MERLIN (*FALCO COLUMBARIUS*) PREYS ON FLYING DRAGONFLIES

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Abstract -- A juvenile Merlin was observed to catch and eat one dragonfly and chase others while on migration. The importance of large insects in the diet of Merlins during migration warrants further investigation.

Key Words: Diet, dragonflies, *Falco columbarius*, Merlin, migration, Vancouver Island.

The diet of the Merlin (*Falco columbarius*) consists mainly of small birds, such as sparrows, larks, swallows and shorebirds, with mammals, insects and reptiles usually constituting a smaller proportion (e.g. Fox 1964; Beebe 1974; Becker 1985; Bibby 1987; Sodhi and Oliphant 1993). Although one early study on the east coast of North America found a large proportion of insects in the diet of migrating Merlins (Allen and Peterson 1936), insects are usually reported as infrequent components of the diet. For example, breeding Merlins in Montana preyed mainly on small birds, but grasshoppers and moths comprised 4% and 1% of the diet respectively (Becker 1985). Beebe (1974) generalized that insects, "especially dragonflies," are taken occasionally on the wing. Most studies of diet have been conducted during the breeding season or in winter, whereas diets during migration are less well known (Sodhi *et al.* 1993). In this note, I document predation by a migrant Merlin on flying dragonflies.

On 10 September 1996 at 19:00, I observed a juvenile Merlin chasing an American Robin (*Turdus migratorius*) through our open-wooded, semi-rural neighbourhood in North Saanich, about 25 km. north of Victoria, British Columbia. This was during the September peak of fall migration of Merlins in the Victoria area (Campbell *et al.* 1990:Appendix 1). At 19:05, I noticed the Merlin perched on a dead-topped Bigleaf Maple (*Acer macrophyllum*). The Merlin sallied out briefly, swooped at something in midair, and returned to its perch, whereupon it plucked the wings from a large dragonfly (probably *Aeschna* sp.) and swallowed the body. A few minutes later, the Merlin circled our yard, flew unsuccessfully at two flying dragonflies, and disappeared from sight.

Flying dragonflies of several species were quite evident in our neighbourhood during the warm (19^0 C), late summer evening, as were flying termites and several songbirds. After its unsuccessful pursuit of a robin, the Merlin apparently targeted dragonflies, as an abundant alternate prey.

Merlins are known to concentrate on particular prey species which are a) abundant, b) leave cover frequently, making them vulnerable to aerial predation, and c) have a mass of between 21 and 40 g. (Sodhi and Oliphant 1993). Dragonflies seem to meet the first two criteria, but the largest species, *Aeschna* spp., weigh only a few grams (R. Cannings personal communication). The bird that I observed appeared to be hunting the largest dragonflies available. Oliphant (1974) reported an observation of an immature Merlin hawking dragonflies, of an unknown species, on the wing in Saskatoon in late summer (Oliphant and McTaggart 1977). That Merlin consumed the dragonflies in flight. My observation differed in that the Merlin returned to a perch and plucked the wings from the dragonfly before consuming it; a behaviour similar to how Merlins eat birds (Sodhi 1992). Palmer (1988) summarized a few previous observations of both behaviours. Dekker (1985) reported an immature in Alberta eating some in the air, and others on a perch during a single hunting sequence, although he did not indicate whether or not the latter were plucked. Bird (1932) found that the wings had been removed from *Aeschna* remains in the stomach of a Merlin shot in Manitoba, whereas the remains of other dragonfly species in the same stomach were intact.

Beebe (1974) considered the Merlin to be an exceptionally successful hunter, more so than other falcons. During its southward migration on the south coast of British Columbia, the Merlin has a multitude of migrant songbirds and large flying insects to choose from and likely preys opportunistically on species which are locally abundant and of appropriate size. Because little is known about Merlin diet during migration, the importance of large flying insects as a food source during fall migration may have been underestimated. This possibility is supported by Dekker's (1988:footnote to Table 2) comment that Merlins captured "numerous dragonflies" during migration around Beaverhills Lake, Alberta. Dragonfly "hawking" appears to be very common among young-of-the-year Merlins and other falcons (Oliphant and McTaggart 1977; L. W. Oliphant personal communication to M. K. McNicholl 17 December 1996) and may be important practice in learning to hunt (Dekker 1985). Further studies on prey taken during migration would help determine the relative importance of insects in the diet of Merlins.

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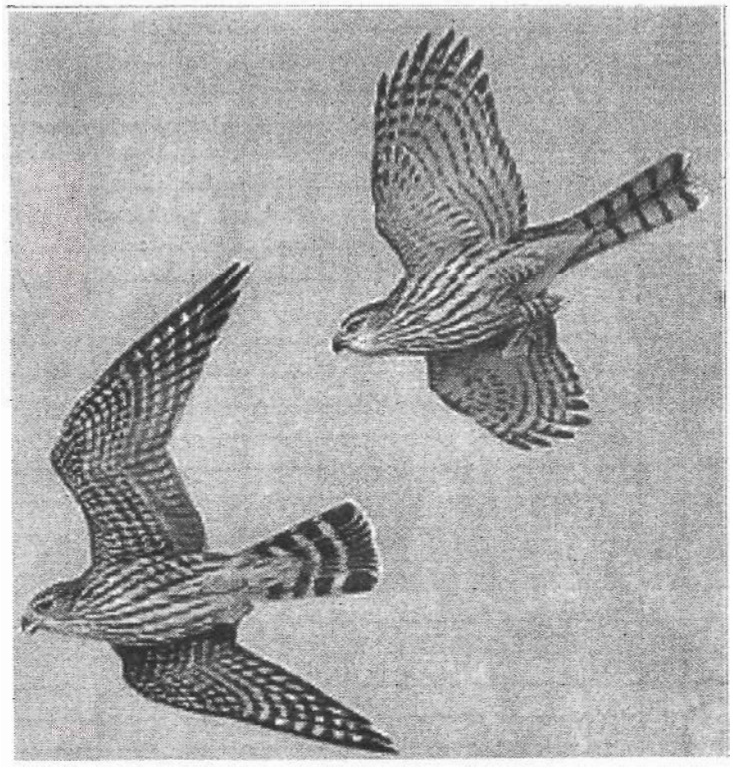

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