



12-31-1990

# Index [and Table of Contents] to Volume 50

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

---

### Recommended Citation

(1990) "Index [and Table of Contents] to Volume 50," *Great Basin Naturalist*: Vol. 50 : No. 4 , Article 2.  
Available at: <https://scholarsarchive.byu.edu/gbn/vol50/iss4/2>

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).

---

**T H E**

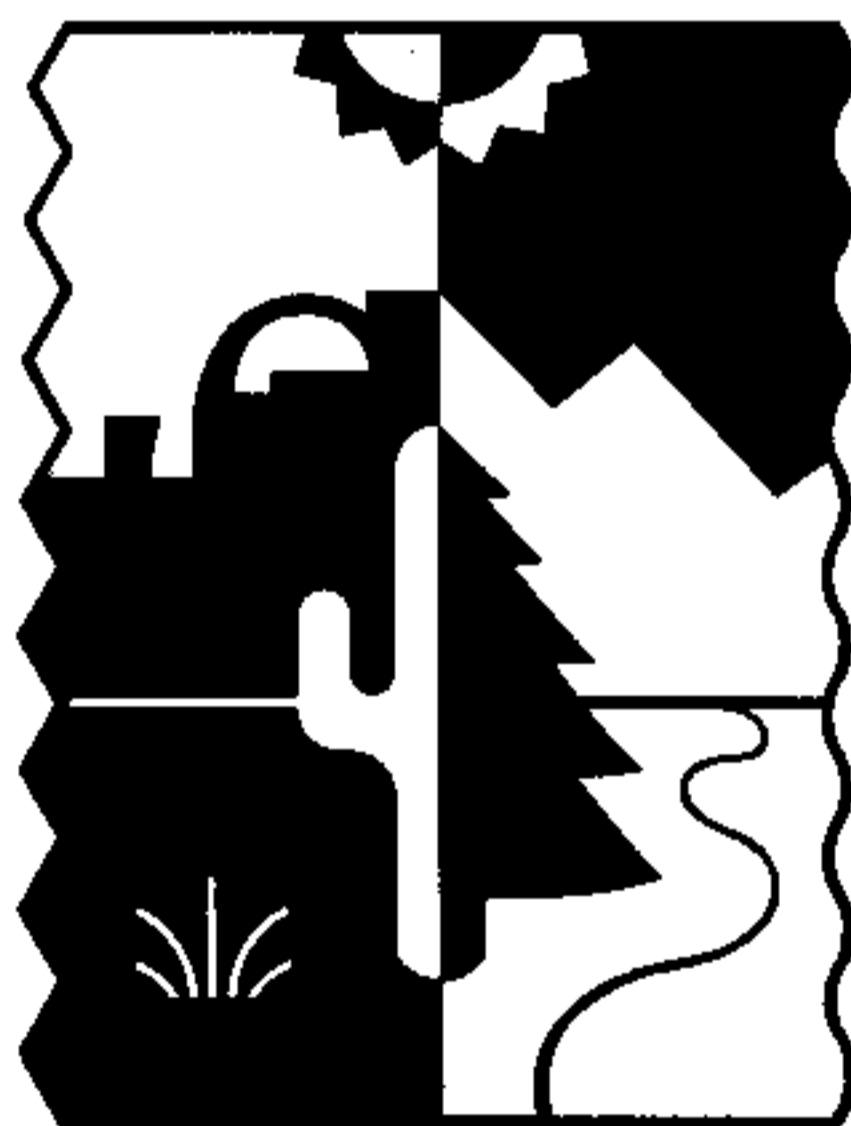
---

**G R E A T B A S I N**

---

**N A T U R A L I S T**

---



---

VOLUME 50 — 1990

---

BRIGHAM YOUNG UNIVERSITY

---

# INDEX

## GREAT BASIN NATURALIST

### Volume 50

Taxa described as new to science in this volume appear in **bold type** in this index.

- A plasma protein marker for population genetic studies of the desert tortoise (*Xerobates agassizi*), 1
- Allred, Kelly W., article by, 73
- Amy, Penny S., and Deborah A. Hall, note by, 289
- Anderson, Gary A., Jack E. Williams, Mark A. Stern, and Alan V. Munhall, article by, 243
- Apa, Anthony D., Daniel W. Uresk, and Raymond L. Linder, article by, 107
- Asquith, Adam, article by, 135
- Bats in Spotted Owl pellets in southern Arizona, 197
- Beard, James M., and Harold M. Tyus, article by, 33
- Belk, Mark C., Clyde L. Pritchett, and H. Duane Smith, note by, 387
- Berna, Howard, J., article by, 161
- Bibliography of Nevada and Utah vegetation description, 209
- Birds of a shadscale (*Atriplex confertifolia*) habitat in east central Nevada, 289
- Black-tailed prairie dog populations one year after treatment with rodenticides, 107
- Blackburn, Wilbert H., and M. Karl Wood, article by, 41
- Bone chewing by Rocky Mountain bighorn sheep, 89
- Bourgeron, P. S., L. D. Engelking, J. S. Tuhy, and J. D. Brotherson, article by, 209
- Britton, Carlton M., Guy R. McPherson, and Forrest A. Sneva, article by, 115
- Brotherson, J. D., P. S. Bourgeron, L. D. Engelking, and J. S. Tuhy, article by, 209
- Buchholz, Todd D., William C. McComb, and James R. Sedell, article by, 273
- California Gull populations nesting at Great Salt Lake, Utah, 299
- Chapman, Joseph A., and Kenneth L. Cramer, article by, 361
- Chapman, Joseph A., Kenneth L. Cramer, and A. Lee Foote, note by, 283
- Cole, David N., article by, 321
- Conservation status of threatened fishes in Warner Basin, Oregon, 243
- Cox, George W., article by, 21
- Cramer, Kenneth L., and Joseph A. Chapman, article by, 361
- Cramer, Kenneth L., A. Lee Foote, and Joseph A. Chapman, note by, 283
- Dam-site selection by beavers in an eastern Oregon basin, 273
- Deisch, Michele S., Daniel W. Uresk, and Raymond L. Linder, article by, 347
- Distribution of limber pine dwarf mistletoe in Nevada, 91
- Doescher, Paul S., Richard F. Miller, Jianguo Wang, and Jeff Rose, article by, 9
- Duncan, Russell B., and Ronnie Sidner, note by, 197
- Ecological review of black-tailed prairie dogs and associated species in western South Dakota, 339
- Ectomycorrhizal formation by *Pisolithus tinctorius* on *Quercus gembelii* × *Quercus turbinella* hybrid in an acidic Sierra Nevada minesoil, 367
- Edminster, Carleton B., Robert L. Mathiasen, and Frank G. Hawksworth, articles by, 67, 173
- Effect of backpack radio transmitter attachment on Chukar mating, 379
- Effects of burning and clipping on five bunchgrasses in eastern Oregon, 115
- Effects of dwarf mistletoe on growth and mortality of Douglas-fir in the Southwest, 173
- Effects of nitrogen availability on growth and photosynthesis of *Artemisia tridentata* ssp. *wyomingensis*, 9
- Effects of prairie dog rodenticides on deer mice in western South Dakota, 347
- Eimeria* sp. (Apicomplexa: Eimeriidae) from Wyoming ground squirrels, *Spermophilus elegans*, and white-tailed prairie dogs, *Cynomys leucurus*, in Wyoming, 327
- Elliott, Charles L., and Richard Guetig, article by, 63
- Emergence, attack densities, and host relationships for the Douglas-fir beetle (*Dendroctonus pseudotsugae* Hopkins) in northern Colorado, 333
- Engelking, L. D., P. S. Bourgeron, J. S. Tuhy, and J. D. Brotherson, article by, 209
- Esox lucius* (Esocidae) and *Stizostedion vitreum* (Percidae) in the Green River basin, Colorado and Utah, 33
- Evans, Howard E., note by, 193
- Flinders, Jerran T., Bartel T. Slauch, Jay A. Roberson, and N. Paul Johnston, note by, 379
- Foliage biomass and cover relationships between tree- and shrub-dominated communities in pinyon-juniper woodlands, 121
- Food caching and handling by marten, 381
- Foote, A. Lee, Kenneth L. Cramer, and Joseph A. Chapman, note by, 283
- Forage quality of rillscale (*Atriplex suckleyi*) grown on amended bentonite mine spoil, 57
- Form and dispersion of Mima mounds in relation to slope steepness and aspect on the Columbia Plateau, 21
- Formation of *Pisolithus tinctorius* ectomycorrhizae on California white fir in an eastern Sierra Nevada minesoil, 85
- Fresquez, P. R., article by, 167
- Fungi associated with soils collected beneath and between pinyon and juniper canopies in New Mexico, 167
- Galatowitsch, S. M., article by, 181

- George, Sarah B., and Mark A. Ports, note by, 93
- Glenn, James L., Richard C. Straight, and Jack W. Sites, Jr., article by, 1
- Guetig, Richard, and Charles L. Elliott, article by, 63
- Hall, Deborah A., and Penny S. Amy, note by, 289
- Hawksworth, Frank G., Robert L. Mathiasen, and Carleton B. Edminster, articles by, 67, 173
- Hawksworth, Frank G., and Robert L. Mathiasen, note by, 91
- Henry, Stephen E., Martin G. Raphael, and Leonard F. Ruggiero, note by, 381
- Holocene predation of the Uinta ground squirrel by a badger, 385
- Home range and activity patterns of black-tailed jackrabbits, 249
- Humpback chub (*Gila cypha*) in the Yampa and Green rivers, Dinosaur National Monument, with observations on roundtail chub (*G. robusta*) and other sympatric fishes, 257
- Infection of young Douglas-firs by dwarf mistletoe in the Southwest, 67
- Influence of soil frost on infiltration of shrub coppice dune and dune interspace soils in southeastern Nevada, 41
- Jehl, Joseph R., Jr., Don S. Paul, and Pamela K. Yochem, note by, 299
- Johnston, Paul, Bartel T. Slauch, Jerran T. Flinders, and Jay A. Roberson, note by, 379
- Joyal, Elaine, note by, 373
- Karp, Catherine A., and Harold M. Tyus, article by, 257
- Keating, K. A., note by, 89
- Lessard, E. D., and J. M. Schmid, article by, 333
- Linder, Raymond L., Anthony D. Apa, and Daniel W. Uresk, article by, 107
- Linder, Raymond L., Michele S. Deisch, and Daniel W. Uresk, article by, 347
- Longitudinal development of macroinvertebrate communities below oligotrophic lake outlets, 303
- Management of endangered Sonoran topminnow at Bylas Springs, Arizona: description, critique, and recommendations, 265
- Marsh, Paul C., and W. L. Minckley, article by, 265
- Mathiasen, Robert L., Carleton B. Edminster, and Frank G. Hawksworth, articles by, 67, 173
- Mathiasen, Robert L., and Frank G. Hawksworth, note by, 91
- Mayfly growth and population density in constant and variable temperature regimes, 97
- McComb, William C., James R. Sedell, and Todd D. Buchholz, article by, 273
- McPherson, Guy R., Carlton M. Britton, and Forrest A. Sneva, article by, 115
- Medica, Philip A., note by, 83
- Medin, Dean E., note by, 295
- Menkens, George E., Jr., Larry M. Shults, Robert S. Seville, and Nancy L. Stanton, article by, 327
- Microbiology and water chemistry of two natural springs impacted by grazing in south central Nevada, 298
- Miller, Richard F., Paul S. Doescher, Jianguo Wang, and Jeff Rose, article by, 9
- Minckley, W. L., and Paul C. Marsh, article by, 265
- Minshall, G. Wayne, and Christopher T. Robinson, article by, 303
- Munhall, Alan V., Jack E. Williams, Mark A. Stern, and Gary A. Anderson, article by, 243
- Natural hybrid between the Great Plains toad (*Bufo cognatus*) and the red-spotted toad (*Bufo punctatus*) from central Arizona, 371
- Nelson, Michael E., note by, 385
- New distribution records of spider wasps (Hymenoptera, Pompilidae) from the Rocky Mountain states, 193
- New Mexico grass types and a selected bibliography of New Mexico grass taxonomy, 73
- New variety of *Oxytropis campestris* (Fabaceae) from the Columbia Basin, Washington, 373
- Noteworthy mammal distribution records for the Nevada Test Site, 83
- Observations on the dwarf shrew (*Sorex nanus*) in northern Arizona, 161
- On the typification of *Oxytropis borealis* DC., 355
- Oxytropis borealis* var. *australis*, 359
- Oxytropis borealis* var. *hudsonica* (Greene) Welsh, 357
- Oxytropis borealis* var. *sulchurea* (Pors.) Welsh, 358
- Oxytropis borealis* var. *viscidi* (Nutt.) Welsh, 358
- Oxytropis campestris* var. *wanapum*, 373
- Patten, Duncan T., and Juliet C. Stromberg, article by, 47
- Patterns of microhabitat use by *Sorex monticolus* in summer, 387
- Paul, Don S., Joseph R. Jehl, Jr., and Pamela K. Yochem, note by, 299
- Pollination experiments in the *Mimulus cardinalis*-*M. lewisii* complex, 155
- Ports, Mark A., and Sarah B. George, note by, 93
- Pritchett, Clyde L., Mark C. Belk, and H. Duane Smith, note by, 387
- Rader, Russell B., and James V. Ward, article by, 97
- Raphael, Martin G., Stephen E. Henry, and Leonard F. Ruggiero, note by, 381
- Reproduction of three species of pocket mice (*Perognathus*) in the Bonneville Basin, Utah, 361
- Roberson, Jay A., Bartel T. Slauch, Jerran T. Flinders, and N. Paul Johnston, note by, 379
- Robinson, Christopher T., and G. Wayne Minshall, article by, 303
- Rose, Jeff, Paul S. Doescher, Richard F. Miller, and Jianguo Wang, article by, 9
- Ruggiero, Leonard F., Stephen E. Henry, and Martin G. Raphael, note by, 381
- Schmid, J. M., and E. D. Lessard, article by, 333
- Sedell, James R., William C. McComb, and Todd D. Buchholz, article by, 273
- Seed production and seedling establishment of a Southwest riparian tree, Arizona walnut (*Juglans major*), 47
- Seville, Robert S., Larry M. Shults, Nancy L. Stanton, and George E. Menkens, Jr., article by, 327
- Sharps, Jon C., and Daniel W. Uresk, article by, 339
- Shults, Larry M., Robert S. Seville, Nancy L. Stanton, and George E. Menkens, Jr., article by, 327
- Sidner, Ronnie, and Russell B. Duncan, note by, 197
- Sites, Jack W., Jr., James L. Glenn, and Richard C. Straight, article by, 1
- Slauch, Bartel T., Jerran T. Flinders, Jay A. Roberson, and N. Paul Johnston, note by, 379
- Slauson, William L., Charles W. Welden, and Richard T. Ward, article by, 313
- Small mammal records from Dolphin Island, the Great Salt Lake, and other localities in the Bonneville Basin, Utah, 283
- Smith, David R., note by, 287
- Smith, Graham W., article by, 249
- Smith, H. Duane, Mark C. Belk, and Clyde L. Pritchett, note by, 387
- Sneva, Forrest A., Carlton M. Britton, and Guy R. McPherson, article by, 115

- Sorex preblei* in the northern Great Basin, 93
- Spatial pattern and interference in piñon-juniper woodlands of northwest Colorado, 313
- Sprouting and seedling establishment in plains silver sagebrush (*Artemisia cana* Pursh. ssp. *cana*), 201
- Stanton, Nancy L., Larry M. Shults, Robert S. Seville, and George E. Menkens, Jr., article by, 327
- Stern, Mark A., Jack E. Williams, Alan V. Munhall, and Gary A. Anderson, article by, 243
- Straight, Richard C., James L. Glenn, and Jack W. Sites, Jr., article by, 1
- Stromberg, Juliet C., and Duncan T. Patten, article by, 47
- Sullivan, Brian K., note by, 371
- Summer food habits of coyotes in Idaho's River of No Return Wilderness Area, 63
- Tausch, R. J., and P. T. Tueller, article by, 121
- Taxonomy and variation of the *Lopidea nigridia* complex of western North America (Heteroptera: Miridae, Orthotylinae), 135
- Trampling disturbance and recovery of cryptogamic soil crusts in Grand Canyon National Park, 321
- Tueller, P. T., and R. J. Tausch, article by, 121
- Tuhy, J. S., P. S. Bourgeron, L. D. Engelking, and J. D. Brotherson, article by, 209
- Two pronghorn antelope found locked together during the rut in west central Utah, 287
- Tyus, Harold M., and James M. Beard, article by, 33
- Tyus, Harold M., and Catherine A. Karp, article by, 257
- Uresk, Daniel W., Anthony D. Apa, and Raymond L. Linder, article by, 107
- Uresk, Daniel W., Michele S. Deisch, and Raymond L. Linder, article by, 347
- Uresk, Daniel W., and Jon C. Sharps, article by, 339
- Using the original land survey notes to reconstruct pre-settlement landscapes in the American West, 181
- Vickery, Robert K., Jr., article by, 155
- Voorhees, Marguerite E., article by, 57
- Walker, R. F., notes by, 85, 367
- Walton, T. P., C. L. Wambolt, and R. S. White, article by, 201
- Wambolt, C. L., T. P. Walton, and R. S. White, article by, 201
- Wang, Jianguo, Paul S. Doescher, Richard F. Miller, and Jeff Rose, article by, 9
- Ward, James V., and Russell B. Rader, article by, 97
- Ward, Richard T., Charles W. Welden, and William L. Slauson, article by, 313
- Welden, Charles W., William L. Slauson, and Richard T. Ward, article by, 313
- Welsh, Stanley L., article by, 355
- White, R. S., C. L. Wambolt, and T. P. Walton, article by, 201
- Williams, Jack E., Mark A. Stern, Alan V. Munhall, and Gary A. Anderson, article by, 243
- Wood, M. Karl, and Wilbert H. Blackburn, article by, 41
- Yochem, Pamela K., Don S. Paul, and Joseph R. Jehl, Jr., note by, 299

## TABLE OF CONTENTS

Volume 50

No. 1 – March 1990

### Articles

A plasma protein marker for population genetic studies of the desert tortoise ( <i>Xerobates agassizi</i> ) . . . . . James L. Glenn, Richard C. Straight, and Jack W. Sites, Jr.	1
Effects of nitrogen availability on growth and photosynthesis of <i>Artemisia tridentata</i> ssp. <i>wyomingensis</i> . . . . . Paul S. Doescher, Richard F. Miller, Jianguo Wang, and Jeff Rose	9
Form and dispersion of Mima mounds in relation to slope steepness and aspect on the Columbia Plateau. . . . . George W. Cox	21
<i>Esox lucius</i> (Esocidae) and <i>Stizostedion vitreum</i> (Percidae) in the Green River basin, Colorado and Utah. . . . . Harold M. Tyus and James M. Beard	33
Influence of soil frost on infiltration of shrub coppice dune and dune interspace soils in southeastern Nevada . . . . . Wilbert H. Blackburn and M. Karl Wood	41
Seed production and seedling establishment of a Southwest riparian tree, Arizona walnut ( <i>Juglans major</i> ) . . . . . Juliet C. Stromberg and Duncan T. Patten	47
Forage quality of rillscale ( <i>Atriplex suckleyi</i> ) grown on amended bentonite mine spoil . . . . . Marguerite E. Voorhees	57
Summer food habits of coyotes in Idaho's River of No Return Wilderness Area. . . . . Charles L. Elliott and Richard Guetig	63
Infection of young Douglas-firs by dwarf mistletoe in the Southwest. . . . . Robert L. Mathiasen, Carleton B. Edminster, and Frank G. Hawksworth	67
New Mexico grass types and a selected bibliography of New Mexico grass taxonomy . . . . . Kelly W. Allred	73

### Notes

Noteworthy mammal distribution records for the Nevada Test Site. . . . . Philip A. Medica	83
Formation of <i>Pisolithus tinctorius</i> ectomycorrhizae on California white fir in an eastern Sierra Nevada minesoil . . . . . R. F. Walker	85
Bone chewing by Rocky Mountain bighorn sheep . . . . . K. A. Keating	89
Distribution of limber pine dwarf mistletoe in Nevada . . . . . Robert L. Mathiasen and Frank G. Hawksworth	91
<i>Sorex preblei</i> in the Northern Great Basin . . . . . Mark A. Ports and Sarah B. George	93

No. 2 – June 1990

### Articles

Mayfly growth and population density in constant and variable temperature regimes . . . . . Russell B. Rader and James V. Ward	97
--------------------------------------------------------------------------------------------------------------------------------	----

Black-tailed prairie dog populations one year after treatment with rodenticides . . . . .	Anthony D. Apa, Daniel W. Uresk, and Raymond L. Linder	107
Effects of burning and clipping on five bunchgrasses in eastern Oregon . . . . .	Carlton M. Britton, Guy R. McPherson, and Forrest A. Sneva	115
Foliage biomass and cover relationships between tree- and shrub-dominated communi- ties in pinyon-juniper woodlands . . . . .	R. J. Tausch and P. T. Tueller	121
Taxonomy and variation of the <i>Lopidea nigridia</i> complex of western North America (Heteroptera: Miridae, Orthotylinae) . . . . .	Adam Asquith	135
Pollination experiments in the <i>Mimulus cardinalis</i> – <i>M. lewisii</i> complex . . . . .	Robert K. Vickery, Jr.	155
Observations on the dwarf shrew ( <i>Sorex nanus</i> ) in northern Arizona. . . . .	Howard J. Berna	161
Fungi associated with soils collected beneath and between pinyon and juniper canopies in New Mexico . . . . .	P. R. Fresquez	167
Effects of dwarf mistletoe on growth and mortality of Douglas-fir in the Southwest. . . . .	Robert L. Mathiasen, Frank G. Hawksworth, and Carleton B. Edminster	173
Using the original land survey notes to reconstruct presettlement landscapes in the American West. . . . .	S. M. Galatowitsch	181
<b>Notes</b>		
New distribution records of spider wasps (Hymenoptera, Pompilidae) from the Rocky Mountain states . . . . .	Howard E. Evans	193
Bats in Spotted Owl pellets in southern Arizona . . . . .	Russell B. Duncan and Ronnie Sidner	197

## No. 3 – October 1990

### Articles

Sprouting and seedling establishment in plains silver sagebrush ( <i>Artemisia cana</i> Pursh. ssp. <i>cana</i> ) . . . . .	C. L. Wambolt, T. P. Walton, and R. S. White	201
Bibliography of Nevada and Utah vegetation description . . . . .	P. S. Bourgeron, L. D. Engelking, J. S. Tuhy, and J. D. Brotherson	209
Conservation status of threatened fishes in Warner Basin, Oregon . . . . .	Jack E. Williams, Mark A. Stern, Alan V. Munhall, and Gary A. Anderson	243
Home range and activity patterns of black-tailed jackrabbits . . . . .	Graham W. Smith	249
Humpback chub ( <i>Gila cypha</i> ) in the Yampa and Green rivers, Dinosaur National Monu- ment, with observations on roundtail chub ( <i>G. robusta</i> ) and other sympatric fishes . . . . .	Catherine A. Karp and Harold M. Tyus	257
Management of endangered Sonoran topminnow at Bylas Springs, Arizona: description, critique, and recommendations . . . . .	Paul C. Marsh and W. L. Minckley	265
Dam-site selection by beavers in an eastern Oregon basin . . . . .	William C. McComb, James R. Sedell, and Todd D. Buchholz	273

### Notes

Small mammal records from Dolphin Island, the Great Salt Lake, and other localities in the Bonneville Basin, Utah . . . . .	Kenneth L. Cramer, A. Lee Foote, and Joseph A. Chapman	283
--------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------	-----

Two pronghorn antelope found locked together during the rut in west central Utah . . . .	David R. Smith	287
Microbiology and water chemistry of two natural springs impacted by grazing in south central Nevada . . . . .	Deborah A. Hall and Penny S. Amy	289
Birds of a shadscale ( <i>Atriplex confertifolia</i> ) habitat in east central Nevada . . . . .	Dean E. Medin	295
California Gull populations nesting at Great Salt Lake, Utah . . . . .	Don S. Paul, Joseph R. Jehl, Jr., and Pamela K. Yochem	299

#### No. 4 – December 1990

#### Articles

Longitudinal development of macroinvertebrate communities below oligotrophic lake outlets . . . . .	Christopher T. Robinson and G. Wayne Minshall	303
Spatial pattern and interference in piñon-juniper woodlands of northwest Colorado . . . . .	Charles W. Welden, William L. Slauson, and Richard T. Ward	313
Trampling disturbance and recovery of cryptogamic soil crusts in Grand Canyon National Park . . . . .	David N. Cole	321
<i>Eimeria</i> sp. (Apicomplexa: Eimeriidae) from Wyoming ground squirrels, <i>Spermophilus elegans</i> , and white-tailed prairie dogs, <i>Cynomys leucurus</i> , in Wyoming . . . . .	Larry M. Shults, Robert S. Seville, Nancy L. Stanton, and George E. Menkens, Jr.	327
Emergence, attack densities, and host relationships for the Douglas-fir beetle ( <i>Dendroctonus pseudotsugae</i> Hopkins) in northern Colorado . . . . .	E. D. Lessard and J. M. Schmid	333
Ecological review of black-tailed prairie dogs and associated species in western South Dakota . . . . .	Jon C. Sharps and Daniel W. Uresk	339
Effects of prairie dog rodenticides on deer mice in western South Dakota . . . . .	Michele S. Deisch, Daniel W. Uresk, and Raymond L. Linder	347
On the typification of <i>Oxytropis borealis</i> DC. . . . .	Stanley L. Welsh	355
Reproduction of three species of pocket mice ( <i>Perognathus</i> ) in the Bonneville Basin, Utah . . . . .	Kenneth L. Cramer and Joseph A. Chapman	361

#### Notes

Ectomycorrhizal formation by <i>Pisolithus tinctorius</i> on <i>Quercus gambelii</i> × <i>Quercus turbinella</i> hybrid in an acidic Sierra Nevada minesoil . . . . .	R. F. Walker	367
Natural hybrid between the Great Plains toad ( <i>Bufo cognatus</i> ) and the red-spotted toad ( <i>Bufo punctatus</i> ) from central Arizona . . . . .	Brian K. Sullivan	371
New variety of <i>Oxytropis campestris</i> (Fabaceae) from the Columbia Basin, Washington . . . . .	Elaine Joyal	373
Effect of backpack radio transmitter attachment on Chukar mating . . . . .	Bartel T. Slaugh, Jerran T. Flinders, Jay A. Roberson, and N. Paul Johnston	379
Food caching and handling by marten . . . . .	Stephen E. Henry, Martin G. Raphael, and Leonard F. Ruggiero	381
Holocene predation of the Uinta ground squirrel by a badger . . . . .	Michael E. Nelson	385
Patterns of microhabitat use by <i>Sorex monticolus</i> in summer . . . . .	Mark C. Belk, Clyde L. Pritchett, and H. Duane Smith	387