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Walter E. Howard
University of California, Davis, wehoward@ucdavis.edu

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The Soap Box

Development of wildlife damage management: a personal perspective

WALTER E. HOWARD, Department of Wildlife, Fish, and Conservation Biology, University of California, Davis, CA 95616 USA *wehoward@ucdavis.edu*

DURING MY PROFESSIONAL CAREER, many changes have occurred in the management of wildlife damage and human–wildlife conflicts, including some dramatic changes in people's attitudes. For example, I remember when most people thought that the only good coyote was one hanging on a roadside fence, whereas today most people are repulsed by such a sight.

The fields of wildlife ecology and conservation were unknown in the early twentieth century. During that period, the level of compassion for wildlife that we take for granted today was essentially nonexistent even into the 1930s. At that time, few people would have believed that an animal they considered to be a pest might also be considered highly desirable to someone else (Howard 1962*a*). Tolerance of animals that were considered pests was very low, and the solution to any unwanted animal was to eliminate it by any means possible. In 1909, California established a law giving authority to local health organizations to enforce ground squirrel control to prevent spreading of plague. In 1913, field crews were designated to control destructive rodents in national forests, and in 1915 the first appropriation was made for animal control on federally-owned and controlled lands. The major high points in the development of lethal means of controlling wildlife were (1) the field success of poison against meadow mice during a Nevada mouse plague and (2) Stanley Piper's development of the Biological Survey's strychnine formula for ground squirrel control.

The USDA's Bureau of Biological Survey unsuccessfully tried to develop a contagious disease that would be effective against prairie dogs, ground squirrels, and meadow mice, but that would not be transmissible to other vertebrates. Because this was not successful, it searched for a poison bait or lethal gas that could be used without harming beneficial species.

Statewide interest in a cooperative animal control endeavor occurred first in Kansas in 1901. The 1909 USDA *Year Book* stated that the essential basis for the work of USDA's Biological Survey was the study of American birds and mammals and their economic benefit to humans. The yearbook went on to say that many mammals and a few birds are seriously destructive, so that any accurate knowledge of the food habits of such pests and effective means for reducing their numbers and preventing their ravages was becoming more and more necessary to profitable agriculture and stock-raising.

Responsibility of government for developing control methods originally was with the USDA's Division of Ornithology and Mammalogy. This responsibility was transferred to the Bureau of Biological Survey. In 1939, it was transferred to U.S. Department of the Interior (USDI), where it began research on food habits of pest animals. Publication of animal damage control methodology was stopped with the transfer from USDA to USDI, where it became unpopular.

I frequently used to lecture and write about the wisdom of transferring the federal animal damage control program back to the USDA Wildlife Services, but the message fell on deaf ears. It was not until 1979 that I, with help from both Jim Lee of APHIS and a Texas congressman, got the transfer approved. We did it by attaching language to a labor bill at the last moment that ordered the transfer. We did this without telling anyone, including the USDA, USDI, Audubon Society, and the Sierra Club. People were at first livid when they learned

what had happened. It took about 2 years after the bill passed before everyone realized the great value of the transfer. When the advantages became apparent, Jack Berryman and other wildlife leaders actually complimented me on my efforts in engineering the transfer, and I was no longer cussed out.

Wildlife management professionals early on recognized the deplorable state of the science of vertebrate pest control. During the early 1960s, it was not yet well-accepted as a field; it was not organized, and it did not have a sound scientific basis. It needed to be recognized as applied ecology, not the killing of animals. There was no journal where papers on vertebrate pest management could be published. Finally, The Wildlife Society agreed to appoint a Committee on Economic Losses Caused by Vertebrates, which I chaired (Eadie et al. 1961). That committee's report stressed the importance of The Wildlife Society deciding whether the Society's mandate included all wild vertebrates or was restricted to game and game-like animals. As a consequence, The Wildlife Society decided that "wildlife" encompassed animals that may be harmful to humans, as well as other kinds of vertebrate animals in the wild. After I presented my paper, titled "Means of Improving the Status of Vertebrate Pest Control," at the North American Wildlife and Natural Resources Conference in Washington, D.C. (1962), professors at both the University of California at Davis and the Museum of Vertebrate Zoology at the University of California at Berkeley assailed me. They jointly even tried to get me fired from the University of California at Davis, but I was saved by the president of the university.

Vertebrate pest control has now become a sophisticated scientific field. It is recognized that the factors responsible for some species of birds and mammals becoming pests are many. A species can overpopulate due to changes in habitat, lessening of predation, lack of competition with other species, or by transmitting disease. Additionally, the National Academy of Sciences' National Research Council Agricultural Board recognized that wildlife and other competitors of agriculture are important to the economy of the whole country. With this in mind, the agricultural board appointed a committee on agricultural pests. The committee in turn formed a subcommittee on vertebrates, which remained in existence from August 1958 to November 1960 (Eadie et al. 1961, Howard 1962*b*). The First Vertebrate Pest Conference was held in Sacramento, California, in 1962 (Howard 1962*a*). The Twenty-third Vertebrate Pest Conference, was held in San Diego, California, March 17–20, 2008, and included participants from Australia, Fiji Islands, Israel, New Zealand, and the United Kingdom.

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WALTER E. (HOWDY) HOWARD is an active professor emeritus of wildlife biology and animal ecology at the University of California at Davis, where he joined the faculty in 1947. He received his A.B. degree at the University of California at Berkeley (1939) and his M.S. (1942) and Ph.D. (1947) degrees at the University of Michigan. He spend 3 years in World War II, first in the Ski Troops (10th Mtn. Div.), medical administration OCS, then trained to be a front-line doctor in the Pacific Theater, but finished the war with the U.S. Typhus Commission in Burma studying a new form of deadly scrub typhus. He served as the major professor for 24 Ph.D. and 20 M.S. students and authored >500 articles, books, and reports, mostly on ecology and how people and animals can best cohabit in modified environments.