REFERENCES

- ALTMANN, J. (1974): Observational study of behaviour: sampling methods *Behaviour 49*: 227-266.
- Borges, R.M. (1993): Resource heterogeneity and the foraging ecology of the Malabar Giant Squirrel (*Ratufa indica*). Ph.D. dissertation, University of Miami, Florida.
- CHAMPION, H.G. & S.K. SETH (1968): A revised survey of the forest types of India. Govt. of India Publications, New Delhi.
- DATTA, A. (1993): Space-use patterns of the Indian giant squirrel (*Ratufa indica centralis*) in relation to food availability in Bori Wildlife Sanctuary, Madhya Pradesh, India. Unpubl. M.Sc. thesis, Saurashtra University, Rajkot, Gujarat.
- EMMONS, L.H. (1980): Ecology and resource partitioning among nine species of African rain forest squirrels.

- Ecological Monogr. 50(1): 31-54.
- Hall, J.G. (1981): A field study of the Kaibab squirrel in the Grand Canyon National Park. Wildlife Monogr. 75: 1-54.
- JOSHUA, J. (1992): Ecology of the endangered grizzled giant squirrel (*Ratufa macroura*) in Tamil Nadu, South India. Ph.D. dissertation, Bharatidasan University, Tiruchirapalli, Tamil Nadu.
- JOSHUA, J. & A.J.T JOHNSINGH (1994): Impact of biotic disturbances on the habitat and population of the endangered grizzled giant squirrel (Ratufa macroura) in south India. Biol. Cons. 68(1): 29-34.
- RAMACHANDRAN, K.K. (1991): Ecology and Behaviour of Malabar Giant Squirrel (*Ratufa indica maxima*) Schreber. K.F.R.I. Research Report: 55 (Summary).

5. A RECORD NUMBER OF BLACKNECKED GREBE PODICEPS NIGRICOLLIS FROM GUJARAT

We visited Okha (22° 15' N, 69° 01' E) in Jamnagar dist., Gujarat on December 28, 1996. On getting information of blacknecked grebe Podiceps nigricollis at the nearby Charakla salt farm (40 km. east of Okha), we reached there at 1720 hrs. We observed two salt water ponds measuring 2 sq. km and about 2 m deep, where the grebes had concentrated. Two neighbouring ponds of similar dimensions did not have any grebe. Since the grebes dive frequently and come to the surface at a short distance, we found it a little difficult to make an accurate count. A total count of 201 blacknecked grebe is a minimum estimated number but we believe the actual number to be a little higher. The other birds worth noting in the same area are as follows:

Flamingo	Phoenicopterus	
and beserved the se-	roseus	494
Lesser Flamingo	Phoeniconaias	
erlants GufferBroader	minor	315
Slenderbilled Gull	Larus geni	129

We also recorded 9 blacknecked grebe in a bird sanctuary at Porbander (21° 37' N, 69° 49'

E) on December 31, 1996. 3 grebes previously sighted at the same site on April 1, 1996 indicate that they might be regular visitors to the area.

One of us (BMP) has also recorded the species in central Gujarat — one bird at Nalsarovar, 25.i.1996; one bird on Vadadhla irrigation tank in Vadodara dist. 17.i.1993; and one bird on Kanewal reservoir, in Kheda dist., 12.i.1988.

Though the blacknecked grebe is recorded breeding in Baluchistan, it is an uncommon winter visitor to Nepal, Uttar Pradesh, Punjab, Gujarat and Maharashtra (Ali and Ripley 1983). In Gujarat, the species has been recorded sewage canals in Bhavnagar (Dharmakumarsinhji 1952) and salt pans of Jamnagar dist. (Naik et al. 1991). Ali (1945, 1954) had not recorded this species during his survey of the birds of Kutch and Gujarat. However, since 1987, a few birds are being reported from Gujarat every year during the Midwinter Waterfowl Census. Our present record of its number and distribution supports Ali and Ripley's (1983) presumption that the species

possibly occurs more generally in northern India than is believed. Occurrence of 201 grebes at Charakla salt pans is the largest number recorded from Indian territory.

We are obliged to Shri Fatehsingh Jasol, I.A.S., of Gujarat, for information regarding the presence of the grebes. We also thank the Indian Council of Agricultural Research, New Delhi,

for financial support.

June 9, 1997

B.M. PARASHARYA
AESHITA MUKHERJEE
Project on Wetland Birds
Biocontrol Laboratory
Gujarat Agricultural University
Anand-388 110.

REFERENCES

ALI, S. (1945): The Birds of Kutch, Oxford University Press, Delhi.

ALI, S. (1954): The Birds of Gujarat, Part-I. J. Bombay nat. Hist. Soc. 52 (2 & 3): 374-458.

ALI, S. & S.D. RIPLEY (1983): Handbook of the Birds of India and Pakistan (Compact Ed.) Oxford University Press, Delhi, pp 737.

Dharmakumarsinhii, K.S. (1952): Blacknecked Grebe Podiceps nigricollis Brehm in Bhavnagar. J. Bombay nat. Hist. Soc. 50 (3): 664. NAIK, R. M., M.S. MURTHY, A.P. MANSURY, Y.N. RAO, R. PRAVEZ, T. MUNDKAR, S. KRISHNAN, P.J. FALDU & T.S.V.R. KRISHNA (1991): Coastal marine ecosystems and anthropogenic pressure in the Gulf of Kachchh. Final report submitted to WWF-India. Dept. Biosciences, Saurashtra Univ., Rajkot.

RIPLEY, S.D. (1982): A synopsis of the birds of India and Pakistan (Second Ed.). Bombay Natural History Society. Oxford University Press, Mumbai.

6. ON THE OCCURRENCE OF THE LESSER FRIGATE BIRD (FREGATA MINOR) IN MUMBAI, INDIA

On the evening of 18th June 1996, a strong wind started blowing from the sea, stirring up high waves. The storm continued throughout the night, with the wind blowing upto 80 km per hr. In the night several big ships drifted towards the shore and were stranded. The storm skirted Mumbai and went on towards Gujarat. The next morning it was cloudy, with the wind still blowing, but not as strong as it had been in the night.

In the morning two frigate birds were noticed from the 13th floor of a building overlooking Mumbai harbour. The birds were flying around quite high, with considerable ease on long wings. They looked completely dark brown, with longish forked tail and pale brown band on the underwing. They were about the size of a kite but a lot slimmer. Thrice the birds came very close to the building and could be examined quite closely. They were identified as lesser frigate birds (*Fregata minor*). We looked out for

white patches under the wing but there were none. Comparing a published description and the birds seen, we concluded that the birds appeared to be males.

The only Indian specimen of lesser frigate bird is that of a storm blown one found entangled in a fishing net near Quilon, Kerala. The last sight records from the west coast are from Mumbai 43 years ago (Taylor 1953). Two recent sight records are from the eastern coast, both storm blown birds. Balachandran et al. (1984) sighted a straggler at Point Calimere on 23rd Dec. 1983 and Rao and Mohapatra (1992) at Sriharikota on 29th July, 1991.

November 18, 1996 KIRAN SRIVASTAVA

13, Meherdad, Cuffe Parade,

Mumbai-400 021.

NITIN JAMDAR

5-A, Samata, near Mantralaya,

Gen. J. Bhosale Road, Mumbai-400 021.



Parasharya, B M and Mukherjee, Aeshita. 1998. "A record number of blacknecked grebe Podiceps nigricollis from Gujarat." *The journal of the Bombay Natural History Society* 95, 335–336.

View This Item Online: https://www.biodiversitylibrary.org/item/189682

Permalink: https://www.biodiversitylibrary.org/partpdf/155933

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder

License: http://creativecommons.org/licenses/by-nc/3.0/ Rights: https://www.biodiversitylibrary.org/permissions/

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at https://www.biodiversitylibrary.org.