

James Bell Benedict 11 November 1938 to 8 March 2011 In Memoriam

Author: Birkeland, Peter W.

Source: Arctic, Antarctic, and Alpine Research, 43(3) : 485-489

Published By: Institute of Arctic and Alpine Research (INSTAAR),
University of Colorado

URL: <https://doi.org/10.1657/1938-4246-43-3.485>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

James Bell Benedict

11 November 1938 to 8 March 2011

In Memoriam

James Bell Benedict passed away at the age of 72 on 8 March 2011 at his mountain home located within the area of the Tertiary erosion surface of the Front Range, Colorado. His decades of research focused on the adjacent mountains, mainly the alpine, where he did ground-breaking work in geomorphology, Quaternary stratigraphy, and archaeology. If there is any thread that characterizes this work, it is the extreme detail with which he undertook any project, using many innovative methods.

Jim was born in Cincinnati, Ohio, on 11 November 1938. Because he enjoyed the high mountains, in 1957 he came west to the University of Colorado at Boulder, took an introductory geology course from Professor Bill Bradley, and that decided his lifelong work. By the time of his graduation in 1961 he was already a member of INSTAAR and began his Ph.D. at the University of Wisconsin–Madison on work he started while at CU. Bob Black was his dissertation advisor, and the degree was earned in 1968.

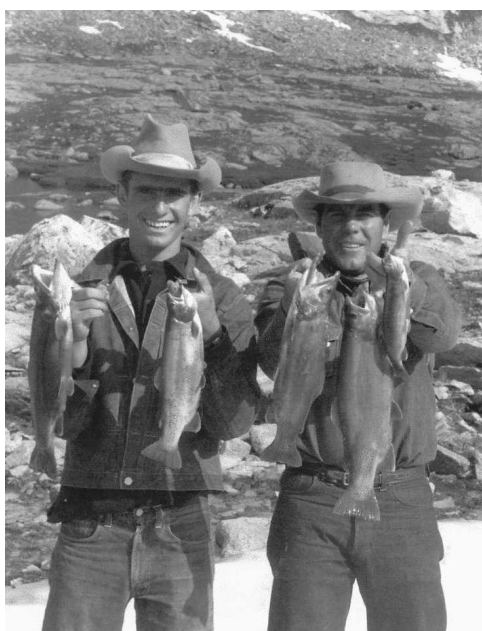
Jim's dissertation was on the neoglacial history of the Colorado Front Range. It consisted of an extensive study of glacial advances and retreats in the cirques over the past about 12,000 years, and included dating the mantles of rock glaciers. To help date the younger deposits, he developed an ingenious radiocarbon-dated lichen-growth curve. Few workers have matched the detail of this curve for any mountain environment. He also correlated these deposits with alluvial deposits in the Colorado Piedmont, as well as with the known archaeology. By the



time he earned his Ph.D. degree, Jim had published 5 papers, a major accomplishment in those days. Two of the papers, published in 1967 and 1968, formed his Ph.D. dissertation. He continued with the stratigraphic and lichen work throughout his life.

In 1961 he began work on the processes, rates, and climatic significance of soil movement on Niwot Ridge, adjacent to the Mountain Research Station. This monumental work was published as an entire issue (summer 1970) of this fairly new journal, then called *Arctic and Alpine Research*. The work so impressed the geomorphological community that the Geological Society of America awarded him the Kirk Bryan Award in 1975, given yearly for the top publication in geomorphology. Of interest, Kirk Bryan also was a geomorphologist who incorporated archaeology into his research during his distinguished career.

Jim hiked across the alpine landscape repeatedly and at least by 1963 he noticed evidence of early humans, and so began the long-term study of archaeological sites. The sites included campsites, hearths, game drives, hunting blinds, cairns, and a vision quest site. His first archaeological publication was in 1969, and by the mid-1970s they were coming out regularly. In the stratigraphy of the deposits are stone tools, including projectile points and ceramics. Dating involved numerous radiocarbon dates, and an ingenious way of using the lichen-growth data. The oldest sites date to the early Holocene (ca. 10,000 years before present). Adaption to changing climate was a common thread throughout this work. In later years he followed snow-patch melting trends in search of new sites.



Jim Benedict (left).

DOI: 10.1657/1938-4246-43-3.485

Putting all the above together, Jim was actively researching across a broad range of fields in the 1960s at a young age. Speculation is that it would have been difficult to write a traditional Ph.D. with all the research, especially as some was completed and some was long term. Hence, his committee may have suggested that the completed work be the Ph.D. dissertation, and that he continue on with the other research.

An outgrowth of the archaeological studies was that artifact lithologies could be used to suggest several human migrations. One was seasonal—summer in the alpine and winter in the plains to the east. The other was a 300- to 400-km-long counterclockwise “grand circuit” that went from the alpine, east to the plains, northward into southern Wyoming, southward through the parks west of the Front Range, and back to the alpine.

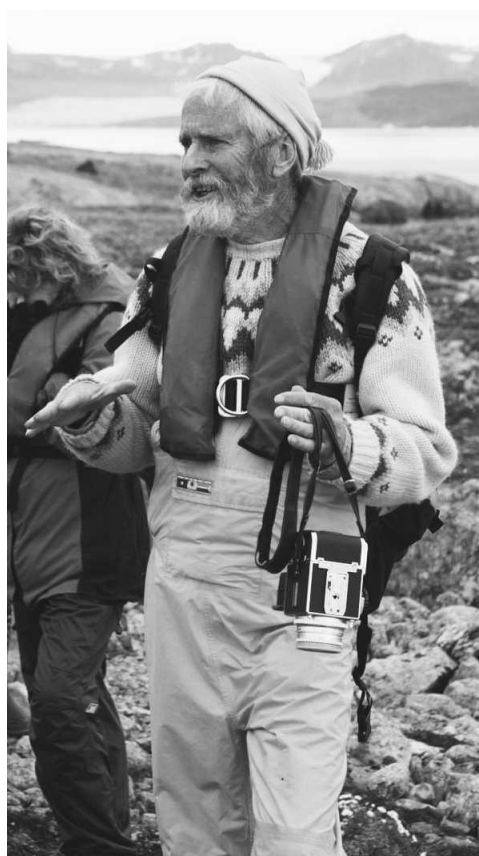
By the early 1970s he moved his operation from INSTAAR to his home and research laboratory in the mountains west of Jamestown, Colorado. There he formed the Center for Mountain Archeology. He first published his works in peer-reviewed journals. However, as time went on he felt they were too restrictive in page allotments, and he began the Research Reports of the Center, the first in 1978. These are large format (8½ × 11 inches) and are richly illustrated with his superb photography and detailed line drawings. The latter depict the site stratigraphy, including soil horizons, position, and shape of clasts, and position of the artifacts. The longest report was 215 pages. I especially liked to run student field trips through his areas as all the pertinent data were easy to access and understand. Jim kept me well supplied with his publications, often autographed with a humorous note to Sue and myself, followed by “Jim.”

His work was incorporated into the teaching at CU. Bill Bradley and Nel Caine used the Niwot Ridge periglacial work in their geomorphology lectures and associated field trips. I used the Quaternary stratigraphy work in my Quaternary lectures, and because students had to do field projects, we had intimate knowledge of his work, and it passed this critical screening. Sometimes we all went out to places he had worked, using his illustrations, and students collected their own data, sometimes with high-altitude headaches and approaching thunderstorms. This turned out to be a great exercise in the physical conditions under which Jim worked, and served to mute some criticisms so easily made from the comfort of a classroom.

In time, soils were added to his investigations. In fact, soils are listed as his Ph.D. minor at the University of Wisconsin. One study involved the interaction between vegetation and podzolization as krummholz trees migrated across the tundra, the rates of which were dated by radiocarbon. Another involved soil chemistry that included soils he had collected from the Mt. Everest area. Still another involved the origin of fine-grained materials in both soils and archaeological deposits that seemed out of place, and he and others soon suggested a loess source. This idea was supported with the help of a geochemist, and source areas were targeted. These soil studies were yet another field of inquiry for him.

He enjoyed interacting with students and others. He was on thesis committees of students working on Quaternary projects at CU, and on archaeology at Colorado State University, where he was a Research Affiliate. He also collaborated with many others working on archaeological projects in the Front Range (see reference list).

Jim led others through his work via field trips. I first met him on his periglacial field trip on Niwot Ridge during the 1965 INQUA meeting in Boulder. In 2003 Jim joined several of us to lead another INQUA field trip in the Front Range. With him, one



day was spent on Niwot Ridge and the other in the vicinity of Arapaho Pass. At the end of the latter day, we were taken to valley-side rock glaciers adjacent to an archaeological site. Knowing the cooling effect of air at depth between the huge rock-glacier clasts, Jim produced naturally cooled beers and toasted the group!

His work inspired others to collect more data in the area. Some workers tried to improve on the dating using lake cores, sometimes collected from frozen lakes accessed by long ski trips, and others have collected rock samples for cosmogenic dating. Still others used his mapped geological deposits as substrates for soil studies.

Jim Benedict will always be known for the thoroughness of his imaginative work on a wide variety of geomorphological, Quaternary stratigraphic, and archaeological phenomena. Besides the studies mentioned above, others that clearly demonstrate the breadth of his interests involved the snowkill effects on lichens by late-lying snow and winter frost, location of field sites for future workers to directly measure lichen growth rates, the long-term measurement of snowbank size, the position of tree limit, rock weathering, and the eolian deposition of forest-fire charcoal. His work in the southern Rockies has attracted the attention of a diverse international community over 5 decades.

We are forever reminded of him and his work as we ski and hike through these mountains, and often we change course to revisit his sites. It enhances our mountain experience, for sure. Good job, well done, my friend.

Several people helped me with this memoriam in various ways; these include Audrey Benedict, Bill Bradley, Nel Caine, Shemin Ge, Vance Holliday, Jessica King, Jim Knox, Jason La Belle, Rich Madole, John Pitlick, and Al Werner.

Compiled Bibliography of James Bell Benedict

- 1965: Patterned ground on Niwot Ridge, Boulder County, Colorado. In *Guidebook for One Day Field Conferences, Boulder Area, Colorado*. VII INQUA Congress, 23–26.
- 1966: Radiocarbon dates from a stone-banked terrace in the Colorado Rocky Mountains, U.S.A. *Geografiska Annaler*, 48(1): 24–31.
- 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.
- 1968a: Neoglacial history of the Colorado Front Range. PhD dissertation, Department of Geology, University of Wisconsin–Madison.
- 1968b: Recent glacial history of an alpine area in the Colorado Front Range. II. Dating the glacial deposits. *Journal of Glaciology*, 7: 77–87.
- 1969a: Aerial photography and mapping of the Rollins Pass site, Colorado. *Year Book of the American Philosophical Society*: 504–506.
- 1969b: Microfabric of patterned ground. *Arctic and Alpine Research*, 1(1): 45–48.
- 1970a: Altithermal occupation of the Front Range alpine region. *Abstracts, First Meeting of the American Quaternary Association*, 8.
- 1970b: Downslope soil movement in a Colorado alpine region: rates, processes, and climatic significance. *Arctic and Alpine Research*, 2(3): 165–226.
- 1970c: Frost cracking in the Colorado Front Range. *Geografiska Annaler*, 52A (2): 87–93.
- 1973a: Chronology of cirque glaciation, Colorado Front Range. *Quaternary Research*, 3(4): 585–599.
- 1973b: Origin of rock glaciers. *Journal of Glaciology*, 12(66): 520–522.
- 1974: Early occupation of the Caribou Lake site, Colorado Front Range. *Plains Anthropologist*, 19: 1–4.
- 1975a: The Murray Site: a Late Prehistoric game drive system in the Colorado Rocky Mountains. *Plains Anthropologist*, 20: 161–174.
- 1975b: Scratching Deer: a Late Prehistoric campsite in the Green Lakes valley, Colorado. *Plains Anthropologist*, 20: 267–278.
- 1975c: The Albion Boardinghouse site: Archaic occupation of a high mountain valley. *Southwestern Lore*, 41: 7–17.
- 1975d: Prehistoric man and climate: the view from timberline. In Suggate, R. P., and Cresswell, M. M. (eds.), *Quaternary Studies*. Royal Society of New Zealand Bulletin 13, 67–74.
- 1976: Frost creep and gelifluction features: a review. *Quaternary Research*, 6(1): 55–76.
- 1978a: Excavations at the Hungry Whistler site. In *The Mount Albion Complex: a study of prehistoric man and the Altithermal*. *Center for Mountain Archeology, Research Report*, 1. [Page numbers?]
- 1978b: The Mount Albion Complex: review and summary. In *The Mount Albion Complex: a study of prehistoric man and the Altithermal*. *Center for Mountain Archeology, Research Report*, 1. [Page numbers?]
- 1978c: The Mount Albion Complex and the Altithermal. In *The Mount Albion Complex: a study of prehistoric man and the Altithermal*. *Center for Mountain Archeology, Research Report*, 1. [Page numbers?]
- 1979a: Getting away from it all: a study of man, mountains and the two-drought Altithermal. *Southwestern Lore*, 45: 1–12. [Page nos. for 1979a and 1979b overlap]
- 1979b: Excavations at the Blue Lake Valley site, Front Range, Colorado. *Southwestern Lore*, 45: 7–17.
- 1979c: Fossil ice-wedge polygons in the Colorado Front Range: origin and significance. *Geological Society of America Bulletin*, 90(part 1): 173–180.
- 1981a: The Fourth of July valley: glacial geology and archeology of the timberline ecotone. *Center for Mountain Archeology, Research Report*, 2: 1–139.
- 1981b: Prehistoric man, volcanism, and climate change: 7500–5000 ¹⁴C Yr. B.P. *Geological Society of America Abstracts with Programs*, 13: 407.
- 1981c: Appendix 3: geology of site 5ST85. In Gooding, J., *The Archaeology of Vail Pass Camp*. Denver: Colorado Department of Highways, Highway Salvage Report Number 35: 137–143.
- 1982: Soft-sediment deformation by rock glaciers, Indian Peaks Wilderness Area, Colorado Front Range. *Program and Abstracts, Seventh Biennial Conference, American Quaternary Association*, 68.
- 1984a: Rates of tree-island migration, Colorado Rocky Mountains, USA. *Ecology*, 65(3): 820–823.
- 1984b: Lichenometric dating of tundra game-drive structures. *Programs and Abstracts, Eighth Biennial Meeting, American Quaternary Association*.
- 1985a: Arapaho Pass: glacial geology and archeology at the crest of the Colorado Front Range. *Center for Mountain Archeology, Research Report*, 3: 1–197.
- 1985b: Old Man Mountain: a vision quest site in the Colorado high country. *Center for Mountain Archeology, Research Report*, 4: 39 pp.
- 1986a: Man at the montane glacial margin, Colorado Front Range. *Programs and Abstracts, Ninth Biennial Meeting, American Quaternary Association*, 61–63.
- 1986b: Review of *People of the High Country—Jackson-Hole before the Settlers*, by G. A. Wright. *Plains Anthropologist*, 31(111): 80–83.
- 1986c: Review of *Archaeological Sediments in Context*, by J. K. Stein and W. R. Farrand. *Arctic and Alpine Research*, 18(1): 125–126.
- 1987a: A fasting bed and game drive site on the Continental Divide in the Colorado Front Range. *Southwestern Lore*, 53(3): 1–27.
- 1987b: Review of *The Knife River Flint Quarries: Excavations at Site 32DU508*, by S. A. Ahler. *International Journal of Geoarchaeology*, 2(4): 334–335.
- 1988: Techniques in lichenometry: identifying the yellow rhizocarpons. *Arctic and Alpine Research*, 20(3): 285–291.
- 1989a: Age of punctate pottery from the Caribou Lake Site: comparison of three physical dating methods. *Southwestern Lore*, 55(2): 1–10.
- 1989b: Use of *Silene acaulis* for dating: the relationship of cushion diameter to age. *Arctic and Alpine Research*, 21(1): 91–96.
- 1989c: Review of *The Little Ice Age*, by Jean M. Grove. *International Journal of Geoarchaeology*, 4(4): 363–365 (with Max Maisch).
- 1989d: Two decades of progress in periglacial research (review of *Advances in Periglacial Geomorphology*, edited by M. J. Clark). *Boreas*, 18(1): 86.
- 1990a: Archeology of the Coney Creek valley. *Center for Mountain Archeology, Research Report*, 5: 1–76.
- 1990b: Lichen mortality due to late-lying snow: results of a transplant study. *Arctic and Alpine Research*, 22(1): 81–89.
- 1990c: Experiments in lichen growth. I. seasonal patterns and environmental controls. *Arctic and Alpine Research*, 22: 244–254.
- 1990d: Winter frost injury to lichens—Colorado Front Range. *The Bryologist*, 93: 423–426.

- 1991: Experiments in lichen growth. II. Effects of a seasonal snow cover. *Arctic and Alpine Research*, 24: 1–16.
- 1992a: Sacred hot springs, instant patinas. *Plains Anthropologist*, 37(138): 1–6.
- 1992b: Footprints in the snow: high altitude cultural ecology of the Colorado Front Range. *Arctic and Alpine Research*, 24: 10–16.
- 1992c: Along the Great Divide: Paleoindian archaeology of the high Colorado Front Range. In Stanford, D. (ed.), *Ice Age Hunters of the Rockies*. Denver: Denver Museum of Natural History.
- 1992d: Field and laboratory studies of patterned ground in a Colorado alpine region. *University of Colorado, Institute of Arctic and Alpine Research, Occasional Paper*, 49: 1–38.
- 1993a: Excavations at Bode's Draw: a women's work area in the mountains near Estes Park, Colorado. *Center for Mountain Archeology, Research Report*, 6: 42 pp.
- 1993b: A 2,000-year lichen-snowkill chronology for the Colorado Front Range, USA. *The Holocene*, 3: 27–33.
- 1993c: Influence of snow upon rates of granodiorite weathering, Colorado Front Range, USA. *Boreas*, 22: 87–92.
- 1994a: Review of *Solifluction and Climatic Variation in the Holocene*, edited by Burkhead, Frnz, J. A. Matthews, and Birgit Glaser. *Arctic and Alpine Research*, 26(4): 427.
- 1996: The game drives of Rocky Mountain National Park. *Center for Mountain Archeology, Research Report*, 7: 110 pp.
- 1999: Effects of changing climate on game-animal and human use of the Colorado high country (USA) since 1000 B.C. *Arctic, Antarctic, and Alpine Research*, 31: 1–15.
- 2000a: Game drives of the Devil's Thumb Pass Area. In Cassells, S (ed.), *This Land of Shining Mountains: Archeological Studies in Colorado's Indian Peaks Wilderness Area*. *Center for Mountain Archeology, Research Report*, 8: 18–94.
- 2000b: Excavations at the Fourth of July Mine Site. In Cassells, S (ed.), *This Land of Shining Mountains: Archeological Studies in Colorado's Indian Peaks Wilderness Area*. *Center for Mountain Archeology, Research Report*, 8: 159–188.
- 2001: Archaeologists above timberline: the early years. *Southwestern Lore*, 67(2): 1–16.
- 2002a: A newly discovered game-drive system in Rocky Mountain National Park, north-central Colorado. *Southwestern Lore*, 68(1): 23–37.
- 2002b: Eolian deposition of forest-fire charcoal above tree limit, Colorado Front Range, U.S.A.: potential contamination of AMS radiocarbon samples. *Arctic, Antarctic, and Alpine Research*, 34(1): 33–37.
- 2005a: Rethinking the Fourth of July Valley site: a study in glacial and periglacial geoarchaeology. *Geoarchaeology*, 20: 797–836.
- 2005b: Tundra game drives: an arctic-alpine comparison. *Arctic, Antarctic, and Alpine Research*, 37: 425–434.
- 2007a: Wild plant foods of the alpine tundra and subalpine forest, Colorado Front Range. *Center for Mountain Archeology, Research Report*, 9.
- 2007b: Effects of climate on plant-food availability at high altitude in the Colorado Front Range, U.S.A. *Journal of Ethnobiology*, 27(2): 143–173.
- 2008: Experiments in lichen growth, III. The shape of the age-size curve. *Arctic, Antarctic, and Alpine Research*, 40: 15–26.
- 2009: A review of lichenometric dating and its applications to archaeology. *American Antiquity*, 74(1): 143–172.
- 2011: Sclerotia as indicators of mid-Holocene tree-limit altitude, Colorado Front Range, U.S.A. *The Holocene*, doi:10.1177/0959683610395078.
- Benedict, James B., and Benedict, Audrey DeLella
1984: *Guidebook to the Glacial Geology and Natural History of the Arapaho Pass Area, Colorado Front Range*. American Quaternary Association, Eighth Biennial Meeting, Post-Conference Field Trip, 16–18 August 1984: 1–46.
- 2001: Subnivean root caching by a montane vole (*Microtus montanus nanus*), Colorado Front Range, USA. *Western North American Naturalist*, 61(2): 241–244.
- Benedict, James B., Benedict, Robert J., Lee, Craig M., and Staley, Dennis M.
2008: Spruce trees from a melting ice patch: evidence for Holocene climatic change in the Colorado Rocky Mountains, USA. *Holocene* 18(7): 1067–1076.
- Benedict, James B., Benedict, Robert J., and Sanville, Doug
1986: Arapaho rock glacier, Front Range, Colorado, U.S.A.: A 25-year resurvey. *Arctic and Alpine Research*, 18(3): 349–352.
- Benedict, James B., and Cassells, E. Steve
2000: The Bob Lake game drive. In Cassells, S. (ed.), *This Land of Shining Mountains: Archeological Studies in Colorado's Indian Peaks Wilderness Area*. *Center for Mountain Archeology Research, Report* 8: 1–17.
- Benedict, James B., and Nash, T. H., III
1990: Radial growth and habitat selection by morphologically similar chemotypes of *Xanthoparmelia*. *The Bryologist*, 93: 319–327.
- Benedict, James B., and Olson, Byron L.
1971: The stratigraphic profile of grid squares 2S/2E and 2S/4E. *Southwestern Lore*, 36(4): 54–58.
- 1973: Origin of the McKean Complex: evidence from timberline. *Plains Anthropologist*, 18: 323–327.
- 1978: The Mount Albion Complex: a Study of Prehistoric Man and the Altithermal. *Center for Mountain Archeology, Research Report*, 1: 213 pp.
- Birkeland, P. W., Burke, R. M., and Benedict, J. B.
1989: Pedogenic gradients for iron and aluminum accumulation and phosphorus depletion in arctic and alpine soils as a function of time and climate. *Quaternary Research*, 32(2): 193–204.
- Dethier, D. P., Benedict, J. B., Birkeland, P. W., Caine, N., Davis, P. T., Madole, R. F., Patterson, P. E., Price, A. B., Schildgen, T. F., and Shroba, R. R.
2003: Quaternary stratigraphy, geomorphology, soils, and alpine archaeology in an alpine-to-plains transect, Colorado Front Range. In Easterbrook, D. J. (ed.), *Quaternary Geology of the United States*. Reno, Nevada: Desert Research Institute, INQUA 2003 Field Guide Volume, 81–104.
- Lee, Craig M., Benedict, James B., and Lee, Jennie B.
2006: Ice patches and remnant glaciers: paleontological discoveries and archaeological possibilities in the Colorado High Country. *Southwestern Lore*, 71(1): 26–43.
- Muhs, Daniel R., and Benedict, James B.
1992: Sources of probable eolian sediments on Late Quaternary alpine moraines, Colorado Front Range: evidence from trace element geochemistry. *Programs and Abstracts, Twelfth Biennial Meeting, American Quaternary Association*, 73 (James Benedict, Dan Muhs and John Evans).
- 2006: Eolian additions to Late Quaternary alpine soils, Indian Peaks Wilderness Area, Colorado Front Range. *Arctic, Antarctic, and Alpine Research*, 38(1): 120–130.
- Outcalt, Samuel I., and Benedict, James B.
1965: Photo-interpretation of two types of rock glacier in the Colorado Front Range, U.S.A. *Journal of Glaciology*, 5(42): 849–856.

Reviews of Benedict Works

Bettinger, Robert L.

1991: Review of *Archaeology of the Coney Creek Valley*, by James B. Benedict. *Arctic and Alpine Research*, 23(1): 120–121.

Cassells, E. Steve

1987: Review of *The Mount Albion Complex, a Study of Prehistoric Man and the Altithermal, The Fourth of July Valley: Glacial Geology, and Archeology of the Timberline Ecotone, and Arapaho Pass: Glacial Geology and Archeology at the Crest of the Colorado Front Range*. *American Antiquity*, 52(1): 207–208.

Dort, Wakefield, Jr.

1979: Review of *The Mount Albion Complex, a Study of Prehistoric Man and the Altithermal*, by James B. Benedict and Byron Olson. *Arctic and Alpine Research*, 11(3): 361–363.

Forbis, Richard G.

1978: Review of *The Mount Albion Complex, a Study of Prehistoric Man and the Altithermal*, by James B. Benedict and Byron Olson. *Arctic*, 31(4): 503.

1981: Review of *The Fourth of July Valley: Glacial Geology, and Archeology of the Timberline Ecotone*, by James B. Benedict. *Arctic*, 34(3): 279.

Holliday, Vance T.

1986: Review of *Arapaho Pass: Glacial Geology and Archeology at the Crest of the Colorado Front Range*, by James B. Benedict. *Arctic and Alpine Research*, 18(2): 241–242.

Jahn, Alfred

1993: Review of *Field and Laboratory Studies of Patterned Ground in a Colorado Alpine Region*, by James B. Benedict. *Arctic and Alpine Research*, 25(3): 260.

Janetski, Joel C.

1997: Review of *The Game Drives of Rocky Mountain National Park*, by James B. Benedict. *Arctic and Alpine Research*, 29(2): 255–256.

Karlstrom, Eric T.

1986: Review of *Arapaho Pass: Glacial Geology and Archeology at the Crest of the Colorado Front Range*, by James B. Benedict. *Geoarchaeology*, 1(2): 208–209.

Loendorf, Lawrence

1986: Review of *Old Man Mountain: A Vision Quest Site in the Colorado High Country*, by James B. Benedict. *Arctic and Alpine Research*, 18(2): 242–243.

Lubinski, Patrick M.

1997: Review of *Game Drives of Rocky Mountain National Park*, by James B. Benedict. *Geoarchaeology*, 12(8): 889–891.

Metcalf, Michael D.

1991: Review of *Archeology of the Coney Creek Valley*, by James B. Benedict. *Plains Anthropologist*, 36(136): 270–271.

Sappington, Robert Lee

1997: Review of *The Game Drives of Rocky Mountain National Park*, by James B. Benedict. *American Antiquity*, 62(3): 580.

White, Sidney E.

1982: Review of *The Fourth of July Valley: Glacial Geology, and Archeology of the Timberline Ecotone*, by James B. Benedict. *Arctic and Alpine Research*, 14(1): 75–76.

Wilke, Philip J.

1998: Review of *The Game Drives of Rocky Mountain National Park*, by James B. Benedict. *Plains Anthropologist*, 43(166): 424–425.

Wood, Raymond

1986: Plains and alpine archaeology (review of the works of James B. Benedict). *The Quarterly Review of Archaeology*, 7 (4): 14–15.

PETER W. BIRKELAND

Department of Geological Sciences
University of Colorado
Boulder, Colorado 80309, U.S.A.