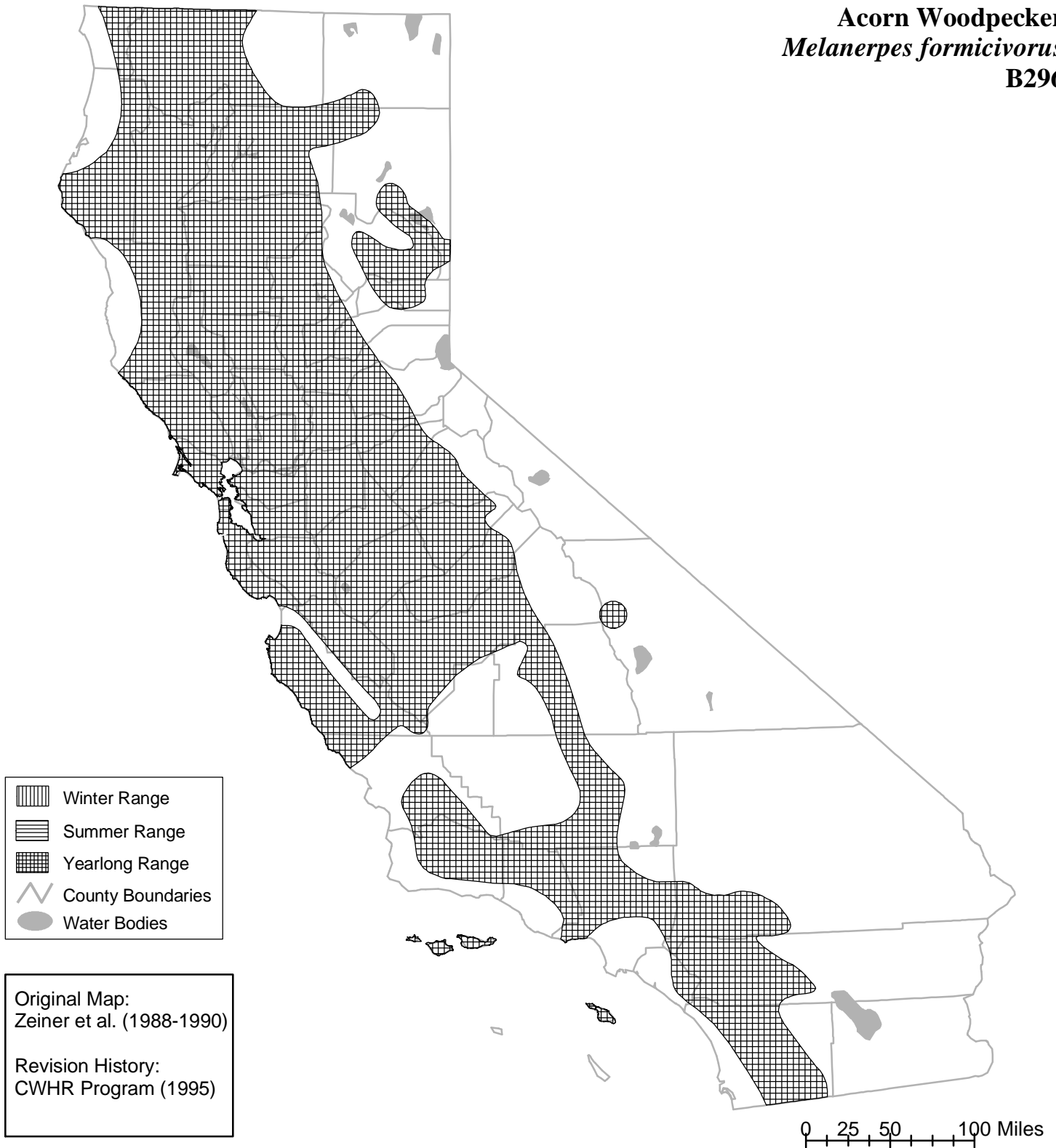


California Wildlife Habitat Relationships System

California Department of Fish and Game

California Interagency Wildlife Task Group

Acorn Woodpecker *Melanerpes formicivorus* B296



Range maps are based on available occurrence data and professional knowledge. They represent current, but not historic or potential, range. Unless otherwise noted above, maps were originally published in Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California. Updates are noted in maps that have been added or edited since original publication.

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ACORN WOODPECKER

Melanerpes formicivorus

Family: PICIDAE
B296

Order: PICIFORMES

Class: AVES

Written by: G. Ahlborn, T. Harvey
Reviewed by: N. Johnson
Edited by: G. Ahlborn

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A common, yearlong resident below 2100 m (6900 ft) elevation in hardwood and hardwood-conifer habitats. Requires stands with large oaks and snags. Occurs in western Sierra Nevada foothills, Coast Ranges, Klamath Range, and locally on the eastern Sierra Nevada slope from Modoc Co. to Nevada Co.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Eats mostly acorns, flying insects, and sap. Green acorns and insects are the primary foods in summer and fall. Gathers acorns from trees and ground. Eats, or stores acorns individually in holes drilled in snags, dead limbs, posts, utility poles, and bark of living trees. Eats stored acorns in winter; in late winter and spring drills holes in trees to feed on sap. Hawks insects, especially in spring. Also eats other nuts, seeds, and fruits.

Cover: Requires low-density stands of large oaks with sparse canopy and snags. Roosts in holes excavated for nesting.

Reproduction: Excavates nesting cavities in winter and spring; prefers soft, decayed wood of live trees or snags of oaks, sycamores, or conifers. Nest hole varies from 1.8 to 30 m (6-100 ft) above ground.

Water: Seeks water daily; crosses territory boundaries to reach water.

Pattern: Curtis (1981) described good habitat in the western Sierra Nevada as stands of open oak or oak/conifer forest of at least 6 ha (15 ac), surrounding clumps of large oaks and pine stands of 0.4 to 0.8 ha (1-2 ac). Open oak or oak/conifer stands should contain at least 4 species of oak, and contain snags. Most good habitats are below 915 m (3000 ft) elevation, and less than 0.4 km (0.25 mi) from water.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: Resident. In the western Sierra Nevada, and probably other areas, upslope movement occurs in fall to mixed conifer habitat with black oak (Verner and Boss 1980).

Home Range: Home range apparently same as territory (Verner and Boss 1980).

Territory: Lives in communal groups of 2-16, consisting of at least 2 breeding adults, their offspring, and cousins. Some communal territories maintained yearlong, with communal acorn stores (Ehrlich et al. 1988). Group defends a territory containing 1-7 (average 2) large,

isolated trees used for acorn storage. Gutierrez and Koenig (1978) observed that groups in Monterey Co. selected the largest tree in an area as the main storage tree. These permanently occupied territories varied in size from 3.5 to 9 ha (8.7 to 22.2 ac) (MacRoberts and MacRoberts 1976). Swearingen (1977) reported average territory size of 4.7 ha (11.5 ac), and a variation of 1.5 to 8.1 ha (3.8 to 20 ac) in the Central Valley. In the Coast Range, he found an average territory of 2.4 ha (6 ac), and a variation of 0.9 to 3.0 ha (2.3 to 7.3 ac). A territory may be abandoned if the acorn crop fails.

Reproduction: Breeds from early April through late July, with peak activity in May and June. Average clutch size 4-5, ranging up to 7, or more, eggs. Large clutches result from more than 1 female laying. Incubation about 11-14 days (Harrison 1978). Usually about 6 individuals in the communal group help at a nest. Both sexes of the breeding pair and the others incubate and tend the altricial young. Young fledge at about 30-32 days, and are independent at about 2 mo. (Ritter 1938, MacRoberts and MacRoberts 1976).

Niche: Potential competitors for acorns and other foods include Lewis' woodpecker, band-tailed pigeon, scrub jay, and American crow. In contrast to other seed harvesters (e.g., Clark's nutcracker and pinyon jay), harvests and stores only a small portion of total metabolic requirements, and consumes nearly all acorns cached. Probably not important in oak dispersal (Koenig 1979). Various hawks apparently are predators (MacRoberts and MacRoberts 1976). Continued elimination of oaks is a threat to the existence of this species in California (Verner and Boss 1980).

REFERENCES

- Bent, A. C. 1939. Life histories of North American woodpeckers. U.S. Natl. Mus. Bull. 174. 334pp.
- Bock, C. E., and J. H. Bock. 1974. Geographical ecology of the acorn woodpecker: diversity versus abundance of resources. *Amer. Nat.* 108:694-698.
- Curtis, T. C. 1981. Acorn woodpecker. Pages 30-31 in J. F. Hurley, S. R. Robertson, S. R. Brougher, and A. M. Palmer. *Wildlife habitat capability models and habitat quality criteria for the western Sierra Nevada*. U.S. Dep. Agric., For. Serv., Stanislaus Natl. For., Sonora CA. 56pp.
- Ehrlich, P. R., D. S. Dobkin, and D. Wheye. 1988. *The birder's handbook*. Simon and Schuster, New York. 785pp.
- Harrison, C. 1978. *A field guide to the nests, eggs and nestlings of north American birds*. W. Collins Sons and Co., Cleveland, OH. 416pp.
- Gutierrez, J. R., and W. D. Koenig. 1978. Characteristics of storage trees used by acorn woodpeckers in two California woodlands. *J. For.* 76:162-164.
- Koenig, W. D. 1979. Acorn storage by acorn woodpeckers in oak woodland: An energetics analysis. Pages 265-269 in T. R. Plumb, tech. coord. *Proc. sympos. on ecology, management, and utilization of California oaks*. U.S. Dep Agric., For Serv., Berkeley. Gen. Tech. Rep. PSW 44. 368pp.
- MacRoberts, M. H. 1970. Notes on the food habits and food defense of the acorn woodpecker. *Condor* 72:196-204.
- MacRoberts, M. H., and B. R. MacRoberts. 1976. Social organization and behavior of the acorn woodpecker in central coastal California. *Ornithol. Monogr.* No. 21. 115pp.
- Ritter, W. E. 1921. Acorn-storing by the California woodpecker. *Condor* 23:3-14.
- Ritter, W. E. 1938. *The California woodpecker and I*. Univ. Calif. Press, Berkeley. 340pp.
- Roberts, R. C. 1979. Habitat and resource relationships in acorn woodpeckers. *Condor* 81:1-8.
- Swearingen, E. M. 1977. Group size, sex ratio, reproductive success, and territory size in acorn woodpeckers. *West. Birds* 8:21-24.
- Van Dersal, W. R. 1940. Utilization of oaks by birds and mammals. *J. Wildl. Manage.* 4:404-428.
- Verner, J., and A. S. Boss. 1980. *California wildlife and their habitats: western Sierra Nevada*. U.S. Dep. Agric., For. Serv., Berkeley. Gen. Tech. rep. PSW-37. 439pp.

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