
Web site: http://straylight.tamu.edu/tamu/toes/toes.html

**Texas Parks and Wildlife Department**
4200 Smith School Road
Austin, TX 78744
(800) 792-1112
(512) 389-4362
Web site: http://www.tpwd.state.tx.us
Texas Water Resources Institute
301 Scoates Hall, MS 2118
Texas A&M University
College Station, TX 77843-2118
(409) 845-1851
Web site: http://twri.tamu.edu

University Microfilms International
P.O. Box 3691
San Francisco, CA 94119-3691
(800) 248-0360
(415) 433-5500
Fax: (415) 433-0100
E-mail: orders@infostore.com
Web site: http://www.umi.com/infostore

U.S. Geological Survey
Information Services
Open File Reports
P.O. Box 25286, MS 517
Denver, CO 80225
(303) 202-4210
Fax: (303) 202-4695
Web site: http://h2o.usgs.gov/

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402
(202) 512-1800
Fax: (202) 512-2250
Web site: http://www.access.gpo.gov/su_docs
**Title and Subtitle**

Biology of the Rio Grande border region: a bibliography

**Authors**

Lynne E. Johnson, Linda J. Jacobs, and Diana Papoulis

**Performing Organization**

U.S. Department of the Interior
U.S. Geological Survey, Biological Resources Division
Environmental and Contaminants Research Center*
Columbia, MO 65201

*Formerly Midwest Science Center

**Abstract**

This bibliography includes 1,913 references to the literature of the Rio Grande (Rio Bravo del Norte). The specific geographic area covered extends 100 km on either side of the river from Elephant Butte Dam in New Mexico to the Gulf of Mexico. The bibliography focuses on the biological literature, divided into major subject areas, and also includes supporting literature from the physical and environmental sciences. The database is available in a searchable format on the Internet home page of the U.S. Geological Survey, Biological Resources Division, Environmental and Contaminants Research Center.

**Subject Terms**

Big Bend National Park, botany, Chihuahuan Desert, ecology, Mexico, New Mexico, pollution, Texas, water quality, zoology

**Number of Pages**

150 p.

**Security Classification**

Unclassified

---

**Note:** The document includes standard form fields for report documentation and contains a bibliographic reference to a collection of information on the Rio Grande border region, focusing on biology and related subjects.
NOTE: The mention of trade names does not constitute endorsement or recommendation for use by the Federal Government.
As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This responsibility includes fostering the sound use of our lands and water resource; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities.