



CENTER FOR ECOLOGICAL SCIENCES
INDIAN INSTITUTE OF SCIENCE
BANGALORE-560 012 INDIA

Prof. Madhav Gadgil

Dated: 25th Feb. 1985

Dear *Joshi,*

Sub: Thrust Area Programme in Life
Sciences: Animal behaviour,
Ecology and Evolution.

....

I am glad to communicate that the following research proposals have been received and despatched to all participants:

1. Prof. K.M. Alexander and Dr.M. Balakrishnan
Department of Zoology
University of Kerala

Study on olfactory communication and its role
in social interactions of some mammals of Kerala.

2. Prof. R.L. Brahmachary
Unit of Embryology
Indian Statistical Institute
Calcutta

Volatile and non-volatile phenomones in certain
mammals.

3. Dr. Raghavendra Gadagkar, Dr.M.S. Shaila
and Dr. N.V. Joshi
Centre for Ecological Sciences
Indian Institute of Science
Bangalore

Kinship in Social Wasps

4. Prof. Madhav Gadgil et al
Centre for Ecological Sciences
Indian Institute of Science
Bangalore

Cultural Evolution of Ecological prudence.

contd2

5. Dr. K.N. Ganeshaiah and Dr. R. Umashankar
Department of Agricultural Botany
University of Agricultural Sciences
Bangalore

Sexual selection and kin recognition mechanisms
in plants.

6. Dr. Ashok, K. Ghosh and Prof. A.S. Mukherjee
Calcutta University

In search of essential data for understanding and
formulation of human evolution in the sub-continent
of India.

7. Dr. A.P. Gore, Dr. A.V. Khaishikar and Dr.M.B.Rajarshi
Statistical Modelling in Ecology

8. Dr. A.S. Mukherjee
Department of Zoology
University of Calcutta

Evolutionary Genetics of conserved Cistrons in Drosophila,
Fish and Amphibia.

9. Dr. Mewa Singh
Department of Psychology
Mysore University

Non-human primates of South India.

I also enclose herewith the tentative programme of the
meeting. Kindly note that it has now been shortened from
three to two days on 14th and 15th March, 1985.

We will be happy to take care of your (air/I class train
fare). Arrangements for your stay have been made on the
campus of the Indian Institute of Science. Please keep me
advised of your travel plans.

With best regards,

Yours sincerely,

Geetha R. Gadgil
for (MADHAV GADGIL)

Encl: Tentative Programme
of the meeting.

Dr. N. V. Joshi

TENTATIVE PROGRAMME OF THE MEETING FOR THE THRUST AREA
PROGRAMME IN LIFE SCIENCES - ECOLOGY, ANIMAL BEHAVIOUR
AND EVOLUTION (MARCH 14-15, 1985).

Venue: Indian Institute of Science, Bangalore.

Thursday, March 14, 1985

- 9.30 am - 10.00 am : Introduction to the programme
10.00 am - 1.00 pm : Presentations of research proposals
2.30 pm - 5.00 pm : Continued presentations of research proposals

Friday, March 15, 1985

- 9.00 am - 1.00 pm : Open discussion on research proposals
2.00 pm - 3.30 pm : Meeting of expert members
3.30 pm - 5.00 pm : Finalization of recommendations.

Prof. Madhav Gadgil

5th September 1986

Dr. Jane Robertson,
Programme Specialist,
Division of Ecological Sciences,
UNESCO, 7, Place de Fontenoy, 75700 Paris

Dear Jane,

It was a great pleasure meeting you once again in Bolivia. As we discussed I am very keen on pursuing further activities in relation to the Nilgiri Biosphere Reserve, as well as the Biological Diversity Information System being set up in our Institute. In this connection I had discussions with Drs. Hugh Synge and Guillermo W. Mann as to the possibilities of some of my young colleagues working with them for a period of few weeks on Conservation Information Systems. Both of them are very keen on exploring further such a possibilities.

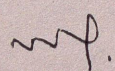
I am therefore writing to them with a suggestion that two of my colleagues Dr. R. Sukumar and Dr. N.V. Joshi visit and spend a few weeks at the Conservation Monitoring Centre in Kew and Cambridge and at the Nature Conservancy and National Museum in Washington, D.C.

I am enclosing herewith the biodata of Dr. Sukumar and Dr. Joshi, as well as a note on the MAB related activities in our department for your information.

I would greatly appreciate it if you could advise me to as to whether such visits could be in part or entirely supported by the MAB Young Scientists programme that you had mentioned to me.

With warm regards,

Yours Sincerely,


(MADHAV GADGIL)

Encl: as above

award UNESCO
Doshi

Prof. Madhav Gadgil

8th October 1986

Shri. K.B. Iyer,
Director,
Department of Environment,
Bikaner House, Shahjahan Road,
NEW DELHI 110 001

Dear Shri. Iyer,

Ref: Our personal discussion of 25th
September at Udhagamandalam

Sub: Award of UNESCO-MAB Young Scientists'
Fellowships to Dr. R. Sukumar and
Dr. N.V. Joshi

Kindly recall our discussion of 25th September in relation to the interest of my colleagues Dr. R. Sukumar and Dr. N.V. Joshi in visiting the Conservation Monitoring Centre of IUCN at Kew-Cambridge in U.K. and the Nature Conservancy in Washington D.C. In this connection I enclose:

1. Note on the Environmental Information Service Centre's biological diversity information base at the Centre for Ecological Sciences
2. Note on the Nilgiri Biosphere Reserve Scientific programme and information base at the Centre for Ecological Sciences
3. Note on the Conservation Monitoring Centre of IUCN at KEW and Cambridge and proposed visit of Drs. Sukumar and Joshi
4. Note on Nature Conservancy, Washington and proposed visit of Drs. Sukumar and Joshi
5. Curriculum vitae of Dr. R. Sukumar
6. Curriculum vitae of Dr. N.V. Joshi
7. Statement of budget

These are self explanatory.

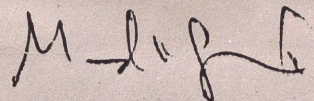
The Director of our Institute has agreed to these visits. I would be grateful if on behalf of DOEn Indian National MAB programme you could address a letter to Dr. Jane Robertson, Programme Specialist, Division of Ecological Sciences, UNESCO, 7, Place de Fontenay, 75700 Paris endorsing the request that

Contd...

we propose for a UNESCO MAB Young Scientists' Fellowship for Dr. Sukumar and Joshi. The letter may specifically mention the utility of such a visit from the point of view of our MAB programme and especially the Nilgiri Biosphere Reserve programme.

With best regards,

Sincerely,



MADHAV GADGIL

ENVIRONMENTAL INFORMATION SERVICE (ENVIS) CENTRE

at Centre for Ecological Sciences,
Indian Institute of Science, Bangalore.

The Dept. of Environment, Govt. of India has set up a number of ENVIS centres in the country. Of these, the ENVIS centre at C.E.S., Indian Institute of Science is responsible for building an information system on BIOLOGICAL DIVERSITY with special reference to the Western Ghats region of southern India.

Both unpublished and published literature in the form of reports, papers and books are being classified subject-wise using key words. For computerizing the information, a DEC 1090 computer available at the Indian Institute of Science at a central facility is being used. Queries about information are expected to come from any part of the country; hence our system has been designed to work on off-line. Programs in the system have been written in COBOL. Search through Author or Title is done by a simple string matching in the appropriate files. For subjects the search is divided into five non-intersecting levels. Since our department has now acquired an IBM Personal Computer, we are also developing storage and retrieval capabilities using dBASE.

In addition to available literature, we are preparing detailed inventories of biological taxa such as birds and flowering plants in the Western Ghats.

Setting up permanent vegetation plots for studies on plant community ecology in the NILGIRI BIOSPHERE RESERVE.

As part of the overall research programme in the Nilgiri Biosphere Reserve, the Centre for Ecological Sciences, Indian Institute of Science, is interested in carrying out studies on plant diversity and community ecology, especially in relation to exploitation of forests by people.

For a long term monitoring of vegetation dynamics we propose to set up a number of permanent plots of 5 - 10 hectares each in different vegetation types such as wet evergreen forests, montane stunted evergreen shola forest and dry deciduous forest. Since ecological processes can be expected to vary across different environmental regimes it would be better to locate a number of such smaller plots rather than one single large plot.

In these plots all woody plants above a certain defined size would be identified, tagged and their positions mapped. The methods used would be comparable to those in the plots set up on Barro Colorado Island, Panama and the Pasoh Forest Reserve, Malaysia. Censuses would be carried out every 5 years to determine recruitment, growth and mortality patterns. These plots could also be sites for other related studies on plant reproduction ecology.

NILGIRI BIOSPHERE RESERVE

and its information system at Centre for Ecological Sciences,
Indian Institute of Science, Bangalore.

India's first Biosphere Reserve, the Nilgiri Biosphere Reserve (NBR), covering a forested area of about 5520 km² has been recently established in the southern states of Karnataka, Kerala and Tamilnadu. NBR has been classified into core zones (1240 km²), manipulation-forestry zones (3239 km²), tourism zones (335 km²) and restoration zones (706 km²).

Our department has been actively involved at all stages of the planning of the NBR. In September 1980, we were commissioned by the Dept. of Environment, Government of India to prepare the first project document on the NBR. This was followed in 1984 by a more detailed field survey and preparation of maps showing the various zones at 1:50000 scale. Through a series of meetings and discussions with managers and scientists, the research priorities in the NBR have also been identified. The Dept. of Environment has identified our centre as the nodal agency for coordinating the research programmes in the NBR.

Before the scientific programme is taken up in earnest, the Dept. of Environment has asked us to set up an information system on the NBR. At present we are collecting literature and statistics on the past history, geology, soils, hydrology, climate, flora, fauna, working of forests, human settlements, people with special reference to tribals, agriculture, developmental projects and other relevant aspects pertaining to the NBR.

Dr. R. Sukumar has been actively involved since 1980 at all stages of planning of NBR and formulating of the scientific programme. He is currently coordinating the setting up of the information system on the NBR. Dr. N.V. Joshi is involved in developing the software for computerizing NBR information system.

CONSERVATION MONITORING CENTRE

of the IUCN at Kew and Cambridge, U.K.

and proposed visits by Dr. R. Sukumar and Dr. N.V. Joshi

The Conservation Monitoring Centre is the division of the IUCN that provides a data service to IUCN and to the conservation and development community. It is building an integrated and cross-referenced data-base on species of conservation concern and on ecosystems, principally on protected areas such as National Parks and Sanctuaries around the world. The CMC produces a wide variety of specialist outputs and analyses from the data base, as well as major publications such as the Red Data Books and Protected Areas Directories.

Dr. R. Sukumar & Dr. N.V. Joshi will spend about a month at CMC acquainting themselves with the systems of obtaining, classifying and retrieving information on biological diversity and protected areas. They will use this training in setting up an information base at the Indian Institute of Science on environmental aspects with special reference to biological diversity in the Western Ghats and the Nilgiri Biosphere Reserve in particular.

Dr. Sukumar will concentrate on the biological aspects, while Dr. Joshi will devote his attention to computer software for the information system.

Dr. Sukumar will also attend the meeting of the "Plantwatch" scheme to be held at CMC in early 1987 (the dates have not yet been finalised).

THE NATURE CONSERVANCY, WASHINGTON D.C.

and proposed visit by Dr. R.Sukumar and Dr. N.V.Joshi

The Nature Conservancy of the United States of America is a national conservation organization committed to the preservation of biological diversity of land and water. Under its Natural Heritage programme, the Nature Conservancy has developed a Data Management System. This data system consists of four major components reflecting the four types of information gathered through the inventory. These components are:

- a) elements files describing the elements of biological diversity that are the targets of the Heritage programme's inventory.
- b) elements occurrence file which stores the occurrence data in map, manual and computer formats.
- c) managed area file which organizes information on protected natural areas.
- d) source file to document the inventory's information sources.

Dr. R.Sukumar and Dr. N.V.Joshi would spend 15 days at the Nature Conservancy to acquaint themselves with their Data Management System. Dr. Sukumar would concentrate on aspects of the biological and protected areas inventories, while Dr. Joshi would familiarise himself with the computer software system. They would use this training in setting up an information system on the Western Ghats and the Nilgiri Biosphere Reserve in particular at the Centre for Ecological Sciences, Indian Institute of Science.

STATEMENT OF BUDGET FOR N.V.JOSHI

I If funds are made available by March 1987

Smithsonian Tropical Research Institute is providing air fare Bangalore - Panama - Bangalore through Washington for a visit during February - March 1987. On return, the tickets can be rerouted through Washington,

	<u>Amount in U.S. dollars</u>
Air fare (cost of rerouting tickets)	200.00
Per diem at Washington DC (\$ 80 per day for 15 days)	1200.00
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Total	1400.00
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II If funds are available only after April 1987

Air fare (economy class) Bangalore-London-Washington-Bangalore	1200.00
Per diem at Washington DC (\$ 80 per day for 15 days)	1200.00
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Total	2400.00
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INDIAN INSTITUTE OF SCIENCE
BANGALORE-560 012

Director for Ecological Sciences

Prof. Madhav Gadgil

18th Nov. 1986

Dr. Bernd von Droste,
Director, Division of Ecological Sciences,
UNESCO, 7 Place de Fontenoy,
Paris 75700 FRANCE

Dear Dr. Bernd,

I am delighted to inform you that the the first Biosphere Reserve of our country, Nilgiri Biosphere Reserve has been formally established in September this year. We are very much involved in developing an information system and the long term scientific programme in this biosphere reserve and look forward to continued involvement with UNESCO in this context.

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Would
Dr. Guillermo W. Mann of the Nature Conservancy visited us in the middle of November and we had detailed discussions on collaborating ~~of~~ biological diversity information methodologies as well as the scientific monitoring programme at the Nilgiri Biosphere reserve. I understand that he is visiting you shortly after his visit here and I would certainly appreciate necessary help from UNESCO/assisting in this collaboration. In particular I have been in correspondence with Dr. Jane Robertson about visit of two of my colleagues Drs. R. Sukumar and N.V. Joshi to the Conservation Monitoring Centre of IUCN and the Nature Conservancy and Smithsonian Institute through MAB Young Scientists Fellowship programme. Support to these visits ~~will~~ certainly help us in furthering our proposed collaboration.

With warm regards,

Yours Sincerely,

M. Madhav Gadgil
MADHAV GADGIL

cc:w/c

Dr. Jane Robertson,
Division of Ecological Sciences,
UNESCO, 7, Place de Fontenoy,
75700 Paris

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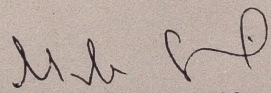
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6.1.87

DR JAMES KARR
SMITHSONIAN TROPICAL RESEARCH INSTITUTE
BOX 2072
BALBOA REPUBLIC OF PANAMA

SUKUMARS PASSPORT NUMBER IS S 753510 STOP
JOSHIS PASSPORT NUMBER IS X 552016 STOP
PREFER BOMBAY FOR PANAMA VISA

MADHAV GADGIL


Prof Madhav Gadgil
CES, IISc, Bangalore 12
INDIA

Debit to CES postage grant



10/10/87

DEPARTMENT OF TELECOMMUNICATIONS

TELEGRAM 101

NIRANJAN VASUDEO JOSHI CENTER

FOR ECOLOGICAL SCIENCES

INDIAN INSTITUTE OF SCIENCE

BANGALORE 56 0012: INDIA

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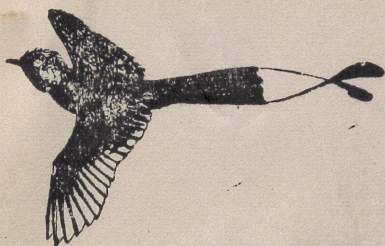
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= SMITHSONIAN TROPICAL RESEARCH INSTITUTE EXTENDS YOU INVITATION TO VISIT OUR FACILITIES IN PANAMA AND RESEARCH IN IOWA FEBRUARY MARCH 1987 COST OF TRAVEL AND MAINTENANCE TO BE BORNE BY STRI= JAMES KARR

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CENTRE FOR ECOLOGICAL SCIENCES
INDIAN INSTITUTE OF SCIENCE

BANGALORE-560 012 INDIA

Prof. Madhav Gadgil

19.01.1987

Shri K.B.Iyer
Joint Secretary
Department of Environment, Forests and Wildlife
CGO Complex
Lodhi Road
New Delhi 110 003

Dear Shri Iyer

Ref: Our letter dated 8 October 1986

Sub: Award of UNESCO-MAB Young Scientists fellowships
to Dr. R. Sukumar and Dr. N.V. Joshi

This is further to our discussion of 15th January 1987. As I mentioned at that time the Smithsonian Triopical Research Institute have provided funds for Drs. R.Sukumar and N.V.Joshi to visit Panama and Iowa February 1987. They can therefore quite easily reroute their tickets to spend some time in Washington D.C. and Kew-Cambridge, U.K. in conjunction with this trip.

Their tentative itinerary can be as follows:

5th February to 1st March 1987	- STRI, Panama
1st week March	- University of Iowa
2nd and 3rd week March	- Nature Conservancy Washington DC
4th week March	- Joshi returns to Bangalore Sukumar visits Smithsonian Conservation and Research Centre, Front Royal Virginia
1st and 2nd week April	- Sukumar visits IUCN Conservation Monitoring Centre, Kew-Cambridge
3rd week April	- Sukumar return's to Bangalore

I am enclosing copies of the revised Budget. Kindly arrange to forward the applications along with the revised budget estimates and a covering letter from DOEn to Dr.Jane Robertson, Division of Ecological Sciences, UNESCO, 7 Place de Fontenoy, 75700 Paris, France.

With best regards

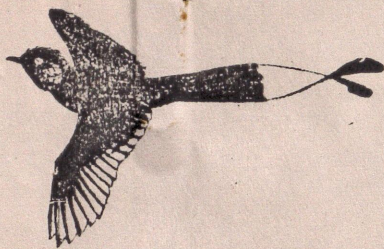
Yours sincerely

Madhav Gadgil

CABLE : CES 'SCIENCE' MALLESWARAM, BANGALORE, INDIA



Telex : 0844 Madhav Gadgil : 364411 Extn. 506



CENTRE FOR ECOLOGICAL SCIENCES
INDIAN INSTITUTE OF SCIENCE
BANGALORE-560 012 INDIA

Prof. Madhav Gadgil

20.01.1987

Chairman
Division of Biological Sciences
Indian Institute of Science
Bangalore 560 012

Sir,

Dr. R.Sukumar and Dr. N.V.Joshi have been invited by the Smithsonian Tropical Research Institute to visit their facilities at Panama and at the University of Iowa, USA. This is for interacting with their faculty regarding a collaborative research programme on Plant Community Ecology. Further, they would also be visiting the Nature Conservancy, Washington DC and IUCN Conservation Monitoring Centre, Cambridge UK to study their Biological Diversity Information System. These visits would be useful training for them to set up a similar information system in our department.

and travel
Their stay ^{and travel} would be provided for ~~travel~~ partially by Smithsonian and also by UNESCO. Their trip to these places during February-April 1987 may kindly be permitted and treated as on duty. Copies of their programme are enclosed.

Thanking you

Yours faithfully

Madhav Gadgil

