

## Large prey for a small predator: Black-thighed Falconet *Microhierax fringillarius* preying on Black-capped Babbler *Pellorneum capistratum*

JOKO SETIYONO, SITI DINIARSIH, RICHARD A. NOSKE, NURDIN S.  
BUDI, ELDE N. R. OSCILATA AND MUHAMMAD M. AMNA

BIOLASKA Study Club, Jl. Sorowajan Baru Gang Muria No.08 Banguntapan,  
Bantul, Daerah Istimewa Yogyakarta, Central Java. E-mail:  
[joko.kurik@yahoo.com](mailto:joko.kurik@yahoo.com)

**Ringkasan:** Alap-alap Capung (*Microhierax fringillarius*) merupakan raptor terkecil dari famili Falconidae. Burung ini memangsa serangga sebagai makanan utamanya, terkadang memakan burung-burung kecil seperti walet, bondol, dan burung-madu. Catatan dari Kacip, kawah Gunung Baluran, Situbondo, Jawa Timur ini menjelaskan tentang temuan mangsa terbesar Alap-alap Capung yaitu Pelanduk Topi-hitam (*Pellorneum capistratum*).

### Introduction

Restricted to Southeast Asia from the Central Himalayas eastwards, the Falconets of the genus *Microhierax* are the smallest of all birds of prey (White *et al.* 1994). Of the five species in the genus, only the Black-thighed Falconet *Microhierax fringillarius* has been recorded in Indonesia (Sukmantoro *et al.* 2007; MacKinnon *et al.* 2010; Irham *et al.* 2012). Measuring a mere 14-17 cm in total length (White *et al.* 1994) this species feeds mainly on insects, including moths, butterflies, dragonflies, alate termites, cicadas, orthopterans and beetles. However it is also known to sometimes take small birds such as munias and sunbirds, and occasionally lizards (White *et al.* 1994; Ferguson-Lees & Christie 2001; Wells 2007). In west and east Java none of the 50 or more stomachs examined by Bartels (1915-1931) contained avian remains, but remains of a small bat were found in a female's stomach, and a prey transfer involving a small tree lizard was observed. In Central Java, Verbeek (1938) described the stomach contents of four Falconets, only one of which contained some bird feathers. H.J.V. Sody (in Becking 1989) lists three bird species as prey: White-capped Munia *Lonchura malacca* (= *L. ferruginosa*), White-headed Munia *L. maja* and Barn swallow *Hirundo rustica*. In Baluran National Park, East Java, one was observed eating a Cave Swiftlet *Collocalia linchi* (Winnasis *et al.* 2011). Here we describe an observation of a Falconet preying on a bird that is unusually large relative to its own size.

### Observation and discussion

From 28 September to 4 October 2012, we conducted fauna surveys in the Kacip crater (560 m asl) of Mount Baluran in Baluran NP. At 08:20 hrs on 4 October we sighted a Black-thighed Falconet perched in a shrub near the ground, where it had evidently recently killed a bird of similar size, which it was holding in its talons (Plate 1). It was watched by eight observers for almost 2 hours, during which photographs were taken. During this time, the Falconet moved to four other perches, each in a shrub, including a small fig *Ficus* sp (c. 3 m in height; Plates 2, 3) and a

Water Apple *Eugenia aquea* (4 m), then finally to the top of a dead tree (3 m). Having started to eat the prey in the fig tree, the Falconet completed its meal in the dead tree. The dead bird appeared to be a babbler, and after comparing our photographs to illustrations and photos of the five species found in Baluran (Winnasis *et al.* 2011), JS identified it as a Black-capped Babbler *Pellorneum capistratum*. The diagnostic features of the bird in question were its largely orange-rufous underparts and long tail, thus differing from the similar-sized Abbott's Babbler *Malacocincla sepiarium*, which has grey-buff underparts and a short tail.

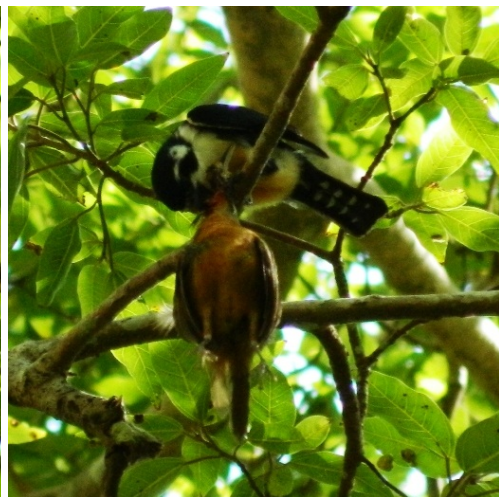


JOKO ETIYONO

**Plate 1.** Black-thighed Falconet with recently killed Black-capped Babbler near the ground.



**Plate 2.** Black-thighed Falconet and its prey perched in Fig Tree



JOKO ETIYONO

**Plate 3.** Black-thighed Falconet eating prey under the canopy

The observation is noteworthy for both the large size of the prey item and the atypical hunting behaviour employed to catch it. Firstly, as far as we know this is the largest and heaviest prey item that has ever been recorded for the Black-thighed Falconet. Birds that have been recorded as prey of this species comprise munias, sunbirds, swallows and swiftlets, typical Indonesian representatives of which weigh 6-17 g (A. Leishman, unpubl. data). The Black-capped Babbler, on the other hand, ranges in weight from 22 to 35 g (median, 28.5 g) across its range (Wells 1999; Collar & Robson 2007), though the weights of three individuals captured at Bodogol, West Java, ranged only from 24 to 28 g, with a mean value of 25.8 g (A. Leishman, unpubl. data). On the Thai-Malay Peninsula, the wing length of this species varied from 63 to 74 mm (Wells 2007). The Black-thighed Falconet is said to weigh 28-55 g (White *et al.* 1994) over its wide range. On the Thai-Malay Peninsula, wing length of the Falconet ranged from 88 to 107 mm (Wells 1999). Using median values from the above ranges, the Babbler's weight is about 69% of that of the Falconet, and its wing-length, 70%. Indeed, the Falconet was obviously labouring to carry the Babbler, which may explain why it flew to three low perches in succession, before reaching the dead tree, rather than direct to the latter.

In Taman Negara National Park, Peninsular Malaysia, Kemp & Crowe (1994) observed 26 successful hunting attacks by ten Black-thighed Falconets over 2.5 hours. All prey were insects, which ranged in size from 0.5 cm to a moth with a wingspan of over 20 cm. The moth was estimated to be about 1.5 times the length of the Falconet, though it was obviously much lighter in weight than a bird with the same wingspan. An unpublished study of the Philippine Falconet *M. erythrogegens*, which is similar in size to the Black-thighed Falconet, showed that 63% of hunting attacks were successful, with 94% of the prey being insects, mainly dragonflies (H. Miranda in White *et al.* 1994). Birds as large as robins (*Erithacus*) and pipits (*Anthus*) were said to be attacked, but it is not stated whether these attacks were successful. While the identity of the robin is unknown, the three commonest pipit species in the Philippines have a weight range from 17 g to 26 g (Tyler 2004), the median value (21.5 g) being less than the Black-capped Babbler.

Nevertheless in India, the Pied Falconet *M. melanoleucus*, the largest of the falconets, is known to sometimes stoop on birds much larger than itself, killing them by striking them with the hind-claw (Ali & Ripley 1978). Recorded prey includes scimitar-babblers *Pomatorhinus* (mean of median weights of nine species, 45.2 g; Collar & Robson 2007) and thrushes *Turdus* (mean of 16 species, 80.9 g; Collar 2005). The mean weight of scimitar-babblers is 70% of the median weight (65 g) of the Pied Falconet (55-75 g, White *et al.* 1994), similar to the ratio between the Black-capped Babbler and the Black-thighed Falconet. However the mean weight of the thrushes is 24% heavier than that of the Pied Falconet. Thus while the Black-capped Babbler may represent the largest prey item of Black-thighed Falconets known to date, it is not the largest item, in either absolute or relative terms, recorded for the genus.

Our observation also represents uncommon foraging behaviour for the Black-thighed Falconet, which usually pursues prey in the air above open areas such as paddyfields and other cultivation, rivers, villages and areas of forest undergoing slash-and-burn (Ferguson-Lees & Christie 2001; MacKinnon *et al.* 2010). Indeed,

other bird species known to be eaten by the falconet (see above) are from open country. The hunting behaviour of all *Microhierax* falconets appears to be largely aerial, in contrast to the more terrestrial hunting of the other pygmy falcons (Kemp & Crowe 1994). Their wing and tail proportions are relatively stocky, even more so than the fast aerial-hunting falcons within the genus *Falco* (Kemp & Crowe 1994). In Kacip, however, the Falconet in question was first observed close to the ground, and since Black-capped Babblers normally forage on or close to the ground (Wells 2007; MacKinnon *et al.* 2010), it is likely that the Falconet was also hunting under the canopy. Such behaviour may be uncommon even in Baluran NP, however, as we observed Falconets eating typical prey items, including a dragonfly, a Pierid butterfly and a Cave Swiftlet, over our six days in the park.

## Acknowledgments

We thank the staff of Baluran National Park, including Swiss Winnasis, who accompanied us during the expedition, and Oman Rohmanillah and Arik Hidayatullah, who helped us to collect data. We are very grateful to Bas van Balen and Muhammad Iqbal for providing information from several sources that we were unable to access, and to Alan Leishman for providing weight data from the ABBBS-IBBS Training of the Trainees programme. Thanks also go to Imam Taufiqurrahman, and reviewers Francesco Geremi and Stephen Debus, for comments on earlier drafts of this manuscript.

## References

- Ali, S. & S.D. Ripley. 1978. *Handbook of the Birds of India and Pakistan*. Vol. 1. 2<sup>nd</sup> edition. Oxford University Press, Delhi.
- Bartels, M. 1915-1931. *Diaries and Notebooks on Javan Birds*. Unpublished typescripts and manuscripts held at Naturalis Biodiversity Center, Leiden (1915).
- Becking, J.H. 1989. *Henry Jacob Victor Sody (1892-1959). His Life and Work*. E.J. Brill, Leiden.
- Collar, N.J. 2005. Family Turdidae (Thrushes). Pp 514-807 in J. del Hoyo, A. Elliott & D.A. Christie (eds). *Handbook of the Birds of the World, Vol. 10*. Cuckoo-shrikes to thrushes. Lynx Edicions, Barcelona.
- Collar, N.J. & C. Robson. 2007. Family Timaliidae (Babblers). Pp 70-291 in J. del Hoyo, A. Elliott & D.A. Christie (eds). *Handbook of the Birds of the World, Vol. 12*. Picathartes to Tits and Chickadees. Lynx Edicions, Barcelona.
- Ferguson-Lees, J. & D.A. Christie. 2001. *Raptors of the World*. Christopher Helm Publishers, London.
- Irham, M., E. Meijaard & S. van Balen. 2012. New information on the distribution of White-fronted *Microhierax latifrons* and Black-thighed Falconets *M. fringillarius* in Kalimantan, Indonesia. *Forktail* 28: 162-163.
- Kemp, A.C. & T.M. Crowe. 1994. Morphometrics of falconets and hunting behaviour of the Black-thighed Falconet *Microhierax fringillarius*. *Ibis* 136: 44-49.
- MacKinnon, J., K. Phillipps & S. van Balen. 2010. *Burung-Burung di Sumatra, Jawa, Bali dan Kalimantan*. Burung Indonesia, Bogor.
- Sukmantoro, W., M. Irham, W. Novarino, F. Hasudungan, N. Kemp. & M. Muchtar M. 2007. *Daftar Burung Indonesia No. 2*. The Indonesian Ornithologist's Union/LIPI/OBC Smythies Fund/Gibbon Foundation, Bogor.
- Tyler, S.J. 2004. Family Motacillidae (*Pipits and Wagtails*). Pp 686-786 in J. del Hoyo, A. Elliott & D.A. Christie (eds). *Handbook of the Birds of World, Vol. 9*. Cotingas to Pipits and Wagtails. Lynx Edicions, Barcelona.

- Verbeek, F.A.Th.A. 1938. *Maaginhouden van Javaansche Vogels*. Unpublished manuscript in Naturalis Biodiversity Center, Leiden.
- Wells, D.R. 1999. *The Birds of the Thai-Malay Peninsula, Volume 1. Non-Passerines*. Academic Press, San Diego and London.
- Wells, D.R. 2007. *The Birds of the Thai-Malay Peninsula, Volume 2. Passerines*. Christopher Helm, London.
- White, C.M., P.D. Olsen & L.F. Kiff. 1994. *Family Falconidae (Falcons and Caracaras)*. Pp 216-275 in J. del Hoyo, A. Elliott & J. Sargatal (eds). *Handbook of the Birds of World, Vol. 2. New World Vultures to Guinea-fowl*. Lynx Edicions, Barcelona.
- Winnasis, S., Sutadi, A. Toha, & R.A. Noske. 2011. *Birds of Baluran National Park*. Baluran National Park, East Java.