

AN OBSERVATION OF A PAIR OF APLOMADO FALCONS *FALCO FEMORALIS* (FALCONIDAE) FOLLOWING A BUS TO FLUSH PREY

OBSERVACIÓN DE UNA PAREJA DE HALCÓN PLOMIZO *FALCO FEMORALIS* (FALCONIDAE) SIGUIENDO A UN AUTOBÚS MIENTRAS CAZABAN

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Key Words: Chaco, Bolivia, hunting strategy, co-operation,

Palabras Clave: Chaco, Bolivia, Estrategia de cacería, co-operación

The Aplomado Falcon *Falco femoralis* is a widespread, medium-sized, open-country falcon occurring in three subspecies from the southern United States to Patagonia (Ferguson-Lees & Christie, 2001). It is a graceful and rapid-flying species that takes small vertebrate and insect prey, both in the air or on the ground (Brown & Amadon, 1989). Bird prey has been shown to account for over 80% of the food biomass of this species in Mexico and Argentina (Hector, 1985; Montoya et al., 1997; Bó, 1999), and is mostly taken at dawn (Ferguson-Lees & Christie, 2001), with insects becoming more prevalent later in the day. Pairs have been frequently observed to hunt together and cooperate when catching birds, with males initiating the attacks by calling to the female who then dashes into cover to flush out prey whilst the male hovers or flies overhead (Hector, 1986). Such pairs show more than double the success rate in terms of prey capture when compared to single birds (Hector, 1986). In this short note I report an interesting variation on this technique in which a cooperatively hunting pair of Aplomado Falcons followed a bus as a means for flushing prey from roadside bushes.

On 22 May 2012 I was travelling by bus on the route between Asunción, Paraguay and Villamontes, Bolivia. The vegetation in this area consisted of the dense, low, arid, thorny forest typical of the Dry Chaco region (Short, 1975). Shortly after crossing the Bolivian frontier at around 7:00 am and in the approach to the Ibibobo migration point I noticed a pair of Aplomado Falcons flying at high speed alongside the bus at an estimated height of approximately 5m. Periodically one of these birds would suddenly swoop low through more open roadside vegetation and could be seen twisting and zig-zagging in pursuit of small passerines flushed by the proximity of the vehicle. Shortly afterwards the pair of falcons would be seen again above the bus in rapid flapping flight following a presumably unsuccessful pursuit. This series of events was observed on four separate occasions over a distance of several kilometers before the birds finally ceased following the vehicle. Because

the observer was inside the moving vehicle it was not possible to confirm whether or not the technique resulted in a successful hunt for the pair, to discern any vocalisations that may have been made or to reliably identify the roles of the sexes during this brief observation.

Despite countless observations of other pairs of this common species in Paraguay, no similar behaviour has been previously observed by the author. Mader (1981) however notes that on two occasions in the llanos of Venezuela a pair followed his motorcycle and captured doves that he flushed, sometimes following him overhead for as long as five minutes. Mader's (1981) report coupled with the observation documented here, suggest that such learned opportunism in following vehicles to flush prey may be a geographically widespread, if rare phenomenon.

Cade (1982) cites Tucker (1971) in estimating that falcons flying at top speed may be using energy at a rate ten times the standard resting metabolic rate (SMR) and suggests that the energetic costs may be even higher for some falconids. Given the energy demands required for a falcon of this size (approx 200-500g - Palmer, 1988) to keep up with a bus travelling at speed over several kilometers, added to the fact that both members of the pair are involved in the chase and subject to these costs, it may be assumed that the compensatory success rate of this technique in terms of energetics are necessarily high. The high energetic cost of employing the technique may be a possible explanation for the apparent rarity of this behaviour despite the wide range of the species and a presumed range wide familiarity with vehicles providing ample opportunity for its adoption. Specific conditions may thus need to be fulfilled before this energetically costly technique becomes "profitable".

Hector (1986) notes that falcons that habitually hunt cooperatively tend to do so when hunting elusive prey such as birds and typically occur in arid habitats such as desert scrub or grasslands. The habitats in which they occur present challenges to prey capture because of the numerous scattered hiding places provided by tree crowns, shrubs and patches of dense cover. Such taxing hunting conditions may have been a driving force in the evolution of cooperative hunting by allowing one member of a pair to pursue the prey through thick cover, while the second airborne member of the pair blocks off an aerial escape route.

In the case of the pair at Ibibobo several additional selective pressures may be hypothesized to have influenced the adoption of a variation in this cooperative behaviour. The dense, low, tangled vegetation in this area is rather more closed than the open habitats typically preferred by this species (Cade, 1982), but a high density of flocking passerines provide ample potential prey for a resident territorial pair if it can be captured (Short, 1975). Though this species has been commonly reported to fly through vegetation in pursuit of prey (Wetmore, 1926), the twisted, thorny and bushy forest of the Dry Chaco provides considerable resistance to this kind of approach and may favour a tendency towards the hunting of prey in more open areas, such as along roadsides or in clearings (Short, 1975). The frequent transit of heavy traffic that ply this international route and the close proximity of bushy vegetation interspersed with more open areas along the roadside is therefore highly conducive to flocks of birds being flushed into the open by passing traffic, when they might otherwise remain concealed within vegetation. The swooping by the falcons over more open vegetation and the higher flight over denser vegetation is suggestive of the fact that this technique was being employed by the birds.

Such learned and highly specialized behaviour is not without risks. Keddy-Hector (2000) notes that the species may be potentially vulnerable to collisions with vehicles "because of a tendency to engage in high-speed, low-level, reckless pursuits of swift avian prey". However this observation and those of Mader (1981) suggest that at least in some cases the birds are able to turn this risk to their advantage.

ACKNOWLEDGEMENTS

Thanks to Dr Robert Owen for his valuable comments on this manuscript.

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