

Note

New Breeding Record for Merlin (*Falco columbarius*) in Southwestern Yukon

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On 3 May 2016, we observed two Merlins (*Falco columbarius*) copulating near Hungry Lake in southwestern Yukon. We recorded Merlins frequently from May until the beginning of July and observed them defending the area from Common Ravens (*Corvus corax*) on two occasions, an activity indicative of a nesting pair. This is the first breeding record for Merlins in southern Yukon, as previous records have documented the breeding range only in central and northern parts of the territory. Here, we summarize historical sightings and breeding reports throughout southern Yukon since 1975 and fill a gap in the breeding range of this species.

Key Words: Merlin; *Falco columbarius*; breeding range; Kluane National Park; Yukon

Introduction

Merlins (*Falco columbarius*) have a wide distribution, ranging from northern Peru to the northern treeline in Alaska and Canada (Warkentin *et al.* 2005). Although Merlins are relatively uncommon in Yukon (Sinclair *et al.* 2003), they have been documented breeding in the Richardson and Ogilvie Mountains of central Yukon and in the British Mountains, as well as along the Porcupine River and Old Crow Flats in northern Yukon (Sinclair *et al.* 2003). While they are suspected of nesting in southern Yukon based on signs of aggressive behaviour, nesting has not yet been documented there (Sinclair *et al.* 2003; eBird 2017).

Merlins are habitat generalists, preferring fairly open country, such as willow (*Salix* spp.) or birch (*Betula* spp.) scrub and shrubland, as well as taiga forest, moorland, and grasslands, such as steppe and prairies (White 1994). Merlins generally inhabit ecosystems that have a mix of low and medium-height vegetation with interspersed trees and avoid dense forests as well as treeless arid regions (White 1994). Within their breeding range, they are found in open to semi-open habitat, often nesting in forest openings, fragmented woodlots, and near rivers, lakes, or bogs (Warkentin *et al.* 2005).

Merlins do not create nests of their own, but rather use abandoned nests (of corvids or hawks) in conifer or mixed tree stands (Sieg and Becker 1990; White 1994). Nests are rarely found in tree cavities, on cliffs, or on the ground (Bent 1938; Fox 1964), but are often highly concealed from predators by conifers (Warkentin and James 1988; Sieg and Becker 1990). In Yukon, breeding pairs are often associated with riverside cliffs or trees; they start arriving in mid-April and initiate nesting by the end of May (Sinclair *et al.* 2003).

Here, we report the first record of breeding Merlins in southern Yukon.

Observations

On 3 May 2016, we photographed (Figure 1) two Merlins copulating (60.9824°N, 138.1372°W), 1 km east of Hungry Lake in southwestern Yukon, near Kluane National Park. The pair occupied an area with vegetation cover dominated by White Spruce (*Picea glauca* (Moench) Voss), Grey Willow (*Salix glauca* L.), and Bog Birch (*Betula glandulosa* Michaux). Historical pipeline trails offer 10-m wide strips without a dense spruce canopy. Between 3 May and 1 July, we spent 36 mornings in the area and recorded the Merlins frequently, including two occasions on which we observed them defending the area from Common Ravens (*Corvus corax*), as indicated by aerial chase, dives, and loud calls.

We searched eBird, a citizen science database of bird observations, for all recorded Merlin sightings from 1975 to 2016 during the breeding season (April–August; eBird 2017). There were 19 records of Merlins within approximately 20 km of our location: one in April (1975), three in June (1990, 2002, 2016), and the other 15 in August. There were no records from May, during the peak egg-laying and incubation period, or July, when young are still in the nest and are typically highly vocal. Of the 19 reported sightings in southwestern Yukon, only one was of a pair, observed on the Sheep Mountain Trail (approximately 22 km northwest of our observed breeding site). Of the 606 sightings across southern Yukon during the breeding seasons from 1975–2016, only 7% reported two Merlin and none indicate a breeding pair was observed (eBird 2017).

Discussion

Although Merlins are relatively uncommon in Yukon, nesting has been documented in the northern and central portions of the territory, but not in the south (Sinclair *et al.* 2003; eBird 2017). We were unable to locate the

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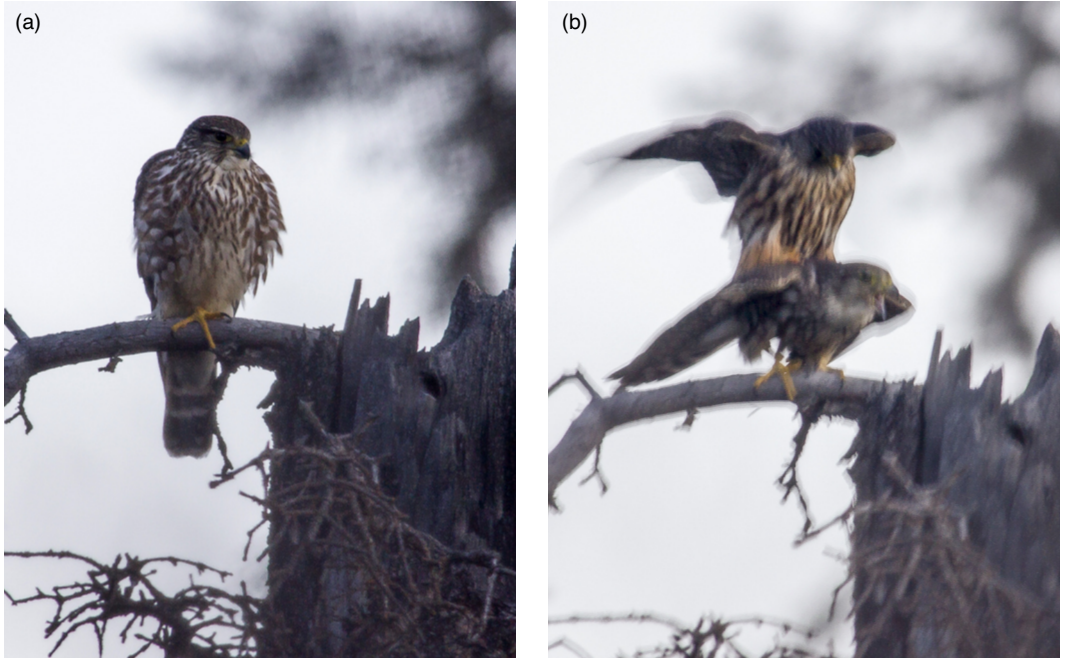


FIGURE 1. (a) A female Merlin (*Falco columbarius*) photographed at 0923 and (b) a male Merlin (*Falco columbarius*) copulating with a female Merlin at 0925. Both photographs were taken near Hungry Lake, southwestern Yukon (60.9824°N, 138.1372°W) on 3 May 2016. Photos: R. P. Lamoureux.

Merlins' nest, but copulation and defense against corvids by both males and females is a reliable indicator of a nearby nest site (Sodhi 1991; Sodhi *et al.* 1992), typically within 800 m (Hardey *et al.* 2006). In addition, the landscape surrounding the observed Merlins included a small pond just over 350 m from the point of copulation, as well as two larger lakes, Hungry Lake and Thirsty Lake, approximately 1 and 1.3 km away, respectively. Both lakes have steep sand embankments over 40 m in height and the surrounding area is dominated by White Spruce with willow and birch understory (Krebs *et al.* 2001). Our observations are consistent with known nesting habitat characteristics and nesting behaviour of Merlins (White 1994; Warkentin *et al.* 2005; Sinclair *et al.* 2003).

Our documentation of copulation, coupled with a habitat seemingly suitable for nesting, provides evidence for the first breeding record of the Merlin in southern Yukon. Whether this represents range expansion for nesting Merlins or, alternatively, is a function of low sampling effort for the species in southern Yukon compared with other parts of their range is unknown. Although we cannot confirm nesting, the evidence suggests that the southern Yukon may be more suitable for Merlin breeding than previously indicated by breeding records and may show that current knowledge of breeding range for this species is limited.

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