

# **BIBLIOGRAPHY OF ALPINE AND SUBALPINE AREAS OF THE FRONT RANGE, COLORADO**

**Compiled by**

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and Paula C. Lehr**



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Cover picture:

Looking north across Niwot Ridge to Longs Peak (4344 m) in Rocky Mountain National Park. The hour-glass shaped snowfield near the center is Silver Dollar snowfield (or Martinelli's snowbank).

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## ABSTRACT

This bibliography comprises 993 references to the literature on the alpine and subalpine areas of the Front Range, Colorado. This bibliography is interdisciplinary and covers 25 scientific disciplines from Archaeology to Taxonomy. It will serve as an introduction to the rich literature about the science of the high mountain regions west of the University of Colorado at Boulder. As an historical document, emphasis has been placed on the heritage of research associated with the Mountain Research Station and the Institute of Arctic and Alpine Research. Additional literature from Rocky Mountain National Park south to Longs Peak has been included. References are listed by author and indexed by key word and author. The key word system was developed as part of the Long-Term Ecological Research program of the National Science Foundation.

## PREFACE

This bibliography of almost 1000 entries is testimony to my often-made oral claim that the natural history of the high mountains accessible from the University of Colorado Mountain Research Station is at least as well known as any other mountain region of comparable size. I have been known to go even farther and claim that Niwot Ridge is the most completely known alpine site in the world. Support for this statement can be seen by examining the key word index in this volume and finding that 35% of the entries deal with Niwot Ridge either directly or indirectly. We can also see that the entries cover a full range of topics from geology through climatology to detailed physiological studies. Nevertheless, the surface of possible research has only been scratched. Bibliographies such as this, which contain correct documentation of prior research, are essential to good science and to the continued growth of knowledge about our world. This bibliography will play its part in assuring that the knowledge of the natural history and ecology of Niwot Ridge per se and high mountains in general increases in depth.

Credit for the healthy state of knowledge about the region and any foundation for my boast goes to all those who have published their work. I wish to especially acknowledge University of Colorado faculty such as Francis Ramaley, Gordon Alexander, Robert W. Pennak, John W. Marr, William A. Weber, Erik K. Bonde, Jack D. Ives, Roger G. Barry, Nel Caine, Michael C. Grant, William M. Lewis, Jeffry B. Mitton and David E. Greenland who, along with their colleagues such as Ronald L. Ives, Clait E. Braun, Sidney E. White, Fred C. Fehsenfeld, James B. Benedict, Martyn M. Caldwell and their students, such as Richard F. Madole, William S. Osburn, Colin E. Thorn, Scott F. Burns, Larry L. Tieszen, and Beatrice E. Willard have contributed so much to this rich heritage.

Although this bibliography was prepared for the University of Colorado Long-Term Research (CULTER) Project, its utility will go much farther. I anticipate that this compilation will be in great demand by all students of the alpine. I congratulate Dr. Halfpenny and his co-authors for bringing the bibliography together, and I look forward to subsequent editions which will contain the ever growing literature of our local alpine site. I am certain these editions will be necessary as a result of continuing CULTER publications and publications of research attracted to the region as a result of this available database.

Patrick J. Webber  
Principal Investigator, CULTER  
May 1986

#### ACKNOWLEDGMENTS

As Field Director of the Mountain Research Station, I initiated a project to develop an updated bibliography of research related to the Mountain Research Station and the alpine areas of the Colorado Front Range. This initial project underwent several stages of evolution before it emerged as a contribution to the University of Colorado Long-Term Ecological Research (CULTER) program.

During all phases, the preparation of this bibliography was aided by many people. Initial efforts were centered around expanding bibliographies developed by earlier researchers at the Mountain Research Station. These bibliographies were prepared by John Marr, William Osburn, Mark Paddock, Beatrice Willard, and Michael Grant. Several anonymous bibliographies present in the files at the Mountain Research Station and the Institute of Arctic and Alpine Research were also consulted. Dr. Sam Shushan provided access to the alpine section of his unpublished Colorado Vegetation Bibliography.

Many people, who were interviewed, provided personal knowledge from their work experiences. These included William Baker (see Baker, 1983), James Benedict, Nel Caine, Ron Foreman, Joyce Gellhorn (Greene), Skip Greene, Michael Grant, John Marr, Jeff Mitton, Mark Paddock, Gordon Snow, Patrick J. Webber, and Beatrice Willard. Two individuals, Fatima Al-Rahim and Nancy Auerbach, deserve special credit for the efforts they have provided. Martha Andrews and Kathleen Salzberg provided expert consultation and additional sources of references. Kathleen has also helped with editing. Many people provided additional information in response to my letters of inquiry, including Ruth Bernstein, Anthony Brazel, Fred Fehsenfeld, Tom Huber, Barry Hubert, Mel Marcus, Charles Southwick, and Dale Toetz. Patrick J. Webber has continually helped with advice and support from the University of Colorado Long-Term Ecological Research Program.

To all these people and any I may have missed, I wish to express my thanks for their efforts, concern, and consultation.

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James C. Halfpenny

## INTRODUCTION

The striking mountains of Colorado have impressed visitors and residents since the arrival of Zebulon Pike in 1806. Scientists and explorers began to write about these mountains in the mid-1800s. The alpine region of the Front Range, in particular, received considerable attention due to its proximity to the academic centers in Denver, Boulder, and Fort Collins and Rocky Mountain National Park. The literature about the alpine areas has grown extensively. Much of this literature originated in conjunction with the University of Colorado's Mountain Research Station. This bibliography is designed to consolidate and update known references about alpine research in this area.

### Purpose and Emphasis

The purpose of this bibliography is to serve as an introduction to the rich literature about the science of high mountain regions immediately to the west of the University of Colorado at Boulder. It will serve as an aid to scientists seeking information within their own disciplines or within other disciplines where they may have little expertise. It is also intended as a reference for all individuals with an interest in the Colorado mountains.

Emphasis has been placed on the heritage of research associated with the Mountain Research Station (MRS) and the Institute of Arctic and Alpine Research (INSTAAR) at the University of Colorado. This document, therefore, represents an overview of the history of the scientists and their projects at the University of Colorado. Other articles dealing with the alpine areas of the Front Range have been included to provide a complete picture of the state-of-knowledge for this region.

### Historical Overview

Early scientists, including E.S. and F.E. Clements and P.A. Rydberg, recognized the importance of the Front Range mountains and wrote about them in general terms. These historical references have been included to set the stage for the development of the University of Colorado research story. Most research in the Colorado alpine dates from about 1908 when Professor Francis Ramaley established a University of Colorado field station at Tolland on South Boulder Creek. Ramaley felt that

the justification of a mountain laboratory lies mostly in the fact that in a mountain region, especially if high mountains and lowlands come together, a great diversity of environmental conditions, with their different biota, may be compressed within environmental conditions.

The Mountain Laboratory at Tolland was used for classes until 1919 when classes commenced at the new University Camp located in the present-day City of Boulder Watershed. University Camp itself had been established in 1915. In 1920 University Camp was relocated to its present site now known as the Mountain Research Station 2.8 km away.

Early research associated with the University concentrated on geological phenomena and surveys of organisms, especially the flora. Other than botanical works, research publications were sporadic through the end of World War II. The literature does reflect the intensive efforts by men such as T.D.A. Cockerell, J. Henderson, R.L. Ives, G.E. Osterhout, F. Ramaley, and W.W. Robbins. Textbooks and articles by A. Gray and J.M. Coulter were instrumental in shaping the early views of western ecology.

John W. Marr began the modern research efforts at the Station, then called Science Lodge, in 1948. Since then, the number of research publications, including those through cooperative efforts with outside scientists, has grown steadily. The knowledge in diverse fields from atmospheric science to zoology has also grown. A climate measurement program has been in existence since 1951. Research efforts have been aided by participation in projects with the U.S. Army Quartermaster Corps, National Science Foundation, Atomic Energy Commission, National Aeronautic and Space Administration, International Biological Programme, and National Oceanographic and Atmospheric Administration. A detailed overview of the history of MRS may be found in the Preface of Geoecology of the Colorado Front Range (Ives, 1980).

### Database System

This bibliography represents the completion of the first phase in a four-part effort to construct a computerized and interactive bibliographic database for the University of Colorado Long-Term Ecological Research (CULTER) program. The planned steps in this process are

1. preparation of the initial bibliography
2. key wording in compliance with the system initiated by the Jornada LTER program (Conley and Conley, 1984)
3. entry into the CU database management system
4. inclusion in the national LTER database management system

### Coverage

Academic disciplines. Researchers associated with MRS and the alpine regions represent many disciplines and an interdisciplinary approach has always been encouraged at MRS. Therefore topics in the bibliography include the following 26 disciplines:

Archaeology	Hydrology
Atmospheric science	Management
Behavior	Meteorology
Biology	Microbiology
Chronology	Natural History
Climatology	Paleoecology
Ecology	Phytosociology
Genetics	Radioecology
Geoecology	Remote Sensing
Geology	Sedimentology
Geomorphology	Soil Science
Glaciology	Stratigraphy
History	Taxonomy

Reviewers familiar with each of these disciplines have provided input for the bibliography.

Research conducted through specific grants for alpine research at the University of Colorado has been included. This includes the following projects: East Slope Ecology Project (Atomic Energy Commission, 1956 - 1964), San Juan Ecology Project (U.S. Department of Interior, Bureau of Reclamation, 1970 - 1976), Tundra Biome Project (International Biological Programme, 1970 - 1974), Remote Sensing in Mountainous Areas (National Aeronautic and Space Administration, 1970 - 1980), and the Long-Term Ecological Research program (National Science Foundation, since 1980).

Geographic extent. References included represent research in the geographic area including Rocky Mountain National Park south to Mount Evans. The lower altitudinal limit was defined as the subalpine (essentially the spruce-fir forest or approximately the 10,000-ft level [3,048 m]). In keeping with the philosophy of providing a historical listing of research associated with MRS, research involving data from the Front Range Climate Stations maintained by MRS at A-1 (7200 ft [2,195 m]), B-1 (8500 ft [2,591 m]), and C-1 sites (9,900 ft or 3,018 m) has also been included.

Place names. Figures 1-3 are maps showing places names that occur repeatedly in the bibliography. Figure 1 shows the entire geographic area covered by the bibliography, while Figures 2 and 3 show the immediate area around the Mountain Research Station in more detail.

Over the last 100 years, different place names have been applied to the same feature or to the same areas. Occasionally when a place name was used, research within the article was conducted at a great distance from the location implied by the place name. Below are listed place names that appear to have been used synonymously, to represent wide areas, or for which confusion may exist.

Niwot Ridge	= Bald Mountain = Mt. Niwot - the term has been used to mean strictly the area above treeline or all areas both above and below treeline on the topographic ridge
Tolland	= Boulder Park = Mountain Laboratory - all three terms have been used to include research from South Boulder Creek valley to the Continental Divide
Rollins Pass	= Corona Pass = Corona (the townsite) - pass across the Continental Divide on the west edge of Boulder County - occasionally referred to as Tolland
University Camp	- refers to both the location in the City of Boulder Watershed and, occasionally, to the current MRS location
Science Lodge	= Science Camp - refers to the current MRS location
Mountain Laboratory	- refers to the Tolland location

## Content

Efforts were made to include alpine research associated with the University of Colorado, especially that associated with the historical development of the current Mountain Research Station and the Institute of Arctic and Alpine Research. In this regard, the coverage of the literature is fairly complete. Coverage of those research efforts that are progressively farther from Niwot Ridge and those efforts from other institutions that have not made contact with MRS or INSTAAR is not as complete. Certainly, there are theses produced at other institutions, but not available in the published literature, of which we are not aware. Often it was not possible to obtain copies of theses from different institutions to ascertain exact locations. This was particularly true of early academic works.

Efforts were made to make this bibliography as complete as possible but this goal represented a hard task because the literature included spanned 26 academic disciplines. A liberal interpretation of the boundaries was used when deciding borderline cases. We hope this approach will not be too restrictive on future scientists' efforts. The types of items included and excluded are discussed in detail below.

This bibliography is considered a dynamic document that will be updated regularly. Once the data are available on the computer, interactive updates will be easy to make. Therefore, we are requesting the input of all those who use the bibliography. Please report omissions, corrections, and new additions to the CULTER program coordinator of INSTAAR.

The final version of the bibliography contains publications known to us as of September 15, 1985.

### Types of Reference Included

1. Historical - Historical accounts (for example, articles by Ramaley), though often of a general nature, have been included to provide a perspective of the development of alpine research in Colorado.

2. Monographs - Monographs listing collections but occasionally having few sites in the high mountains have been included to complete the picture on a statewide basis, for example, The Ants of Colorado (Gregg, 1963).

3. Guidebooks - Representative state guides have been included for the same reason as monographs, for example, The Rocky Mountain Flora (Weber, 1976). Also included are guidebooks prepared for academic meetings offering field trips to the high mountain areas (for example, Andrews et al., 1973). Many times these guides offered the most integrated and up-to-date picture of research in a discipline. To locate these guides, check the INSTAAR library.

4. Entire area maps - Maps showing the reference area and depicting aspects of biological or earth sciences have been included, for example, Geologic Map of the Ward Quadrangle (Gable and Madole, 1976).

5. Abstracts - Published abstracts have been included because they contain information which may not be available elsewhere.

6. Project report summaries - Reports containing summaries of several subprojects under one major program have been included, for example, International Biological Programme Tundra Biome yearly summaries. However, individual reports within the summaries have not been included. This procedure saves reprinting information that is often available in later journal articles but still allows the interested individual to "dig" deeper if necessary.

7. Unusual reports - Rarely, we have listed manuscripts for which only one copy exists because of their importance or the fact that the information is not available anywhere else. To locate this type of manuscript visit the INSTAAR library or contact the CULTER program coordinator.

#### Reference Types not Included

1. Unpublished abstracts - Even though one copy may presently exist in INSTAAR or MRS files, these items have not been included (for example, NSF high school program abstracts).

2. Unpublished reports - These reports, also available in the INSTAAR and MRS libraries, have been excluded for the same reasons as the unpublished abstracts (for example, reports of participants in the NSF College Teacher program). There are, however, notable exceptions including important research reports (usually present in multiple copies) which contain material not presented elsewhere (for example, "Population of small mammals in the Boulder City watershed and a preliminary estimate of biomass cycle in 1964" [Quick, 1966]). The decision to include these reports was based on experience gained in compiling the bibliography.

3. Lower-level academic reports - These include the NSF undergraduate and high school research participation program and other student reports on file at MRS.

4. Research from nearby areas outside the bounds of this study - Research works from the Fraser Experimental Forest, the Pikes Peak area, and the Medicine Bow mountains in Wyoming have not been included. A bibliography of research at Fraser is available from the Forest Service, Rocky Mountain Forest and Range Experiment Station, 240 West Prospect, Fort Collins, CO 80526.

#### Locating References

Scientists interested in doing complete literature searches on particular topics are encouraged to visit the MRS and INSTAAR libraries. Many articles not available in other libraries may be found in these two specialized libraries. This is particularly true of short reports on special topics. Those interested in a historical perspective on a topic or the area would also benefit by visiting these libraries.

Many of the references listed in the bibliography are present in the CU library system on the Boulder campus including the Earth Science Library. Many of the older references are housed in special areas. Older works, in particular theses and dissertations, are housed in the archives section of Norlin Library, which also has a special section of archives dealing with the Mountain Research Station only.

Other summary reports containing data from the Mountain Research Station are produced by the Soil Conservation District (for example, Water Supply Outlook and SNOTEL data reports), and the National Oceanographic and Atmospheric Administration, Program for Regional Observing and Forecasting Systems and Geophysical Monitoring for Climate Change (Flask Sampling News).

Addresses for these organizations are:

NOAA Geophysical Monitoring for Climate Change  
325 Broadway  
Boulder, CO 80303

NOAA Program for Regional Observing and Forecasting Service  
325 Broadway  
Boulder, CO 80303

State Conservationist  
USDA Soil Conservation Service  
2490 West 26th Avenue  
Denver, CO 80211

#### Key Words

Each article was associated with the key words best describing the content of the article. Seven categories of key words were utilized:

1. Type of Article
2. Scientific Discipline
3. Institution or Program Affiliation
4. Place Names
5. Classification
6. Abiotic Descriptors
7. Biotic Descriptors

By reviewing the Categorized Key Word List (p. 73), the user can quickly understand the scope of the Bibliography.

The initial choice of key words was based on the system initiated by the Jornada LTER program (Conley and Conley, 1984). We added additional key words needed to characterize research in the Front Range. Four-letter key word codes based on the Jornada system (W. Conley, pers. com.) were used for computer sorting. We have included a alphabetical key word and code list (p. 77).

Using a database management system, a Key Word Index was developed. For many users, the key word index will be the most useful method of accessing the bibliography. To use the index, make a list of key words and synonyms describing your research interest. Look up all the key words, because it is possible that a given article may not be listed under the key word you selected. For example, to locate climate articles about research at the weather station C-1, check each of the key words Climatology, C-1, A-1 to D-1, Climate-date, Climate-discussion of. In this manner, you should be able to locate all articles on climatological research at C-1 and other related articles that might be of interest. By cross-referencing the access numbers under each list you can narrow down the possible number of selections.

## Author Index

Articles have been indexed by author name, whether the author was senior author or junior author.

### REFERENCES CITED

Andrews, J.T., Webber, P.J., Thorn, C.E., and LeDrew, E., 1973: Tundra environment on Niwot Ridge, Colorado Front Range. Guide for Field Trip No. 7, 26th Annual Meeting, Rocky Mountain Section, Geological Society of America. Boulder, University of Colorado. 31 pp.

Conley, M.R. and Conley, W., 1984: New Mexico State University College Ranch and Jornada Experimental Range: A Summary of Research, 1900-1983. New Mexico State University Agricultural Experiment Station, Special Report 56. 83 pp.

Crossley, D.A., Jr. and Swank, W.T., 1983: Publications of the Cowetta Forest Ecosystem Project. Available from the Cowetta Hydrologic Laboratory. Institute of Ecology, University of Georgia, Athens, GA 30602.

Gable, D.J. and Madole, R.F., 1976: Geologic map of the Ward quadrangle, Boulder County, Colorado. U.S. Geological Survey, Geologic Quadrangle Map, GQ-1277.

Gregg, R.E., 1963: The Ants of Colorado. Boulder: University of Colorado Press. 792 pp.

Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range: A study of alpine and subalpine environments. Boulder, Colorado: Westview Press. 484 pp.

Quick, H.F., 1966: Population of small mammals in the Boulder City watershed and a preliminary estimate of biomass in 1964. Attachment No. 11 to USAEC Contract No. AT(11-1)-1191. Radio-ecology of the Colorado Front Range, Osburn, W.S., Principal Investigator, mimeographed.

Weber, W.A., 1976: Rocky Mountain Flora, 5th edition. Boulder: Colorado Associated University Press. viii + 438 pp.

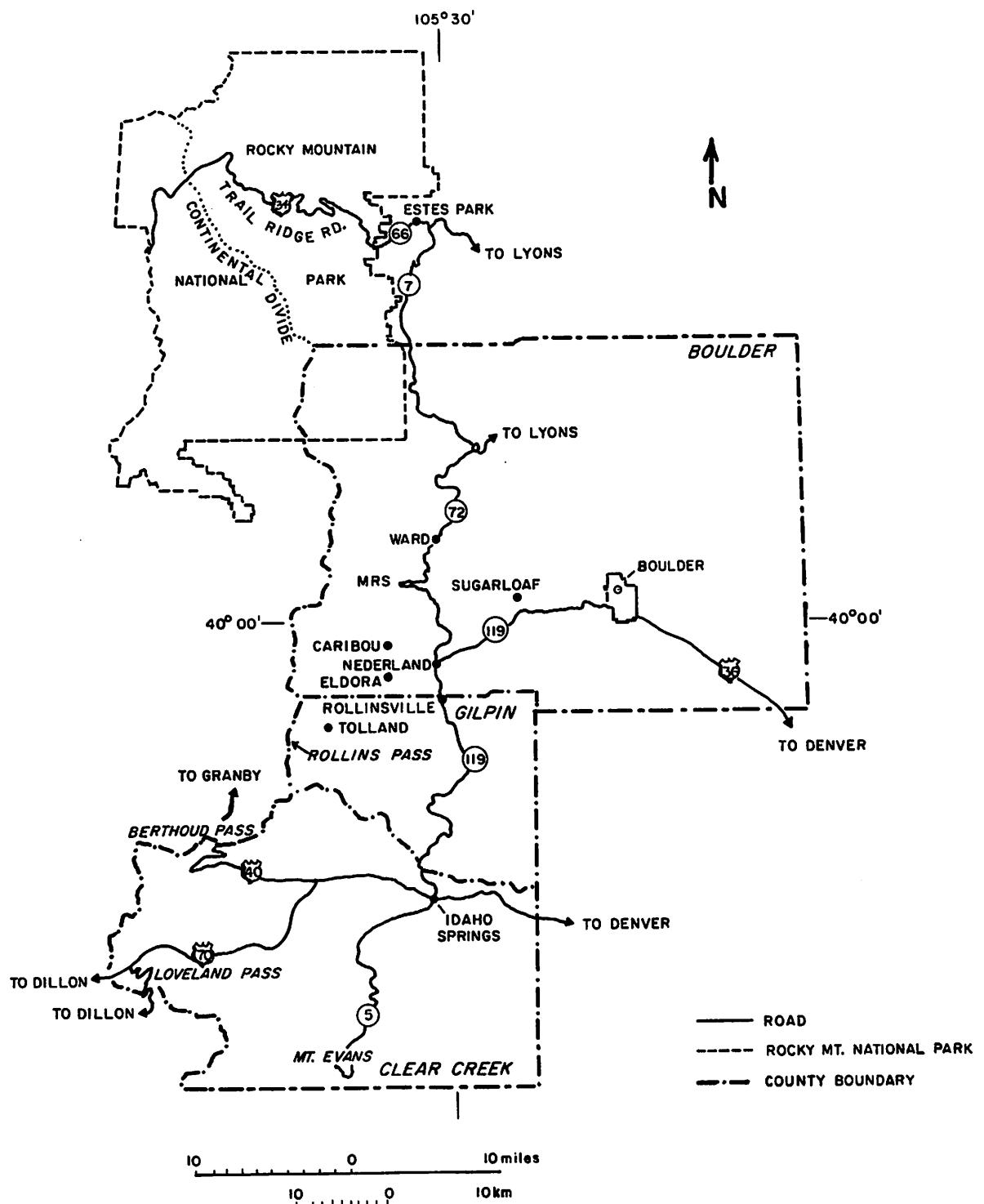


Figure 1. Geographic area covered by bibliography.

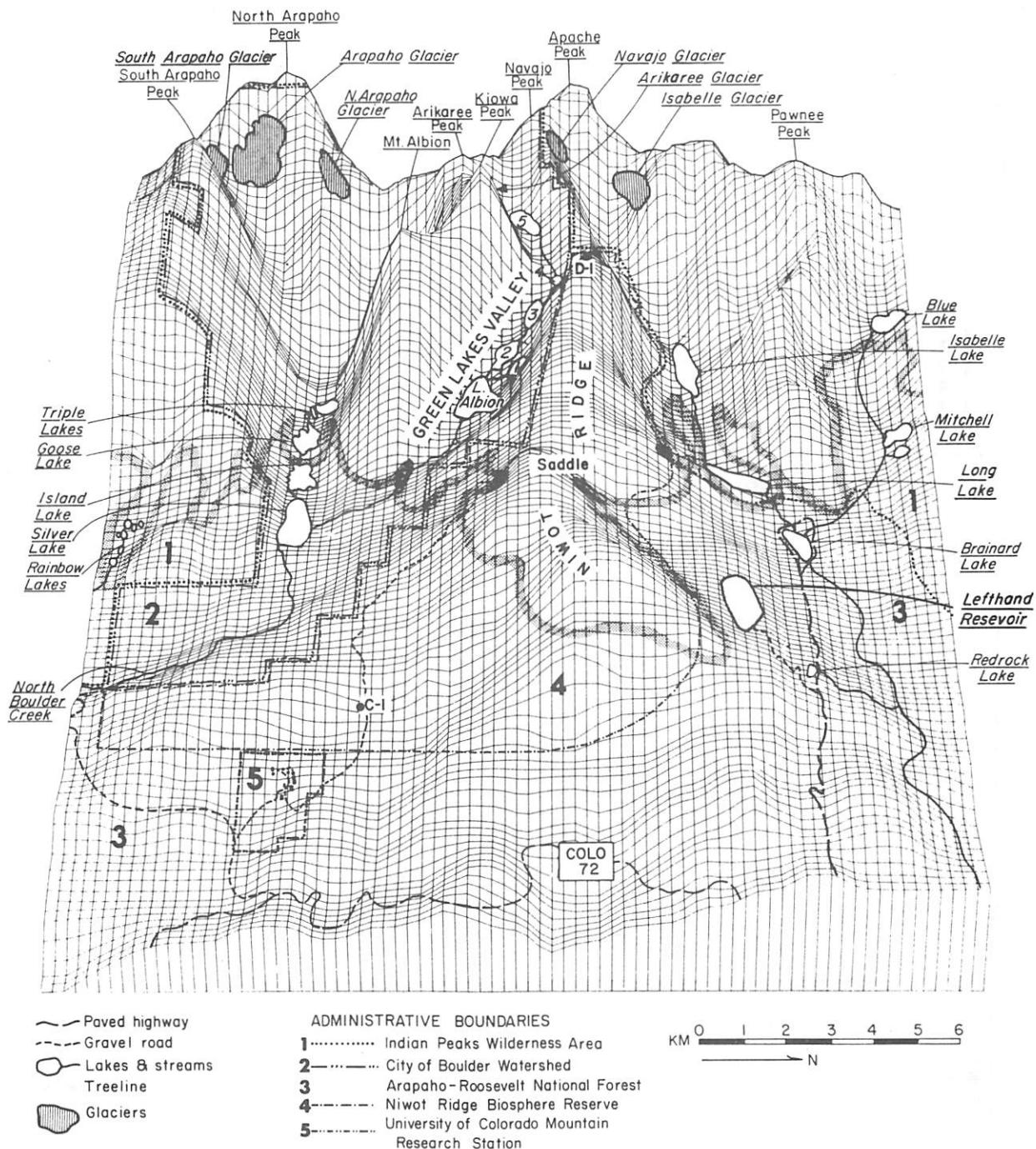
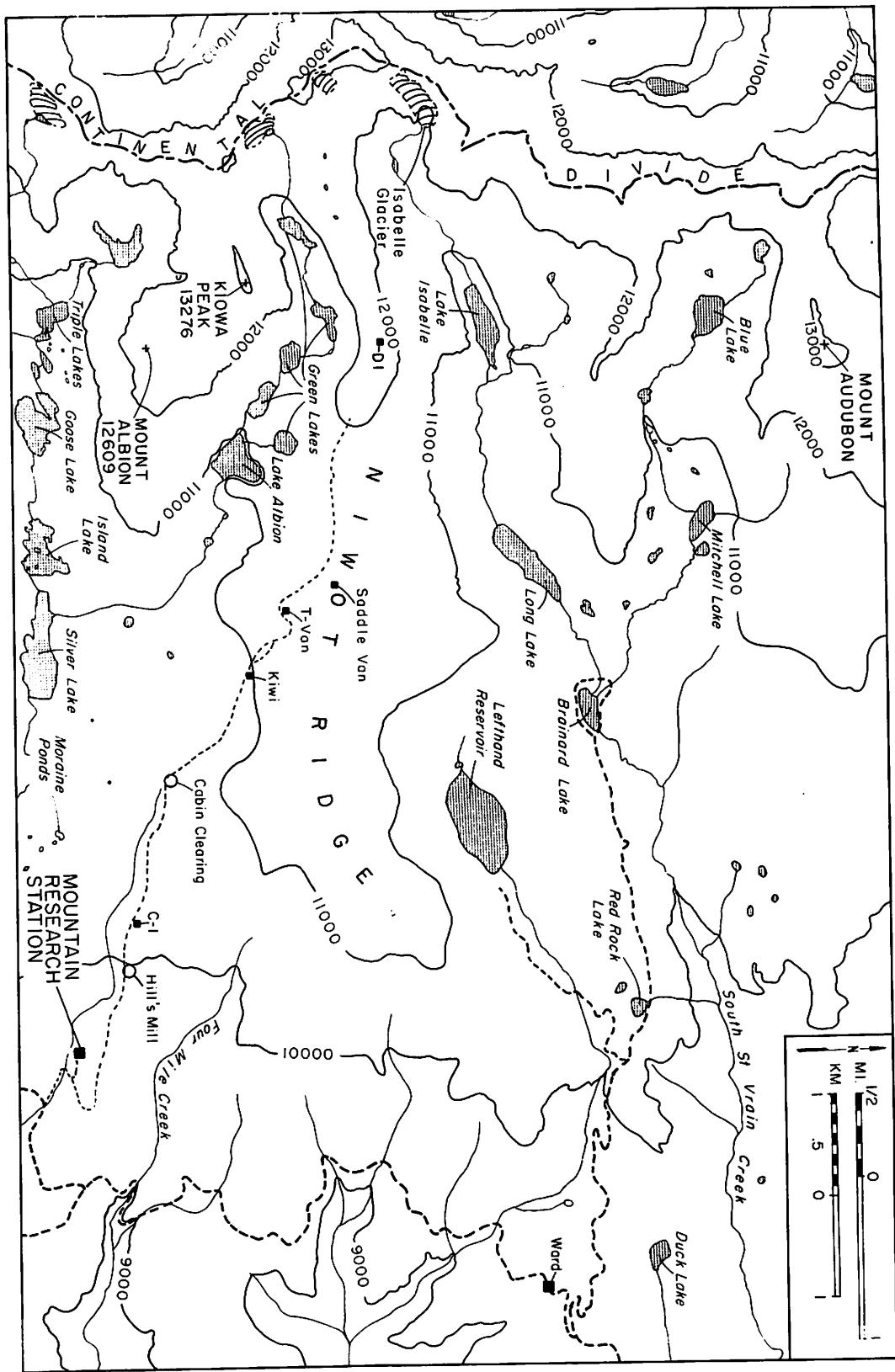


Figure 2. Block diagram of the east slope of the Indian Peaks, Colorado Front Range. The bottom left-hand (southeast) corner has an altitude of 2700 m, and the Continental Divide, which forms the horizon, reaches 4115 m at North Arapaho Peak. Niwot Ridge and the Green Lakes Valley are shown in the upper middle portion of the block. Lake Albion is indicated and the Green Lakes are numbered from 1 to 5. The principal climate stations, D-1 (3750 m), Saddle (3500 m), and C-1 (3048) are also shown.

Figure 3. Topographic map of Niwot Ridge and surroundings. The contour interval is 1000 ft.



## **BIBLIOGRAPHY**

- 1 Alexander, G., 1937: The birds of Boulder County, Colorado. University of Colorado Studies, 24:79-105.
- 2 Alexander, G., 1951: The natural history of high altitudes. The Biologist, 33:91-97.
- 3 Alexander, G., 1951: The occurrence of Orthoptera at high altitudes, with special reference to Colorado Acrididae. Ecology, 32:104-112. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 448-459.
- 4 Alexander, G., 1960: Vertical movements of grasshoppers in the Rocky Mountains of Colorado. Ecological Society of America Bulletin, 41:89. Abstract.
- 5 Alexander, G., 1964: Occurrence of grasshoppers as accidentals in the Rocky Mountains of Northern Colorado. Ecology, 45:77-86.
- 6 Alexander, G. and Hillard, J.R., Jr., 1964: Life history of Aeropedellus clavatus (Orthoptera: Acrididae) in the alpine tundra of Colorado. Annals Entomological Society of America, 57:310-317.
- 7 Alexander, G. and Hillard, J.R., Jr., 1969: Altitudinal and seasonal distribution of Orthoptera in the Rocky Mountains of northern Colorado. Ecological Monographs, 39:385-431.
- 8 Alexander, R.R., Troendle, C.A., Kaufmann, M.R., Shepperd, W.D., Crouch, G.L., and Watkins, K., 1985: The Fraser Experimental Forest, Colorado-Research program and published research, 1937-1985. USDA Forest Service General Technical Report, RM-118. 46 pp.
- 9 Alford, D., 1973: Cirque glaciers of the Colorado Front Range: Mesoscale aspects of a glacier environment. Ph.D. dissertation, University of Colorado, Boulder. 198 pp.
- 10 Alford, D., 1977: The orientation gradient: Regional variations of accumulation and ablation in alpine basin. Paper presented at the Symposium-Workshop on Northern Research Basins, U.S. National Committee on Scientific Hydrology, Fairbanks, Alaska, August 15-17. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 214-223.
- 11 Allessio, M.L., 1966: Dormancy and germination in achenes of Polygonum bistortoides Pursh., Ph.D. dissertation, University of Colorado, Boulder. 190 pp.
- 12 Amen, R.D., 1962: Germination and dormancy in two species of alpine Carex from the Colorado Front Range. Ph.D. dissertation, University of Colorado, Boulder. 157 pp.
- 13 Amen, R.D., 1966: The extent and role of seed dormancy in alpine plants. Quarterly Review of Biology, 41:271-281.
- 14 Amen, R.D. and Bonde, E.K., 1964: Dormancy and germination in alpine Carex from the Colorado Front Range. Ecology, 45:881-884.

- 15 Amundsen, C.C., 1967: The subalpine forest of Wild Basin, Front Range, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 129 pp.
- 16 Anderson, R.A., 1964: The genus Lecidea (lichenized fungi) in Rocky Mountain National Park, Colorado. Ph.D. dissertation. University of Colorado, Boulder. 209 pp.
- 17 Andrews, J.T., Birkeland, P.W., Kihl, R., Litaor, M., Nichols, H., and Stuckenrath, H., 1982: Holocene lake sediments from subalpine and alpine lakes, Colorado Front Range: baseline studies. Geological Society of America, Abstracts, 14:433. Abstract.
- 18 Andrews, J.T., Kihl, R., Caine, T.N., Birkeland, P.W., Litaor, M.Z., Dellmonte, N.L., and Stuckenrath, R., 1984: Characteristics of lake sediments from alpine and subalpine environments: Front Range, Colorado. University of Colorado Long-Term Ecological Research Data Report, 84/6. 29 pp.
- 19 Andrews, J.T., Millington, A.C., and Nichols, H., 1976: Litho- and biostratigraphy of the Mary Jane site, Fraser Valley, Colorado: a late Quaternary multiple till and peat exposure. Geological Society of America Abstracts with Programs, 8:562. Abstract.
- 20 Andrews, J.T., Nichols, H., Short, S.K., Stuckenrath, R., and Birkeland, P.W., 1982: Alpine lake-sediment studies, Front Range Colorado: a contribution to the Long-Term Ecological Research (LTER) Program. American Quaternary Association, Seventh Biennial Conference, Program and Abstracts, p. 61. Abstract.
- 21 Andrews, J.T., Webber, P.J., Thorn, C.E., and LeDrew, E., 1973: Tundra environment on Niwot Ridge, Colorado Front Range. Guide for Field Trip No. 7, 26th Annual Meeting, Rocky Mountain Section, Geological Society of America. Boulder, University of Colorado. 31 pp.
- 22 Armin, L.C., 1963: A study of the family Carabidae (Coleoptera) in Boulder County, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 465 pp.
- 23 Arno, S.F., 1966: Interpreting the timberline. M.S. thesis, University of Montana, Missoula. 205 pp.
- 24 Arno, S.F. and Hammerly, R.P., 1984: Timberline: Mountain and Arctic Forest Frontiers. Seattle, WA: The Mountaineers. 304 pp.
- 25 Bachrach, J.H., 1951: The plant communities of a valley in the montane forest of the Colorado Front Range. M.A. thesis, University of Colorado, Boulder. 68pp.
- 26 Bailey, D.S., 1983: God's Country, U.S.A., The Life and History of Milling, Mining and Families Along the Switzerland Trail. Fort Collins, Colorado: Robinson Press, Inc. 150 pp.
- 27 Baker, F., 1944: Mountain climates of the western United States. Ecological Monographs, 14:223-254.

- 28 Baker, M., 1961: The altitudinal distribution of mosquito larvae in the Colorado Front Range. Transactions American Entomological Society, 87:231-246.
- 29 Baker, M.M., 1961: Altitudinal ecology of mosquito larvae in Boulder, Colorado. M.A. thesis, University of Colorado, Boulder. 66 pp.
- 30 Baker, W.L., 1983: A bibliography of Colorado vegetation description. Great Basin Naturalist, 43(1):45-64.
- 31 Barber, R.A., 1935: An ecological study of a small, montane, spring-fed stream area in the University of Colorado Camp, on Mount Niwot. M.A. thesis, University of Colorado, Boulder. 76 pp.
- 32 Baron, J. et al., 1984: Long-term research into the effects of acidic deposition in Rocky Mountain National Park: Summary report 1980-1984. Water Resources Field Support Laboratory, National Park Service, Colorado State University, Fort Collins. WRFSL Report, 84-RUMU-2. 43 pp.
- 33 Barry, R.G., 1972: Climatic environment of the east slope of the Colorado Front Range. University of Colorado, Institute of Arctic and Alpine Research Occasional Paper, 3. 206 pp.
- 34 Barry, R.G., 1973: A climatological transect on the east slope of the Front Range, Colorado. Arctic and Alpine Research, 5(2):89-110. Reprinted in: Ives, J.D. (ed.), 1980, Geoecology of the Colorado Front Range. Boulder: Westview Press, 264-285.
- 35 Barry, R.G., 1979: High altitude climates. In: Webber, P.J. (ed.), High Altitude Geoecology, AAAS Selected Symposium No. 12. Boulder: Westview Press, 55-74.
- 36 Barry, R.G., 1980: Climatology: overview. In: Ives, J.D. (ed.), Geoecology of the Colorado Front Range. Boulder: Westview Press. 259-263.
- 37 Barry, R.G., 1981: Mountain Weather and Climate. New York: Methuen. 313 pp.
- 38 Barry, R.G., 1984: Mountain climate data for long-term ecological research. Proceedings of the International Symposium on Tibet Plateau and Mountain Meteorology, Beijing. In press.
- 39 Barry, R.G., 1985: Growing season temperature characteristics, Niwot Ridge and the east slope of the Front Range, Colorado. University of Colorado Long-Term Ecological Research Data Report, 85/6. 52 pp.
- 40 Barry, R.G. and Clark, J.M., 1975: Evaluation of an ERTS-1 data collection platform installed in the alpine tundra, Colorado. Journal of Applied Meteorology, 14:622-626.
- 41 Barry, R.G. and LeDrew, E.F., 1974: The energy budget of the alpine tundra, Colorado. U.S. Tundra Biome Data Report, 74-2, 93 pp.
- 42 Barry, R.G. and Van Wie, C.C., 1974: Topo- and microclimatology in alpine areas. In: Ives, J.D. and Barry, R.G. (eds.), Arctic and Alpine Environments. London: Methuen, 73-83.

- 43 Bastin, E.S. and Hill, J.M., 1917: Economic geology of Gilpin county and adjacent parts of Clear Creek and Boulder counties, Colorado. U.S. Geological Survey Professional Paper, 94:1-32.
- 44 Baumgartner, R., 1979: Combined dominant visual landscape types, Indian Peaks, Colorado. A new approach to characterize the visual resource of scenic mountain environments. Second Conference on Scientific Research in the National Parks, November 1979, San Francisco. Abstract.
- 45 Baumgartner, R., 1979: Our national landscape: mountain landscape mapping and landscape mapping as an aid to management of scenic mountain areas. Conference on Applied Techniques for Analysis and Management of Visual Resources, April 1979, Lake Tahoe, Incline Village, Nevada. Abstract.
- 46 Baumgartner, R., 1983: The visual landscape of the Indian Peaks area, Colorado Front Range, U.S.A. Mountain Research and Development, 3:13-25.
- 47 Becwar, M.R., Rajashekhar, C., Hansen-Bristow, K.J., and Burke, M.J., 1981: Deep undercooling of tissue water and winter hardiness limitations in timberline flora. Plant Physiology, 68:111-114.
- 48 Behnke, R.J., 1976: Summary of information on the status of greenback cutthroat trout, Salmo clarki stomias. Report prepared for U.S. Fish and Wildlife Service, Salt Lake City Area Office. 30 pp.
- 49 Behnke, R.J., 1977: Evaluation of recent collections of cutthroat trout in Colorado. Report prepared for the Colorado Division of Wildlife, Denver. 18 pp.
- 50 Bell, K.L., 1973: Autecology of Kobresia bellardii: Why winter snow accumulation patterns affect local distribution. Ph.D. dissertation, University of Alberta, Edmonton. 167 pp.
- 51 Bell, K.L., 1974: Autumn, winter, and spring phenology of some Colorado alpine plants. American Midland Naturalist, 91:460-464.
- 52 Bell, K.L., 1977: Autecology of Kobresia bellardii: why winter snow accumulation affects local distribution. Bulletin of the Ecological Society of America, 58:41. Abstract.
- 53 Bell, K.L. and Amen, R.D., 1970: Seed dormancy in Luzula spicata and L. parviflora. Ecology, 51:492.
- 54 Bell, K.L. and Bliss, L.C., 1979: Autecology of Kobresia bellardii: Why winter snow accumulation limits local distribution. Ecological Monographs, 49:377-402.
- 55 Benedict, J.B., 1966: Radiocarbon dates from a stone-banked terrace in the Colorado Rocky Mountains, U.S.A. Geografiska Annaler, 48A:24-31.
- 56 Benedict, J.B., 1967: Recent glacial history of an alpine area in the Colorado Front Range, U.S.A. I. Establishing a lichen growth curve. Journal of Glaciology, 6(48):817-832.
- 57 Benedict, J.B., 1968: Neoglacial history of the Colorado Front Range. Ph.D. dissertation, University of Wisconsin. 75 pp.

- 58 Benedict, J.B., 1968: Recent glacial history of an alpine area in the Colorado Front Range, U.S.A. II. Dating the glacial deposits. Journal of Glaciology, 7(49):77-87.
- 59 Benedict, J.B., 1969: Microfabric of patterned ground. Arctic and Alpine Research, 1:45-48.
- 60 Benedict, J.B., 1970: Downslope soil movement in a Colorado alpine region: rates, processes, and climatic significance. Arctic and Alpine Research, 2(3):165-226. Reprinted in part in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 123-150.
- 61 Benedict, J.B., 1970: Frost cracking in the Colorado Front Range. Geografiska Annaler, 52A:87-93.
- 62 Benedict, J.B., 1973: Chronology of cirque glaciation, Colorado Front Range. Quaternary Research, 3:584-599.
- 63 Benedict, J.B., 1974: Early occupation of the Caribou Lake site, Colorado Front Range. Plains Anthropologist, 19(63):1-4.
- 64 Benedict, J.B., 1975: The Albion Boardinghouse site: archaic occupation of a high mountain valley. Southwestern Lore, 41(3):1-12.
- 65 Benedict, J.B., 1975: Scratching deer: a late prehistoric campsite in the Green Lakes Valley, Colorado. Plains Anthropologist, 20(70):267-280.
- 66 Benedict, J.B., 1979: Getting away from it all: a study of man, mountains, and the two-drought altithermal. Southwestern Lore, 45(3):1-12.
- 67 Benedict, J.B., 1981: The Fourth of July Valley: Glacial Geology and Archeology of the Timberline Ecotone. Ward, Colorado: Center for Mountain Archeology, Research Report No. 2. 139 pp.
- 68 Benedict, J.B., 1982: Soft-sediment deformation by rock glaciers, Indian Peaks Wilderness Area, Colorado Front Range. American Quaternary Association, Seventh Biennial Conference, Program and Abstracts, 68. Abstract.
- 69 Benedict, J.B., 1984: Rates of tree-island migration, Colorado Rocky Mountains, USA. Ecology, 65(3):820-823.
- 70 Benedict, J.B., 1985: Arapaho Pass: Glacial Geology and Archeology at the Crest of the Colorado Front Range. Ward, Colorado: Center for Mountain Archeology, Research Report No. 3. 197 pp.
- 71 Benedict, J.B., Corte, A.E., and Osburn, W.S., 1965: Frost phenomena, patterned ground, and ecology on Niwot Ridge. In: Schultz, C.B. and Smith, H.T.U. (eds.), Guidebook for One-Day Field Conferences, Boulder Area, Colorado. International Association for Quaternary Research, VIIth Congress, 27-35.
- 72 Benedict, J.B. and Olson, B.L., 1978: The Mount Albion Complex: A Study of Prehistoric Man and the Altithermal. Ward, Colorado: Center for Mountain Archeology, Research Report No. 1. 213 pp.

- 73 Bennett, J.O., Johnson, P.S.C., Key, J.R., Pattie, D.C., and Taylor, A.H., 1984: Foreseeable effects of nuclear detonations on a local environment: Boulder County, Colorado. Environmental Conservation, 11(2):155-165.
- 74 Benton, R.O., 1985: Record of decision for mineral leasing criteria, Arapaho and Roosevelt National Forests and Pawnee National Grassland. USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado. 4 pp.
- 75 Berg, N.H., 1976: Prediction of natural snowdrift accumulation on alpine sites. Ph.D. dissertation, University of Colorado, Boulder. Summarized in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 254-258.
- 76 Bernstein, R.A., 1974: Comparative worker size and reproductive output of subpopulations of the alpine ant, Formica gelida Wheeler (Formicidae). Southwestern Naturalist, 29(4):423-427.
- 77 Bernstein, R.A., 1976: The adaptive value of polymorphism in an alpine ant, Formica neorufibarbis gelida Wheeler. Psyche, 83(2):180-184.
- 78 Betts, N. deW., 1913: Birds of Boulder County, Colorado. University of Colorado Studies, 10:177-232.
- 79 Billings, W.D., Godfrey, P.J., Chabot, B.F., and Bourque, D.P., 1971: Metabolic acclimation to temperature in arctic and alpine ecotypes of Oxyria digyna. Arctic and Alpine Research, 3:277-289.
- 80 Billings, W.D. and Mooney, H.A., 1968: The ecology of arctic and alpine plants. Biological Reviews, 43:481-530.
- 81 Bliss, L.C. and Wielgolaski, F.E. (eds.), 1973: Proceedings of the Conference on Primary Production and Production Processes, Tundra Biome. Dublin, Ireland, April 1973. Stockholm: IBP Tundra Biome Steering Committee. 256 pp.
- 82 Bogg, S.L., 1939: Brome grasses and fescues in Colorado. M.A. thesis, University of Colorado, Boulder. 99 pp.
- 83 Bollinger, M.J., 1982: Chemiluminescent measurements of the oxides of nitrogen in the clean troposphere and atmospheric chemistry implications. Ph.D. dissertation, University of Colorado, Boulder. 251 pp.
- 84 Bollinger, W.H., 1973: The vegetation patterns after fire at the alpine forest-tundra ecotone in the Colorado Front Range. Ph.D. dissertation, University of Colorado. 75 pp.
- 85 Bonde, E.K., 1948: Damage by spring frosts to young shoots of Picea engelmannii and Abies lasiocarpa in Colorado. M.A. thesis, University of Colorado, Boulder. 63 pp.
- 86 Bonde, E.K., 1965: Further studies on the germination of seeds of Colorado alpine plants. University of Colorado Studies, Series in Biology No. 18. 30 pp.

- 87 Bonde, E.K., 1965: Studies on the germination of seeds of Colorado alpine plants. University of Colorado Studies, Series in Biology No. 14. 16 pp.
- 88 Bonde, E.K., 1967: Pinus aristata (Pinaceae) in Boulder County, Colorado: northward extension of its known Colorado range. Southwest Naturalist, 12:474-475.
- 89 Bonde, E.K., 1968: Survival of seedlings of an alpine clover (Trifolium nanum Torr.). Ecology, 49:1193-1195.
- 90 Bonde, E.K., 1969: Plant disseminates in wind-blown debris from a glacier in Colorado. Arctic and Alpine Research, 1:135-140.
- 91 Bonde, E.K., Flock, J.W., and Shushan, S., 1982: Air pollution and the ecology of plants. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37:101-112.
- 92 Bonde, E.K., Flock, J.W., Shushan, S., and Funk, D.W., 1982: Fungal diseases in Colorado alpine plants. Journal Colorado-Wyoming Academy of Sciences, 14(1):47. Abstract.
- 93 Bonde, E.K. and Foreman, M.F., 1973: Growth and development of arctic and alpine grasses in experimental gardens at various altitudes in Colorado, U.S.A. In: Bliss, L.C. and Wielgolaski, F.E. (eds.), Proceedings of the Conference on Primary Production and Production Processes, Tundra Biome. Dublin, Ireland, April 1973. Stockholm: IBP Tundra Biome Steering Committee, 87-97.
- 94 Bonde, E.K. and Foreman, M.F., 1973: Plant growth rates, phenology, and productivity in experimental gardens, Front Range, Colorado. U.S. Tundra Biome Data Report, 73-11. 28 pp.
- 95 Bonde, E.K., Foreman, M.F., Babb, T.A., Kjelvik, S., McKendrick, J.D., Mitchell, W.W., Wooding, F.J., Tieszen, L.L., and Younkin, W., 1973: Growth and development of three agronomic species in pots ("phytometers"). In: Bliss, L.C. and Wielgolaski, F.E. (eds.), Proceedings of the Conference on Primary Production and Production Processes, Tundra Biome. Dublin, Ireland, April 1973. Stockholm: IBP Tundra Biome Steering Committee, 99-110.
- 96 Bondurant, L.D., 1933: A study of secondary vegetation on an artificially denuded area in the montane zone of Colorado. M.A. thesis, University of Colorado, Boulder. 112 pp.
- 97 Bonham, C.D., 1966: An ordination of alpine hairgrass (Deschampsia caespitosa Beauv.) meadows. Ph.D. dissertation, Colorado State University, Fort Collins. 124 pp.
- 98 Bonham, C.D. and Ward, R.T., 1970: Phytosociological relationships in alpine tufted hairgrass (Deschampsia caespitosa (L.) Beauv.) meadows. Arctic and Alpine Research, 2:267-275.
- 99 Bonnett, R.B., 1970: The glacial sequence of upper Boulder Creek drainage basin in the Colorado Front Range. Ph.D. dissertation, Ohio State University. 318 pp.

- 100 Bonnett, R.B., 1970: Wisconsin glaciation of the upper Boulder Creek drainage basin, Colorado Front Range. American Quaternary Association Abstracts of First Meeting, 13. Abstract.
- 101 Boulder County Historical Society, undated: The Switzerland Trail of America - The Denver, Boulder & Western Railroad. Boulder, Colorado: Boulder County Historical Society. 12 pp.
- 102 Bovis, M.J., 1974: Rates of soil movement in the Front Range, Boulder County, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 254 pp.
- 103 Bovis, M.J., 1978: Soil loss in the Colorado Front Range: Sampling design and areal variation. Zeitschrift für Geomorphologie, 29:10-21. Reprinted in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 187-198.
- 104 Bovis, M.J., 1982: The spatial variation of soil loss and soil loss controls. In: Thorn, C.E. (ed.), Space and Time in Geomorphology. The 'Binghamton' Symposia in Geomorphology: International Series, No. 12. London: George Allen and Unwin, 1-24.
- 105 Bovis, M.J. and Thorn, C.E., 1981: Soil loss variation within a Colorado alpine area. Earth Surface Processes and Landforms, 6:151-163.
- 106 Bradley, R.S., 1973: Climate. In: Madole, R.F. (ed.), Environmental inventory and land use recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8: 81-100.
- 107 Bradley, W.C., 1965: Glacial geology, periglacial features, and erosion surfaces in Rocky Mountain National Park. In: Schultz, C.B. and Smith, H.T.U. (eds.), Guidebook for One-Day Field Conferences, Boulder Area, Colorado. International Association for Quaternary Research, VIIth Congress, 27-33.
- 108 Braun, C.E., 1969: Population dynamics, habitat, and movements of white-tailed ptarmigan in Colorado. Ph.D. dissertation, Colorado State University, Fort Collins. 189 pp.
- 109 Braun, C.E., 1971: Habitat requirements of Colorado white-tailed ptarmigan. Proceedings Western Association State Game and Fish Commissions, 51:284-292.
- 110 Braun, C.E., Hoffman, R.W., and Rogers, G.E., 1976: Wintering areas and winter ecology of white-tailed ptarmigan in Colorado. Colorado Division of Wildlife, Special Report Number 38. 38 pp.
- 111 Braun, C.E. and May, T.A., 1972: Colorado alpine tundra avifaunal investigations, 1966-71. In: Bowen, S. (ed.), Proceedings 1972 Tundra Biome Symposium, Lake Wilderness Center, University of Washington, 3-5 April 1972, U.S. IBP Tundra Biome, 165-168.
- 112 Braun, C.E. and Rogers, G.E., 1971: The white-tailed ptarmigan in Colorado. Colorado Division of Game, Fish and Parks, Technical Publication, 27. 80 pp.

- 113 Braun, C.E. and Schmidt, R.K., Jr., 1971: Effects of snow and wind on wintering populations of white-tailed ptarmigan. In: Haugen, A.O. (ed.), Proceedings Snow and Ice Symposium. Ames, IA: Iowa State University, 238-250.
- 114 Brazel, A.J. and Brazel, S.W., 1983: Summer diurnal wind patterns at 3000 m surface level, Front Range, Colorado, U.S.A. Physical Geography, 4:53-61.
- 115 Brazel, A.J. and Hyers, A.D., 1979: Measurements of energy exchange at high altitude: Colorado Front Range. AAG Program Abstracts, Philadelphia.
- 116 Brazel, A.J. and Hyers, D., 1981: Comments on aspects of radiation transfer at high altitudes. Geography Publication No. 1, Department of Geography, Arizona State University, Research Papers in Climatology, 1-19.
- 117 Brendecke, C.M., Laiho, D., and Holden, D., 1984: A comparative evaluation of streamflow simulation models in a Colorado alpine and subalpine environment. Proceedings of the American Geophysical Union, Front Range Branch Hydrology Days, April 24-26, 1984. Abstract.
- 118 Brendecke, C.M., Laiho, D., and Holden, D., 1984: Comparison of two daily streamflow simulation models of an alpine watershed. Journal of Hydrology, 77:171-186.
- 119 Brendecke, C.M., Laiho, D.R., and Sweeten, J., 1984: Management of a municipally owned alpine watershed using continuous simulations. 1984 International Symposium on Urban Hydrology, Hydraulics and Sediment Control, University of Kentucky, Lexington, KY. July 23-26, 1984, 79-87.
- 120 Brinkman, W.A.R., 1973: A climatological study of strong downslope winds in the Boulder area. Ph.D. dissertation, University of Colorado, Boulder. 229 pp.
- 121 Brinkman, W.A.R., 1973: A climatological study of strong downslope winds in the Boulder area. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 7. 228 p.
- 122 Brinkman, W.A.R., 1974: Strong downslope winds at Boulder, Colorado. Monthly Weather Review, 102:592-602.
- 123 Brown, J., 1971: The structure and function of the tundra ecosystem. U.S. International Biological Program, Tundra Biome Report, 71-6. 26 pp.
- 124 Brown, J. (ed.), 1973: 1971 Project and data set abstracts. U.S. Tundra Biome Data Report, 73-17. 35 pp.
- 125 Brown, J. (ed.), 1973: U.S. Tundra Biome 1972 summer project reports. U.S. Tundra Biome Data Report, 73-3. 83 pp.
- 126 Brown, J. (ed.), 1973: U.S. Tundra Biome 1973 field project reports. U.S. Tundra Biome Data Report, 73-31. 57 pp.

- 127 Brown, J., Liston, N., Murphy, D., and Wats, J., 1983: U.S. Tundra Biome Publication List. [U.S.Army] CRREL Special Report 83-29. 29 pp.
- 128 Brown, R.C., 1983: Anatomy of a mesoscale instrumentation system. Fifth Symposium on Meteorological Observations and Instrumentation, Toronto, Ontario, Canada, April 11-15, 1983. Boston, Massachusetts: American Meteorological Society.
- 129 Brown, R.W., 1962: Paleocene flora of the Rocky Mountains and Great Plains. U.S. Geological Survey Professional Paper, 375. 119 pp.
- 130 Buckner, D.L., 1977: Ribbon forest development and maintenance in the Central Rocky Mountains of Colorado. Ph.D. dissertation, University of Colorado, Boulder, Colorado. 224 pp.
- 131 Burns, S.F., 1979: The northern pocket gopher (Thomomys talpoides): A major geomorphic agent. Journal Colorado-Wyoming Academy of Sciences, 11(1):86
- 132 Burns, S.F., 1980: Alpine soil distribution and development, Indian Peaks, Colorado Front Range. Ph.D. dissertation, University of Colorado, Boulder. 360 pp.
- 133 Burns, S.F., 1980: Alpine soil factors in disturbance and revegetation. Presented at the Fourth High Altitude Revegetation Workshop, Golden, Co, February 27, 1980.
- 134 Burns, S.F., 1980: A comparison of mountain life zones of the Swiss Alps with the Colorado Front Range. Journal Colorado-Wyoming Academy of Science, 12(1):31. Abstract.
- 135 Burns, S.F., 1980: Mapping alpine soils using color positive and color infrared photographs. Presented at the 6th Purdue Symposium on Machine Processing of Remotely Sensed Data (in conjunction with the International Symposium on Soil Information and Remote Sensing), Purdue University, June 2-6, 1980.
- 136 Burns, S.F., 1982: Silt translocation in alpine soils. Agronomy Abstracts, American Society of Agronomy and Soil Science Society of American, 1982 Annual Meetings, Anaheim, 227. Abstract.
- 137 Burns, S.F., 1982: Silt translocation in alpine soils - a periglacial phenomenon? Geological Society of America, Abstracts with Programs, 14:305. Abstract.
- 138 Burns, S.F., 1984: Classification and development of alpine soils, Southern Rocky Mountains, U.S.A. International Meeting on Classification and Management of Soils in Mountain Regions. Sofia, Bulgaria, 25-29 September 1984, 15-16. Abstract.
- 139 Burns, S.F. and Thorn, C., 1984: Niwot Ridge soils, weathering and periglacial features. Guidebook for Field Trip 4, Eight Biennial Meeting, American Quaternary Association, Boulder, Colorado, August 1984. 28 pp.

- 140 Burns, S.F. and Tonkin, P.J., 1981: Soil-geomorphic models and the spatial distribution and development of alpine soils. Proceedings 12th Geomorphology Symposium on the Spatial and Temporal Validity of Geomorphic Data. Boston: George Allen and Unwin.
- 141 Burns, S.F. and Tonkin, P.J., 1982: Soil-geomorphic models and the spatial distribution and development of alpine soils. In: Thorn, C.E. (ed.), Space and Time in Geomorphology, The 'Binghamton' Symposia in Geomorphology: International Series, No. 12. London: George Allen and Unwin, 25-43.
- 142 Bursa, A.S., 1970: Dinamoebidium coloradense spec. nov. and Katodinium auratum spec. nov. in Como Creek, Boulder County, Colorado. Arctic and Alpine Research, 2:145-151.
- 143 Bushnell, J.H. and Butler, N.M., 1984: Plankton data from the Green Lakes Valley Flowage System. University of Colorado Long-Term Ecological Research Data Report, 85/3. 34 pp.
- 144 Bushnell, J.H., Butler, N.M., and Pennak, R.W., 1982: Invertebrate communities and dynamics of alpine flowages. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37:124-132.
- 145 Bushnell, J.H. and Haney, B.J., 1983: Benthic invertebrate community patterns in an alpine flowage system. Journal Colorado-Wyoming Academy of Sciences, 15(1):15-16. Abstract.
- 146 Bushnell, J.H., Haney, B.J., and Wahle, B.M., 1984: Benthos data from the Green Lakes Valley Flowage System. University of Colorado Long-Term Ecological Research Data Report, 84/1. 22 pp.
- 147 Butler, N.M. and Kaiser, W.D., 1983: Zooplankton communities in an alpine watershed. Journal Colorado-Wyoming Academy of Sciences, 15(1):15. Abstract.
- 148 Caine, J.M., 1982: Sources of dissolved humic substances of a subalpine bog in the Boulder Watershed, Colorado. M.S. thesis, University of Colorado, Boulder. 85 pp.
- 149 Caine, T.N., 1974: The geomorphic processes of the alpine environment. In: Ives, J.D. and Barry, R.G. (eds.), Arctic and Alpine Environments. London: Methuen, 721-748.
- 150 Caine, N., 1978: Climatic geomorphology in mid-latitude mountains. In: Davies, J.L. and Williams, M.A.J. (eds.), Landform Evolution in Australasia, Canberra: A.N.U. Press, 113-127.
- 151 Caine, T.N., 1980: Glaciology and hydrology: overview. In: Ives, J.D. (ed.), Geoecology of the Colorado Front Range. Boulder: Westview Press, 199-201.

- 152 Caine, T.N., 1982: Water and sediment flows in the Green Lakes Valley, Colorado Front Range. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37, 13-22.
- 153 Caine, N., 1984: Elevational contrasts in contemporary geomorphic activity in the Colorado Front Range. Studia Geomorphologica Carpatho-Balcanica, 18:5-31.
- 154 Caine, N., Furbish, D.J., and Harbor, J.M., 1985: Interactions between geomorphic processes and vegetation in the alpine tundra of the Colorado Rocky Mountains. Bulletin of Ecological Society America, 66(2):150. Abstract.
- 155 Caine, N., Furbish, D.J., and Moses, T.A., 1983: Stream-flow data from the Green Lakes Valley, 1981-1982. University of Colorado Long-Term Ecological Research Data Report, 83/2. 56 pp.
- 156 Caine, N. and Swanson, F. (eds.), 1983: Report of Long-Term Ecological Research Workshop on disturbance regimes of ecosystems. University of Colorado Long-term Ecological Research Working Paper, 83/6. 48 pp.
- 157 Caine, N., Thurman, E.M., Furbish, D.J., and Moses, T.A., 1983: Water quality data from the Green Lakes Valley, 1981-1982. University of Colorado Long-Term Ecological Research Data Report, 83/7. 47 pp.
- 158 Caldwell, M.M., 1968: Solar ultraviolet radiation as an ecological factor for alpine plants. Ecological Monographs, 38:243-268.
- 159 Caldwell, M.M., Johnson, D.A., Fareed, M., Tieszen, L.L., Moore, R.T., and Ehleringer, J., 1973: Gas exchange of alpine tundra species. U.S. Tundra Biome Data Report, 73-16. 41 pp.
- 160 Caldwell, M., Tieszen, L.L., and Fareed, M., 1972: Comparative Barrow and Niwot Ridge canopy structure. In: Bowen, S. (ed.), Proceedings 1972 Tundra Biome Symposium, Lake Wilderness Center, University of Washington, 3-5 April 1972, U.S. IBP Tundra Biome, 22-28.
- 161 Caldwell, M.M., Tieszen, L.L., and Fareed, M., 1974: The canopy structure of tundra plant communities at Barrow, Alaska and Niwot Ridge, Colorado. Arctic and Alpine Research, 6:151-159. Reprinted in: Ives, J.D. (ed.), 1980, Geocology of the Colorado Front Range. Boulder: Westview Press, 403-411.
- 162 Campbell, J.B., 1970: Food and feeding habits of the boreal toad, Bufo boreas boreas, in the Colorado Front Range. Journal of Herpetology, 4:83-85.
- 163 Campbell, J.B., 1970: Hibernacula of a population of Bufo boreas boreas in the Colorado Front Range. Herpetologica, 26:278-282.
- 164 Campbell, J.B., 1970: Life history of Bufo boreas in the Colorado Front Range. Ph.D. dissertation, University of Colorado, Boulder. 110 pp.

- 165 Campbell, J.B., 1970: New elevational records for the boreal toad (*Bufo boreas boreas*). Arctic and Alpine Research, 2:157-159. Reprinted in: Ives, J.D. (ed.), 1980, Geoeocology of the Colorado Front Range. Boulder: Westview Press, 468-470.
- 166 Carey, C., Hoyt, D.F., Bucher, T.L., and Larson, D.L., 1984: Eggshell conductances of avian eggs at different altitudes. In: Seymour, R.S., (ed.) Respiration and Metabolism of Embryonic Vertebrates. Dordrecht, Nederlands: D.W. Junk Publishers, 259-270.
- 167 Carroll, T., 1974: Relative age dating techniques and a late Quaternary chronology, Arikaree Cirque, Colorado. Geology, 2:321-325. Reprinted in: Ives, J.D. (ed.), 1980: Geoeocology of the Colorado Front Range. Boulder: Westview Press, 51-55.
- 168 Carroll, T.R., 1974: The water budget of an alpine catchment in Central Colorado. M.A. thesis, University of Colorado, Boulder. 124 pp.
- 169 Carroll, T., 1976: Hydrology of an alpine basin in the Colorado Front Range. Proceedings 44th Annual Western Snow Conference, Calgary, Alberta, April 20-22. 12 pp.
- 170 Carroll, T.R., 1977: Statistical analysis of the liquid water distribution in a high altitude snowpack. Ph.D. dissertation, University of Colorado, Boulder. 70 pp.
- 171 Carroll, T., 1980: An estimate of watershed efficiency for a Colorado alpine basin. In: Ives, J.D. (ed.), 1980: Geoeocology of the Colorado Front Range. Boulder: Westview Press, 229-240.
- 172 Cary, M., 1911: A biological survey of Colorado. U.S.D.A., North America Fauna No. 33. 256 pp.
- 173 Chapin, F.H., 1889. Mountaineering in Colorado: The Peaks above Estes Park. Boston: Appalachian Mountain Club. 168 pp.
- 174 Chapin, F.S., III, 1981: Field measurements of growth and phosphate absorption in Carex aquatilis along a latitudinal gradient. Arctic and Alpine Research, 13:83-94.
- 175 Chapin, F.S., III and Chapin, M.C., 1981: Ecotypic differentiation of growth processes in Carex aquatilis along latitudinal and local gradients. Ecology, 62:1000-1009.
- 176 Chapman, J.E. Williams, 1969: Ecology of Polycelis coronata in some Colorado habitats. Ph.D. dissertation, University of Colorado, Boulder. 157 pp.
- 177 Charles, T.J., 1983: Development of a reservoir operations package for inclusion into the precipitation-runoff-modeling-system based upon specific site conditions within the Boulder Watershed. M.S. thesis, University of Colorado, Boulder. 180 pp.
- 178 Cherem, G.J. and Driver, B.L., 1983: Visitor employed photography: A technique to measure common perceptions of natural environments. Journal of Leisure Research, 25:65-83.

- 179 Chung, In-Cho, 1984: The Arctic and the Rockies as Seen by a Botanist Pictorial. Seoul, Korea: Samhwa Printing Co., Ltd. 343 pp.
- 180 Clark, J.M. and Marr, J.W., 1966: Insolation and other environment factors during 1965 in three ecological regions in the Front Range. Colorado. Final Report on Contract DA49-092-AR046.
- 181 Clark, J.M. and Peterson, E.B., 1967: Insolation in relation to cloud characteristics in the Colorado Front Range. In: Wright, H.E., Jr., and Osburn, W.H. (eds.), Arctic and Alpine Environments. Bloomington: Indiana University Press, 3-11.
- 182 Clark, J.M. and Wells, C., 1973: An interface system for meteorological data using the ERTS data collection platform. Arctic and Alpine Research, 5:151-154.
- 183 Clarke, M.J., 1980: Glacial geology: overview. In: Ives, J.D. (ed.), Geoecology of the Colorado Front Range. Boulder: Westview Press, 9-23.
- 184 Clements, F.E. and Clements, E.S., 1914: Rocky Mountain Flowers. New York: H.W. Wilson. 392 pp.
- 185 Cockerell, T.D.A., 1906: The alpine flora of Colorado. American Naturalist, 40:861-873.
- 186 Cockerell, T.D.A., 1907: A new Mertensia from Colorado. Muhlenbergia, 3:68.
- 187 Cockerell, T.D.A., 1907: Note on a tradescantia. Muhlenbergia, 3:54.
- 188 Cockerell, T.D.A., 1912: The fauna of Boulder County, Colorado. II. University of Colorado Studies, 9:41-52.
- 189 Cockerell, T.D.A., 1915: Some plants from the vicinity of the Arapahoe Glacier. Torreya, 15(9):202-205.
- 190 Cockerell, T.D.A., 1927: Zoology of Colorado. Boulder: University of Colorado Press. 262 pp.
- 191 Cofer, C., 1972: Differences in ablation of three adjacent alpine glaciers, Indian Peaks region, Front Range, Colorado. Arctic and Alpine Research, 4(4):349-353. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 224-228.
- 192 Conry, J.A., 1978: Resource utilization, breeding biology, and nestling development in an alpine tundra passerine community. Ph.D. dissertation, University of Colorado, Boulder. 195 pp.
- 193 Cooper, W.S., 1908: Alpine vegetation in the vicinity of Longs Peak, Colorado. Botanical Gazette, 45:319-337.
- 194 Coulter, J.M., 1885: Manual of Rocky Mountain Botany. New York: Ivison, Blakeman, Taylor, and Co. 452 pp.
- 195 Coulter, J.M., 1909: New Manual of the Botany of the Central Rocky Mountains. Revised by Aven Nelson. Laramie: American Book Company. 646 pp.

- 196 Cox, C.F., 1933: Alpine plant succession of James Peak, Colorado. Ecological Monographs, 3:300-372.
- 197 Cree, A., 1948: Tertiary intrusives in the Hessie-Tolland area, Boulder and Gilpin Counties, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 119 pp.
- 198 Cruzan, J., 1968: Ecological distributions and interactions of four species of Microtus in Colorado. Ph.D. dissertation, University of Colorado, Boulder. 116 pp.
- 199 Currie, C., 1961: The effect of diiodotyrsine on neoteny in members of a local population of Ambystoma tigrinum. M.S. thesis, University of Colorado, Boulder. 61 pp.
- 200 Dailey, T.V., 1981: Composition and quality of mountain goat diets in alpine tundra, Colorado. M.S. thesis, Colorado State University, Fort Collins. 116 pp.
- 201 Daly, C., 1984: Influence of snow persistence on the regeneration of Engelmann spruce and subalpine fir, Colorado Front Range. M.A. thesis. University of Colorado, Boulder. 157 pp.
- 202 Daly, C., 1984: Snow distribution patterns in the alpine krummholz zone. Progress in Physical Geography, 8:157-175.
- 203 Daly, C. and Shankman, D., 1985: Seedling establishment by conifers above tree limit on Niwot Ridge, Front Range, Colorado, U.S.A. Arctic and Alpine Research, 17:389-400.
- 204 Daniels, F.P., 1911: The flora of Boulder, Colorado, and vicinity. University of Missouri Studies, Science Series, Vol. II. 311 pp.
- 205 Dansereau, P., 1963: The barefoot scientist. Colorado Quarterly, 12(2):101-115.
- 206 Daubenmire, R.F., 1932: The relation of structure to altitudinal distribution in some Colorado conifers. M.S. thesis, University of Colorado, Boulder. 15 pp.
- 207 Daubenmire, R.F., 1943: Vegetational zonation in the Rocky Mountains, Botanical Review, 9:325-387.
- 208 Daubenmire, R., 1954: Alpine timberlines in the Americas and their interpretation. Butler University Botanical Studies, 11:119-136.
- 209 Davis, L.I., Hamilton, E.J., Niki, H., Wang, C.C., Weinstock, B., Bollinger, M.J., Fehsenfeld, F.C., and Liu, S.C., 1982: Fluorescence measurements of OH at Niwot Ridge. Proceedings of Second Symposium on the Composition of the Nonurban Troposphere. Williamsburg, Virginia, May 25-28, 1982. Boston: American Meteorological Society.
- 210 Davis, P.T., Upson, S., and Waterman, S.E., 1979: Lacustrine sediment variation as an indicator of late Holocene climatic fluctuation, Arapahoe Cirque, Colorado Front Range. Geological Society of America, Abstracts with Programs, 11:410. Abstract.

- 211 Davis, P.T. and Waterman, S.E., 1979: New radiocarbon ages for type Triple Lakes moraines, Arapaho Cirque, Colorado Front Range. Geological Society of America, Abstracts with Programs, 11(6):270. Abstract.
- 212 Davis, T., Burns, S., and Caine, N., 1984: Holocene deposits in Arapaho Cirque, Front Range. Guidebook for Field Trip 4, Eighth Biennial Meeting, American Quaternary Association. Boulder, Colorado, August 1984. 16 pp.
- 213 Davis, W.M., 1911: The Colorado Front Range. Annals Association of American Geographers, 1:21-83.
- 214 Dene, H., Goodman, M., McKenna, M.C., and Romero-Herrera, A.E., 1982: Ochotona princeps (pika) myoglobin: An appraisal of lagomorph phylogeny. Proceedings Natural Academy of Science, U.S.A., 79:1917-1920.
- 215 Denton, G.H., 1975: Glaciers of the American Rocky Mountains. In: Field, W.O. (ed.), Mountain Glaciers of the Northern Hemisphere. Hanover, NH: Cold Regions Research and Engineering Laboratory, Volume 1:509-542.
- 216 Diaz, H.F., Barry, R.G., and Kiladis, G., 1982: Climatic characteristics of Pike's Peak, Colorado (1874-1888) and comparisons with other Colorado stations. Mountain Research and Development, 2:359-371.
- 217 Dieffenbach, W.J., 1966: Taxonomy of the cutthroat trout (Salmo clarki Richardson) of the South Platte drainage, Colorado. Copeia, 1966: 415-424.
- 218 Dixon, H.N., 1969: The growth of lodgepole pine in the Colorado Front Range as related to environment. Ph.D. dissertation, University of Colorado, Boulder. 108 pp.
- 219 Dixon, J.C., 1983: Chemical weathering of Late Quaternary cirque deposits in the Colorado Front Range. Ph.D. dissertation, University of Colorado, Boulder. 174 pp.
- 220 Dodds, G.S., 1909: A list of entomostraca of Colorado. University of Colorado Studies, 5:243-250.
- 221 Dodds, G.S., 1919: Altitudinal distribution of entomostraca in Colorado. Proceedings U.S. National Museum, 54:59-88.
- 222 Douglass, M.M., 1954: Ecology of forest succession on a ridge in the subalpine forest of northern Colorado. M.A. thesis, University of Colorado, Boulder. 134 pp.
- 223 Douglass, M.M., 1954: Subalpine fir succession on a ridge in Boulder County, Colorado. Journal Colorado-Wyoming Academy of Science, 4(6):45-46. Abstract.
- 224 Dow, V.S., 1979: Cartographic analysis and development of legend and prototype map of multiple geomorphic hazards. M.A. thesis, University of Colorado, Boulder. 84 pp.

- 225 Dow, V., Kienholz, H., Plam, M., and Ives. J.D., 1981: Mountain hazards mapping: The development of a prototype combined hazards map, Monarch Lake quadrangle, Colorado, U.S.A. Mountain Research and Development, 1:55-64.
- 226 Dyson, J.L., 1937: Snowslide striations. Journal of Geology, 45:549-557.
- 227 Dyson, J.L., 1938: Snowslide erosion. Science, 87:365-366.
- 228 Dyson, J.L., 1952: Glaciers of the American Rocky Mountains. Triennial Report, Subcommittee on Glaciers, Section of Hydrology, AGU, American Geographic Society, New York, 37 pp.
- 229 Ebert, D.C., 1972: Primary productivity as a function of vegetation composition in an alpine tundra environment. Journal Colorado-Wyoming Academy of Science, 7(2):27-28. Abstract.
- 230 Eddleman, L., 1962: Sampling in alpine vegetation. Journal Colorado-Wyoming Academy Science, 5(3):32-33. Abstract.
- 231 Eddleman, L., 1967: A study of phyto-edaphic relationships in alpine tundra of northern Colorado. Ph.D. dissertation, Colorado State University, Fort Collins. 148 pp.
- 232 Edmondson, C.H., 1912: Protozoa of high mountain lakes in Colorado. University of Colorado Studies, 9:65-74.
- 233 Edwards, S., 1972: Soil invertebrates in North American arctic and alpine tundra. In: Bowen, S. (ed.), Proceedings 1972 Tundra Biome Symposium, Lake Wilderness Center, University of Washington, 3-5 April, 1972, U.S. IBP Tundra Biome, 139-143
- 234 Egan, R.S., 1969: The alpine lichen flora of Mt. Audubon, Boulder County, Colorado. Journal Colorado-Wyoming Academy of Science, 6(2):15. Abstract.
- 235 Egan, R.S., 1969: The alpine lichen flora of Mt. Audubon, Boulder County, Colorado. M.A. thesis, University of Colorado, Boulder. 79 pp.
- 236 Egan, R.S., 1970: Alpine lichens from Mt. Audubon, Boulder County, Colorado. The Bryologist, 73:385-389.
- 237 Egan, R.S., 1971: A floristic study of alpine lichens from Colorado and New Mexico. Ph.D. dissertation, University of Colorado, Boulder. 243 pp.
- 238 Egeberg, R., Jr., 1963: Inherent variations in the response of aspen to frost damage. Ecology, 44:153-156.
- 239 Ehleringer, J.R., 1973: Water relations in alpine tundra, Niwot Ridge, Colorado. M.S. thesis, California State University, San Diego. 111 pp.
- 240 Ehleringer, J.R. and Miller, P.C., 1975: A simulation model of plant water relations and production in the alpine tundra, Colorado. Oecologia, 19:177-193.

- 241 Ehleringer, J.R. and Miller, P.C., 1975: Water relations of selected plant species in the alpine tundra, Colorado. Ecology, 56:370-380.
- 242 Elder, M.E., 1912: Roadside plants of a high mountain park in Colorado. Torreya, 12:175-180.
- 243 Elder, M.E., 1913: The vascular plants of a small mountain district in Colorado. M.A. thesis, University of Colorado, Boulder. 53 pp.
- 244 Elgmork, K. and Saether, O.R., 1970: Distribution of invertebrates in a high mountain brook in the Colorado Rocky Mountains. University of Colorado Series in Biology, 31:3-58.
- 245 Elias, S.A., 1983: Paleoenvironmental interpretations of Holocene insect fossil assemblages from the La Poudre Pass site, northern Colorado Front Range. Palaeogeography, Palaeoclimatology, Palaeoecology, 41:87-102.
- 246 Elias, S.A., 1984: Holocene paleoecology of Lake Isabelle, Colorado Front Range, based on insect fossils. Bulletin of Ecological Society of America, 65(2):168. Abstract.
- 247 Elias, S.A., 1984: Holocene tree limit positions and paleoenvironments of the Colorado Front Range, based on insect fossil assemblages from five high altitude sites. American Quaternary Association Eighth Biennial Meeting, Program and Abstracts, University of Colorado, Boulder, 36. Abstract.
- 248 Elias, S.A., 1985: Paleoenvironmental interpretation of Holocene insect fossil assemblages from four high altitude sites in the Front Range, Colorado. U.S.A. Arctic and Alpine Research, 17:31-48.
- 249 Ellsworth, P.M., 1978: Ecology of zooplankton in high-altitude glacial moraine ponds. Ph.D. dissertation, University of Colorado, Boulder. 221 pp.
- 250 Emerick, J.C., 1976: Effects of artificially increased winter snow cover on plant canopy architecture and primary production in selected areas of Colorado alpine tundra. Ph.D. dissertation, University of Colorado, Boulder. 192 pp.
- 251 Emerick, J.C. and Webber, P.J., 1982: The effects of augmented winter snow cover on the canopy structure of alpine vegetation. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37:63-72.
- 252 Ewan, J.A., 1950: Rocky Mountain Naturalists. Denver, CO: University of Denver Press. 358 pp.
- 253 Fahey, B.D., 1971: A quantitative analysis of freeze-thaw cycles, frost-heave cycles and frost penetration in the Front Range of the Rocky Mountains, Boulder County, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 305 pp.

- 254 Fahey, B.D., 1973: An analysis of diurnal freeze-thaw and frost heave cycles in the Indian Peaks region of the Colorado Front Range. Arctic and Alpine Research, 5:269-281. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 151-163.
- 255 Fahey, B.D., 1974: Seasonal frost heave and frost penetration measurements in the Indian Peaks region of the Colorado Front Range. Arctic and Alpine Research, 6:63-70.
- 256 Fahey, B.D., 1975: Nonsorted circle development in a Colorado alpine location. Geografiska Annaler, 57A:153-164.
- 257 Falk, L.H., 1910: The grass flora of northeastern Colorado. M.A. thesis, University of Colorado, Boulder. 82 pp.
- 258 Fareed, M., 1973: Canopy structure and phenology of alpine tundra vegetation. M.S. thesis, Utah State University, Logan. 43 pp.
- 259 Fareed, M., and Caldwell, M.M., 1975: Phenological patterns of two alpine tundra plant populations, Niwot Ridge, Colorado. Northwest Science, 49:17-23.
- 260 Fehlmann, H.A., 1950: Alpine Orthoptera of the eastern Rockies of Colorado. M.A. thesis, University of Colorado, Boulder. 21 pp.
- 261 Fehsenfeld, F.C., Goldan, P.D., Phillips, M.P., and Sievers, R.E., 1981: Selective electron capture sensitization. Chapter 4. In: Zlatkis, A. and Poole, C.F. (eds.), Electron Capture Theory and Practice in Chromatography. New York: Elsevier, 69-90.
- 262 Fenneman, N.N., 1902: The Arapahoe Glacier in 1902. Journal of Geology, 10:839-851.
- 263 Fenneman, N.N., 1936: Cyclic and non-cyclic aspects of erosion. Bulletin Geological Society of America, 47:173-185.
- 264 Fitch, J.T., 1956: Observations of movements of birds at higher altitudes following the breeding season. M.A. thesis, University of Colorado, Boulder. 48 pp.
- 265 Fjellberg, A., 1984: Collembola from the Colorado Front Range, U.S.A. Arctic and Alpine Research, 16:193-208.
- 266 Flock, J.W., 1976: The influence of snow cover and soil moisture on bryophyte and lichen distribution, Niwot Ridge, Boulder County, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 168 pp.
- 267 Flock, J.W., 1978: Lichen-bryophyte distribution along a snow-cover soil-moisture gradient, Niwot Ridge, Colorado. Arctic and Alpine Research, 10:31-47. Abstract reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 395. Abstract.
- 268 Flock, J.W., 1983: Changes in alpine plant communities. Journal Colorado-Wyoming Academy of Sciences, 15(1):37. Abstract.

- 269 Flock, J.W., 1983: Changes in plant communities between 1972 and 1982 on Niwot Ridge. University of Colorado Long-Term Ecological Research Data Report, 83/6 38 pp.
- 270 Flock, J.W., 1985: Changes in plant communities between 1973 and 1983 on Niwot Ridge. University of Colorado Long-Term Ecological Research Data Report, 85/5. 67 pp.
- 271 Foreman, M.F., 1960: Studies on germination and growth in five alpine species of flowering plants from Central Colorado. M.S. thesis, University of Colorado, Boulder. 88 pp.
- 272 Foreman, M.F., 1971: Growth, flowering, and vivipary in arctic and alpine populations of Deschampsia caespitosa (L.) Beauv., Poa alpina L., and Trisetum spicatum (L.) Richt. Ph.D. dissertation, University of Colorado. 336 pp.
- 273 Forsyth, J.K., 1980: Principal components analysis of subalpine vegetation on the east slope of the Colorado Rocky Mountains. Ph.D. dissertation, University of Colorado, Boulder. 101 pp.
- 274 Foss, F. and Hinkelmann, J.W., Jr., 1984: Denver ARTCC evaluation of PROFS mesoscale weather products. A Joint Report of the Program for Regional Observing and Forecasting Services (325 Broadway, Boulder, Colorado 80303) and the Denver Air Route Traffic Control Center (Longmont, Colorado 80501). 23 pp. plus appendices.
- 275 Foster, S.Q., 1984: Elevational trends in macroinvertebrate species diversity, biotic condition, and functional group condition in three Colorado Front Range streams. M.A. thesis, University of Colorado, Boulder. 110 pp.
- 276 Foster, S.Q., 1984: The intermediate-disturbance hypothesis and elevational trends in macroinvertebrate species diversity. Journal Colorado-Wyoming Academy of Sciences, 16(1):6. Abstract.
- 277 Foster, S.Q. and Windell, J.T., 1982: Ecological characteristics of an alpine-subalpine second order stream. Journal Colorado-Wyoming Academy of Sciences, 14(1):14. Abstract.
- 278 Foster, S.Q. and Windell, J.T., 1984: The intermediate-disturbance hypothesis and elevational trends in macroinvertebrate species diversity. Bulletin of Ecological Society of America, 65(2):131. Abstract.
- 279 Freeman, D.M., 1976: A Social Well-Being Analysis of the Impacts of Four Managerial Alternatives for the Boulder-Grand Divide Planning Unit. USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado. Variously paged.
- 280 French, N.R., 1951: The effect of altitude on the migration of birds in the vicinity of Boulder, Colorado. M.A. thesis, University of Colorado, Boulder. 58 pp.
- 281 Fritz, P.S., 1933: The mining districts of Boulder County, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 639 pp.

- 282 Fuller, G.D., 1917: A comparison of certain Rocky Mountain grassland with the prairie of Illinois. Transactions of the Illinois Academy of Science, 8:1-10
- 283 Funk, D.W., 1983: Effects of simulated acid precipitation on growth and reproduction of two alpine plant species, Acomastylis rossii (R.Br.) E. Greene and Bistorta vivipara L., in the field. M.A. thesis. University of Colorado, Boulder. 80 pp.
- 284 Funk, D.W. and Bonde, E.K., 1983: Effects of simulated precipitation on growth and reproduction of two alpine plant species, Acomastylis rossii and Bistorta vivipara. Journal Colorado-Wyoming Academy of Sciences, 15(1):37. Abstract.
- 285 Funk, D.W. and Bonde, E.K., 1984: Effects of artificial acid mist on two species of alpine plants. New Mexico Journal of Science, 24(1):46. Abstract.
- 286 Furbish, D.J., Brendecke, C.M., Caine, N., and Moses, T.A., 1983: Ablation, evaporation, and evapotranspiration in the Green Lakes Valley, 1981-1982. University of Colorado Long-Term Ecological Research Data Report, 83/3. 16 pp.
- 287 Gable, D.J., 1969: Geologic map of the Nederland quadrangle, Boulder and Gilpin Counties, Colorado. U.S. Geological Survey, Geologic Quadrangle Map GQ-833.
- 288 Gable, D.J., 1978: Vegetation map of the Ward Quadrangle, Boulder County, Colorado. U.S. Geological Survey, Miscellaneous Field Studies Map MF-940.
- 289 Gable, D.J., and Madole, R.F., 1976: Geologic map of the Ward quadrangle, Boulder County, Colorado. U.S. Geological Survey, Geologic Quadrangle Map GQ-1277.
- 290 Gates, D.M., 1980: Biophysical Ecology. New York: Springer-Verlag. 611 pp.
- 291 Gates, D.M. and Janke, R., 1966: The energy environment of the alpine tundra. Oecologia Plantarum, 1:39-62.
- 292 Giesen, K.M. and Braun, C.E., 1979: Nesting behavior of female white-tailed ptarmigan in Colorado. Condor, 81:215-217.
- 293 Giesen, K.M. and Braun, C.E., 1979: Renesting of white-tailed ptarmigan in Colorado. Condor, 81:217-218.
- 294 Giesen, K.M. and Braun, C.E., 1979: A technique for age determination of juvenile white-tailed ptarmigan. Journal of Wildlife Management, 43:508-511.
- 295 Giesen, K.M., Braun, C.E., and May, T.A., 1980: Reproduction and nest-site selection by white-tailed ptarmigan in Colorado. Wilson Bulletin, 92(2):188-199.
- 296 Gilbert, J.R., 1968: Late Pleistocene history of Caribou Creek Valley, Boulder County, Colorado. M.S. thesis, University of Colorado, Boulder. 53 pp.

- 297 Gillette, D.A., 1983: Decomposition of annual patterns of atmospheric carbon dioxide concentrations: a preliminary interpretation of one year of data at 13 globally distributed locations. Atmospheric Environment, 16:2537-2542.
- 298 Gillette, D.A. and Hansen, K.J., 1983: Sampling strategy to obtain data used in models of global annual CO<sub>2</sub> increase and global carbon cycle. Journal of Geophysical Research, 88(C2):1345-1348.
- 299 Gillette, D.A. and Steele, A.T., 1983: Selection of CO<sub>2</sub> concentration data from whole-air sampling at three locations between 1968 and 1974. Journal of Geophysical Research, 88(C2):1349-1359.
- 300 Glidden, D.E., 1981: Summer Wind Studies Near the Alpine Visitor's Center, Rocky Mountain National Park. Estes Park, Colorado: Rocky Mountain Nature Association. 53 pp.
- 301 Glidden, D.E., 1982: Winter Wind Studies in Rocky Mountain National Park. Estes Park, Colorado: Rocky Mountain Nature Association. 28 pp.
- 302 Goldan, P.D., Kuster, W.C., Albritton, D.L., Fehsenfeld, F.C., Connell, P.S., Norton, R.B., and Huebert, B.J., 1983: Calibration and tests of the filter-collection method for measuring clean-air, ambient levels of nitric acid. Atmospheric Environment, 17:1355-1364.
- 303 Golian, S.C. and Southwick, C.H., 1985: Population dynamics of pikas: Effects of snowpack and vegetation. In: Fuller, W.A., Nietfield, M.T., and Harris, M.A. (eds.), Abstracts of Papers and Posters, Fourth International Theriological Congress, Edmonton, 13-20 August, 1985. Abstract No. 240, Session W08. Abstract.
- 304 Golian, S.C., Southwick, C.H., and Halfpenny, J.C., 1984: Effects of snowpack and vegetation on the population dynamics of pikas (Ochotona princeps). Bulletin of Ecological Society of America, 65(2):95. Abstract.
- 305 Golian, S.C., Southwick, C.H., Halfpenny, J.C., 1984: Population dynamics of pikas: effects of snowpack and vegetation. Journal Colorado-Wyoming Academy of Sciences, 16(1):10. Abstract.
- 306 Golian, S.C. and Whitworth, M.R., 1985. Growth of pikas (Ochotona princeps) in Colorado. Journal of Mammalogy, 66:367-371.
- 307 Goodhue, M.H., 1973: A taximetric analysis of the genus Erysimum (Brassicaceae) in Colorado. Ph.D. dissertation, University of Colorado. 99 pp.
- 308 Graf, W.L., 1976: Cirques as glacier locations. Arctic and Alpine Research, 8:79-90.
- 309 Graham, J.R., 1934: Tertiary igneous intrusions of Green Lakes and Isabelle Lake Valleys, Boulder County, Colorado. M.S. thesis, University of Colorado, Boulder. 54 pp.
- 310 Grant, M.C. and Lewis, W.M., Jr., 1982: Chemical loading rates from precipitation in the Colorado Rockies. Tellus, 34:74-88.

- 311 Grant, M.C. and Mitton, J.B., 1977: Genetic differentiation among growth forms of Engelmann spruce and subalpine fir at treeline. Arctic and Alpine Research, 9:259-263. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 359-363.
- 312 Grant, M.C. and Mitton, J.B., 1979: Elevational gradients in adult sex ratios and sexual differentiation in vegetative growth rates of Populus tremuloides Michx. Evolution, 33:914-918.
- 313 Grant, M.C., Mitton, J.B., and Linhart, Y.B., 1982: Ecological and evolutionary studies of forest trees in Colorado. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37, 96-100.
- 314 Gray, A. and Coulter, J.M., 1885: Textbook of Western Botany. New York: Ivison, Blakeman, Taylor and Co. 678 pp.
- 315 Greene, J.G., 1971: Clonal variation in Populus tremuloides Michx. on the east slope of the Front Range, Boulder County, Colorado. Ph.D. dissertation, University of Colorado. 298 pp.
- 316 Greenland, D.E., 1977: Living on the 700 mb surface: The Mountain Research Station of the Institute of Arctic and Alpine Research. Weatherwise, 30(6):232-238.
- 317 Greenland, D.E., 1978: Spatial distribution of radiation in the Colorado Front Range. Climatological Bulletin, 24:1-14. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 302-315.
- 318 Greenland, D.E., 1982: Air quality and surface energy budget. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37, 23-25.
- 319 Greenland, D.E., 1983: Energy balance instrumentation. University of Colorado Long-Term Ecological Research Working Paper, 83/1. 18 pp.
- 320 Greenland, D., 1983: Summer microclimatic observations over alpine tundra. Journal of the Colorado-Wyoming Academy of Sciences. 15(1):37. Abstract.
- 321 Greenland, D.E., 1983: Summer microclimate observations over alpine tundra. University of Colorado Long-Term Research Working Paper, 83/5. 18 pp.
- 322 Greenland, D.E., 1983: The theoretical basis for energy budget measurements on Niwot Ridge. University of Colorado Long-Term Ecological Research Working Paper, 83/2. 23 pp.
- 323 Greenland, D., 1984: Bioclimates. In: Taylor, J.A. (ed.), Themes in Biogeography. London: Croom Helm, 234-253.

- 324 Greenland, D.E., 1984: Energy budgets over a moisture gradient in alpine tundra. Paper presented to annual meeting of the Association of American Geographers. Washington, D.C., April 22-25, 1984.
- 325 Greenland, D.E., 1984: The use of the water budget to specify ecological conditions in the alpine tundra of Colorado. Paper presented at the 25th International Geographical Congress. Paris, France. August 25-31, 1984.
- 326 Greenland, D., Burbank, J., Key, J., Klinger, L., Moorhouse, J., Oaks, S., and Shankman, D., 1985: The bioclimates of the Colorado Front Range. Mountain Research and Development, 5:251-262.
- 327 Greenland, D., Caine, N., and Pollak, O., 1984: The summer water budget and its importance in the alpine tundra of Colorado. Physical Geography, 5:221-239.
- 328 Greenland, D.E. and Daly C., 1983: Microclimate data from the Saddle Area, Niwot Ridge, Summer - 1982. University of Colorado Long-Term Ecological Research Data Report, 83/8. 36 pp.
- 329 Greenland, D. and Daly, C., 1985: Microclimate data from the Saddle, Niwot Ridge, Summer - 1984. University of Colorado Long-Term Ecological Research Data Report, 85/4. 82 pp.
- 330 Greenstein, L.A., 1983: Alpine permafrost on Niwot Ridge based on indirect locational techniques. M.A. thesis, University of Colorado, Boulder. 103 pp.
- 331 Greenstein, L.A., 1983: An investigation of midlatitude alpine permafrost on Niwot Ridge, Colorado Rocky Mountains, USA. Permafrost Fourth International Conference Proceedings, Fairbanks, July 17-22, 1983. Washington, DC: National Academy Press, 380-383.
- 332 Gregg, R.E., 1947: Altitudinal indicators among the formicidae. University of Colorado Studies Series D, 2(3):385-403.
- 333 Gregg, R.E., 1963: The Ants of Colorado. Boulder: University of Colorado Press. 792 pp.
- 334 Gregg, R.E., 1964: Distribution of the ant genus Formica in the mountains of Colorado. In: Rodeck, H.G. (ed.), Natural History of the Boulder Area. University of Colorado Museum, Leaflet No. 13, 59-69.
- 335 Greller, A.M., 1974: Vegetation of roadcut slopes in the tundra of Rocky Mountain National Park, Colorado. Biological Conservation, 6(2):84-93.
- 336 Greller, A.M., Goldstein, M., and Marcus, L., 1974: Snowmobile impact on three alpine tundra plant communities. Environmental Conservation, 1(2):101-110.
- 337 Griggs, R.F., 1955: Competition and succession on the fellfield of Rocky Mountain National Park. Bulletin of Ecological Society of America, 36(3):76. Abstract.
- 338 Griggs, R.F., 1956: Competition and succession on a Rocky Mountain fellfield. Ecology, 37:8-20.

- 339 Groeneveld, D.P., 1973: Wildlife. In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper 8:137-142.
- 340 Groeneveld, D.P. and Krebs, P.V., 1974: Forest cover-type mapping using color infrared aerial photography. Journal Colorado-Wyoming Academy of Science, 7(5):46. Abstract.
- 341 Grulke, N.E., 1978: Vegetational regeneration fifty years after fire in the Front Range, Colorado. B.S. thesis, Department of Botany, Trinity College of Duke University. 65 pp.
- 342 Gurnell, J., 1984: Home range, territoriality, caching behaviour and food supply of the red squirrel (Tamiasciurus hudsonicus fremonti) in a subalpine lodgepole pine forest. Animal Behavior, 32:1119-1131.
- 343 Gustafson, D., 1965: The geology of the Lake Isabelle area, Boulder County, Colorado. M.S. thesis, University of Colorado, Boulder. 100 pp.
- 344 Haase, R., 1983: Verbreitungsmuster und Standorte der Aplinen Vegetation in der Indian Peaks Area, Colorado Front Range, U.S.A. Ph.D. dissertation, University of Münster, West Germany.
- 345 Hadley, N.F., 1966: Microenvironmental factors influencing the nesting sites of some Colorado subalpine Fringillidae. Ph.D. dissertation, University of Colorado, Boulder. 86 pp.
- 346 Hadley, N.F., 1969: Microenvironmental factors influencing the nesting sites of some subalpine fringillid birds in Colorado. Arctic and Alpine Research, 1:121-126.
- 347 Haefner, B.D., 1974: Glacial valley morphometry in the Front Range of Colorado. M.A. thesis, University of Colorado, Boulder. 103 pp.
- 348 Halford, M.K., 1983: Analysis of the structure of herbaceous communities along an elevational gradient in the Colorado Front Range. M.A. thesis, University of Colorado, Boulder. 145 pp.
- 349 Halfpenny, J.C., 1980: Reproductive strategies: Intra- and inter-specific comparison within the genus Peromyscus. Ph.D. dissertation, University of Colorado, Boulder. 160 pp.
- 350 Halfpenny, J.C. (ed.), 1982: Ecological Studies in the Colorado Alpine: A Festschrift to John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper 37. 147 pp.
- 351 Halfpenny, J.C., 1982: Introduction: The University of Colorado Long-Term Ecological Program. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37, ix-xiii.
- 352 Halfpenny, J.C. and Heffernan, M.W., 1985: Summer temperature analysis for the Saddle, Niwot Ridge, Colorado. Front Range - 1981-1984. University of Colorado Long-Term Ecological Research Data Report, 85/1. 21 pp.

- 353 Halfpenny, J.C. and Ingraham, K.P., 1983: Growth and development of heather voles. Growth, 47:437-445.
- 354 Halfpenny, J.C. and Ingraham, K.P. (eds.), 1984: Long-Term Ecological Research in the United States: A Network of Research Sites. 28 pp.
- 355 Halfpenny, J.C., Ingraham, K.P., and Adams, J.A., 1983: Working atlas for the Saddle, Niwot Ridge, Front Range, Colorado. University of Colorado Long-Term Ecological Research Data Report, 83/1. 24 pp.
- 356 Halfpenny, J.C., Ingraham, K.P., Adams, J.A., and Pekar, H., 1983: Mountain Research Station: Its Environment and Research. University of Colorado, Institute of Arctic and Alpine Research. 20 pp.
- 357 Halfpenny, J.C., Ingraham, K., Southwick, C.H., Golian, S.C., Hause, H.L., and Meany, C., 1984: Ecological data on small mammal herbivores from the Colorado alpine tundra, 1981 - 1983. University of Colorado Long-Term Ecological Research Data Report, 84/7. 63 pp.
- 358 Halfpenny, J.C. and Pollak, O., 1983: Snow survey data from the Saddle, Niwot Ridge, Colorado, 1981-1982. University of Colorado Long-Term Ecological Research Data Report, 83/9. 53 pp.
- 359 Halfpenny, J.C., Pollak, O., and Heffernan, M.W., 1984: Snowpack patterns in the alpine tundra, Niwot Ridge, Colorado. Abstracts and Program, International Snow Science Workshop-A Merging of Theory and Practice. Aspen, Colorado, October 24-27, 1984, 43. Abstract.
- 360 Halfpenny, J.C., Pollak, O., and Heffernan, M.W., 1984: Snowpack patterns in the alpine tundra, Niwot Ridge, Colorado. New Mexico Journal of Science, 24(1):48-49. Abstract.
- 361 Halfpenny, J.C., Pollak, O., and Heffernan, M.W., 1984: Snowpack patterns in the alpine tundra, Niwot Ridge, Colorado. Proceedings International Snow Science Workshop: A Merging of Theory and Practice. Aspen, Colorado, October 24-27, 1984, 155-160.
- 362 Halfpenny, J.C., Pollak, O.D., Hibbard, K.A., Rink, L.P., and Heffernan, M.W., 1984: An ecosystem phenology for alpine tundra, Niwot Ridge, Colorado. New Mexico Journal of Science, 24(1):45-46. Abstract.
- 363 Halfpenny, J.C., Pollak, O.D., Hibbard, K.A., Rink, L.P., Ingraham, K.P., and Heffernan, M.W., 1984: Ecosystem phenology for alpine tundra, Front Range, Colorado. Bulletin of Ecological Society of America, 65(2):247.
- 364 Halfpenny, J.C., Pollak, O.D., Ingraham, K.P., Rink, L.P., and Heffernan, M.W., 1984: Summer and winter phenologies for alpine tundra. Journal Colorado-Wyoming Academy of Sciences, 16(1):10. Abstract.
- 365 Halfpenny, J.C. and Southwick, C.H., 1982: Small mammal herbivores of the Colorado alpine tundra. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37, 111-123.

- 366 Halfpenny, J.C., Southwick, C.H., Golian, S., Meaney, C., Ingraham, K. and Hause, H., 1983: Mammalian herbivore biomass in the Colorado alpine tundra. Journal Colorado-Wyoming Academy of Sciences, 15(1):50. Abstract.
- 367 Halleck, D.K., 1974: Environmental and hormonal control of flowering in Sedum lanceolatum Torr. (Crassulaceae). Ph.D. dissertation, University of Colorado, Boulder. 221 pp.
- 368 Halleck, D.K. and Wiens, D., 1966: Taxonomic status of Claytonia rosea and C. lanceolata (Portulacaceae). Annals, Missouri Botanical Garden, 53(2):205-212.
- 369 Hammerson, G.A., 1979: Structure and reproduction of "tree island" populations of Engelmann Spruce (Picea engelmannii) and subalpine fir (Abies lasiocarpa) in the lower alpine tundra of Colorado. Journal Colorado-Wyoming Academy of Science, 11(1):23-24. Abstract.
- 370 Hansen, K.J., 1978: Forest-tundra ecotone, Niwot Ridge, Colorado. Association of American Geographers Program Abstracts. New Orleans. Abstract.
- 371 Hansen, W.R., Chronic, J., and Matelock, T., 1978: Climatology of the Front Range Urban Corridor and Vicinity, Colorado. U.S. Geological Survey Professional Paper, 1019. 59 pp.
- 372 Hansen-Bristow, K., 1979: The instability of the conifer species within the forest-alpine tundra ecotone, Niwot Ridge, Colorado. Proceedings of the Second Conference on Scientific Research in the National Parks, San Francisco. Abstract.
- 373 Hansen-Bristow, K.J., 1981: Environmental controls influencing the altitude and form of the forest-alpine tundra ecotone, Colorado Front Range. Ph.D. dissertation, University of Colorado, Boulder. 245 pp.
- 374 Hansen-Bristow, K.J., 1981: Environmental controls and physiological responses of the forest-alpine tundra ecotone, Front Range, Colorado. Association of American Geographers National Convention Abstracts, Los Angeles, 51-52.
- 375 Hansen-Bristow, K.J., 1982: Environmental factors influencing growth within the forest-alpine tundra ecotone, Colorado Front Range. Association of American Geographers National Convention Abstracts, San Antonio, 80.
- 376 Hansen-Bristow, K.J. and Ives, J.D., 1984: Changes in the forest alpine tundra ecotone: Colorado Front Range. Physical Geography, 5:186-187.
- 377 Hara, Y. and Thorn, C.E., 1982: Preliminary quantitative study of alpine subnival boulder pavements, Colorado Front Range, U.S.A. Arctic and Alpine Research, 13:361-367.
- 378 Harbor, J.M., 1984: Terrestrial and lacustrine evidence for Holocene climatic/geomorphic change in the Blue Lake and Green Lakes Valleys of the Colorado Front Range. M.A. thesis, University of Colorado, Boulder. 205 pp.

- 379 Harrington, F.A., Jr., 1978: Ecological segregation of ungulates in alpine and subalpine communities. Ph.D. dissertation. Colorado State University, Fort Collins. 164 pp.
- 380 Harrington, H.D., 1946: Results of a seedling experiment at high altitudes in Rocky Mountain National Park. Ecology, 27:375-377.
- 381 Harris, S.A., 1968: Till fabrics and speed of movement of the Arapahoe Glacier, Colorado. The Professional Geographer, 20:195-198.
- 382 Heaton, R.L., 1933: The ancestral Rockies and Mesozoic and later Paleozoic stratigraphy of the Rocky Mountain region. Bulletin American Association of Petroleum Geologists, 17:109-168.
- 383 Heffernan, M.W. and Halfpenny, J.C., 1984: Snow and plant community distribution in the alpine tundra, Front Range, Colorado. New Mexico Journal of Science, 24(1):48. Abstract.
- 384 Heifner, M.A., 1974: Ecological studies in Colorado alpine willow marshes. M.S. thesis. Colorado State University, Fort Collins. 66 pp.
- 385 Helm, D.J., 1977: Variations in alpine snowfield vegetation. M.S. thesis. Colorado State University, Fort Collins. 95 pp.
- 386 Helm, D., 1982: Multivariate analysis of alpine snow-patch vegetation cover near Milner Pass, Rocky Mountain National Park, Colorado, U.S.A. Arctic and Alpine Research, 14:87-95.
- 387 Henderson, J., 1904: Arapaho Glacier in 1903. Journal of Geology, 12:30-33.
- 388 Henderson, J., 1905: Extinct glaciers of Colorado. University of Colorado Studies, 3:39-44.
- 389 Henderson, J., 1909: An annotated list of the birds of Boulder County, Colorado. University of Colorado Studies, 6:219-242.
- 390 Henderson, J., 1910: Extinct and existing glaciers of Colorado. University of Colorado Studies, 8:33-76.
- 391 Henderson, J., 1921: Water works storage system. Report on the Boulder Watershed, available at University of Colorado Archives.
- 392 Herrmann, S.J., 1968: Systematics, distribution, and ecology of Colorado Hirudinea. Ph.D. dissertation, University of Colorado, Boulder. 140 pp.
- 393 Herrmann, S.J., 1978: Winter anomalies of seston, phytoplankton and cations in a Colorado (U.S.A.) alpine flowage lake. Internationale Revue der Gesamten Hydrobiologie, 63(6): 773-786.
- 394 Hess, D.W., 1959: Background gamma radiation of sites in the Rocky Mountain Front Range west of Boulder, Colorado. Attachment to Technical Progress Report to the United States Atomic Energy Commission, Contract No. AT(11-1)435. 14 pp. Mimeographed.

- 395 Hess, D.W., 1959: Ecological studies of the growth of Ponderosa Pine on the East Slope of the Rocky Mountain Front Range in Boulder County, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 100 pp.
- 396 Hibbard, K.A., 1984: Tundra avian breeding phenology, Niwot Ridge, Colorado. New Mexico Journal of Science 24(1):47. Abstract.
- 397 Hickman, T.J. and Miller, D.L., 1977: A report on the Greenback Cutthroat Trout Inventory program, July to October, 1977. Report prepared for the Colorado Division of Wildlife. 22 pp.
- 398 Hjermstad, L.M., 1970: The influence of meteorological parameters on the distribution of precipitation across central Colorado mountains. Colorado State University, Fort Collins. Atmospheric Science Paper, 163. 78 pp. Summarized in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 286-287.
- 399 Hoffer, R.M. and Staff, 1975: An interdisciplinary analysis of Colorado Rocky Mountain environments using ADP techniques. Laboratory for Applications of Remote Sensing, LARS/Purdue University, West Lafayette, Indiana, Research Bulletin, 919 (LARS Information Note 061575). 124 pp.
- 400 Hoffman, R.W. and Braun, C.E., 1974: Composition, distribution, and size of winter flocks of white-tailed ptarmigan. Journal Colorado-Wyoming Academy of Science, 7(5):68-69. Abstract.
- 401 Hoffman, R.W. and Braun, C.E., 1975: Migration of white-tailed ptarmigan in Colorado. Journal Colorado-Wyoming Academy of Science, 7(6):45. Abstract.
- 402 Hoffman, R.W. and Braun, C.E., 1975: Migration of a wintering population of white-tailed ptarmigan in Colorado. Journal of Wildlife Management, 39:485-490.
- 403 Hoffman, R.W. and Braun, C.E., 1977: Characteristics of a wintering population of white-tailed ptarmigan in Colorado. The Wilson Bulletin, 89:107-115.
- 404 Holch, A.E., Hertel, E.W., Oakes, W.O., and Whitewell, H.H., 1941: Root habits of certain plants of the foothills and alpine belts of Rocky Mountain National Park. Ecological Monographs, 11:327-345.
- 405 Holden, D.C., 1984: A comparative study of two precipitation runoff models applied to a subalpine watershed. Unpublished M.S. Report. University of Colorado, Boulder. 65 pp.
- 406 Holm, H.T., 1903: Studies in the Cyperaceae. XIX. The genus Carex in Colorado. American Journal of Science, 16:17-44.
- 407 Holm, T., 1908: The Gramineae of the alpine region of the Rocky Mountains in Colorado. Botanical Gazette, 46:422-444.
- 408 Holm, T.H., 1927: The vegetation of the alpine region of the Rocky Mountains in Colorado. National Academy of Science Memoirs, 19:1-45.

- 409 Holtmeier, F.K., 1978: Die Bodennahen Winde in den Hochlagen der Indian Peaks Section (Colorado Front Range). Münstersche Geographische Arbeiten, Paderborn, No. 3. 47 pp.
- 410 Holtmeier, F.K., 1980: Influence of wind on tree-physiognomy at the upper timberline in the Colorado Front Range. In: Benecke, U. and Davis, M.R. (eds.), Mountain Environments and Subalpine Tree Growth. New Zealand Forest Service, Forest Research Institute Technical Paper 70:247-261.
- 411 Holtmeier, F.K., 1981: What does the term "krummholz" really mean? Observations with special reference to the Alps and the Colorado Front Range. Mountain Research and Development, 1:253-260.
- 412 Holway, J.G., 1960: Phenological observations on the major alpine species in the vicinity of False Mummy Pass, Rocky Mountain National Park, Colorado. M.S. thesis, Colorado State University, Fort Collins. 84 pp.
- 413 Holway, J.G., 1961: Phenological observations of alpine species. Journal Colorado-Wyoming Academy of Science, 5(2):38-39. Abstract.
- 414 Holway, J.G., 1962: Effects of snow and diverted melt-water in the alpine tundra. Journal Colorado-Wyoming Academy of Science, 5(3):33. Abstract.
- 415 Holway, J.G., 1962: Phenology of Colorado alpine plants. Ph.D. dissertation, Colorado State University, Fort Collins. 154 pp.
- 416 Holway, J.G. and Ward, R.T., 1963: Snow and meltwater effects in an area of Colorado alpine. American Midland Naturalist, 69(1):189-197.
- 417 Holway, J.G. and Ward, R.T., 1965: Phenology of alpine plants in northern Colorado. Ecology, 46:73-83.
- 418 Hubbard, J.D., 1978: Breeding biology and reproductive energetics of Mt. White-Crowned sparrows in Colorado. Ph.D. dissertation, University of Colorado, Boulder. 311 pp.
- 419 Huebert, B.J., Fehsenfeld, F.C., Norton, R.B., and Albritton, D., 1983: The scavenging of nitric acid vapor by snow. In: Pruppacher et al. (eds.), Precipitation Scavenging, Dry Deposition, and Resuspension. New York: Elsevier, 293-302.
- 420 Huebert, B.J., Norton, R.B., Bollinger, M.J., Parrish, D.D., Hahn, C., Bush, Y.A., Murphy, P.C., Fehsenfeld, F.C., and Albritton, D.L., 1982: Gas phase and precipitation acidities in the Colorado mountains. International Symposium on Hydrometeorology, June 1982. American Water Resources Association, 17-23.
- 421 Huebert, B.J., Norton, R.B., Bollinger, M.J., Parrish, D.D., Hahn, C., Bush, Y.A., Murphy, P.C., Fehsenfeld, F.C., and Albritton, D.L., 1983: Gas phase and precipitation acidities in the Colorado mountains. In: Herrman, R. and Johnson, A.I. (eds.), Acid Rain, A Water Resources Issue for the 80's. Bethesda, MD: American Water Resources Association, 17-23.

- 422 Huebert, B.J., Norton, R.B., Bollinger, M.J., Parrish, D.D., Murphy, P.C., Albritton, D.L., Fehsenfeld, F.C., 1982: HNO<sub>3</sub> and NO<sub>3</sub>- particulates measured at a remote rural site. Proceedings of Second Symposium on the Composition of the Nonurban Troposphere, May 25-28, 1982; Williamsburg, Va. Boston: American Meteorological Society, 163-165.
- 423 Husted, W.M., 1974: Prehistoric occupation of the alpine zone in the Rocky Mountains, pp. 857-872. In: Ives, J.D. and Barry, R.G. (eds.), Arctic and Alpine Environments. London: Methuen.
- 424 Ingraham, K.P., Halfpenny, J.C., Southwick, C.H., Golian, S.C., and Hause, H.L. 1984: Ecology of small mammal herbivores from the Colorado alpine tundra. New Mexico Journal of Science 24(1):46-47. Abstract.
- 425 Irwin, R.L., 1982: The influence of soil nitrogen, phosphorus, and potassium on the germination and establishment of alpine plants. Master of B.S. thesis, University of Colorado, Boulder. 40 pp.
- 426 Isard, S.A., 1983: Estimating potential direct insolation to alpine terrain. Arctic and Alpine Research, 15:77-89.
- 427 Isard, S.A., 1984: Factors controlling soil moisture and evapotranspiration within alpine vegetation communities: Niwot Ridge, Colorado Front Range. Ph.D. dissertation, Indiana University, Bloomington. 97 pp.
- 428 Isard, S.A., 1986: Factors influencing soil moisture and plant community distribution on Niwot Ridge, Front Range, Colorado, U.S.A. Arctic and Alpine Research, 18:83-96.
- 429 Ives, J.D., 1973: Permafrost and its relationship to other environmental parameters in a midlatitude, high-altitude setting, Front Range, Colorado Rocky Mountains. Permafrost: The North American Contribution to the Second International Conference, Washington, D.C.: National Academy of Science, 121-125. Reprinted in: Ives, J.D. (ed.) 1980, Geoecology of the Colorado Front Range. Boulder: Westview Press, 316-325.
- 430 Ives, J.D., 1973: Studies in high altitude geoecology of the Colorado Front Range: A review of the research program of the Institute of Arctic and Alpine Research, University of Colorado. Arctic and Alpine Research, 5(3, Pt. 2):A67-A75.
- 431 Ives, J.D., 1974: The impact of man as a biped. In: Ives, J.D. and Barry, R.G. (eds.), Arctic and Alpine Environments. London: Methuen, 921-924.
- 432 Ives, J.D., 1974: Permafrost. In: Ives, J.D. and Barry, R.G. (eds.), Arctic and Alpine Environments. London: Methuen, 159-194.
- 433 Ives, J.D., 1978: Remarks on the stability of timberline. In: Troll, C. and Lauer, W. (eds.), Geocological Relations Between the Southern Temperate Zone and the Tropical High Mountains. Wiesbaden: Franz Steiner Verlag, 313-317. Reprinted in: Ives, J.D. (ed.), 1980, Geoecology of the Colorado Front Range. Boulder: Westview Press, 351-358.

- 434 Ives, J.D., 1980: The development of a Front Range Mountain Research Station. In: Ives, J.D. (ed.), Geoecology of the Colorado Front Range. Boulder: Westview Press, xv-xxv.
- 435 Ives, J.D., (ed.) 1980: Geoecology of the Colorado Front Range: A study of alpine and subalpine environments. Boulder: Westview Press. 484 pp.
- 436 Ives, J.D., 1980: Geomorphology: overview. In: Ives, J.D. (ed.), Geoecology of the Colorado Front Range. Boulder: Westview Press, 84-90.
- 437 Ives, J.D., 1980: Introduction: A description of the Front Range. In: Ives, J.D. (ed.), Geoecology of the Colorado Front Range. Boulder: Westview Press, 1-8.
- 438 Ives, J.D., 1980: Preface. In: Ives, J.D. (ed.), Geoecology of the Colorado Front Range: Boulder: Westview Press, xv-xxv.
- 439 Ives, J.D., 1982: Mapping of mountain hazards. Impact of Science on Society, 32(1):79-88.
- 440 Ives, J.D. and Barry, R.G. (eds.), 1974: Arctic and Alpine Environments. London: Methuen. 999 pp.
- 441 Ives, J.D., Baumgartner, R., Burns, S., Dow, V., Hansen, K., Ketchin, A., Luff, D., McCord, B., and Plam, M., 1979: The Indian Peaks Environmental Atlas, Colorado Front Range. Second Conference on Scientific Research in National Parks, San Francisco, November 1979.
- 442 Ives, J.D., Baumgartner, R., Plam, M., Hansen, K., and Burns, S., 1979: Indian Peaks Wilderness Area environmental atlas (Colorado Front Range). American Association of Geographers, Program Abstracts, Philadelphia. Abstract.
- 443 Ives, J.D. and Dow, V., 1981: The Indian Peaks Wilderness Area. UNESCO MAB Project 6 and NASA grant NASA-PY-NGL-06-003-200. (A 1:50,000 shaded relief map with text and photos).
- 444 Ives, J.D. and Dow, V., 1982: Indian Peaks Wilderness Environmental Atlas (Colorado Front Range). Mountain Research and Development, 2:337-348.
- 445 Ives, J.D. and Fahey, B.D., 1971: Permafrost occurrence in the Front Range, Colorado Rocky Mountains, U.S.A. Journal of Glaciology, 10(58):105-111.
- 446 Ives, J.D. and Hansen-Bristow, K., 1979: The Indian Peaks environmental atlas, Colorado, Front Range. Second Conference on Scientific Research in the National Parks, November 1979, San Francisco.
- 447 Ives, J.D. and Hansen-Bristow, K.J., 1983: Stability and instability of natural and modified upper timberline landscapes in the Colorado Rocky Mountains, U.S.A. Mountain Research and Development, 3:149-155.
- 448 Ives, J.D. and Plam, M., 1980: Avalanche hazard mapping and zoning problems in the Rocky Mountains with examples from Colorado, U.S.A. Journal of Glaciology, 26(94):363-375.

- 449 Ives, J.D. and Webber, P.J., 1980: Plant ecology: overview. In: Ives, J.D. (ed.), Geoecology of the Colorado Front Range. Boulder: Westview Press. 326-338.
- 450 Ives, R.L., 1935: Some past and present glaciers of Colorado. Rocks and Minerals, 10:129-136.
- 451 Ives, R.L., 1936: Are our glaciers disappearing? Trail and Timberline, 207:3-5.
- 452 Ives, R.L., 1936: Glaciology of the Monarch Valley, Grand County, Colorado. M.S. thesis, University of Colorado, Boulder. 69 pp.
- 453 Ives, R.L., 1937: The Arapahoe Glacier. Nature Magazine, 29:166-169.
- 454 Ives, R.L., 1938: Chinook winds in Northern Colorado. American Journal of Science, 35(5):138-142.
- 455 Ives, R.L., 1938: Glacial geology of the Monarch Valley, Grand County, Colorado. Bulletin Geological Society of America, 49:1045-1066.
- 456 Ives, R.L., 1938: Weather phenomena of the Colorado Rockies. Journal of the Franklin Institute, 226:691-755.
- 457 Ives, R.L., 1939: Glacier Measurements. Report International Commission on Snow, p. 5.
- 458 Ives, R.L., 1940: Glaciers in the Colorado Front Range. Bulletin Geological Society of America, 51:1271-1264.
- 459 Ives, R.L., 1940: Mountain glaciers of long ago. Trail and Timberline, 258:87-92.
- 460 Ives, R.L., 1940: Rock glaciers in the Colorado Front Range. Geological Society of America Bulletin, 51:1271-1294.
- 461 Ives, R.L., 1941: Colorado Front Range crest clouds and related phenomena. Geographical Review, 31:23-45.
- 462 Ives, R.L., 1941: Rapid identification of the montane-subalpine zone boundary. Bulletin of the Torrey Botanical Club, 68:195-197.
- 463 Ives, R.L., 1941: Thrust faulting around Crater Lake, Colorado. Pan-American Geologist, 76:259-274.
- 464 Ives, R.L., 1941: Tundra ponds. Journal of Geomorphology, 4:285-296.
- 465 Ives, R.L., 1941: Vegetation indicators of solifluction. Journal of Geomorphology, 4:128-132.
- 466 Ives, R.L., 1942: Early human occupation of the Colorado headwaters region - an archeological reconnaissance. Geographical Review, 32:448-462.
- 467 Ives, R.L., 1942: Atypical subalpine environments. Ecology, 23:89-96.

- 468 Ives, R.L., 1950: Frequency and physical effects of chinook winds in the Colorado high plains region. Annals Association of American Geographers, 40:293-327.
- 469 Ives, R.L., 1951: Modern glaciers of the Arapaho Massif. Scientific Monthly, 73:25-36.
- 470 Ives, R.L., 1953: Later Pleistocene glaciation in the Silver Lake Valley, Colorado. Geographical Review, 63:229-253.
- 471 James, J.W., 1977: Route 40 mountain environment transect, Colorado and Utah. Final Report to Earth Sciences Division, U.S. Army Natick Laboratories, Natick, MA. Contract No. DA 19-129-AMC-472(N); Project No. IK02400 IA 129. 218 pp. plus appendices, bibliography.
- 472 James, M.T., 1938: A systematic and ecological study of the Robber flies (Asilidae) of Colorado. Ph.D. dissertation, University of Colorado, Boulder. 188 pp.
- 473 Janke, R.A., 1968: The ecology of Vaccinium myrtillus using concepts of productivity, energy exchange, and transpiration resistance. Ph.D. dissertation, University of Colorado, Boulder. 109 pp.
- 474 Janke, R.A., 1970: Transpiration resistance in Vaccinium myrtillus. American Journal of Botany, 57:1051-1054.
- 475 Johnson, A.W., 1951: Indications of altitudinal distribution in some mouse fleas of Boulder County, Colorado. M.S. thesis, University of Colorado, Boulder. 55 pp.
- 476 Johnson, A.W., 1956: Ecology of subalpine forest communities in the Silver Lakes Valley of the Front Range in Colorado. Ph.D. dissertation, University of Colorado. 121 pp.
- 477 Johnson, D., 1984: Acid rains on the Rockies. Summit (University of Colorado) January: 17-20.
- 478 Johnson, D.A., 1973: Field measurements of photosynthesis and leaf growth rates of three alpine plant species. M.S. thesis, Utah State University, Logan. 30 pp.
- 479 Johnson, D.A. (ed.), 1979: Special Management Needs of Alpine Ecosystems. Range Science Series, 5. 100 pp.
- 480 Johnson, D.A. and Caldwell, M.M., 1974: Field measurements of photosynthesis and leaf growth rates of three alpine plant species. Arctic and Alpine Research, 6:245-251. Reprinted in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 396-402.
- 481 Johnson, D.A. and Caldwell, M.M., 1975: Gas exchange of four arctic and alpine tundra plant species in relation to atmospheric and soil moisture stress. Oecologia, 21:93-108.

- 482 Johnson, D.A. and Caldwell, M.M., 1976: Water potential components, stomatal function, and liquid phase water transport resistances of four arctic and alpine species in relation to moisture stress. Physiologia Plantarum, 36:271-278.
- 483 Johnson, D.A., Caldwell, M.M., and Tieszen, L.L., 1973: Photosynthesis in relation to leaf water potential in three alpine plant species. In: Bliss, L.C. and Wielgolaski, F.E. (eds.), Proceedings of the Conference on Primary Production and Production Processes, Tundra Biome. Dublin, Ireland, April 1973. Stockholm: IBP Tundra Biome Steering Committee, 205-210.
- 484 Johnson, J.B., 1979: Mass balance and aspects of the glacial environment, Front Range, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 287 pp. Summarized in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 209-213.
- 485 Johnson, K.R., 1932: Ecology of a glacial lake in Central Colorado. M.S. thesis, University of Colorado, Boulder. 30 pp.
- 486 Johnston, M.A., 1966: The ecological physiology of three Colorado varieties of Hymenoxys acaulis (Pursh) Parker. Ph.D. dissertation, University of Colorado, Boulder. 209 pp.
- 487 Jolls, C.L., 1980: Phenotypic patterns of variation in biomass allocation in Sedum lanceolatum Torr. at four elevational sites in the Front Range, Rocky Mountains, Colorado. Bulletin of the Torrey Botanical Club, 107:65-70.
- 488 Jolls, C.L., 1980: Variation in the reproductive biology of Sedum lanceolatum Torr. (Crassulaceae) along an elevational gradient in the Front Range, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 154 pp.
- 489 Jolls, C.L., 1982: Plant population biology above timberline: Biotic selective pressures and plant reproductive success. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37, 83-95.
- 490 Jolls, C.L. and Bock, J.H., 1983: Seedling density and mortality patterns among elevations in Sedum lanceolatum. Arctic and Alpine Research, 15:119-126.
- 491 Jones, W.D. and Quam, L.O., 1944: Glacial landforms in Rocky Mountain National Park, Colorado. Journal of Geology, 52:217-234.
- 492 Judson, J.A., 1965: The weather and climate of a high mountain pass in the Colorado Rockies. U.S. Forest Service Research Paper, RM-16. 28 pp.
- 493 Judson, J.A., 1977: Climatological data from the Berthoud Pass area of Colorado. U.S. Department of Agriculture, Forest Service, General Technical Report, RM-42. Fort Collins, Colorado. 94 pp.

- 494 Kapoor, B.M. and Löve, A., 1979: Chromosomes of Rocky Mountain Ranunculus. Caryologia, 23(4):575-594.
- 495 Keefer, V.M., 1969: Seasonal changes in plankton and seston production in a Colorado mountain lake. Ph.D. dissertation, University of Colorado. 84 pp.
- 496 Keigley, R.B., 1984: Effects of experimental manipulations on Kobresia myosuroides. Journal Colorado-Wyoming Academy of Sciences, 16(1):15. Abstract.
- 497 Keinholz, H., 1980: Zur Anwendung des Luftbildes bei der Mittelmaßstäbigen Gefahrenkartierung für Region alplanerische Zwecke in schlecht erschlossenen Gebirgsräumen: interpraevent. Conference on Natural Hazard Studies and Prevention, held in Linz, Austria. Manuscript on mapping experiments in the Colorado Rocky Mountains.
- 498 Keinholz, H. and Bichsel, M., 1982: The use of air photographs for mapping natural hazards in mountainous areas: A study based on the Colorado Rocky Mountains, U.S.A. Mountain Research and Development, 2:349-358.
- 499 Kelso, S., 1980: Management of the Niwot Ridge biosphere reserve. M.A. thesis, University of Colorado, Boulder. 159 pp.
- 500 Kendall, G.D., Jr., 1908: A one hundred percent analysis of some Nederland tungsten minerals. B.S. thesis in Chemical Engineering, University of Colorado, Boulder. 9 pp.
- 501 Kenoyer, L.A., 1908 or 1910: Insect pollination of timberline flowers in Colorado. Iowa Academy of Science, 483. Abstract.
- 502 Khanna, K.R., 1967: A cytological investigation of the mosses of the Rocky Mountains. University of Colorado Studies, Series in Biology, 26. 39 pp.
- 503 Kiener, W., 1935: Structural analysis of alpine vegetation on Longs Peak, Colorado. Journal Colorado-Wyoming Academy of Science, 2:50-51. Abstract.
- 504 Kiener, W.B., 1939: Alpine vegetation on Longs Peak, Colorado. American Botanist, 45:100-105.
- 505 Kiener, W., 1939: Peltigera on Longs Peak, Colorado, and in Iowa County, Iowa. The Bryologist, 42:142-149.
- 506 Kiener, W., 1939: Sociological studies of the alpine vegetation on Longs Peak. Ph.D. dissertation, University of Nebraska, Lincoln, Nebraska. 68 pp. Reprinted in: University of Nebraska Studies New Series, 34, 1967. 75 pp.
- 507 Kiener, W., 1946: A list of algae chiefly from the alpine zone of Longs Peak, Colorado. Madroño, 8:161-173.
- Kienholz - see Keinholz.
- 508 Kilburn, P.D., 1965: Floras of the tundra treeless ecosystem. Natural History, 74(7):52-59.

- 509 Klemp, J.B. and Lilly, D.K., 1975: The dynamics of wave-induced downslope winds. Journal of Atmospheric Science, 32:320-339.
- 510 Kling, G.W. and Grant, M.C., 1984: Acid precipitation in the Colorado Front Range: An overview with time predictions for significant effects. Arctic and Alpine Research, 16:321-329.
- 511 Knight, S.H., 1964: The geologic background of the Boulder Area. In: Rodeck, H.G. (ed.), Natural History of the Boulder Area. University of Colorado Museum, Leaflet, 13:1-8.
- 512 Knowles, M.H., 1978: Genetic characteristics associated with growth in ponderosa pine. M.S. thesis, University of Colorado, Boulder. 81 pp.
- 513 Knowles, M.H., 1980: Genetic variation of lodgepole pine over time and microgeographic space. Ph.D. dissertation, University of Colorado, Boulder. 114 pp.
- 514 Knowles, P. and Grant, M.C., 1981: Genetic patterns associated with growth variability in ponderosa pine. American Journal of Botany, 68:942-946.
- 515 Knowles, P. and Grant, M.C., 1983: Age and size structure analyses of Engelmann spruce, ponderosa pine, lodgepole pine and limber pine in Colorado. Ecology, 64:1-9.
- 516 Knowles, P. and Grant, M.C., 1985: Genetic variation of lodgepole pine over time and microgeographic space. Canadian Journal of Botany, 63:723-727. In Press.
- 517 Knowles, P. and Mitton, J.B., 1980: Genetic heterozygosity and radial growth variability in Pinus contorta. Silvae Genetica, 19:114-117.
- 518 Koerner, J.M., 1969: Krummholz influences on alpine snow accumulations. M.A. thesis, University of Colorado, Boulder. 115 pp.
- 519 Kol, E., 1964: Cryobiological research in the Rocky Mountains. Archiv für Hydrobiologie, 60:278-285.
- 520 Komarkova, V., 1976: Alpine vegetation of the Indian Peaks area, Front Range. Colorado Rocky Mountains. Ph.D. dissertation, University of Colorado. 655 pp.
- 521 Komarkova, V., 1979: Alpine vegetation of the Indian Peaks area, Front Range, Colorado Rocky Mountains. In: Tuxen, R. (ed.), Flora et Vegetatio Mundi, VII. Vaduz: J. Cramer. xvi + 591 pp. plus casebox of tables, maps, illus.
- 522 Komarkova, V., 1980: Classification and ordination of the Indian Peaks area, Colorado Rocky Mountains. Vegetatio, 42:149-163.
- 523 Komarkova, V., 1984: The recovery of vegetation after disturbance in the Colorado alpine Long-Term Ecological Research (LTER) study area. Bulletin of Ecological Society of America, 65(2):67. Abstract.

- 524 Komarkova, V. and Webber, P.J., 1978: An alpine vegetation map of Niwot Ridge, Colorado. Arctic and Alpine Research, 10(1):1-29. Reprinted in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 364-392.
- 525 Kooiman, M. and Linhart, Y.B., 1986: Structure and change in herbaceous communities of four ecosystems in the Front Range, Colorado. Arctic and Alpine Research, 18:97-110.
- 526 Krear, H.R., 1965: An ecological and ethological study of the pika (Ochotona princeps saxatilis Bangs) in the Front Range of Colorado. Ph.D. dissertation, University of Colorado, Boulder. 329 pp.
- 527 Krebs, P.V., 1973: Vegetation. In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper. 8:63-80.
- 528 Kreibich, V.H., 1966: Precipitation climatology of the Front Range in Colorado. M.A. thesis, University of Colorado, Boulder. 119 pp.
- 529 Laiho, D., 1983: A comparative evaluation of streamflow simulation models in a Colorado alpine environment. M.S. thesis. University of Colorado, Boulder. 104 pp.
- 530 Langlois, D., Hickman, T., Miller, D., and Tores, J., 1978: Greenback cutthroat trout restoration program. Colorado Division of Wildlife, Denver, Colorado. Endangered Wildlife Investigations Performance Report, SE-3-1. 42 pp.
- 531 Lanier, J., 1978: Population dynamics of Rocky Mountain Douglas Fir (Pseudotsuga menziesii var. glauca) along an elevational gradient in the Front Range of Colorado. M.A. thesis, University of Colorado, Boulder. 97 pp.
- 532 LeDrew, E.F., 1974: Five-day means of radiation data and miscellaneous climatic data for Barrow and Eagle Summit, Alaska and the Niwot Ridge, Saddle and Como stations in the Front Range, Colorado. U.S. Tundra Biome Data Report, 74-39. 26 pp.
- 533 LeDrew, E.F., 1974: Radiation and energy budget of an alpine tundra in Colorado during the growing season, 1973. M.A. thesis, University of Colorado. 170 pp.
- 534 LeDrew, E.F., 1975: The energy balance of a mid-latitude alpine site during the growing season, 1973. Arctic and Alpine Research, 7:301-314. Reprinted in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 288-301.
- 535 LeDrew, E.F., 1975: The estimation of clear sky atmospheric emittance at high altitudes. Arctic and Alpine Research, 7:227-236.
- 536 LeDrew, E.F. and Emerick, J.C., 1974: A mechanical balance-type lysimeter for use in remote environments. Agricultural Meteorology, 13:253-258.

- 537 LeDrew, E.F. and Weller, G., 1978: A comparison of the radiation and energy balance during the growing season for arctic and alpine tundra. Arctic and Alpine Research, 10:665-678.
- 538 Lee, W.T., 1900: The glacier of Mt. Arapahoe, Colorado. Journal of Geology, 8:647-654.
- 539 Lee, W.T., 1917: The Geologic Story of Rocky Mountain National Park. National Park Service, U.S. Department of the Interior. 89 pp.
- 540 Lee, W.T., 1922: Peneplains of the Front Range and Rocky Mountain National Park. U.S. Geological Survey Bulletin, 730A:1-19.
- 541 Legg, T.E. and Baker, R.G., 1980: Palynology of Pinedale sediments, Devil's Park, Boulder County, Colorado. Arctic and Alpine Research, 12:319-333.
- 542 Lewis, W.M., Jr., 1982: Changes in pH and buffering capacity of lakes in the Colorado Rockies. Limnology and Oceanography, 27:162-172.
- 543 Lewis, W.M., Jr. and Grant, M.C., 1978: Methodological considerations affecting the sampling of precipitation for ecological nutrient studies. Water Resources Research, 14:1098-1104.
- 544 Lewis, W.M., Jr. and Grant, M.C., 1978: Sampling and chemical interpretation of precipitation for mass balance studies Water Resources Research, 14:1098-1104.
- 545 Lewis, W.M., Jr. and Grant, M.C., 1979: Relationships between stream discharge and yield of dissolved substances from a Colorado mountain watershed. Soil Science, 128(6):353-363.
- 546 Lewis, W.M., Jr. and Grant, M.C., 1980: Acid precipitation in the western United States. Science, 207:176-177.
- 547 Lewis, W.M., Jr. and Grant, M.C., 1980: Changes in the output of ions from a watershed as a result of acidification of precipitation. Ecology, 60:1093-1097.
- 548 Lewis, W.M., Jr. and Grant, M.C., 1980: Relationships between snow cover and winter losses of dissolved substances from a mountain watershed. Arctic and Alpine Research, 12:11-17.
- 549 Lewis, W.M., Jr. and Grant, M.C., 1980: Reply to a comment on acid precipitation in the western U.S. Science, 210:1043.
- 550 Lewis, W.M., Jr. and Grant, M.C., 1981: Effect of the May-June Mount St. Helens eruptions on precipitation chemistry in central Colorado. Atmospheric Environment, 15:1539-1542.
- 551 Lewis, W.M., Jr., Grant, M.C., and Saunders, J., 1984: A precipitation chemistry network study of the State of Colorado, 1982-1983. Water Resources Research, 20:1691-1740.

- 552 Light, J.T., Nelson, W.C., and Windell, J.T., 1982: The vital statistics of unexploited brook trout populations in the alpine lakes, Front Range, Colorado. Journal Colorado-Wyoming Academy of Sciences, 14(1):14. Abstract.
- 553 Lilly, D.K. and Kennedy, P.J., 1973: Observations of a stationary mountain wave and its associated momentum flux and energy dissipation. Journal of Atmospheric Science, 30:1135-1152.
- 554 Lilly, D.K. and Zipser, E.J., 1972: The Front Range windstorm of 11 January 1972--a meteorological narrative. Weatherwise, 25:56-63.
- 555 Lindeberg-Johnson, M., 1981: Ecological physiology of populations of Caltha leptosepala DC. along altitudinal and latitudinal gradients in the Central Rocky Mountains. Ph.D. dissertation, University of Colorado, Boulder. 204 pp.
- 556 Linton, M.D., 1973: Biomass allocation of Harbouria trachyleura (Gray) on an elevational transect. M.S. thesis, University of Kansas, Lawrence. 103 pp.
- 557 Litaor, M.Z., 1984: Soil buffering capacity in the Green Lakes Valley, Colorado Front Range. Bulletin of Ecological Society of America, 65(2):272. Abstract.
- 558 Litaor, M.Z., 1985: Soil genesis and soil water chemistry in the Green Lakes Valley, Colorado Front Range, 1982-1983. University of Colorado Long-Term Ecological Research Data Report, 85/2. 38 pp.
- 559 Litaor, M.Z. and Thurman, E.M., 1984: Soil interstitial waters chemistry in the Green Lakes Valley, Front Range, Colorado. Soil Science Society of America Annual Meeting, 1984, Las Vegas, NV. Abstract.
- 560 Lloyd, D.T., 1970: The Isabelle Glacier, Front Range, Colorado, during the 1968-1969 budget year. M.A. thesis, University of Colorado, Boulder. 133 pp.
- 561 Losleben, M.V., 1983: Climatological data from Niwot Ridge, East Slope, Front Range, Colorado, 1970-1982. University of Colorado Long-Term Ecological Research Data Report, 83/10. 193 pp.
- 562 Losleben, M.V., 1984: Climatological data from Niwot Ridge, East Slope, Front Range, Colorado - 1983. University of Colorado Long-Term Ecological Research Data Report, 84/3. 28 pp.
- 563 Losleben, M.V., 1985: Climatological data from Niwot Ridge, East Slope, Front Range, Colorado - 1984. University of Colorado Long-Term Ecological Research Data Report, 85/3. 29 pp.
- 564 Losleben, M.V. and Eccles, M., 1984: Front Range Climatological Program, Colorado. New Mexico Journal of Science, 24(1):35. Abstract.

- 565 Losleben, M., Halfpenny, J., and Ingraham, K., 1984: Climate of alpine tundra, Front Range, Colorado. Abstracts and Program, International Snow Science Workshop: A Merging of Theory and Practice. Aspen, Colorado. October 24-27, 1984. 45. Abstract.
- 566 Losleben, M.V., Halfpenny, J.C., and Ingraham, K.P., 1984: Climate of alpine tundra, Front Range, Colorado. New Mexico Journal of Science, 24(1):46. Abstract.
- 567 Løve, A., Løve, D., and Kapoor, B.M., 1971: Cryotaxonomy of a century of Rocky Mountain orophytes. Arctic and Alpine Research, 3:139-165.
- 568 Løve, D., 1969: Papaver at high altitudes in the Rocky Mountains. Brittonia, 21(1):1-10.
- 569 Løve, D., 1970: Subarctic and subalpine: where and what? Arctic and Alpine Research, 2(1):63-73.
- 570 Løve, D., 1971: Reflections around a mutilated tree. Biological Conservation, 3(4):274-278.
- 571 Løve, D., McClellan, C., and Gamow, I., 1970: Coumarin and coumarin derivatives in various growth types of Engelmann spruce. Svensk Botanisk Tidskrift, 64:284-296.
- 572 Low, R.S., 1982: Identification, classification, and quantification of wetlands in alpine and subalpine watershed, Journal Colorado-Wyoming Academy of Sciences, 13(1):12. Abstract.
- 573 Ludi, W., 1961: Botanische Streifzüge durch die Rocky Mountains Nordamerikas. Veröffentlichungen der Geobotanischen Institutes, Rubel, Zurich, 32:217-236.
- 574 Lullau, I., 1974: Studien und Beobachtungen zum Landschaftsgefüge in der östlichen Front Range, Colorado. Staatsarbeit in Geographie, Münster. 120 pp.
- 575 Luti, R., 1953: Ecological features of the vegetation of a ridge in the montane forest of Boulder County, Colorado. M.S. thesis, University of Colorado, Boulder. 100 pp.
- 576 Macior, L.W., 1968: Pollination adaptation in Pedicularis groenlandica. American Journal of Botany, 55(8):927-932.
- 577 Macior, L.W., 1970: The pollination ecology of Pedicularis in Colorado, American Journal of Botany, 57(6):716-728.
- 578 Macior, L.W., 1971: Co-evolution of plants and animals--systematic insights from plant-animal interactions. Taxon, 20(1):17-28.
- 579 Macior, L.W., 1974: Pollination ecology of the Front Range of the Colorado Rocky Mountains. Melanderia, 15:1-59.

- 580 McCauley, C., 1958: Glaciers of the American Rocky Mountains. In: Geographic Study of Mountain Glaciation in the Northern Hemisphere. Report to the U.S. Army Quartermaster Research and Engineering Command Under Contract No. DA19-129-Qm-409. Study conducted by the Department of Exploration and Field Research, American Geographical Society, Project No. 7-83-03-008C. Part 3, Chapter 2.
- 581 McCord, B.E., 1982: Surficial deposits of the Indian Peaks Region, Colorado Front Range. M.A. thesis, University of Colorado, Boulder. 132 pp.
- 582 McCown, B.H. and Tieszen, L.L., 1972: A comparative investigation of periodic trends in carbohydrate and lipid levels in arctic and alpine plants. In: Bowen, S. (ed.), Proceedings 1972 Tundra Biome Symposium, Lake Wilderness Center, University of Washington, 3-5 April, 1972, U.S. IBP Tundra Biome, 40-40.
- 583 McKenna, J.W., 1940: The geology of the Conger Mine, Boulder County, Colorado. M.A. thesis, University of Colorado, Boulder. 39 pp.
- 584 McNeal, D.W., Jr., 1976: Annotated checklist of the alpine vascular plants of Specimen Mountain, Rocky Mountain National Park, Colorado. Southwest Naturalist, 20:423-435.
- 585 McNeely, R., 1983: Preliminary physical data on Green Lakes 1-5, Front Range, Colorado. University of Colorado Long-Term Ecological Research Working Paper, 83/4. 34 pp.
- 586 McSaveney, E.R., 1971: The surficial texture of rockfall talus. M.S. thesis, Ohio State University. 91 pp.
- 587 McSaveney, E.R., 1971: The surficial fabric of rockfall talus. In: Morisawa, M. (ed.), Quantitative Geomorphology: Some Aspects and Applications. Proceedings, Second Annual Geomorphology Symposia Series, Binghamton, NY, October 15-16, 1971. State University of New York, Publications in Geomorphology, 181-197.
- 588 Madole, R.F., 1960: Glacial geology of upper St. Vrain Valley, Boulder County, Colorado. M.S. thesis, Ohio State University. 109 pp.
- 589 Madole, R.F., 1963: Quaternary geology of St. Vrain drainage basin, Boulder County, Colorado. Ph.D. dissertation, Ohio State University. 288 pp.
- 590 Madole, R.F., 1969: Pinedale and Bull Lake glaciation in upper St. Vrain drainage basin, Boulder County, Colorado. Arctic and Alpine Research, 1:279-287.
- 591 Madole, R.F., 1972: Neoglacial facies in the Colorado Front Range. Arctic and Alpine Research, 4:119-130.
- 592 Madole, R.F. (ed.), 1973: Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8. 181 pp.

- 593 Madole, R.F., 1976: Bog stratigraphy, radiocarbon dates, and Pinedale to Holocene glacial history in the Front Range, Colorado. Journal of Research, U.S. Geologic Survey, 4:163-169. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 70-76.
- 594 Madole, R.F., 1976: Glacial geology of the Front Range, Colorado. In: Mahaney, W.C. (ed.), Quaternary Stratigraphy of North America. Stroudsburg, PA: Dowden, Hutchinson and Ross, Inc., 279-318.
- 595 Madole, R.F., 1980: Age of Pinedale deglaciation in north-central Colorado: Further considerations. Geology, 8(3):118-122.
- 596 Madole, R.F., 1980: Lake Devlin and the time of maximum expansion of Pinedale Glaciation in the Front Range, Colorado. U.S. Geological Survey Open File Report, 80-725. 33 pp.
- 597 Madole, R.F., 1982: Possible origins of till-like deposits near the summit of the Front Range in North-Central Colorado. Geological Survey Professional Paper 1243. Washington, D.C.: U.S. Government Printing Office. 31 pp.
- 598 Madole, R.F., Bachuber, F.W., and Larson, E.E. (Leaders), 1973: Geomorphology, palynology, and paleomagnetic record of glacial Lake Devlin, Front Range. Guidebook for Field Trip No. 1, 26th Annual Meeting, Rocky Mountain Section, Geological Society of America. Boulder, University of Colorado. 25 pp.
- 599 Madole, R.F., Bradley, R.S., Carrara, P.E., and Mears, A.E., 1973: Natural Hazards. In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research Occasional Paper, 8:143-174.
- 600 Madole, R.F., Krebs, P.V., and Carrara, P.E., 1973: Natural hazards in Boulder County. (Map 1:96,000). In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8:Plate 6.
- 601 Madole, R.F., Krebs, P.V., and Groeneveld, D.P., 1973: Wildlife and Water Quality in Boulder County. (Map 1:96,000). In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8:Plate 5.
- 602 Madole, R.F., Krebs, P.V., and Nichol, J.E., 1973: Land Types of Boulder County. (Map 1:96,000). In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8:Plate 7.
- 603 Madole, R.F., Krebs, P.V., Nichol, J.E., Carrara, P.E., Diesterweg, P.G., Groeneveld, D.P., Irwin, S.W., McVey, S.E., and Sharpe, D.R., 1973: Vegetation of Boulder County. (Map 1:96,000). In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8:Plate 3.

- 604 Madole, R.F., Krebs, P.V., and Sharpe, D.R., 1973: Groundwater Availability in Boulder County. (Map 1:96,000.) In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8:Plate 4.
- 605 Madole, R.F., Krebs, P.V., Sharpe, D.R. and Williams, L.D., 1973: Surficial Geology of Boulder County. (Map 1:96,000.) In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8:Plate 2.
- 606 Madole, R.F., Krebs, P.V., and Williams, L.D., 1973: Bedrock Geology of Boulder County. (Map 1:96,000.) In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8:Plate 1.
- 607 Madole, R., Larson, E., Baker, R., and Rosenbaum, T., 1984: Geology of a late Quaternary lake and Pinedale glacial history, Front Range, Colorado. Guidebook for Field Trip 3, Eighth Biennial Meeting, American Quaternary Association, Boulder, Colorado, August 1984. 28 pp.
- 608 Madole, R.F. and Shroba, R.R., 1979: Till sequence and soil development in the North St. Vrain drainage basin, east slope, Front Range, Colorado. In: Ethridge, F.G. (ed.), Field Guide, North Front Range and Northwest Denver Basin, Colorado. Rocky Mountain Section, Geological Society of America, Boulder, Colorado, 123-178.
- 609 Mahaney, W.C., 1970: Soil genesis on deposits of Neoglacial and late Pleistocene age in the Indian Peaks of the Colorado Front Range. Ph.D. dissertation, University of Colorado, Boulder. 246 pp.
- 610 Mahaney, W.C., 1971: Note on the "Arikaree Stade" of the Rocky Mountains Neoglacial. Journal of Glaciology, 10(58):143-144.
- 611 Mahaney, W.C., 1972: Audubon: new name for Colorado Front Range Neoglacial deposits, formerly called "Arikaree." Arctic and Alpine Research, 4:355-357.
- 612 Mahaney, W.C., 1972: Reinterpretation of the Neoglacial chronology of the central Colorado Front Range. In: Miller, M.M. (ed.), Proceedings, Arctic and Mountain Environments Symposium, April 22-23, East Lansing, Michigan: Michigan State University.
- 613 Mahaney, W.C., 1973: Neoglacial chronology in the Fourth of July Cirque, central Colorado Front Range. Geological Society of America Bulletin, 84:161-170.
- 614 Mahaney, W.C., 1973: Neoglacial chronology of the Fourth of July Cirque, central Colorado Front Range: reply. Geological Society of America Bulletin, 84:3767-3772.
- 615 Mahaney, W.C., 1974: Soil stratigraphy and genesis of Neoglacial deposits in the Arapaho and Henderson Cirques, Central Colorado Front Range. In: Mahaney, W.C. (ed.), Quaternary Environments: Proceedings of a Symposium. Geographical Monographs 5. Toronto: York University, 197-240.

- 616 Mahaney, W.C. and Fahey, B.D., 1976: Quaternary soil stratigraphy of the Front Range, Colorado. In: Mahaney, W.C. (ed.), Quaternary Stratigraphy of North America. Stroudsburg, PA: Dowden, Hutchinson, Ross, 319-352.
- 617 Mahaney, W.C. and Fahey, B.D., 1980: Morphology, composition and age of a buried paleosol, Front Range, Colorado. Geoderma, 23:209-218.
- 618 Maher, L.J., 1972: Absolute pollen diagram of Redrock Lake, Boulder, County, Colorado. Quaternary Research, 2:531-553.
- 619 Maher, L.J., Jr., 1973: Pollen evidence suggests that climatic changes in the Colorado Rockies during the last 5000 years were out of phase with phase in the northeastern United States. Abstracts of the IXth INQUA Congress Meetings, Christchurch, New Zealand, 227-228. Abstract.
- 620 Mancinelli, R.L., 1984: Population dynamics of alpine tundra soil bacteria, Niwot Ridge, Colorado Front Range, Colorado, U.S.A. Arctic and Alpine Research, 16:185-192.
- 621 Mancinelli, R.L. and Keigley, R.B., 1983: Effects of increases in soil loading rates of nitrate, nitrate/sulfate and acid rain on the alpine tundra soil bacterial community. Abstracts of the Annual Meeting of the American Society of Microbiology, New Orleans, Louisiana, 232. Abstract.
- 622 Mancinelli, R.L. and Shulls, W.A., 1983: Population dynamics of soil bacteria from Niwot Ridge, 1981-1982. University of Colorado Long-Term Ecological Research Data Report, 83/5. 13 pp.
- 623 Mancinelli, R.L. and William, J.C., 1984: Factors limiting cellulose decomposition in the alpine tundra. Abstracts of the Annual Meeting of the American Society for Microbiology, St. Louis. 187. Abstract.
- 624 Mandics, P.A., 1984: Advanced system for the interactive analysis and presentation of geophysical data. Proceedings of Oceans, September 10-12, 1984, 502-505.
- 625 Mandics, P.A. and Brown, R.C., 1985: When will the storm get here? Research and Development, January 1985:72-77.
- 626 Marr, J.W., 1958: Lee slope stands in the upper part of the forest-tundra ecotone on Niwot Ridge, Boulder County, Colorado. Journal Colorado-Wyoming Academy of Science, 4(10):41. Abstract.
- 627 Marr, J.W., 1959: Forms of tree islands in alpine tundra. Journal Colorado-Wyoming Academy of Science, 4(11):34. Abstract.
- 628 Marr, J.W., 1961: Ecosystems of the east slope of the Front Range in Colorado. University of Colorado, Series in Biology, 8. 134 pp.
- 629 Marr, J.W., 1964: Utilization of the Front Range tundra, Colorado. In: Crisp, D.J. (ed.), Grazing in Terrestrial and Marine Environments. A Symposium of the British Ecological Society, Bangor, 11-14 April 1962. Oxford: Blackwell Scientific Publications, 109-118.

- 630 Marr, J.W., 1964: The vegetation of the Boulder area. In: Rodeck, H.G. (ed.), Natural History of the Boulder Area, University of Colorado Museum Leaflet, 13:32-42.
- 631 Marr, J.W., 1967: Data on mountain environments. I. Front Range, Colorado, sixteen sites, 1952-1953. University of Colorado Studies, Series in Biology, 27. 110 pp.
- 632 Marr, J.W., 1977: A classification of tree island forms in the high mountains of Colorado. Journal of the Colorado-Wyoming Academy of Sciences, 9(1):35. Abstract.
- 633 Marr, J.W., 1977: The development and movement of tree islands near the upper limit of tree growth in the Southern Rocky Mountains. Ecology, 58:1159-1164.
- 634 Marr, J.W., Clark, J.M., Osburn, W.S., and Paddock, M.W., 1968: Data on mountain environments. III. Front Range, Colorado, four climax regions, 1959-1965. University of Colorado Studies, Series in Biology, 29. 181 pp.
- 635 Marr, J.W., Johnson, A.W., Osburn, W.S., and Knorr, O.A., 1968: Data on mountain environments. II. Front Range, Colorado, four climax regions, 1953-1958. University of Colorado Studies, Series in Biology, 28. 170 pp.
- 636 Marr, J.W., Knorr, O.A., and Viereck, E.M., 1956: Vegetation and environment on the east slope of the Front Range in Colorado. Part V. The Climate Atlas. Report to the Quartermaster Research and Development Command.
- 637 Marr, J.W. and Marr, R.E., 1973: Environment and phenology in the forest-tundra ecotone, Front Range, Colorado. Arctic and Alpine Research, 5(3, Pt. 2):A65-A66.
- 638 Marr, J.W. and Willard, B.E., 1970: Persisting vegetation in an alpine recreation area in the southern Rocky Mountains, Colorado. Biological Conservation, 2(3):97-104.
- 639 Martinelli, M., Jr., 1959: Some hydrologic aspects of alpine snowfields under summer conditions. Journal Geophysical Research, 64:451-455.
- 640 Martinelli, M., Jr., 1964: Accumulation of snow in alpine areas of central Colorado and means of influencing it. Journal of Glaciology, 5(41):625-636.
- 641 Martinelli, M., Jr., 1967: Possibilities of snowpack management in alpine areas. In: Sopper, W.E. and Lull, H.W. (eds.), Proceedings of a Symposium on Forest Hydrology. Oxford: Pergamon Press, 225-231.
- 642 Martinelli, M., Jr., 1973: Snow-fence experiments in alpine areas. Journal of Glaciology, 12(65):291-303. Reprinted in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 241-253.

- 643 Maslin, T.P., 1965: Amphibians and reptiles of the Boulder area. In: Rodeck, H.G. (ed.), Natural History of the Boulder Area. University of Colorado Museum, Leaflet, I3:75-80.
- 644 May, D.E., 1973: Models for predicting composition and production of alpine tundra vegetation from Niwot Ridge, Colorado. M.A. thesis, University of Colorado, Boulder. 99 pp.
- 645 May, D.E., 1974: Phenology and ecotypic variation in alpine tundra vegetation, Niwot Ridge, Colorado. Journal Colorado-Wyoming Academy of Sciences, 7(5):29-30. Abstract.
- 646 May, D.E., 1976: The response of alpine tundra vegetation in Colorado to environmental variation. Ph.D. dissertation, University of Colorado, Boulder. 164 pp.
- 647 May, D.E. and Webber, P.J., 1975: Summary of soil and plant canopy temperatures for the major vegetation types from Niwot Ridge, Colorado, for the period July 1972-October 1974. U.S. Tundra Biome Data Report, 75-8. 129 pp.
- 648 May, D.E. and Webber, P.J., 1982: Spatial and temporal variation of the vegetation and its productivity on Niwot Ridge, Colorado. In: Halfpenny, J.C. (ed.), Ecological studies in the Colorado alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37:35-62.
- 649 May, D.E., Webber, P.J., and May, T.A., 1982: Success of transplanted alpine tundra plants on Niwot Ridge, Colorado. Journal of Applied Ecology, 19(3):965-976.
- 650 May, D.E., Webber, P.J., and May, T.A., 1982: Success of transplanted alpine plants on Niwot Ridge, Colorado. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research Occasional Paper, 37: 73-81.
- 651 May, T.A., 1970: Seasonal foods of white-tailed ptarmigan in Colorado. M.S. thesis, Colorado State University, Fort Collins. 55 pp.
- 652 May, T.A., 1975: Physiological ecology of white-tailed ptarmigan in Colorado. Ph.D. dissertation, University of Colorado, Boulder. 311 pp.
- 653 May, T.A., 1980: Animal ecology: overview . In: Ives, J.D. (ed.), Geocology of the Colorado Front Range. Boulder: Westview Press, 430-435.
- 654 May, T.A. and Braun, C.E., 1971: Seasonal foods of adult white-tailed ptarmigan in Colorado. Transactions Northwest Section of the Wildlife Society. Abstract.
- 655 May, T.A. and Braun, C.E., 1971: A working hypothesis for a study of Colorado white-tailed ptarmigan nutrition. Alaskan Science Conference, 22:36. Abstract.

- 656 May, T.A. and Braun, C.E., 1972: Seasonal foods of adult white-tailed ptarmigan in Colorado. Journal of Wildlife Management, 36:1180-1186. Reprinted in: Ives: J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 478-484.
- 657 May, T.A. and Braun, C.E., 1972. Weight dynamics of free-living white-tailed ptarmigan in Colorado Journal Colorado-Wyoming Academy of Science, 7(2):70-71. Abstract.
- 658 May, T.A. and Braun, C.E., 1973: Gizzard stones from adult white-tailed ptarmigan (Lagopus leucurus) in Colorado. Arctic and Alpine Research, 5:49-57.
- 659 Meaney, C., 1981: Rate and location of cheek marking by pika during the breeding season. Third International Symposium on Chemical Signals, Miami, Florida. Abstract.
- 660 Mears, A.E., Sharpe, D.R., and Madole, R.F., 1973: Water Resources. In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 8:123-130.
- 661 Meierding, T.C., 1982: Late Pleistocene glacial equilibrium-line altitudes in the Colorado Front Range: A comparison of methods. Quaternary Research, 18:289-310.
- 662 Meierding, T.C. and Birkeland, P.W., 1980: Quaternary glaciation of Colorado. In: Kent, H.C. and Porter, K.W. (eds.), Rocky Mountain Association of Geologists - 1980 Symposium, Denver, Colorado, 165-173.
- 663 Mericle, L.W. and Mericle, R.P., 1965: Biological discrimination of differences in natural background radiation levels. Radiation Botany, 5:475-492.
- 664 Mericle, L.W. and Mericle, R.P., 1965: Reassessing the biological role of background terrestrial radiation as a constituent of the natural environment. Health Physics, 11:1607-1620.
- 665 Merritt, J.F., 1976: Population ecology and energy relationships of small mammals of a Colorado subalpine forest. Ph.D. dissertation, University of Colorado, Boulder. 133 pp.
- 666 Merritt, J.F., 1984: Growth patterns and seasonal thermogenesis of Clethrionomys gapperi inhabiting the Appalachian and Rocky Mountains of North America. In: Merritt, J.F. (ed.), Winter Ecology of Small Mammals. Special Publication of Carnegie Museum of Natural History, 10:201-213.
- 667 Merritt, J.F., 1984: Winter Ecology of Small Mammals. Carnegie Museum of Natural History, Pittsburgh, Special Publication, 10. 380 pp.
- 668 Merritt, J.F. and Merritt, J.M., 1978: Population ecology and energy relationships of Clethrionomys gapperi in a Colorado subalpine forest. Journal of Mammalogy, 59:576-598.

- 669 Merritt, J.F. and Merritt, J.M., 1978: Seasonal home ranges and activity of small mammals of a Colorado subalpine forest. Acta Theriologica, 23:195-202.
- 670 Michaels, P.S., 1984: Temporal and spatial analysis of the isothermal snowpack in an alpine environment. M.A. thesis, University of Colorado, Boulder. 99 pp.
- 671 Millett, M.T., 1956: Glaciation in the headwaters of Middle Boulder Creek. M.A. thesis, University of Colorado, Boulder. 38 pp.
- 672 Miller, P.C., Stoner, W.A., and Ehleringer, J.R., 1978: Some aspects of water relations of arctic and alpine regions. In: Tieszen, L.L. (ed.), Vegetation and Production Ecology of an Alaskan Arctic Tundra, New York: Springer-Verlag, 343-369.
- 673 Millington, A.C., 1976: Late Quaternary paleo-environmental history of the Mary Jane Creek Valley. Grand County, Colorado. M.A. thesis, University of Colorado, Boulder, Colorado. 194 pp.
- 674 Mills, R.A., 1977: Introgressive hybridization between Picea pungens and Picea engelmannii in Colorado. M.A. thesis, University of Colorado, Boulder. 46 pp.
- 675 Mills, R.C., 1962: A study of near climax conditions in a spruce-fir ecosystem. M.S. thesis, University of Colorado, Boulder. 68 pp.
- 676 Minges, D.R., 1966: Determination of the effect of topography, season, and stream type on precipitation distribution. M.S. thesis, University of Colorado. 58 pp.
- 677 Mitchell, J.D., 1978: Evaluation and comparison of stream habitats and populations between greenback cutthroat and rainbow trout in the Rocky Mountains of Colorado. M.A. thesis, University of Colorado, Boulder. 53 pp.
- 678 Mitchell, V.L., 1969: The regionalization of climate in montane areas. Ph.D. dissertation, University of Wisconsin, Madison. 159 pp.
- 679 Mitchell, W.W., McKendrick, J.D. and Wooding, F.W., 1973: Responses of arctic, boreal and alpine biotypes in reciprocal transplants. U.S. Tundra Biome Data Report, 73-6. 15 pp.
- 680 Mitton, J.B., 1985: So grows the tree. Natural History, 1:58-65.
- 681 Mitton, J.B. and Andalora, R., 1981: Genetic and morphological relationships between blue spruce, Picea pungens Engelm. and Engelmann spruce, Picea engelmannii Parry, in the Colorado Front Range. Canadian Journal of Botany, 59:2088-2094.
- 682 Mitton, J.B. and Grant, M.C., 1980: Observations on the ecology and evolution of quaking aspen, Populus tremuloides, in the Colorado Front Range. American Journal of Botany, 67:202-209.
- 683 Mitton, J.B. and Grant, M.C., 1984: Associations among protein heterozygosity, growth rate and developmental homeostasis. Annual Review of Ecology and Systematics, 15:479-499.

- 684 Mitton, J.B., Knowles, P., Sturgeon, K.B., Linhart, Y.B., and Davis, M., 1981: Associations between heterozygosity and growth rate variables in western forest trees. In: Conkle, M.T. (ed.), Isozymes of North American Forest Trees and Forest Insects. U.S. Department of Agriculture General Technical Report. PSW-48. 64 pp
- 685 Mooney, H.A. and Billings, W.D., 1961: Comparative physiological ecology of arctic and alpine populations of Oxyria digyna. Ecological Monographs, 31:1-29.
- 686 Moore, R.J., Ehleringer, J., Miller, P.C., Caldwell, M.M., and Tieszen, L.L., 1973: Gas exchange studies of four alpine tundra species at Niwot Ridge, Colorado. In: Bliss, L.C. and Wielgolaski, F.E. (eds.), Proceedings of the Conference on Primary Production and Production Processes, Tundra Biome. Dublin, Ireland, April 1973. Stockholm: IBP Tundra Biome Steering Committee, 211-218.
- 687 Morey, C.A., 1927: Glaciation in the Arapahoe and Albion Valleys. M.S. thesis, University of Colorado, Boulder. 62 pp.
- 688 Murray, C.R., 1934: Geology and ore deposits of the Adit Tunnel and Columbia Mine, Ward, Colorado. M.S. thesis, University of Colorado, Boulder. 41 pp.
- 689 Mutel, C.F., 1973: An ecological study of the plant communities of certain montane meadows in the Front Range of Colorado. M.A. thesis, University of Colorado. 77 pp.
- 690 Mutel, C.F. and Emerick, J.C., 1984: From Glacier to Grassland: The Natural History of Colorado. Boulder: Johnson Books. 238 pp.
- 691 Neldner, K.H. and Pennak, R.W., 1955: Seasonal faunal variations in a Colorado alpine pond. American Midland Naturalist, 53:419-430. Reprinted in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 436-447.
- 692 Nelson, A., 1907: Some new western plants and their collectors. Proceedings Biological Society, Washington, 10:33-40.
- 693 Nelson, A.R., Millington, A.C., Andrews, J.T., and Nichols, H., 1979: Radiocarbon-dated upper Pleistocene glacial sequence, Fraser Valley, Colorado Front Range. Geology, 7:410-414.
- 694 Nelson, R.A., 1982: Plants of Rocky Mountain National Park. Estes Park, Co.: Rocky Mountain Nature Association. 167 pp.
- 695 Nichol, J.E., 1973: Land types and associated land use from photomorphic mapping in Boulder County, Colorado. M.A. thesis. University of Colorado, Boulder. 135 pp.
- 696 Nichol, J., 1973: Land use and tenure. In: Madole, R.F. (ed.), Environmental Inventory and Land Use Recommendations for Boulder County, Colorado. University of Colorado, Institute of Arctic and Alpine, Occasional Paper 8:175-188.

- 697 Nichol, J.E., 1975: Photomorphic mapping for land-use planning. Photogrammetric Engineering and Remote Sensing, 41:1253-1258.
- 698 Nicholls, J.M., 1973: The airflow over mountains: Research 1958-1972. World Meteorological Organization, Technical Note No. 127. WMO No. 355. 73pp.
- 699 Nichols, H., 1982: Review of late Quaternary history of vegetation and climate in the mountains of Colorado. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37:27-33.
- 700 Nichols, H., Short, S., Elias, S., and Harbor, J., 1984: Sedimentation and palynology in high-level lakes, Front Range. Guide for Field Trip II, Eighth Biennial Meeting, American Quaternary Association, Boulder, Colorado, August 1984. 21 pp.
- 701 Norton, C. and Nelson, W.C., 1977: High altitude lakes: phytoplankton I. Journal of the Colorado-Wyoming Academy of Sciences, 9:10. Abstract.
- 702 Norton, J.W., 1961: Red snow in Colorado. Journal Colorado-Wyoming Academy of Science, 5(2):37. Abstract.
- 703 Norton, R.B., Roberts, J.M., Huebert, B.J., 1983: Troposphere oxalate. Geophysical Research Letters, 10(7):517-520.
- 704 Nunamaker, R. and Thomas, B.O., 1977: Aquatic studies of the St. Vrain Creek, Colorado. Journal of the Colorado-Wyoming Academy of Sciences, 9(1):11. Abstract.
- 705 Oder, A.L., 1932: Preliminary survey of the faunas and flora of a series of morainal lakes in the montane zone near Silver Lake, Colorado. M.A. thesis, University of Colorado, Boulder. 53 pp.
- 706 Olson, B.L., 1969: An Archaic site in the Colorado Front Range. Journal Colorado-Wyoming Academy of Science, 6(2):43. Abstract.
- 707 Osburn, W.S., 1957: Alpine tundra ecosystems of the Front Range in Colorado. Bulletin Ecological Society of America, 38(3):70. Abstract.
- 708 Osburn, W.S., Jr., 1958: Characteristics of the Kobresia bellardi meadow stand ecosystem in the Front Range, Colorado. Journal Colorado-Wyoming Academy of Sciences, 4(10):38-39. Abstract.
- 709 Osburn, W.S., Jr., 1958: Ecology of winter snow-free areas of the alpine tundra of Niwot Ridge, Boulder County, Colorado. Ph.D. dissertation, University of Colorado. 77 pp.
- 710 Osburn, W.S., Jr., 1963: The dynamics of fallout distribution in a Colorado alpine tundra snow accumulation ecosystem, In: Schults, V. and Klement, A.W. (eds.), Radioecology. New York: Reinhold Publishing Company, 51-71.
- 711 Osburn, W.S., Jr., 1963: Influence of four Rocky Mountain regional environments on pea plants grown from irradiated seeds. In: Schultz, V. and Klement, A.W., Jr. (eds.), Radioecology. New York: Reinhold Publishing Company, 319-324.

- 712 Osburn, W.S., 1966: Radioecology of the Front Range. Terminal Report on U.S. Atomic Energy Commission Contract No. At (11-1-1191) with the University of Colorado, Boulder. 118 pp.
- 713 Osburn, W.S., 1967: Ecological concentration of nuclear fallout in a Colorado mountain watershed. In: Aberg, B. and Hungate, F.P. (eds.), Radioecological Concentration Processes. New York: Pergamon Press, 675-709.
- 714 Osburn, W.S., Jr., 1969: Accountability of nuclear fallout deposited in a Colorado high mountain bog. In: Nelson, D.G. and Evans, F.C. (eds.), Symposium on radioecology, US AEC Report, CONF-670503, 578-86. New York: US Atomic Energy Commission Operations Office.
- 715 Osburn, W.S., Benedict, J.B., and Corte, A.E., 1965: Frost phenomena, patterned ground, and ecology on Niwot Ridge. In: Schultz, C.B. and Smith, H.T.U. (eds.), Guidebook for One-Day Field Conferences, Boulder Area, Colorado, International Association for Quaternary Research, VII Congress, 21-26.
- 716 Osterhout, G.E., 1907: Flora of Colorado. Muhlenbergia, 3:63-67.
- 717 Osterhout, G.E., 1919: Additions to the flora of Colorado. Bulletin of the Torrey Botanical Club, 46:53-56.
- 718 Outcalt, S.I. and Benedict, J.B., 1965: Photointerpretation of two types of rock glacier in the Colorado Front Range, U.S.A. Journal of Glaciology, 5(42):849-856.
- 719 Outcalt, S.I. and MacPhail, D.D., 1965: A survey of Neoglaciation in the Front Range of Colorado. University of Colorado Studies, Series in Earth Science, 4. 124 pp. Summarized in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 203-208.
- 720 Paddock, M.W., 1959: Some precipitation patterns in the Colorado Front Range as related to elevations and weather types. Journal Colorado-Wyoming Academy of Sciences, 4(11):38. Abstract.
- 721 Paddock, M.W., 1959: Weather types of the east slope of the Colorado Front Range (abstracted). Attachment VIIF to Technical Progress Report of the Institute of Arctic and Alpine Research to the United States Atomic Energy Commission, Contract No. AT(11-1)435. 4 pp.
- 722 Paddock, M.W., 1961: The food habits of the pika, Ochotona princeps saxatilis Bangs. M.A. thesis, University of Colorado. 81 pp.
- 723 Paddock, M.W., 1964: Climate and topography of the Boulder region. In: Rodeck, H.G. (ed.), Natural History of the Boulder Area. University of Colorado Museum, Leaflet, 13:25-33.
- 724 Paddock, M.W., 1964: Science Lodge conference on inland field stations. BioScience 14(3):41-42.

- 725 Patterson, C.G., 1980: Geochemistry of Boulder Creek, Boulder, Jefferson, and Gilpin Counties, Colorado. M.S. thesis, University of Colorado, Boulder. 231 pp.
- 726 Pearcy, R.W., 1969: Physiological and varied environment studies of ecotypes of Deschampsia caespitosa (L.) Beauv. Ph.D. dissertation. Colorado State University, Fort Collins. 184 pp.
- 727 Pearcy, R.W. and Ward, R.T., 1972: Phenology and growth of Rocky Mountain populations of Deschampsia caespitosa at three elevations in Colorado. Ecology, 53:1171-1178.
- 728 Pearson, R.C. and Speltz, C.N., 1975: Mineral resources of the Indian Peaks study area, Boulder and Grand Counties, Colorado. U.S. Geological Survey, Open-File Report, 75-500. 175 pp.
- 729 Pearson, R.C. and U.S. Bureau of Mines, 1980: Mineral resources of the Indian Peaks study area, Boulder and Grand Counties, Colorado. U.S. Geological Survey Bulletin, 1363. 109 pp.
- 730 Peet, R.K., 1978: Forest vegetation of the Colorado Front Range: Patterns of species diversity. Vegetatio, 37:65-78.
- 731 Peet, R.K., 1978: Latitudinal variation in southern Rocky Mountain forests. Journal of Biogeography, 5:275-289.
- 732 Peet, R.K., 1981: Forest vegetation of the Colorado Front Range: composition and dynamics. Vegetatio, 45:3-75.
- 733 Pennak, R.W., 1941: A bibliography of high-altitude limnological investigations in the western United States. University of Colorado Studies, Series D-1:225-229.
- 734 Pennak, R.W., 1945: An introduction to the limnology of northern Colorado. University of Colorado Studies, Series D-1:203-220.
- 735 Pennak, R.W., 1945: Hydrography and morphometry of some northern Colorado Lakes. University of Colorado Studies, Series D-2:245-262.
- 736 Pennak, R.W., 1945: Some aspects of the regional limnology of northern Colorado. University of Colorado Studies, Series D-2: 263-293.
- 737 Pennak, R.W., 1955: Comparative limnology of eight Colorado mountain lakes. University of Colorado Studies, Series in Biology, 2. 75 pp.
- 738 Pennak, R.W., 1963: Ecological and radiocarbon correlations in some Colorado mountain lake and bog deposits. Ecology, 44:1-15.
- 739 Pennak, R.W., 1968: Field and experimental winter limnology of three Colorado mountain lakes. Ecology, 49:505-520.
- 740 Petersen, B., 1968: Pollination of some tundra plants with miniature flowers on Niwot Ridge in Boulder County, Colorado. Ph.D. dissertation, University of Colorado, Boulder. 106 pp.

- 741 Peterson, B., 1977: Pollination by ants in the alpine tundra of Colorado. Transactions Illinois State Academy of Science, 70(3/4):349-355.
- 742 Petersen, B., 1977: Pollination of Thlaspi alpestre by selfing and by insects in the alpine zone of Colorado. Arctic and Alpine Research, 9:211-215.
- 743 Pewé, T.L., 1983: Alpine permafrost in the contiguous United States: A review. Arctic and Alpine Research, 15:145-156.
- 744 Phillips, M.P., Goldan, P.D., Sievers, R.E., and Fehsenfeld, F.C., 1979: Enhancement of electron capture detector sensitivity to non-electron attaching compounds using N<sub>2</sub>O carrier gas doping. American Society for Mass Spectrometry Meeting, Seattle. Abstract.
- 745 Phillips, V.D., III, 1982: Responses by alpine plants and soils to microtopography within sorted polygons. Ph.D. dissertation, University of Colorado, Boulder. 208 pp.
- 746 Plam, M. and Ives, J.D., 1978: A prototype avalanche map (1:24,000) of the Indian Peaks, Colorado Front Range. American Association of Geographers Program Abstracts, New Orleans. Abstract.
- 747 Pollock, R., 1970: What colors the mountain snow? Sierra Club Bulletin, 55(4): 18-20.
- 748 Porter, C.L., 1932: Some arctic-alpine mosses from the central Rocky Mountains. The Bryologist, 35:11.
- 749 Pratte, J.F. and Clark, R.J., 1983: PROFS MESONET - description and performance. Preprint volume: Fifth Symposium on Meteorological Observations and Instrumentation, Toronto, Ontario, Canada, April 11-15, 1983. Boston, Massachusetts: American Meteorological Society, 303-307.
- 750 Prior, R.V., 1963: Bryophytes of Rocky Mountain National Park. Proceedings Southwestern and Rocky Mountain Division American Association for the Advancement of Science, 22. Abstract.
- 751 Quick, H.F., 1964: Survey of the mammals. In: Rodeck, H.G. (ed.), Natural History of the Boulder Area, University of Colorado Museum, Leaflet, 13:81-89.
- 752 Quick, H.F., 1966: Population of small mammals in the Boulder City watershed and a preliminary estimate of biomass cycle in 1964. Attachment No. 11 to USAEC Contract No. AT(11-1)-1191. Radio-ecology of the Colorado Front Range, Osburn, W.S., Principal Investigator, mimeographed.
- 753 Quinn, B. G., 1962: Seasonal plankton studies on a Colorado mountain flowage. Ph.D. dissertation, University of Colorado, Boulder. 89 pp.
- 754 Rall, G., 1963: Soil fungi of the alpine zones of the Rocky Mountains. Proceedings Southwestern and Rocky Mountain Division American Association for the Advancement of Science, 24. Abstract.

- 755 Ramaley, F., 1901: Remarks on the distribution of plants in Colorado east of the Divide. Postelsia, 1:19-53.
- 756 Ramaley, F., 1907: Plant zones in the Rocky Mountains of Colorado. Science, 26:642-643.
- 757 Ramaley, F., 1908: Color variation in some Colorado flowers. Plant World, 11:17-18.
- 758 Ramaley, F., 1908: Plant-zones in the Rocky Mountains. Scottish Geographical Magazine, 24:37-38.
- 759 Ramaley, F., 1908: The silva of Colorado III: Woody plants of Boulder County. University of Colorado Studies, 5:47-63.
- 760 Ramaley, F., 1909: The University of Colorado Mountain Laboratory. University of Colorado Studies, 7(1):91-95.
- 761 Ramaley, F., 1910: Remarks on some northern Colorado plant communities with special reference to Boulder Park (Tolland, Colorado). University of Colorado Studies, 7(3):223-236.
- 762 Ramaley, F., 1914: The amount of bare ground in some mountain grasslands. Botanical Gazette, 57:526-528.
- 763 Ramaley, F., 1915: The relative importance of different species in a mountain grassland. Botanical Gazette, 60:154-157.
- 764 Ramaley, F., 1916: Dry grassland of a high mountain park in northern Colorado. The Plant World, 19(9):249-270.
- 765 Ramaley, F., 1916: Quadrat studies in a mountain grassland. Botanical Gazette, 62:70-74.
- 766 Ramaley, F., 1917: Soil moisture index. Botanical Gazette, 63:151-152.
- 767 Ramaley, F., 1917: Vascular plants of the Tolland region in Colorado. University of Colorado Studies, 12:27-51.
- 768 Ramaley, F., 1919: The role of sedges in some Colorado plant communities. American Journal of Botany, 6:120-130.
- 769 Ramaley, F., 1919: Xerophytic grasslands at different altitudes in Colorado. Bulletin of the Torrey Botanical Club, 46:37-52.
- 770 Ramaley, F., 1920: Subalpine lake-shore vegetation in North-Central Colorado. American Journal of Botany, 7:57-74.
- 771 Ramaley, F., 1927: Colorado Plant Life. Boulder: University of Colorado Press. 229 pp.
- 772 Ramaley, F. and Mitchell, L.A., 1911: Ecological cross-section of Boulder Park. University of Colorado Studies, 8:277-287.

- 773 Ramaley, F. and Robbins, W.W., 1909: Studies in lake and streamside vegetation, 1. Redrock Lake near Ward, Colorado. University of Colorado Studies, 6:133-168.
- 774 Raven, K.A., 1948: Ecology of a timberline area in the Colorado Front Range. M.S. thesis, University of Colorado, Boulder. 83 pp.
- 775 Ray, L.L., 1940: Glacial chronology of the southern Rocky Mountains. Geological Society of America Bulletin, 51:1851-1918.
- 776 Ray, R.J., Krantz, W.B., Caine, T.N., and Gunn, R.D., 1983: A mathematical model for patterned ground: sorted polygons and stripes, and underwater polygons. Permafrost Fourth International Conference Proceedings. Washington, D.C.: National Academy Press, 1036-1041.
- 777 Ray, R.J., Krantz, W.B., Caine, T.N., and Gunn, R.D., 1983: A model for sorted patterned-ground regularity. Journal of Glaciology, 29(102):317-337.
- 778 Razum, B.A., 1979: Mineralogy and geochemistry of lake deposits from Devlin's Park, Boulder County, Colorado. M.S. thesis, University of Colorado, Boulder. 78 pp.
- 779 Reddy, M.M., Liebermann, T.D., Jellinski, J.C., Caine, N., 1985: Variation in pH during summer storms near the Continental Divide in Central Colorado, U.S.A. Arctic and Alpine Research, 17:79-88.
- 780 Reed, E.L., 1917: Meadow vegetation in the montane region of Northern Colorado. Bulletin of the Torrey Botanical Club, 44:97-109.
- 781 Reed, E., 1970: Summer seston crops in Colorado alpine and montane lakes. Archiv fur Hydrobiologie, 67:485-501.
- 782 Reheis, M.J., 1974: Source, transportation, and deposition of debris on Arapaho Glacier, Front Range, Colorado. M.S. thesis, University of Colorado, Boulder. 71 pp.
- 783 Reheis, M.J., 1974: Source, transportation, and deposition of debris on Arapahoe Glacier, Front Range, Colorado. Geological Society America, Abstracts with Programs, 6(7):469-470. Abstract.
- 784 Reheis, M.J., 1975: Source, transportation and deposition of debris on Arapaho Glacier, Front Range, Colorado, U.S.A. Journal of Glaciology, 4(72):407-420. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 174-186.
- 785 Reid, W.H., 1974: Analysis of plant ecological systems through simulation of individual organisms. Ph.D. dissertation, University of Colorado. 265 pp.
- 786 Retzer, J.L., 1956: Alpine soils of the Rocky Mountains. Journal of Soil Science, 7:22-32.
- 787 Retzer, J.L., 1974: Alpine soils. In: Ives, J.D. and Barry, R.G. (eds.), Arctic and Alpine Environments. London: Methuen, 771-802.

- 788 Reynolds, D.W., 1983: Prototype workstation for mesoscale forecasting. Bulletin of the American Meteorological Society, 64(3):264-273.
- 789 Reynolds, G.F., 1978: Record of decision for USDA, Forest Service. Environmental Assessment Report, Como Creek Greenback Cutthroat Trout Restoration Project - Roosevelt National Forest, Boulder, County, Colorado. USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado.
- 790 Richmond, G.M., 1960: Glaciation of the east slope of Rocky Mountain National Park, Colorado. Bulletin of the Geological Society of America, 71:1371-1382.
- 791 Richmond, G.M., 1965: Glaciation of the Rocky Mountains. In: Wright, H.E., Jr. and Frey, D.G. (eds.), The Quaternary of the United States. Princeton: Princeton University, 217-230.
- 792 Richmond, G.M., 1974: Raising the Roof of the Rockies. Bozeman, Montana: Artcraft Printers. 81 pp.
- 793 Rink, L.P., 1984: Temporal and spatial distribution of *Acomastylis rossii* over an alpine tundra site. New Mexico Journal of Science, 24(1):47-48.
- 794 Rissing, J.M. and Thorn, C.E., 1985: Particle size and clay mineral distribution within sorted and nonsorted circles and the surrounding parent material, Niwot Ridge, Front Range, Colorado, U.S.A. Arctic and Alpine Research, 17:153-163.
- 795 Robbins, W.W., 1910: Climatology and vegetation in Colorado. Botanical Gazette, 49:256-280.
- 796 Robbins, W.W., 1912: Preliminary list of the algae of Colorado. University of Colorado Studies, 9:105-118.
- 797 Robbins, W.W., 1918: Suggestion of vegetation in Boulder Park, Colorado. Botanical Gazette, 65:493-525.
- 798 Roberts, J.M., Fehsenfeld, F.C., Albritton, D.L., and Sievers, R.E., 1984: Sampling and analysis of monoterpene hydrocarbons in the atmosphere with Tenax GC porous polymer. In: Keith, L.H. (ed.), Identification and Analysis of Organic Pollutants in Air. Woburn, Massachusetts: Butterworth Publishers, 371-387.
- 799 Roberts, J.M., Goldan, P.D., Albritton, D.L., Fehsenfeld, F.C. and Sievers, R.E., 1982: Measurements of atmospheric hydrocarbons at a remote rural site. Proceedings 2nd Symposium on the Composition of the Nonurban Troposphere. Williamsburg, VA, May 25, 1982. American Meteorological Society. Boston, Massachusetts. 281-283.
- 800 Roberts, J.M., Goldan, P.D., Albritton, D.L., and Fehsenfeld, F.C., 1982: Techniques for the measurements of atmospheric hydrocarbons at a remote rural site. Symposium on Pollutant Monitoring of Ambient Air and Stationary Sources, Raleigh, NC, May 4-7, 1982.

- 801 Rodeck, H.G., 1941: Distribution problems in some moraine ponds. University of Colorado Studies, Series D, 1(3).
- 802 Rodeck, H.G., (ed.), 1964: Natural History of the Boulder Area. University of Colorado Museum, Leaflet, 13. 100 pp.
- 803 Rosenbaum, J.G., 1980: Comparison of the paleomagnetic records in sediments from two late Pleistocene lake basins in Colorado. Ph.D. dissertation, University of Colorado, Boulder. 148 pp.
- 804 Rosenbaum, J.G. and Larson, E.E., 1983: Paleomagnetism of two late Pleistocene lake basins in Colorado--An evaluation of detrital remanent magnetization as a recorder of the geomagnetic field. Journal of Geophysical Research, 88:10611-10624.
- 805 Ruwisch, K., 1983: Windflow near soil surface/upper 4th of July Valley. Ph.D. dissertation, University of Münster, West Germany.
- 806 Rydberg, P.A., 1904: Studies on the Rocky Mountain flora, XII. Bulletin of the Torrey Botanical Club, 31:555-575.
- 807 Rydberg, P.A., 1904: Studies on the Rocky Mountain Flora, XIII. Bulletin of the Torrey Botanical Club, 31:631-655.
- 808 Rydberg, P.A., 1905: Studies on the Rocky Mountain flora, XV. Bulletin of the Torrey Botanical Club, 32:597-610.
- 809 Rydberg, P.A., 1906: Studies on the Rocky Mountain flora, XVI. Bulletin of the Torrey Botanical Club, 33:137-161.
- 810 Rydberg, P.A., 1913: Phytogeographical notes on the Rocky Mountain Region I: alpine region. Bulletin of the Torrey Botanical Club, 40:677-686.
- 811 Rydberg, P.A., 1914: Phytogeographical notes on the Rocky Mountain Region II: Origin of the alpine flora. Bulletin of the Torrey Botanical Club, 41:89-103.
- 812 Rydberg, P.A., 1914: Phytogeographical notes on the Rocky Mountain Region III: Formations the alpine zone. Bulletin of the Torrey Botanical Club, 41:459-474.
- 813 Rydberg, P.A., 1915: Phytogeographical notes on the Rocky Mountain Region IV: Forests of the subalpine and montane zones. Bulletin of the Torrey Botanical Club, 42:11-25.
- 814 Rydberg, P.A., 1915: Phytogeographical notes on the Rocky Mountain Region V: Grasslands of the subalpine and montane zones. Bulletin of the Torrey Botanical Club, 42:629-642.
- 815 Rydberg, P.A., 1922: Flora of the Rocky Mountains and Adjacent Plains. 2nd edition. Published by the author, New York. 1143 pp.
- 816 Rydberg, P.A., 1917: Phytogeographical notes on the Rocky Mountain region, VII: Formations in the subalpine zone. Bulletin of the Torrey Botanical Club, 44:431-454.

- 817 Saether, O.A., 1970: Chironomids and other invertebrates from North Boulder Creek, Colorado. University of Colorado Studies, Series in Biology, 31:59-114.
- 818 Salisbury, F.B. and Spomer, G.G., 1964: Leaf temperatures of alpine plants in the field. Planta, 60:497-505.
- 819 Salisbury, F.B. Spomer, G.G., Sobral, M., and Ward, R.T., 1968: Analysis of an alpine environment. Botanical Gazette, 129:16-32.
- 820 Sayers, R.L. and Ward, R.T., 1966: Germination responses in alpine species. Botanical Gazette, 127:11-16.
- 821 Schmitz, E., 1959: Seasonal biotic events in two Colorado alpine tundra ponds. American Midland Naturalist, 61:424-446.
- 822 Schmoller, R.R., 1968: Ecology of alpine tundra Arachnida and Carabidae (Coleoptera) in Colorado. Ph.D. dissertation. University of Colorado, Boulder. 81 pp.
- 823 Schmoller, R., 1970: Life histories of alpine tundra Arachnida in Colorado. American Midland Naturalist, 83:119-133.
- 824 Schmoller, R., 1971: Habitats and zoogeography of alpine tundra Arachnida and Carabidae (Coleoptera) in Colorado. Southwestern Naturalist, 15(3):319-329.
- 825 Schmoller, R., 1971: Nocturnal arthropods in the alpine tundra of Colorado. Arctic and Alpine Research, 3:345-352. Reprinted in: Ives, J.D. (ed.), 1980: Geocology of the Colorado Front Range. Boulder: Westview Press, 460-467.
- 826 Schultz, C.B. and Smith, H.T.U., (eds.), 1965: Guidebook for One-Day Field Conferences, Boulder Area, Colorado. International Association for Quaternary Research, VIIth Congress. 80 pp.
- 827 Schwan, H.E. and Costello, D.F., 1951: The Rocky Mountain alpine type: range conditions, trends, and land use. (A preliminary report). U.S.D.A. Forest Service.
- 828 Scott-Williams, B.W., 1965: The ecology of the alpine tundra on Trail Ridge. In: Schultz, C.G. and Smith, H.T.U. (eds.), Guidebook for One-Day Field Conferences, Boulder Area, Colorado. International Association for Quaternary Research, VIIth Congress, 13-16.
- 829 Scott-Williams, B.W., 1967: Effect of visitors on alpine tundra associations in Rocky Mountain National Park, Colorado, U.S.A. Proceedings and Papers of the IUCN 10th Technical Meeting, Lucerne, June 1966. IUCN Publications New Series, 7:214-216.
- 830 Shankman, D., 1984: Tree regeneration following fire as evidence of timberline stability in the Colorado Front Range, U.S.A. Arctic and Alpine Research, 16:413-417.

- 831 Shea, K.L., 1985: Mating systems and population structure in Engelmann spruce and subalpine fir. Ph.D. dissertation, University of Colorado, Boulder. 170 pp.
- 832 Shope, P.F., 1927: Stem and leaf structure of aspen at different altitudes in Colorado. American Journal of Botany, 14:116-119.
- 833 Short, S.K. and Elias, S.A., 1984: Holocene vegetational history of the Colorado Front Range. 6th International Palynological Conference, University of Calgary, Alberta. Abstract. 153 pp.
- 834 Short, S.K., Nichols, H., Briggs, W., Elias, S.A., and Andrews, J.T., 1983: Paleoenvironmental studies in the Colorado Front Range. University of Colorado Long-Term Ecological Research Data Report, 83/4. 38 pp.
- 835 Shroba, R. and Madole, R., 1984: Front Range glacial deposits. Guide for Field Trip 5, Eighth Biennial Meeting, American Quaternary Association, Boulder, Colorado, August 194. 27 pp.
- 836 Shroba, R.R., Rosholt, J.N., and Madole, R.F., 1983: Uranium-trend dating and soil B horizon properties of till of Bull Lake age, North St. Vrain drainage basin, Front Range, Colorado. Geological Society of America, Abstracts with Programs, 15:431. Abstract.
- 837 Shurlls, W.A., 1976: Microbial populations of the Colorado alpine tundra. Arctic and Alpine Research, 8:387-391.
- 838 Shurlls, W.A., 1982: A review of some aspects of bacteriological decomposition of plant litter. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37: 138-147.
- 839 Shurlls, W.A. and Mancinelli, R.L., 1982: Comparative study of metabolic activities of bacteria in three ecoregions of the Colorado Front Range, U.S.A. Arctic and Alpine Research, 14:53-58.
- 840 Shushan, S., Flock, J.W., and Bonde, E.K., 1983: Plant voucher specimens from Niwot Ridge. University of Colorado Long-Term Ecological Research Working Paper, 83/3. 8 pp.
- 841 Sievers, R.E., Roberts, J.M., and Fehsenfeld, F.C., 1982: Measurement of monoterpane hydrocarbons in rural atmospheres. Presented before the division of Environmental Chemistry, American Chemical Society, Kansas City, MO, September 1982.
- 842 Simkins, E.C., 1931: The alpine flora of Mt. Niwot, Colorado. M.A. thesis. University of Colorado, Boulder. 68 pp.
- 843 Simms, H.R., 1965: Fungi of two spruce-fir forests in Northern and Southern Colorado. Ph.D. dissertation, University of Colorado, Boulder. 94 pp.
- 844 Simms, H.R., 1967: On the ecology of Herpotrichia nigra. Mycologia, 59(5):902-909.

- 845 Sims, P.K., 1963: Geology of uranium and associated ore deposits, central part of the Front Range mineral belt, Colorado. U.S. Geological Survey Professional Paper, 371. 119 pp.
- 846 Sims, P.K. and Sheridan, D.M., 1964: Geology of uranium deposits in the Front Range, Colorado (with sections by King, R.U., Moore, F.B., Richter, D.H., and Schlottmann, J.D.) U.S. Geological Survey Bulletin, 1159. 116 pp.
- 847 Sims, P.K. and Taylor, R.B., 1962: Precambrian Gabbro in the Central Front Range, Colorado. U.S. Geological Survey, Professional Paper, 450-D, Article No. 154.
- 848 Sinclair, R.A. (ed.), 1983: Long-Term Ecological Research Data Management Workshop held at Urbana-Champaign, Illinois. November 22-23, 1982. Illinois State Water Survey Miscellaneous Publication, 72. 24 pp.
- 849 Slaymaker, O., 1984: High mountain environments. Progress in Physical Geography, 8:118-128.
- 850 Smith, P., 1981: A Look at Boulder: From Settlement to City. Boulder, Colorado: Pruett Publishing Company. 263 pp.
- 851 Solheim, W.G. and Rall, G., 1963: Patterns of distribution of the Melamporaceae in the Rocky Mountains of the United States. Proceedings Southwestern and Rocky Mountain Division American Association for the Advancement of Science, 23. Abstract.
- 852 Somers, L.P., III., 1971: Dialects in Southern Rocky Mountain pikas, Ochotona Princeps (lagomorpha). Ph.D. dissertation, University of Colorado. 32 pp.
- 853 Southwick, C.H., Golian, S.C., Whitworth, M.R., and Halfpenny, J.C., 1984: Population studies of pika: a theory of population stability. American Zoologist, 24: 88A. Abstract.
- 854 Southwick, C.H., Golian, S., Whitworth, M.R., and Halfpenny, J.H., 1985: Population patterns of pika: A theory of population stability. In: Fuller, W.A., Nietfield, M.T., and Harris, M.A. (eds.), Abstracts of Papers and Posters, Fourth International Theriological Congress, Edmonton, 13-20 August, 1985. Abstract No. 589, Session W08. Abstract.
- 855 Southwick, C.H., Whitworth, M.R., Golian, S., and Halfpenny, J.C., 1984: Population functions of pikas in Central Colorado. New Mexico Journal of Science, 24(1):80. Abstract.
- 856 Southwick, C.H., Whitworth, M.R., Golian, S.C., and Halfpenny, J.C., 1984: Relative stability of pika populations (Ochotona princeps) in Colorado. Bulletin of Ecological Society of America, 65(2):95. Abstract.
- 857 Spomer, G.G., 1964: Physiological ecology studies of alpine cushion plants. Physiologia Plantarum, 17:717-724.
- 858 Spomer, G.G. and Salisbury, F.B., 1968: Eco-physiology of Geum turbinatum and implications concerning alpine environments. Botanical Gazette, 129(1):33-49.

- 859 Stafford, W.L., 1951: Geology of the Phoenix-Rollinsville Area, Boulder and Gilpin Counties, Colorado. M.S. thesis, University of Colorado, Boulder. 32 pp.
- 860 Stein, J.R. and Amundsen, C.C., 1967: Studies on snow algae and fungi from the Front Range of Colorado. Canadian Journal of Botany, 45:2034-2046.
- 861 Steward, D.G., 1977: Tree-island communities of Rocky Mountain National Park. M.A. thesis, University of Colorado, Boulder. 140 pp.
- 862 Stinson, N.S., 1977: Species diversity, resource partitioning, and demography of small mammals in a subalpine deciduous forest. Ph.D. dissertation, University of Colorado. 238 pp.
- 863 Stinson, N., Jr., 1978: Seasonal survival rates in subalpine mammals. Journal Colorado-Wyoming Academy of Sciences, 10(1):43. Abstract.
- 864 Street, F.A., 1973: A study of tors in the Front Range of the Rocky Mountains in Colorado, with special reference to their value as an indicator of nonglaciation. M.A. thesis, University of Colorado, Boulder. 241 pp.
- 865 Sturgeon, K.B., 1980: Evolutionary interactions between the mountain pine beetle, Dendroctonus ponderosae Hopkins, and its host trees in the Colorado Rocky Mountains. Ph.D. dissertation, University of Colorado, Boulder. 160 pp.
- 866 Suanraksa, S., 1960: Differences in metabolic rate between grasshoppers from high and low altitudes. M.S. thesis, University of Colorado, Boulder. 61 pp.
- 867 Sudworth, G.B., 1934: Poplars, principal tree willows and walnuts of the Rocky Mountain region. U.S. Department of Agriculture Technical Bulletin, 420. 112 pp.
- 868 Sweeten, J.C., 1984: Applications of the precipitation-runoff modeling system to the Boulder alpine watershed. M.S. thesis, University of Colorado, Boulder. 119 pp.
- 869 Taussig, W.H., 1962: An ecological study of Formica neorufibarbis gelida Wheeler in the alpine tundra of Colorado. M.S. thesis, University of Colorado, Boulder. 91 pp.
- 870 Thacher, G.W., 1891: Alpine flowers of Colorado. Appalachia, 5:284-291.
- 871 Thilenius, J.F., 1975: Alpine range management in the Western United States--principles, practices, and problems: the status of our knowledge. U.S.D.A. Forest Service Research Paper, RM-157. 32 pp.
- 872 Thorn, C.E., 1974: An analysis of nivation processes and their geomorphic significance, Niwot Ridge, Colorado Front Range. Ph.D. dissertation, University of Colorado, Boulder. 351 pp.
- 873 Thorn, C.E., 1974: Nivation: a reappraisal. Geological Society of America Abstracts with Programs, 6(7):987. Abstract.

- 874 Thorn, C.E., 1975: Influence of late-lying snow on rock-weathering rinds. Arctic and Alpine Research, 7:373-378.
- 875 Thorn, C.E., 1975: A model of nivation processes. Proceedings of the Association of American Geographers, 7:243-246.
- 876 Thorn, C.E., 1976: Quantitative evaluation of nivation in the Colorado Front Range. Geological Society of America Bulletin, 87:1169-1178. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of Colorado Front Range. Boulder: Westview Press, 164-173.
- 877 Thorn, C.E., 1978: A preliminary assessment of the geomorphic role of pocket gophers in the alpine zone of the Colorado Front Range. Geografiska Annaler, 60A:181-187.
- 878 Thorn, C.E., 1978: The geomorphic role of snow. Annals of the Association of American Geographers, 68:414-425.
- 879 Thorn, C.E., 1979: Bedrock freeze-thaw weathering regime in an alpine environment, Colorado Front Range. Earth Surface Processes, 4:211-228.
- 880 Thorn, C.E., 1979: Ground temperatures and surficial transport in colluvium during snowpatch meltout: Colorado Front Range. Arctic and Alpine Research, 11:41-52.
- 881 Thorn, C.E., 1980: Alpine bedrock temperatures: An empirical study. Arctic and Alpine Research, 12:73-86.
- 882 Thorn, C.E., 1982: Gopher disturbance: its variability by Braun-Blanquet vegetation units in the Niwot Ridge alpine tundra zone, Colorado Front Range, U.S.A. Arctic and Alpine Research, 14:45-51.
- 883 Thorn, C.E. (ed.), 1982: Space and Time in Geomorphology. The 'Binghamton' Symposia in Geomorphology: International Series, No. 12. London: George Allen and Unwin. 379 pp.
- 884 Thorn, C.E. and Darmody, R.G., 1980: Contemporary eolian sediments in the alpine zone of the Colorado Front Range. Geografiska Annaler, 60A:181-187.
- 885 Thorn, C.E. and Darmody, R.G., 1985: Grain-size distribution of the insoluble component of contemporary eolian deposits in the alpine zone, Front Range, Colorado, U.S.A. Arctic and Alpine Research, 17:433-442.
- 886 Thorn, C.E. and Darmody, R.G., 1985: Grain-size sampling and characterization of eolian lag surfaces within alpine tundra, Niwot Ridge, Front Range, Colorado, U.S.A. Arctic and Alpine Research, 17:443-450.
- 887 Thorn, C.E. and Hall, K., 1980: Nivation: An arctic-alpine comparison and reappraisal. Journal of Glaciology, 25(91):109-124.
- 888 Thornbury, W.D., 1928: Glaciation of the east side of the Colorado Front Range between Longs Peak and James Peak. M.A. thesis, University of Colorado. 66 pp.

- 889 Thurman, E.M., Caine, N., and Furbish, D., 1984: Specific export of carbon in an alpine watershed. Bulletin of Ecological Society of America, 65(2):193. Abstract.
- 890 Tieszen, L.L., 1965: Photosynthetic adaptations to light intensity in arctic and alpine populations of Deschampsia caespitosa, Ph.D. dissertation, University of Colorado, Boulder. 175 pp.
- 891 Tieszen, L.L., 1974: Leaf area index in the U.S. Tundra Biome. U.S. Tundra Biome Data Report, 74-5. 62 pp.
- 892 Tieszen, L.L. and Bonde, E.K., 1967: The influence of light intensity on growth and chlorophyll in arctic, subarctic, and alpine populations of Deschampsia caespitosa and Trisetum spicatum. University of Colorado Studies, Series in Biology, 25. 21 pp.
- 893 Tieszen, L.L. and Helgager, J.A., 1968: Genetic and physiological adaptation in the Hill reaction of Deschampsia caespitosa. Nature, 219:1066-1067.
- 894 Toetz, D.W. and Windell, J.T., 1984: Lake productivity in the Green Lakes Valley, Front Range, Colorado - 1983. University of Colorado Long-Term Ecological Research Data Report, 84/5. 15 pp.
- 895 Toetz, D. and Windell, J.T., 1984: Observations of nitrogen fixation and nutrients in the Green Lakes, Colorado. New Mexico Journal of Science, 24(1):39. Abstract.
- 896 Tolbert, W.W., Tolbert, V.R., and Ambrose, R.E., 1977: Distribution, abundance, and biomass of Colorado alpine tundra arthropods. Arctic and Alpine Research, 9:221-234.
- 897 Trench, N.R. and Sauchyn, D.J., 1978: Application of Landsat data to the identification and delimitation of landslides in Colorado. Geological Society of America Abstracts with Programs, 10(7):506. Abstract.
- 898 Tschirley, F.H., 1954: The altitudinal distribution of spiders in Boulder County, Colorado. M.A. thesis, University of Colorado, Boulder. 50 pp.
- 899 U.S. Department of Agriculture, Forest Service, 1968: Range environmental analysis handbook. Rocky Mountain Region (R-2). Forest Service Manual 2209.21.N.p. Denver, Colorado.
- 900 U.S. Department of Agriculture, Forest Service, 1976: Draft Environmental Statement for the Boulder-Grand Divide Unit (Including the Wilderness Study for Indian Peaks as Specified in P.L. 92-528). USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado. 208 pp.
- 901 U.S. Department of Agriculture, Forest Service, 1976: St. Vrain Glaciers Wilderness Unit - A Proposal. USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado. 19 pp.
- 902 U.S. Department of Agriculture, Forest Service, 1981: Arapaho and Roosevelt National Forests Land and Resource Management Plan--Draft Environmental Impact Statement and Maps of the Alternatives. USDA Forest Service, Rocky Mountain Region, Fort Collins, CO. Variously paged.

- 903 U.S. Department of Agriculture, Forest Service, 1981: Arapaho and Roosevelt National Forests Land and Resource Management Plan - Proposed Forest Plan and Management Area Maps. USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado. Variously paged.
- 904 U.S. Department of Agriculture, Forest Service, 1981: Arapaho and Roosevelt National Forests Land and Resource Management Plans - Appendix Volume. USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado. Variously paged.
- 905 U.S. Department of Agriculture, Forest Service, 1981: Final Environmental Impact Statement for the Arapaho and Roosevelt National Forests Land and Resource Management Plan. USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado. Variously paged.
- 906 U.S. Department of Agriculture, Forest Service, 1984: Land and Resource Management Plan - Arapaho and Roosevelt National Forests and Pawnee National Grassland. USDA Forest Service, Rocky Mountain Region, Fort Collins, Colorado. Variously paged.
- 907 U.S. Department of Interior/U.S. Department of Agriculture, 1979: Rocky Mountain National Park Boundary Study: area surrounding Rocky Mountain National Park, including Indian Peaks Wilderness in Arapaho and Roosevelt National Forests, Colorado. Joint Study conducted by the National Park Service and the Forest Service.
- 908 U.S. International Biological Program, 1972: Report of the US/IBP Phenology Committee, July 1972. Environmental Programs Coordinating Office, U.S. Component of the International Biological Program. 54 pp.
- 909 Van Tuyl, F.M. and Lovering, T.A., 1935: Physiographic development of the Front Range. Geological Society of America Bulletin, 46:1291-1350.
- 910 Vestal, A.G., 1919: Phytogeography of the Eastern mountain-front in Colorado, I: Physical geography and distribution of vegetation. Botanical Gazette, 68:153-193.
- 911 Vetter-Sauchyn, M.A., 1981: The physiological ecology of Sedum lanceolatum in the Colorado Front Range. Ph.D. Dissertation, Duke University. 235 pp.
- 912 Wahlstrom, E., 1933: Geology of the Lake Albion region, Boulder County, Colorado. M.A. thesis, University of Colorado, Boulder. 47 pp.
- 913 Wahlstrom, E.E., 1940: Audubon-Albion stock, Boulder County, Colorado. Geological Society of America Bulletin, 51:1789-1820.
- 914 Wahlstrom, E.E., 1947: Cenozoic physiographic history of the Front Range, Colorado. Geological Society of America Bulletin, 58:551-572.
- 915 Wailes, G.H., 1912: Some desmids from alpine stations in Colorado. University of Colorado Studies, 9:119-120.
- 916 Waldrop, H.A., 1962: Arapaho Glacier, Boulder County, Colorado. M.S. thesis, University of Colorado. 91 pp.

- 917 Waldrop, H.A. 1964: Arapaho Glacier: a sixty-year record. University of Colorado Studies, Series in Geology No. 3. 37 pp. Abstract reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 202. Abstract.
- 918 Waldrop, H.A. and White, S.E., 1965: Arapaho Glacier and Arapaho Rock Glacier. In: Schultz, C.B. and Smith, H.T.U. (eds.), Guidebook for One-Day Field Conferences, Boulder Area, Colorado. International Association for Quaternary Research, VII Congress, 5-10.
- 919 Wallace, R.G., 1967: Types and rates of alpine mass movement, west edge of Boulder County, Colorado, Front Range. Ph.D. dissertation, Ohio State University, Columbus. 200 pp.
- 920 Ward, J.D.Q., 1964: Triclad Turbellaria in a Colorado altitudinal transect. M.A. thesis, University of Colorado, Boulder. 28 pp.
- 921 Wardle, P., 1968: Engelmann spruce (*Picea engelmannii* Engel.) at its upper limits on the Front Range, Colorado. Ecology, 49:483-495. Reprinted in: Ives, J.D., (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 339-350.
- 922 Wardle, P., 1974: Alpine timberline. In: Ives, J.D. and Barry, R.G., (eds.), Arctic and Alpine Environments. London: Methuen, 371-402.
- 923 Washichek, J.N., 1972: Summary of Snow Survey Measurements for Colorado and New Mexico. Denver: Soil Conservation Service. 208 pp.
- 924 Waterman, S., 1979: Investigation of multispectral remote sensing on snow cover using solar radiation model. Ph.D. dissertation, University of Colorado, Boulder. 206 pp.
- 925 Webber, P.J., 1972: Comparative ordination and productivity of tundra vegetation. In: Bowen, S. (ed.), Proceedings 1972 Tundra Biome Symposium, Lake Wilderness Center, University of Washington, 3-5 April 1972. U.S. IBP Tundra Biome, 55-60.
- 926 Webber, P.J., 1974: Tundra primary productivity. In: Ives, J.D. and Barry, R.G. (eds.), Arctic and Alpine Environments. London: Methuen, 445-473.
- 927 Webber, P.J., 1977: Belowground tundra research: A commentary. Arctic and Alpine Research, 9:105-111.
- 928 Webber, P.J. (ed.): 1979: High Altitude Geoecology. AAAS Selected Symposium No. 12. Boulder: Westview Press. 188 pp.
- 929 Webber, P.J., 1981: Niwot Ridge, Colorado, U.S.A. In: Bliss, L.C., Heal, O.W., and Moore, J.J. (eds.), Tundra Ecosystems: A Comparative Analysis. Cambridge: Cambridge University Press, 780-782.
- 930 Webber, P.J., 1982: Preface. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37:vii.

- 931 Webber, P.J. and Andrews, J.T., 1973: Lichenometry: A commentary. Arctic and Alpine Research, 5:295-302.
- 932 Webber, P.J., Caine, N., Andrews, J.T., and Keigley, R., 1982: Temporal variability in Long-Term Ecological Research (LTER): some examples from the Colorado alpine environment. Bulletin of the Ecological Society of America, 63(2):119. Abstract.
- 933 Webber, P.J., Caine, T.N., Andrews, J.T., and Keigley, R., 1984: Temporal variability in Long-Term Ecological Research. New Mexico Journal of Science, 24(1):44. Abstract.
- 934 Webber, P.J. and Ebert, D.C., 1973: Ordination and production of tundra vegetation from Niwot Ridge, Colorado, and Point Barrow, Alaska. U.S. Tundra Biome Data Report, 73-22. 72 pp.
- 935 Webber, P.J., Emerick, D.C., Ebert-May, D.C., and Komarkova, V., 1976: The impact of increased snowfall on alpine vegetation. In: Steinhoff, H.W. and Ives, J.D. (eds.), Ecological Impacts of Snowpack Augmentation in the San Juan Mountains, Colorado. Final Report, San Juan Ecology Project prepared for U.S. Department of Interior, Bureau of Reclamation. Fort Collins, Colorado State University. CSU-FNR-7052-1, 201-264.
- 936 Webber, P.J. and Halfpenny, J.C., 1982: Niwot Ridge/Green Lakes LTER Research Site (Front Range, Colorado, U.S.A.). Bulletin of the Ecological Society of America, 63(2):117. Abstract.
- 937 Webber, P.J. and Halfpenny, J.C., 1984: Niwot Ridge/Green Lakes Long-Term Ecological Research. New Mexico Journal of Science, 24(1):48. Abstract.
- 938 Webber, P.J. and Keigley, R.B., 1982: Defining disturbance and stability in northern ecosystems. Proceedings of the 33rd Alaskan Science Conference, 208. Abstract.
- 939 Item dropped.
- 940 Webber, P.J. and May, D.E., 1977: The magnitude and distribution of belowground plant structures in the alpine tundra of Niwot Ridge, Colorado. Arctic and Alpine Research, 9:157-174. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 412-429.
- 941 Webber, P.J., Pollak, O.D., and Lederer, N.D., 1984: Peak season standing crop and annual production data for six alpine plant communities from the Saddle, Niwot Ridge 1982 and 1983. University of Colorado Long-Term Ecological Research Data Report, 84/4. 21 pp.
- 942 Webber, P.J., Pollak, O.D., and Lederer, N.D., 1984: The significance of long-term measurement of primary production in six Colorado alpine communities. Bulletin of Ecological Society of America, 65(2):248. Abstract.

- 943 Weber, W.A., 1949: The Flora of Boulder County, Colorado. Department of Biology and the University of Colorado Museum, Boulder.
- 944 Weber, W.A., 1953, 1961: Handbook of Plants of the Colorado Front Range. Boulder: University of Colorado Press. (Revised editions under the title Rocky Mountain Flora.) 232 pp.
- 945 Weber, W.A., 1955: Additions to the Flora of Colorado - II. University of Colorado Studies, Series in Biology, 3:65-109.
- 946 Weber, W.A., 1961: Additions to the Flora of Colorado. University of Colorado Studies, Series in Biology, 7:1-26.
- 947 Weber, W.A., 1961: Studies of Colorado Bryophytes. University of Colorado Studies, Series in Biology, 7:27-52.
- 948 Weber, W.A., 1965: Mount Evans, concentration points for Pleistocene relic plants. In: Schultz, C.B. and Smith, H.T.U. (eds.), Guidebook for One-Day Field Conferences, Boulder Area, Colorado. International Association for Quaternary Research, VII Congress, 10-12.
- 949 Weber, W.A., 1966: Additions to the flora of Colorado. IV. University of Colorado Studies Series in Biology, 23:1-24.
- 950 Weber, W.A., 1973: Guide to the mosses of Colorado. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 6. 48 pp.
- 951 Weber, W.A., 1976: Rocky Mountain Flora, 5th edition. Boulder: Colorado Associated University Press. viii + 438 pp.
- 952 Weber, W.A. and Shushan, S., 1955: The lichen flora of Colorado: Centraria, Cornicularia, Dactylina, and Thamnolia. University of Colorado Studies, Series in Biology, 3:115-134.
- 953 Wehrmeister, R.R. and Bonde, E.K., 1977: Comparative aspects of growth and reproductive biology in arctic and alpine populations of Saxifraga cernua L. Arctic and Alpine Research, 9:401-406.
- 954 Western Resource Development Corporation, 1984: Mule Deer Study: Current Conditions and Management. Report prepared for City of Boulder, Colorado. 46 pp.
- 955 White, S.E., 1967: Rockfall, alluvial, and avalanche talus in the Colorado Front Range. Abstracts for 1967. Geological Society of America Special Publication 115:237. Abstract.
- 956 White, S.E., 1971: Debris falls at the front of Arapaho rock glacier, Colorado Front Range, U.S.A., Geografiska Annaler 53A(2):86-91.
- 957 White, S.E., 1971: Rock glacier studies in the Colorado Front Range, 1961 to 1968. Arctic and Alpine Research, 3:43-64.
- 958 White, S.E., 1972: Alpine subnival boulder pavements in Colorado Front Range. Geological Society of America Bulletin, 83:195-200.

- 959 White, S.E., 1974: Comment: Relative age dating technique and a late Quaternary chronology, Arikaree Cirque, Colorado. Geology, 2:326. Reprinted in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 56.
- 960 White, S.E., 1976: Rock glaciers and block fields: Review and new data. Quaternary Research, 6:77-97.
- 961 White, S.E., 1971: Rock glacier studies in the Colorado Front Range, 1961 - 1968. Arctic and Alpine Research, 3:43-64. Reprinted in part in: Ives, J.D. (ed.), 1980: Geoecology of the Colorado Front Range. Boulder: Westview Press, 102-122.
- 962 White, S.E., 1981: Alpine mass movement forms (noncatastrophic): classification, description, and significance. Arctic and Alpine Research, 13:127-137.
- 963 White, S.E., 1982: Physical and geological nature of the Indian Peaks, Colorado Front Range. In: Halfpenny, J.C. (ed.), Ecological studies in the Colorado Alpine. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37:1-12.
- 964 Whitworth, M.R. and Southwick, C.H., 1984: Sex differences in the ontogeny of social behavior in pikas; possible relationships to dispersal and territoriality. Behavioral Ecology and Sociobiology, 15:175-182.
- 965 Wielgolaski, F.E. and Webber, P.J., 1973: Classification and ordination of circumpolar arctic and alpine vegetation. International Tundra Biome Newsletter, 9:24-31.
- 966 Wiens, D. and Halleck, D.K., 1962: Chromosome numbers in Rocky Mountain plants. Botaniska Notiser, 115:455-464.
- 967 Wiens, D. and Richter, J.A., 1966: Artemisia pattersoni: a 14-chromosome species of alpine sage. American Journal of Botany, 53(10):981-986.
- 968 Willard, B.E., 1960: Application of the methods of Zurich-Montpellier phytosociology to some alpine vegetation on Trail Ridge, Rocky Mountain National Park, Colorado. Journal Colorado-Wyoming Academy of Sciences, 5(1):36-37. Abstract.
- 969 Willard, B.E., 1960: The ecology and phytosociology of the Tundra Curve, Trail Ridge, Colorado. M.A. thesis, University of Colorado, Boulder. 144 pp.
- 970 Willard, B.E., 1961: The effects of visitor impact on Rocky Mountain alpine tundra. Bulletin of the Ecological Society of America, 42:141-142.
- 971 Willard, B.E., 1963: Phytosociology of the alpine tundra of Trail Ridge, Rocky Mountain National Park, Colorado. Ph.D. dissertation. University of Colorado, Boulder. 245 pp.

- 972 Willard, B.E., 1967: Effects of visitors on the ecosystems of Rocky Mountain National Park. Bulletin of the Ecological Society of America, 48(2):86. Abstract.
- 973 Willard, B.E., 1979: Plant sociology of alpine tundra, Trail Ridge, Rocky Mountain National Park, Colorado. Colorado School of Mines Quarterly, 74(4):1-119.
- 974 Willard, B.E. and Harris, C.O., 1976: Alpine Wildflowers of the Rocky Mountains. Estes Park, Colorado: Rocky Mountain Nature Association, Inc. 28 pp.
- 975 Willard, B.E. and Marr, J.W., 1970: Effects of human activities on alpine tundra ecosystems in Rocky Mountain National Park, Colorado. Biological Conservation, 2(4):257-265.
- 976 Willard, B.E. and Marr, J.W., 1971: Recovery of alpine tundra under protection after damage by human activities in the Rocky Mountains of Colorado. Biological Conservation, 3(3):181-190.
- 977 Williams, G.M. and McCoy, M.C., 1984: Forecast results of the PROFS 1983 Summer experiment. Preprint Volume: 10th Conference on Weather Forecasting and Analysis, June 25-29, 1984, Clearwater Beach, Florida. Boston, Massachusetts: American Meteorological Society, 234-240.
- 978 Williams, J., 1973: Neoglacial chronology of the Fourth of July Cirque, central Colorado Front Range: discussion. Geological Society of America Bulletin, 84:3761-3766.
- 979 Williams, L.D., 1974: Simulation of Green Lakes snowmelt for 1973 and for  $\pm 50\%$  changes in initial snowpack. In: Carroll, T. and Caine, N., Volume and rate of stream discharge from an alpine snowpack. A final report to the Eisenhower Consortium for Western Environmental Forestry Research. Appendix 4,3 pp. + 16 pp., figs.
- 980 Williams, R.E., 1977: Distribution, ecology, and reproductive cycles of Colorado fresh-water sponges (porifera: spongillidae). Ph.D. dissertation, University of Colorado, Boulder. 155 pp.
- 981 Windell, J.T., Bushnell, J.H., Butler, N., and Caine, N., 1982: Elevational contrasts in the alpine lakes of Green Lakes Valley, Colorado Front Range. Joint Symposium on Long-Term Ecological Research. Ecological Bulletin, 63(2):119. Abstract.
- 982 Windell, J.T. and Foster, S.Q., 1982: The status of unexploited fish populations in the Green Lakes Valley, an alpine watershed, Colorado Front Range. In: Halfpenny, J.C. (ed.), Ecological Studies in the Colorado Alpine: A Festschrift for John W. Marr. University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper, 37:133-137.
- 983 Windell, J.T. and Light, J.T., 1984: Age and growth of alpine brook trout populations, Green Lakes Valley, Colorado Front Range. Bulletin of Ecological Society of America, 65(2):132. Abstract.

- 984 Wojciechowski, M.F., 1981: Biological nitrogen fixation in the alpine tundra of the Front Range of the Colorado Rocky Mountains. Ph.D. dissertation, University of Northern Colorado, Greeley. 108 pp.
- 985 Wojciechowski, M.F. and Heimbrook, M.E., 1984: Dinitrogen fixation in alpine tundra, Niwot Ridge, Front Range, Colorado, U.S.A. Arctic and Alpine Research, 16:1-10.
- 986 Wolfenden, P.J. and Lewin, J., 1978: Distribution of metal pollutants in active stream sediments. Catena, 5:67-78.
- 987 Woodmansee, R.G., 1972: Soil descriptions and simulation model of potassium cycling in Colorado forests. Ph.D. dissertation, Colorado State University Fort Collins. 160 pp.
- 988 Worchester, P.G., 1920: The geology of the Ward Region, Boulder County, Colorado. M.A. thesis, University of Colorado, Boulder. 74 pp.
- 989 Wright, H.E., Jr., and Osburn, W.H. (sic W.S.) (eds.), 1967: Arctic and Alpine Environments. Bloomington: Indiana University Press. 308 pp.
- 990 Youmans, G.R., 1980: Assessment of denitrification in meadow soils from regional ecosystems of the Colorado Front Range. Ph.D. dissertation, University of Northern Colorado, Greeley. 103 pp.
- 991 Young, R.T., 1907: The forest formations of Boulder County, Colorado. Botanical Gazette, 44:321-352.
- 992 Young, W.C., 1967: The Hydracarina (Acarina) of Northcentral Colorado. Ph.D. dissertation, University of Colorado, Boulder. 124 pp.
- 993 Zwinger, A.N. and Willard, B.E., 1972: Land above the Trees: A Guide to American Alpine Tundra. New York: Harper and Row. 489 pp.

**CATEGORIZED KEY WORD LIST**  
**UNIVERSITY OF COLORADO LONG-TERM ECOLOGICAL RESEARCH PROGRAM**

**Type of Article**

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- Abstract
- Bibliography
- Data Report
- Dissertation
- Fauna
- Flora
- Guide
- Map
- Model
- Overview
- Technical Report
- Technique
- Thesis

**Scientific Discipline**

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- Archaeology
- Atmospheric Science
- Behavior
- Biology
- Chronology
- Climatology
- Ecology
- Genetics
- Geoecology
- Geology
- Geomorphology
- Glaciology
- History
- Hydrology
- Management
- Microbiology
- Natural History
- Paleoecology
- Phytosociology
- Radioecology
- Remote Sensing
- Sedimentology
- Soil Sciences
- Stratigraphy
- Taxonomy

**Institution or Program Affiliation**

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- Atomic Energy Commission
- Institute of Arctic and Alpine Research
- Long-Term Ecological Research
- Mountain Research Station
- National Aeronautics and Space Administration
  - PY Program
- National Oceanic and Atmospheric Administration
  - Aeronomy Laboratory
- National Oceanic and Atmospheric Administration
  - Geophysical Monitoring for Climatic Change
- National Oceanic and Atmospheric Administration
  - Program for Regional Observing and Forecasting Service
- Rocky Mountain National Park
- San Juan Ecology Project
- U.S. International Biological Programme
- University of Colorado

## Place Names

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- A-1 Climate Station
- B-1 Climate Station
- C-1 Climate Station
- D-1 Climate Station
- A-1 to D-1 Climate Stations
- Boulder City Watershed and Rainbow Lakes Area
- Indian Peaks Region
- James Peak
- Long's Peak
- Mount Evans and Guanella Pass Region
- Mountain Research Station
- Niwot Ridge (See C-1, D-1, Saddle)
- Rainbow Lakes (See Boulder City)
- Rocky Mountain National Park
- Rollins Pass and Tolland
- Saddle (Niwot Ridge)
- Trail Ridge

## Classification

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- Plants
  - Thallophytes
    - Algae
    - Fungi
    - Lichens
  - Bryophytes
  - Tracheophytes
    - Lycopsida (Selaginella)
    - Sphenopsida (Horsetails)
    - Pteropsida (Ferns)
    - Spermopsida (Sed Plants)
    - Conifers
    - Angiosperms
- Animals
  - Invertebrates
    - Molluscs
    - Arthropods
      - Arachnids
      - Insects
  - Vertebrates
    - Fish
    - Amphibians
    - Reptiles
    - Birds
    - Mammals
      - Lagomorphs
      - Rodents
      - Carnivores
      - Artiodactyls

## Abiotic Descriptors

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- Acid Deposition
- Altitude
- Atmospheric Chemistry
- Avalanche (Landslide)
- Carbon Dioxide
- Chemistry
- Climate - Data
- Climate - Discussion of
- Dating - Radiocarbon and Other
- Frost
- Glacier
- Hazards
- Insolation
- Lake
- Landslide (See Avalanche)
- Latitude
- Mining
- Periglacial
- Permafrost
- Precipitation
- Sediment
- Snow
- Soil
- Stream
- Temperature
- Water
- Watershed
- Wind

## Biological Descriptors

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- Biochemical
- Bioenergetics
- Biomass
- Blood
- Carbon
- Community
- Competition
- Decomposition
- Demography (Population)
- Development (See Growth)
- Disease
- Distribution
- Disturbance
- Diversity
- Dormancy (See Germination)
- Ecosystem
- Evapotranspiration
- Fertilizers
- Fire
- Food Habits
- Forest-tundra Ecotone (Timberline)
- Germination (Dormancy)
- Grazing (See Food Habits)
- Growth (Development)
- Habitat
- Metabolism
- Morphological
- Movement
- Nitrogen Compounds
- Nutrients
- Nutrition
- Parasites
- Phenological (Seasonal)
- Photosynthesis
- Physiographic
- Physiological
- Plankton
- Pollen
- Pollination
- Pollution
- Population (See Demography)
- Predation
- Productivity
- Recovery (See Revegetation)
- Reproduction
- Revegetation (Recovery)
- Root
- Seasonal (See Phenological)
- Seed
- Succession
- Thermoregulation
- Timberline
  - (See Forest-tundra Ecotone)
- Tree
- Trophic

### Key Words Used in Alpine Bibliography

Key Word	4-letter code
A-1 CLIMATE STATION	A1
A-1 TO D-1	A1D1
ABSTRACT	ABST
ACID DEPOSITION	ACID
ALGAE	ALGA
ALTITUDE	ALTI
AMPHIBIANS	AMPH
ANGIOSPERMS	ANGI
ANIMALS	ANIM
ARACHNIDS	ARAC
ARCHAEOLOGY	ARCH
ARTIODACTYLS	ARTI
ATMOSPHERIC CHEMISTRY	ATMC
ATMOSPHERIC SCIENCES	ATMO
ATOMIC ENERGY COMMISSION	ATOM
AVALANCHE	AVAL
B-1 CLIMATE STATION	B1
BEHAVIOR	BEHA
BIBLIOGRAPHY	BIBL
BIOCHEMICAL	BIOC
BIOENERGETICS	BIOE
BIOLOGY	BIOL
BIMASS	BIOM
BIRDS	BIRD
BLOOD	BLOO
BOULDER WATERSHED AND RAINBOW LAKES	BOUL
BRYOPHYTES	BRYO
C-1 CLIMATE STATION	C1
CARBON	CARB
CARBON DIOXIDE	CARD
CHEMISTRY	CHEM
CHRONOLOGY	CHRO
CLIMATE - DATA INCLUDED	CLID
CLIMATE - DISCUSSION OF	CLIG
CLIMATOLOGY	CLIM
COMMUNITY	COMM
COMPETITION	COMP
CONIFERS	CONI
D-1 CLIMATE STATION	D1
DATA REPORT	DATA
DATING - RADIOCARBON AND OTHER	DATI
DECOMPOSITION	DECO
DEMOGRAPHY	DEMO
DISEASE	DISE
DISSERTATION	DISS
DISTRIBUTION	DIST
DISTURBANCES	DISU
DIVERSITY	DIVE

## Key Words Used in Alpine Bibliography

Key Word	4-letter code
ECOLOGY	ECOL
ECOSYSTEM	ECOS
EVAPOTRANSPIRATION	EVAP
FAUNA	FAUN
FERTILIZERS	FERT
FIRE	FIRE
FISH	FISH
FLORA	FLOR
FOOD HABITS	FOOD
FOREST-TUNDRA ECOTONE (TIMBERLINE)	FORE
FROST	FROS
FUNGI	FUNG
GENETICS	GENE
GEOECOLOGY	GEOE
GEOLOGY	GEOL
GEOMORPHOLOGY	GEOM
GERMINATION (DORMANCY)	GERM
GLACIER	GLAA
GLACIOLOGY	GLAC
GROWTH (DEVELOPMENT)	GROW
GUIDE	GUID
HABITAT	HABI
HAZARDS	HAZA
HISTORY	HIST
HYDROLOGY	HYDR
INDIAN PEAKS REGION	INDI
INSECTS	INSE
INSOLATION	INSO
INSTITUTE OF ARCTIC AND ALPINE RESEARCH	INST
INVERTEBRATES	INVE
JAMES PEAK	JAME
LAGOMORPHS	LAGO
LAKE	LAKE
LATITUDE	LATI
LICHENS	LICH
LONG'S PEAK	LONG
LONG-TERM ECOLOGICAL RESEARCH PROGRAM	LTER
MAMMALS	MAMM
MANAGEMENT	MANA
MAP	MAP
METABOLISM	META
MICROBIOLOGY	MICR
MINING	MINI
MODEL	MODE
MOLLUSCS	MOLL
MORPHOLOGICAL	MORP
MOUNT EVANS AND GUANELLA PASS REGION	MOUE
MOUNTAIN RESEARCH STATION - AFFILIATION	MOUF

### Key Words Used in Alpine Bibliography

Key Word	4-letter code
MOUNTAIN RESEARCH STATION - LOCATION	MOUL
MOVEMENT	MOVE
NASA - PY	NASA
NATURAL HISTORY	NATU
NITROGEN COMPOUNDS	NITR
NIWOT RIDGE	NIWO
NOAA - AERONOMY LAB	NOAA
NOAA - GEOPHYSICAL MONITORING FOR CLIMATIC CHANGE	NOAG
NOAA - PROFS	NOAP
NUTRIENTS	NUTR
NUTRITION	NUTT
OVERVIEW	OVER
PALEOECOLOGY	PALE
PARASITES	PARA
PERIGLACIAL	PERI
PERMAFROST	PERM
PHENOLOGICAL (SEASONAL)	PHEN
PHOTOSYNTHESIS	PHOT
PHYSIOGRAPHIC	PHYG
PHYSIOLOGICAL	PHYL
PHYTOSOCIOLOGY	PHYT
PLANKTON	PLAN
POLLEN	POLE
POLLINATION	POLL
POLLUTION	POLU
PRECIPITATION	PREC
PREDATION	PRED
PRODUCTIVITY	PROD
RADIOECOLOGY	RADI
REMOTE SENSING	REMO
REPRODUCTION	REPR
REPTILES	REPT
REVEGETATION - RECOVERY	REVE
ROCKY MOUNTAIN NATIONAL PARK - AFFILIATION	RMNA
ROCKY MOUNTAIN NATIONAL PARK - LOCATION	RMNL
RODENTS	RODE
ROLLINS PASS AND TOLLAND	ROLL
ROOT	ROOT
SADDLE (NIWOT RIDGE)	SADD
SAN JUAN ECOLOGY PROJECT	SANJ
SEDIMENT	SEDI
SEDIMENTOLOGY	SEDO
SEED	SEED
SNOW	SNOW
SOIL	SOIL
SOIL SCIENCES	SOIS
SPERMOPSIDA (SEED PLANTS)	SPER
STRATIGRAPHY	STRA

### Key Words Used in Alpine Bibliography

Key Word	4-letter code
STREAM	STRE
SUCCESSION	SUCC
TAXONOMY AND SYSTEMATICS	TAXO
TECHNICAL REPORT	TECH
TECHNIQUE	TECQ
TEMPERATURE	TEMP
THERMOREGULATION	THER
THESIS	THES
TRACHEOPHYTES	TRAC
TRAIL RIDGE	TRAI
TREE	TREE
TROPHIC	TROP
U.S. INTERNATIONAL BIOLOGICAL PROGRAMME	UNIT
UNIVERSITY OF COLORADO	UNIV
WATER	WATE
WATERSHED	WATS
WIND	WIND

## KEY WORD INDEX FOR ALPINE BIBLIOGRAPHY

### **A-1 Climate Station**

395 515 516 517 866

### **A-1 to D-1**

033	034	038	039	093	094	120	121	180	181	317	348	487	488
525	528	556	561	564	628	631	634	635	676	711	720	721	839

### **Abstract**

004	017	019	020	044	045	052	068	092	100	115	117	131	134
137	138	145	147	154	210	211	223	229	230	234	267	268	276
277	278	284	285	303	304	305	320	338	340	359	360	362	363
364	366	369	370	372	374	375	383	396	400	401	405	413	414
424	496	501	503	523	552	557	559	564	565	566	572	619	621
623	626	627	632	645	654	655	657	659	704	706	707	708	744
746	750	754	783	793	836	851	853	854	855	856	863	873	889
895	897	917	932	933	936	937	938	968	972	981			

### **Acid Deposition**

032	091	148	283	284	285	310	419	420	421	422	477	510	542
543	544	546	547	548	549	550	621	779					

### **Aeronomy Laboratory - See also NOAA - Aeronomy Laboratory**

### **Algae**

142 507 702 747 796 801 860 915

### **Altitude**

002	003	004	005	007	009	010	020	023	028	029	033	034	035
047	120	121	122	134	153	165	166	172	175	206	207	208	216
218	219	221	222	234	235	236	249	264	265	273	275	276	277
278	280	312	332	333	334	348	349	373	374	375	376	398	429
445	462	475	489	490	503	504	506	508	515	520	521	524	526
531	555	556	585	661	676	720	730	756	782	783	784	808	832
861	864	869	919	920	955	956	968	969	971	973	980	981	

### **Amphibians**

162 163 164 165 199 643

### **Angiosperms**

011	012	013	014	050	051	052	053	054	079	082	083	086	087
089	092	093	094	095	096	097	098	159	160	161	173	174	175
184	229	239	240	241	242	243	250	251	257	258	259	268	269
270	271	272	273	282	283	284	285	307	312	313	315	335	336

**Angiosperms (continued)**

337	338	341	344	348	361	362	363	364	367	368	380	383	384
385	386	404	406	407	412	413	414	415	416	417	425	427	428
465	473	474	478	480	481	482	483	485	486	487	488	489	490
494	496	501	503	504	506	508	520	521	522	523	524	525	555
556	573	576	577	579	582	637	644	645	646	647	648	649	650
672	675	679	682	685	686	689	699	708	709	710	711	713	714
722	726	727	730	731	732	740	741	742	745	757	758	759	763
764	765	768	769	770	772	773	780	793	801	811	812	813	814
818	820	830	832	833	834	838	840	842	857	858	867	870	882
890	891	892	893	910	911	921	922	925	926	927	934	935	939
940	941	942	948	949	953	965	966	967	968	969	970	971	972
973	974	975	976	984	985								

**Animals**

134	172	190	479	578	601	653	871	908	928	929	993
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**Arachnids**

822	823	824	825	898
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**Archaeology**

063	064	065	066	067	070	072	423	466	706
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**Artiodactyls**

200	339	379	464	954
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**Atmospheric Chemistry**

084	209	261	297	298	299	302	310	318	332	419	420	421	422
487	488	703	727	744	798	799	800	841	898				

**Atmospheric Sciences**

084	209	261	297	298	299	302	310	318	419	420	421	422	477
510	703	744	798	799	800	841							

**Atomic Energy Commission**

394	663	664	707	708	709	710	711	712	713	714	752
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**Avalanche**

224	225	226	227	439	444	448	497	498	586	587	599	600	746
897	919	955	956										

**B-1 Climate Station**

512	513	514	515	516	517	531	575	866
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**Behavior**

342 526 659 669 765 825 852 964

**Bibliography**

008 030 127 733

**Biochemical**

174 214 571 582

**Bioenergetics**077 158 192 239 240 241 290 291 418 473 474 489 556 657  
665 666 668 672 818 911**Biology**008 022 030 189 190 193 199 204 214 220 233 288 306 314  
353 519 571 582 584 658 686 692 724 821 832 866 867**Biomass**

357 366 424 487 556 752 896 927 940 941

**Bird**001 078 108 109 110 111 113 166 192 264 280 292 293 294  
295 339 345 346 362 363 364 389 396 400 401 402 403 418  
651 652 654 655 656 657 658**Blood**

214

**Boulder City Watershed and Rainbow Lakes Area**017 020 056 057 058 063 064 065 066 068 072 096 099 100  
117 118 119 143 148 152 153 154 155 156 157 167 168 169  
170 171 176 177 189 210 211 212 217 218 219 226 227 232  
244 262 273 275 276 277 278 286 308 309 349 354 356 365  
377 378 381 387 388 389 390 391 394 405 450 451 453 457  
458 459 460 464 466 469 470 476 484 529 538 542 551 552  
557 558 559 572 585 609 610 611 612 615 639 640 641 642  
661 662 670 671 687 705 706 710 712 713 714 718 719 735  
738 752 753 779 782 783 784 801 817 843 868 874 880 881  
888 889 894 895 912 916 917 918 919 923 936 937 955 956  
957 959 960 961 962 979 980 981 982 983 986 991**Bryophytes**019 020 091 266 267 502 505 506 520 521 748 750 801 840  
948 950

### C-1 Climate Station

084	122	209	218	222	223	261	274	297	298	299	302	342	419
420	421	422	510	513	515	516	517	543	544	545	546	547	548
549	550	551	562	563	571	624	625	637	703	744	749	779	788
798	799	800	841	977									

### Carbon

889

### Carbon Dioxide

159	297	298	299	481	686								
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### Chemistry

249	393	425	542	543	544	545	546	547	548	549	550	551	557
617	725	733	736	737	739	778	779	821	913	986			

### Chronology

055	056	057	058	062	063	064	065	066	067	070	072	099	100
129	167	210	211	212	245	246	247	248	296	450	451	453	455
570	588	589	590	591	593	594	595	596	597	598	607	608	609
610	611	612	613	614	615	616	619	661	662	673	693	719	775
803	804	833	836	959	978								

### Climate - Data

033	034	035	038	042	106	117	118	119	180	181	191	216	239
240	250	251	253	254	255	273	316	321	324	328	329	362	363
364	418	476	492	493	528	532	533	534	537	561	562	563	565
566	631	634	635	646	647	648	709	819					

### Climate - Discussion of

024	080	097	098	106	130	134	149	150	151	177	192	196	198
207	208	210	216	218	219	222	223	229	239	240	241	245	246
247	248	253	254	255	256	258	259	271	272	274	282	290	291
316	320	321	322	323	324	326	328	329	330	331	345	346	362
363	364	366	367	371	373	374	375	376	386	395	415	417	423
429	432	447	460	467	471	476	486	487	488	489	492	493	503
504	506	508	520	521	524	528	529	532	533	534	537	541	555
560	561	564	565	566	598	618	619	620	622	623	624	625	628
631	634	635	636	637	644	645	646	647	648	649	650	661	662
665	666	668	670	690	699	700	708	709	711	715	721	726	749
773	787	788	795	819	820	822	833	834	858	861	866	921	922
925	926	929	932	933	934	939	968	971	973	977	993		

### Climatology

009	010	021	023	027	032	033	034	035	036	037	038	039	040
041	042	051	057	060	061	072	073	106	111	112	114	115	116
120	121	122	128	150	158	180	181	182	191	210	216	218	245

**Climatology (continued)**

247	248	274	300	301	310	316	317	318	319	320	321	322	323
324	325	326	327	328	329	330	331	352	356	371	398	409	426
427	435	454	456	461	468	471	492	493	509	528	532	533	534
535	536	537	543	544	546	547	549	550	551	553	554	561	562
563	564	565	566	619	621	624	625	631	634	635	636	637	646
647	676	678	690	698	707	720	721	723	749	779	788	795	805
977													

**Community**

019	020	025	083	096	123	144	145	146	147	160	161	172	196
207	222	223	229	250	251	258	266	267	268	269	270	275	276
278	336	348	383	425	427	428	503	504	506	520	521	523	524
525	572	620	621	622	623	628	630	632	636	644	647	648	695
696	709	730	731	732	761	763	764	768	769	821	829	837	860
861	882	939	941	942	965	968	969	971	973	984	985		

**Competition**

337 338

**Conifers**

015	023	024	047	069	085	088	130	201	203	206	218	222	223
238	242	243	273	311	313	340	341	342	369	370	372	373	374
375	376	395	409	410	433	467	476	485	512	513	514	515	517
518	520	521	525	531	541	573	626	627	632	633	637	665	668
674	681	683	684	699	710	713	758	759	770	772	773	813	831
833	834	843	844	861	865	910	987	991					

**D-1 Climate Station**

200 216 352 562 563 565 566 571 637 866

**Data Report**

018	039	041	143	146	155	156	157	159	180	269	270	286	319
321	322	328	329	352	355	357	358	397	532	558	561	562	563
585	622	636	647	840	894	941							

**Dating - Radiocarbon and Other**

055 211 219 593 595 596 693 719 738 803 804 836

**Decomposition**

620 622 623 837 838 839

**Demography**

089	108	112	113	130	164	203	292	293	294	303	304	305	312
349	357	365	384	397	400	424	487	488	489	490	515	526	531

**Demography (continued)**

552	570	620	622	649	650	652	665	668	691	745	823	837	853
854	855	856	862	863	865	882	896	935	982	983			

**Development - See also Growth****Disease**

092 843 844

**Dissertation**

009	011	012	015	022	050	057	075	083	097	099	102	108	120
130	132	164	170	176	192	197	198	218	219	231	237	249	250
253	266	272	273	281	307	315	344	345	349	367	373	379	392
394	395	415	418	427	472	473	476	484	486	488	495	506	513
520	526	555	589	609	646	652	665	709	726	740	745	753	785
803	805	822	831	843	852	862	865	872	890	911	919	924	971
980	984	987	990	992									

**Distribution**

001	002	003	004	005	007	016	022	023	028	029	050	052	054
083	088	090	097	098	110	112	132	142	143	164	165	173	176
198	206	221	233	234	235	236	237	242	244	245	246	247	248
249	252	257	265	266	267	273	275	276	278	288	323	326	333
334	335	339	340	344	355	357	361	365	379	383	386	389	392
395	398	403	406	407	409	423	428	472	475	508	520	521	524
601	603	636	677	682	690	705	707	708	709	731	745	756	758
759	765	772	793	795	801	806	807	808	809	810	811	812	817
822	824	831	865	869	870	882	896	898	910	920	939	940	945
946	947	948	949	968	969	971	973	974	980	981	982	992	

**Disturbance**

133	156	335	336	380	431	447	523	550	629	638	829	882	938
970	972	975	976										

**Diversity**

160 161 217 220 221 237 249 268 269 270 572 730 862 981

**Dormancy - See also Germination****Ecology**

001	003	004	005	006	007	008	011	012	013	014	015	021	023
024	025	028	029	030	031	047	048	049	050	051	052	053	054
069	071	076	077	078	079	080	081	083	085	086	087	088	089
090	091	092	093	094	095	097	098	108	109	110	113	123	124
125	126	127	130	131	134	142	143	144	145	146	147	154	158
159	160	161	162	163	164	165	166	172	174	175	176	179	192
196	198	200	201	203	205	206	207	208	221	222	223	229	230
231	238	239	240	241	249	250	251	258	259	260	264	266	267

**Ecology (continued)**

268	269	270	271	272	273	275	276	277	278	280	282	283	284
285	290	291	292	293	294	295	303	304	305	312	313	315	325
326	327	332	333	334	335	336	337	338	339	340	341	342	344
345	346	348	349	350	351	354	355	356	357	361	362	363	364
365	366	367	369	370	372	373	374	375	376	379	380	383	384
385	386	392	393	395	396	397	400	401	402	403	404	408	410
411	412	413	414	415	416	417	418	424	425	427	428	433	435
447	449	462	465	467	472	473	474	475	476	478	479	480	481
482	483	485	486	487	488	489	490	495	496	501	503	504	505
506	508	515	516	517	518	520	521	522	523	524	525	526	527
530	531	543	552	555	556	568	569	570	572	573	574	575	576
577	578	579	601	603	621	626	627	628	630	632	633	636	637
638	643	644	645	646	648	649	650	651	652	653	654	655	656
657	665	666	667	668	669	672	675	677	679	680	682	685	689
690	691	701	702	704	705	707	708	709	710	711	712	713	714
715	722	726	727	730	731	732	733	734	735	736	737	738	739
740	741	742	745	747	751	752	753	755	756	757	758	759	761
762	763	764	765	767	768	769	770	771	772	773	774	780	781
785	793	795	797	801	802	805	810	811	812	813	814	815	816
817	818	819	820	821	822	823	824	825	828	830	831	840	842
843	844	848	849	853	854	855	856	857	858	860	861	862	863
865	869	871	877	882	890	891	892	893	894	895	896	898	899
907	908	910	911	915	920	921	922	925	926	927	930	931	932
933	934	935	936	937	938	939	940	941	942	948	953	954	965
968	969	971	973	974	980	981	982	983	984	985	987	989	990
991	992	993											

**Ecosystem**

172	207	208	628	707	990	993
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**Evapotranspiration**

239	240	241	286	327	427	428	473	474	482	536	672
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**Fauna**

220	244	265	333	389	705
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**Fertilizers**

496
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**Fire**

083	341	476	830	991
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**Fish**

048	049	217	339	397	530	552	677	789	981	982	983
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**Flora**

185	193	204	234	235	236	237	243	257	507	584	692	694	705
716	717	748	755	759	767	801	840	843	867	943	944	949	950
951	952												

**Food Habits**

110	112	162	164	200	303	342	365	526	651	652	654	656	658
722	825	862											

**Forest-tundra Ecotone (Timberline)**

024	201	202	206	207	208	247	311	369	370	372	373	374	375
376	410	411	433	447	518	520	521	573	574	626	627	632	633
680	682	699	774	810	830	861	921	922					

**Frost**

059	061	071	085	238	253	254	255	256	464	715	879		
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**Fungi**

092	754	843	844	851	860								
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**Genetics**

008	076	077	175	214	238	311	313	315	487	494	502	512	513
514	516	517	567	645	674	680	681	683	684	831	893	966	967

**Geocology**

021	435	437	438	440	441	442	446	569	928	929			
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**Geology**

017	021	043	057	067	070	073	107	183	197	213	263	281	287
289	296	309	343	356	382	430	435	463	500	511	539	540	583
602	605	606	688	723	728	729	778	792	803	804	845	846	847
859	909	912	913	914	963	988							

**Geomorphology**

055	058	059	060	061	062	068	071	102	103	104	105	107	131
132	133	135	136	137	138	139	140	141	149	150	153	154	156
167	211	219	224	225	249	253	254	255	256	330	331	347	377
378	381	429	432	436	439	443	444	445	448	460	464	465	471
491	539	540	581	586	587	595	596	597	598	607	608	609	610
611	612	613	614	661	662	671	693	715	718	719	743	746	776
777	782	783	784	794	835	864	872	873	874	875	876	877	878
879	880	881	883	884	885	886	887	888	889	897	918	919	931
955	956	957	958	959	960	961	962	963	978				

**Geophysical Monitoring for Climatic Change**

- See also NOAA - Geophysical Monitoring for Climatic Change

**Germination (Dormancy)**

011 012 013 014 053 086 087 271 272 820

**Glacier**

056	057	058	062	073	090	099	100	167	183	191	211	212	215
228	262	296	308	347	381	387	388	390	450	451	452	453	455
457	458	459	460	469	470	484	485	491	538	539	540	559	560
580	588	589	590	591	593	594	597	598	602	607	610	611	612
613	614	671	693	775	782	783	784	790	791	792	835	888	916
917	918	957	960	961	978								

**Glaciology**

009	010	017	055	056	057	058	062	067	068	070	099	100	107
137	139	151	183	191	210	211	212	215	228	262	308	387	388
390	450	451	452	453	455	457	458	459	469	470	484	491	538
560	580	588	589	590	591	594	607	661	662	671	687	775	782
783	784	790	791	888	916	917	918						

**Growth (Development)**

056	085	093	094	095	130	164	167	174	175	206	218	271	272
283	284	285	306	311	312	353	375	478	480	512	514	515	517
552	633	645	646	657	666	683	684	685	727	892	953	983	

**Guide**

021	071	107	139	184	212	354	356	598	607	608	715	826	828
835	974												

**Habitat**

108	109	110	112	131	217	295	304	305	345	346	379	400	403
526	652	677	827	869	871	899							

**Hazards**

224	225	226	227	439	444	448	497	498	599	600	663	664	
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**History**

026	027	101	172	173	184	185	189	193	194	195	204	205	213
232	242	243	252	257	262	281	282	313	314	356	387	389	390
391	406	407	408	434	438	454	500	501	538	539	540	692	705
716	717	748	755	756	757	758	759	760	761	762	763	764	766
767	768	769	770	771	772	773	780	795	796	797	810	811	812
813	814	815	816	842	850	867	870	888	910	991			

**Hydrology**

008	050	052	054	075	103	104	105	117	118	119	136	137	148
151	152	155	157	168	169	170	171	177	202	226	227	277	286

**Hydrology (continued)**

325	358	359	360	361	391	405	529	542	543	545	548	585	604
639	640	641	642	660	670	725	868	923	924	979	986		

**Indian Peaks Region**

003	043	044	045	046	070	074	132	135	178	185	188	191	198
206	215	220	221	224	225	228	232	234	235	236	246	257	263
271	279	308	343	344	369	382	388	389	390	393	409	410	411
441	442	443	444	445	446	452	455	458	459	466	469	495	497
498	520	521	522	560	568	580	581	586	587	588	589	590	591
595	596	597	609	612	613	614	615	616	618	619	629	643	671
673	674	675	699	700	701	704	707	719	728	729	734	736	737
746	770	773	796	803	804	805	836	852	864	888	898	900	901
902	903	904	905	906	907	914	950	951	954	958	963	978	986
988	992												

**Insects**

002	003	004	005	006	007	022	028	029	076	077	233	244	245
246	247	248	260	265	275	276	278	332	333	334	362	363	364
472	475	501	817	822	824	825	865	866	869	896			

**Insolation**

009	010	041	115	116	158	180	181	191	290	291	317	318	319
322	426	532	533	534	535	537	561	562	563	565	566	634	635
670	890	892	924										

**Institute of Arctic and Alpine Research**

009	010	015	017	018	019	020	021	033	034	035	036	040	042
055	056	057	058	059	060	061	075	102	103	106	111	120	121
149	150	151	158	162	163	164	165	166	167	168	169	170	171
183	212	218	222	223	253	254	255	256	291	295	315	339	345
346	347	423	429	430	431	432	433	434	437	438	440	445	449
471	476	494	508	520	521	522	524	527	560	563	567	568	569
570	571	580	591	592	593	594	609	626	627	628	629	630	631
634	635	636	651	652	654	655	656	657	658	673	680	681	682
683	684	693	700	707	708	709	710	711	712	715	718	720	721
722	723	776	777	782	783	784	864	872	873	926	927	928	929
931	978	979											

**Invertebrates**

143	144	145	146	147	176	220	221	232	244	249	392	393	495
691	701	704	705	733	735	736	737	738	739	740	741	742	753
781	817	894	895	920	980	981	992						

**James Peak**

086	087	196	232	915									
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**Lagomorphs**

214	303	304	305	306	357	365	526	659	722	852	853	854	855
856	964												

**Lake**

017	018	020	143	144	145	146	147	150	151	157	168	169	171
176	177	210	232	244	249	378	392	397	405	464	529	542	552
585	691	701	705	710	713	733	734	735	736	737	738	739	770
773	778	781	796	801	821	868	894	895	912	915	979	980	981
992													

**Latitude**

174	175	429	555	731									
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**Lichens**

016	056	057	058	091	167	234	235	236	237	266	267	506	520
521	840	931	948	952	959	968	969	971	973				

**Long's Peak**

193	503	504	505	506	507								
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**Long-Term Ecological Research Program**

017	020	038	039	047	091	092	118	119	143	144	145	146	147
152	153	154	155	156	157	177	216	245	246	247	248	251	265
268	269	270	275	276	277	278	280	283	284	285	286	303	304
305	306	313	318	319	320	321	322	323	324	325	326	327	328
329	350	351	352	353	354	355	357	358	359	360	361	362	363
364	365	366	376	378	383	396	405	424	426	427	447	489	496
523	529	552	557	558	559	561	562	563	564	565	566	572	585
620	621	622	623	648	649	650	659	670	699	779	793	833	834
838	839	840	848	853	854	855	856	868	889	894	895	932	933
936	937	938	941	942	963	981	982	983					

**Mammals**

339	342	362	363	364	366	424	651	652	654	655	656	657	658
710	713	751	752	877	973								

**Management**

008	044	045	046	060	073	074	106	119	133	177	178	279	281
335	336	339	355	380	397	431	434	441	442	446	448	479	499
592	599	600	601	602	603	604	605	606	629	638	641	649	660
679	695	696	697	724	728	729	789	827	829	848	871	899	900
901	902	903	904	905	906	907	930	935	970	972	975	976	

**Map**

026	046	101	172	224	225	281	287	288	289	339	340	355	371
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**Map (continued)**

443 444 524 592 599 600 601 602 603 604 605 606 695 696  
850 867 902 903 905 906 907

**Metabolism**

047 079 159 685 837 838 839 866 893

**Microbiology**

620 621 622 623 837 838 839

**Mining**

026 043 074 101 148 281 500 583 688 728 729 845 846 847  
850

**Model**

117 118 119 140 141 177 240 298 405 529 644 776 777 785  
868 875 924 979 987

**Molluscs**

188 801

**Morphological**

206 238 250 251 258 294 311 515 627 632 633 645 646 679  
681 757 805 832 857 891 935

**Mount Evans and Guanella Pass Region**

006 089 109 110 113 179 192 232 260 271 400 401 402 403  
471 555 567 573 639 642 737 739 775 806 807 808 819 822  
823 825 826 857 858 864 866 890 909 915 948 953 964

**Mountain Research Station - Affiliation**

114 115 116 131 134 174 175 180 181 182 191 203 205 210  
214 217 233 238 239 240 241 310 316 317 330 331 335 341  
342 344 348 349 356 368 370 372 377 409 410 411 418 428  
484 499 510 513 515 517 525 542 543 544 545 546 547 548  
549 550 551 556 561 564 565 566 581 610 611 612 613 614  
615 616 639 640 641 665 666 668 669 677 685 715 745 794  
805 831 860 869 874 875 876 877 879 880 881 882 885 886  
896 907 911 919 921 922 955 956 957 959 960 961 962 963  
984 985 987 990

**Mountain Research Station - Location**

031 048 049 142 166 176 205 217 238 275 276 277 278 310  
316 345 346 349 397 434 438 475 487 488 490 513 574 663

**Mountain Research Station - Location (continued)**

664 665 666 667 668 669 677 681 683 684 724 789 862 863  
865 898 954

**Movement**

003 004 005 069 108 112 264 280 400 401 402 526 633 669  
954

**NASA - PY Program**

044 045 046 132 133 135 224 225 340 373 374 375 399 441  
442 443 444 446 448 497 498 599 600 601 602 603 604 605  
606 660 695 696 697 746 897 924

**Natural History**

002 164 165 184 692 761

**Nitrogen Compounds**

084 302 419 422 496 621 894 895 984 985 990

**Niwot Ridge - See also C-1, D-1, Saddle**

003 007 009 021 041 042 051 055 059 069 071 075 076 077  
079 081 083 085 092 095 102 103 104 105 111 114 115 116  
124 125 126 127 131 139 158 159 160 161 174 175 182 201  
202 203 214 229 233 239 240 241 249 250 251 253 254 255  
256 258 259 266 267 268 269 270 272 283 284 285 290 291  
295 304 305 306 311 327 336 340 341 345 346 353 354 356  
365 367 368 370 372 373 374 375 376 377 418 425 426 427  
428 429 431 432 433 445 447 473 474 477 479 480 481 482  
483 486 492 494 499 502 508 518 520 521 522 523 524 526  
532 533 534 535 536 537 567 568 570 571 573 574 576 577  
578 579 582 620 622 623 626 627 633 639 640 641 651 652  
654 656 657 658 661 662 672 679 680 682 685 686 705 708  
709 710 712 713 715 722 738 740 741 742 743 745 747 774  
787 794 826 830 831 837 838 839 840 842 849 860 864 869  
871 872 873 875 876 877 878 879 882 883 884 885 886 887  
891 896 898 907 908 911 913 921 922 924 925 926 927 928  
929 931 934 935 936 937 938 939 940 949 952 962 966 967  
984 985 986 990

**NOAA - Aeronomy Lab**

084 261 302 419 420 421 422 703 744 798 799 800 841

**NOAA - Geophysical Monitoring for Climatic Change**

297 298 299

**NOAA - PROFS**

128 274 624 625 749 788 977

**Nutrients**

174 425 543 621 895 987

**Nutrition**

200 303 655

**Overview**

002	024	026	091	179	194	195	215	318	333	350	351	354	365
371	430	434	435	436	437	438	440	449	479	510	511	578	592
643	653	667	690	694	699	712	723	743	751	760	771	786	792
802	815	849	883	926	927	928	930	936	937	963	989	993	

**Paleoecology**

019	020	056	057	063	064	065	066	129	245	246	247	248	378
541	598	618	619	673	699	700	833	834					

**Parasites**

865

**Periglacial**

019	058	059	071	107	137	139	211	219	253	254	255	256	378
465	491	581	598	607	608	610	611	612	613	614	661	662	718
719	745	776	777	782	783	784	792	794	801	835	864	872	873
874	875	876	878	879	887	888	918	919	956	957	958	959	978

**Permafrost**

059 061 071 107 330 331 429 432 445 715 743

**Phenological (Seasonal)**

007	011	012	013	014	051	094	163	192	258	259	272	362	363
364	367	396	412	413	414	415	416	417	495	620	622	637	645
646	654	656	666	669	691	727	753	773	781	793	821	857	863
908													

**Photosynthesis**

081 478 480 483 685 890 892 893

**Physiographic**

006 178 410 573 574 909 914

**Physiological**

011	012	013	014	015	047	079	081	085	163	166	174	199	206
214	238	239	240	241	367	373	374	375	376	481	482	483	486
555	652	658	679	685	686	726	857	858	893	911	921	922	

**Phytosociology**

097	098	503	506	520	521	524	573	925	934	965	968	969	971
973													

**Plankton**

143	144	145	146	147	244	249	393	495	691	701	704	705	733
734	735	736	737	738	739	753	781	821	894	981			

**Plant**

030	080	081	090	133	134	154	158	189	194	230	231	303	408
449	479	527	575	578	601	603	636	663	664	692	694	716	756
771	787	797	806	807	808	809	815	816	871	899	907	908	928
929	932	933	943	944	993								

**Pollen**

019	020	129	501	541	598	618	619	693	699	700	833	834	
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**Pollination**

501	576	577	579	740	741	742							
-----	-----	-----	-----	-----	-----	-----	--	--	--	--	--	--	--

**Pollution**

091	986												
-----	-----	--	--	--	--	--	--	--	--	--	--	--	--

**Precipitation**

027	032	148	168	169	170	171	177	219	239	240	241	283	284
285	286	310	398	405	419	420	421	422	427	428	477	510	528
536	543	544	545	546	547	549	550	551	560	561	562	563	565
566	634	635	676	714	720	779	787	868					

**Predation**

112	556	825											
-----	-----	-----	--	--	--	--	--	--	--	--	--	--	--

**Productivity**

081	094	229	240	250	251	473	474	489	495	644	646	648	894
925	926	927	934	941	942								

**PROFS - See also NOAA - PROFS**

### **Radioecology**

073 394 663 664 710 711 712 713 714

### **Rainbow Lakes Area - See also Boulder City Watershed**

**Recovery - See also Revegetation**

### **Remote Sensing**

040 135 182 224 225 340 399 439 441 442 443 444 446 497  
498 695 696 697 718 897 907 924

### **Reproduction**

077 112 164 192 203 264 272 283 284 285 292 293 295 303  
304 305 349 357 365 369 418 424 487 488 489 652 659 710  
713 823 831 911 953 980

### **Reptiles**

643

### **Revegetation - Recovery**

133 335 341 380 523 649 650 830 976

### **Rocky Mountain National Park - Affiliation**

300 301

### **Rocky Mountain National Park - Location**

015 016 032 050 052 054 109 110 130 173 179 193 230 231  
252 292 293 294 300 301 335 337 338 380 385 386 404 412  
413 414 415 416 417 431 471 491 503 504 505 506 507 528  
539 540 567 573 578 584 638 639 691 730 731 732 737 748  
750 754 775 781 790 791 792 818 819 820 822 823 824 825  
826 828 829 851 852 857 858 861 864 888 898 909 968 969  
970 971 972 973 974 975 976

### **Rodents**

131 198 349 353 357 365 475 665 666 667 668 669 709 862  
863 877 882 973

### **Rollins Pass and Tolland**

012 013 014 086 087 110 188 196 220 221 242 243 271 272  
282 307 472 486 555 639 726 727 734 760 761 762 763 764  
765 766 767 768 769 772 780 796 797 832 859 866 890 892  
893 915

**Root**

404

**Saddle (Niwot Ridge)**

303	319	320	321	322	324	325	328	329	330	331	352	355	357
358	359	360	361	362	363	364	366	383	396	424	425	478	480
496	561	562	563	564	621	640	644	645	646	647	648	649	650
659	793	853	854	855	856	941	942						

**San Juan Ecology Project**

935

**Seasonal - See also Phenological**

**Sediment**

017	018	019	020	210	212	378	381	581	597	700	778	803	804
880	884	919	955	956	962								

**Sedimentology**

017	018	020	060	104	105	152	210	263	378	700	778	794	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--

**Seed**

011	012	013	014	053	086	087	090	201	711				
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--	--

**Seed Plants - See also Spermopsida**

**Snow**

006	009	010	027	050	052	054	075	097	098	113	148	149	150
151	152	168	169	170	171	177	201	202	206	226	227	239	240
241	250	251	266	267	286	303	304	305	358	359	360	361	377
383	385	386	414	415	416	417	419	427	428	484	518	548	560
639	640	641	642	670	702	709	710	713	714	747	793	860	862
863	868	872	873	874	875	876	878	879	880	887	923	924	934
935	959	979											

**Soil**

102	103	104	105	131	132	133	135	136	137	138	139	140	141
149	150	151	152	231	233	250	251	253	254	255	256	266	267
282	427	428	467	476	481	557	558	559	608	609	615	616	617
647	661	662	708	709	710	713	745	754	762	766	773	782	783
784	786	787	794	836	851	877	880	881	882	884	885	886	925
927	934	940	968	969	971	973	987	990					

**Soil Sciences**

060	102	103	104	105	132	133	135	136	137	138	139	140	141
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

**Soil Sciences (continued)**

381 557 558 559 608 609 615 616 617 766 786 787 836 884  
885 886 987

**Spermopsida (Seed Plants)**

207 208 252 327 755 761 774 795 945 947

**Stratigraphy**

019 210 382 593 615 616 650

**Stream**

031 048 049 142 143 144 145 146 147 148 149 150 151 152  
155 157 168 169 171 176 177 217 244 275 276 277 278 310  
378 397 405 529 530 545 676 677 710 713 725 733 734 735  
736 753 773 789 817 868 979 986 992

**Succession**

020 096 163 196 222 223 282 335 337 338 376 464 877

**Taxonomy**

001 016 048 049 078 082 143 173 186 187 189 195 214 217  
220 232 233 234 235 236 237 242 243 244 252 257 260 265  
307 368 389 392 406 407 472 494 502 507 530 567 578 694  
716 717 750 754 796 806 807 808 809 843 851 870 915 943  
944 945 946 947 949 950 951 952

**Technical Report**

048 049 070 094 123 124 125 126 129 279 530 580 752 827  
845 846 847 848 867 871 891 899 900 901 902 903 904 905  
906 907 908 923 934 935 954 979

**Technique**

040 103 128 170 182 230 274 294 298 302 319 330 386 439  
497 498 536 543 569 624 625 655 744 749 765 766 788 798  
800 891 931

**Temperature**

027 039 047 076 077 079 115 116 250 251 253 254 255 256  
352 519 561 562 563 634 635 647 818 825 879 880 881

**Thermoregulation**

076 666 824 825

**Thesis**

023	025	029	031	082	085	096	148	168	177	199	200	201	206
222	224	235	239	243	246	247	257	258	260	264	271	275	280
283	296	309	330	341	343	347	348	378	384	385	412	425	452
475	478	485	499	512	518	528	529	531	533	556	560	574	575
581	586	587	644	651	670	671	673	674	675	677	688	702	705
725	774	778	782	859	861	864	866	868	869	888	898	912	916
920	969	988											

**Timberline - See also Forest-tundra Ecotone**

**Tracheophytes**

019	020	025	091	129	161	193	196	204	462	584	767	946	951
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

**Trail Ridge**

300	301	638	639	819	824	828	857	858					
-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--	--	--

**Tree**

023	024	069	201	218	224	225	238	311	312	313	369	370	372
373	374	375	376	410	411	433	447	512	513	514	515	516	517
518	570	626	627	632	633	680	681	682	683	684	730	731	732
759	805	810	813	830	861	921	922	991					

**Trophic**

249

**U.S. International Biological Programme**

024	041	081	093	094	095	123	124	125	126	127	159	160	161
229	239	240	241	250	251	478	480	481	482	483	532	533	534
535	536	537	582	644	645	646	647	648	649	650	672	679	686
891	908	925	934	939	940	965	991						

**University of Colorado**

001	002	003	004	005	006	007	011	012	013	014	016	022	025
028	029	031	037	076	077	078	082	083	085	086	087	088	089
090	096	107	122	130	148	176	185	186	187	188	189	190	192
197	198	199	201	202	206	219	220	221	232	234	235	236	237
242	243	244	249	264	266	267	271	272	273	281	296	307	309
311	312	332	333	334	343	367	369	371	388	389	390	391	392
393	395	425	439	452	472	473	474	475	477	485	486	487	488
490	495	500	502	511	512	514	516	518	526	528	531	555	575
583	632	633	637	638	643	671	674	675	687	688	689	691	701
705	716	719	725	733	734	735	736	737	738	739	740	741	742
751	753	755	756	757	758	759	760	761	762	763	764	765	766
767	768	769	770	771	772	773	774	778	785	796	801	802	817
822	823	824	825	830	837	842	843	844	852	859	861	862	863
865	866	888	890	892	898	912	913	914	915	916	917	920	943

**University of Colorado (continued)**

944	945	946	947	948	949	950	951	952	953	964	966	967	968
969	970	971	972	973	975	976	980	988	992				

**Water**

050	052	054	090	102	103	104	105	117	118	119	136	137	148
155	157	168	169	170	171	177	239	240	241	249	253	254	255
256	266	267	324	325	327	391	393	405	414	415	416	417	427
481	482	483	523	536	548	558	559	601	604	639	641	660	672
676	725	766	776	777	872	873	875	876	878	880	887	889	919
924	962	974											

**Watershed**

017	117	118	119	148	149	150	151	171	177	405	545	547	572
710	713	889	979										

**Wind**

009	010	027	084	113	114	115	116	120	121	122	209	300	301
409	410	411	420	421	454	456	461	468	509	553	554	561	562
563	565	566	574	634	635	640	698	782	783	784	805	884	885
886	962												

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