California Wildlife Habitat Relationships System

California Department of Fish and Wildlife California Interagency Wildlife Task Group

PINYON JAY Gymnorhinus cyanocephalus

Family: CORVIDAE Order: PASSERIFORMES Class: AVES

B349

Written by: D. Gaines Reviewed by: L. Mewaldt Edited by: R. Duke, S. Granholm

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

A fairly common but somewhat local, yearlong resident in coniferous habitats east of the Cascade-Sierra Nevada crest from the Oregon border south to vicinity of Walker Pass, Kern Co. Also found in most major desert mountain ranges, including the arid slopes of ranges west of the deserts, from the White Mts. south to the San Jacinto Mts. and west to the Piute Mts. (Kern Co.) and to Mt. Piños. Preferred nesting habitats are pinyon-juniper (juniper may be absent) and eastside pine. Breeders often range into sagebrush, bitterbrush and grassland habitats to forage (Grinnell and Miller 1944, Gaines 1977b, Garrett and Dunn 1981). Occasionally wanders to cismontane California, even to coast, in flocks in fall and winter (Grinnell and Miller 1944, McCaskie et al. 1988).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Omnivorous; feeds on pine seeds, juniper berries, other seeds and fruits, beetles, grasshoppers, caterpillars, ants, many other invertebrates, and rarely lizards. Nesters appear to require pinyon, ponderosa, or Jeffrey pine seeds, which often are cached in soil or crevices in bark near breeding areas. Hammers, pries, and pecks to extract seeds from cones. Gleans foliage and probes bark and crevices for insects, probes in soil for seeds and insects, hunts for insects on ground, and sometimes hawks flying insects (Bent 1946, Balda and Bateman 1972, Bateman and Balda 1973).

Cover: Trees of moderate size, especially pinyon and juniper, afford nesting, roosting, and other cover.

Reproduction: Builds bulky, open-cup nest of twigs, bark shreds, grasses, other plant fibers, wool, hair. Usually placed in pinyon or juniper at height of 0.9-6.2 m (3-20 ft), rarely to 25 m (80 ft), in ponderosa or Jeffrey pine (Bent 1946, Balda and Bateman 1972).

Water: No additional information found. Eats snow in winter (Balda and Bateman 1971).

Pattern: Nesters most numerous in pinyon, ponderosa, and Jeffrey pine woodlands with sparse to open canopy, and a well-defined understory of sagebrush, bitterbrush, and other shrubs.

SPECIES LIFE HISTORY

Activity Patterns: Yearlong, diurnal activity.

Seasonal Movements/Migration: Usually resident yearlong, but unpredictable desertion of nesting area occurs sporadically, probably when pine seeds are scarce. At such times, may occur on both slopes of the Cascade-Sierra cordillera, rarely wandering westward to the coast or southward into the mountains and coastal plains of southern California.

Home Range: In New Mexico, a flock ranged over 29 km² (11.2 mi²) (Ligon 1971). In Arizona, a flock ranged over 21 km² (8 mi²) (Balda and Bateman 1971).

Territory: Includes only nest and eggs (Balda and Bateman 1972).

Reproduction: May breed anytime from February through October if conditions are propitious (Ligon 1961, 1971), but height of egg-laying probably April through June (Bent 1946). Colonial nester with up to 3 nests recorded in 1 tree (Braly 1931). As many as 54 nests have been found in a 50 ha (124 ac) area, a density of 1 nest per 0.9 ha (2.3 ac) (Balda and Bateman 1971). Monogamous; clutch averages 4-5 eggs (range 3-6). Single-brooded; incubation 16-17 days, by female (Goodwin 1976, Bateman and Balda 1973). Both parents care for altricial young, occasionally assisted by other individuals (Terres 1980). Fledging age 20-22 days (Bateman and Balda 1973).

Niche: Potential predators include mammals, owls, hawks, jays, shrikes (Bent 1946, Ligon 1971). Many unrecovered pine seed caches germinate.

Comments: Highly gregarious at all seasons. Flocks of up to 400 have been observed in the Providence Mts. (Johnson et al. 1948).

REFERENCES

- Balda, R. P., and G. C. Bateman. 1971. Flocking and annual cycle of the piñon jay, Gymnorhinus cyanocephalus. Condor 73:287-302.
- Balda, R. P., and G. C. Bateman. 1972. The breeding biology of the piñon jay. Living Bird 11:5-42.
- Balda, R. P., and G. C. Bateman. 1973. Unusual mobbing behavior by incubating piñon jays. Condor 75:251-252.
- Balda, R. P., and G. C. Bateman. 1976. Cannibalism in the piñon jay. Condor 78:562-564.
- Balda, R. P., G. C. Bateman, and G. F. Foster. 1972. Flocking associates of the piñon jay. Wilson Bull. 84:60-76.
- Balda, R. P., M. L. Morrison, and T. R. Bement. 1977. Roosting behavior of the piñon jay in autumn and winter. Auk 94:494-504.
- Bateman, G. C., and R. P. Balda. 1973. Growth, development, and food habits of young piñon jays. Auk 90:39-61.
- Beidleman, R. G., and J. H. Enderson. 1964. Starling-piñon jay associations in southern Colorado. Condor 66:437.
- Bent, A. C. 1946. Life histories of North American jays, crows, and titmice. U.S. Natl. Mus. Bull. 191. 495pp.
- Braly, J. C. 1931. Nesting of the piñon jay in Oregon. Condor 33:29.
- Cannon, F. D. 1973. Nesting energetics of the piñon jay. M.S. Thesis, Northern Arizona Univ., Flagstaff. 58pp.
- Gaines, D. 1977b. Birds of the Yosemite Sierra. California Syllabus, Oakland. 153pp.
- Garrett, K., and J. Dunn. 1981. Birds of southern California. Los Angeles Audubon Soc. 408pp.
- Gilman, M. F. 1936. Additional bird records from Death Valley. Condor 38:40-41.
- Goodwin, D. 1976. Crows of the world. Cornell Univ. Press, Ithaca, NY. 354pp.
- Grinnell, J., and A. H. Miller. 1944. The distribution of the birds of California. Pac. Coast Avifauna No. 27. 608pp.
- Johnson, D. H., M. D. Bryant, and A. H. Miller. 1948. Vertebrate animals of the Providence Mountains area of California. Univ. Calif. Publ. Zool. 48:221-376.
- Ligon, J. D. 1971. Late summer-autumnal breeding of the piñon jay in New Mexico. Condor 73:147-153.
- Ligon, J. D. 1974. Comments on the systematic relationships of the piñon jay (Gymnorhinus cyanocephalus). Condor 76:468-470.
- Ligon, J. S. 1961. New Mexico birds. Univ. New Mexico Press, Albuquerque. 360pp.
- Ligon, J. D., and J. L. White. 1974. Molt and its timing in the pinon jay (Gymnorhinus

cyanocephalus). Condor 76:274-287.

McCaskie, G., P. De Benedictis, R. Erickson, and J. Morlan. 1988. Birds of northern California, an annotated field list. 2nd ed. Golden Gate Audubon Soc., Berkeley. Reprinted with suppl. 108pp.

Terres, J. K. 1980. The Audubon Society encyclopedia of North American birds. A. Knopf, New York. 1100pp.

B349

Life history accounts for species in the California Wildlife Habitat Relationships (CWHR) System 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 accounts that have been added or edited since original publication.