## State of California The Resources Agency Department of Fish and Game

## THE FORMER DISTRIBUTION OF GRAY WOLVES IN CALIFORNIA

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1994

The gray wolf, Canis lupus, was extirpated as a resident species from California more than 100 years ago (Grinnell, Dixon and Linsdale 1937). This is a brief review of what is known about the former status of this species in California.

The past distribution of the gray wolf in California is not known with certainty. Historical accounts are of limited value in assessing their former distribution and abundance because of inaccuracies and poor reliability of reports. In the 19th century, people often misidentified the coyote, *Canis latrans*, as a wolf or considered it to be a type of wolf. The large, gray form of coyote of the Great Plains and high elevations of the Sierra Mountains, *C. l. lestes*, was often called a "wolf" or "gray wolf" by observers, including fur trappers (Grinnell and Storer 1924; Grinnell, Dixon and Linsdale 1937). Other names given coyotes in the past were "barking wolf" (Stephens 1906), "brush wolf", and "prairie wolf" (Bekoff 1982). Consequently, "wolves" were reported throughout most of California in journals and publications of early explorers, pioneers, miners, and settlers.

Grinnell, Dixon and Linsdale (1937) wrote, "Unquestionably wolves ranged regularly over the northeastern one-fourth of the State and south along the Sierra Nevada to Inyo County at least..." Also, they felt that it "is not unlikely" that wolves formerly existed in California's northwest coastal strip, although they had not found any evidence to support such speculation. They found no convincing evidence of wolves occurring "one hundred years ago in west central California or southern California west of the desert divides".

In contrast, Young (1944) did accept many of the 19th century written records of "wolf" sightings as evidence of a wide occurrence of the gray wolf in California. He concluded that "the occurrence of the wolf in most of California has been rare".

Resident populations of wolves were extirpated from California sometime in the 1800s. Wolves seen or trapped in the State in the late 1800s and early 1900s probably were stragglers from Oregon and Nevada. The last known specimen of a native wolf in California was collected in 1924 (Grinnell, Dixon, and Linsdale 1937).

Unverified sightings of wolves or their tracks have been reported occasionally since the 1920s, even in recent years. Most, if not all, may have been misidentifications of large coyotes, other animals, or other animal sign. Some may have been sightings of escaped or illegally released captive-bred wolves or wolf-dog hybrids.

Only two specimens of native forms of wolves have been collected in California, and both are reposited at the Museum of Vertebrate Zoology (MVZ), Berkeley:

A skull of an adult male Southern Rocky Mountains wolf, C. l. youngi, trapped in 1922 in the Providence Mountains, eastern San Bernardino County.

This individual was trapped by a Mr. Watson on December 14, 1922, near the old Barnett Mine, 12 miles west of Lanfair in the Providence Mountains of the Mojave Desert (Grinnell, Dixon, and Linsdale 1937). It was kept alive a short time and was photographed. Goldman (1944) suggested that this wolf may have wandered into California from southern Nevada. Since then, wolves have become extinct throughout the range demarcated for this subspecies.

The skull and skin of an adult male Cascades Mountains wolf, C. l. fuscus, trapped in 1924 in Lassen County.

This emaciated, three-legged individual was caught by Government trapper Frank W. Kaehler 1 mile east of Litchfield on June 13, 1924. The wolf may have straggled into California from Oregon or northern Nevada (Grinnell, Dixon, and Linsdale 1937). Wolves in the range denoted for this subspecies the Pacific Northwest may have become extirpated, at least in the United States. Wolf sightings have occurred in northern Washingtion and southern Oregon in recent years, however. These include individuals of unknown taxonomic origin, but at least some of them have been hybrids or illegally released wolves.

Additionally, MVZ has the skull and skin of a male wolf that was shot in 1962 in Tulare County:

This wolf was shot by David Boas on March 22, 1962 in a chicken yard at Woodlake, near the boundary of Sequoia National Park (Ingles 1963). Ingles (1963) suggested that this might be an example of a remnant population of wolves in the remote regions of the southern Sierra Nevada. McCulloch (1967), however, compared the skull of this animal with those of subspecies from North America and other parts of the world and found that it differed markedly from other subspecies of wolves of western North America. It was most similar to the subspecies C. l. chanco of eastern Asia. Measurements and other physical characteristics suggested to McCulloch (1967) that this wolf had been introduced by man.

Our knowledge of the former distribution of wolves in California is based primarily on these authoritative sources:

- Goldman, E. A. 1944. Part II. Classification of wolves. Pages 389-636 in Young, S. P., and E. A. Goldman. The wolves of North America. The American Wildlife Institute, Washington, D.C. 636 pp.
- Grinnell, J. 1933. Review of the recent mammal fauna of California. University of California Publications in Zoology 40(2):71-234.
- Grinnell, J., J. S. Dixon, and J. M. Linsdale. 1937. Fur-bearing animals of California. Contributions from University of California Museum of Vertebrate Zoology. Vol. 1.
- Young, S. P. 1944. Part I. Their history, life habits, economic status, and control. Pages 1-369 in Young, S. P., and E. A. Goldman. The wolves of North America. The American Wildlife Institute, Washington, D.C. 636 pp.

## Other literature cited:

- Bekoff, M. 1982. Coyote. Chapter 20, pages 447-459 in Chapman, J. A., and G. A. Feldhamer (eds.). Wild mammals of North America, biology, management, and economics. The Johns Hopkins University Press, Baltimore.
- Ingles, L. 1963. Status of the wolf in California. J. Mammalogy, 44(1):109-110.
- McCullough, D. R. 1967. The probable affinities of a wolf captured near Woodlake, California. Calif. Fish and Game, 53(3):146-153.
- Stephens, F. 1906. California mammals. West Coast Publishing, San Diego. 351 pp.