

- Collar, N. J., Crosby, M. J. and Stattersfield, A. J. (1994) *Birds to watch 2, the world list of threatened birds*. Cambridge: BirdLife International.
- Fletcher, B. S. (1998) A breeding record for Minahassa Owl *Tyto inexpectata* from Dumoga-Bone National Park, Sulawesi, Indonesia. *Forktail* 14: 80-81.

- Rozendaal, F. G. and Dekker, R. W. R. J. (1989) An annotated checklist of the birds of the Dumoga-Bone National Park, North Sulawesi. *Kukila* 4: 85-108.
- Watling, D. (1983) Ornithological notes from Sulawesi. *Emu* 83: 247-261.

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Hosts of the Common Hawk Cuckoo *Hierococcyx varius* in India

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In their *Birds of the Indian subcontinent*, Grimmett *et al.* (1998) described the breeding of the Common Hawk Cuckoo thus: 'Breeding: January-June, also later months and varying locally. No certain evidence of which species it brood parasitizes.'

The hosts of this species have been described by many previous authors, summarized by Baker (1934), 'different species of *Argya* [*Turdoides*] and *Turdoides*' and Ali and Ripley (1981), 'chiefly *Turdoides*.. and *Garrulax*'. In case these earlier references have been considered to allow of some uncertainty, we record the following cases from our personal observations, along with additional natural history notes on the species.

In Delhi, during 1970-1974, AJG observed two Common Hawk Cuckoo eggs laid in Jungle Babbler *Turdoides striatus* nests: one in March and one in April. One of these hatched, and the chick ejected the 3 babbler eggs, and subsequently fledged; the other was removed. Another fledgling Hawk Cuckoo was observed being fed by Jungle Babblers in April.

In Khozikode (Calicut), Kerala, during 1975-1982, two cases of nestling and five of fledgling Common Hawk Cuckoos were observed by VJZ, all being fed by groups of Jungle Babblers. One observation was in March, the rest all in October, eggs being laid, presumably, in September. The period of fledgling dependency in all cases continued for more than one month. Five of these observations involved the same territorial group of Jungle Babblers (for information on Jungle Babbler behaviour, see Gaston 1977).

Because of the long period of fledgling dependency, the hosts of the Common Hawk Cuckoo are relatively easy to determine. It appears that in Delhi and Khozikode the species is rather specific to the Jungle Babbler. In Delhi, Common Babblers *Turdoides caudatus* and Large Grey Babblers *T. malcolmi* are both common, and in Khozikode the Yellow-billed Babbler *Turdoides affinis* is abundant, but no species other than Jungle

Babbler was recorded as a host. However, in Delhi, Common and Large Grey Babblers both breed principally during the rainy season (June-September), whereas, it appears the Common Hawk Cuckoos prefer to lay in the spring in this area. Nests of all babbler species at Delhi during the rainy season are heavily parasitized by Pied Cuckoos *Clamator jacobinus* (Gaston 1976). Hence the tendency for Hawk Cuckoos to breed in spring around Delhi may be a response to competition from more abundant Pied Cuckoos.

Our records suggest that earlier descriptions of Common Hawk Cuckoo hosts were correct. However, the comment by Ali (1968) that they breed in March-April in Kerala, may have been based on observations elsewhere in India, because our records indicate that September is the preferred month of laying in Kerala; also the main month there for Jungle Babbler breeding (Gaston *et al.* 1979). More information on the breeding seasons of this species in different parts of India would be desirable.

REFERENCES

- Ali, S. (1968) *The birds of Kerala*. New Delhi: Oxford University Press.
- Ali, S. and Ripley, S. D. (1981) *Handbook of birds of India and Pakistan*, 3. New Delhi: Oxford University Press.
- Baker, E. C. S. (1934) *The nidification of birds of the Indian empire*, 3. London: Taylor and Francis.
- Gaston, A. J. (1976) Brood parasitism by the Pied Crested Cuckoo *Clamator jacobinus*. *Journal of Animal Ecology* 45: 331-348.
- Gaston, A. J. (1977) Social behaviour within groups of Jungle Babblers (*Turdoides striatus*). *Animal Behaviour* 25: 828-848.
- Gaston, A. J., Zacharias, V. J. and Mathew, D. N. (1979) Regional variation in the breeding seasons of babblers (*Turdoides* spp.) in India. *Ibis* 121: 512-516.
- Grimmett, R., Inskipp, C. and Inskipp, T. (1998) *Birds of the Indian subcontinent*. London: Christopher Helm.
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