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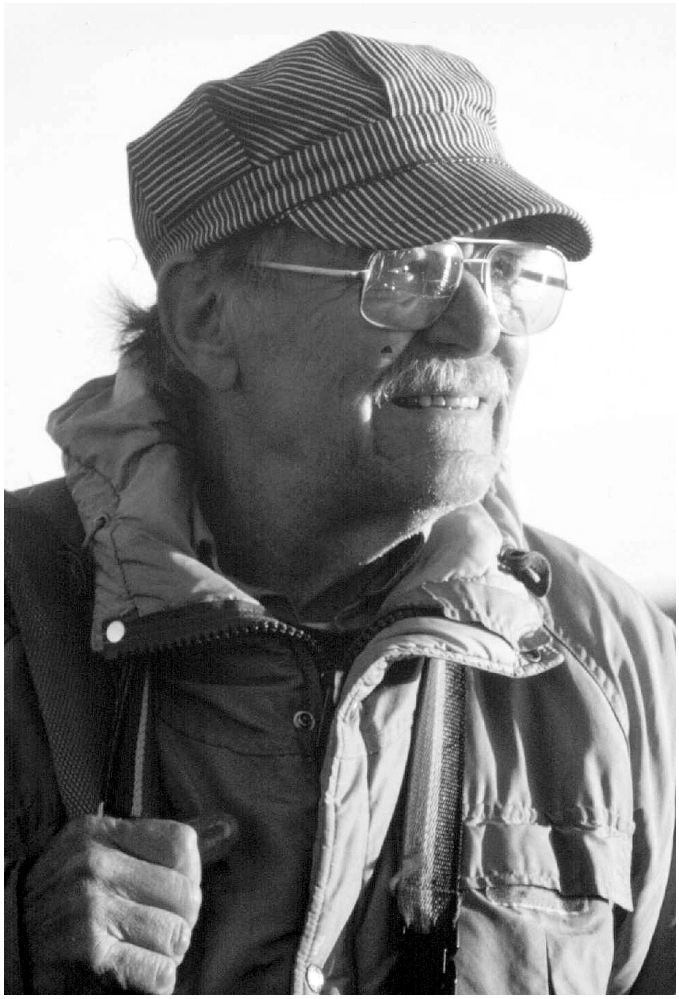
DAVID MOODY HOPKINS (1921–2001)



David Moody Hopkins.

David M. Hopkins, a Quaternary geologist widely known for his broad-ranging studies of the Bering Land Bridge region ("Beringia"), passed away at his home in Menlo Park, California, on November 2, 2001. Dave was a long-time member of Alaskan units of the U.S. Geological Survey (USGS). In search of a deeper understanding of Beringia, he became a pioneer in interdisciplinary research and in collaborative research with Russian investigators. Following his retirement from the USGS in 1985, Dave became director of the Alaskan Quaternary Center and Professor of Quaternary Studies at the Fairbanks campus of the University of Alaska. During the 57 years of his professional career, he was a mentor, friend, and source of inspiration to several generations of Arctic scholars.

Dave was raised in Greenfield, New Hampshire. At an early age, he developed a broad interest in natural science. After graduating from the University of New Hampshire with a bachelor's degree in Geology in 1942, he joined the USGS and began graduate studies at Harvard University. Dave spent his initial field seasons with the USGS in southern regions of Alaska, where he investigated strategic minerals, engineering geology, and other aspects of geology that were considered essential to the ongoing war effort. In 1944, he was inducted into the Army and assigned to carry out meteorological observations at Cold Bay, situated at the tip of the Alaska Peninsula. Following his discharge, Dave resumed graduate studies at Harvard and field work with the USGS. He obtained an M.S. degree in Geology (1948) and a Ph.D. in Quaternary Geology (1955) from Harvard University.

In 1947, Dave began geological investigations on the Seward Peninsula under the permafrost program of the USGS Alaska Terrain and Permafrost Section (which later became the Branch of Alaskan Geology). He rapidly became well known for his contributions to the geology of the Seward Peninsula and for his pioneering interdisciplinary studies in northwestern Alaska. In 1948, he initiated a productive collaboration with the botanist Robert Sigafoos. Their seminal publications on the interactions of permafrost, soil, and vegetation on the Seward Peninsula are considered classics today. Dave also began a long-term collaboration with the archeologist Louis Giddings on dating and reconstructing the paleoecology of prehistoric village sites and other early human habitations in northwestern Alaska. As new approaches to geochronology were developed in the 1960s and 1970s, Dave used his position with the USGS to provide encouragement and funding for their applications to geological problems in Alaska. For example, he encouraged investigations in the Bering Sea region by Allan Cox, Richard Doell, and Brent Dalrymple that contributed to refinement of the paleomagnetic time scale. In the mid-1970s, he helped support the establishment of the Amino Acid Geochronology Lab at the University of Colorado at Boulder.

Dave's investigations of elevated and submerged gold-bearing beaches at Nome during the 1950s initiated his long-lasting interest in the sea-level history of Beringia and the paleoecology of parts of the Bering platform that are submerged today. Using marine fossils and sediments, he and his colleagues attempted to date significant sea-level fluctuations and determine associated water conditions. During the 1960s, with support from the USGS Heavy Metals program, Dave was instrumental in formulating a wide-ranging investigation of the Bering Sea floor, the first program of geophysical and geological studies and core drilling that the USGS conducted in Alaskan waters using fully equipped, ocean-class research vessels. These studies led to the discovery of buried Cenozoic basins and of drainage systems, now submerged, that developed offshore from modern river mouths at times of low Pleistocene sea levels. Using the numerous offshore drilling records from the Prudhoe Bay oil field, he later carried out studies of submerged permafrost and its history on the Beaufort Sea shelf.

Dave's broadening interests in the paleoecology of Beringia led to increasing contacts with Russian colleagues

that developed into a fruitful, 40-year collaboration across the Bering Strait. As part of the VII Congress of the International Association for Quaternary Research, held in Boulder, Colorado, in 1965, Dave organized a symposium on *The Late Cenozoic History and Environments of the Bering Land Bridge*. Nearly as many Russian as American investigators were invited to participate. The volume resulting from that conference was edited by Dave and published in 1967 by Stanford University Press. It contains paired papers by American and Russian scientists on terrestrial and marine geology, vegetation history, marine invertebrate records, and mammalian faunas on both sides of the Bering Strait. Dave subsequently served as a National Academy of Sciences exchange fellow in the USSR in 1969, the first of 11 visits for conferences, field excursions, and field work that he carried out over a 25-year period. He also hosted exchange and shorter visits by Russian colleagues and arranged for translations of several Russian books and scientific papers. With assistance from several younger colleagues and support from the Wenner-Gren Foundation for Anthropological Research, Dave organized a second international Beringian conference in Austria in 1979. Russian investigators again were well represented, both at the conference and in each major section of the proceedings volume (*The Paleoecology of Beringia*, Academic Press: 1982) that Dave and his colleagues edited following that conference.

After Dave's retirement from the USGS, he began a second career of teaching and research as Distinguished Professor of Quaternary Studies at the University of Alaska at Fairbanks (UAF). Serving as head of the Alaskan Quaternary Center at UAF from 1985 to 1990, he became the gravitational center of a diverse group of faculty, students, and visiting scholars. He initiated interdisciplinary field trips that brought together geologists, biologists, anthropologists, and soil scientists. Similarly diverse groups assembled for the seminars that he and his wife, Rachael, hosted in their home. These interactions led to innovative cross-cultural graduate projects and other research collaborations. With support from the U.S. National Park Service, the National Science Foundation, and other agencies, he initiated graduate thesis and dissertation projects on both sides of the Bering Strait. Dave continued to do field work until declining health forced him to become less active a few years before his death.

As a direct result of Dave's broad-ranging research on the northern Seward Peninsula, the U.S. National Park Service (NPS) set aside much of his former field area as the Bering Land Bridge National Preserve. His pioneering interdisciplinary exchanges with Russian colleagues later inspired creation of the Beringian Heritage International Park, which is managed by the NPS in collaboration with the Russian federal government and the Chukotka regional administration. Dave's deep emotional ties with the landscapes of the Seward Peninsula come through strongly in two videos produced by the NPS—*Journey of Discovery: Landscape History of the Bering Land Bridge* and *Siulipta Paitaat: Our Ancestors' Heritage*—in which Dave reflects on the land and its people. In recognition of his contributions, the Shared Beringian Heritage Program of the NPS has established the David M. Hopkins Beringian Award to be given annually in honor of his scientific and educational legacy.

Dave's scientific influence encompasses such diverse fields as bedrock geology, marine geology, paleontology, limnology, hydrology, ecology, archeology, and paleoclimatology—the topics of his more than 200 refereed papers and abstracts. Numerous awards and commendations from the USGS and other scientific organizations recognized his contributions. His 1967 volume, *The Bering Land Bridge*, won the Geological Society of America's Kirk Bryan Award for the year's best publication in Quaternary geology or geomorphology. For his contributions in geoarcheology, Dave received the Society for American Archaeology Roald Fryxell Award in 1988 and the Geological Society of America Archeology Division's Rip Rapp Distinguished Career Award in 1992. For his Beringian research, he received the Franklin L. Burr Prize from the National Geographic Society in 1993. In 1995 he was the recipient of the Geological Society of America Quaternary Geology and Geomorphology Division's Distinguished Career Award, and in 1997 he received a similar award from the American Quaternary Association. The UAF awarded him an honorary Doctor of Science degree in 2000 for his seminal role in "developing the geological concept of Beringia." In 2001, a large collection of papers titled *Beringian Paleoenvironments*, assembled as a Festschrift in his honor, was published in Quaternary Science Reviews (v. 20, nos. 1–3).

During his highly productive career, Dave always found time to advise and encourage younger colleagues and students. He is remembered fondly as a mentor and friend by several generations of Beringian scientists whose careers he assisted or influenced. His creative thinking and his intellectual courage inspired an even wider circle of colleagues. He did not hesitate to leap disciplinary boundaries when grappling with scientific problems, and he was not afraid to admit that he was wrong when pushing the limits of knowledge led him to novel ideas that later proved incorrect. We shall all miss his warmth, his humor, and his infectious passion for Beringia, but his legacy of inspired research and interdisciplinary scholarship will be enduring.

A list of David Hopkins' numerous publications is available at http://alaska.usgs.gov/geology/d_hopkins.biblio.

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