Munias of Mt. Abu (Rajasthan, India) with special emphasis on threatened Green Munia *Amandava formosa*

Satya P. Mehra[1], Sarita Sharma[2] and Reena Mathur[3]

[1]*Kesar Bhawan, 90, B/D Saraswati Hosp., Ganeshnagar, Pahada, Udaipur 313001, Rajasthan, India. Email: spmehra@sancharnet.in.*

[2]*C/O Mr. L. L. Sharma, village Gol, via Jawal, Sirohi, Rajasthan, India.*

[3]*Professor, Department of Zoology, University of Rajasthan, Jaipur, Rajasthan, India. Email: rmzooprof@sify.com.*

Introduction

McCann (1942) spent a short holiday at Mt. Abu and wrote, "It is an 'oasis' in the Rajputana desert, and a delightful place for a holiday". On the one hand, the rain-fed eastern side is full of semi-evergreen and deciduous flora, on the other, the drier western side gives way to xerophytic and deciduous plants (Champion 1961). In this varied habitat is found a diverse avifauna (Mehra & Sharma, in prep.). The Munias (Estrildinae) form an important part of this diversity, especially as this is the western limit of the distribution of the Globally Threatened Green Munia *Amandava formosa*. Mt. Abu has been assessed as an Important Bird Area due to the presence of this species. (Islam & Rahmani 2004).

Seven species of munias namely Red Munia *Amandava amandava*, Green Munia *A. formosa*, White-throated Munia *Lonchura malabarica*, White-rumped Munia *L. striata*, Black-throated Munia *L. kelaarti*, Spotted Munia *L. punctulata* and Black-headed Munia *L. malacca* are reported from India (Ali and Ripley 1987). Five of these, namely, Red, Green, White-throated, Spotted and Black-headed Munias are present at Mt. Abu. Grimmett et al. (1999) show that White-throated Munia is the most widely distributed munia in India followed by Spotted, Red, White-rumped and Black-headed, whereas distribution of Black-throated is restricted to the hills of southwest and east India, and that of Green Munia to patches of central India. Mt. Abu is the western limit of the Green Munia's distribution.

Study Area

Mt. Abu (*Ar-Booda*, "the hill of wisdom"; Shyamaldas 1886) (24°36'N, 72°45'E, Sirohi district, Rajasthan) is the only hill station (unnotified) in Rajasthan or Gujarat and is situated at the average height of 1,219 m.s.l. in the Abu Hills, on the south-western extremity of the Aravalis. Mt. Abu was declared as a 'closed area' in the early 1960s (pers. comm., Karan Singh Rathore, RFO, Mt. Abu Wildlife Sanctuary). Although the entire 328km^2 of Abu Hills have been declared as protected, officially only 112.98km^2 is under unnotified sanctuary area (Anonymous 2003). Mt. Abu Wildlife Sanctuary is long and narrow in shape, but the top spreads out into a picturesque plateau, which is about 19km in length and 5-8km in breadth.

Methodology

Regular seasonal surveys were conducted from January 2004 – August 15, 2005. Notes were taken on different species and the altitude and habitat they occupied. For convenience, five altitudinal zones were created and the study area along with its altitudinal zones was mapped (Figures 1 and 2).

The status of a species was established upon the following criteria: Very Common - More than ten birds of a species during a survey or at any time of the day; Common - More than five birds of a species during a survey or at any time of the day; Rare - Less than five birds during a survey or at any time of the day; Very Rare - One or two sightings of a bird or two during the entire study period.

Observations

White-throated Munia was sighted almost in every part of the Abu Hills irrespective of the altitudes. Itwas observed from the highest peak, Gurushikhar (1,722m), to the foothills of Mt. Abu. Spotted Munia was commonly sighted in the agricultural fields in the altitudinal range of 600-1,500m. Green Munia and Red Munia were found at the altitudinal range of 900-1,500m. Green Munia was very common on almost the entire plateau region above 900m, whereas Red Munia was rare and found in a few limited patches of dense bushes. Black-headed Munia was very rare and this is the first recorded sighting at Mt. Abu. Only three birds were sighted during June-July 2004. Except Green Munia, all the four species of munias were sighted throughout the day. Green Munias were seen during morning and evening, mainly on open ground, in the short dense bushes of *Lantana camara* or *Carissa spinarum*, as well in ripe maize and *jowar* fields. On overcast days we sighted them throughout the day.

Distribution of Munias

Above 1,500m: Gurushikhar and Bhairon ka Pathar are two prominent points within this range. Only White-throated Munia was sighted within this altitudinal range. Green Munia was sighted around *Taramandal* (Planetarium), at 1,630m.

1,200-1,500m: Charlie Point (Jalara Fields), Achalgarh, Oriya Village, Trevor's Tank, Palanpur Point, Jawai Dam, Shergaon, Kodra Dam and Sunset Point are important points within this range. First five sites were selected for the avifaunal studies. Except Black-headed Munia, all the other four specie were sighted in this range. Red Munia was rare and only sighted at Achalgarh whereas Green, White-throated and Spotted were very common in this zone. Achalgarh is important for the number of Green Munias sighted there.

900-1,200m: The main city along with Delwara, Sunrise Valley, Salgaon, Nesting Valley and Arna Village are important points within this range. All of them were selected as study sites. In this zone all five species were sighted from different points. Delwara was the main site for Green Munia.

600-900m: No prominent point was present within this zone. Only White-throated and Scaly-breasted Munias were sighted within these limits. Scaly-breasted were mainly sighted in and around agricultural fields whereas White-throated were common everywhere.

Below 600m: Chipaberi and Rishikesh temple are among the important points of this zone. Only White-throated and Spotted Munias were abundant in the lower area of Abu Hills.

Threats

The major threat for munias especially the Green Munia, is habitat alteration. Although construction activities are banned by the Honorable Supreme Court from 2002, illegal clearing of land is still rampant. Being a tourist spot, the development of hotels, and temporary camping grounds or parking lots on the feeding areas of this bird are constant threats. The activities of religious pilgrims also tend to disturb Green Munias.

There have been unconfirmed reports of poaching of this species (Mehra and Sharma

2004). This has now been confirmed by the tribals of village Gopala Nana, Saroopganj. Although the trapping of this species is not intensive, they are occasionally trapped for traditional medicinal use (remedial properties were not disclosed to us) as well as to meet the demand for aviary birds (?)from Gujarat.

Results and Discussions

Five species of munias, out of the seven reported from India, were sighted in the study area. The Black-headed Munia is reported for the first time from Mt. Abu. Butler (1875-1876) documented four species from here, excluding Black-headed Munia. Other works on the avifauna of Mt. Abu record the presence of Green, White-throated and Spotted Munias (Prakash and Singh 1995; Sharma 2002). Devarshi and Trigunayat (1989) mention only White-throated Munia.

The overall status of munias in the Abu Hills is: Red Munia *Amandava amandava* - Rare; Green Munia *A. formosa* - Common; White-throated Munia *Lonchura malabarica* - Very Common; Spotted Munia *L. punctulata* - Common; Black-headed Munia *L. malacca* - Very Rare.

Ahmed (1997, 1998) considered trade a major threat to Green Munia, and as a result of continued trapping, its populations appears to have been wiped out in many areas (Bhargava 1996). Although trapping is prevalent at Mt. Abu, it cannot be considered a major threat to the species. Its population can be monitored by regular patrolling and involving local residents in protecting its habitat. Increasing human population pressurises the sites where Green Munias feed. Strict implementation of the order of the Honorable Supreme Court is the only solution to check the human activities in the forest area.

Conclusions

At Abu Hills the Green Munia is restricted to the altitudinal range which is highly prone to anthropogenic activities like construction and habitat alteration. This needs immediate action if the dwindling population of the species is to be protected.

Acknowledgements

We thank Dr Asad R. Rahmani, Director BNHS, who encouraged us to study the Globally Threatened Green Munia in southern Rajasthan. We are thankful to the Department of Forest (Wildlife Division), Mt. Abu, especially to Mr Karan Singh Rathore and Mr Mahendra Saxena for their kind and generous help during the study. Further we are thankful to Mr Ramesh Mali for helping and making arrangements for our study. Special thanks to Mr Ainsley Priestman, Mr Walter Aubert and their families for providing us with historic information on the birds. We are also grateful to Dr A. K. Sharma, Mr Ajay Mehta, Mr Pradip Dave and Mr Praveen Mehra for their kind assistance. Last but not least, we thank our friends Shambhu Sharma and Praveen Sharma for their technical assistance and help in photography.

References

Ahmed, A. 1997. *Live bird trade in northern India*. Delhi: TRAFFIC-India.

Ahmed, A. 1998. Some observations of the Green Munia in the Indian bird trade. *Oriental Bird Club Bulletin* 27: 21–25.

Ali, Salim, and S. Dillon Ripley. 1987. *Compact handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka*. 2nd ed. (Sponsored by the Bombay Natural History Society.) Delhi: Oxford University Press.

Anonymous. 2003. *Rajasthan forest statistics*, 2003. Forest Department, Rajasthan.

Bhargava, R. 1996. Notes on Green Munia. *J. Bombay Nat. Hist. Soc.* 93: 588.

Birdlife International 2001. *Threatened birds of Asia: the Birdlife International Red Data Book*. Cambridge, UK: Birdlife International.

Butler, E. A. 1875–1877. Notes on the avifauna of Mount Aboo and northern Guzerat. *Stray Feathers* 3: 437–500; 4: 1–41; 5: 207–235.

Champion, H. G. 1961. A preliminary survey of the forest types of India. *Indian Forest Records, Silviculture* 1 (1): 123-125.

Devarshi, D. and Trigunayat, M. M. 1989. Checklist of the birds of Mt. Abu (Rajasthan). *Pavo* 27 (1&2): 59-63.

Grimmett, R, Inskipp, C. and Inskipp, T. 1999. *Birds of the Indian Subcontinent*. Oxford University Press, New Delhi.

Islam, M. Z. and Rahmani, A. R. 2004. *Important Bird Areas: Priority sites for conservation*. Indian Bird Conservation Network: Bombay Natural History Society and Birdlife International (UK).

McCann, C. 1942. A Bushman's Holiday in the Abu Hills. *J. Bombay Nat. Hist. Soc.* 43: 206-217.

Mehra, S. P.and Sharma, S. (in prep.). Altitudinal distribution of avifauna of Mt. Abu, Rajasthan, India.

Mehra, S. P. and Sharma, S. 2004. Additional site records of Green Munia *Amandava formosa* (Latham) from Mt. Abu, Sirohi. *Newsl. Ornithologists* 1(6): 84-85.

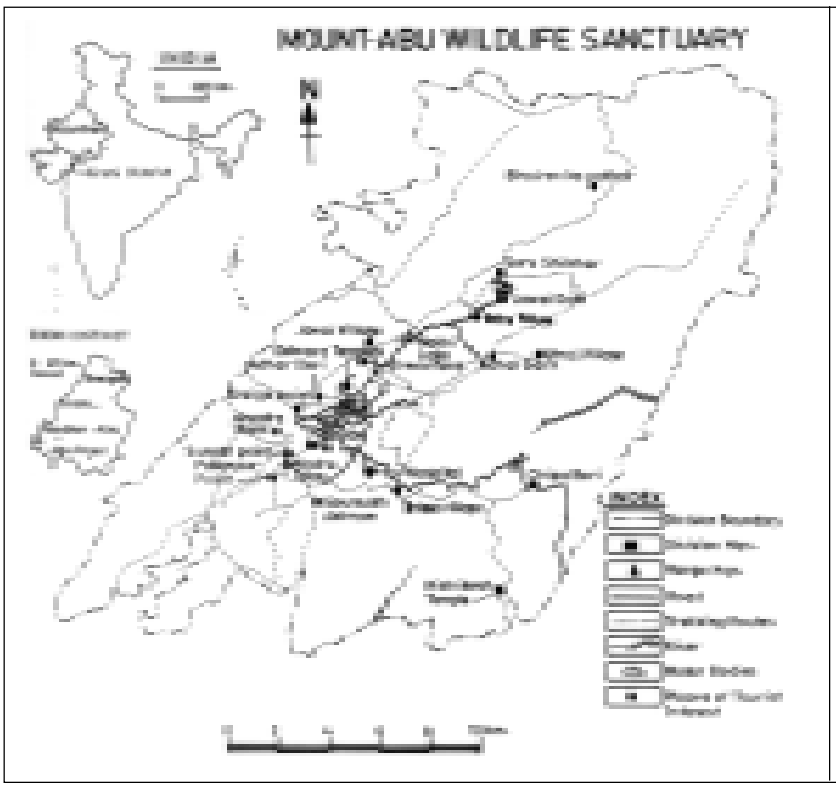
Prakash, I. and Singh, P. 1995. Some observations on the birds of Abu hill, Aravalli ranges. *Pavo* 33 (1–2): 99–110.

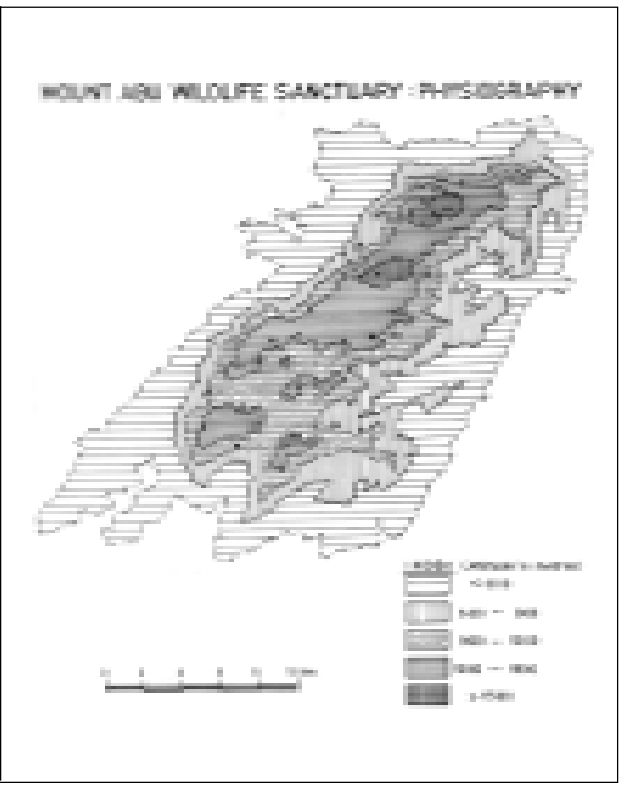
Sharma, S. K. 2002. Preliminary biodiversity survey of protected areas of southern Rajasthan. Unpublished. Pp 24.

Shyamaldas. 1886. *Veer Vinod - Mewar ka Itihaas* (in Hindi). Vol 1-3. Motilal Banarsidas, Delhi.

Table 1: Status of Munias (Estrildidae) at Mt. Abu

Altitude	Red Munia *Amandava amandava*	Green Munia *A. formosa*	White-throated Munia *Lonchura malabarica*	Spotted Munia *L. punctulata*	Black-headed Munia *L. malacca*
Above 1,500m	Not sighted	Rare	Common	Not sighted	Not sighted
1,200-1,500m	Rare	Common	Common	Common	Not sighted
900-1,200m	Rare	Common	Common	Common	Very rare
600-900m	Not sighted	Not sighted	Common	Common	Not sighted
Below 600m	Not sighted	Not sighted	Common	Common	Not sighted





Bird ringing around Hyderabad city, Andhra Pradesh, India

Humayun Taher[1], Hyder Jaffer[2] & Hatim Jaffer[2]

[1]*2-B Atlas Apartments, Road No. 10, Banjara Hills, Hyderabad 500034, India. Email: baazdaar@yahoo.co.uk.* Corresponding author.

[2]*18-7-360/8 Yakhutpura, Hyderabad 500023, India. Email: indianfalconer@rediffmail.com*

The Birdwatcher's Society of Andhra Pradesh (BSAP), in conjunction with the Bombay Natural History Society (BNHS), has been conducting bird ringing activities around Hyderabad city (Andhra Pradesh, India) for five years (from 1998 through 2002). Most of the birds so far ringed have been raptors, particularly Common Kestrel *Falco tinnunculus*, with one Red-headed Falcon *Falco chiquera*, three Shikras *Accipiter badius*, one Black-shouldered Kite *Elanus caeruleus*, one Western Marsh-Harrier *Circus aeruginosus* and one Barn Owl *Tyto alba*. In addition to these, we have also ringed, at various times, two Pied Crested Cuckoos *Clamator jacobinus*, two Indian Pittas *Pitta brachyura* and one Common Quail *Coturnix coturnix*, plus a few Baya Weaver *Ploceus philippinus*. Some of the birds which we have ringed from time to time are given in Table 1.

Below is given a brief account of ringing activities, with specific reference to raptorial birds (Table 1). All the data collected from the birds so far ringed is not presented. This will form the subject matter of a future article. The non-raptorial birds that were ringed were mostly acquired from the illegal bird market near Charminar, in the 'Old City'. Most of the raptors were trapped by us for the express purpose of ringing.

Bearing in mind that, with the exception of *Falco tinnunculus*, none of the other smaller raptors found around the city were migratory, we confined our activities to the Common Kestrel. The other birds of prey (*Falco chiquera*, *Accipiter badius*, *Elanus caeruleus*, *Tyto alba* and *Circus aeruginosus*) that we ringed, had either been purchased or inadvertently caught, as we were rather new to ringing at that stage and tended to become a trifle over-enthusiastic.

Ringing was mostly conducted in the areas around Nadergul, Jalpally, Mamidipally, Tukkuguda and Balapur, (all in Rangareddi district), within a 10-15km radius, east of Hyderabad. This area has suitable habitat for small raptors, particularly Common Kestrel, because of the open grass areas and an abundance of locusts and other small prey species that form the staple diet of this falcon. As a result, there is always a sizeable population of this species in the area during the season when the birds migrate to south India.

Unfortunately, none of the ringed birds has been recovered from outside India. However, a few interesting aspects have emerged from our ringing activities, which we describe below:

1. One of the main things that we have noticed is that Common Kestrels are highly territorial birds, and this territoriality is seen in successive years. The territoriality has also apparently given rise to a strong homing instinct. These observations are based on our trapping and re-trapping records. We have only twice managed to actually re-trap an earlier ringed bird (see below), but we have seen the ringed birds in the area from where they had originally been trapped. For example, a first year male Common Kestrel which was trapped and ringed (ring no. 44920) in Balapur on 5.xii.1999, was seen later in the same area for over three months from that date. Our last sighting of the bird was on 23.iii.2000. Another Common Kestrel bearing ring number C-44909 was caught near Nadergul on 11.i.1999, ringed and released. It was again trapped in the same locality on 21.xi.1999. This indicates that the birds return each season to the same locality.

2. Territoriality also appears to have developed a good homing instinct in this species. On one occasion, an adult male, which had been trapped in Nadergul on 28.xi.1998, was brought to the city and released near the Kasu Brahmananda Reddy (K.B.R.) National Park in Jubilee Hills.