



# An Abridged Bibliography of Research in the Barrow Area

compiled by Jerry Brown

Research in the Barrow, Alaska, area since the 1940s has resulted in thousands of open-literature publications. This abridged compilation highlights significant and historic publications and indicates locations of many field studies on an index map (following page). The present compilation is based on Gunn's bibliography of the Naval Arctic Research Laboratory, prepared in conjunction with the 25th anniversary of NARL (Gunn, 1973), with additions from the Tundra Biome list of publications, the bowhead whale and Climate Monitoring and Diagnostics Lab (CMDL) compilations, and on-line bibliographic searches by Martha Andrews (Institute for Arctic and Alpine Research), Nancy Liston (Cold Regions Research and Engineering Laboratory), and Julia Triplehorn (University of Alaska Fairbanks). Due to space limitations, several selection criteria were used in editing this abridged bibliography: included were books and chapters in books about Barrow, at least one Barrow-related reference for each author who had worked at Barrow, and selective multiple listings for an author if the subject matter differs substantially. The author's most recent publication was usually cited in the case of a series of papers. Abstracts, dissertations, and the extensive gray literature, including contract reports, are not included. Many of these reports and other publications predating the early 1970s can be found in the NARL archive at the Rasmuson Library, University of Alaska Fairbanks.

Several large lists of publications were reduced for this compilation. The Tundra Biome site bibliography contains over 200 publications and 35 dissertations that are specific to Barrow. The present list of Biome citations is limited to the contents of books and single entries for individual authors. The complete Tundra Biome publication list as of 1983 is available in digital form (scanned and edited by Donna Valliere, Cold Regions Research and Engineering Lab) and based on Brown et al. (1983). Additional references provided by Tom Albert of the North Slope Borough Department of Wildlife Management and Dan Endres of CMDL are available on the ARCUS web site ([www.arcus.org](http://www.arcus.org)). The compiler of this abridged bibliography, Jerry Brown, takes full responsibility for omissions or inappropriate selection of references. This compilation could be used as the basis for a comprehensive electronically searchable bibliography of the Barrow area, which would be a valuable resource on the recommended web site (see pages 51 and 67).

The GIS indexing has been prepared by Christopher Kroot, TREESystems, with support from the Barrow Arctic Science Consortium. Ultimately, references, field sites, and accessible data will be incorporated into a GIS database. The following sites are indicated by number or letter [ ] at the end of each citation.

Barrow town sites (NWS) [9]

Beach Ridge: Trenches [14]; Arctic Brown [16];

Bowhead whale studies and related studies [25]\*

Brant Point [10]

Britton Manor [8]

CMDL/GMCC/ARM [15]

Coastal studies [4]\*

CRREL ice mine [23]

CRREL transect [12]\*

Elson Lagoon [11]\*

Footprint Drainage: Creek [18]; Lake [28]

Imikpuk Lake [6]

Ikroavik Lake [27]

ITEX sites [13]

NARL [7]

North Meadow Lake [17]

Nunavak Creek [24]

Point Barrow (Nuvuk) [2]

Sea ice, Subsea permafrost [5]\*

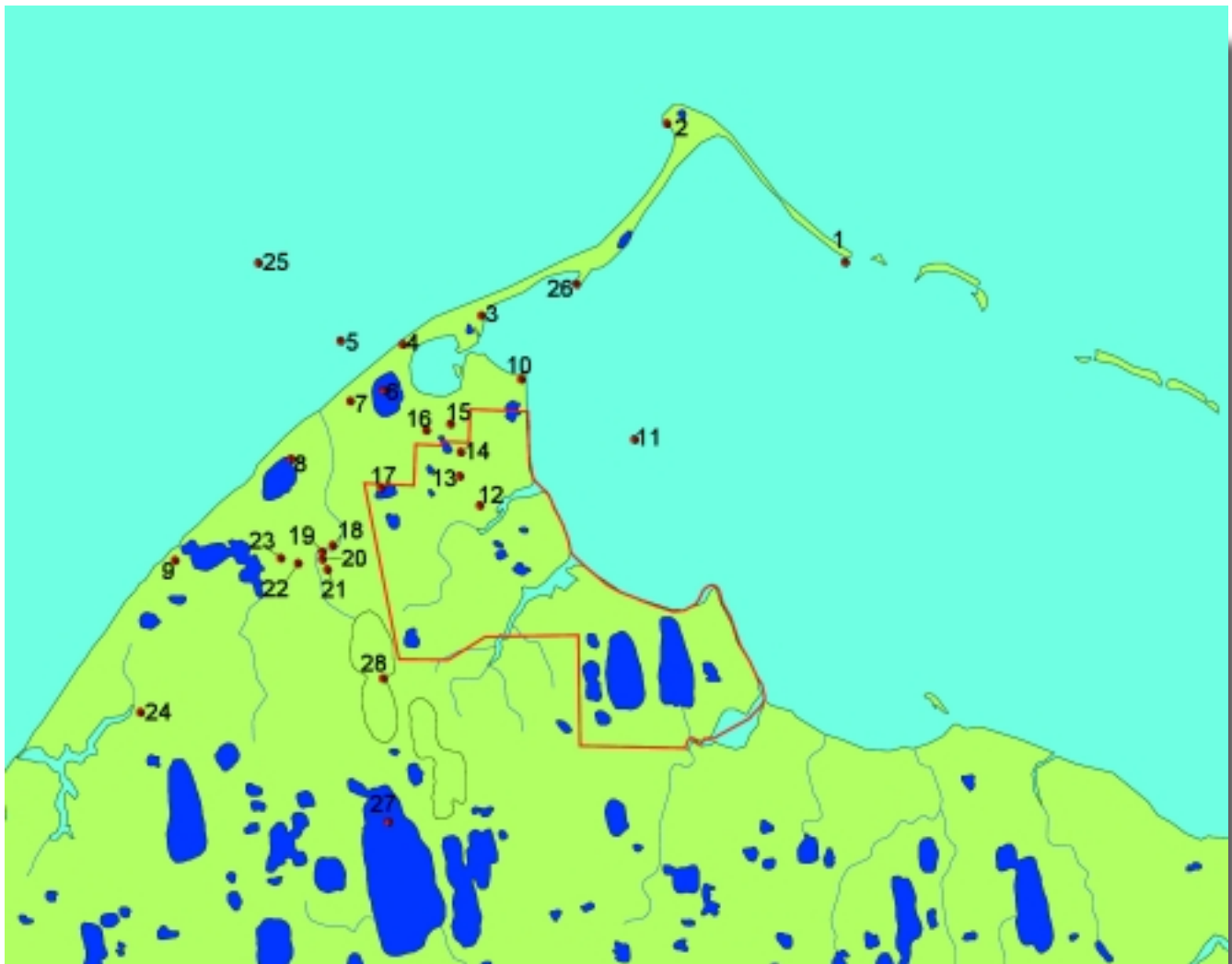
Spit (site specific): Birnirk [3]; Eluitkak Pass [1];

Niksiuraq [26]; Nuvuk [2]

Tundra Biome: Site 1 [19]; Site 2 [20]; Site 4 [21]; Site 7 [22]

Non-site-specific citations for Barrow and adjacent region or location unassigned [G]

\* indicates type location for broader geographic area



- Abdelbaki, Y., W. Henk, J. Haldiman, T. Albert, R. Henry, and D. Duffield. 1984. Macroanatomy of the renicula of the bowhead whale, *Balaena mysticetus*. *Anatomical Record* 208:481–490. [25]
- Aitken, G. W. 1965. Ground temperature observations, Barrow, Alaska. *U.S. Army Cold Regions Research and Engineering Laboratory Technical Report 105*. 15 pp. [9]
- Akasofu, S. I., S. Chapman, and C. Ming. 1965. The polar electrojet. *Journal of Atmospheric and Terrestrial Physics* 27(11/12):1275–1305. [G]
- Akasofu, S. I., and C. I. Ming. 1969. A study of polar magnetic substorms. *Journal of Geophysical Research* 74:293–313. [G]
- Albert, T. 1988. The role of the North Slope Borough in arctic environmental research. *Arctic Research of the United States* 2:17–23. [25]
- Albert, T., ed. 1990. *Fifth Conference on the Biology of the Bowhead Whale, Balaena mysticetus: Extended Abstracts and Panel Discussions*. Barrow, AK: North Slope Borough. 244 pp. [25]
- Alexander, V., M. Billington, and D. M. Schell. 1978. Nitrogen fixation in arctic and alpine tundra. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 23, 539–558. New York: Springer-Verlag. [20]
- Alexander, V., D. W. Stanley, R. J. Daley, and C. P. McRoy. 1980. Primary producers. In *Limnology of tundra ponds*, ed. J. E. Hobbie, Chapter 5, 179–250. Stroudsburg, PA: Dowden, Hutchinson and Ross. [22]
- Allessio, M. L., and L. L. Tieszen. 1978. Translocation and allocation of <sup>14</sup>C-photoassimilate by *Dupontia fisheri*. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 17, 393–413. New York: Springer-Verlag. [20]
- Anderson, B. E., G. L. Gregory, J. E. Collins Jr., G. W. Sachse, T. J. Conway, and G. P. Whiting. 1996. Airborne observations of spatial and temporal variability of tropospheric carbon dioxide. *Journal of Geophysical Research* 101:1985–1997. [G]
- Aoki, T., T. Aoki, M. Fukabori, Y. Tachibana, Y. Zaizen, F. Nishio, and T. Oishi. 1998. Spectral albedo observation on the snow field at Barrow, Alaska. *Polar Meteorology and Glaciology* 12:1–9.
- Arcone, S. A., and A. J. Delaney. 1982. Electrical properties of frozen ground at VHF near Point Barrow, Alaska. *IEEE Transactions on Geoscience and Remote Sensing*. GE-20:485–492. [G]
- Ashkenazie, S., and U. N. Safriel. 1979. Time-dependent budget of the semi-palmated sandpiper *Calidris pusilla* at Barrow, Alaska. *Ecology* 60(4):783–799. [20]
- Bakwin, P. S., P. P. Tans, and P. C. Novelli. 1994. Carbon monoxide budget in the Northern Hemisphere. *Geophysical Research Letters* 21:433–436. [G]
- Banks, E. M., R. J. Brooks, and J. Schnell. 1975. Radiotracking study of home range and activity of the brown lemming (*Lemmus trimucronatus*). *Journal of Mammalogy* 56(4):888–901. [21]
- Barkley, S. A., G. O. Batzli, and B. D. Collier. 1980. Nutritional ecology of microtine rodents: A simulation model of mineral nutrition for brown lemmings. *Oikos* 34:103–114. [20]
- Barr, W. 1985. Expeditions of the First International Polar Year, 1882–83. *Arctic Institute of North America Technical Paper No. 29*. Washington, D.C.: 222 pp. [G]
- Barsdate, R. J., M. C. Miller, V. Alexander, J. R. Vestal, and J. E. Hobbie. 1980. Oil spill effects. In *Limnology of tundra ponds*, ed. J. E. Hobbie, Chapter 9, 388–406. Stroudsburg, PA: Dowden, Hutchinson and Ross. [22]
- Batzli, G. O., R. G. White, S. F. MacLean Jr., F. A. Pitelka, and B. D. Collier. 1980. The herbivore-based trophic system. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 10, 335–410. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Bay, C. 1996. *International Tundra Experiment, Barrow, Alaska (1995)*. Columbus, OH: Byrd Polar Research Center, Ohio State University. 202 pp. [13]
- Beal, M. A. 1968. The seasonal variation in sea level at Barrow, Alaska. In *Arctic Drifting Stations*, coord. J. E. Sater, 327–341. Washington D.C.: Arctic Institute of North America. [1]

- Bee, J. W., and E. R. Hall. 1956. *Mammals of northern Alaska*. Museum of Natural History, University of Kansas. Lawrence, KS: Allen Press. 309 pp. [G]
- Beeman, K., C. Clark, and W. Ellison. 1985. Acoustic tracking of migrating whales. *Horizon* 9(2):1–4. [Published by Sippican Ocean Systems, Inc., Marion, MA 02738.] [25]
- Bender, M. L., P. P. Tans, J. T. Ellis, J. Orchardo, and K. Habfast. 1994. A high-precision isotope ratio mass spectrometry method for measuring the O<sub>2</sub>/N<sub>2</sub> ratio of air. *Geochimica Cosmochimica Acta* 58:4751–4758. [G]
- Benson, C. S. 1969. The seasonal snow cover of arctic Alaska. *Arctic Institute of North America Technical Report* No. 51. Washington, D.C.: 47 pp.
- Benson, S. L., D. L. Hess, D. F. Meyer, K. A. Peck, and W. C. Swanner. 1997. Water resources data, Alaska, water year 1997. *U.S. Geological Survey Water-Data Report* AK-97-1. 212 pp. [See WRD reports starting in 1971 for Nunavak Creek discharge data.] [24]
- Billings, W. D., and K. M. Peterson. 1980. Vegetational change and ice-wedge polygons through the thaw-lake cycle in arctic Alaska. *Arctic and Alpine Research* 12(4):413–432. [18, 28]
- Billings, W. D., K. M. Peterson, and G. R. Shaver. 1978. Growth, turnover, and respiration rates of roots and tillers in tundra graminoids. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 18, 415–434. New York: Springer-Verlag. [20]
- Black, R. F. 1954. Precipitation at Barrow, Alaska, greater than recorded. *Transactions of the American Geophysical Union* 35(2):203–206. [9]
- Black, R. F. 1963. Les coins de glace et le gel permanent dans le Nord de Alaska. *Annales de Geographie* 72(391):257–271. [14]
- Black, R. F. 1964. Gubik formation of Quaternary age in northern Alaska. *U.S. Geological Survey Professional Paper* 302-C, pp. 59–91. [G]
- Black, R. F., and W. L. Barksdale. 1949. Oriented lakes of northern Alaska. *Journal of Geology* 57:105–118. [G]
- Blake, D. R., D. F. Hurst, T. W. Smith Jr., W. J. Whipple, T.-Y. Chen, N. J. Blake, and F. S. Rowland. 1992. Summertime measurements of nonmethane hydrocarbons in the Arctic and sub-Arctic during the 1988 Arctic Boundary Layer Experiment (ABLE 3A). *Journal of Geophysical Research* 97:16559–16588. [G]
- Bodhaine, B. A. 1995. Aerosol absorption measurements at Barrow, Mauna Loa, and the South Pole. *Journal of Geophysical Research* 100:8967–8975. [15]
- Bodhaine, B. A., and E. G. Dutton. 1993. A long-term decrease in arctic haze at Barrow, Alaska. *Geophysical Research Letters* 20:947–950. [15]
- Boering, K. A., S. C. Wofsy, B. C. Daube, R. R. Schneider, M. Loewenstein, J. R. Podolski, and T. J. Conway. 1996. Stratospheric mean ages and transport rates from observations of carbon dioxide and nitrous oxide. *Science* 274:1340–1343. [G]
- Booth, C. R., T. B. Lucas, J. H. Morrow, C. S. Weiler, and P. A. Penhale. 1994. The United States National Science Foundation's polar network for monitoring ultraviolet radiation. *Antarctic Research Series* 62:17–37. [7]
- Bousquet, P., P. Ciais, P. Monfray, Y. Balkansky, M. Ramonet, and P. P. Tans. 1996. Influence of two atmospheric transport models on inferring sources and sinks of atmospheric CO<sub>2</sub>. *Tellus* 48B:568–582. [G]
- Boyd, W. L., and J. W. Boyd. 1959. Water supply problems at Point Barrow. *Journal of the American Water Works Association* 51(7):890–896. [6]
- Boyd, W. L., and J. W. Boyd. 1964. Presence of bacteria in permafrost of the Alaskan Arctic. *Canadian Journal of Microbiology* 10:917–919. [23]
- Braham, H., 1984. The bowhead whale, *Balaena mysticetus*. *Marine Fisheries Review* 46(4):45–53. [25]
- Bratton, G., C. Spainhour, W. Flory, M. Reed, and K. Jayko. 1993. Presence and potential effects of contaminants. In *The bowhead whale*, eds. J. Burns, J. Montague, and C. Cowles, 701–744. Lawrence, KS: The Society for Marine Mammalogy. [25]
- Brewer, M. C. 1958a. Some results of geothermal investigations of permafrost in northern Alaska. *Transactions of the American Geophysical Union* 39(1):19–26. [G]

- Brewer, M. C. 1958b. The thermal regime of an arctic lake. *Transactions of the American Geophysical Union* 39(1):278–284. [6]
- Bridgeman, H. A., R. C. Schnell, J. D. Kahl, G. A. Herbert, and E. Joranger. 1989. A major haze event near Point Barrow, Alaska: analysis of probable source regions and transport pathways. *Atmospheric Environment, part A* 23(11):2537–2549. [G]
- Britton, M. E. 1957. Vegetation of the arctic tundra. In *Arctic biology*, ed. H. P. Hansen, 26–61. Corvallis, OR: Oregon State University Press. [8]
- Britton, M. E. 1964. ONR Arctic Research Laboratory. *Bioscience* 14(5):44–48. [7]
- Britton, M. E., ed. 1973. *Alaska Arctic Tundra: Proceedings of the twenty-fifth anniversary celebration of the Naval Arctic Research Laboratory, Arctic Institute of North America Technical Report No. 25*. Washington, D.C.: 224 pp. [7]
- Brogan, T. M. 1969. Constructing the Arctic Research Laboratory. *Navy Civil Engineer* 10(1): 4–6. [7]
- Brower, E., and J. Stotts. 1984. Arctic policy: The local/regional perspective. In *United States arctic interests: The 1980s and 1990s*, eds. W. E. Westermeyer and K. M. Shusterich: 319–344. New York: Springer-Verlag. [25]
- Brown, J. 1965. Radiocarbon dating, Barrow, Alaska. *Arctic* 18(1):36–48. [G]
- Brown, J., and P. L. Johnson. 1965. Pedo-ecological investigations, Barrow, Alaska. *CRREL Technical Report* 159. 38 pp. [12]
- Brown, J., N. Liston, D. Murphy, and J. Watts. 1983. U.S. Tundra Biome publication list. *CRREL Special Report* 83-29. 29 pp. [7]
- Brown, J., P. C. Miller, L. L. Tieszen, and F. L. Bunnell, eds. 1980. *An arctic ecosystem: The coastal tundra at Barrow, Alaska*. Stroudsburg, PA: Dowden, Hutchinson and Ross. 571 pp. [20]
- Buechler, D. G., and R. D. Dillon. 1974. Phosphorus regeneration in freshwater paramecia. *Journal of Protozoology* 21(2):339–343. [22]
- Bunnell, F. L., S. F. MacLean Jr., and J. Brown. 1975. Barrow, Alaska, USA. *Structure and function of tundra ecosystems*, eds. T. Rosswall and O. W. Heal, 73–124. Ecological Bulletins INFR 20. [G]
- Bunnell, F. L., O. K. Miller, P. W. Flanagan, and R. E. Benoit. 1980. The microflora: Composition, biomass, and environment. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 8, 255–290. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Bursa, A. S. 1963. Phytoplankton in coastal waters of the Arctic Ocean at Barrow, Alaska. *Arctic* 16(4):239–262. [4]
- Butler, M., M. C. Miller, and S. Mozley. 1980. Macro-benthos. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 7, 297–339. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Byrne, C., R. Balasubramanian, E. Overton, and T. Albert. 1985. Concentrations of trace metals in the bowhead whale. *Marine Pollution Bulletin* 14:497–498. [25]
- Caldwell, M. M., D. A. Johnson, and M. Fareed. 1978. Constraints on tundra productivity: Photosynthetic capacity in relation to solar radiation utilization and water stress in arctic and alpine tundras. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 13, 323–357. New York: Springer-Verlag. [20]
- Cameron, J. N., J. Kostoris, and P. A. Penhale. 1973. Preliminary energy budget of the nine-spined stickleback (*Pungitius pungitius*) in an arctic lake. *Journal of the Fisheries Research Board, Canada* 30(3):1179–1189. [27]
- Cameron, R. E., A. D. Knox, and F. A. Morell. 1978. The role of algae in tundra soils. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 8, 207–227. New York: Springer-Verlag. [20]
- Campbell, W. B., R. W. Harris, and R. E. Benoit. 1973. Response of Alaskan tundra microflora to a crude oil spill. *Proceedings of the Symposium on the Impact of Soil Resource Development on Northern Plant Communities*. Alaska Science Conference. 53–62. Fairbanks, AK: University of Alaska. [20]

- Carson, C. E., and K. M. Hussey. 1962. The oriented lakes of arctic Alaska. *Journal of Geology* 70: 417–439. [G]
- Carson, C. E. 1968. Radiocarbon dating of lacustrine strands in arctic Alaska. *Arctic* 21(1): 12–26. [G]
- Challet, G. L., and K. K. Bohnsack. 1968. The distribution and abundance of Collembola at Point Barrow, Alaska. *Pedobiologia* 8:214–222. [G]
- Challinor, J. L., and P. L. Gersper. 1975. Vehicle perturbation effect upon a tundra soil–plant system. vol. II. Effects on the chemical regimes. *Soil Science Society of America Proceedings* 39:689–695. [20]
- Chapin, F. S. III. 1978. Phosphorus uptake and nutrient utilization by Barrow tundra vegetation. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 21, 483–507. New York: Springer-Verlag. [20]
- Chapin, F. S. III, P. C. Miller, W. D. Billings, and P. I. Coyne. 1980. Carbon and nutrient budgets and their control in coastal tundra. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 12, 458–482. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Chapin, F. S. III, L. L. Tieszen, M. C. Lewis, P. C. Miller, and B. H. McCown. 1980. Control of tundra plant allocation patterns and growth. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 5, 140–185. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Chesemore, D. L. 1968. Occurrence of moose near Barrow, Alaska. *Journal of Mammalogy* 49(3):528–529. [G]
- Childs, H. E. Jr. 1951. Banding activities at Point Barrow, Alaska. *News from the Bird-banders* 26:40–41. [G]
- Chisholm, S. W., R. G. Stross, and P. A. Nobbs. 1975. Environmental and intrinsic control of filtering and feeding rates in arctic *Daphnia*. *Journal of Fisheries Research Board, Canada* 32(2):219–226. [22]
- Ciais, P., P. P. Tans, M. Trolier, J. W. C. White, and R. J. Francey. 1995. A large northern hemisphere terrestrial CO<sub>2</sub> sink indicated by the <sup>13</sup>C/<sup>12</sup>C ratio of atmospheric CO<sub>2</sub>. *Science* 269:1098–1102. [G]
- Clark, C. W. 1991. Acoustic behavior of mysticete whales. In *Sensory abilities of cetaceans*. eds. J. Thomas and R. Kastelein, 571–583. New York: Plenum Press. [25]
- Clark, C., and J. Johnson. 1984. The sounds of the bowhead whale, *Balaena mysticetus*, during the spring migrations of 1979 and 1980. *Canadian Journal of Zoology* 62:1436–1441. [25]
- Clark, C. W., R. Charif, S. Mitchell, and J. Colby. 1996. Distribution and behavior of the bowhead whale, *Balaena mysticetus*, based on analysis of acoustic data collected during the 1993 spring migration off Point Barrow, Alaska. *Report of the International Whaling Commission* 46:541–552. [25]
- Clebsch, E. E. C., and R. E. Shanks. 1968. Summer climatic gradients and vegetation near Barrow, Alaska. *Arctic* 21(3):161–171. [9]
- Cohen, D. M. 1954. Age and growth studies of two species of whitefish from Point Barrow, Alaska. *Stanford Ichthyological Bulletin* 4(3):168–187. [G]
- Cole, D. M., and L. H. Shapiro. 1998. Observations of brine drainage networks and microstructure of first-year sea ice. *Journal of Geophysical Research* 103(C10):21739. [5]
- Colinvaux, P. A. 1964. Origins of ice ages: Pollen evidence from arctic Alaska. *Science* 145(3633): 707–708. [14] [23]
- Collier, B. D., N. C. Stenseth, and S. Barkley. 1975. A simulation model of energy acquisition and utilization by the brown lemming (*Lemmus trimucronatus*) at Barrow, Alaska. *Oikos* 26:276–294. [20]
- Collins, F. R., and M. C. Brewer. 1961. Core tests and test wells, Barrow area, Alaska. *U.S. Geological Survey Professional Paper* 305-K. pp. 569–644. [G]
- Conway, T. J., P. P. Tans, L. S. Waterman, K. W. Thoning, D. R. Kitzis, K. A. Masarie, and N. Zhang. 1994. Evidence for interannual variability of the carbon cycle from the NOAA/CMDL global air sampling network. *Journal of Geophysical Research* 99:22831–22855. [15]

- Coulter, H. W., K. M. Hussey, and J. B. O'Sullivan. 1960. Radiocarbon dates related to the Gubik formation, northern Alaska. *U.S. Geological Survey Professional Paper* No. 440-B. pp. 350–351. [G]
- Coyne, P. I., and J. J. Kelley. 1974. Carbon dioxide partial pressures in arctic surface waters. *Limnology and Oceanography* 19(6):928–938. [17]
- Coyne, P. I., and J. J. Kelley. 1978. Meteorological assessment of CO<sub>2</sub> exchange over an Alaskan arctic tundra. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 12, 299–321. New York: Springer-Verlag. [17]
- Craig, P. 1989. An introduction to anadromous fishes in the Alaskan arctic. In *Research advances on anadromous fish in Arctic Alaska and Canada: Biological Papers of the University of Alaska* 24: 27–54.
- Cummings, W., and D. Holliday. 1985. Passive acoustic location of bowhead whales in a population census off Point Barrow, Alaska. *Journal of the Acoustical Society of America* 78:1163–1169. [25]
- Custer, T. W., and F. A. Pitelka. 1978. Seasonal trends in summer diet of the Lapland longspur near Barrow, Alaska. *The Condor* 80:295–301. [20]
- Daley, R. J., and J. E. Hobbie. 1975. Direct counts of aquatic bacteria by a modified epifluorescence technique. *Limnology and Oceanography* 20(5):875–882. [22]
- Davis, T. N., V. P. Hessler, H. Leinbach, and L. Owren. 1958. The study of absorption in the ionosphere, earth currents, magnetic disturbances, auroral displays, and problems of radio propagation in the vicinity of Point Barrow, Alaska. *University of Alaska Geophysical Institute Report* UAG-R67. 29 pp. [G]
- Deluisi, J. J., C. L. Mateer, D. Theisen, P. K. Bhartia, D. Longenecker, and B. Chiu. 1994. Northern middle-latitude ozone profile features and trends observed by SBUV and Umkehr, 1979–1990. *Journal of Geophysical Research* 99(D9):18901–18908. [G]
- Dennis, J. G., L. L. Tieszen, and M. A. Vetter. 1978. Seasonal dynamics of above- and below-ground production of vascular plants at Barrow, Alaska. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 4, 113–140. New York: Springer-Verlag. [20]
- Dessler, A. E., E. M. Weinstock, E. J. Hintsa, J. G. Anderson, C. R. Webster, R. D. May, J. W. Elkins, and G. S. Dutton. 1994. An examination of the total hydrogen budget of the lower stratosphere. *Geophysical Research Letters* 21(33): 2563–2566. [G]
- Dillon, R. D., and J. T. Hobbs. 1973. Estimating quantity and quality of the biomass of benthic protozoa. *Proceedings of the South Dakota Academy of Science* 52:47–48. [22]
- Dingman, S. L., R. G. Barry, G. Weller, C. Benson, E. F. LeDrew, and C. W. Goodwin. 1980. Climate, snow cover, microclimate, and hydrology. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Bown et al., Chapter 2, 30–65. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Dlugokencky, E. J., L. P. Steele, P. M. Lang, and K. A. Masarie. 1995. Atmospheric methane at Mauna Loa and Barrow observatories: Presentation and analysis of *in situ* measurements. *Journal of Geophysical Research* 100:23103. [15]
- Dodson, S. I., and D. L. Egger. 1980. Selective feeding of red phalaropes on zooplankton of arctic ponds. *Ecology* 61(4):755–763. [22]
- Doskey, P. V., and J. S. Gaffney. 1992. Non-methane hydrocarbons in the Arctic atmosphere at Barrow, Alaska. *Geophysical Research Letters* 19(4):381–4. [15]
- Douce, C. K., and D. A. Crossley. 1982. The effect of soil fauna on litter mass loss and nutrient loss dynamics in arctic tundra at Barrow, Alaska. *Ecology* 63(2):523–537. [20]
- Douglas, L. A., and J. C. F. Tedrow. 1959. Organic matter decomposition rates in arctic soils. *Soil Science* 88(6):305–312. [16]
- Drew, J. V., and J. C. F. Tedrow. 1957. Pedology of an arctic brown profile, Point Barrow, Alaska. *Soil Science Society of America Proceedings* 21(3):336–339. [16]

- Drew, J. V., J. C. F. Tedrow, R. E. Shanks, and J. J. Koranda. 1958. Rate and depth of thaw in arctic soils. *Transactions of the American Geophysical Union* 39(4): 697–701.
- Dronenburg, R., J. George, B. Krogman, R. Sonntag, and J. Zeh. 1986. Report of the 1984 spring bowhead whale (*Balaena mysticetus*) ice-based visual census. *Report of the International Whaling Commission* 36:293–298. [25]
- Duffield, D., J. Haldiman, and W. Henk. 1992. Surface morphology of the forebrain of the bowhead whale, *Balaena mysticetus*. *Marine Mammal Science* 8(4):354–378. [25]
- Duguid, J. O. 1971. Thin gravel deposits on a wave-eroded cliff near Barrow, Alaska. *Arctic* 24(4):304–306. [4]
- Dutton, E. G., and D. J. Endres. 1991. Date of snowmelt at Barrow, Alaska, USA. *Arctic and Alpine Research* 23:115–119. [9] [15]
- Dykins, J. E. 1963. Construction of sea ice platforms. In *Snow and ice*, ed. W. D. Kingery, 289–301. Bedford, MA: Office of Aerospace Research, U.S. Air Force. [5]
- Edmonson, W. T. 1955. The seasonal life history of *Daphnia* in an arctic lake. *Ecology* 36(3):439–455. [G]
- Edwards, J. S., and P. C. Banko. 1976. Arthropod fallout and nutrient transport: Quantitative study of Alaskan snow patches. *Arctic and Alpine Research* 8(3):237–245. [G]
- Eisner, W. R., and K. M. Peterson. 1998. Pollen, fungi, and algae as age indicators of drained lake basins near Barrow, Alaska. *Seventh International Conference on Permafrost*, Yellowknife, Canada: Centre d'Etudes Nordiques de l'Université Laval, Laval, Quebec, pp. 245–250. [G]
- Elkins, J. W., T. M. Thompson, T. H. Swanson, J. H. Butler, B. D. Hall, S. O. Cummings, D.A. Fisher, and A. G. Raffo. 1993. Decrease in the growth rates of atmospheric chlorofluorocarbons 11 and 12. *Nature* 364:780–783. [Won 1994 ERL Outstanding Scientific Paper Award.] [G]
- Ellison, W., R. Sonntag, and C. Clark. 1987. Comparison of measured bowhead whale, *Balaena mysticetus*, migration parameters with results from the tracking algorithm. *Report of the International Whaling Commission* 37:309–311. [25]
- Endres, D., and M. Gaylord. 1998. Barrow Observatory. In *Climate monitoring and diagnostics laboratory summary report no. 24: Summary report 1996–1997*, eds. D. J. Hoffmann, J. T. Peterson, and R. M. Rosen, 8–12. Boulder, CO: NOAA Environmental Research Laboratories. [15]
- Erickson, D. J. III, P. J. Rash, P. P. Tans, P. Friedlingstein, P. Ciais, E. Maier-Reimer, K. Six, C. A. Fisher, and S. Walters. 1996. The seasonal cycle of atmospheric CO<sub>2</sub>: A study based on the NCAR Community Climate Model (CCM2). *Journal of Geophysical Research* 101:15079–15097. [15]
- Estabrook, G. F., and S. Outcalt. 1984. An algorithm for clustering profile data and its application to near-surface ice content data from wet coastal tundra soils near Barrow, Alaska. *Mathematical Geology* 16:193–205. [12]
- Faas, R. W. 1966. Paleocology of an arctic estuary. *Arctic* 19(4):343–348. [9]
- Fan, S. M., S. C. Wofsy, P. S. Bakwin, D. J. Jacob, S. M. Anderson, P. L. Kebejian, J. B. McManus, C. E. Kolb, and D. R. Fitzjarrald. 1992. Micrometeorological measurements of CH<sub>4</sub> and CO<sub>2</sub> exchange between the atmosphere and the arctic tundra. *Journal of Geophysical Research* 97:16627–16644. [15]
- Fechhelm, R. G., R. E. Dillenger Jr., and B. J. Gallaway. 1992. Modeling of *in situ* temperature and growth relationships for yearling broad whitefish in Prudhoe Bay, Alaska. *Transactions of the American Fisheries Society* 12:1–12.
- Fechhelm, R. G., P. S. Fitzgerald, J. D. Bryan, and B. J. Gallaway. 1993. Effect of salinity and temperature on the growth of yearling arctic cisco (*Coregonus autumnalis*) of the Alaskan Beaufort Sea. *Journal of Fish Biology* 43:463–474.
- Fenchel, T. 1975. The quantitative importance of the benthic microfauna of an arctic tundra pond. *Hydrobiologia* 46(4): 445–464. [22]

- Flanagan, P. W., and F. L. Bunnell. 1980. Microflora activities and decomposition. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 9, 291–334. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Flint, P. S., and P. L. Gersper. 1974. Nitrogen nutrient levels in arctic tundra soils. In *Soil organisms and decomposition in tundra*, eds. A. J. Holding et al., 375–378. Stockholm, Sweden: IBP Tundra Biome Steering Committee.
- Folk, G. E., M. A. Folk, and D. Craighead. 1977. A comparison of body temperatures of least weasels and wolverines. *Comparative Biochemistry and Physiology* 58:229-234. [G]
- Follmann, E., and A. Manning. 1989. The use of radio telemetry as an aid in the retrieval of bowhead whales (*Balaena mysticetus*) struck during the annual Eskimo subsistence hunt in Alaska. *Arctic* 42(3):189–198. [25]
- Ford, J. A. 1959. Eskimo prehistory in the vicinity of Point Barrow, Alaska. *Anthropological Papers of the American Museum of Natural History* 47(1): 272 pp. [3]
- Foster, J. L. 1989. The significance of the date of snow disappearance on the arctic tundra as a possible indicator of climate change. *Arctic and Alpine Research* 21:60–70. [9]
- Foster, J. L., J. W. Winchester, and E. G. Dutton. 1992. The date of snow disappearance on the arctic tundra as determined from satellite, meteorological station and radiometric *in situ* observations. *IEEE Transactions on Geoscience and Remote Sensing* 30:793–798. [9]
- Frankenstein, G. E. 1965. USA CRREL ice chipper. *CRREL Technical Report* 7. 11 pp. [5]
- Freeman, M. 1989. The Alaska Eskimo Whaling Commission: Successful co-management under extreme conditions. In *Cooperative management of local fisheries*, ed. E. Pinkerton, 137–153. Vancouver, BC, Canada: University of British Columbia Press. [25]
- Frosch, R. A. 1969. The growth of the Naval Arctic Research Laboratory. *Arctic* 22(3):356–348. [7]
- Galloway, B., R. J. Fechhelm, W. B. Griffiths, and J. G. Cole. 1997. Population dynamics of broad whitefish in the Prudhoe Bay region of Alaska. In *Fish Ecology in the Arctic: North America American Fisheries Society Symposium* 19, ed. J. Reynolds, 194–207. Bethesda, MD: American Fisheries Society.
- Galloway, B. J., W. B. Griffiths, P. C. Craig, W. J. Gazey, and J. W. Helmericks. 1983. An assessment of the Colville River Delta stock of arctic cisco migrants from Canada. *Biological Papers of the University of Alaska* 21:4–23.
- Geller, L. S., J. W. Elkins, J. M. Lobert, A. D. Clarke, D. F. Hurst, J. H. Butler, and R. C. Myers. 1997. Tropospheric SF6: Observed latitudinal distribution and trends, derived emissions and interhemispheric exchange time. *Geophysical Research Letters* 24:675–678. [G]
- Gentlemen, R., and J. Zeh. 1987. A statistical model for estimating the number of bowhead whales, *Balaena mysticetus*, passing a census point from combined visual and acoustic data. *Report of the International Whaling Commission* 37:313–327. [25]
- George, J., C. Clark, G. Carroll, and W. Ellison. 1989. Observations on the ice-breaking and ice navigation behavior of migrating bowhead whales (*Balaena mysticetus*) near Point Barrow, Alaska, spring 1985. *Arctic* 42(1):24–0. [25]
- George, J., L. Philo, K. Hazard, D. Withrow, G. Carroll, and R. Suydam. 1994. Frequency of killer whale (*Orcinus orca*) attacks and ship collisions based on scarring on bowhead whales (*Balaena mysticetus*) of the Bering–Chukchi–Beaufort seas stock. *Arctic* 47(3):247–255. [25]
- Gerlach, C., J. George, and R. Suydam. 1993. Bowhead whale (*Balaena mysticetus*) length estimations based on scapula measurements. *Arctic* 46(1):55–59. [25]
- Gersper, P. L., V. Alexander, S. A. Barkley, R. J. Barsdate, and P. S. Flint. 1980. The soils and their nutrients. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 7, 219–254. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Gessaman, J. A., 1972. Bioenergetics of the snowy owl (*Nyctea scandiaca*). *Arctic and Alpine Research* 4(3): 223-238. [G]

- Givens, G. H., and A. Raftery. 1996. Local adaptive importance sampling for multivariate densities with strong nonlinear relationships. *Journal of the American Statistical Association* 91:132–141. [25]
- Givens, G. H., and S. Thompson. 1996. Alternative Bayesian synthesis approaches to Bering–Chukchi–Beaufort Seas bowhead whale stock assessment: Uncertainty in historic catch and hitting with fixed MSYR. *Report of the International Whaling Commission* 46:509–529. [25]
- Gonor, J. J. 1964. Egg capsules and young of the gastropod *Pyrulofusus deformis* (Neptuneidae) at Barrow, Alaska. *Arctic* 17(1):48–51. [G]
- Goodwin, C. W., and S. I. Outcalt. 1975. The development of a computer model of the annual snow–soil thermal regime in arctic tundra terrain. In *Climate of the Arctic*, eds. G. Weller and S. Bowling, 227–229. Fairbanks, AK: Geophysical Institute, University of Alaska. [19]
- Gregory, G. L., B. E. Anderson, L. S. Warren, E. V. Browell, D. R. Bagwell, and C. H. Hudgins. 1992. Tropospheric ozone and aerosol observations: the Alaskan Arctic. *Journal of Geophysical Research* 97(D15): 16451–71. [G]
- Griffiths, W. B., B. J. Gallaway, W. J. Gazey, and R. E. Dillinger Jr. 1992. Growth and condition of arctic cisco and broad whitefish as indicators of causeway-induced effects in the Prudhoe Bay region, Alaska. *Transactions of the American Fisheries Society* 121:557–577.
- Gunn, W. W. 1973. Bibliography of the Naval Arctic Research Laboratory. *Arctic Institute of North America Technical Report* No. 24. Washington, D.C.: 176 pp. [7]
- Gurney, K. R. 1998. Evidence for increasing ultraviolet irradiance at Point Barrow, Alaska. *Geophysical Research Letters* 25(6):903–906. [7]
- Guymon, G. L., and J. N. Luthin. 1974. A coupled heat and moisture transport model for arctic soils. *Water Resources Research* 10(5):995–1001. [19]
- Haas-Laursen, D. E., D. E. Hartley, and T. J. Conway. 1997. Consistent sampling methods for comparing models to CO<sub>2</sub> flask data. *Journal of Geophysical Research* 102:19059–19071. [G]
- Haldiman, J., and R. Tarpley. 1993. Anatomy and physiology. In *The bowhead whale*, eds. J. Burns, J. Montague, and C. Cowles, 71–156. Lawrence, KS: The Society for Marine Mammalogy. [25]
- Haldiman, J., W. Henk, R. Henry, T. Albert, Y. Abdelbaki, and D. Duffield. 1985. Epidermal and papillary dermal characteristics of the bowhead whale, *Balaena mysticetus*. *Anatomical Record* 211:391–402.
- Hall, E. R., and J. W. Bee. 1954. Occurrence of the harbor porpoise at Point Barrow, Alaska. *Journal of Mammalogy* 35(1):122–1223. [G]
- Hall, E. S. Jr. (ed.). 1990. *The Utqiagvik Excavations*. Barrow, AK: The North Slope Borough Commission on Iñupiat History, Language and Culture, 3 volumes. [9]
- Halter, B. C., J. M. Harris, and K. A. Rahn. 1985. Study of winter variability in carbon dioxide and arctic haze aerosols at Barrow, Alaska. *Atmospheric Environment* 19(12):2033–2037. [15]
- Hammond, J. 1988. High technology in the Arctic. *Emerald Direct* 4(2):8–9. [Published by Emerald Systems, San Diego, CA.] [25]
- Hanna, G. D. 1956. Land and freshwater mollusks of the Arctic Slope, Alaska. *Nautilus* 70(1):4–10. [G]
- Hansen, A. D. A., and H. Rosen. 1984. Vertical distribution of particulate carbon, sulfur, and bromine in the arctic haze and comparison with ground level measurements at Barrow, Alaska. *Geophysical Research Letters* 11(5):381–384. [15]
- Hansen, H. P., ed. 1967. *Arctic biology*. Second edition. Corvallis, OR: Oregon State University Press. 318 pp. [G]
- Hanson, W. C. 1968. Fallout radionuclides in northern Alaskan ecosystems. *Archives of Environmental Health* 17(4):639–648. [G]
- Harms, C. 1993. Composition of prepartum mammary secretions of two bowhead whales (*Balaena mysticetus*). *Journal of Wildlife Diseases* 29(1):94–97. [25]
- Haugen, R. K., and J. Brown. 1980. Coastal–inland distributions of summer air temperature and precipitation in northern Alaska. *Arctic and Alpine Research* 12(4):403–412. [9]

- Heckmann, R., L. Jensen, R. Warnock, and B. Coleman. 1987. Parasites of the bowhead whale, *Balaena mysticetus*. *Great Basin Naturalist* 47:355–372. [25]
- Heidel, J., L. Philo, T. Albert, C. Andreasen, and B. Stang. 1996. Serum chemistry of bowhead whales (*Balaena mysticetus*). *Journal of Wildlife Diseases* 32(1):75–79. [25]
- Henk, W., and J. Haldiman. 1990. Microanatomy of the lung of the bowhead whale, *Balaena mysticetus*. *Anatomical Record* 226:187–197. [25]
- Henry, R., J. Haldiman, T. Albert, W. Henk, Y. Abdelbaki, and D. Duffield. 1983. Gross anatomy of the respiratory system of the bowhead whale, *Balaena mysticetus*. *Anatomical Record* 207:435–449. [25]
- Henshaw, R. E., L. S. Underwood, and T. M. Casey. 1972. Peripheral thermo-regulation: Foot temperature in two arctic canines. *Science* 175:988–990. [G]
- Hessler, V. P. 1963. Telluric currents. *Transactions of the American Geophysical Union* 44(2):424–427. [G]
- Hessler, V. P., and A. R. Franzke. 1958. Earth-potential electrodes in permafrost and tundra. *Arctic* 11(4):211–217. [G]
- Hinkel, K. M., F. E. Nelson, Y. Shur, J. Brown, and K. R. Everett. 1996. Temporal changes in moisture content of the active layer and near-surface permafrost at Barrow, Alaska: 1962–1994. *Arctic and Alpine Research* 28:300–310. [12]
- Hinkel, K. M., K. M. Peterson, W. R. Eisner, F. E. Nelson, K. M. Turner, L. L. Miller, and S. I. Outcalt. 1996. Formation of injection frost mounds over winter 1995–96 at Barrow, Alaska. *Polar Geography* 20:235–248. [28]
- Hintsa, E. J., C. R. Webster, R. D. May, R. L. Herman, P. A. Newman, L. R. Lait, M. R. Schoeberl, H. H. Jonsson, J. W. Elkins, P. R. Wamsley, G. S. Dutton, D. W. Kohn, T. P. Bui, and J. G. Anderson. 1997. Dehydration and denitrification in the arctic polar vortex in winter, 1995–96. *Geophysical Research Letters*, 24(4):501. [G]
- Hobbie, J. E., ed. 1980. *Limnology of tundra ponds, Barrow, Alaska*. Stroudsburg, PA: Dowden, Hutchinson and Ross. 514 pp.[22]
- Hock, R., F. H. Erickson, W. Flagg, P. F. Scholander, and L. Irving. 1952. Composition of the ground-level atmosphere at Point Barrow, Alaska. *Journal of Meteorology* 9(6):441–442. [G]
- Holmes, R. T. 1966. Breeding ecology and annual cycle adaptations of the red-backed sandpiper (*Calidris alpina*) in northern Alaska. *The Condor* 68(1):3–46. [G]
- Holm-Hansen, O., F. J. R. Taylor, and R. J. Barsdate. 1970. A ciliate red tide at Barrow, Alaska. *Marine Biology* 7(1):37–46. [G]
- Holmquist, C. 1967. Turbellaria of northern Alaska and northwestern Canada. *Internationale Revue der Gesamten Hydrobiologie* 52(1):123–139. [G]
- Holtsmark, B. E. 1954. Insulating effect of a snow cover on the growth of young sea ice. *Arctic* 8(1):60–65. [5]
- Honrath, R. E., and D. A. Jaffe. 1992. The seasonal cycle of nitrogen oxides in the Arctic troposphere at Barrow, Alaska. *Journal of Geophysical Research* 97(D18):20615–30. [G]
- Horvath, R., and D. S. Lowe. 1968. Multispectral survey in the Alaska Arctic. In *Proceedings of the 5<sup>th</sup> Symposium on Remote Sensing of Environment*, 483–496. [G]
- Howard, H. H., and G. W. Prescott. 1971. Primary production in Alaskan tundra lakes. *American Midland Naturalist* 85(10):108–123. [G]
- Hume, J. D. 1965. Sea-level changes during the last 2000 years at Point Barrow, Alaska. *Science* 150(3700):1165–66. [4]
- Hume, J. D., and M. Schalk. 1976. Effects of ice on the beach and nearshore, Point Barrow, arctic Alaska. *Revue de géographie de Montréal* 30(1–2): 105–114. [4]
- Hume, J. D., M. Schalk, and P. W. Hume. 1972. Short-term climate changes and coastal erosion, Barrow, Alaska. *Arctic* 25(4):272–278. [4]
- Huntington, H. P. 1992a. The Alaska Eskimo Whaling Commission and other cooperative marine mammal management organizations in Alaska. *Polar Record* 28(165):119–126.
- Huntington, H. P. 1992b. *Wildlife management and subsistence hunting in Alaska*. London: Belhaven Press. 177 pp.

- Hurd, P. D. Jr. 1954. 'Myiasis' resulting from use of the aspirator method in the collection of insects. *Science* 119(3101):814-815. [G]
- Hussey, K. M., and R. W. Michelson. 1966. Tundra relief features near Point Barrow, Alaska. *Arctic* 19(2):162-84. [G]
- Ingling, A. 1995. Determination of the muzzle velocity of the black powder and penthrite projectiles fired from a bench-mounted darting gun of the type used by Alaskan Eskimos in the subsistence hunt of the bowhead whale, as influenced by the propellant charge and other factors. Paper IWC/47/WK16, *Workshop on Whale Killing Methods, International Whaling Commission*, May-June 1995. 31 pp. [25]
- International Whaling Commission. 1997. Chairman's report of the forty-eighth annual meeting. *Report of the International Whaling Commission* 47:17-55. [25]
- Irving, L. 1948. Arctic research at Point Barrow, Alaska. *Science* 107(2777):284-286. [7]
- Jacob, D. J., S. M. Fan, S. C. Wofsy, P. A. Spiro, P. S. Bakwin, J. Ritter, E. V. Browell, G. L. Gregory, D. R. Fitzjarrald, and K. E. Moore. 1992. Deposition of ozone to tundra. *Journal of Geophysical Research* 97:16473-16480. [15]
- Jacob, D. J., S. C. Wofsy, P. S. Bakwin, S. M. Fan, J. D. Bradshaw, S. T. Sandholm, G. L. Gregory, G. W. Sachse, M. Shipham, H. B. Singh, D. R. Blake, and R. W. Talbot. 1992. Summertime photochemistry in the arctic troposphere. *Journal of Geophysical Research* 97:16421-16432. [G]
- Jaffe, D., T. Iversen, and G. Shaw. 1995. Comment on "A long-term decrease in arctic haze at Barrow, Alaska," by B. A. Bodhaine and E. G. Dutton. *Geophysical Research Letters* 22: 739-740. [15]
- Jaffe, D. A., R. E. Honrath, J. A. Herring, S.-M. Li, and J. D. Kahl. 1991. Measurements of nitrogen oxides at Barrow, Alaska, during spring: evidence for regional and northern hemispheric pollution. *Journal of Geophysical Research* 96(D4):7395-405. [15]
- Jamison, P. L., S. L. Zegura, and F. A. Milan. 1987. *Eskimos of Northwestern Alaska—A Biological Perspective*. US/IPB synthesis series. Stroudsburg, PA: Dowden, Hutchinson and Ross, Inc. [G]
- Johnson, D. A., and L. L. Tieszen. 1976. Above-ground biomass allocation, leaf growth and photosynthesis patterns in tundra plant forms in arctic Alaska. *Oecologia* 224:159-173. [20]
- Johnson, M. W. 1958. Observations of inshore plankton collected during summer 1957 at Point Barrow, Alaska. *Journal of Marine Research* 17:272-281. [G]
- Johnson, P. L., and J. J. Kelley Jr. 1970. Dynamics of carbon dioxide productivity in an arctic biosphere. *Ecology* 51(1):73-80. [17]
- Johnson, P. L., and L. L. Tieszen. 1973. Vegetation research in arctic Alaska. *Alaska Arctic Tundra: Proceedings of the Twenty-fifth Anniversary Celebration of the Naval Arctic Research Laboratory*, ed. M. E. Britton, 169-198. Montreal, QC, Canada: Arctic Institute of North America Technical Report. [G]
- Kahl, J. D., M. C. Serreze, R. S. Stone, S. Shiotani, M. Kisley, and R. C. Schnell. 1993. Tropospheric temperature trends in the Arctic: 1958-1986. *Journal of Geophysical Research* 98(D7):12825-12838. [G]
- Kalff, J. 1967. Phytoplankton abundance and primary production in two arctic ponds. *Ecology* 48(4): 558-565. [22]
- Kawamura, T. 1984. Characteristics of fast sea ice collected near Barrow, Alaska. *Low Temperature Science, Series A* 43:163-170. In Japanese. [5]
- Kelley, J. J. Jr., and J. D. McTaggart-Cowan. 1968. Vertical gradient of net oxidant near the ground surface at Barrow, Alaska. *Journal of Geophysical Research* 73(10):3328-30. [17]
- Kelley, J. J. Jr., and D. F. Weaver. 1969. Physical processes at the surface of the arctic tundra. *Arctic* 22(4):425-37. [17]
- Kelley, J. J. Jr., D. F. Weaver, and B. P. Smith. 1968. The variation of carbon dioxide under the snow in the Arctic. *Ecology* 49(2):358-61. [17]
- Key, J. R., A. J. Schweiger, and R. S. Stone. 1997. Expected uncertainty in satellite-derived estimates of surface radiation budget at high latitudes.

- Journal of Geophysical Research* 102(C7):15837–15847. [G]
- Kinosita, S., Y. Suzuki, K. Horiguchi, and M. Fukuda. 1978. Comparison of frozen soil structure beneath a high center polygon, trough and center, at Barrow, Alaska. *Proceedings, Third International Conference on Permafrost*. Ottawa, ON, Canada: National Research Council of Canada. 1:301–304. [G]
- Ko, D., and J. Zeh. 1988. Detection of migration using sound location. *Biometrics* 44:751–763. [25]
- Kondo, J. 1998. Preliminary analysis of heat budget over the arctic tundra. *Journal of Agricultural Meteorology* 54(1):31-42. In Japanese. [15]
- Koranda, J. J., B. Clegg, and M. Stuart. 1978. Radiotracer measurement of transpiration in tundra vegetation, Barrow, Alaska. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 15, 359–369. New York: Springer-Verlag. [20]
- Kreiton, K., R. Hintz, and R. Lambertsen. 1990. Creation of a three-dimensional model of a bowhead whale (*Balaena mysticetus*) baleen rack using close-range photogrammetry. *American Congress on Surveying and Mapping and the American Society for Photogrammetry and Remote Sensing Technical Papers* 5:76–75. [25]
- Krogman, B., D. Rugh, R. Sonntag, J. Zeh, and D. Ko. 1989. Ice-based census of bowhead whales migrating past Point Barrow, Alaska, 1978–1983. *Marine Mammal Science* 5(2):116–138. [25]
- Kumai, M., and R. F. Glienna. 1972. Fog drop measurements at Barrow, Alaska. *CRREL Special Report* 166. 15 pp. [G]
- Lachenbruch, A. H. 1957. Thermal effects of the ocean on permafrost. *Geological Society of America Bulletin* 68(11):1515–1529. [G]
- Lachenbruch, A. H. 1966. Contraction theory of ice-wedge polygons: A qualitative discussion. *Proceedings, Permafrost International Conference*, National Research Council Publication No. 1287. pp. 63–71. [G]
- Lachenbruch, A. H., and B. V. Marshall. 1986. Changing climate: Geothermal evidence from permafrost in the Alaskan Arctic. *Science* 234(4777):689–696. [G]
- Lambertsen, R., R. Hintz, and K. Kreiton. 1990. Use of close-range photogrammetry in characterizing the functional morphology of filter feeding in bowhead whales. *American Congress on Surveying and Mapping and the American Society for Photogrammetry and Remote Sensing Technical Papers* 5:86–95. [25]
- Laursen, G. A., and J. E. Ammirati, eds. 1982. *Arctic and alpine mycology: The First International Symposium on Arcto-Alpine Mycology*. Seattle, WA: University of Washington Press. 559 pp. [G]
- Laursen, G. A., and O. K. Miller Jr. 1977. The distribution of fungal hyphae in arctic soil on the International Biological Programme Tundra Biome site, Barrow, Alaska. *Arctic and Alpine Research* 9(2):149–156. [20]
- Lawrence, B. A., M. C. Lewis, and P. C. Miller. 1978. A simulation model of population processes of arctic tundra graminoids. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 26, 599–619. New York: Springer-Verlag. [20]
- Leck, M. A. 1980. Germination in Barrow, Alaska, tundra soil cores. *Arctic and Alpine Research* 12: 343–349. [20]
- LeDrew, E. F., and G. Weller. 1978. Comparison of the radiation and energy balance during the growing season for an arctic and alpine tundra. *Arctic and Alpine Research* 10(4):665-678. [20]
- Leinbach, H., D. Venkatesan, and R. Parthasarathy. 1965. The influence of geomagnetic activity on polarcap absorption. *Planetary and Space Science* 13(11):1075-1096. [G]
- Leonard, R. S. 1962. Distribution of radar auroras over Alaska. *Journal of Geophysical Research* 67(3): 939–952. [G]
- Leontyeva, E., and K. Stamnes. 1994. Estimation of cloud optical thickness from ground-based measurements of incoming solar radiation in the Arctic. *Journal of Climate* 7(4):566-578. [15]
- Leung, Y. M. 1965. A collection of whale-lice (Cyamidae: Amphipoda). *Bulletin of Southern California Academy of Sciences* 64(3):132-43. [G]

- Lewellen, R. I. 1972. *Studies on fluvial environments, arctic plain province, northern Alaska*. vols. I and II, 282 pp. plus charts. [copyrighted and published by the author] [18]
- Lewis, R. W., 1969. The fatty acid composition of arctic marine phytoplankton and zooplankton with special reference to minor acids. *Limnology and Oceanography* 14(1):35-40 [G]
- Li Y., and Q. Zhang. 1999. Modern foraminifera in the Elson Lagoon and stream mouth at Barrow, Alaskan Arctic. *Journal of Micropaleontology* 16(1):22-30. In Chinese with English summary. [11]
- Lieske, B. J. 1965. Net radiation over fast sea ice during spring breakup at Point Barrow, Alaska. *Proceedings, Fifteenth Alaskan Science Conference*. College, AK: University of Alaska. pp. 52-60. [26]
- Lieske, B. J., and L. A. Stroschein. 1967. Measurements of radiative flux divergence in the Arctic. *Archiv fur Meteorologie, Geophysik und Bioklimatologie* 15(1-2):67-81. [17]
- Linkins, A. E., R. M. Atlas, and P. Gustin. 1978. Effect of surface applied crude oil on soil and vascular plant root respiration, soil cellulase, and hydrocarbon hydroxylase at Barrow, Alaska. *Arctic* 31(3):355-365. [20]
- Lindquist, E. E. 1961. Taxonomic and biological studies of mites of the genus *Arctoseius* Thor from Barrow, Alaska (Acarina: Aceosejidae). *Hilgardia* 30(11):303-350. [G]
- Little, C. G., and H. Leinbach. 1958. Some measurements of high-latitude ionospheric absorption using extraterrestrial radio waves. *Proceedings of the Institute of Radio Engineers* 46(1):334-348. [G]
- Little, E. M., M. B. Allen, and F. F. Wright. 1972. Field measurements of light penetration through sea ice. *Arctic* 25(1):28-33. [5]
- Lord, N. W., M. A. Atwater, and J. P. Pandolfo. 1974. Influence of the interaction between tundra thaw lakes and surrounding land. *Arctic and Alpine Research* 6(2):143-150. [20] [G]
- Lowenthal, D. H., and K. A. Rahn. 1985. Regional sources of pollution aerosol at Barrow, Alaska, during winter 1979-1980 as deduced from elemental tracers. *Atmospheric Environment* 19(12): 2011-2024. [15]
- MacCarthy, G. R. 1952. Geothermal investigations on the arctic slope of Alaska. *Transactions of the American Geophysical Union* 33:589-593. [G]
- MacCarthy, G. R. 1953. Recent changes in the shoreline near Point Barrow, Alaska. *Arctic* 6(1):44-51. [10]
- MacCarthy, G. R. 1958. Glacial boulders on the arctic coast of Alaska. *Arctic* 11(2):70-85. [12]
- MacGinitie, G. E. 1955. *Distribution and ecology of marine invertebrate fauna at Point Barrow, Alaska: Smithsonian Miscellaneous Collections* 128(9). Washington, D.C.: 201 pp. [G]
- MacGinitie, N. L. 1959. Marine mollusca of Point Barrow, Alaska. *Proceedings of the United States National Museum* 109(3412):59-208. [G]
- MacLean, E. 1971. *Genealogical record of Barrow Eskimo families*. Washington State University: Primate Research Center. 511 pp.
- MacLean, S. F. Jr. 1980. The detritus-based trophic system. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 11, 411-457. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- MacLean, S. F. Jr., and M. P. Ayers. 1985. Estimation of soil temperature from climatic variables at Barrow, Alaska, USA. *Arctic and Alpine Research* 17(4): 425-432. [21]
- Maher, W. J. 1970. The pomarine jaeger as a brown lemming predator in northern Alaska. *Wilson Bulletin* 82:130-157. [G]
- Maher, W. J., and N. J. Wilimovsky. 1963. Annual catch of bowhead whales by Eskimos at Point Barrow, Alaska, 1928-1960. *Journal of Mammalogy* 44(1):16-20. [25]
- Masarie, K. A., and P. P. Tans. 1995. Extension and integration of atmospheric carbon dioxide data into a globally consistent measurement record. *Journal of Geophysical Research* 100:11593-11610. [G]

- Mather, J. R., and C. W. Thornthwaite. 1958. *Microclimatic investigations at Point Barrow, Alaska, 1957–58*. Philadelphia, PA: Publications in Climatology, Drexel Institute of Technology. 239 pp. [G]
- Mattheis, P. J., L. L. Tieszen, and M. C. Lewis. 1976. Responses of *Dupontia fisheri* to simulated lemming grazing in an Alaskan arctic tundra. *Annals of Botany* 40:179–197. [20]
- Matthews, J. B. 1970. Tides at Point Barrow. *Northern Engineers* 2(2):12–13. [G]
- Mayer, W. V., and E. T. Roche. 1954. Developmental patterns in the Barrow ground squirrel, (*Spermophilus undulatus barrowensis*). *Growth* 18(1):53–69. [G]
- Maykut, G. A., and P. E. Church. 1973. Radiation climate of Barrow, Alaska, 1962–66. *Journal of Applied Meteorology* 12(4):620–628. [G]
- McCarthy, K. A., and G. L. Solin. 1995. Assessment of the subsurface hydrology of the UIC–NARL main camp near Barrow, Alaska, 1993–94. *U.S. Geological Survey Open-file Report* 95-737. Anchorage, AK. [6]
- McCown, B. H. 1978. The interaction of organic nutrients, soil nitrogen, and soil temperature and plant growth and survival in the arctic environment. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 19, 435–456. New York: Springer-Verlag. [20]
- McGaw, R. W., S. I. Outcalt, and E. Ng. 1978. Thermal properties and regime of wet tundra soils at Barrow, Alaska. *Proceedings, Third International Conference on Permafrost*. Ottawa, ON, Canada: National Research Council of Canada. 1:47–53. [19]
- McIntosh, C. M., E. J. Dlugokencky, P. M. Lang, and K. A. Masarie. 1996. Atmospheric CH<sub>4</sub> seasonal cycles and latitude gradient from the NOAA CMDL cooperative air sampling network. *NOAA Technical Memorandum* ERL CMDL-11. [15]
- McKendrick, J. D., V. J. Ott, and G. A. Mitchell. 1978. Effect of nitrogen and phosphorus fertilization on carbohydrate and nutrient levels in *Dupontia fisheri* and *Arctagrostis latifolia*. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 22, 509–537. New York: Springer-Verlag. [20]
- Medway, W. 1983. Examination of blood and urine from Eskimo-killed bowhead whales (*Balaena mysticetus*). *Aquatic Mammals* 10(1):1–8. [25]
- Migaki, G., and T. Albert. 1982. Lipoma of the liver in a bowhead whale, *Balaena mysticetus*. *Veterinary Pathology* 19:329–331. [25]
- Milan, F. A. 1968. The international study of the Eskimos. *Arctic* 21(3):123–126. [G]
- Miller, L. K., and L. Irving. 1962. Local reactions to air cooling in an Eskimo population. *Journal of Applied Physiology* 17(3):449–455. [G]
- Miller, L. L., K. M. Hinkel, F. E. Nelson, R. F. Paetzold, and S. I. Outcalt. 1998. Spatial and temporal patterns of soil moisture and thaw depth at Barrow, Alaska, USA. *Proceedings of the Seventh International Conference on Permafrost*. Quebec, Canada: Centre d'Etudes Nordiques, Université Laval. pp. 731–737. [12]
- Miller, M. C., R. T. Prentki, and R. J. Barsdate. 1980. Physics. In *Limnology of tundra ponds*, ed. J. E. Hobbie, Chapter 3, 51–75. Stroudsburg, PA: Dowden, Hutchinson and Ross. [22]
- Miller, O. K. Jr., and G. A. Laursen. 1978. Ecto- and endomycorrhizae of arctic plants at Barrow, Alaska. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 9, 229–237. New York: Springer-Verlag. [20]
- Miller, P. C., B. D. Collier, and F. L. Bunnell. 1975. Development of ecosystem modeling in the tundra biome. In *Systems analysis and simulation in ecology*, ed. B. C. Patten, 111:95–115. New York: Academic Press. [20]
- Miller, P. C., W. A. Stoner, and J. R. Ehleringer. 1978. Some aspects of water relations of arctic and alpine regions. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 14, 343–357. New York: Springer-Verlag. [G]

- Miller, P. C., P. J. Webber, W. C. Oechel, and L. L. Tieszen. 1980. Biophysical processes and primary production. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 3, 66–101. Stoudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Miller, P. C., W. A. Stoner, L. L. Tieszen, M. L. Allesio, B. H. McCown, F. S. Chapin III, and G. R. Shaver. 1978. A model of carbohydrate, nitrogen, phosphorus allocation and growth in tundra production. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 25, 577–498. New York: Springer-Verlag. [20]
- Mohr, J. L., D. J. Reish, D. J. Barnard, R. W. Lewis, and S. R. Geiger. 1961. The marine nature of Nuvuk Lake and small ponds of the peninsula of Point Barrow, Alaska. *Arctic* 14(4):210–223. [2]
- Monson, A. P. B., and J. E. Sater, eds. 1969. Proceedings of the U.S. Naval Arctic Research Laboratory Dedication Symposium, Fairbanks, Alaska, 9–12 April 1969. *Arctic* 22(3):172–364. [7]
- Montzka, S. A., R. C. Myers, J. H. Butler, and J. W. Elkins. 1994. Early trends in the global tropospheric abundance of hydrochlorofluorocarbons - 141b and 142b. *Geophysical Research Letters* 21(23):2483–2486. [G]
- Moore, S. E., J. C. George, K. O. Coyle, and T. J. Weingartner. 1995. Bowhead whales along the Chukotka coast in autumn. *Arctic* 46(2):155–160. [25]
- Moritz, R. E. 1977. On a possible sea breeze circulation near Barrow, Alaska. *Arctic and Alpine Research* 9(4):427–431. [9]
- Mullen, D. A. 1968. Reproduction in brown lemmings (*Lemmus trimucronatus*) and its relevance to their cycle of abundance. *University of California Publications in Zoology* 85:1–24. [G]
- Murphy, E., and G. Jarrell. 1983. Simulation studies of population trends in western arctic bowhead whales. *Report of the International Whaling Commission* 33:509–523. [25]
- Murray, B. M., and D. F. Murray. 1978. Checklists of vascular plants, bryophytes, and lichens for the Alaskan U.S. IBP Tundra Biome study areas—Barrow, Prudhoe Bay, and Eagle Summit. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Appendix, 647–677. New York: Springer-Verlag. [20]
- Murray, D. F. 1978. Vegetation, floristics, and phytogeography of northern Alaska. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 2, 19–36. New York: Springer-Verlag. [G]
- Musacchia, X. J., and R. D. Hamilton. 1959. Notes on hibernation and waking in arctic ground squirrels. *Journal of Mammalogy* 40(2):201–204. [G]
- Myers, J. P., and F. A. Pitelka. 1979. Variations in summer temperature patterns near Barrow, Alaska: Analysis and ecological interpretation. *Arctic and Alpine Research* 11:131–141. [21]
- Nakano, Y., and J. Brown. 1972. Mathematical modeling and validation of the thermal regimes in tundra soils, Barrow, Alaska. *Arctic and Alpine Research* 4:19–38. [19]
- Nelson, F. E., S. I. Outcalt, J. Brown, N. I. Shiklomanov, and K. M. Hinkel. 1998. Spatial and temporal attributes of the active-layer thickness record, Barrow, Alaska, USA. *Proceedings of the Seventh International Conference on Permafrost*. Quebec, Canada: Centre d'Etudes Nordiques, Université Laval. pp. 797–802. [12]
- Nemesure, S. R., D. Cess, E. G. Dutton, J. J. DeLuisi, Z. Li, and H. G. Leighton. 1994. Impact of the shortwave radiation budget of the surface–atmosphere system for snow-covered surfaces. *Journal of Climate* 7:579–585. [15]
- Nerini, M., H. Braham, and W. Marquette. 1984. Life history of the bowhead whale. *Journal of Zoology (London)* 204:443–468. [25]
- Newman, S. 1991. An icy externship in Alaska. *Interwet* 26(6):28–30. [25]
- Ng, E., and P. C. Miller. 1977. Validation of a model of the effect of tundra vegetation on soil temperature. *Arctic and Alpine Research* 9(2): 89–104. [19]

- NOAA. 1988. *Geophysical monitoring for climatic change, nos. 1–17: Summary reports 1972–1988*. Boulder, CO: NOAA Environmental Research Laboratories. [15]
- NOAA. 1997. *Climate monitoring and diagnostics laboratory, nos. 18–24: Summary report 1989–1997*. Boulder, CO: NOAA Environmental Research Laboratories. [15]
- Norton, D. W. 1972. Incubation schedules of four species of Calidridine sandpipers at Barrow, Alaska. *The Condor* 74(2):164–176. [20]
- Novelli, P. C., K. A. Masarie, P. P. Tans, and P. M. Lang. 1994. Recent changes in atmospheric carbon monoxide. *Science* 263:1587–1590. [G]
- Ostdiek, J. L., and R. M. Nardone. 1959. Studies of the Alaskan blackfish *Dallia pectoralis*: Habitat, size, and stomach analyses. *American Midland Naturalist* 61(1):218–229. [G]
- Oechel, W. C., and B. Sveinbjornsson. 1978. Primary production processes in arctic bryophytes at Barrow, Alaska. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 11, 269–298. New York: Springer-Verlag. [20]
- Oechel, W. C., G. L. Vourlitis, S. J. Hastings, and S. A. Bochkarev. 1995. Change in arctic CO<sub>2</sub> flux over two decades: Effects of climate change at Barrow, Alaska. *Ecological Applications* 5: 846–855. [20]
- O’Sullivan, J. B. 1966. Geochemistry of permafrost: Barrow, Alaska. *Proceedings, Permafrost International Conference*. National Research Council Publication 1287:30–37. [G]
- O’Sullivan, J. B., and K. M. Hussey. 1957. Problems associated with soils stabilization in the vicinity of Point Barrow, Alaska. *Proceedings of the Iowa Academy of Sciences* 64:429–442. [4]
- Outcalt, S. I., C. Goodwin, G. Weller, and J. Brown. 1975. Computer simulation of the annual snowmelt and soil thermal regime at Barrow, Alaska. *Water Resources Research* 131(5):709–715. [19]
- Outcalt, S. I., K. M. Hinkel, F. E. Nelson, and L. L. Miller. 1998. Estimating the magnitude of coupled-flow effects in the active layer and upper permafrost, Barrow, Alaska, USA. *Proceedings of the Seventh International Conference on Permafrost*. Quebec, Canada: Centre d’Etudes Nordique, Université Laval. pp. 869–873. [12]
- Overton, E., C. Byrne, J. McFall, S. Antoine, and J. Laseter. 1983. Preliminary observations on tissue pollutant levels in subsistence harvested bowhead whales (*Balaena mysticetus*). *Paper SC/35/PS17, International Whaling Commission Scientific Committee*, June 1983. 11 pp. [25]
- Palmer, H. E., W. C. Hanson, B. I. Griffin, and L. A. Braby. 1965. Radioactivity measured in Alaskan natives, 1962–1964. *Science* 144(3620):859–860. [G]
- Paul, J. R. 1951. Epidemiological observations on Eskimos from the north coast of Alaska. *National Research Council Bulletin* No. 122. [G]
- Peterson, J. T. 1986. Atmospheric CO<sub>2</sub> variations at Barrow, Alaska, 1973–1982. *Journal of Atmospheric Chemistry* 4(4):491–510. [15]
- Peterson, K. M., and W. D. Billings. 1975. Carbon dioxide flux from tundra soils and vegetation as related to temperature at Barrow, Alaska. *The American Midland Naturalist* 94(1):88–98. [20]
- Peterson, R. M., G. O. Batzli, and E. M. Banks. 1976. Activity and energetics of the brown lemming in its natural habitat. *Arctic and Alpine Research* 8(2): 131–138. [20]
- Pettibone, M. H. 1954. Marine polychaete worms from Point Barrow, Alaska, with additional records from the North Atlantic and North Pacific. *Proceedings of the United States National Museum* 103(3324): 203–356. [G]
- Péwé, T. L., and R. E. Church. 1962. Age of the spit at Barrow, Alaska. *Geological Society of America Bulletin* 73(10):1287–91. [2]
- Peyton, H. R. 1963. Some mechanical properties of sea ice. In *Ice and snow*, ed. W. D. Kingery, 107–113. Bedford, MA: Office of Aerospace Research, U.S. Air Force. [5]

- Pfeiffer, C. 1990. Observations on the ultrastructural morphology of the bowhead whale (*Balaena mysticetus*) heart. *Journal of Zoo and Wildlife Medicine* 21(1):48–55. [25]
- Philo, L., E. Shotts, and J. George. 1993. Morbidity and mortality. In *The bowhead whale*, ed. J. Burns, J. Montague, and C. Cowles, 275–312. Lawrence, KS: The Society for Marine Mammalogy. [25]
- Pitelka, F. A. 1973. Cyclic pattern in lemming populations near Barrow, Alaska. In *Alaska Arctic Tundra: Proceedings of the Twenty-Fifth Anniversary Celebration of the Naval Arctic Research Laboratory, Arctic Institute of North America Technical Report No. 25*, ed. M. E. Britton, 199–215. Washington D.C. [G]
- Pitelka, F. A. 1974. Avifaunal review for the Barrow region and north slope of arctic Alaska. *Arctic and Alpine Research* 6(2):161–184. [G]
- Polissar, A. V., P. K. Hopke, W. C. Mahm, and J. F. Sisler. 1998. Atmospheric aerosol over Alaska. I. Spatial and seasonal variability. *Journal of Geophysical Research* 103(D15):19035–19044. [15]
- Poole, D., G. H. Givens, and A. E. Raftery. 1997. On a proposed assessment method for bowhead whales. *Paper SC/49/AS6, Scientific Committee of the International Whaling Commission*, October 1997. 15 pp. [25]
- Potter, J., D. Mellinger, and C. Clark. 1994. Marine mammal call discrimination using artificial neural networks. *Journal of the Acoustical Society of America* 96(3):1255–1262. [25]
- Prentki, R. T., M. C. Miller, R. J. Barsdate, V. Alexander, J. J. Kelley, and P. I. Coyne. 1980. Chemistry. In *Limnology of tundra ponds*, ed. J. E. Hobbie, Chapter 4, 76–178. Stoudsburg, PA: Dowden, Hutchinson and Ross. [22]
- Proffitt, M. H., K. Aikin, J. J. Margitan, M. Loewenstein, J. R. Podolske, A. Weaver, R. R. Chan, L. Avallone, H. Fast, and J. W. Elkins. 1993. Ozone loss inside the northern polar vortex during the 1991–92 winter. *Science* 261:1150–1154. [G]
- Raatz, W. E. 1985. Air mass characteristics in the vicinity of Barrow, Alaska. *Atmospheric Environment* 19(12):2127–2134. [15]
- Raftery, A. E., and D. Poole. 1997. Bayesian synthesis assessment methodology for bowhead whales. *Paper SC/49/AS5, the Scientific Committee of the International Whaling Commission*, October 1997. 40 pp. [25]
- Raftery, A. E., and J. E. Zeh. 1998. Estimating bowhead whale population size and rate of increase from the 1993 census. *Journal of the American Statistical Association* 93(442):1–13. [25]
- Raney, W. P. 1973. NARL relevance and mission support. In *Alaska Arctic Tundra: Proceedings of the Twenty-fifth Anniversary Celebration of the Naval Arctic Research Laboratory, Arctic Institute of North America Technical Report No. 25*, ed. M. E. Britton, 23–26. Washington, D.C. [7]
- Raspet, R., J. R. Gregory, B. D. Zak, H. W. Church, and L. Yellowknife. 1998. Measurement and analysis of sound levels from the RASS site near Barrow, Alaska. *Applied Acoustics* 53(4):333–234. [15]
- Rastorfer, J. R. 1978. Composition and bryomass of the moss layers of two wet-tundra meadow communities near Barrow, Alaska. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 6, 169–183. New York: Springer-Verlag. [20]
- Rausch, R. L. 1950. Observations on a cyclic decline of lemmings (*Lemmus*) on the arctic coast of Alaska during the spring of 1949. *Arctic* 3:166–177. [G]
- Rausch, R. L. 1959. Studies on the helminth fauna of Alaska. XXXV. On the identity of certain cestodes (Taeniidae) from foxes. *Proceedings of Helminthological Society of Washington* 26:125–131. [G]
- Rausch, R. L. 1970. Trichinosis in the arctic. In *Trichinosis in man and animals*, ed. S. E. Gould, 348–373. Springfield, IL: Charles C. Thomas. [G]
- Rausch, R. L., V. R. Rausch, and J. W. Lindsay. 1987. Fenestrated cranium in varying lemmings, *Dicrostonyx* spp. (Rodentia: Arvicolidae), in the Nearctic. *Zoologisch Anzeiger* 218:170–176. [G]

- Reed, J. C., and A. G. Ronhovde. 1971. *Arctic laboratory: A history (1947–1966) of the Naval Arctic Research Laboratory at Point Barrow, Alaska*. Washington, D. C.: Arctic Institute of North America Technical Reports. 748 pp. [7]
- Rex, R. W. 1961. Hydrodynamic analysis of circulation and orientation of lakes in Northern Alaska. *Geology of the Arctic: Proceedings of the First International Symposium on Arctic Geology*, vol. 2, 1021–1043. Toronto, ON, Canada: University of Toronto Press.
- Rex, R. W. 1964. Arctic beaches, Barrow, Alaska, In *Papers in marine geology*, ed. R. L. Miller, 384–400. New York: Macmillan. [4]
- Rickard, W. E. Jr., and J. Brown. 1974. Effects of vehicles on arctic tundra. *Environmental Conservation* 1:55–62. [G]
- Rogers, J. C., L. D. Gedney, L. H. Shapiro, and D. Van Wormer. 1976. Nearshore permafrost in the vicinity of Point Barrow, Alaska. *Third International Conference on Port and Ocean Engineering Under Arctic Conditions* (Fairbanks) 2:1071–1082. [5]
- Rosen, J. M., B. A. Bodhaine, J. F. Boatman, J. J. DeLuisi, Y. Kim, M. J. Post, P. J. Sheridan, R. C. Schnell, and D. M. Garvey. 1992. Measured and calculated optical property profiles in the boundary layer and free troposphere. *Journal of Geophysical Research* 97:12837–12850. [G]
- Rosenfeld, G. A., and K. M. Hussey. 1958. A consideration of the problem of oriented lakes. *Proceedings of the Iowa Academy of Sciences* 65:279–287. [G]
- Rugh, D., J. Zeh, J. E. Koski, W. R. Baraff, G. W. Miller, and K. E. W. Shelden. 1997. An improved system for scoring photo quality and whale identifiability in aerial photographs of bowhead whales. *Paper SC/49/AS19, Scientific Committee of the International Whaling Commission*, October 1997. 29 pp. [25]
- Sackinger, W. M., and J. C. Rogers. 1974. Dynamics of breakup in shorefast ice. *Proceedings, Symposium on Beaufort Sea Coast and Shelf Research*. Arlington, VA: Arctic Institute of North America. pp. 367–376. [5]
- Safriel, U. N. 1980. The semipalmated sandpiper in Alaska: Reproductive strategies and tactics. *British Ornithologists Union* 122:425. [20]
- Salawitch, R. J., S. C. Wofsy, E. W. Gottlieb, et al. 1993. Chemical loss of ozone in the Arctic polar vortex in the winter of 1991–92. *Science* 261:1146–1149. [G]
- Schafer, P. J. 1966. Computation of a storm surge at Barrow, Alaska. *Archiv fur Meteorologie, Geophysik und Bioklimatologie* 15(3–4):372–393. [4]
- Schaffner, A., J. Zeh, and A. Raftery. 1996. Documentation of programs and data to produce the posterior distribution of bowhead whale, *Balaena mysticetus*, population size. *Paper SC/48/AS13, International Whaling Commission Scientific Committee*, June 1996. 6 pp. [25]
- Schalk, M., and J. D. Hume. 1962. Review of shore line investigations 1954–1959, Point Barrow, Alaska. *Proceedings of the First National Coastal and Shallow Water Research Conference*, ed. D. S. Gorsline, 91–94. [4]
- Schamel, D. M., and D. Tracy. 1977. Polyandry, replacement clutches, and site tenacity in the red phalarope (*Phalaropus fulicarius*) at Barrow, Alaska. *Bird-Banding* 48:314–324. [20]
- Schell, D. M., and V. Alexander. 1973. Nitrogen fixation in arctic coastal tundra in relation to vegetation and microrelief. *Arctic* 26:130–137. [20]
- Schiller, E. F. 1955. Studies of the helminth fauna of Alaska. XXIII. Some cestode parasites of eider ducks. *Journal of Parasitology* 41:79–88. [G]
- Schindler, J. F. 1973. NARL's contribution and a look ahead. In *Alaska Arctic Tundra: Proceedings of the Twenty-fifth Anniversary Celebration of the Naval Arctic Research Laboratory, Arctic Institute of North America Technical Report No. 25*, ed. M. E. Britton, 217–220. Washington, D.C. [7]
- Scholander, P. F., R. Hock, V. Walters, and L. Irving. 1950. Adaptation to cold in arctic and tropical mammals and birds in relation to body temperature, insulation, and basal metabolic rate. *Biological Bulletin* 99:259–271. [G]

- Scholander, P. F., W. Flagg, R. J. Hock, and L. Irving. 1953. Studies on the physiology of frozen plants and animals in the arctic. *Journal of Cell and Comparative Physiology* 42:1-56. [G]
- Schultz, A. M. 1964. The nutrient-recovery hypothesis for arctic microtine cycles. In *Grazing in terrestrial and marine environments*, ed. D. J. Crisp 57–68. Oxford: Blackwell Scientific Publications. [G]
- Seastedt, T. R., and S. F. MacLean. 1979. Territory size and composition in relation to resource abundance in Lapland longspurs breeding in arctic Alaska. *Auk* 96:131–142. [20]
- Sellmann, P. V., and J. Brown. 1965. Coring of frozen ground, Barrow, Alaska, spring 1964. *CRREL Special Report* 31. 8 pp. [12]
- Sellmann, P. V., K. L. Carey, C. Keeler, and A. D. Hartwell. 1972. Terrain and coastal conditions on the Arctic Alaskan Coastal Plain: Arctic environmental data package supplement 1, *CRREL Special Report* 165. Hanover, NH. 70 pp. [G]
- Sellmann, P. V., J. Brown, R. I. Lewellyn, H. L. McKim, and C. J. Merry. 1975. The classification and geomorphic implications of thaw lakes on the Arctic Coastal Plain. *CRREL Report* 344. Hanover, NH. 20 pp.
- Sexstone, A., P. Gustin, and R. M. Atlas. 1978. Long-term interactions of microorganisms and Prudhoe Bay crude oil in tundra soils at Barrow, Alaska. *Arctic* 31(3):348–354. [20]
- Shade, C. I., and H. T. Cain. 1953. An anthropology survey of the Point Barrow, Alaska region. *Proceedings, Second Alaskan Science Conference*. pp. 248–251. [G]
- Shapiro, L. H. 1976. Preliminary study of ridging in landfast ice at Barrow, Alaska, using radar data. *Third International Conference on Port and Ocean Engineering Under Arctic Conditions*. (Fairbanks, AK) 1:417–425. [5]
- Shapiro, L. H., and P. W. Barnes. 1991. Correlation of nearshore ice movement with seabed ice gouges near Barrow, Alaska. *Journal of Geophysical Research* 96(C9):16979–89. [5]
- Shaver, G. R., F. S. Chapin III, and W. D. Billings. 1979. Ecotypic differentiation in *Carex aquatilis* on ice-wedge polygons in the Alaskan coastal tundra. *Journal of Ecology* 67:1025–1046. [20]
- Sheehan, G. W. 1997. *In the Belly of the Whale: Trade and War in Eskimo Society*. Anchorage, AK: Aurora. Alaska Anthropological Association Monograph Series. 225 pp. [G]
- Sheehan, G. W. 1995. Whaling surplus, trade, war, and the integration of prehistoric Northern and Northwestern Alaskan economies, A.D. 1200–1826. In *Hunting the Largest Animals: Native Whaling in the Western Arctic and Subarctic*. ed. A. P. McCartney, 185–206. Studies in Whaling No. 3, Occasional Publications No. 36. Edmonton, AB, Canada: The Canadian Circumpolar Institute. [G]
- Shelesnyak, M. C. 1947. Some problems of human ecology in polar regions. *Science* 106:405–409. [G]
- Shelesnyak, M. C. 1948. The history of the Arctic Research Laboratory, Office of Naval Research, Point Barrow, Alaska. *Arctic* 1(2):97–106. [7]
- Shields, M. 1969. Activity cycles of snowy owls at Barrow, Alaska. *Murrelet* 50(2):14–16. [G]
- Shipman, M. C., S. A. Bachmeier, D. R. Cahoon Jr., and E. V. Browell. 1992. Meteorological overview of the Arctic Boundary Layer Expedition (ALBE 3A) flight series. *Journal of Geophysical Research* 97(D15):16395–16419. [G]
- Shirasawa, K., T. Takatsuka, and M. Ikeda. 1991. Measurements of momentum and heat flux over the open water, sea, and snow surface on Elson Lagoon, Alaska. *Low Temperature Science, Series A* 50:45–56. [11]
- Shoemaker, C. R. 1955. Amphipoda collected at the Arctic Research Laboratory, Point Barrow, Alaska, by G. E. MacGinitie. *Smithsonian Miscellaneous Collections* 128:1–78. [G]
- Shotts, E., T. Albert, R. Wooley, and J. Brown. 1990. Microflora associated with the skin of the bowhead whale (*Balaena mysticetus*). *Journal of Wildlife Diseases* 26(3):351–359. [25]

- Slaughter, C. W., M. Mellor, P. V. Sellmann, J. Brown, and L. Brown. 1975. Accumulating snow to augment fresh water supply at Barrow, Alaska. *CRREL Special Report* 217. 20 pp.
- Smith, A., D. Skilling, K. Benirschke, T. Albert, and J. Barlough. 1987. Serology and virology of the bowhead whale (*Balaena mysticetus*). *Journal of Wildlife Diseases* 23:92–98. [25]
- Smith, T. D., M. B. Bravington, and G. Givens. 1995. The basis for the Scientific Committee's 1994 management advice on aboriginal subsistence whaling on the Bering–Chukchi–Beaufort seas stock of bowhead whales. *Paper SC/47/AS19, Scientific Committee of the International Whaling Commission*, May 1995. 32 pp. [25]
- Sonnenfeld, J. 1960. Changes in an Eskimo hunting technology, an introduction to implement geography. *Annals of the Association of American Geographers* 50(2):172–186. [G]
- Sonntag, R., and G. Broadhead. 1989. Documentation for revised bowhead whale catch data (1948–1987). *Report of the International Whaling Commission* 39:114–115. [25]
- Spencer, R. F. 1959. *The north Alaskan Eskimo, a study in ecology and society*. Smithsonian Institution, Bureau of American Ethnology. Bulletin 171. Washington, D.C.: U.S. Government Printing Office. 490 pp. [G]
- Spencer, R. F., and W. K. Carter. 1954. The blind man and the loon: Barrow Eskimo variants. *Journal of American Folklore* 67(263):65–72. [G]
- Stamnes, K. H., R. G. Ellingson, J. A. Curry, J. E. Walsh, and B. D. Zak. 1999. Review of science issues, deployment strategy, and status for the ARM North Slope of Alaska—Adjacent Arctic Ocean Climate Research Program. *Journal of Climate* 12:46–61. [15]
- Stanley, D. W. 1976. Carbon flow model of epipelagic algae productivity in Alaskan tundra ponds. *Ecology* 57:1034–1042. [22]
- Stanley, G. M. 1960. Layered earth propagation in the vicinity of Point Barrow, Alaska. *Journal of Research* (National Bureau of Standards) 64D(1):95–97. [G]
- Steere, W. C. 1978. Floristics, phytogeography, and ecology of arctic bryophytes. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 5, 141–167. New York: Springer-Verlag. [G]
- Stone, R. S. 1997. Variations in western arctic temperatures in response to cloud radiative and synoptic-scale influences. *Journal of Geophysical Research* 102:21769–21776. [G]
- Stone, R. S., and J. R. Key. 1993. The detectability of arctic leads using thermal imagery under varying atmospheric conditions. *Journal of Geophysical Research* 98(C7):12469–12482. [G]
- Stoner, W. A., P. C. Miller, and W. C. Oechel. 1978. Simulation of the effect of the tundra vascular plant canopy on the productivity of four moss species. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 16, 371–387. New York: Springer-Verlag. [20]
- Stroschein, L. A. 1965. Automated radiation climatology station at Point Barrow, Alaska. *Proceedings, Fifteenth Alaskan Science Conference*. College, AK. pp. 61–72. [17]
- Stross, R. G., M. C. Miller, and R. J. Daley. 1980. Zooplankton. In *Limnology of tundra ponds*, ed. J. E. Hobbie, Chapter 6, 251–296. Stroudsburg, PA: Dowden, Hutchinson and Ross. [22]
- Sturges, W. T., R. C. Schnell, G. S. Dutton, S. R. Garcia, and J. A. Lind. 1993. Spring measurements of atmospheric bromine at Barrow, Alaska. *Geophysical Research Letters* 20(2):201–204. [15]
- Sturges, W. T., R. C. Schnell, S. Landsberger, S. J. Oltmans, J. M. Harris, and S.-M. Li. 1993. Chemical and meteorological influences on surface ozone destruction at Barrow, Alaska, during spring 1989. *Atmosphere Environment* 27A(17/18):2851–2863. [15]
- Sullivan, W. D. 1957. Identification of protozoa from Point Barrow, Alaska. *Transactions of the American Microscopical Society* 76(2):189–196. [G]
- Suydam R., J. C. George, T. M. O'Hara, and T. F. Albert. 1997. Efficiency of the subsistence harvest of bowhead whales by Alaskan Eskimos 1973 to 1996, with observations on the 1995 and

- 1996 subsistence harvests. *Paper SC/49/AS21, Scientific Committee of the International Whaling Commission*, October 1997. 14 pp. [25]
- Sveinbjornsson, B., and W. C. Oechel. 1981. Controls on CO<sub>2</sub> exchange in two *Polytrichum* moss species. 2. The implications of below-ground plant parts on the whole plant carbon balance. *Oikos* 36(3):348–354. [20]
- Swade, R. H., and C. Pittendrigh. 1967. Circadian locomotor rhythms of rodents in the Arctic. *American Naturalist* 101:431–466. [G]
- Tarpley, R., D. Hillmann, W. Henk, and J. C. George. 1997. Observations on the external morphology and vasculature of a fetal heart of the bowhead whale, *Balaena mysticetus*. *Anatomical Record* 247:556–581. [25]
- Tedrow, J. C. F., and D. E. Hill. 1955. Arctic brown soil. *Soil Science* 80:265–275. [16]
- Thomas, C. W. 1969. Concentrations of airborne radionuclides during 1968 at Point Barrow, Alaska; Richland, Washington; and Rio de Janeiro, Brazil. *Radiological Sciences, Pacific Northwest Laboratory, 1968: Report to the Atomic Energy Commission* 2(2):85–91. [G]
- Thomas, J. H. 1952. *Cochlearia officinalis arctica* in the vicinity of Point Barrow, Alaska. *Rhodora* 54(638):40–42. [G]
- Thompson, D. Q. 1955. The role of food and cover in population fluctuations of the brown lemming at Point Barrow, Alaska. *Transactions of the Twentieth North American Wildlife Conference* 11:166–176. [G]
- Tieszen, L. L., ed. 1978. *Vegetation and production ecology of an Alaskan arctic tundra*. New York: Springer-Verlag. 686 pp. [20]
- Tieszen, L. L., P. C. Miller, and W. C. Oechel. 1980. Photosynthesis. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 4, 102–139. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]
- Tillman, M. 1980. Introduction: A scientific perspective of the bowhead whale problem. *Marine Fisheries Review* 42(9–10):1–5. [25]
- Tiwari, J. L., R. D. Daley, J. E. Hobbie, M. C. Miller, D. W. Stanley, and J. P. Reed. 1980. Modeling. In *Limnology of tundra ponds*, ed. J. E. Hobbie, Chapter 10, 407–456. Stroudsburg, PA: Dowden, Hutchinson and Ross. [22]
- Trolier, M., J. W. C. White, P. P. Tans, K. A. Masarie, and P. A. Gemery. 1996. Monitoring the isotopic composition of atmospheric CO<sub>2</sub>: Measurements from the NOAA Global Air Sampling Network. *Journal of Geophysical Research* 101:25897–25916. [15]
- Ulrich, A., and P. L. Gersper. 1978. Plant nutrient limitations of tundra plant growth. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 20, 457–481. New York: Springer-Verlag. [20]
- Wade, P., and G. Givens. 1996. A family of catch control laws that meet Aboriginal Subsistence Management principles as stated in sub-paragraph 13(a). *Paper SC/48/Mg6, International Whaling Commission Scientific Committee*, June 1996. 5 pp. [25]
- Waelbroeck, C., P. Monfray, W. C. Oechel, S. Hastings, and G. Vourlitis. 1997. The impact of permafrost thawing on the carbon dynamics of tundra. *Geophysical Research Letters* 24:229–232. [19]
- Walker, H. J. 1991. Bluff erosion at Barrow and Wainwright, Arctic Alaska. *Zeitschrift fur Geomorphologie* 81:53–61. [G]
- Wang, G., and Q. Zhang. 1998. Features of temperature changes at Barrow, Arctic, in the last 400 years. *Chinese Journal of Polar Science* 9(1):33–38. [11]
- Webber, P. J. 1978. Spatial and temporal variation of the vegetation and its production, Barrow, Alaska. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 3, 37–112. New York: Springer-Verlag. [20]
- Webber, P. J., P. C. Miller, F. S. Chapin III, and B. H. McCown. 1980. The vegetation: Pattern and succession. In *An arctic ecosystem: The coastal tundra at Barrow, Alaska*, eds. J. Brown et al., Chapter 6, 187–218. Stroudsburg, PA: Dowden, Hutchinson and Ross. [20]

- Weber, N. A. 1950. A survey of the insects and the related arthropods of arctic Alaska, part 1. *Transactions of the American Entomological Society* 76:147–206. [G]
- Weber, N. A. 1950. The role of lemmings at Point Barrow, Alaska. *Science* 111(2890):552–553. [G]
- Webster, C. R., R. D. May, D. W. Toohey, L. M. Avallone, J. G. Anderson, P. Newman, L. Lait, M. R. Schoberl, J. W. Elkins, and K. R. Chan. 1993. Hydrochloric acid loss and chlorine chemistry on polar stratospheric clouds in the arctic winter. *Science* 261: 1130–1133. [G]
- Weeks, W. F., and A. J. Gow. 1979. Crystal alignments in the fast ice of arctic Alaska. *CRREL Report* 79-22. 21 pp. [5]
- Weeks, W. F., P. V. Sellmann, and W. J. Campbell. 1977. Interesting features of radar imagery of ice-covered North Slope lakes. *Journal of Glaciology* 18(78):129–136. [G]
- Weller, G., and B. Holmgren. 1974. The microclimates of the arctic tundra. *Journal of Applied Meteorology* 13:854–862. [20]
- Wells, R. D. 1969. The Naval Arctic Research Laboratory. *United States Naval Institute Proceedings* 95(9):39–45. [7]
- Wendler, G., and F. Eaton. 1990. Surface radiation budget at Barrow, Alaska. *Theoretical and Applied Climatology* 41(3):107–115. [G]
- Wescott, E. M. 1967. Coastal effects in magnetic and telluric current variations near a complex land, shelving seawater boundary. *Journal of Geophysical Research* 72(7):1959–1969. [G]
- Wiggins, I. L. 1951. The distribution of vascular plants on polygonal ground near Point Barrow, Alaska. *Contributions of Dudley Herbarium* 4(3):41–56. [G]
- Wiggins, I. L., and J. H. Thomas. 1961. A flora of the Alaskan arctic slope. *Arctic Institute of North America, Special Publication* No. 4. Toronto, ON, Canada: University of Toronto Press. 425 pp. [G]
- Wilber, C. G., and X. J. Musacchia. 1950. Fat metabolism in the arctic ground squirrel. *Journal of Mammalogy* 31:304–309. [G]
- Wilimovsky, N. J. 1954. List of the fishes of Alaska. *Stanford Ichthyological Bulletin* 4:279–294. [G]
- Williams, J. R., and L. D. Carter. 1984. Engineering–geologic maps of northern Alaska, Barrow quadrangle. *U.S. Geological Survey Open-file Report* No. 84-124. 38 pp. [G]
- Williams, M. E., E. D. Rudolph, E. A. Schofield, and D. C. Prasher. 1978. The role of lichens in the structure, productivity, and mineral cycling of the wet coastal Alaskan tundra. In *Vegetation and production ecology of an Alaskan arctic tundra*, ed. L. L. Tieszen, Chapter 7, 185–206. New York: Springer-Verlag. [20]
- Wilson, M. T. 1965. North American Harpacticoid copepods. 7. A new species of *Stenhelium* from Nuvuk Lake on the arctic coast of Alaska. *Proceedings of the Biological Society of Washington* 78(22):179–188. [2]
- Withrow, D., and C. Geobel-Diaz. 1989. Distribution of bowhead whales near Point Barrow, Alaska 1984–86. *Report of the International Whaling Commission* 39: 305–308. [25]
- Wofsy, S. C., K. A. Boering, J. B. C. Daube, M. B. McElroy, M. Loewenstein, J. R. Podolske, J. W. Elkins, G. S. Dutton, and D. W. Fahey. 1994. Vertical transport rates in the stratosphere in 1993 from observations of CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub>. *Geophysical Research Letters* 21(33):2571–2574. [G]
- Wohlschlag, D. E. 1957. Differences in metabolic rates of migratory and resident freshwater forms of an arctic whitefish. *Ecology* 35:502–510. [27]
- Woodbridge, E. L., J. W. Elkins, D. W. Fahey, et al. 1995. Estimates of total organic and inorganic chlorine in the lower stratosphere from *in situ* and flask measurements. *Journal of Geophysical Research* 100:3057–3064. [G]
- Yang, W., Q. Zhang, and G. Wang. 1998. Lagoon sediments geochemistry and its significance in study of climatic and environmental changes in Barrow, Alaska. *Chinese Journal of Polar Sciences* 9(1):59–65. [11]

- Yoshimoto, M., Y. Harazono, G. L. Vourlitis, and W. C. Oechel. 1996. The heat and water budgets in the active layer of the arctic tundra at Barrow, Alaska. *Journal of Agricultural Meteorology* 52(4): 293-300. In Japanese. [15] [20]
- Zak, B. D., K. H. Stamnes, and K. B. Widener. 1998. ARM climate change research in Alaska. *Arctic Research of the United States* 12:35-37. [15]
- Zeh, J., J. George, and R. Suydam. 1995. Population size and rate of increase, 1978-1993, of bowhead whales, *Balaena mysticetus*. *Report of the International Whaling Commission* 45:339-344. [25]
- Zeh, J., D. Ko, B. Krogman, and R. Sonntag. 1986. A multinomial model for estimating size of a whale population from incomplete census data. *Biometrics* 42:1-14. [25]
- Zhang, Q., Y. Li, W. Yang, G. Wang, S. Li, and S. Hou. 1996. Climatic and environmental records in the past 450 years from Elson Lagoon, Barrow, Arctic. *Quaternary Science* (3): 211-220 [in Chinese with English summary]. [11]
- Zhang, T., and K. Stamnes. 1998. Impact of climatic factors on the active layer and permafrost, Barrow, Alaska. *Permafrost and Periglacial Processes* 9:229-246. [12]
- Zhu, Q. 1997. First record of an eye disease in the bowhead whale (*Balaena mysticetus*). *Chinese Journal of Oceanology and Limnology* 15(2):192-193. [25]