

WESTERN BIRD PHOTOGRAPHERS

ARNOLD SMALL, 608 N. Camden Drive, Beverly Hills, California 90210

Having repeatedly attempted in vain to study and photograph Golden Eagles at their eyries in California, I can well appreciate the time, effort, patience, and technical skill that went into the production of Don Hoechlin's photographic essay of these marvelous birds. Golden Eagles, like other raptors, have exceptionally keen vision, are wary of man, and are extremely shy at the eyrie. Fortunate indeed for them that this is so; otherwise, their numbers would long ago have been depleted by shooters and nest-robbers.

Don R. Hoechlin, a medical student, has taken precious time from his academic studies to provide us with an intimate look at the home life of a pair of young Golden Eagles.

DEVELOPMENT OF GOLDEN EAGLETS IN SOUTHERN CALIFORNIA

DON R. HOECHLIN, 34454 Avenue G, Yucaida, California 92399

The sight of an adult Golden Eagle (*Aquila chrysaetos*) soaring in the afternoon sun gives one a feeling of freedom, but to watch the development of a pair of Golden Eaglets is a rare and thrilling experience.

The nesting cycle begins in early January when the adult birds commence their spectacular courtship displays and the nest site selection process. In southern California the nest locations are about equally divided between tree and cliff sites. The eagle nest, called an eyrie, is composed of branches and twigs ranging in size from 2.56 to 0.64 cm in diameter. From mid-February to mid-March one to three eggs, but usually two, are deposited in the nest. After an incubation period of 42 to 45 days, the first eaglet hatches. The second eaglet hatches three or four days later. Incubation is shared by both adults, but the majority is done by the female.

During the first three weeks of development the eaglets are covered with a dual layer of down—a dense, short white down and a fine, long white down. Most of their first week of life is spent lying quietly in the nest. At this point in development they showed no fear of humans and actually moved toward them. At first they accepted food from the

GOLDEN EAGLETS

female in a crouched position. By the second week the eaglets were able to sit up to accept food if they propped themselves with their wings. By the fourth week of development the eaglets took on a new look as the pin-feathers, especially the remiges and rectrices began to unsheathe. The eaglets were now also beginning to stand when accepting food and were beginning to pick at carcasses in the nest, but without success. The eaglets became progressively stronger, and by the sixth week they were standing up for long periods while being fed and while observing. They were still unable to pick meat off a carcass by themselves and at times still accepted food from a sitting position. The most notable changes in eaglet behavior during the seventh week were the exclusive use of walking to move around the nest and the picking up of large pieces of disarticulated food without it first being offered by the female. By the eighth week the eaglets were able to strip meat off the prey brought to the nest but could not disarticulate the limbs. The eaglets were now covered completely with their juvenal plumage, although it was not yet fully unsheathed. By the beginning of the ninth week of development the eaglets began exercising their wings, and by the end of the tenth week they had both fledged.

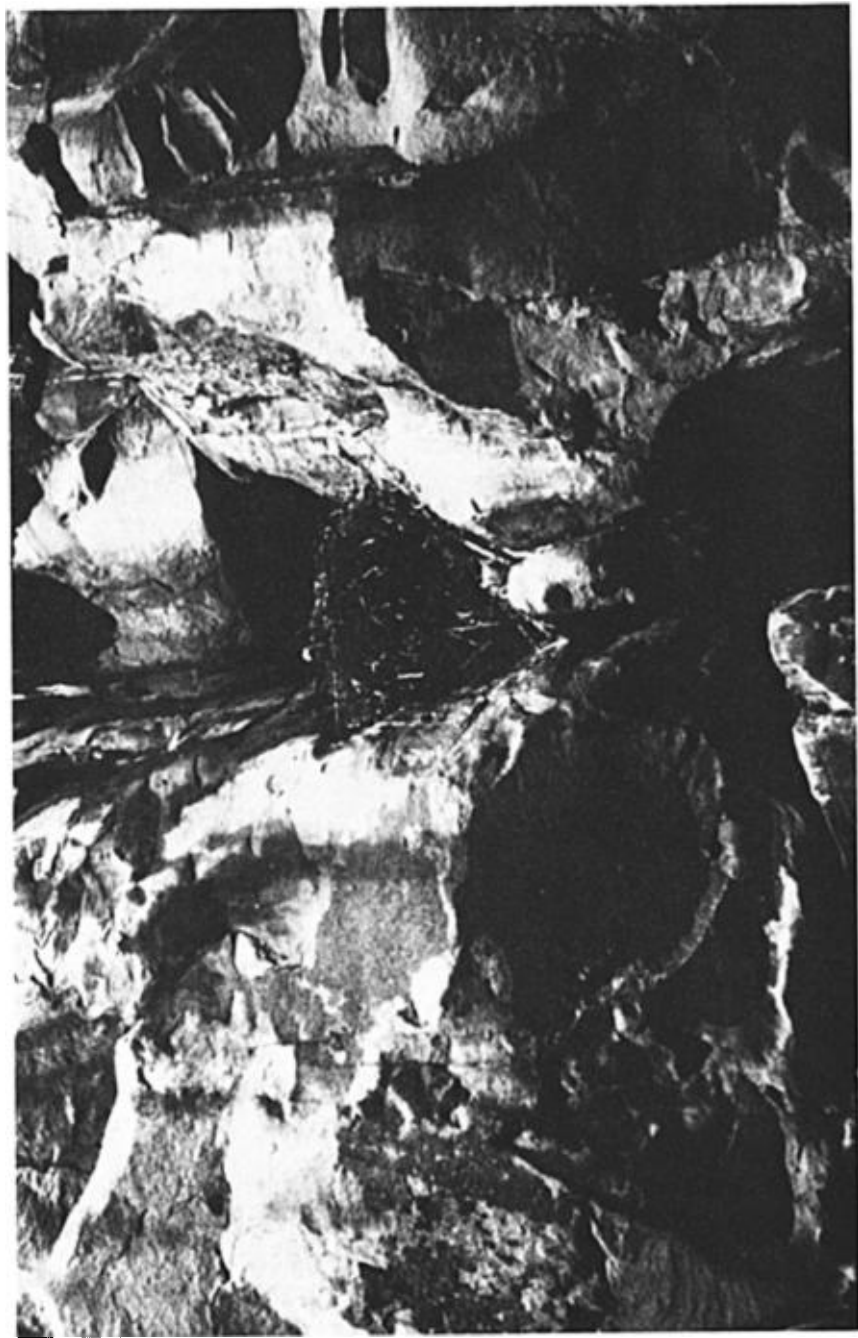
Prey of southern California Golden Eagles is made up predominantly of two species—the Beechey Ground Squirrel (*Spermophilus beecheyi*) and the Audubon Cottontail (*Sylvilagus audubonii*). Of interest is the record of two adult Great Horned Owls (*Bubo virginianus*) and one Bobcat (*Lynx rufus*) kitten at one nest.

ACKNOWLEDGMENTS

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A typical cliff nest location as found in southern California. Note the sheer faces of the boulders. The nest is at the arrow.



A Golden Eagle eyrie located on a granite ledge in San Diego County, California.



A three-egg Golden Eagle clutch. The two eggs on the left were white with reddish blotches, and the one on the right was stippled reddish and cream.



The adult female Golden Eagle feeding a nine-day-old eaglet. The prey item on this occasion was a cottontail.



The one-week-old Golden Eaglelets. The position of the lower eaglelet was typical when either eaglelet was moving around the nest



The two-week-old Golden Eaglelets. Note the sleeping position of the older eaglet (upper) and the apparently lactating ground squirrel.



The three-week-old Golden Eaglets. The remains of two cottontails can be seen, one above the eaglet on the left and one below the eaglet on the right



The four-week-old Golden Eagle. Note the development of pin-feathers on both eaglets—especially the remiges and rectrices.



The five-week-old Golden Eagle. The unsheathing of the pin-feathers has become more evident and now includes the back and wing coverts.



The six-week-old Golden Eaglelets. The eaglets are now almost completely feathered except for their heads and legs.



The seven-week-old Golden Eagle chicks. The heads of both eaglets have now become feathered.



The eight-week-old Golden Eaglets. The feathering process has proceeded almost to completion. Great Horned Owl feathers can be seen under the beak of the upper eaglet.



A nine-week-old Golden Eagle. The light hackles of the head and nape and the white area at the base of the tail can be seen.



An immature Golden Eagle. Note the characteristic white wing patches and white tail band.