



Figure 1. Aplomado Falcons grappling and whirling. Adult male (above) was perched in treetop when juvenile female stooped from left.

area. After 11 min, first one male, and then the second, flew from the touch down zone and rejoined the female. The trio then drifted north out of sight with the males again stooping at each other. A Red-tailed Hawk (*Buteo jamaicensis*) was present, soaring above and occasionally stooping at the trio, during almost the entire episode. This may be the most extended grappling and whirling bout ever reported, at least for the Golden Eagle.—**David H. Ellis, U.S. Fish and Wildlife Service, Patuxent Wildlife Research Center, Laurel, MD 20708.**

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#### A PREVIOUSLY UNDESCRIBED FALCON FLIGHT DISPLAY

It is something of a surprise for a social display to suddenly be discovered in a supposedly well-studied species. An example is the recent description of the Bowing display for the Cooper's Hawk (*Accipiter cooperii*) (R.N. Rosenfield and J. Bielefeldt, 1991, *Condor* 93:191–193). The Prairie Falcon (*Falco mexicanus*) and Peregrine Falcon (*Falco peregrinus*) have also received great attention during the last three decades, yet I am unaware of any published account of a "deep-flap" display I will next describe.

In 1981, at three different cliffs, all in Arizona, I observed a flight display that was distinctly different from normal flapping flight. On 11 February at 1607 H, at a site on the Tohono O'Odham Indian Reservation, an adult Prairie Falcon (probably a male by size comparison with the other falcon attending the cliff) stooped upon and flushed a Red-

tailed Hawk (*Buteo jamaicensis*) from the vicinity of the 1980 Prairie Falcon eyrie. After pursuing the hawk nearly 1 km west, the falcon returned to the eyrie cliff by flying along the cliff rim while performing a flapping flight with slow, deep, exaggerated wingbeats reminiscent of the flight of a nighthawk (*Cordeiles* sp.). The wings of the falcon nearly touched at the top and at the bottom of each stroke.

On 24 February at 1010 H, on the East Tactical Military Range south of Gila Bend, I saw an even more elaborate performance of this same display. An adult Prairie Falcon (probably female by size) flushed from her eyrie cliff after the third pass by a pair of A-10 military jets about 100 m from the cliff. She soared in front of the cliff for 6 min, then performed five series of the exaggerated deep-flap display. Each series consisted of one to four flaps. After the display, the falcon soared briefly, then lit on the cliff rim near the 1980 eyrie.

The third observation of the deep-flap display occurred on 17 March near a traditional Peregrine Falcon eyrie in Pinal County. During the day, four falcons (two peregrines and two Prairie Falcons), two Red-tailed Hawks, and two Golden Eagles (*Aquila chrysaetos*) were observed attending the same cliff, a massive wall about 1 km long and over 150 m high. During the 7 hr 46 min observation period, many territorial interactions were observed. In one of these encounters (1157 H), one of the falcons left the cliff and stooped on a distant hawk or eagle. Then, while circling back toward the cliff, it performed one bout of the deep-flap display. The bird performing this bout was at such a great distance that, although I thought it to be one of the Prairie Falcons, it may have been one of the peregrines. In fact, later in the day (1441 H), the adult male Peregrine Falcon led its mate toward the eyrie cliff as it performed a brief bout of exaggerated flaps that was similar to the Prairie Falcon's deep-flap display.

It may be that this, and perhaps other yet undescribed social displays, have gone unobserved, or at least unreported, for so long because the courtship phase of the breeding cycle of even well-studied raptors has been under-emphasized. From my own work with large falcons over two decades, all observations of deep-flap were in a two-month period when the peculiar demands of my study required that I concentrate on the pre-laying stage.—**David H. Ellis, U.S. Fish and Wildlife Service, Patuxent Wildlife Research Center, Laurel, MD 20708.**

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#### AN UNUSUAL DEATH OF A NESTING GOLDEN EAGLE

On 16 May 1991, while flying nesting surveys for Golden Eagles (*Aquila chrysaetos*) in Sheridan County, Wyoming, we observed a dead adult eagle in a nest. The nest site was located in a shallow cave of a clay bank approximately 200 m above Big Goose Creek, west of Sheridan, Wyoming, and had been active for at least 10 years. Closer inspection of the nest from the ground showed that a large rock measuring 71 cm × 43 cm × 28 cm and weighing approximately 45 kg had broken loose from the clay bank directly above the nest and fallen over the torso of the incubating bird. The dead eagle was an adult female that had been banded near the nest in February 1988. Remnants of one egg were found under her body. We estimated that the bird died in late April following a series of wet snowstorms, which contributed to loosening the rock from the bank. The rock was removed from the nest so that the site could be used again in future years. Incidents of this type are undoubtedly rare throughout the entire range of the Golden Eagle. However, mortality associated with the erosion of banks supporting nests may be common in parts of Wyoming, Colorado and Nebraska where Golden Eagles use creek banks as nest sites.—**Robert L. Phillips and John L. Cummings, U.S. Department of Agriculture, P.O. Box 25266, Denver, CO 80225-0266. John D. Berry, Kiewit Mining Group, Inc., P.O. Box 3049, Sheridan, WY 82801.**

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#### CHICKS OF BLACK KITES ATTACKED BY ANTS WHILE HATCHING

In 1988 while routinely visiting nests of Black Kites (*Milvus migrans*) the following observations were made at two nests in the north of Doñana National Park, South West Spain (37°N 6°W) which show that ants have some influence on the survival of chicks at hatching. In one nest, on 15 June, one egg had already hatched, and the second egg of a clutch of two was in an advanced stage of hatching with half the shell already open. The adult was not incubating