

Predation of Long-tailed Silky Flycatcher (*Ptilogonys caudatus*) by Ornate Hawk-Eagle (*Spizaetus ornatus*) in a cloud forest of Costa Rica

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ABSTRACT: Predation of Long-tailed Silky Flycatcher (*Ptilogonys caudatus*) by Ornate Hawk-Eagle (*Spizaetus ornatus*) in a cloud forest of Costa Rica. This paper is the first record of a predation event made by an Hawk-Eagle (*S. ornatus*, Accipitridae) on a Long-tailed Silky Flycatcher (*P. caudatus*, Ptilonotidae) in a cloud forest of Costa Rica, and this is the first prey item reported for this raptor in a middle elevation forest. Also this is the first predation event reported for the Ptilonotidae family.

KEY-WORDS: Accipitridae; middle elevation forest; Ptilonotidae; Río Macho.

The Ornate Hawk-Eagle ranges from southern Mexico through Central America to South America (Marquez *et al.* 2005). In Costa Rica, it is found almost exclusively in moist forests from sea level to 1500 meters, but can reach up 3000 m.a.s.l. (Stiles & Skutch 1989). The Ornate Hawk-Eagle is dependent on mature forest for nesting which takes place in the forest canopy, but can use clearings or open areas for foraging (Lyon & Kuhnigk 1985, Stiles & Skutch 1989, Marquez *et al.* 2005).

The diet of this hawk eagle has been studied mainly in the Petén of Guatemala (Lyon & Kuhnigk 1985, Madrid *et al.* 1991), Manaus in Brazil (Klein *et al.* 1988), Belize (Clinton *et al.* 1991) and Amazonian Peru (Robinson 1994), but few isolated predation events have been previously reported for other areas (Haymann 1990, Boinski *et al.* 2003, De Luna *et al.* 2010). Its dietary items include birds, small mammals and reptiles such as snakes and lizards (*e.g.* Iguanidae *Iguana iguana*, Teiidae; Klein *et al.* 1988, Clinton *et al.* 1991, Rangel & Enriquez 1993, Robinson 1994). Avian prey items included members of the following families: Tinamidae (*e.g.* *Tinamus* sp., *Crypturellus* sp.), Rallidae (*e.g.* *Aramides cajanea*, *Porphyrio martinica*), Ramphastidae (*e.g.* *Ramphastos* sp. *Pteroglossus* sp.), Psittacidae (*e.g.* *Ara* spp., *Brotogeris* sp., *Aratinga* sp.), Cracidae (*e.g.* *Penelope* sp., *Ortalis* sp.), Psophiidae (*e.g.* *Psophia leucoptera*), Columbidae (*e.g.* *Leptotila* sp.), Cotingidae (*e.g.* *Rupicola*

rupicola), Icteridae (*e.g.* *Psarocolius* sp., *Cacicus* sp) as well as unidentified small birds (Lyon & Kuhnigk 1985, Klein *et al.* 1988, Clinton *et al.* 1991, Madrid *et al.* 1991, Robinson 1994). The mammalian prey items observed included Echimyidae (*e.g.* *Proecomys* sp.), Sciuridae (*e.g.* *Sciurus* spp.), Didelphidae (*e.g.* *Didelphis marsupialis*, *Methachiurus nudicaudatus*), Dasyproctidae (*e.g.* *Dasyprocta* sp., *Myoprocta* sp.), Erethizontidae (*e.g.* *Coendu* sp.), Procyonidae (*e.g.* *Potus flavus*, *Procyon lotor*), Canidae (*e.g.* *Speothos venaticus*), Cebidae (*e.g.* *Alouatta* sp., *Saimiri* spp., *Saguinus* spp., *Cebus* sp., *Callicebus* sp.) and even Phyllostomidae bats (Lyon & Kuhnigk 1985, Klein *et al.* 1988, Stiles & Skutch 1989, Haymann 1990, Madrid *et al.* 1991, Rangel & Enriquez 1993, Robinson 1994, Boinski *et al.* 2003, De Luna *et al.* 2010). In Costa Rica the prey items of the Ornate Hawk-Eagle have been poorly documented, except for some notes of guans, unspecified small mammals, lizards and snakes (Stiles & Skutch 1989) and a squirrel monkey (*Saimiri oerstedii*) in Corcovado National Park (Boinski *et al.* 2003).

This raptor is known to occur in Río Macho, Cartago Province, near the hydroelectric dam of the “Instituto Costarricense de Electricidad” and the “Estación de Biología Tropical y Acuicultura Río Macho” of the “Universidad Nacional de Costa Rica”. This site belongs to the Premontane Rain Forest and Lower Montane Rain Forest life zones, with an average annual rainfall

of 3200-3500 mm, temperature ranging between 14-26°C (Calderón 1994) and altitude varying from 1500 to 1900 m.a.s.l. The landscape consists of mature forest and secondary regenerating forest, forest plantations of *Cupressus lusitanica* and *Alnus acuminata*, coffee fields, grasslands and infrastructure for hydropower generation with a few farmhouses.

When visiting this site on 5 December 2010 along a dirt road surrounded by secondary forest and grasslands, where the oscillation tank of the hydroelectric dam is located (9°46'6.52"N; 83°51'8.02"W), we observed a flock of Emerald Toucanets (*Aulacorhynchus prasinus*) with a pair of Long-tailed Silky Flycatcher (*P. caudatus*) foraging in a bush (Lauraceae) at the border of the roadside at about 7h 30 min. While we watched those birds, an Ornate Hawk-eagle emerged from the surrounding trees, then glided towards the bush and captured a Long-tailed Silky Flycatcher while it was eating a fruit. At that moment, the Emerald Toucanets and the other Long-tailed Silky Flycatcher that survived the attack escaped to the secondary forest for protection, as even bigger toucans are also potential preys according to literature (Rangel & Enriquez 1993). The hawk-eagle flew very quickly to the dense vegetation on the other side of the road as we lost sight of the raptor.

The Long-tailed Silky Flycatcher is endemic to the highlands of Costa Rica and western Panama and inhabits middle and highland forest (it occurs at around 1600 m.a.s.l. to timberline). This bird can use partially open areas for feeding (Skutch 1965, Stiles & Skutch 1989). To our knowledge, this is first predation report involving an adult Long-tailed Silky Flycatcher and the family Ptilonotidae as a whole, since only nest predation reports are available for this species. (Skutch 1965). This observation highlights the importance of predation reports obtained in the field, as many of the passerine birds consumed by the Ornate Hawk-Eagle were not identified to species level in studies based on pellet or bones analysis (Klein *et al.* 1988, Rangel & Enriquez 1993). Furthermore, these records contribute to a better understanding of the habits of this predator in cloud forests, as current knowledge is limited to the humid lowlands.

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