

Resolution of Respect

Charles F. Cooper 1924-1994

In the death of Charles F. Cooper in September 1994 at age 70, ecology lost a notable personality and wide-ranging intellect. Though he was retired from the last position he held as professor of Biology at San Diego State University and was hampered somewhat by ill health, Chuck was still active and planning new projects to the end. At the time of his death he had just returned from a trip to the Kamchatka Peninsula and had resumed his participation on the management authority for the Tijuana Estuary on the international border in San Diego County.

The activities of his last days typified a productive career that combined a global perspective, insightful contributions to specific ecological questions, and a commitment to the application of ecological knowledge to the solution of practical problems. Chuck earned the right to speak with authority on these issues by his unusual breadth of experience in applied and theoretical ecology.

Born in Kenosha, Wisconsin, he was a scion of a family of successful businessmen. His father was president of the company now known as Jockey International. From his early youth, however, his bent was science, not business. His cousin recalls his interests in chemistry and photography and his comprehensive knowledge of natural history, all topics that would figure in his professional life.

Like others of his generation, Chuck's education was interrupted by the war, and he served as a mechanic in the U.S. Army Air Corps. His professional career was launched with a degree in forestry from the University of Minnesota in 1951. As a newly-minted forester his first job—slogging through the mosquito-infested tag-alder swamps of northern Wisconsin—was brief, but provided valuable career guidance. He

was unapologetic in admitting that he lacked the qualifications necessary for this kind of applied ecology. A position with the U.S. Bureau of Land Management, as a forester and range conservationist, working in Colorado and Arizona, was more to his liking. This introduction to the southwest and its resource problems seem to have stimulated him to further his education by obtaining a master's degree in watershed management at the University of Arizona in 1957.

With this strong background in applied ecology, Chuck entered the program in plant ecology at Duke University, working toward his Ph.D. under Professor H. J. Oosting. He took as his thesis project the fire ecology of the ponderosa pine forests in the White Mountains of Arizona, camping and hiking in what were then mostly roadless areas. The series of papers that came from this work were among the most influential in establishing the scientific legitimacy of the now universally accepted view of fire as a natural and necessary part of ecosystem function. Chuck provided a solid conceptual foundation for the use of fire in ecosystem management. Details of his interpretation have been revised by subsequent research, but his major insights have stood the test of time.

Graduating from Duke in 1958, his first academic position was in the Natural Resources Department at Humboldt State College (now State University) in the redwood belt of northern California. His love of wide open spaces probably influenced his decision to leave 2 years later. Though he found the redwoods magnificent, he often commented that his preference was to drive inland and into the sun.

His next position as a research botanist and research hydrologist with the U. S. Agricultural Research Service in Boise, Idaho in 1960 took him from forests to the ecology of sagebrush watersheds. Though he

maintained an interest in fire, and did return to it briefly during a Fulbright fellowship to Australia in 1962-1963, he never again took it up as an active area of field research. Instead, stimulated by the multi-faceted problems and large scale of watershed management in the semi-arid West, he became interested in regional and global issues.

His reputation as an ecologist with innovative ideas and strong management credentials attracted the attention of forward-looking academicians, and in 1964 he accepted a faculty position at the University of Michigan in the School of Natural Resources. There he was a member of a multidisciplinary group of five faculty headed by Stanley Cain that focused on natural resource issues. Chuck was responsible for the ecology curriculum. Graduate students who were part of this program recall it as innovative and exciting despite some internal dissension, external pressures, and a continual state of flux as the fledgling program was buffeted by academic winds. Colleagues recall him as an intellectual leader who did much to shape the direction of the School.

By virtue of his interest in large-scale ecological problems and his early involvement in the U.S. International Biological Program, he became an advocate of the use of simulation models as a means of understanding and managing ecosystems. He was therefore a logical choice as program director for ecosystems studies at the National Science Foundation, helping to shape the U.S. involvement in the International Biological Program in the critical years 1969-1971 as ecology was becoming part of the popular culture.

His bias toward the West and the challenge of an academic post as director of the Center for Regional Environmental Studies at San Diego State University are probably what lured him away from Michigan at the end of his term at NSF. His ocean-view house in La Jolla put him back

in the California fog-belt, but not in the redwoods. In coming to San Diego, Chuck was choosing a region with a wide array of environmental problems desperately in need of cooperative efforts between researchers, managers, and politicians. Chuck took up the challenge, devoting much of his time and energy to local and regional issues in his teaching and research. Under his direction the Center undertook a wide range of studies from environmental planning for the space shuttle launching site to snowpacks in the Sierras. To planners, managers, and politicians he continually stressed the importance of sound ecological science as the keystone of environmental policy. To ecologists, he emphasized the need to recognize political and financial constraints. He always stressed compromise and collaboration.

He brought this philosophy to the many panels, commissions, and

boards on which he served for various organizations including the U.S. Department of Energy, the Ecological Society of America, UNESCO Man and the Biosphere, the National Science Foundation, the Institute of Ecology, and the American Association for the Advancement of Science, of which he was a fellow. He was chairman of a joint U.S.–Republic of China seminar on forest ecology and genetics. He was for many years a member of the Board of Directors of the San Diego County Water Authority and, very appropriately, on a county fire protection and control advisory committee. In 1977 he was a fellow of the Woodrow Wilson International Center for Scholars, where he had the opportunity to pursue his interest in politics, ecology, and environmental policy. This led, among other things, to a publication on the impact of global change in the journal *Foreign Affairs*. He retired from SDSU in 1988 but remained on

campus until 1992.

In his long career Chuck influenced many students and consistently encouraged and supported junior colleagues. He was exacting but minimally judgmental, and generous with his time. His enthusiasm for the subject, eagerness to make his point, and penchant for precise thought gave a distinctive flair to his discourse that could leave audiences bemused or exasperated. But for those who listened he provided unique insights, a wealth of examples from his broad experience, and well-reasoned arguments. His most consistent message was that we cannot avoid the need to manage the biosphere, and therefore it is the task of ecologists to obtain the knowledge and devise the strategies for doing so.

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