

ANNUAL PROGRESS REPORT

August 1992 to October 1993

R Sankaran

Scientist (Avian Ecology)

Research & Publication:

Project proposals and Publications:

August - November 1992

Project proposals written:

'A study on the ecology, status and conservation perspectives of certain rare endangered avifauna of the Andaman & Nicobar Islands'.

Papers submitted:

- 1) The territorial behaviour of the lesser florican. Accepted by JBNHS.
- 2) Territorial displays of the Bengal florican. Submitted to Auk.

Field work:

November - April 1993. Survey of the Nicobar group of Islands. Covered 8 islands on foot.

Output: Report completed, 5 papers in preparation.

April - June 1993. Survey of Nanda Devi National Park. Output: Report completed. 1 paper submitted.

Project proposals and Publications:

July to October 1993:

Reports:

- 1) An ornithological survey of Nanda Devi National Park. July 1993.
- 2) Urgent Conservation actions in the Nicobar group of Islands. July 1993.
- 2) Status and conservation of the Nicobar Scrubfowl. October 1993.

Project Proposals:

- 1) The status and conservation planning of the lesser florican in western India'.

Papers submitted:

- 1) An ornithological survey of Nanda Devi National Park. Submitted to Forktail.

Papers in Preparation:

- 1) Status and conservation of the Nicobar scrubfowl. Target journal: Conservation Biology(?).
- 2) The mound in the Nicobar scrubfowl. Target journal: Emu.
- 3) The avifauna of the Andaman & Nicobar Islands. A review and the current scenario. National Seminar by Ornithological society of India.
- 4) Current conservation perspectives in the Nicobars. Target journal: Environmental conservation.
- 5) A recent survey of the Nicobars. Target journal: Hamadryad.

Lectures given:

- 1) On the Floricans. At Lalit Kala Academy, organised by the Madras Naturalists Society on 25 July 1993.
- 2) On Nanda Devi Expedition.
 - a) To the Engineer in Chief, Corps of Engineers at New Delhi on 9 July 1993, at Delhi.
 - b) To the Chief of Army Staff, Indian Army on 12 July 1993, at New Delhi.
 - c) To the first meeting of the Scientific Advisory Committee on Biosphere Reserves, on 26 August 1993, at Paryavaran Bhavan, New Delhi, under the Chairmanship of the Secretary, Ministry of Environment and Forests.

Workshops attended:

Avian Conservation Workshop. 2 to 4 August 1993. At SACON, Coimbatore.

Following presentations were made.

- 1) The Status and Conservation of the Lesser Florican.
- 2) The Status and Conservation of the Nicobar Scrubfowl.
- 3) The Thar Desert.
- 4) The Andaman and Nicobar Islands.

Miscellaneous:

- 1) Information communicated to Dr. F Lambert, for the book titled 'Pittas, Broadbills and Asity's of the world' on the Nicobar or Hooded pitta *Pitta sordida abbotti*.
- 2) Commented on parts pertaining to the Nicobar Scrubfowl of the Megapode Action Plan, to be published in the Species Survival Commission of the IUCN.
- 3) Commented on the section on megapodes on a book under preparation on the Avifauna of the Indian sub-continent.
- 4) Invited to write an article on the lesser florican for World Birdwatch. Article under preparation.

General:

August 1992 - November 1992 & August 1993 - October 1993.

Purchase of Binoculars; purchase of miscellaneous equipment for the field; getting quotations for laboratory equipment, slide projector, over head projector etc. Preparation of comparative price charts of equipment to be purchased.

Collection of references at the BNHS library on Avifauna of the Andaman & Nicobar Islands.

Purchase of Survey of India Topo Sheets and Hydrgraphic maps of Andaman & Nicobar Islands.

~~11/1/93~~ 11/1/93. Walked to 'Aiyoub'. Camped surveyed coast.

2/1/93 Camp at Aiyoub. Surveyed coast.

3/1/93 Walked upto 'kantan'. Camped.

4/1/93 Surveyed coast.

5/1/93 Walked upto opp. Kondul. Camped. Crossed to Kondul by Nicobari canoe. Bought Provision. Returned.

6/1/93 Surveyed coast.

7/1/93 By fishy boat from camp to across Richard Mauti. Camped.

8/1/93 Walked \leq 4-4 1/2 hrs. Camped. Tides prevent crossing of Rocks.

9/1/93 Walked upto bay just before Trinkhat. Camped.

10/1/93 Crossed into Trinkhat. Camped.

11/1/93 Walked upto Rayam bay. Camped.

12/1/93 Survey of coast.

13/1/93 Walked upto latul. Night halt.

14/1/93 Walked to Navy Dera.

15/1/93 Navy Dera.

16/1/93 Navy Dera

17/1/93 Navy Dera

18/1/93 Walked from camp Navy Dera upto Quarry where got a lift by truck to Campbell Bay.

19/1/93 - 21/1/93 Campbell Bay.

22/1/93 C' Bay - survey of k.m. 13-16 N.S. Road.

23/1/93 Survey of k.m. 27-35 on N.S. Road. Camp 41.

24/1/93 Survey of old airstrip.

25/1/93 '41' - C' Bay

26/1/93 - 28/1/93 C' Bay.

29/1/93 Departure to little Nicobar (Proposed)

Ravi Sankaran.

April - June 1994
(Progress report)

Projects

1. Status of the Nicobar Megapode *Megapodius nicobariensis*

The Nicobar islands were surveyed twice, between December 1992 and April 1993 and December 1993 and April 1994 to assess the status of the megapode.

The Nicobar megapode, a mound nesting megapode, occurs as two subspecies *Megapodius nicobariensis nicobariensis* and *M. n. abbotti*, both endemic to the Nicobar Islands. Thought to be endangered, this survey found it on almost all Nicobar islands where it historically occurred and concluded that, as a species, was currently not threatened. It has probably become extinct only on inhabited Pilo Milo island. While *M. n. abbotti* is secure other than on small outlying islets, *M. n. nicobariensis* is threatened on all but 3 islands of its range. Loss of population in *M. n. nicobariensis* was indicated both by significantly lower mound densities and by a higher proportion of abandoned mounds to active mounds, when compared with *M. n. abbotti*. Data was collected for 127 active mounds of *M. n. abbotti* and 85 active mounds of *M. n. nicobariensis*, and it was estimated that 848 and 312 active mounds respectively are present, and the population of the species is between 4500 and 8000 adult birds. Though hunting and collection of eggs existed, the main threat to megapodes is loss of habitat which was mainly due to conversion of coastal forest, the megapode's primary nesting habitat, to coconut plantations. Expanding urbanization and construction of coastal roads are other serious problems. The single largest threat is a proposal to make Great Nicobar a free trade port which, if implemented, will destroy the Andaman and Nicobar islands.

2. Status Survey and Conservation Planning for the Lesser Florican

Preliminary letter of intent and circular on the conservation problem of the lesser florican has been circulated. The Survey commences on the 15 of July. Full co-operation and support by the Gujarat Forest Department and the Gujarat Ecology Commission has been assured to us.

Publications

1. Distribution, status and conservation of the Nicobar Megapode *Megapodius nicobariensis*. Accepted for publication in Biological Conservation.
2. Courtship displays in the Bengal florican. Submitted JBNHS

Reports

(Under Preparation)

1. Status of the Nicobar Megapode *Megapodius nicobariensis* and notes on the endemic avifauna of the Nicobar islands.
2. Conserving the Nicobar group of islands.

Other Activities

1. Discussion on lesser florican survey and workshop with officials in Baroda and Ahmdabad, and A.R. Rahmani, AMU.
2. Gave lecture to MSc students at the Centre for Wildlife & Ornithology at AMU.
3. Gave lecture at Rishi Valley School to the students, staff and invitees on the occasion of the release of the book, 'The Birds of Rishi Valley'.
4. Preparation of a manual for the conservation of the lesser florican.

R Sankaran
Scientist
Avian Ecology

Monthly Report - September 1994

R Sankaran

1. Survey of lesser Florican was concluded
2. Workshop on lesser florican conservation was discussed with Officials / N.G.Os in MP & Gujarat
3. 147 lesser florican were sighted during the survey.
4. The workshop is to be held at Baroda, Hotel Surya Palace on December 2nd & 3rd. Target officials of Gujarat & M.P Forest Department will most probably support and participate.

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R Sankaran

Summary of accomplishment August 1992 - November 1995

31 July 1995 : Joined SACON

Publications

Papers

1. Sankaran, R. 1994. Some Aspects of the territorial system in the Lesser Florican. *J Bom. nat Hist. Soc.* 91: 173-186.
2. Sankaran, R. 1995. The distribution, status and conservation of the Nicobar Megapode *Megapodius nicobariensis*. *Biol. Cons.* 72: 17-26.
3. Sankaran, R. 1995. Ornithological survey of Nanda Devi National Park, India. *Forktail* 10: 115-128.

Reports

4. Sankaran, R. 1993. A Study on the ecology, status and conservation perspectives of certain rare and endemic avifauna of the Andaman and Nicobar islands. Urgent conservation actions in the Nicobar islands. Unpubl. report. Salim Ali Centre for Ornithology and Natural History, Coimbatore.
5. Sankaran, R. 1993. An ornithological survey of Nanda Devi National Park. Pages 16-34 in Scientific & Ecological expedition to Nanda Devi. Corps. of Engineers (Army), WII, SACON, WWF-India, GBPIHED, BSI.
6. Sankaran, R. 1994. The Status and Conservation of the Nicobar Scrubfowl *Megapodius nicobariensis*. Unpubl. report. Salim Ali Centre for Ornithology and Natural History, Coimbatore
7. Sankaran, R. 1995. *The Nicobar Megapode and other endemic avifauna of the Nicobar islands*. SACON Technical Report 2. Salim Ali Centre for Ornithology and Natural History, Coimbatore.
8. Sankaran, R. 1995. *Impact assessment of nest collection on the Edible-nest Swiftlet in the Nicobar islands*. SACON Occasional Report 1. Salim Ali Centre for Ornithology and Natural History, Coimbatore.

Seminar / workshop proceedings

9. Sankaran, R. & Vjayan, L. 1993. The avifauna of the Andaman and Nicobar islands: A review and the current scenario. In *Bird conservation. Strategies for the nineties and beyond* (A. Verghese, S. Sridhar and A.K. Chakravarthy eds) pp 255-271. Bangalore: Ornithological Society of India.
10. Sankaran, R. 1995. The status and conservation of the Lesser Florican. Pp 22-24 in *Avian Conservation in India* (L. Vijayan, ed.). Salim Ali Centre for Ornithology and Natural History, Coimbatore.
11. Sankaran, R. 1995. Distribution, status and conservation of the Nicobar megapode. Pp 43-44 in *Avian Conservation in India* (L. Vijayan, ed.). Salim Ali Centre for Ornithology and Natural History, Coimbatore.
12. Sankaran, R. 1995. Avifauna of the Andaman and Nicobar islands. Pp 56-57 in *Avian Conservation in India* (L. Vijayan, ed.). Salim Ali Centre for Ornithology and Natural History, Coimbatore.
13. Rahmani, A.R. and Sankaran, R. 1995. The Indian Thar Desert. Pp 61-62 in *Avian Conservation in India* (L. Vijayan, ed.). Salim Ali Centre for Ornithology and Natural History, Coimbatore.
14. Sankaran, R. (compiler). 1995. Restoration and management of grasslands

Appendix 1

A. Publications

(note: papers submitted, accepted or in press have not been listed. Between April 1st 1993 and 31st March 1995, I have published 3 papers, 1 report, 5 papers in workshops / seminars, compiled 1 action plan, 1 popular article, 6 miscellaneous articles / reports, and 3 papers have been accepted for publication or are in press. A total of 20).

Papers

1. Sankaran, R. 1995. The distribution, status and conservation of the Nicobar Megapode *Megapodius nicobariensis*. *Biol. Cons.* 72: 17-26.
2. Sankaran, R. 1995. Ornithological survey of Nanda Devi National Park, India. *Forktail* 10: 115-128.

Reports

3. Sankaran, R. 1995. *The Nicobar Megapode and other endemic avifauna of the Nicobar islands*. SACON Technical Report 2. Salim Ali Centre for Ornithology and Natural History, Coimbatore.

Seminar / workshop proceedings

4. Sankaran, R. 1995. The status and conservation of the Lesser Florican. Pp 22-24 in *Avian Conservation in India* (L. Vijayan, ed.). Salim Ali Centre for Ornithology and Natural History, Coimbatore.
5. Sankaran, R. 1995. Distribution, status and conservation of the Nicobar megapode. Pp 43-44 in *Avian Conservation in India* (L. Vijayan, ed.). Salim Ali Centre for Ornithology and Natural History, Coimbatore.
6. Sankaran, R. 1995. Avifauna of the Andaman and Nicobar islands. Pp 56-57 in *Avian Conservation in India* (L. Vijayan, ed.). Salim Ali Centre for Ornithology and Natural History, Coimbatore.
7. Rahmani, A.R. and Sankaran, R. 1995. The Indian Thar Desert. Pp 61-62 in *Avian Conservation in India* (L. Vijayan, ed.). Salim Ali Centre for Ornithology and Natural History, Coimbatore.
8. Sankaran, R. (compiler). 1995. Restoration and management of grasslands for people and the lesser florican. Action Plan. Salim Ali Centre for Ornithology and Natural History, Coimbatore.

Miscellaneous

9. Sankaran, R. 1995. The Nicobar megapode. *Megapode Newsletter*.
10. Sankaran, R. 1995. Workshop on the management and restoration of grasslands for people and the lesser florican. *Saconnews* 2: 10.
11. Sankaran, R. 1994. Background Paper for Workshop on Conservation of the Lesser Florican. Salim Ali Centre for Ornithology and Natural History, Coimbatore.

Curriculum Vitae

Ravi Sankaran

Career focus: Over the past 12 years, I have developed a specialised understanding of the issues related to the ecology and conservation of species, natural and agrarian habitats. My career interests revolve around the formulation and implementation of sustainable conservation action plans. Philosophically such action plans have to be consistent with the socio-economic characteristics and aspirations of the region. Thus I am interested in developing a career within an agency whose focus is on sustainable development within the framework of the preservation of local, regional and global biodiversity.

The Eastern Himalayas, and its lowland and montane rainforests in particular, is amongst the richest in biological diversity in Asia. Over the next few years, I intend to focus on the development of pragmatic conservation action plans for hotspots of avian endemism in the Eastern Himalayas, and advocate their implementation. This would necessitate intensive surveys to identify important endemic bird areas, and an assessment of the dependency of local communities at these sites to develop pragmatic site specific conservation action measures.

Nationality	Indian
Date of Birth	4 th October 1963
Mailing Address	Sálím Ali Centre for Ornithology & Natural History Kalampalayam P.O., Coimbatore 641 010, India Tel. +91 +422 807952, 807973, 807983
Qualification	Ph.D. 1991; Bombay University Topic 'Some aspects of the breeding behaviour of the Lesser Florican <i>Sypheotides indica</i> J.F. Miller and the Bengal Florican <i>Houbaropsis bengalensis</i> Gmelin.'
Present Assignment	August 1992 onwards Sálím Ali Centre for Ornithology & Natural History Scientist, Avian Ecology
Past Assignment	April 1985 - June 1992 Bombay Natural History Society 1985-1990. Endangered species project 1991-1992. Grassland ecology project Designation: Junior Scientist
Languages	English, Hindi, Tamil
Computer knowledge	Proficient

- Area of expertise** →
- * Ecological research of species, estimation of population, assessment of habitat quality and threats
 - * Development of protected area networks based on biological, ecological and socio-economic criteria
 - * The development and implementation of programmes for the sustainable use of habitats, particularly those that have had traditional utilisation systems
 - * Working with local communities, NGOs and Government Departments

Work Experience

A. 1992-present : A study on the status, ecology and conservation perspectives of certain rare and endemic avifauna of the Andaman & Nicobar islands, (Co-Investigator)

Species : All endemic species and subspecies of avifauna with a focus on the Nicobar Megapode *Megapodius nicobariensis*, Andaman Teal *Anas gibberifrons* and Narcondam Hornbill *Rhyticeros narcondami*.

Habitat : Forests, grasslands and wetlands

Geographical area : Andaman & Nicobar islands

Nature of work : Assessment of population of endemic avifauna and evaluation of to evaluate threats to them. Ecological research on focal species to prepare management plans for key forested and wetland habitats. Developing a protected area network in the Andaman & Nicobar islands.

Output : Documentation of the status of the Nicobar Megapode and other endemic avifauna of the Nicobar islands, and the development of a protected area network in the Nicobar islands. The protected area network plan has the particular view of safeguarding the lifestyles of indigenous tribes.

B. 1994-present : The conservation of the Lesser Florican and its economically important habitat in Western India (Principal Investigator / Programme coordinator)

Species : Lesser Florican *Sypheotides indica*

Habitat : Protected fodder producing grasslands locally known as *Bheed*, *Vidi*, *Rakhal*, or *Jod*.

Geographical Area : Western Madhya Pradesh, Saurashtra, Kutch, eastern Gujarat, central and eastern Rajasthan.

Nature of work : This conservation action implementation programme, advocated the conservation of the Lesser Florican and its economically important habitat through workshops at regional, state and district levels, publicity material, and interaction with village and taluk level people in important florican areas. The programme also involve^s advocating florican with the government, with a particular view of incorporating further areas into the existing protected fodder producing grasslands. The Lesser Florican's breeding range is periodically surveyed to monitor trends in the population.

Output : The formulation of an action plan for the conservation of the Lesser Florican and the sustainable use of its economically important habitat. This action plan is being implemented with the active support of local people and government agencies.

C. 1995 - 1997 : Impact assessment of nest collection on the Edible-nest Swiftlet in the Andaman & Nicobar Island. (Principal Investigator)

Species : Edible-nest Swiftlet *Collocalia fuciphaga*
 Habitat : Caves, cliffs and grottoes
 Geographical Area : Andaman & Nicobar islands
 Nature of work : Survey of Edible-nest Swiftlet nesting colonies to assess populations through nest counts. Assess the impact of nest collection by eliciting information on past yields from nest collectors and traders.
 Output : Documentation on the impact of nest collection on the swiftlets, and the formulation of a pragmatic conservation action programme that advocated the development of house farming, analogous to apiculture, to save the species and form a source of sustainable utilisation of a natural resource.

D. 1985-1991 Study of the ecology of certain endangered species of wildlife and their habitats. (Junior Scientist) →

Species : Lesser Florican *Sypheotides indica*
 Habitat : Protected fodder producing grasslands locally known as *Bheed*, *Vidi*, *Rakhal*, or *Jod*. →
 Geographical area : Western Madhya Pradesh, Saurashtra, Kutch, Eastern Gujarat, Central and Eastern Rajasthan →
 Nature of Work : Study of the breeding biology, and the impact of a variable southwest monsoon and livestock grazing on grasslands and on the Lesser Florican. Extensive surveys of the species' breeding range to estimate population and to assess the extent, status and threats to fodder producing grasslands.

Species : Bengal Florican *Houbaropsis bengalensis*
 Habitat : Humid grasslands of the *terai* and *duars*
 Geographical Area : Uttar Pradesh (Dudwa Tiger Reserve), Bengal & Assam.
 Nature of Work : Breeding biology and the impact of fire on grasslands. Surveyed most protected areas in the *terai* and *duars* of Uttar Pradesh, Bengal and Assam to assess the status of the species and its grassland habitat.

Species : Great Indian Bustard *Ardeotis nigriceps*
 Habitat : *Zizyphus* scrub, semi-arid grasslands and desert
 Geographical Area : Western Rajasthan, North-western Madhya Pradesh
 Nature of Work : Behavioural studies and population status surveys

Species : Mountain Quail *Ophrysiosa superciliosa*
 Habitat : Himalayan grass covered mountain slopes
 Geographical Area : Around Mussoorie, Uttar Pradesh
 Nature of work : Preliminary survey

Output : Documentation of the ecology and behaviour of the species, and the development of management plans.

E. 1991-1992 A study on the ecology of the grasslands of the Indian plains with special references to their endangered avifauna. (Junior Scientist)

Species : All species of avifauna, ungulates, carnivores and flora
 Habitat : Thar Desert
 Geographical Area : Jaisalmer and Barmer districts of Western Rajasthan
 Nature of Work : Community ecology to examine the effects of exclosure from livestock grazing on the desert ecosystem. Status survey of the livestock exclosures in the Desert National Park and

surveys to identify further areas where more such enclosures could be created.

Output : Development of preliminary reports on the management of desert grasslands

F. 1985-present Additional research programmes

1. Study of wetland avifauna by participating in the banding of over 4000 birds.
2. The causes of decline in the swamp deer *Cervus duvauceli* in the Dudwa Tiger Reserve.
3. Group sizes and habitat use in the Red Jungle Fowl *Gallus gallus* in the Dudwa Tiger Reserve.
4. Group sizes and habitat use in the Hog deer *Axis porcinus* Dudwa Tiger Reserve.
5. In collaboration with others, documenting decline of the tiger in the Dudwa Tiger Reserve.
6. Ornithological Survey of Nanda Devi National Park.

Workshops Convened

1. Management and restoration of grasslands for people and the Lesser Florican. 2 & 3 December, 1994. Vadodara, Gujarat.
2. Conservation of the Lesser Florican in Rajasthan. 28 July, 1996. Kota, Rajasthan.

Publications

1. Sankaran, R. 1997. Developing a protected area network in the Nicobar islands: The perspective of endemic avifauna. **Biodiversity and Conservation 6**: 797-815.
2. Sankaran, R. 1997 Nesting in the Lesser Florican during the south west monsoon. **J. Bombay Nat. Hist. Soc. 94**: 401-403.
3. Sankaran, R. 1997. The relation between bustard body size and display type. **J. Bombay Nat. Hist. Soc. 94**: 403-406.
4. Sankaran, R. 1997. Habitat use in the Lesser Florican in a mosaic of grassland and cropland. The influence of grazing and rainfall. **J. Bombay Nat. Hist. Soc. 94**: 40-47.
5. Sankaran, R. 1996. Aerial Display of the Lesser Florican. **J. Bombay Nat. Hist. Soc. 93**: 401-410.
6. Sankaran, R. 1996. Territorial displays of the Bengal Florican. **J. Bombay Nat. Hist. Soc. 93**: 167-177.
7. Sankaran, R. 1995. The distribution status and conservation of the Nicobar Megapode *Megapodius nicobariensis*. **Biological Conservation 72**: 17-26.
8. Sankaran, R. 1995. Ornithological survey of Nanda Devi National Park, India. **Forktail 10**: 115-128.
9. Sankaran, R. 1995. The decline of the Edible-nest Swiftlet in the Nicobar islands. **Oriental Bird Club Bulletin 22**: 42-45.
10. Sankaran, R. 1995. A fresh initiative to conserve the Lesser Florican. **Oriental Bird Club Bulletin 22**: 51-54.
11. Sankaran, R. 1994. Some aspects of the territorial system in the Lesser Florican. **J. Bombay Nat. Hist. Soc. 91**: 173-196.
12. Sankaran, R., A.R. Rahmani & U.G. Lachungpa. 1992. The distribution and status of the Lesser Florican *Sypheotides indica* (J.F. Miller) in the Indian subcontinent. **J. Bombay Nat. Hist. Soc. 89**: 156-179.
13. Rahmani, A.R. & R. Sankaran. 1991. Blackbuck and Chinkara in the Thar Desert: a changing scenario. **J. Arid Environment 20**: 379-391.
14. Rahmani, A.R., G. Narayan, R. Sankaran, L. Rosalind and U.G. Lachungpa. 1991. Status of the Bengal Florican in India. **J. Bombay Nat. Hist. Soc. 88**: 349-375.

15. Sankaran, R. & R. Manakadan. 1990. Recent breeding records of the lesser florican (Miller) from Andhra Pradesh. **J. Bombay Nat. Hist. Soc.** **87**: 294-296.
16. Sankaran, R. 1990. Status of the swamp deer *Cervus duvauceli duvauceli* in Dudwa National Park, Uttar Pradesh. **J. Bombay Nat. Hist. Soc.** **87**: 250-259.
17. Rahmani, A.R. & R. Sankaran. 1990. An unusual nesting site of the sunbird. **J. Bombay Nat. Hist. Soc.** **87**: 148
18. D'Silva, C., R. Sankaran & J. Chandra. 1990. Indian black drongo *Dicrurus adsimilis* eating a bird. **J. Bombay Nat. Hist. Soc.** **87**: 301.
19. Sankaran, R. 1989. Range extension of the painted bronze backed tree snake *Dendrelaphis pictus*. **J. Bombay Nat. Hist. Soc.** **86**: 225.
20. Sankaran, R. 1989. Range extension of the yellow bellied wren-warbler. **J. Bombay Nat. Hist. Soc.** **86**: 451.
21. Sankaran, R. 1987. De-ticking by a large grey shrike, *Lanius excubitor*. **J. Bombay Nat. Hist. Soc.** **83 (suppl.)**: 120.

Papers in press / accepted / submitted

22. Sankaran, R. An annotated list of the endemic avifauna of the Nicobar islands. Accepted **Forktail**.
23. Sankaran, R. The impact of nest collection on the Edible-nest Swiftlet *Collocalia fuciphaga* in the Andaman & Nicobar islands. Submitted **Conservation Biology**.

Symposium / Seminar / Workshops

24. Sankaran, R. & K. Sivakumar. 1997. A review of an ongoing study on the Nicobar Megapode *Megapodius nicobariensis*. IIIrd International Megapode Symposium, Nhill, Australia.
25. Sankaran, R. 1996. Identification of important bird areas in the Andaman & Nicobar islands. XII Birdlife Asia Conference, Coimbatore, India.
26. K. Sivakumar & R. Sankaran. 1996. Incubation mounds and mound use patterns in the Nicobar Megapode *Megapodius nicobariensis*. Ist Pan Asian Ornithological Congress, Coimbatore, India.
27. Sankaran, R. 1995. The status and conservation of the Lesser Florican. Pp 22-24 in Avian Conservation in India (L. Vijayan, ed.) Sálím Ali Centre for Ornithology & Natural History, Coimbatore.
28. Rahmani, A.R. & R. Sankaran. 1995. The Indian Thar desert. Pp 61-62 in Avian Conservation in India (L. Vijayan, ed.) Sálím Ali Centre for Ornithology & Natural History, Coimbatore.
29. Sankaran, R. 1995. Distribution, status and conservation of the Nicobar Megapode. Pp 43-44 in Avian Conservation in India (L. Vijayan, ed.) Sálím Ali Centre for Ornithology & Natural History, Coimbatore.
30. Sankaran, R. 1995. Avifauna of the Andaman & Nicobar islands. Pp 56-57 in Avian Conservation in India (L. Vijayan, ed.) Sálím Ali Centre for Ornithology & Natural History, Coimbatore.
31. Sankaran, R. & L. Vijayan. 1993. The avifauna of the Andaman & Nicobar islands: A review and the current scenario. Pp 255-271 in Bird conservation. Strategies for the nineties and beyond. (Verghese, A., S. Sridhar and A.K. Chakravarthy, eds.). Ornithological Society of India, Bangalore.
32. Sankaran, R. 1986. The Lesser Florican *Sypheotides indica* at the Sailana Kharmor Sanctuary. Sálím Ali Feschrift Seminar. Bombay Natural History Society, Bombay.

Conservation Action Plans

33. 1995. Restoration and management of grasslands for people and the Lesser Florican. Sálím Ali Centre for Ornithology & Natural History, Coimbatore. (Compiler).

Workshop Proceedings

34. 1996. Barasingha Population and habitat viability assessment. Zoo Outreach Organisation. Joint editor.

MONTHLY REPORT
R SANKARAN
SCIENTIST, AVIAN ECOLOGY

Report for the months of May & June

- Field work : none
- Tours : To Aligarh, Baroda, Anand, Ahmadabad & Bombay. Preparation for the lesser florican survey and workshop.
- Publications : Revised paper on the status of Nicobar Megapode. Has been accepted for publication in Biological Conservation.
- Report : Preparation of final survey report of Nicobar survey. First circular for the Lesser Florican workshop circulated.
- Project proposals : Proposal for a status survey of the Edible-nest Swiftlet in the Nicobar group of islands is under preparation.
- Miscellaneous : Lectures given to the M.Sc. students at the Centre for Wildlife & Ornithology, Aligarh Muslim University.
Preparation of Brochure for SACON

Lesser Florican Conservation in Western India

- Identifying existing protected fodder producing grassland sites where the Lesser Florican continues to breed and advocating optimal protection and management regimes at these grasslands.
- Identifying grasslands which have the potential of becoming Lesser Florican breeding sites and advocating their inclusion into a protected fodder producing grassland network, by interaction, meetings workshops, lectures and the media.
- Identifying and sensitizing hunters and influential individuals at the important florican areas so as to ensure that hunting pressures are significantly reduced at these sites. This network of individuals is called the Florican Watch, and communication is maintained through a news letter and periodic visits.

Identification and mapping of Lesser Florican breeding sites to develop a fodder producing grassland network in western India

- Principal Investigator : R Sankaran
- Project Period : Three years
- Expected date : July 2001
- Budget : Rs 4,04,000.00/-
- Funding source : SACON

Clarifications on Comments of Referees on the project proposal, "A study on the ecology, and status and conservation perspectives of certain rare endemic avifauna of the Andaman and Nicobar islands."

REFEREE 1

a) Objectives are vast and spread out. It would be better if the PI concentrated on objective nos. one i.e. the assessment of the status of endemic avifauna and identification of rare / threatened / endangered taxa in the Andaman & Nicobar islands.

Justification

The project has three objectives.

1. To assess the status of endemic avifauna in the Andaman and Nicobar Islands and to identify taxa which are rare, threatened or endangered.
2. To study the ecology of the Nicobar Scrubfowl (*Megapodius nicobariensis nicobariensis* & *M. n. abbotti*), Narcondam Hornbill (*Aceros narcondami*) and Andaman (or Grey) Teal (*Anas gibberifrons albobularis*).
3. To prepare a conservation management plan for rare endemic avifauna of the Andaman & Nicobar Islands.

In this project, our primary approach to conserving habitats in the Andaman & Nicobar Islands is through focal species, that are indicators of, and most vulnerable to, changes in the ecosystem. The selection of the target species has been based on this premise. However, during the wide ranging surveys that are necessary to assess status of species and their habitats, the status of other species and their habitats are also easily collected. This is exactly what has been done during our intensive survey of the Nicobar group of islands over 9 months between December 1992 and April 1994, and precise information on the status of the Nicobar Scrubfowl (megapode) *Megapodius nicobariensis* and the relative abundance of all other species of avifauna has already been collected. Thus while we have precise

information on the Nicobar Scrubfowl, we now know the status of other endemics like the Nicobar Bulbul *Hypsipetes nicobariensis*.

The comment that the objectives are spread out is not valid because the first two objectives are linked together, i.e. Objective 2 is an immediate successor to Objective 1, and in fact both are interdependent. We would like to add here that, about 30% of objective 1 has already been achieved as the detailed survey of the avifauna of the Nicobar islands has been completed. We do not believe that the objectives are ambitious and spread out because: a) The scientific work load over 3 years of field work has been divided in the following manner. The PI and the CI, both actively involved in field work, will focus their field efforts on assessing the status of endemic avifauna and supervise the 2 research scholars who will mainly be involved in collection of ecological data on the target species. b) Within 9 months of field work most of the Nicobar and some of the Andaman islands have already been surveyed, and in the envisaged 3 years of field work, mainly islands in the Andamans group need to be surveyed. Further surveys of the Nicobars will help in confirming the status of various species.

The third objective is in fact, the outcome of the first two objectives. It is therefore logical, and economical, to consider the project in its entirety.

b) Methodology not given in detail, and methodology not yet standardized.

Justification

It had been stated clearly in the proposal that methodology would be finalized after adequate field trials. During our surveys many of the methods have been tried in the field, and are now in the process of being finalized. Since the study involves censusing diverse species in varied habitats, and studying the ecology of target species, different techniques have to be applied. The methods that we intend using are standard, and we did not give it in the proposal as it would be voluminous. We intend publishing a detailed account of the methods used in our first annual report.

REFEREE 2.

a) Budget seems to be towards the higher side and should be reduced.

Action taken.

Has been done. The Budget has been reduced from Rs 15,51,790/= to Rs 12,67,180/=. This was possible because of deletion of Phase I from the proposal and certain items in the permanent equipment and reduction of some other expenditure as shown below in the revised budget. Part of the surveys (Phase I) has already been completed with the funds from SACON's research contingency in 1992-93 and from the Ministry of Environment and Forests in 1993-94. We would like to add that the original budget had been revised following comments from the Ministry of Environment, before it was submitted to the Research Advisory Committee of SACON in October 1992 and also thereafter. After our surveys in the Andaman and Nicobar islands we now know that the amount budgeted here is the bare minimum required to conduct this study.

b) suggested to approach the three targeted species separately

Justification

As explained above, the Nicobar Scrubfowl and Andaman Teal will be studied intensively by each of the two research fellows while the Narcondam Hornbill will be studied seasonally by the whole team.

SUMMARY BUDGET FOR PHASE-II

Details	1994-95	1995-96	1996-97	1997-98 (6 months)	TOTAL
1. Salaries & Wages	102000	102000	109200	30600	343800
2. Permanent equipment	166000	5000	2000	-	173000
3. Expendables	45000	30000	30000	20000	125000
4. Travel	107000	98000	98000	37000	340000
5. Other Project Costs	25000	40000	40000	40000	145000
6. Contingencies	28000	28000	30000	20000	106000
7. Institutional charges (10 % of 1)	10200	10200	10920	3060	34380
GRAND TOTAL	483200	313200	320120	150660	1267180

DETAILED BUDGET FOR PHASE-II

Sl.No.	Details	1994-95	1995-96	1996-97	1997-98 (6 months)	TOTAL
1.	Salaries & Wages					
a.	Junior Research Fellow (2) (Rs1800 + HRA for 2 years) (Rs 2100 + HRA for 1.5 years)	54000	54000	61200	30600	199800
b.	Field Assistants (4) (Daily wages per day Rs 40)	48000	48000	48000	-	144000
2.	Permanent equipment					
a.	Binoculars (2)	40000	-	-	-	40000
b.	Sound recording equipment(1) (e.g. Sony walkman professional with parabolic reflector and uni-directional microphone)	30000	-	-	-	30000
c.	Telescope (1)	15000	-	-	-	15000
d.	Tripods (1)	6000	-	-	-	6000
e.	Handheld anemometer (2)	16000	-	-	-	16000
f.	Digital thermometer (1) with detachable probes	5000	-	-	-	5000
g.	Altimeter (2)	10000	-	-	-	10000
h.	Minor equipment (2 sets) (Weather station, pedometer, Stopwatch, Dial Calipers, Spring balances)	22000	-	-	-	22000
i.	Miscellaneous (Collection jars, polythene bags thermometers, Insect nets, pinning boards, tally counters, Compasses, killing jars, plant press, chemicals, dissection sets etc.)	16000	5000	2000	-	23000
j.	Camping equipment (2 sets) (Tent, sleeping bags, field stove & utensils etc.)	6000	-	-	-	6000
3.	Expendables					
a.	Maps & Satellite Data	15000	-	-	-	15000
b.	Consumables (Film & processing, stationery etc.)	30000	30000	30000	20000	110000
4.	Travel					
a.	Travel & Perdiem	67000	80000	80000	30000	257000
b.	Vehicle (Motor cycle) 1	35000	-	-	-	35000
c.	Fuel & Maintenance	5000	18000	18000	7000	48000
5.	Other Project Costs					
a.	Publications(Reports)	10000	15000	15000	40000	80000
b.	Camp Maintenance (Rental etc.)	15000	25000	25000	-	65000
6.	Contingencies	28000	28000	30000	20000	106000
7.	Institutional charges (10% of 1)	10200	10200	10920	3060	34380
GRAND TOTAL		483200	313200	320120	150660	1267180