

SHORT NOTE

New Zealand falcon (*Falco novaeseelandiae*) attempts to adopt Muscovy duck (*Cairina moschata*) ducklings

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For a period of four weeks, starting in early September 2020, Hamurana (Rotorua) resident Bernie Kerr witnessed some extraordinary behaviour by an adult male New Zealand falcon (*Falco novaeseelandiae*). One morning when about to feed his chickens (*Gallus gallus*), and Muscovy duck (*Cairina moschata*) and her very young ducklings, he noticed them all behaving defensively, hiding under bushes within their 15 x 3 m open-topped pen. After hearing a loud 'kekking', he became aware of a New Zealand falcon perched in a tree nearby. The falcon identified, as an adult male, was subsequently observed flying to the metre-high enclosure fence with a small prey item and plucking it while perched on a post. The falcon then dropped into the pen, ran up to the ducklings, and attempted to offer them the prey item.

Over the following three weeks, the falcon was regularly observed near the pen, and became quite territorial, actively defending the area by frequently swooping at Bernie Kerr and fellow observer Lee Ormsby. The falcon also swooped at a feral cock common pheasant (*Phasianus colchicus*) and struck it on the head, when it ventured too close to the pen. The following summary is based on the author's own observations over four days in late September, supplemented by those made by Bernie and Lee.

The falcon visited the pen at least three times a day, usually in the early morning, around midday, and mid- to late afternoon. Once with a rock pigeon (*Columba livia*) but usually with a small passerine,

a house sparrow (*Passer domesticus*), yellowhammer (*Emberiza citrinella*), Eurasian blackbird (*Turdus merula*), or song thrush (*Turdus philomelos*). The chickens, and the Muscovy duck and ducklings, soon accepted his presence and thereafter largely ignored him. The prey was often already plucked. After landing in the pen, the falcon would run up to the ducklings and try to offer them pieces of the prey that he had bitten off. The ducklings were never observed taking the food and just ignored it so he would leave the prey with them, or take it away to cache. "Often there was a various collection of bird bits left behind daily. Usually up to 3 or 4 small passerines, mainly whole plucked sparrows, but some odd bits and pieces as well" (Bernie Kerr pers. comm., 8 October 2020).

If the falcon arrived without a prey item, he would frequently search for and retrieve a previously cached corpse from clumps of grass in the adjoining paddock, before entering the pen. On other occasions, the falcon perched in a large tree that overlooked the pen, and spent several minutes preening and looking around, before flying away. The falcon was never aggressive to the chickens, duck, or ducklings.

Unfortunately, no photos were taken of the falcon interacting with the ducklings; however, two short videos of the falcon attempting to bring prey to the ducklings were taken by Bernie Kerr. Although this footage does not provide conclusive evidence supporting the description of "adoption" above, it does demonstrate the activity of the falcon in the presence of the ducks, and their lack of alarm in its presence.

The falcon was trapped and colour-banded by the author on 30 September 2020. By this date his visits had become irregular. The last food delivery to the ducklings was observed by Bernie Kerr on 2 October, and the falcon was last recorded in the area on 4 October 2020.

Adoption of other species (predominantly prey species) has been previously recorded by at least five species of raptors, including: black-breasted buzzards (*Hamirostra melanosternon*) adopting Nankeen kestrels (*Falco cenchroides*) (Cupper 1977); bald eagles (*Haliaeetus leucocephalus*) adopting red-tailed hawks (*Buteo jamaicensis*) (Stefanek *et al.* 1992; Watson *et al.* 1993; Watson & Cunningham 1996), and a glaucous-winged gull (*Larus glaucescens*) (Anthony & Faris 2003) and white-tailed eagles (*Haliaeetus albicilla*) adopting common buzzards (*Buteo buteo*) (Literak & Mraz 2011), great spotted eagle (*Aquila glanga*) adopting marsh harrier (*Circus aeruginosus*) (Karyakin 2014), and steppe eagle (*Aquila nipalensis*) rearing long legged buzzards (*Buteo rufinus*) (Pulikova & Tugarev 2021). All these cases were presumed to be non-lethal predation, where live prey had been taken back to the nest. Most live prey delivered to raptor nestlings are killed and eaten. However, if the prey is a young bird which begs for food, it may on rare occasions be adopted and fed, and even reared to fledging (Spofford & Amadon 1993).

Further to these cases of interspecific adoption involving a buzzard and four eagle species, the author is aware of only two previous examples of falcons adopting other species. A pair of peregrine falcons (*Falco peregrinus*) adopted three young herring gulls (*Larus argentatus*) (<http://southwestperegrine.org.uk>>2014/06/13), and a pair of American kestrels (*Falco sparverius*) adopted a brood of common starlings (*Sturnus vulgaris*) (Tlusty & Hamerstrom 1992). Following a breeding failure at the brood stage, the kestrels transferred their attention to a nestbox 1.1 km away, which contained a brood of young common starlings, and so the adopted chicks came with the nest site, rather than being delivered as intended food items (Tlusty & Hamerstrom 1992).

While the circumstances under which adoption of potential prey species by raptors may differ, it is likely that this behaviour is due to an innate drive to care for begging young. "The instincts around breeding are very strong and the male New Zealand falcon especially, has to match his behaviour with whatever is going on, rather than being more closely governed by the cycle of hormones as the female is. It appears that being in breeding condition, and for one reason or another his own breeding effort has failed or maybe not materialised, he could be triggered by a stimulus such as the ducklings which are small, fluffy, and have a plaintive cheeping call,

and his paternal instincts have taken over" (Nick Fox *pers. comm.*, 7 October 2020).

The attempted adoption of Muscovy ducklings described here is particularly notable as it occurred away from any known falcon nest site, and the male falcon persisted for several weeks, despite the ducklings not being observed showing any interest in the food items offered.

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