

GRAPPLING IN BLACK-SHOULDERED KITES

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On 3 March 1990 at approximately 0645 hours a displaying Black-shouldered Kite (*Elanus caeruleus*) attracted me by its continuous calling. The bird was flying back and forth low over a small grove of Monterey Cypress (*Cupressus macrocarpa*), near the intersection of Point Reyes–Petaluma Road and Nicasio Valley Road in western Marin County, California. The kite was wing-fluttering, leg-dangling, and calling continuously, in a display that is best described as flutter flight. I then noticed another kite soaring above the calling bird. A third kite flew toward the soaring bird and the two birds locked talons, threw their wings back, and twirled slowly to earth from an estimated height of 100–150 feet (Figure 1). This behavior has been referred to as “grappling” (see Jaques 1973). A small rise prevented my seeing the birds below about 20 feet above the ground, when they were still engaged. One of the grappling birds reappeared above the rise and stooped once or twice on the other bird, which remained out of sight. The same two birds flew back up to about the same initial height and repeated the grappling four times before flying off, while the original kite continued its flutter flight.

On the following day at 0900 hours at the same cypress grove I saw three kites engaging in similar behavior. On this day I saw only one episode of grappling. From observations of other kites in the county, I believe the flutter-flight display preceded nest building, but no kites nested that year in the grove.

Several studies of Black-shouldered Kites (Pickwell 1930, Hawbecker 1940, Dixon et al. 1957) made no mention of grappling. Watson (1940) was the first to describe grappling by Black-shouldered Kites. He concluded that the behavior was combative and the result of a territorial dispute. He observed two pairs of kites grappling simultaneously, each member of a pair engaged with a member of the opposite pair, but he was unable to determine how the sexes matched up in the encounters. The slight size dimorphism of Black-shouldered Kites (Johnsgard 1990) and the brevity of such encounters make distinguishing the sexes difficult. Waian (1973) spent 1100 hours observing Black-shouldered Kites and observed grappling only once.

Arlott (1984) observed a pair of Black-shouldered Kites grappling in 1975 in Kenya. He presumed this interaction was between a male and female. John Mendolsohn, in remarks appended to Arlott's note, stated that he had observed the behavior in color-marked birds of known identity and believed it to be aggressive. Johnsgard (1990) interpreted Arlott's (1984) observation as an example of aggression between members of a courting pair. Jepson (1986) reported behavior of two Black-shouldered Kites in Thailand “identical” to that reported by Arlott (1984).

Henry (1983) considered “talon-grapple . . . the most remarkable of the agonistic behaviors”; he observed an instance of it at a territorial boundary between an identified resident of the territory and an unidentified kite, in which the resident kite exhibited flutter flight before grappling with the intruder. Brown and Amadon (1968) described grappling by *Haliaeetus* eagles but did not mention this behavior in the repertoire of Black-shouldered Kites, though they reported its occurrence in larger kites such as *Milvus* species. They did not mention a third bird in their descriptions of grappling, and discussed this activity under breeding behavior. They did, however, caution against attributing grappling exclusively to courtship display. They cited as a possible example of aggression a pair of grappling *Haliaeetus* eagles plunging into the sea, one nearly drowning. They also noted that grappling appears to evolve from the mutual foot-touching when one raptor dives from above toward another and the lower bird rolls over on its back and presents its talons to the approaching bird. This behavior arises among raptors in both courtship displays and in conspecific and

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Figure 1. Grappling Black-shouldered Kites above kite in flutter flight.

Sketch by Anne Rovetta

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interspecific aggression. Still, Brown and Amadon concluded their chapter on display by maintaining that grappling is courtship behavior and that the chief error to be avoided in field observations is confusing it with combat.

In a note to Dawson's (1978) report of grappling by Eurasian Sparrowhawks (*Accipiter nisus*), Ian Newton stated that grappling in that species is always between "two females in aggressive conflict."

I surmise that the grappling that I observed, by two Black-shouldered Kites in the presence of a third bird, was combative rather than sexual behavior, involving two females attracted to a displaying male (flutter flight by female kites is rarely reported). Alternative interpretations are that two males were competing for the attention of a displaying female or that the grappling was intersexual aggressive behavior, i.e., a female repelling the advances of another male or defending her territory from him.

In any case, my observation supports the claim that grappling is aggressive behavior. If grappling were a standard part of the courtship display, it should be observed more commonly. In evaluating the conflicting interpretations of grappling as combat or courtship, it is well to remember the aggressive nature of raptors, which kill with their talons, that aggression may erupt in the course of courtship, and that if grappling ever occurs as a part of courtship display, it is probably ritualized aggression.

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