

Leaf-presenting as possible courtship behaviour by **Pied Falconets** *Microhierax melanoleucos*

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**Key words:** Pied Falconets, *Microhierax melanoleucos*, courtship behaviour, leaf-presenting

**Abstract:** Pied Falconets *Microhierax melanoleucos* were observed presenting leaves to each other in two different locations during the breeding season, suggesting a role for this behaviour in courtship. The observations are discussed in relation to other published references to the breeding of this and related species.

Pied Falconets *Microhierax melanoleucos* are distributed from the foothills of the eastern Himalaya through southern China, Laos and northern Viet Nam. Despite this wide range though, rather little is documented about their breeding behaviour, and Grimmett *et al.* comment that the juvenile remains undescribed. We present here some incidental observations of behaviours apparently connected with breeding made during a trip to north-east India in 1998 (Hornbuckle *et al.*).

A small group of at least four Pied Falconets *Microhierax melanoleucos* was observed in the top of a tall, open tree near the Deban HQ of Namdapha National Park, Arunachal Pradesh, on 24<sup>th</sup> February, at c.8.00AM. JH observed one to have a large leaf in its bill, which it proceeded to offer to a neighbouring bird. This bird accepted the leaf in its bill but soon dropped it and neither bird made any attempt to retrieve it. The other birds, perched a little further away, soon flew off, as did the presenting bird a few minutes later. Shortly after, DA also saw this same behaviour reenacted in some dead, bare branches in the canopy, of probably the same tree. At least one falconet was seen flying with a large (c. 15cm long) leaf held in its feet, before alighting on a bare branch. It transferred the leaf to its bill and presented it to another bird, which then dropped the leaf almost immediately.

Three weeks later, on 12<sup>th</sup> March, in the Kolomi area of Dibru-Saikhowa Wildlife Sanctuary, Assam, DA saw two Pied Falconets land in the top of a nearby dead tree and again witnessed this unusual behaviour.

The presenting of food items as a courtship ritual is well known among raptors (e.g. Cade 1982); moreover, leaves are used by several species as nest material. However, the presenting of leaves seems to be very unusual.

The first record of this kind of behaviour is by Naoroji (1997) who found the courtship behaviour of Collared Falconets *Microhierax caerulescens* in progress on 16<sup>th</sup> April 1993. He commented that, prior to mating, there would be an extended courtship ritual in which the female

would usually remain perched on a bare branch while the male would fly off. Prior to returning the male would often pluck a dried sal leaf with his feet and deposit it in the nest hole, sometimes firstly perching alongside the female with the leaf before depositing it in the nest.

Pied Falconets are recorded as breeding in old barbet and woodpecker holes from March to May (Delacour and Jabouille (1931), Ali and Ripley (1987)). Caldwell and Caldwell (1931) remark that (in China) the eggs are laid 'upon a bed of leaves and bits of grasses in a cavity of a tree.' However, Baker, while noting that their nesting behaviour was poorly known, recorded only beetle elytra and other insect remains as nest lining. Etchecopar and Hue (1978-83) also refer to the nest being of insect remains, while Delacour and Jabouille state that the eggs always lie on a bed of insect debris, beetle elytra and butterfly wings. Neither they nor La Touche nor Baker mention any leaves being present in nests of Pied Falconet, though Baker comments on leaves in the nest holes of Collared Falconet. This is puzzling since the behaviour we observed would seem to be stereotyped.

At 9:23am on 15<sup>th</sup> March in Panbari Forest near Kaziranga NP, PIH observed two Pied Falconets perched together about 20m up on a dead snag. The pair were about 20cm apart with the female facing away from the male. He was bobbing from an exaggerated vertical position to the horizontal at about once per second, and calling frantically. This was a fairly loud, very excited, rapid-fire sequence of slightly hoarse, chattering notes - '*jiff jiff jiff jiff jiff...*' which gradually slowed, and reminded him of the food-begging calls of fledglings of several other raptor species. This behaviour continued for a few seconds, after which copulation took place, with the male continuing to call for about 20 seconds afterwards. The pair then flew off.

Closely perched Collared Falconets were noted by Sparks (1965) to often face away from each other in captivity, probably to prevent agonistic responses. This was a rather brief observation by PIH, and neither leaf-presenting nor clumping and allopreening, (thought by Naoroji to help maintain the pair bond of Collared Falconets), were seen.

Our observations are presumably earlier in the breeding cycle than those witnessed by Naoroji, but suggest that Pied Falconets may show some similarities in courtship and mating behaviour to Collared Falconets. The offering of leaves by (presumably) the male may be a first stage in initiating interest in mating and nesting behaviour in the female.

Kemp and van Zyl (1998) recorded Collared Falconets breeding cooperatively. Etchecopar and Hue note that Pied Falconets can be seen in groups of 5 or 6, and this together with our observation of a group at Deban in February suggests that Pied Falconets may also sometimes breed cooperatively. Clearly this species, regarded as 'Vulnerable' by BirdLife International (Collar *et al.*), requires

considerable further study.

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