

NESTING OF THE GOLDEN EAGLE IN THE GUADALUPE VALLEY, BAJA CALIFORNIA, MEXICO

SANDRA GALLO-CORONA, Laboratorio de Biología de la Conservación, Universidad Autónoma de Nuevo León. Av. Universidad s/n, Ciudad Universitaria, San Nicolás de los Garza, Nuevo León, México; plumazulibre@gmail.com

RICARDO RODRÍGUEZ-ESTRELLA, Centro de Investigaciones Biológicas del Noroeste, La Paz, Baja California Sur, México; estrella@cibnor.mx

The Golden Eagle (*Aquila chrysaetos*) has a wide global distribution (Kochert et al. 2002), in North America covering Alaska, Canada, the contiguous United States, and Mexico. In Mexico its distribution ranges from the Baja California Peninsula east to the highlands of northeastern Sonora (Russell and Monson 1998) and Chihuahua and south to Colima, San Luis Potosí, Guanajuato, and Querétaro (Howell and Webb 1995). In Mexico, the Golden Eagle inhabits temperate forest, grasslands, and xeric scrub (Rodríguez-Estrella 2002). It may be extirpated as a breeding species in the central area from Guanajuato and Querétaro (Kochert et al. 2002) and is listed as a threatened species in the Norma Oficial Mexicana (SEMARNAT 2002) as a result of mortality caused by electrocution, pesticide poisoning, hunting, and habitat loss. In the Baja California Peninsula, juveniles as well as adults of the Golden Eagle have been reported (Rodríguez-Estrella et al. 1991, Rodríguez-Estrella 2002, Erickson et al. 2002, Ruiz-Campos et al. 2005), but there is little information about nesting sites. Nesting in Baja California has been reported previously from San Telmo (30° 49' N; Anthony 1893, cited by Grinnell 1928), San José (30° 48' N; nest in good repair, Hill and Wiggins 1948), and along the Río Santo Domingo (30° 45' N; active nest, Erickson et al. 2002). But no systematic effort to find Golden Eagle nests has been made in northern Baja California (L. F. Kiff pers. comm. through R. A. Erickson).

On 6 and 14 July 2007 we observed three Golden Eagles, two adults and one juvenile, in Arroyo El Barbón, Guadalupe Valley, 31 km northeast of Ensenada and 12 km east of the community of Guadalupe. The juvenile was identified by white coloration at the base of primary feathers and a wide white band in the base of rectrices. We observed the eagles for 2 hours on 6 July and 1 hour on 14 July. On 18 August we did not observe any eagles at the site.

On 6 July, we located the nest on a cliff 80 m high, situated in cracks of the rocks. One of the adults carried a Black-tailed Jackrabbit (*Lepus californicus*) toward the top of the cliff. Suitable prey, both the jackrabbit and California Ground Squirrel (*Spermophilus beecheyi*), are common in the area. The three eagles were near the nest, but the juvenile, accompanied by both adults, was already flying within the canyon and vocalizing. On the basis of the Golden Eagle's incubation and nestling periods and the apparent age of the juvenile, in the process of becoming independent, the egg was likely laid at the end of March.

The nest was in a canyon with vegetated with scrub, coast live oaks (*Quercus agrifolia*), willows (*Salix lasiolepis*), and cottonwood trees (*Populus fremontii*). Along the canyon are several hot springs connected by a stream. The nest is above the natural pools, 4 km from the closest agricultural area, consisting of vineyards, in an area often visited by local tourists. Human access to the eagle's nest is difficult but not impossible, but we expect the main threats to be fires, disturbance, and hunting. According to the landowner, raptors occur in the canyon every year, although he had not identified them as Golden Eagles. The site offers the opportunity for further research.

LITERATURE CITED

Anthony, A. W. 1893. Birds of San Pedro Martir, Lower California. *Zoe* 4:228–247.

NOTES

- Erickson R. A., Patten, M. A., Palacios, E., and Carmona, R. 2002. Baja California Peninsula. *N. Am. Birds* 56:489–490.
- Grinnell, J. 1928. A distributional summation of the ornithology of Lower California. *Univ. Calif. Publ. Zool.* 32:1–500.
- Hill, H. M., and Wiggins, L. 1948. Ornithological notes from Lower California. *Condor* 50:155–161.
- Howell, S. N. G., and S. Webb. 1995. *A Guide to the Birds of Mexico and Northern Central America*. Oxford Univ. Press, Oxford, England.
- Kochert, M., Steenhof, K., McIntyre, C. F., and Craig, E. H. 2002. Golden Eagle (*Aquila chrysaetos*), in *The Birds of North America* (A. Poole and F. Gill, eds.), no. 684. *Birds N. Am., Inc., Philadelphia*.
- Rodríguez-Estrella, R., Llinas, J., and Cancino, J. 1991. New Golden Eagle records from Baja California. *J. Raptor Res.* 25:68–71.
- Rodríguez-Estrella, R. 2002. A survey of Golden Eagles in northern Mexico (1984), and some recent records in central and southern Baja California Peninsula, in *The Golden Eagle: its status, conservation and management in 1999* (M. J. McGrady, R. Rodríguez-Estrella, M. Bechard, and E. Iñigo-Elias, eds). *J. Raptor Res.* 36 (supplement): 3–9.
- Ruiz-Campos G., Palacios, E., Castillo-Guerrero, J. A., González-Guzmán, S., and Batche-González, E. H. 2005. Spatial and temporal composition of the avifauna from small coastal wetlands and adjacent habitats in northwestern Baja California, Mexico. *Ciencias Marinas* 31:553–576.
- Russell, S. M., and Monson, M. 1998. *The Birds of Sonora*. Univ. of Ariz. Press, Tucson.
- SEMARNAT. 2002. Norma Oficial Mexicana NOM-059-ECOL-2001, Protección ambiental–Especies nativas de México de flora y fauna silvestres–Categorías de riesgo y especificaciones para su inclusión, exclusión o cambio–Lista de especies en riesgo. *Diario Oficial de la Federación*, segunda sección, 6 de marzo.

Accepted 21 July 2010