

SHORT NOTE

A new prey species for the New Zealand bush falcon (*Falco novaeseelandiae*)

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As part of a study of New Zealand falcon (*Falco novaeseelandiae*) diet in pine forests, approximately 1000 pellets and prey remains were collected and analysed over two breeding seasons, during the period from Sep to Mar 2003-04 and 2004-05 (Seaton 2007). From these results we describe a new prey species for the bush form of the New Zealand falcon.

Although Fox (1977) demonstrated that the eastern form of the New Zealand falcon can take prey up to six times their own body weight, such as hares (*Lepus europaeus*), most studies of the New Zealand falcon's diet have shown that the majority of prey taken are small passerines (Fitzgerald 1965, Fox 1977, Lawrence and Gay 1991, Barea 1995, Stewart and Hyde 2004). The eastern falcon (average female mass 600 g) is much larger than the smaller bush falcon (female mass 420 g to 510 g) and large prey items have not previously been recorded in the diet of this smaller form.

The discovery of the remains of three adult ring necked pheasants (*Phasianus colchicus*) at two nest sites within Kaingaroa Forest, is the first published record of bush falcon successfully taking very large prey items. Kaingaroa Forest comprises approximately 300,000 ha of plantation forest, and is located within the central North Island, stretching approximately 100 km east of Rotorua to south of the Napier-Taupo highway. The 3 pheasants were found dismembered near the falcon nests and consisted only of the larger bone elements, i.e., wing and leg bones, pelvis and sternum from 2 adult pheasant hens and 1 adult male (Fig. 1).

Our observations confirm pheasants are part of

the diet of bush falcons. The authors know of only one other instance of bush falcons attempting to take pheasant as prey. John Read, a hunter from Rotorua, flushed an adult male pheasant while shooting behind Mt Edgecumbe in the early 1970's. The pheasant was immediately grabbed in flight by a falcon, although he could not find the birds after they went into cover (*pers. comm.*).

New Zealand falcons have a marked reverse sexual dimorphism (Fox 1977), and it seems likely that females take the largest prey due to their greater size. Female adult hen pheasant weights range from 851 g to 1356 g and adult male pheasants from 1172 g to 1537 g (Marchant & Higgins 1993). The adult female falcon at one of the nests where the pheasant remains were found weighed approximately 450g, illustrating that this bird took prey up to 3 times its own body weight. Other large prey items located at bush falcon nest sites in this study include the hind limbs of three near full-grown hares. This suggests that, like the larger eastern falcon, the smaller bush form of the New Zealand falcon, is also capable of taking very large prey compared to its body size.

LITERATURE CITED

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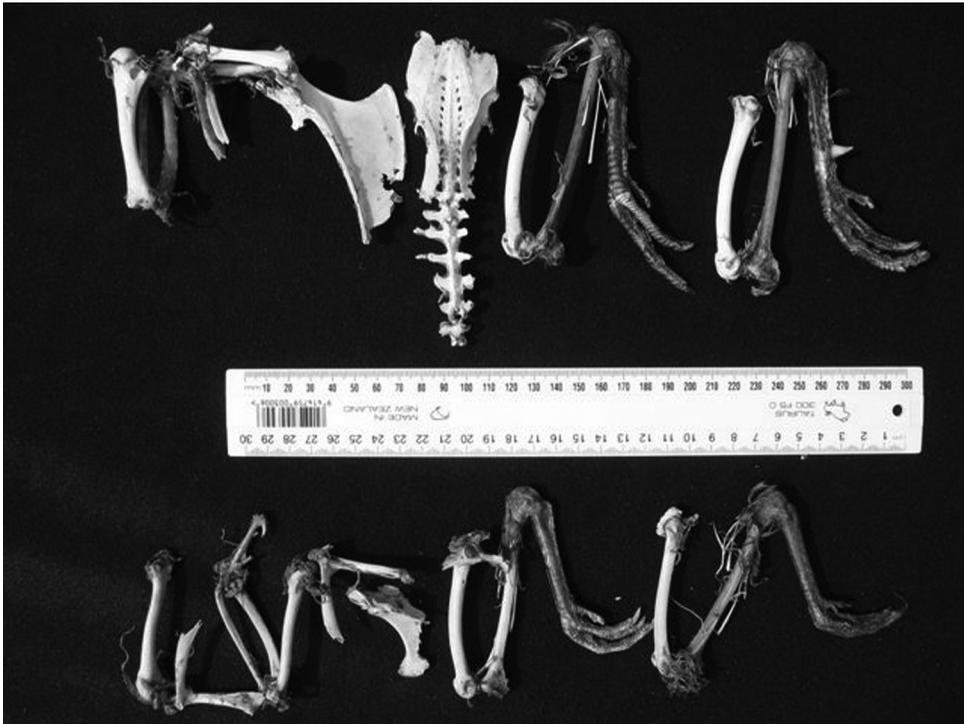


Fig 1. Wing and leg bones, pelvis and sternum of two adult hen pheasants and one adult male pheasant, preyed upon by New Zealand bush falcons. Characteristic notches can clearly be seen on the sternum (and other bones) where the falcons have fed on the carcass.

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Key words New Zealand bush falcon; prey remains; pine forests