



10-31-1986

## Index [and Table of Contents] to Volume 46

Follow this and additional works at: <https://scholarsarchive.byu.edu/gbn>

---

### Recommended Citation

(1986) "Index [and Table of Contents] to Volume 46," *Great Basin Naturalist*: Vol. 46 : No. 4 , Article 25.  
Available at: <https://scholarsarchive.byu.edu/gbn/vol46/iss4/25>

This End Matter is brought to you for free and open access by the Western North American Naturalist Publications at BYU ScholarsArchive. It has been accepted for inclusion in *Great Basin Naturalist* by an authorized editor of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

# The Great Basin Naturalist

VOLUME 46, 1986

EDITOR: STEPHEN L. WOOD



PUBLISHED AT BRIGHAM YOUNG UNIVERSITY, BY  
BRIGHAM YOUNG UNIVERSITY

TABLE OF CONTENTS  
Volume 46  
31 January 1986 (Number 1)

Dynamic landforms and plant communities in a pluvial lake basin. James A. Young, Raymond A. Evans, Bruce A. Roundy, and John A. Brown. . . . .	1
Vegetation and flora of Pine Butte Fen, Teton County, Montana. Peter Lesica. . . . .	22
Effects of suspended sediment on leaf processing by <i>Hesperophylax occidentalis</i> (Trichoptera: Limnephilidae) and <i>Pteronarcys californica</i> (Plecoptera: Pteronarcidae). C. Evan Hornig and Merlyn A. Brusven. . . . .	33
Effects of watershed alteration on the brook trout population of a small Black Hills stream. Timothy Modde, Henry G. Drewes, and Mark A. Rumble. . . . .	39
Floristic analysis of the southwestern United States. Steven P. McLaughlin. . . . .	46
Utah flora: Apiaceae (Umbelliferae). Sherel Goodrich. . . . .	66
<i>Quercus</i> (Fagaceae) in the Utah flora. Stanley L. Welsh. . . . .	107
Seasonal phenology and possible migration of the Mourning Cloak butterfly, <i>Nymphalis antiopa</i> (Lepidoptera: Nymphalidae) in California. Arthur M. Shapiro. . . . .	112
Seasonal microhabitat relationships of blue grouse in southeastern Idaho. Dean F. Stauffer and Steven R. Peterson. . . . .	117
Fall diet of blue grouse in Oregon. John A. Crawford, Walter Van Dyke, S. Mark Meyers, and Thomas F. Haensly. . . . .	123
Status and distribution of California Gull nesting colonies in Wyoming. Scott L. Findholt. . . . .	128
New genus and species of leafhopper in the tribe Tinobregmini (Homoptera: Cicadellidae: Coelidiinae). M. W. Nielson. . . . .	134
New oriental genus of leafhoppers in the tribe Coelidiini with descriptions of new species (Homoptera: Cicadellidae: Coelidiinae). M. W. Nielson. . . . .	137
Ecological differences of C <sub>3</sub> and C <sub>4</sub> plant species from central Utah in habitats and mineral composition. C. Morden, Jack D. Brotherson, and Bruce N. Smith. . . . .	140
Response of winterfat ( <i>Ceratoides lanata</i> ) communities to release from grazing pressure. Lars L. Rasmussen and Jack D. Brotherson. . . . .	148
Isozymes of an autopolyploid shrub, <i>Atriplex canescens</i> (Chenopodiaceae). E. Durant McArthur, Stewart C. Sanderson, and D. Carl Freeman. . . . .	157
Winter nutritive content of black sagebrush ( <i>Artemisia nova</i> ) grown in a uniform garden. Barbara Behan and Bruce L. Welch. . . . .	161
Winter food habits of the pine marten in Colorado. Christine C. Gordon. . . . .	166
Foliage age as a factor in food utilization by the western spruce budworm, <i>Choristoneura occidentalis</i> . Elizabeth A. Blake and Michael R. Wagner. . . . .	169
Apple maggot ( <i>Rhagoletis pomonella</i> ) adaptation for cherries in Utah. Clive D. Jorgensen, Darin B. Allred, and Richard L. Westcott. . . . .	173
New records for <i>Monotropa hypopithys</i> (Ericaceae) from Colorado. William Jennings, Loraine Yeatts, and Velma Richards. . . . .	175
Tree densities on pinyon-juniper woodland sites in Nevada and California. Susan Koniak. . . . .	178

30 April 1986 (Number 2)

Biology of Red-necked Phalaropes ( <i>Phalaropus lobatus</i> ) at the western edge of the Great Basin in fall migration. Joseph R. Jehl, Jr. . . . .	185
Some relationships of black-tailed prairie dogs to livestock grazing. Craig J. Knowles. . . . .	198

Effect of excluding shredders on leaf litter decomposition in two streams. James R. Barnes, J. V. McArthur, and C. E. Cushing. . . . .	204
Three-year surveillance for cestode infections in sheep dogs in central Utah. Ferron L. Andersen, Lauritz A. Jensen, H. Dennis McCurdy, and Craig R. Nichols. . . . .	208
Dam-raised fawns, an alternative to bottle feeding. Kathrin M. Olson-Rutz, Philip J. Urness, and Laura A. Urness. . . . .	217
Subspecific identity of the Amargosa pupfish, <i>Cyprinodon nevadensis</i> , from Crystal Spring, Ash Meadows, Nevada. Jack E. Williams and James E. Deacon. . . . .	220
Two aberrant karyotypes in the sagebrush lizard ( <i>Sceloporus graciosus</i> ): triploidy and a "supernumerary" oddity. Pamela Thompson and Jack W. Sites, Jr. . . . .	224
Food habits of clouded salamanders ( <i>Aneides ferreus</i> ) in Curry County, Oregon (Amphibia: Caudata: Plethodontidae). John O. Whitaker, Jr., Chris Maser, Robert M. Storm, and Joseph J. Beatty. . . . .	228
Wintering bats of the upper Snake River Plain: occurrence in lave-tube caves. David L. Genter. . . . .	241
Growth rates of mule deer fetuses under different winter conditions. Richard M. Bartmann. . . . .	245
Denning habitat and diet of the swift fox in western South Dakota. Daniel W. Uresk and Jon C. Sharps. . . . .	249
New taxa and combinations in the Utah flora. Stanley L. Welsh. . . . .	254
New taxa in miscellaneous families from Utah. Stanley L. Welsh. . . . .	261
New synonymy and new species of American bark beetles (Coleoptera: Scolytidae), Part XI. Stephen L. Wood. . . . .	265
Energy and protein content of coyote prey in southeastern Idaho. James G. MacCracken and Richard M. Hansen. . . . .	274
Estimates of site potential for Douglas-fir based on site index for several southwestern habitat types. Robert L. Mathiasen, Elizabeth A. Blake, and Carleton B. Edminster. . . . .	277
Wintering mule deer preference for 21 accessions of big sagebrush. Bruce L. Welch and E. Durant McArthur. . . . .	281
Coleoptera of the Idaho National Engineering Laboratory: an annotated checklist. Michael P. Stafford, William F. Barr, and James B. Johnson. . . . .	287
Microhabitat affinities of Gambel oak seedlings. Ronald P. Neilson and L. H. Wullstein. . . . .	294
Feeding habits of metamorphosed <i>Ambystoma tigrinum melanostictum</i> in ponds of high pH (> 9). Brian T. Miller and John H. Larsen, Jr. . . . .	299
Notes on the Swainson's Hawk in central Utah: insectivory, premigratory aggregations, and kleptoparasitism. Neil D. Woffinden. . . . .	302
Turkey vultures decline at a traditional roosting site. Daniel M. Taylor. . . . .	305
Barn owl diet includes mammal species new to the island fauna of the Great Salt Lake. Carl D. Marti. . . . .	307
Distributional study of the Zion Snail, <i>Physa zionis</i> , Zion National Park, Utah. David Ng and James R. Barnes. . . . .	310
Blockage and recovery of nitrification in soils exposed to acetylene. Steven J. Burns and Richard E. Terry. . . . .	316
New thagriine leafhoppers from the Oriental Region, with a key to 30 species (Homoptera: Cicadellidae: Coelidiinae). M. W. Nielson. . . . .	321
Genus <i>Paralidia</i> with descriptions of new species (Homoptera: Cicadellidae: Coelidiinae). M. W. Nielson. . . . .	329
Montane insular butterfly biogeography: fauna of Ball Mountain, Siskiyou County, California. Arthur M. Shapiro. . . . .	336
Comparative habitat and community relationships of <i>Atriplex confertifolia</i> and <i>Sarcobatus vermiculatus</i> in central Utah. Jack D. Brotherson, Lars L. Rasmussen, and Richard D. Black. . . . .	348

Trees used simultaneously and sequentially by breeding cavity-nesting birds. Kevin J. Gutzwiller and Stanley H. Anderson. . . . .	35
New species of <i>Mentzelia</i> (Loasaceae) from Grand County, Utah. Barry A. Prigge. . . . .	36
Utah flora: Juncaceae. Sherel Goodrich. . . . .	36
Advertisement call variation in the Arizona tree frog, <i>Hyla wrightorum</i> Taylor, 1938. Brian K. Sullivan. . . . .	37

31 July 1986 (Number 3)

North American stoneflies (Plecoptera): systematics, distribution, and taxonomic references. B. P. Stark, S. W. Szczytko, and R. W. Baumann. . . . .	38
Three new records for diatoms from the Great Basin, USA. Samuel R. Rushforth, Lorin E. Squires, and Jeffrey R. Johansen. . . . .	39
Movements by small mammals on a radioactive waste disposal area in southeastern Idaho. Craig R. Groves and Barry L. Keller. . . . .	40
Roll of three rodents in forest nitrogen fixation in western Oregon: another aspect of mammal-mycorrhizal fungus-tree mutualism. C. Y. Li, Chris Maser, Zane Maser, and Bruce A. Caldwell. . . . .	41
Canids from the late Pleistocene of Utah. Michael E. Nelson and James H. Madsen, Jr. . . . .	41
Note on food habits of the Screech Owl and the Burrowing Owl of southeastern Oregon. Barbara A. Brown, John O. Whitaker, Thomas W. French, and Chris Maser. . . . .	42
Diseases associated with <i>Juniperus osteosperma</i> and a model for predicting their occurrence with environmental site factors. E. D. Bunderson, D. J. Weber, and D. L. Nelson. . . . .	42
Status and distribution of the Fish Creek Springs tui chub. Thomas M. Baugh, John W. Pedretti, and James E. Deacon. . . . .	44
Ponderosa pine conelet and cone mortality in central Arizona. J. M. Schmid, J. C. Mitchell, and S. A. Mata. . . . .	44
Number and condition of seeds in ponderosa pine cones in central Arizona. J. M. Schmid, S. A. Mata, and J. C. Mitchell. . . . .	44
New species of <i>Protocedroxylon</i> from the Upper Jurassic of British Columbia, Canada. David A. Medlyn and William D. Tidwell. . . . .	45
New taxa and nomenclatural changes in Utah Penstemon (Scrophulariaceae). Elizabeth C. Neese. . . . .	45
Relict occurrence of three "American" Scolytidae (Coleoptera) in Asia. Stephen L. Wood and Hui-fen Yin. . . . .	46
New genus of Scolytidae (Coleoptera) from Asia. Stephen L. Wood and Fu-sheng Huang. . . . .	46
New <i>Pseudoxylechinus</i> (Coleoptera: Scolytidae) from India. Stephen L. Wood. . . . .	46
Wildlife distribution and abundance on the Utah Oil Shale Tracts, 1975-1984. C. Val Grant. . . . .	46
Comparison of vegetation patterns resulting from bulldozing and two-way chaining on a Utah pinyon-juniper big game range. J. Skousen, J. N. Davis, and Jack D. Brotherson. . . . .	50
Vertebrate fauna of the Idaho National Environmental Research Park. Timothy D. Reynolds, John W. Connelly, Douglas K. Halford, and W. John Arthur. . . . .	51
Infection of young Douglas-firs and spruces by dwarf mistletoes in the Southwest. Robert L. Mathiasen. . . . .	52
Habitat relationships of saltcedar ( <i>Tamarix ramosissima</i> ) in central Utah. Jack D. Brotherson and Von Winkel. . . . .	53
Characteristics of mule deer beds. H. Duane Smith, Mark C. Oveson, and Clyde L. Pritchett. . . . .	54
Trumpeter Swan ( <i>Cygnus buccinator</i> ) from the Pleistocene of Utah. Alan Feduccia and Charles G. Oviatt. . . . .	54

new species and a new combination of <i>Mentzelia</i> section <i>Bartonia</i> (Loasaceae) from the Colorado Plateau. H. Thompson and B. Prigge.....	549
new variety of <i>Mentzelia multicaulis</i> (Loasaceae) from the Book Cliffs of Utah. Kaye H. Thorne and Frank J. Smith. ....	555
new variety of <i>Mentzelia pumila</i> (Loasaceae) from Utah. Kaye H. Thorne. ....	557
<i>Guthoxylon lemonii</i> sp. nov., from the Dakota Formation, Utah. William D. Tidwell and Gregory F. Thayne.....	559
grazing and passerine breeding birds in a Great Basin low-shrub desert. Dean E. Medin. ....	567
chloroplast ultrastructure in the desert shrub <i>Chrysothamnus nauseosus</i> ssp. <i>Albicaulis</i> . Craig E. Coleman and William R. Andersen.....	573
genetic variation of woodrats ( <i>Neotoma cinerea</i> ) and deer mice ( <i>Peromyscus maniculatus</i> ) on montane habitat islands in the Great Basin. William T. Mewaldt and Stephen H. Jenkins. ....	577
breeding records for Clark's Grebe in Colorado and Nevada. Richard L. Bunn. ....	581

31 October 1986 (Number 4)

history of fish hatchery development in the Great Basin states of Utah and Nevada. J. W. Sigler and W. F. Sigler. ....	583
composition and abundance of periphyton and aquatic insects in a Sierra Nevada, California, stream. Harry V. Leland, Steven V. Fend, James L. Carter, and Albert D. Mahood. ....	595
diatom flora of Cowboy Hot Spring, Mono County, California. Laura Ekins and Samuel R. Rushforth. ....	612
inventory of Utah crayfish with notes on current distribution. James E. Johnson.....	625
cryptogamic soil crusts: recovery from grazing near Camp Floyd State Park, Utah, USA. Jeffrey R. Johansen and Larry L. St. Clair. ....	632
new species and new records of North American <i>Pityophthorus</i> (Coleoptera: Scolytidae), Part VI. The Lautus group. Donald E. Bright. ....	641
initial survey of acetylene reduction and selected microorganisms in the feces of 19 species of mammals. C. Y. Li, Chris Maser, and Harlan Fay.....	646
notes on the birds of Cold Spring Mountain, northwestern Colorado. Peter O. Dunn and Ronald A. Ryder. ....	651
life, strategies in the evolution of the Colorado squawfish ( <i>Ptychocheilus lucius</i> ). Harold M. Tyus. ....	656
parasites of the woundfin minnow, <i>Plagopterus argentissimus</i> , and other endemic fishes from the Virgin River, Utah. Richard A. Heckmann, James E. Deacon, and Paul D. Greger. ....	662
new Sclerocactus (Cactaceae) from Nevada. Ken Heil and Stanley L. Welsh. ....	677
new species and new records of North American <i>Pityophthorus</i> (Coleoptera: Scolytidae), Part VII. Donald E. Bright. ....	679
effects of dwarf mistletoe on spruce in the White Mountains, Arizona. Robert L. Mathiasen, Frank G. Hawksworth, and Carleton B. Edminster. ....	685
hydrology of Bear Lake Basin and its impact on the trophic state of Bear Lake, Utah-Idaho. Vincent Lamarra, Chuck Liff, and John Carter. ....	690
understory seed rain in harvested pinyon-juniper woodlands. Richard L. Everett. ....	706
species diversity and habitat complexity: does vegetation organize vertebrate communities in the Great Basin? David J. Germano and David N. Lawhead. ....	711
comparison of insects from burned and unburned areas after a range fire. James D. Hansen. ....	721
size, structure, and habitat characteristics of populations of <i>Braya humilis</i> var. <i>humilis</i> (Brassicaceae): an alpine disjunct from Colorado. Elizabeth E. Neely and Alan T. Carpenter. ....	728

Biogeographic aspects of leeches, mollusks, and amphibians in the Intermountain Region. Peter Hovingh. ....	736
Hatching chronology of Blue Grouse in northeastern Oregon. John A. Crawford, Walter Van Dyke, Victor Coggins, and Martin St. Louis. ....	745
New South American leafhoppers in the genus <i>Docalidia</i> , with a key to 37 species (Cicadellidae: Coelidiinae, Teruliini). M. W. Nielson. ....	749
Fossil birds of the Oreana local fauna (Blancan), Owyhee County, Idaho. Jonathan J. Becker. ....	765
Index. ....	766

## INDEX TO VOLUME 46

The genera, species, and other taxa described as new to science in this volume appear in bold type in this index.

- Abronia nana* var. ***harrisii***, p. 258.
- Advertisement call variation in the Arizona tree frog, *Hyla wrightorum* Taylor, 1938, p. 378.
- Agathoxylon lemonii* sp. nov., from the Dakota Formation, Utah, p. 559.
- Agathoxylon lemonii*, p. 561.
- Allred, Darin B., Clive D. Jorgensen, and Richard L. Westcott, article by, p. 173.
- Ambrosiodmus ferus*, p. 269.
- Ambrosiodmus paucus*, p. 269.
- Andersen, Ferron L., Lauritz A. Jensen, H. Dennis McCurdy, and Craig R. Nichols, article by, p. 208.
- Anderson, Stanley H., and Kevin J. Gutzwiller, article by, p. 358.
- Andersen, William R., and Craig E. Coleman, article by, p. 573.
- Apple maggot (*Rhagoletis pomonella*) adaptation for cherries in Utah, p. 173.
- Aquilegia formosa* var. ***fosteri***, p. 259.
- Arabis vivariensis*, p. 263.
- Arthur, W. John, Timothy D. Reynolds, John W. Connelly, and Douglas K. Halford, article by, p. 513.
- Astragalus eremiticus* var. ***ampullarioides***, p. 262.
- Astragalus limnocharis* var. ***tabulaeus***, p. 261.
- Astragalus preussii* var. ***cutleri***, p. 256.
- Barn owl diet includes mammal species new to the island fauna of the Great Salt Lake, p. 307.
- Barnes, James R., and David Ng, article by, p. 310.
- Barnes, James R., J. V. McArthur, and C. E. Cushing, article by, p. 204.
- Barr, William F., Michael P. Stafford, and James B. Johnson, article by, p. 287.
- Bartmann, Richard M., article by, p. 245.
- Baugh, Thomas M., John W. Pedretti, and James E. Deacon, article by, p. 441.
- Baumann, R. W., B. P. Stark, and S. W. Szczytko, article by, p. 383.
- Beatty, Joseph J., John O. Whitaker, Jr., Chris Maser, and Robert M. Storm, article by, p. 228.
- Becker, Jonathan J., article by, p. 763.
- Behan, Barbara, and Bruce L. Welch, article by, p. 161.
- Biogeographic aspects of leeches, mollusks, and amphibians in the Intermountain Region, p. 736.
- Biology of Red-necked Phalaropes (*Phalaropus lobatus*) at the western edge of the Great Basin in fall migration, p. 185.
- Black, Richard D., Jack D. Brotherson, and Lars L. Rasmussen, article by, p. 348.
- Blake, Elizabeth A., and Michael R. Wagner, article by, p. 169.
- Blake, Elizabeth A., Robert L. Mathiasen, and Carleton B. Edminster, article by, p. 277.
- Blockage and recovery of nitrification in soils exposed to acetylene, p. 316.
- Breeding recovers for Clark's Grebe in Colorado and Nevada, p. 581.
- Bright, Donald E., articles by, 641, 679.
- Brotherson, Jack D., C. Morden, and Bruce N. Smith, article by, p. 140.
- Brotherson, Jack D., and Lars L. Rasmussen, article by, p. 148.
- Brotherson, Jack D., Lars L. Rasmussen, and Richard D. Black, article by, p. 348.
- Brotherson, Jack D., J. Skousen, and J. N. Davis, article by, p. 508.
- Brotherson, Jack D., and Von Winkel, article by, p. 535.
- Brown, Barbara A., John O. Whitaker, Jr., Thomas W. French, and Chris Maser, article by, p. 421.
- Brown, John A., James A. Young, Raymond A. Evans, and Bruce A. Roundy, article by, p. 1.
- Brusven, Merlyn A., and C. Evan Hornig, article by, p. 33.
- Bunderson, E. D., D. J. Weber, and D. L. Nelson, article by, p. 427.



- Bunn, Richard L., article by, p. 581.
- Burns, Steven J., and Richard E. Terry, article by, p. 316.
- Caldwell, Bruce A., C. Y. Li, Chris Maser, and Zane Maser, article by, p. 411.
- Camissonia atwoodii*, p. 258.
- Canids from the late Pleistocene of Utah, p. 415.
- Carpenter, Alan T., and Elizabeth E. Neely, article by, p. 728.
- Carphoborus bicornis*, p. 269.
- Carter, James L., Harry V. Leland, Steven V. Fend, and Albert D. Mahood, article by, p. 595.
- Carter, John, Vincent Lamarra, and Chuck Liff, article by, p. 690.
- Chaetophloeus pouteriae*, p. 269.
- Characteristics of mule deer beds, p. 542.
- Chloroplast ultrastructure in the desert shrub *Chrysothamnus nauseosus* ssp. *Albicaulis*, p. 573.
- Cleomella palmerana* var. *goodrichii*, p. 263.
- Cnemonyx euphorbiae*, p. 270.
- Coggins, Victor, John A. Crawford, Walter Van Dyke, and Martin St. Louis, article by, p. 745.
- Coleman, Craig E., and William R. Andersen, article by, p. 573.
- Coleoptera of the Idaho National Engineering Laboratory: an annotated checklist, p. 287.
- Comparative habitat and community relationships of *Atriplex confertifolia* and *Sarcobatus vermiculatus* in central Utah, p. 348.
- Comparison of insects from burned and unburned areas after a range fire, p. 721.
- Comparison of vegetation patterns resulting from bulldozing and two-way chaining on a Utah pinyon-juniper big game range, p. 508.
- Composition and abundance of periphyton and aquatic insects in a Sierra Nevada, California stream, p. 595.
- Connelly, John W., Timothy D. Reynolds, Douglas K. Halford, and W. John Arthur, article by, p. 513.
- Corthylus convexifrons*, p. 270.
- Corthylus senticosus*, p. 271.
- Corthylus sentosus*, p. 271.
- Crawford, John A., Walter Van Dyke, Victor Coggins, and Martin St. Louis, article by, p. 745.
- Crawford, John A., Walter Van Dyke, S. Mark Meyers, and Thomas F. Haensly, article by, p. 123.
- Cryptantha cinerea* var. *arenicola*, p. 255.
- Cryptocarenum pubescens*, p. 271.
- Cryptocarenum spatulatus*, p. 272.
- Cryptogamic soil crusts: recovery from grazing near Camp Floyd State Park, Utah, USA, p. 632.
- Cushing, C. E., James R. Barnes, and J. V. McArthur, article by, p. 204.
- Cymopterus acaulis* var. *parvus*, p. 79.
- Dam-raised fawns, an alternative to bottle feeding, p. 217.
- Davis, J. N., J. Skousen, and Jack D. Brotherson, article by, p. 508.
- Deacon, James E., Thomas M. Baugh, and John W. Pedretti, article by, p. 441.
- Deacon, James E., Richard A. Heckmann, and Paul D. Greger, article by, p. 662.
- Deacon, James E., and Jack E. Williams, article by, p. 220.
- Dendrocranulus mexicanus*, p. 272.
- Denning habitat and diet of the swift fox in western South Dakota, p. 249.
- Diatom flora of Cowboy Hot Spring, Mono County, California, p. 612.
- Diseases associated with *Juniperus osteosperma* and a model for predicting their occurrence with environmental site factors, p. 427.
- Distributional study of the Zion Snail, *Physa zionis*, Zion National Park, Utah, p. 310.
- Docalidia caterva*, p. 752.
- Docalidia convexa*, p. 761.
- Docalidia gracilitas*, p. 759.
- Docalidia paracrista*, p. 762.
- Docalidia pennyi*, p. 755.
- Docalidia setacea*, p. 758.
- Docalidia triquetra*, p. 756.
- Docalidia vella*, p. 753.
- Docalidia vesica*, p. 754.
- Docalidia zanoli*, p. 753.
- Draba kassii*, p. 264.
- Drewes, Henry G., Timothy Modde, and Mark A. Rumble, article by, p. 39.
- Dunn, Peter O., and Ronald A. Ryder, article by, p. 651.
- Dynamic landforms and plant communities in a pluvial lake basin, p. 1.
- Ecological differences of C<sub>3</sub> and C<sub>4</sub> plant species from central Utah in habitats and mineral composition, p. 140.
- Edminster, Carleton B., Robert L. Mathiasen, and Elizabeth A. Blake, article by, p. 277.

- Edminster, Carleton B., Robert L. Mathiasen, and Frank B. Hawksworth, article by, p. 685.
- Effect of excluding shredders on leaf litter decomposition in two streams, p. 204.
- Effects of dwarf mistletoe on spruce in the White Mountains, Arizona, p. 685.
- Effects of suspended sediment on leaf processing by *Hesperophylax occidentalis* (Trichoptera: Limnephilidae) and *Pteronarcys californica* (Plecoptera: Pteronarcidae), p. 33.
- Effects of watershed alteration on the brook trout population of a small Black Hills stream, p. 39.
- Ekins, Laura, and Samuel R. Rushforth, article by, p. 612.
- Energy and protein content of coyote prey in southeastern Idaho, p. 274.
- Erigeron zothecinus*, p. 262.
- Estimates of site potential for Douglas-fir based on site index for several southwestern habitat types, p. 277.
- Evans, Raymond A., James A. Young, Bruce A. Roundy, and John A. Brown, article by, p. 1.
- Everett, Richard L., article by, p. 706.
- Fall diet of blue grouse in Oregon, p. 123.
- Fay, Harlan, C. Y. Li, and Chris Maser, article by, p. 646.
- Feduccia, Alan, and Charles G. Oviatt, article by, p. 547.
- Feeding habits of metamorphosed *Ambystoma tigrinum melanostictum* in ponds of high pH (>9), p. 299.
- Fend, Steven V., Harry V. Leland, James L. Carter, and Albert D. Mahood, article by, p. 595.
- Findholt, Scott L., article by, p. 128.
- Floristic analysis of the southwestern United States, p. 46.
- Foliage age as a factor in food utilization by the western spruce budworm, *Choristoneura occidentalis*, p. 169.
- Food habits of clouded salamanders (*Aneides ferreus*) in Curry County, Oregon (Amphibia: Caudata: Plethodontidae), p. 228.
- Fossil birds of the Oreana local fauna (Blancan), Owyhee County, Idaho, p. 763.
- Freeman, D. Carl, E. Durant McArthur, and Stewart C. Sanderson, article by, p. 157.
- French, Thomas W., Barbara A. Brown, John O. Whitaker, Jr., and Chris Maser, article by, p. 421.
- Genetic variation of woodrats (*Neotoma cinerea*) and deer mice (*Peromyscus maniculatus*) on montane habitat islands in the Great Basin, p. 577.
- Genter, David L., article by, p. 241.
- Genus *Paralidia* with descriptions of new species (Homoptera: Cicadellidae: Coelidiinae), p. 329.
- Germano, David J., and David N. Lawhead, article by, p. 711.
- Gnatharus**, p. 463.
- Gnatharus tibetensis*, p. 463.
- Goodrich, Sherel, articles by, pp. 66, 366.
- Gordon, Christine C., article by, p. 166.
- Grant, C. Val, article by, p. 469.
- Grazing and passerine breeding birds in a Great Basin low-shrub desert, p. 567.
- Greger, Paul D., Richard A. Heckmann, and James E. Deacon, article by, p. 662.
- Groves, Craig B., and Barry L. Keller, article by, p. 404.
- Growth rates of mule deer fetuses under different winter conditions, p. 245.
- Gutzwiller, Kevin J., and Stanley H. Anderson, article by, p. 358.
- Habenaria zothecina*, p. 259.
- Habitat relationships of saltcedar (*Tamarix ramosissima*) in central Utah, p. 535.
- Haensly, Thomas F., John A. Crawford, Walter Van Dyke, and S. Mark Meyers, article by, p. 123.
- Halford, Douglas K., Timothy D. Reynolds, John W. Connelly, and W. John Arthur, article by, p. 513.
- Hansen, James D., article by, p. 721.
- Hansen, Richard M., and James G. MacCracken, article by, p. 274.
- Hatching chronology of Blue Grouse in north-eastern Oregon, p. 745.
- Hawksworth, Frank G., Robert L. Mathiasen, and Carleton B. Edminster, article by, p. 685.
- Heckmann, Richard A., James E. Deacon, and Paul D. Greger, article by, p. 662.
- Heil, Ken, and Stanley L. Welsh, article by, p. 677.
- History of fish hatchery development in the Great Basin states of Utah and Nevada, p. 583.
- Hornig, C. Evan, and Merlyn A. Brusven, article by, p. 33.
- Hovingh, Peter, article by, p. 736.
- Huang, Fu-sheng, and Stephen L. Wood, article by, p. 465.

- Hydrology of Bear Lake Basin and its impact on the trophic state of Bear Lake, Utah-Idaho, p. 690.
- Hylesinus caseariae*, p. 272.
- Infection of young Douglas-firs and spruces by dwarf mistletoes in the Southwest, p. 528.
- Initial survey of acetylene reduction and selected microorganisms in the feces of 19 species of mammals, p. 646.
- Inventory of Utah crayfish with notes on current distribution, p. 625.
- Ips orientalis*, p. 461.
- Iris pariensis*, p. 256.
- Isozymes of an autopolyploid shrub, *Atriplex canescens* (Chenopodiaceae), p. 157.
- Jehl, Joseph R., Jr., article by, p. 185.
- Jenkins, Stephen H., and William T. Mewaldt, article by, p. 577.
- Jennings, William, Loraine Yeatts, and Velma Richards, article by, p. 175.
- Jensen, Lauritz A., Ferron L. Anderson, H. Dennis McCurdy, and Craig R. Nichols, article by, p. 208.
- Johansen, Jeffrey R., Samuel R. Rushforth, and Lorin E. Squires, article by, p. 398.
- Johansen, Jeffrey R., and Larry L. St. Clair, article by, p. 632.
- Johnson, James B., Michael P. Stafford, and William F. Barr, article by, p. 287.
- Johnson, James E., article by, p. 625.
- Jorgensen, Clive D., Darin B. Allred, and Richard L. Westcott, article by, p. 173.
- Keller, Barry L., and Craig R. Groves, article by, p. 404.
- Knowles, Craig J., article by, p. 198.
- Koniak, Susan, article by, p. 178.
- Lamarra, Vincent, Chuck Liff, and John Carter, article by, p. 690.
- Larsen, John H., Jr., and Brian T. Miller, article by, p. 299.
- Lawhead, David N., and David J. Germano, article by, p. 711.
- Leland, Harry V., Steven V. Fend, James L. Carter, and Albert D. Mahood, article by, p. 595.
- Lesica, Peter, article by, p. 22.
- Li, C. Y., Chris Maser, and Harlan Fay, article by, p. 646.
- Li, C. Y., Chris Maser, Zane Maser, and Bruce A. Caldwell, article by, p. 411.
- Life strategies in the evolution of the Colorado squawfish (*Ptychocheilus lucius*), p. 656.
- Liff, Chuck, Vincent Lamarra, and John Carter, article by, p. 690.
- Lomatium scabrum* var. *tripinnatum*, p. 99.
- Lupinus argenteus* var. *moabensis*, p. 262.
- MacCracken, James G., and Richard M. Hansen, article by, p. 274.
- Madsen, James H., Jr., and Michael E. Nelson, article by, p. 415.
- Mahood, Albert D., Harry V. Leland, Steven V. Fend, and James L. Carter, article by, p. 595.
- Marti, Carl D., article by, p. 307.
- Maser, Chris, Barbara A. Brown, John O. Whitaker, Jr., and Thomas W. French, article by, p. 421.
- Maser, Chris, C. Y. Li, and Harlan Fay, article by, p. 646.
- Maser, Chris, C. Y. Li, Zane Maser, and Bruce A. Caldwell, article by, p. 411.
- Maser, Chris, John O. Whitaker, Jr., Robert M. Storm, and Joseph J. Beatty, article by, p. 228.
- Maser, Zane, C. Y. Li, Chris Maser, and Bruce A. Caldwell, article by, p. 411.
- Mata, S. A., J. M. Schmid, and J. C. Mitchell, articles by, pp. 445, 449.
- Mathiasen, Robert L., article by, p. 528.
- Mathiasen, Robert L., Elizabeth A. Blake, and Carleton B. Edminster, article by, p. 277.
- Mathiasen, Robert L., Frank G. Hawksworth, and Carleton B. Edminster, article by, p. 685.
- McArthur, E. Durant, Stewart C. Sanderson, and D. Carl Freeman, article by, p. 157.
- McArthur, E. Durant, and Bruce L. Welch, article by, p. 281.
- McArthur, J. V., James R. Barnes, and C. E. Cushing, article by, p. 204.
- McCurdy, H. Dennis, Ferron L. Andersen, Lauritz A. Jensen, and Craig R. Nichols, article by, p. 208.
- McLaughlin, Steven P., article by, p. 46.
- Medin, Dean E., article by, p. 567.
- Medlyn, David A., and William D. Tidwell, article by, p. 452.
- Mentzelia cronquistii*, p. 550.
- Mentzelia multicaulis* var. *librina*, p. 556.
- Mentzelia pumila* var. *lagrosa*, p. 558.
- Mentzelia shultziorum*, p. 361.
- Mewaldt, William T., and Stephen H. Jenkins, article by, p. 577.
- Meyers, S. Mark, John A. Crawford, Walter Van Dyke, and Thomas F. Haensly, article by, p. 123.

- Microhabitat affinities of Gambel oak seedlings, p. 294.
- Miller, Brain T., and John H. Larsen, Jr., article by, p. 299.
- Mitchell, J. C., J. M. Schmid, and S. A. Mata, articles by, pp. 445, 449.
- Modde, Timothy, Henry G. Drewes, and Mark A. Rumble, article by, p. 39.
- Montane insular butterfly biogeography: fauna of Ball Mountain, Siskiyou County, California, p. 336.
- Morden, C., Jack D. Brotherson, and Bruce N. Smith, article by, p. 140.
- Movements by small mammals on a radioactive waste disposal area in southeastern Idaho, p. 404.
- Neely, Elizabeth E., and Alan T. Carpenter, article by, p. 728.
- Neese, Elizabeth C., article by, p. 459.
- Neilson, Ronald P., and L. H. Wullstein, article by, p. 294.
- Nelson, D. L., E. D. Bunderson, and D. J. Weber, article by, p. 427.
- Nelson, Michael E., and James H. Madsen, Jr., article by, p. 415.
- New genus and species of leafhopper in the tribe Tinobregmini (Homoptera: Cicadellidae: Coelidiinae), p. 134.
- New genus of Scolytidae (Coleoptera) from Asia, p. 465.
- New oriental genus of leafhoppers in the tribe Coelidiini with descriptions of new species (Homoptera: Cicadellidae: Coelidiinae), p. 137.
- New records for *Montropa hypopithys* (Ericaceae) from Colorado, p. 175.
- New *Pseudoxylechinus* (Coleoptera: Scolytidae) from India, p. 468.
- New Sclerocactus (Cactaceae) from Nevada, p. 677.
- New South American leafhoppers in the genus *Docalidia*, with a key to 37 species (Cicadellidae: Coelidiinae, Teruliini), p. 749.
- New species and a new combination of *Mentzelia* section *Bartonia* (Loasaceae) from the Colorado Plateau, p. 549.
- New species and new records of North American *Pityophthorus* (Coleoptera: Scolytidae), Part VI. The Lautus group, p. 641.
- New species and new records of North American *Pityophthorus* (Coleoptera: Scolytidae), Part VII, p. 679.
- New species of *Mentzelia* (Loasaceae) from Grant County, Utah, p. 361.
- New species of *Protocedroxylon* from the Upper Jurassic of British Columbia, Canada, p. 452.
- New synonymy and new species of American bark beetles (Coleoptera: Scolytidae), Part XI, p. 265.
- New taxa and combinations in Utah flora, p. 254.
- New taxa and nomenclatural changes in Utah *Penstemon* (Scrophulariaceae), p. 459.
- New taxa in miscellaneous families from Utah, p. 261.
- New thagriine leafhoppers from the Oriental Region, with a key to 30 species (Homoptera: Cicadellidae: Coelidiinae), p. 321.
- New variety of *Mentzelia multicaulis* (Loasaceae) from the Book Cliffs of Utah, p. 555.
- New variety of *Mentzelia pumila* (Loasaceae) from Utah, p. 557.
- Ng, David, and James R. Barnes, article by, p. 310.
- Nichols, Craig R., Ferron L. Andersen, Lauritz A. Jensen, and H. Dennis McCurdy, article by, p. 208.
- Nielson, M. W., articles by, pp. 134, 137, 321, 329, 749.
- North American stoneflies (Plecoptera): systematics, distribution, and taxonomic references, p. 383.
- Note on food habits of the Screech Owl and the Burrowing Owl of southeastern Oregon, p. 421.
- Notes on the birds of Cold Spring Mountain, northwestern Colorado, p. 651.
- Notes on the Swainson's Hawk in central Utah: insectivory, premigratory aggregations, and kleptoparasitism, p. 302.
- Number and condition of seeds in ponderosa pine cones in central Arizona, p. 449.
- Olson-Rutz, Kathrin M., Philip J. Urness, and Laura A. Urness, article by, p. 217.
- Oveson, Mark C., H. Duane Smith, and Clyde L. Pritchett, article by, p. 542.
- Oviatt, Charles G., and Alan Feduccia, article by, p. 547.
- Paralidia bispinosa*, p. 335.
- Paralidia denticulata*, p. 334.
- Paralidia retrorsa*, p. 332.
- Paralidia singularis*, p. 331.
- Paralidia spinata*, p. 329.
- Parasites of the woundfin minnow, *Plagotterus argentissimus*, and other endemic fishes from the Virgin River, Utah, p. 662.

- Pediomelum aromaticum* var. **tuhyi**, p. 257.
- Pedretti, John W., Thomas M. Baugh, and James E. Deacon, article by, p. 441.
- Penstemon angustifolius* var. **dulcis**, p. 459.
- Penstemon leonardii* var. **higginsii**, p. 459.
- Penstemon scariosus* var. **cyanomontanus**, p. 460.
- Penstemon thompsoniae* var. **desperatus**, p. 460.
- Peterson, Steven R., and Dean F. Stauffer, article by, p. 117.
- Phacelia demissa* var. **minor**, p. 256.
- Physaria chambersii* var. **sobolifera**, p. 255.
- Pityophthorus bravoii*, p. 679.
- Pityophthorus conscriptus*, p. 680.
- Pityophthorus indefessus*, p. 641.
- Pityophthorus inhabilis*, p. 642.
- Pityophthorus levis*, p. 273.
- Pityophthorus ostryacoleus*, p. 681.
- Pityophthorus tutulus*, p. 643.
- Pityophthorus vegrandis*, p. 643.
- Ponderosa pine conelet and cone mortality in central Arizona, p. 445.
- Prigge, Barry A., article by, p. 361.
- Prigge, B., and H. Thompson, article by, p. 549.
- Pritchett, Clyde L., H. Duane Smith, and Mark C. Oveson, article by, p. 542.
- Protocedroxylon macgregorii*, p. 452.
- Pseudopityophthorus peregrinus*, p. 462.
- Pseudoxylechinus*, p. 465.
- Pseudoxylechinus indicus*, p. 468.
- Pseudoxylechinus rugatus*, p. 467.
- Pseudoxylechinus sinensis*, p. 467.
- Pseudoxylechinus tibetensis*, p. 466.
- Pseudoxylechinus uniformis*, p. 465.
- Pseudoxylechinus variegatus*, p. 466.
- Quercus* (Fagaceae) in the Utah flora, p. 107.
- Quercus gambelii* var. **bonina**, p. 108.
- Quercus havardii*, var. **tuckeri**, p. 109.
- Rasmussen, Lars L., and Jack D. Brotherson, article by, p. 148.
- Rasmussen, Lars L., Jack D. Brotherson, and Richard D. Black, article by, p. 348.
- Relict occurrence of three "American" Scolytidae (Coleoptera) in Asia, p. 461.
- Response of winterfat (*Ceratoides lanata*) communities to release from grazing pressure, p. 148.
- Reynolds, Timothy D., John W. Connelly, Douglas K. Halford, and W. John Arthur, article by, p. 513.
- Richards, Velma, William Jennings, and Lorraine Yeatts, article by, p. 175.
- Roll of three rodents in forest nitrogen fixation in western Oregon: another aspect of mammal-mycorrhizal fungus-tree mutualism, p. 411.
- Roundy, Bruce A., James A. Young, Raymond A. Evans, and John A. Brown, article by, p. 1.
- Rumble, Mark A., Timothy Modde, and Henry G. Drewes, article by, p. 39.
- Rushforth, Samuel R., and Laura Ekins, article by, p. 612.
- Rushforth, Samuel R., Lorin E. Squires, and Jeffrey R. Johansen, article by, p. 398.
- Ryder, Ronald A., and Peter O. Dunn, article by, p. 651.
- St. Clair, Larry L., and Jeffrey R. Johansen, article by, p. 632.
- St. Louis, Martin, John A. Crawford, Walter Van Dyke, and Victor Coggins, article by, p. 745.
- Sanderson, Stewart C., E. Durant McArthur, and D. Carl Freeman, article by, p. 157.
- Schmid, J. M., J. C. Mitchell, and S. A. Mata, articles by, pp. 445, 449.
- Sclerocactus schlesseri*, p. 677.
- Seasonal microhabitat relationships of blue grouse in southeastern Idaho, p. 117.
- Seasonal phenology and possible migration of the Mourning Cloak butterfly, *Nymphalis antiopa* (Lepidoptera: Nymphalidae) in California, p. 112.
- Shapiro, Arthur M., articles by, pp. 112, 336.
- Sharps, Jon C., and Daniel W. Uresk, article by, p. 249.
- Sigler, J. W., and W. F. Sigler, article by, p. 583.
- Sigler, W. F., and J. W. Sigler, article by, p. 583.
- Sites, Jack W., Jr., and Pamela Thompson, article by, p. 224.
- Size, structure, and habitat characteristics of populations of *Braya humilis* var. *humilis* (Brassicaceae): an alpine disjunct from Colorado, p. 728.
- Skousen, J., J. N. Davis, and Jack D. Brotherson, article by, p. 508.
- Smith, Bruce N., C. Morden, and Jack D. Brotherson, article by, p. 140.
- Smith, Frank J., and Kaye H. Thorne, article by, p. 555.
- Smith, H. Duane, Mark C. Oveson, and Clyde L. Pritchett, article by, p. 542.
- Some relationships of black-tailed prairie dogs to livestock grazing, p. 198.

- Species diversity and habitat complexity: does vegetation organize vertebrate communities in the Great Basin?, p. 711.
- Squires, Lorin E., Samuel R. Rushforth and Jeffrey R. Johansen, article by, p. 398.
- Stafford, Michael P., William F. Barr, and James B. Johnson, article by, p. 287.
- Stark, B. P., S. W. Szczytko, and R. W. Baumann, article by, p. 383.
- Status and distribution of California Gull nesting colonies in Wyoming, p. 128.
- Status and distribution of the Fish Creek Springs tui chub, p. 441.
- Stauffer, Dean F., and Steven R. Peterson, article by, p. 117.
- Stenolidia*, p. 134.
- Stenolidia magna*, p. 134.
- Storm, Robert M., John O. Whitaker, Jr., Chris Maser, and Joseph J. Beatty, article by, p. 228.
- Stylolidia*, p. 137.
- Stylolidia cristata*, p. 138.
- Stylolidia pectinata*, p. 137.
- Subspecific identity of the Amargosa pupfish, *Cyprinodon nevadensis*, from Crystal Spring, Ash Meadows, Nevada, p. 220.
- Sullivan, Brian K., article by, p. 378.
- Szczytko, S. W., B. P. Stark, and R. W. Baumann, article by, p. 383.
- Taylor, Daniel M., article by, p. 305.
- Terry, Richard E., and Steven J. Burns, article by, p. 316.
- Thagria bifida*, p. 322.
- Thagria insolentis*, p. 325.
- Thagria marissae*, p. 326.
- Thagria melichari*, p. 323.
- Thagria unidentata*, p. 327.
- Thayn, Gregory F., and William D. Tidwell, article by, p. 559.
- Thompson, H., and B. Prigge, article by, p. 549.
- Thompson, Pamela, and Jack W. Sites, Jr., article by, p. 224.
- Thorne, Kaye H., article by, p. 557.
- Thorne, Kaye H., and Frank J. Smith, article by, p. 555.
- Three new records for diatoms from the Great Basin, USA, p. 398.
- Three-year surveillance for cestode infections in sheep dogs in central Utah, p. 208.
- Tidwell, William D., and David A. Medlyn, article by, p. 452.
- Tidwell, William D., and Gregory F. Thayn, article by, p. 559.
- Tree densities on pinyon-juniper woodland sites in Nevada and California, p. 178.
- Trees used simultaneously and sequentially by breeding cavity-nesting birds, p. 358.
- Trischidias exigua*, p. 273.
- Trumpeter Swan (*Cygnus buccinator*) from the Pleistocene of Utah, p. 547.
- Turkey vultures decline at a traditional roosting site, p. 305.
- Two aberrant karyotypes in the sagebrush lizard (*Sceloporus graciosus*): triploidy and a "supernumerary" oddity, p. 224.
- Tyus, Harold M., article by, p. 656.
- Understory seed rain in harvested pinyon-juniper woodlands, p. 706.
- Uresk, Daniel W., and Jon C. Sharps, article by, p. 249.
- Urness, Laura A., Kathrin M. Olson-Rutz, and Philip J. Urness, article by, p. 217.
- Urness, Philip J., Kathrin M. Olson-Rutz, and Laura A. Urness, article by, p. 217.
- Utah flora: Apiaceae (Umbelliferae), p. 66.
- Utah flora: Juncaceae, p. 366.
- Van Dyke, Walter, John A. Crawford, Victor Coggins, and Martin St. Louis, article by, p. 745.
- Van Dyke, Walter, John A. Crawford, S. Mark Meyers, and Thomas F. Haensly, article by, p. 123.
- Vegetation and flora of Pine Butte Fen, Teton County, Montana, p. 22.
- Vertebrate fauna of the Idaho National Environmental Research Park, p. 513.
- Wagner, Michael R., and Elizabeth A. Blake, article by, p. 169.
- Weber, D. J., E. D. Bunderson, and D. L. Nelson, article by, p. 427.
- Welch, Bruce L., and Barbara Behan, article by, p. 161.
- Welch, Bruce L., and E. Durant McArthur, article by, p. 281.
- Welsh, Stanley L., articles by, pp. 107, 254, 261.
- Welsh, Stanley L., and Ken Heil, article by, p. 677.
- Westcott, Richard L., Clive D. Jorgensen, and Darin B. Allred, article by, p. 173.
- Whitaker, John O., Jr., Barbara A. Brown, Thomas W. French, and Chris Maser, article by, p. 421.
- Whitaker, John O., Jr., Chris Maser, Robert M. Storm, and Joseph J. Beatty, article by, p. 228.

- Wildlife distribution and abundance on the Utah Oil Shale Tracts, 1975-1984, p. 469.
- Williams, Jack E., and James E. Deacon, article by, p. 220.
- Winkel, Von, and Jack D. Brotherson, article by, p. 535.
- Winter food habits of the pine marten in Colorado, p. 166.
- Wintering bats of the upper Snake River Plain: occurrence in lava-tube caves, p. 241.
- Wintering mule deer preference for 21 accessions of big sagebrush, p. 281.
- Winter nutritive content of black sagebrush (*Artemisia nova*) grown in a uniform garden, p. 161.
- Woffinden, Neil D., article by, p. 302.
- Wood, Stephen L., articles by, pp. 265, 468.
- Wood, Stephen L., and Fu-sheng Huang, article by, p. 465.
- Wood, Stephen L., and Hui-fen Yin, article by, p. 461.
- Wullstein, L. H., and Ronald P. Neilson, article by, p. 294.
- Xenophthorus**, p. 462.
- Yeatts, Loraine, William Jennings, and Velma Richards, article by, p. 175.
- Yin, Hui-fen, and Stephen L. Wood, article by, p. 461.
- Young, James A., Raymond A. Evans, Bruce A. Roundy, and John A. Brown, article by, p. 1.