

Some observations on the diet of Red-faced Malkoha *Phaenicophaeus pyrrhocephalus* in Sri Lanka

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Red-faced Malkoha *Phaenicophaeus pyrrhocephalus* is a Vulnerable species found in the remaining intact rainforests of the wet zone, and a few scattered riverine forests of the intermediate and dry zones, in Sri Lanka, to which it is endemic (BirdLife International 2001). Sinharaja World Heritage Reserve (hereafter referred as Sinharaja), the largest expanse of lowland rainforest in Sri Lanka (Gunatilleke *et al.* 2004) with an area of 11,187 ha, remains its foremost stronghold.

The species can be often seen joining mixed-species bird flocks, a strategy adopted primarily by insectivorous birds in the tropics in order to maximise feeding efficiency and to reduce the risk of predation (Powell 1985, Kotagama and Goodale 2004). It was found in 48% of flocks in Sinharaja by Kotagama and Goodale (2004). It only utters soft grunt-like calls and lacks loud conspicuous vocalisations (de Silva Wijeyeratne 2000, personal observations). It is usually found in the forest canopy but also descends almost to the ground, especially where the undergrowth is thick (Fuller and Erritzoe 1997). It moves through dense foliage discreetly, often 'melting away' to rematerialise in another place moments later, making it rather difficult to obtain prolonged views.

Owing to these habits, its ecology, and particularly its diet, is poorly known. Early literature described the species to feed almost exclusively on fruit and berries, although insect remains were found in the stomachs of the specimens (Legge 1880, Henry 1955). However, recent reports describe the species feeding only on insects (Fuller and Erritzoe 1997, D. Warakagoda *in litt.* to BirdLife International 2001, Gunawardene *et al.* 2002, Kotagama

and Goodale 2004) and a large lizard (Kamalgoda and Anthony 2003), probably a hump-nosed lizard *Lyriocephalus scutatus* (N. Kamalgoda verbally 2005).

Here I describe two observations of Red-faced Malkoha feeding on rainforest insects.

First observation

On 31 December 2004 at 10h25, while observing a mixed-species bird flock in Sinharaja, I saw a Red-faced Malkoha fly into a dense thicket c.12 m above the ground, and c.12 m from me. The bird had white irides and was therefore identified as a female (males have brown irides: Legge 1880). At 10h30 it appeared on a more exposed branch holding in its beak a 25-cm long giant stick insect *Palophus* sp. (order Phasmatodea). I observed the bird through Leica Trinovid 10×42 binoculars, and I took a sequence of 53 photographs using a Kowa TSN 823 telescope and a Nikon coolpix 4500 digital camera over the next six minutes whilst the bird ate its prey. The bird shook the insect violently and on several occasions it appeared to nearly slip off its perch. At least the left rear limb was removed through this process (Plate 1). Stick insects are capable of autotomy (shedding limbs) in an emergency to divert the attention of an attacker (Meegaskumbura 1999). The bird then removed the thorax (Plate 2). Many species of stick insect deter predators by secreting a milky substance from special glands in their thorax. (Meegaskumbura 1999). The complete removal of the thoracic area may be to avoid this substance. The bird then shifted perches, removed the remaining limbs, and swallowed the remainder of the insect.



Plate 1. Red-faced Malkoha *Phaenicophaeus pyrrhocephalus* feeding on giant stick insect, December 2004, Sinharaja, Sri Lanka.



Plate 2. Red-faced Malkoha *Phaenicophaeus pyrrhocephalus* feeding on giant stick insect, December 2004, Sinharaja, Sri Lanka.



Plate 3. Red-faced Malkoha *Phaenicophaeus pyrrhocephalus* feeding on preying mantis, April 2005, Sinharaja, Sri Lanka.

Second observation

On 4 April 2005 at 17h45, while observing a mixed-species bird flock after a heavy downpour in Sinharaja, I observed a female Red-faced Malkoha flitting inside the canopy of a *Shorea congestiflora*, c.15 m high and c.7 m from me. A few minutes later, the bird flew down to an exposed branch with a preying mantis in its beak. I watched the bird and obtained a sequence of nine photographs as it ate the insect over the next three minutes. As before, it violently beat the insect, almost losing its balance on the perch, before shifting to another perch and swallowing the prey.

DISCUSSION

During a two-month visit to Sri Lanka, Fleming (1977) made nine separate observations of Red-faced Malkoha and although he did not directly observe feeding, he noted that the birds appeared to forage for insects. Recent reports have confirmed insect prey, e.g. a large 5 cm-long caterpillar, and caterpillars of a common pest of teak *Tectona grandis* (Fuller and Erritzoe 1997), canopy insects (D. Warakagoda *in litt.* to BirdLife International 2001), a large caterpillar (Gunawardene *et al.* 2002), a cicada and c.10 cm-long caterpillars (E. Goodale *in litt.* 2005), a large, c.8 cm-long, green grasshopper-like insect (U.

Ekanayake verbally 2005) and moths (D. Warakagoda verbally 2005). My observations are consistent with these.

However, early reports described Red-faced Malkoha as feeding almost exclusively on fruit and berries (Henry 1955), although the remains of insects were found in the stomachs of specimens (Legge 1880). From recent observations it is clear that Red-faced Malkoha is largely insectivorous, but given these earlier reports it is possible to conclude that it is probably omnivorous. The only recent observation of fruit-eating was apparently of one bird in Sinharaja eating a red berry from an unidentified plant species on 19 April 2005 (reported by W. Wickremesekera to G. de Silva Wijeyeratne *in litt.* 2005), but verification would be desirable, and further studies are needed to determine the identity and importance of fruit in the diet.

ACKNOWLEDGEMENTS

I would like to thank: Sarath W. Kotagama for improving the manuscript; Eben Goodale for his useful suggestions and sharing his observations; two reviewers and Kelum Manamendra-Arachchi for valuable criticisms of the manuscript; Deepal Warakagoda and Upali Ekanayake for sharing their field observations with me; and the late Laurence Poh for his encouragement to take up digiscoping. Finally, I am immensely thankful to my clients who were with me at the time of the observations and shared my joy.

REFERENCES

- BirdLife International (2001) *Threatened Birds of Asia: the BirdLife International Red Data Book*. Cambridge, U.K.: BirdLife International.
- Fleming, R. L. (1977) *Comments on the endemic birds of Sri Lanka*. Colombo: Ceylon Bird Club and Wildlife and Nature Protection Society.
- Fuller, R. A and Erritzoe, J. (1997) Little-known Oriental bird: Red-faced Malkoha. *Oriental Bird Club Bull.* 26: 35–39.
- Gunatilleke, C. V. S., Gunatilleke, I. A. U. N., Ethugala, A. U. K. and Esufali, S. (2004) *Ecology of Sinharaja rain forest and the forest dynamics plot in Sri Lanka's natural World Heritage Site*. Colombo: WHT Publications.
- Gunawardene, K., Samaraweewa, P., Kumaranayagam, K. and Wikramanayake, T. (2002) Morapitiya 11.8. *Ceylon Bird Club Notes* August 2002: 158.
- Henry, G. M. (1955) *A guide to the birds of Ceylon*. London: Oxford University Press.
- Kamalagoda, N. and Anthony, P. (2003) Sinharaja 10.9. *Ceylon Bird Club Notes* September 2003: 148.
- Kotagama, S. W. and Goodale, E. (2004) The composition and spatial organization of mixed species flocks in a Sri Lankan rainforest. *Forktail* 20: 63–70.
- Legge, W. V. (1880) *A history of the birds of Ceylon*. Second edition. Dehiwala: Tisara Prakasakayo.
- Meegaskumbura, M. (1999) Miniature giants. *Sri Lanka Nature* 2(3): 22–24.
- Powell, G. V. N. (1985). Sociobiology and adaptive significance of interspecific foraging flocks in the Neotropics. *Ornithol. Monogr.* 36: 713–732.
- de Silva Wijeyeratne, G. (2000) Red-faced Malkoha captured on film. *Loris* 22(4): 44–45.