

Predation on the Cattle Egret (*Bubulcus ibis*) and consumption of the Campo Flicker (*Colaptes campestris*) by the Aplomado Falcon (*Falco femoralis*) in Brazil

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RESUMO. Predação de *Bubulcus ibis* e consumo de *Colaptes campestris* por *Falco femoralis* no Brasil. Duas observações sobre o hábito alimentar de *Falco femoralis* (208 - 460 g) são reportadas para o Brasil. No município de Santana do Deserto, MG foi observada a predação de um indivíduo de *Bubulcus ibis* (395 g) por uma fêmea de *Falco femoralis*. No segundo caso, em um cerrado de Brasília, DF, um casal desses falcões foi observado no solo consumindo as vísceras de uma carcaça recente do pica-pau-do-campo *Colaptes campestris*, cuja massa corporal varia de 145 a 192 g. Nesse último caso, apesar de não ter havido observação direta do evento de predação, as várias evidências (carcaça ainda quente e nenhum outro predador avistado/ouvido nas proximidades) sugerem que houve captura por um ou ambos os falcões. Ambas as observações reforçam a importância das aves na dieta desse falcão, além de evidenciar a capacidade dos mesmos em capturar presas de grande tamanho.

PALAVRAS-CHAVE: *Falco femoralis*, predação, *Colaptes campestris*, *Bubulcus ibis*, Brasil.

KEY WORDS: *Falco femoralis*, predation, *Colaptes campestris*, *Bubulcus ibis*, Brazil.

The Aplomado Falcon (*Falco femoralis*) has a wide distribution ranging from south-east USA to Tierra del Fuego (Ferguson-Lees and Christie 2001). This small raptor (208 - 460 g) inhabits mostly non-forested habitats, such as savannah grassland, scrub steppe, cactus desert, marshland with scattered trees, and sometimes in and around small woods and plantations (Cade 1982, White *et al.* 1994, Sick 1997, Ferguson-Lees and Christie 2001). The diet of the Aplomado Falcon relies mostly in birds, insects, rodents, bats and lizards (Hector 1981, 1985, White *et al.* 1994, Ferguson-Lees and Christie 2001). Despite the Aplomado Falcon's wide distribution, its biology is poorly known, mostly in Brazil. Thus, we describe consumption and predation events by this raptor on two relatively large birds.

On 26 March 2005 at 08:52 h, while driving a car, MAMG observed one adult Aplomado Falcon preying on a Cattle Egret (*Bubulcus ibis*). The falcon was probably a female, considering its large size relative to the egret. It took place in the unpaved road between a semi-deciduous forest fragment and pastures (21° 57' 16" S, 43° 09' 30" W) in the Santana do Deserto municipality, State of Minas Gerais, south-east Brazil. When first seen from the car, the falcon was on the ground pecking the egret, which it was holding by the neck in its claws. During 2-3 min, the egret was observed desperately flapping its wings, and eventually died. The approaching car drove the falcon away from its prey, an adult egret. The neck of the prey had severe damages caused by the attack. The Cattle Egret, a common and group-living bird, was originally distributed in most of the Old World, but in the last decades of the 20th century this species has expanded to open habitats of South America. This expansion was possible mainly due

to the development of cattle raising and associated pastures (Sick 1997).

On 24 July 1988 at 14:30 h, while walking through a grassland savannah in central Brazil, JCMJ observed a pair of the Aplomado Falcon feeding on an adult female of the Campo Flicker (*Colaptes campestris*) on the ground. The observation site was located at Fazenda Água Limpa (15° 57'S, 47° 54'W), a reserve of approximately 4000 ha in Brasília, Federal District, Central Brazil (for more details see Ratter 1986), a core area of the Cerrado biome (Oliveira and Marquis 2002). As the researcher neared the falcons, they flew away. One of the individuals was markedly smaller, presumably the male. The Falconiformes have a known reversal sexual dimorphism, also evident in the Aplomado Falcon (Brown and Amadon 1968, Sick 1997). An almost entire, still warm flicker carcass was found. It was lacking only part of the abdomen and viscera. Although the Aplomado Falcon have been reported as a kleptoparasite on other raptors (White *et al.* 1994, Ferguson-Lees and Christie 2001), at the time of the reported event a careful search of the area revealed no other potential predator. Additionally, we speculate that possibly this relatively large prey was killed through cooperative hunting. This behaviour has been commonly reported for Aplomado Falcons (Hector 1986). The Campo Flicker is a common, conspicuous and group-living eastern South American grassland bird. As the Campo Flicker forages mostly for ants and termites on the ground (Sick 1997, Winkler and Christie 2002), the capture possibly happened on this site. In spite of the Campo Flicker's social habits, neither other flicker nor other mobbing birds were visually or vocally detected. These findings suggest a

recent attack and an initial consumption of the viscera by the falcons.

According to Hector (1981, 1985), birds appear to be the bulk of the diet (about 94% of prey numbers and 99% of total prey biomass) of Mexican Aplomado Falcon's populations. This apparently occurs also in South America where few studies have been conducted on this species (Jimenez 1993, Bó 1999, Rojas and Stappung 2005).

The Aplomado Falcon has body mass ranging from 208 to 305 g for males and 271 - 460 g for females (Ferguson-Lees and Christie 2001). The Campo Flicker body mass ranges from 145 to 192 g (Winkler and Christie 2002), which is equal to 47.5 - 92.3% of the mass of male falcons, or 31.5 - 70.8% of the mass of the females. In the case of the Cattle Egret, the proportions are higher, since body mass of the egret that was preyed upon was 395 g (weighed by a spring scale on location), equal to 85.8 - 145.7 % of the mass of female falcons.

As already noted, other authors have reported heavy consumption of birds by the Aplomado Falcon, but 77% of bird prey weighed less than 100 g (Hector 1985, Johnsgard 1990). Only four birds weighed more than 200 g, and the largest prey reported was the Plain Chachalaca (*Ortalis vetula*), weighing 470-685 g (Hector 1985).

In conclusion, this study reports two feeding events by the Aplomado Falcon on comparatively large preys relative to the predator's size, particularly the predation on the Cattle Egret. Evidence and common habits of this raptor species suggest a real event of predation by a pair of falcons in the case of their feeding on a Campo Flicker.

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