



Newsletter of the Rodentia, Insectivora, Scandentia Conservation & Information Network of South Asia
RISCINSA for Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka

Volume I, Number I

October 2000

Members of RISCINSA -- October 2000

Babu, T. Raveendra

AICRP on Rodent Control
 College of Agriculture, University of Ag Sci
 GKVK, Bangalore 560 065

Borges, Dr. Renee Maria

Asst. Prof., Indian Institute of Science
 Centre for Zoological Science, Bangalore 12

Chakraborty, Rina

Zoological Survey of India
 F.P. S Building, 27 Jawaharlal Nehru Road
 Calcutta 700 016 West Bengal

Chakraborty, Sujit

Zoological Survey of India
 'M' Block, New Alipore
 Calcutta, West Bengal 700 053

Chakravarthy, Akshay Kumar, Entomologist

University of Agricultural Sciences, GKVK
 Bangalore 560 065 Karnataka

Jordan, Dr. Michael, External Advisor

Reader, Sparsholt College
 Winchester, Hampshire SQ21 2 U. K.

Joshua, Justus

Gujarat Institute of Desert Ecology
 Patwadi Naka (Kachchh, Gujarat 370 001

Kannan, Soundara Pandian

Lecturer, Dept. of Biotechnology
 A.J. College (Autonomous)
 Sivakasi 626 124

Kizhakkemadham, R. K.

Wildlife Biology Division
 Kerala Forest Res Institute
 Peechi, Trichur dist. 680 653 Kerala

Khan, Mohammad Morninil Hasan

IUCN World Conservation Union, Bangladesh
 H. No. 3A, Road No. 15 (New)
 Dhanmondi, Dhaka 1209, Bangladesh

Kumar, Ajith, Scientist

Salim Ali Centre
 Anaikatti, Coimbatore 641 108

Molur, Sanjay, Red List Advisor

Zoo Outreach Organisation, Box 1683
 Peelamedu, Coimbatore 641 004

Mudappa, Divya

8/356, Cooperative colony
 Valparai, Via Pollachi 642 127 Tamil Nadu

Manimozhi, Dr. A., Zoo Biologist

Arignar Annal Zoological Park
 Vandalur, Chennai 600 048 Tamil Nadu

Mukherjee, Shomen

Ben-Gurion University of the Neger
 Blaustein Institute for Desert Research
 Mitrani Dept. of Desert Ecology
 Sede Boker Campus 84990 Israel

Muktha Bai, Krishnaji Rao

Scientist, Food Protection and Infestation
 Control Dept, Central Food Technology
 Research Institute (CFTRI)
 Mysore 570 013

Nameer, P. O., Asst. Professor

College of Forestry, WL Department, Kerala
 Agri. University, Vellanikara P.O.
 Trissur 680 654, Kerala

Parshad, Vir Rajinder

Senior Zoologist (Rodents)
 Head, Dept. of Zoology, Punjab Agricultural
 University, Ludhiana 141 004

Pradhan, M. S., Scientist SE,

Zoological Survey of India, WRS
 Vidyannagar, Sector No. 29
 Rawat Road, PCNTDA Post, Pune, Ma.

Prakash, Iswar, Scientific Chair RISCINSA

Zoological Survey of India
 107 Kamla Nehru Nagar, Jodhpur 342 009

Rajamani, Nandini, Student

20-A Murrays Gate Road
 Alwarpet, Chennai 600 018

Samal, Bhubaneswar, Superintendent

Orissa State Museum
 Bhubaneswar 751 014

Shankar, Kartik

A1/4/4, 3rd Main Road
 Besant Nagar, Chennai

Sheikher, Chander

Researcher, Dept. of Entomology and
 Agriculture, Dr. Y.S. Parmar University of
 Horticulture and Forestry, Solan, M. P.

Sood, Pankaj

Department of Entomology
 UHF NAUNI (SOLAN)
 Himachal Pradesh 173 230

Sridhara, Shakunthala

Professor & Head, AICRP on Rodent Control,
 University of Agricultural Sciences, College of
 Agriculture GKVK, Bangalore 560 065

Tej Bahadur Thapa

Lecturer of Ecology, Central Department
 of Zoology, T.U., P.O. Box: 11191,
 Kathmandu Nepal.

Thomas, Moni

401 Arpan Apartment, Near Gitanjali H.S.
 School, IV Bridge, Napier Town
 Jasalpur, M. P. 482 001

Thyagarajan, Ganesh

Ashoka Trust for Research in Ecology and
 the Environment (ATREE), 659 Vth A, Main
 Road, Hebbal, Bangalore 560 024

Venkatraman, Meena

Research Coordinator
 C/o Palni Hills Conservation Council
 Post box No 34
 Kodaikanal 624 101

Walker, Sally, Administrative Chair

Zoo Outreach Organisation
 79 Bharati Colony, Peelamedu
 Coimbatore 641 004

Rodentia, Insectivora, Scandentia Conservation & Information Network of South Asia **RISCINSA for Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka**

This newsletter is to introduce you to RISCINSA, the Rodentia Insectivora and Scandentia Conservation & Information Network of South Asia which was begun a few months ago. The network to date has 31 members. We are including its newsletter in ZOOS' PRINT, as we do for all our networks, to catch the attention of readers and direct it to an important group of mammals which is not getting sufficient attention today.

This network was suggested by interested biodiversity conservation specialists and is being implemented by a group of small organisations in India, e.g. the Zoo Outreach Organisation (Z.O.O.), Wildlife Information Liason Development (W.I.L.D.), CBSG, India and CBSG, South Asia. The initiation of this network and preliminary work is being funded by the Society for Preservation of Species and Populations, Munich, Germany.

The inspiration for this network has its roots in the Conservation Assessment and Management Plan (C.A.M.P.) Workshop for Indian Mammals which was conducted in 1997 at the Indian Institute for Science and Centre for Ecological Studies, Bangalore, under the auspices of the Biodiversity Conservation Prioritisation Project (BCPP) coordinated by WWF, India. During this workshop field biologists from all parts of India assessed the conservation status of more than 400 species of Indian mammals (118 of which were rodents, insectivores and squirrels) using the new IUCN Red List Criteria, 1994. The summary results of this assessment for rodents and insectivores are below. Included on the following pages is list of Rodentia and Insectivora of India with the conservation status (as per Red List criteria as applied by the BCPP CAMP Workshop) given to the species which have a range in India and were assessed nationally. If you live in a non-Indian South Asian country we hope you will inform us of species in this group which occur in your country also, and adding any that have been left out and noting those which you think are endemic to your country.

Table: Summary of Status of Rodents and Insectivores in India, 1997 (BCPP CAMP Workshop, Bangalore)

EX — Extinct	1
CR — Critically endangered	1
EN — Endangered	9
VU — Vulnerable	30
LR-nt — Lower risk near threatened	16
LR-lc — Lower risk least concern	31
DD — Data deficient	<u>30</u>
Total	118

There are two aspects of this CAMP workshop output that should be stressed :

- i.) together rodents and insectivores make up 29% of the mammalian diversity of India with perhaps a similar percentage of the mammalian diversity of the South Asian region, and
- ii.) 25% of the list of 118 assessed at the workshop had to be classified as Data Deficient ! If this is the case in India, the

situation for this group of mammals in all of South Asia may be crucial as well.

The purpose of this network, then, is to link together rodent field researchers and their field knowledge throughout South Asia (Bangladesh, Bhutan, India, Nepal, Maldives, Pakistan, Sri Lanka so that a clearer picture can emerge, and lead to conservation action. Some things this network itself can and will do with your help and cooperation are :

1. encourage and promote the study of all rodents and insectivores, prioritising species assessed as Data Deficient in the Indian CAMP Workshop of 1997 for upcoming field work.
2. Assemble a check list — as complete and correct as possible — of rodents and insectivores of South Asia and maintain it providing local, national and regional information to be shared with important national agencies and institutions as well as international organisations.
3. catalyse and help organise conservation assessment and other workshops and training exercises of rodent specialists of South Asia as appropriate, nationally or regionally.
4. follow up such workshops with recommendations to local, state, national and regional wildlife authorities for protection for threatened species of bats and promotion of further studies of Data Deficient species
5. undertake a set of specific "tasks" utilising the information from the 1997 BCPP CAMP workshop to further enhance our knowledge of rodent and insectivore status in S. Asia
6. research funding sources for field surveys
7. bring out a newsletter of current rodent and insectivore research news for network members and other interested persons
8. prepare a Directory of rodent and insectivore specialists of South Asia for distribution to all network members

We would like to enlist every rodent and insectivore field researcher in South Asia to the extent possible. We have sent forms to all rodent researchers that we know and to zoology departments of colleges and universities. We feel there are not enough people focusing their whole attention on this large group of mammals.

Although this is a conservation network, we welcome members working in pest control research as well because they will have information to contribute despite the difference in orientation. We are aware of and in touch with Dr. D. B. Rana and All India Rodent Coordination Program of which he is Project Coordinator. We will work together for a greater store of information on these taxon group. Dr. Rana's very cordial letter is on the opposite page.

Our role at Zoo Outreach Organisation is purely administrative and coordinating. We do not conduct field or laboratory research on any species. We take on the burden of administration and coordination towards networking taxon and subject area specialty groups because researchers and scientists who need to be linked do not have time or (often) infrastructure for this type of work. We can also provide technical expertise and objective organisation and facilitation for conducting special conservation workshops (PHVA's and CAMPs). We have been running networks for zoo and veterinary specialists, zoo educators of Asia, invertebrate, amphibian, reptile, bat specialists, and now rodent and insectivore specialists in South Asia.

Mike Jordan of Sparsholt College, UK has agreed to be an external advisor for the network. Dr. Jordan has done extensive field work and systematics as well as advised zoos on how to keep small mammals such as rodents in captivity attractively and comfortably.

Dr. Jordan commented recently in an article that of all the Mammalian Orders, the Order Rodentia contains the largest number of mammal species. Rodents comprise a total of 2021 species, which represents 43.7% of all mammals. Fifty-three percent of all recent mammalian extinctions have been of rodents according to the IUCN Red List, 1996 and there are more rodent species currently categorised as threatened by the IUCN than for any other mammalian order, a total of 330 species (IUCN 1996). When you consider that rodents occupy all six zoogeographical regions of the world in a massive diversity of ecological niches, such information is disturbing. Figures like that have to make a difference.

Comparing this information to the 1998 Conservation Assessment and Management Plan workshop for Indian Mammals, we have listed the Orders Rodentia and Insectivora together as 118 species which makes up almost 30% of the mammalian diversity of India. One species is known to be extinct but with 25% of the 118 species assessed as Data Deficient by the workshop, who knows! Nearly 34% were categorised as threatened.

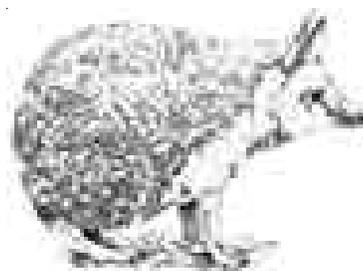
This information alone justifies a conservation network!

We hope to get Dr. Jordan over to India to conduct a workshop for Rodents, etc. much on the same lines as the Bates workshop on bats. In the case of Jordan, however, we would mingle *in situ* and *ex situ*.

We are very grateful to Dr. Iswar Prakash for agreeing to serve as Technical Chair of this network. He will keep us from making technical blunders and provide much needed guidance.

We hope our readers will give this newsletter more than a casual glance as this group of mammals needs your help. If we do not start paying more attention to the lesser loved creatures which make up our biodiversity then we will use up our options and have many regrets in the future.

Sally Walker, Administrative Chair, RISCINSA



From: "B.D.RANA" <bdrana@cazri.raj.nic.in>
To: <zooreach@vsnl.com>
Subject: Regarding Rodent and Insectivore Conservation Information Network of South Asia - RICINSA.
Date: Thu, 3 Feb 2000

Dear Sally Walker,

Many thanks for your above referred letter and for initiating a Network of rodent and insectivore researches throughout South Asia for understanding the conservation status of all species of this region.

We have an All India Coordinated Research Project on Rodent Control, which has 10 centres spread in various agro-climatic zones of country. Under this Project, we conduct basic and strategic researches to evolve an integrated management system for the pest rodents infesting different cropping systems. Our mandate could not be a duplication, if the network proposed by you strictly adheres to the survey of rodent fauna for the purpose of understanding the conservation status for various species.

We are publishing a quarterly Rodent News Letter and your name has been included in the list of subscribers. Some of the back issues would be sent to you soon. I am happy to know that you are also going to publish a newsletter with a different theme. Kindly do send me the samples from your network.

It is a welcome step proposed by you and our association with your network could be complimentary to each other in generating volumes of information on rodents and insectivores for whole of South Asia.

I am forwarding some of our latest publications for your information separately. The "AICRP on rodent control - at a glance" could provide you all information about the mandate and active researchers of this All India Coordinated Project.

With best wishes.

Yours sincerely

B.D. Rana, Project Coordinator
AICRP on Rodent Control
Central Arid Zone Research Institute, Jodhpur

List of Indian Rodentia, Insectivora and Scandentia and their common names and status from the BCPP CAMP for Indian Mammals, 1997

INSECTIVORA



1. *Anourosorex squamipes* Milne-Edwards, Mole Shrew. **VU**
2. *Chimarrigale himalayica* (Gray, 1842), Himalayan water shrew **LR-nt**
3. *Crocidura andamanensis* Miller, 1902, Miller's Andaman spiny shrew. **DD**
4. *Crocidura attenuata* Milne-Edwards, 1872, Gray (Woodland) shrew **LR-ic**
5. *Crocidura fuliginosa* (Blyth, 1856). **DD**
6. *Crocidura hispida* Thomas, 1913, Andaman spiny shrew. **EN**
7. *Crocidura horsfieldi* (Tomes, 1856), Horsfield's shrew. **DD**
8. *Crocidura jenkinsi* Chakraborty, 1978, Jenkin's Andaman spiny shrew. **DD**
9. *Crocidura leucodon* (Hermann, 1780), Bicoloured white-toothed shrew. **DD**
10. *Crocidura nicobarica* Miller, 1902, Nicobar spiny shrew. **DD**
11. *Crocidura pergrisea* Miller, 1913, Pale gray shrew. **EN**
12. *Crocidura pullata* Miller, 1911. **DD**
13. *Feroculus feroculus* (Kelaart, 1850), Kelart's long clawed shrew. **VU**
14. *Hemiechinus collaris* (Gray, 1830), Long -eared hedgehog. **LR-ic**
15. *Nectogale elegans* Milne - Edwards, 1870, Elegant water shrew **VU**
16. *Paraechinus micropus* (Blyth), Indian hedge hog. **LR-ic**
17. *Paraechinus micropus nudirentis* (Horsfield), Short eared hedgehog. **VU**
18. *Sorex minutus* (Linnaeus, 1766). **VU**
19. *Soriculus caudatus* (Horsfield, 1851), Hodgson's brown-toothed shrew. **VU**
20. *Soriculus leucops* (Horsfield, 1851), Indian long-tailed shrew. **VU**
21. *Soriculus macrurus* Blanford, 1888, Hodgson's shrew. **VU**
22. *Soriculus nigrescens* (Gray, 1842), Sikkim large clawed (Himalayan) shrew. **VU**
23. *Suncus dayi* (Dobson, 1888), Day's shrew. **VU**
24. *Suncus etrusus* (Savi, 1822), Pygmy white toothed shrew. **LR-ic**
25. *Suncus montanus* (Kelaart, 1850), Mountain shrew. **VU**
26. *Suncus murinus* (Linnaeus, 1766), House shrew/Grey musk shrew. **LR-ic**
27. *Suncus stoliczkanus* (Anderson, 1877), Anderson's shrew/Yellow throated shrew. **LR-ic**
28. *Talpa leucura* Blyth, 1850, Eastern mole. **VU**
29. *Talpa micrura* (Hodgson, 1841), Short-tailed mole. **LR-ic**

RODENTIA



30. *Alticola albicauda* (True). **DD**
31. *Alticola montosa* (True). **DD**
32. *Alticola roylei* (Royle's vole), Royle's mountain vole. **DD**

33. *Alticola stoliczkanus* (Blanford), Stoliczka's mountain vole. **DD**
34. *Apodemus draco* (Berrett-Hamilton), Fukien wood mouse. **VU**
35. *Apodemus sylvaticus* (Linnaeus), Thomas Wood mouse. **DD**
36. *Bandicota bengalensis* (Gray & Hardwicke), Lesser-Bandicoot rat (Indian mole rat). **LR-ic**
37. *Bandicota indica* (Bechstein, 1800), Large Bandicoot rat. **LR-nt**
38. *Belomys pearsoni* (Gray, 1842), Hairy footed flying squirrel. **LR-nt**
39. *Berylmys bowersi* (Anderson, 1879), Bower's rat. **EN**
40. *Berylmys mackenziei* (Thomas, 1916), Kenneth's rat. **LR-ic**
41. *Berylmys manipulus* (Thomas, 1916), Manipur rat. **DD**
42. *Biswamoyopterus biswasi* (Saha, 1981), Namdapha flying squirrel. **CR**
43. *Callosciurus erythraeus* (Pallas, 1779), Pallas squirrel. **LR-nt**
44. *Callosciurus pygerythrus* (Geoffroy St. Hilaire, 1831), Hoary-bellied Himalayan (Irrawaddy) squirrel. **LR-nt**
45. *Cannomys badius* (Hodgson, 1841), Bay/Lesser bamboo rat. **LR-ic**
46. *Chiropodomys gliroides* (Blyth, 1856), Pencil-tailed tree mouse. **VU**
47. *Cremnomys blanfordi* (Thomas, 1881), White-tailed wood (Blanford's) rat. **LR-nt**
48. *Cremnomys cutchicus* Wroughton, 1912, Cutch rat. **LR-ic**
49. *Cremnomys elvira* (Ellerman, 1946), Ellerman's rat. **VU**
50. *Cricetulus alticola* (Thomas, 1917), Ladakh hamster. **VU**
51. *Cricetulus migratorius* (Pallas, 1773), Gray hamster. **EN**
52. *Dacnomys millardi* (Thomas, 1916), Millard's (Large-toothed) rat. **VU**
53. *Diomys crumpi* Thomas, 1917, Crump's (Manipur) mouse. **EN**
54. *Dremomys lokriah* (Hodgson, 1863), Orange bellied himalayan squirrel. **LR-nt**
55. *Eothenomys melanogastor* (Milne Edwards, 1871), Pere David's vole. **DD**



56. *Eupetaurus cinereus* Thomas, 1888, Woolly flying squirrel. **LR-nt**
57. *Funambulus layardi* (Blyth, 1849), Layard's striped squirrel. **DD**
58. *Funambulus palmarum* (Linnaeus, 1766), Indian (Tree-stripe) palm squirrel. **LR-ic**
59. *Funambulus pennantii* (Wroughton, 1905), Northern (Five -striped) palm squirrel. **LR-ic**
60. *Funambulus sublineatus* (Waterhouse, 1838), Dusky striped squirrel. **DD**
61. *Funambulus tristriatus* (Waterhouse, 1837), Jungle striped squirrel **LR-nt**
62. *Gerbillus gleadowi* Murray, 1886, Indian hairy footed gerbil. **LR-ic**
63. *Gerbillus nanus* Blanford (1875), Baluchistan gerbill. **LR-nt**
64. *Golunda ellioti* Gray, 1837, Indian bush rat. **LR-ic**
65. *Hadromys humei* (Thomas, 1886), Hume's (Manipur bush) rat. **DD**
66. *Hylopetes alboniger* (Hodgson, 1836), Parti-coloured flying squirrel. **VU**
67. *Hylopetes barberi* (Blyth, 1847), Kashmir flying squirrel. **DD**
68. *Hylopetes fimbriatus* (Gray, 1837), Small Kashmir flying squirrel. **LR-nt**
69. *Hyperacrius fertilis* (True, 1894), True's vole. **DD**

70. *Hyperacrius wynnei* (Blanford, 1881), Murree vole. **VU**
 71. *Leopoldamys edwardsi* (Thomas, 1882), Edward's rat. **DD/N**
 72. *Marmota bobak*, Himalayan marmot. **EN**
 73. *Marmota caudata* (Geoffroy, 1844), Long-tailed marmot. **VU**
 74. *Meriones hurriane* Jerdon, 1867, Indian desert gerbil (Indian desert jird)
LR-Ic
 75. *Micromys minutus* (Pallas, 1771), Harvest mouse. **VU**
 76. *Microtus leusurus* (Blyth, 1863), Harvest mouse. **DD**
 77. *Microtus sikimensis* (Hodgson, 1849), **LR-Ic**
 78. *Millardia gleadowi* (Murray, 1886), Sand coloured rat. **LR-nt**
 79. *Millardia kondana* Mishra and Dhanda, 1975, Kondana rat (Kondana
 metad). **VU**
 80. *Millardia meltada* (Gray, 1837), Soft furred field rat (Metad). **LR-Ic**
 81. *Mus booduga* (Gray, 1837), Little Indian field mouse. **LR-Ic**
 82. *Mus cervicolor* Hodgson, 1845, Fawn-coloured mouse. **LR-Ic**
 83. *Mus cookii* (Ryley, 1914), Cook's mouse. **LR-nt**
 84. *Mus famulus* (Bonhote, 1898), Bemjpte's mouse. **EN**
 85. *Mus musculus* (Linnaeus, 1758), House mouse. **LR-Ic**
 86. *Mus pahari* Thomas, 1916, Gairdner's (Sikkim mouse) shrew mouse. **DD**
 87. *Mus phillipsi* (Wroughton, 1912), Fawn-coloured spiny mouse. **LR-Ic**
 88. *Mus platythrix* Bennett, 1832, Spiny field (Indian Brown spiny) mouse.
LR-Ic
 89. *Mus saxicola* (Elliot, 1839), Elliot's Brown spiny mouse. **LR-Ic**
 90. *Nesokia indica* (Grey and Hardwicke, 1830), Short tailed bandicoot rat
LR-Ic
 91. *Niviventer brahma* (Thomas, 1914), Mishmi rat. **EN**
 92. *Niviventer eha* (Wroughton, 1916), Smoke bellied rat. **VU**
 93. *Niviventer fulvescens* (Gray, 1847), Chestnut rat. **LR-Ic**
 94. *Niviventer langbianis* (Robinson and Kloss, 1922), Langbian rat. **DD**
 95. *Niviventer niviventer* (Hodgson, 1836), White bellied rat. **DD**
 96. *Niviventer tenaster* (Thomas, 1916), Tenasserim rat. **DD**
 97. *Petaurista philippensis* (Elliot, 1842), Elliot's giant flying squirrel. **LR-nt**
 98. *Petinomys fuscocapillus fuscocapillus* (Jerdon, 1847), Travancore flying
 squirrel. **VU**
 99. *Plantacanthomys lasiurus* Blyth, Malabar spiny mouse. **LR-Ic**
 100. *Rattus nitidus* (Hodgson, 1845), Himalayan rat. **DD**
 101. *Rattus norvegicus* (Berkenhout, 1769), Brown/Norway rat. **LR-Ic**
 102. *Rattus palmarum* (Zeelabor, 1869), Nicobar rat. **VU**
 103. *Rattus ranjinae* Agarwal & Ghosal, Ranjini's rat. **VU**
 104. *Rattus rattus* (Linnaeus, 1758), House (Black) rat. **LR-Ic**
 105. *Rattus sikkimensis* Hinton, 1919. **DD**
 106. *Rattus stoicus* (Miller, 1902), Andaman rat. **VU**
 107. *Rattus tiomanicus* (Miller, 1900), Malaysian wood rat. **VU**
 108. *Rattus turkestanicus* (Satunin, 1903), Turkestan rat. **DD**
 109. *Ratufa bicolor gigantea* (Sparrman, 1778), Black (Malayan) giant squirrel.
VU
 110. *Ratufa indica centralis* (Erxleben, 1777), Indian (Malabar) giant squirrel
VU
 111. *Ratufa indica dealbata* (Erxleben, 1777), Indian (Malabar) giant Squirrel
EX
 112. *Ratufa indica indica* (Erxleben, 1777), Indian (Malabar) giant squirrel. **VU**
 113. *Ratufa indica maxima* (Erxleben, 1777), Indian (Malabar) giant squirrel.
VU
 114. *Ratufa macroura dandolena* (Pennant, 1769), Grizzled (Srilankan) giant
 squirrel. **EN**
 115. *Rhizomys pruinosus* Blyth, 1851, Horry bamboo rat. **LR-nt**
 116. *Sicista concolor* (Buchner, 1892), Chinese birch mouse. **DD**
 117. *Tamias macclellandi* (Horsefield, 1840), Himalayan striped squirrel.
LR-nt
 118. *Tatera indica* (Hardwicke, 1807), Indian gerbil or antelope rat. **LR-Ic**
 119. *Vandeleuria oleracea* (Bennett, 1832), Palm mouse (Indian long tailed
 tree-mouse). **LR-Ic**



IV THE IUCN RED LIST CATEGORIES -- KEY

EXTINCT (EX)

A taxon is Extinct when there is no reasonable doubt that the last individual has died.

EXTINCT IN THE WILD (EW)

A taxon is Extinct in the wild when it is known only to survive in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed extinct in the wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

CRITICALLY ENDANGERED (CR)

A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria (A to E) on subsequent pages.

ENDANGERED (EN)

A taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future, as defined by any of the criteria (A to E) on subsequent pages.

VULNERABLE (VU)

A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future, as defined by any of the criteria (A to D) on subsequent pages.

LOWER RISK (LR)

A taxon is Lower Risk when it has been evaluated, does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable. Taxa included in the Lower Risk category can be separated into three subcategories:

LR - Conservation Dependent (cd). Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation programme targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period of five years.

Near Threatened (nt).

NT - Taxa which do not qualify for Conservation Dependent, but which are close to qualifying for Vulnerable.

LC Least Concern (Ic). Taxa which do not qualify for Conservation Dependent or Near Threatened.

DATA DEFICIENT (DD)

A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/ or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution is lacking. Data Deficient is therefore not a category of threat or Lower Risk. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and threatened status. If the range of a taxon is suspected to be relatively circumscribed, if a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified.

NOT EVALUATED (NE)

A taxon is Not Evaluated when it has not yet been assessed against the criteria.

Insectivores and Rodents of Bangladesh

A.W. Akonda & M. Monirul H. Khan

The diversity of small mammals like insectivores and rodents is comparatively rich in Bangladesh. A total of 4 insectivores and 21 rodents have so far been reported from a small country like Bangladesh having an area of 144,000 sq km. Most of them are considered as pests. They damage a significant amount of crops and other materials every year. There is a strong conflict between man and insectivores-rodents. People are becoming more and more hostile to them. The Agriculture Department of the Government influence people to kill some species for the protection of crops. People use poison and trap to kill them. The poison also affects the biological controlling agents through the food chain.

IUCN Bangladesh took the initiatives to identify the status of insectivores and rodents in Bangladesh while preparing the Red Book of Threatened Mammals of Bangladesh. Only one species, i.e. Indian Crested Porcupine, has been identified as Endangered in Bangladesh. However, some of the species from Data Deficient category are actually threatened. A total of 15 species are nationally Data Deficient, and the rest 9 are Not Threatened. However, Hoary-bellied Himalayan Squirrel of the Not Threatened category is globally Vulnerable, and Hodgson's Flying Squirrel and Large Brown Flying Squirrel of the Data Deficient category are globally in Lower Risk category. The Criteria adopted by IUCN Bangladesh for the national categorisation is given in Table 1, and the status and distribution of insectivores and rodents in Table 2.

Table 2. Status and distribution of rodents and insectivores of Bangladesh

Class: Mammalia

Order	Family	Scientific name	English Name	Local name	Local Status	Global Status	Distribution
Insectivora	Soricidae	<i>Suncus etruscus</i> (Savi, 1822)	Savi's Pigmy Shrew/ Pygmy White-toothed Shrew	Baman Chika	DD	—	NE ?
		<i>Suncus murinus</i> (Linnaeus, 1766)	Grey Musk Shrew/ House Shrew	Chika/Chhucho	NO	--	W
	Talpidae	<i>Talpa micrura</i> Hodgson, 1841	Eastern Mole/ Himalayan Mole	-	DD	—	MEF
Scandentia [Insectivora]	Tupaiaidae	<i>Tupaia glis</i> (Diard, 1820) {Reported by Khan, 1982}	Common Tree Shrew/ Malayan Tree Shrew	Gechho Chhucho	DD	--	DF, MEF
Rodentia	Sciuridae	<i>Callosciurus erythraeus</i> (Pallas, 1779)	Pallas's Squirrel	—	DD	—	MEF
		<i>Callosciurus pygerythrus</i> (Geoffroy, 1831)	Hoary-bellied Himalayan Squirrel/Irrawaddy Squirrel	Badami Kathbirali	NO	VU	E of Jamuna, SB
		<i>Dremomys lokriah</i> (Hodgson, 1836)	Orange-bellied Himalayan Squirrel	—	DD	—	MEF
		<i>Funambulus palmarum</i> (Linnaeus, 1766)	Threestriped Palm Squirrel/ Indian Palm Squirrel	—	NO	—	E of Jamuna
		<i>Funambulus pennanti</i> Wroughton, 1905	Fivestriped Palm Squirrel/ Northern Palm Squirrel	Dora Kathbirali	NO	—	W' of Jamuna except SB
		<i>Petaurista magnificus</i> (Hodgson, 1836)	Hodgson's Flying Squirrel	Uranta Kathbirali	DD	LR	MEF
		<i>Petaurista petaurista</i> (Pallas, 1766)	Large Brown Flying Squirrel/ Common Giant Flying Squirrel /Red Giant Flying Squirrel	Uranta Kathbirali	DD	LR	SE
		<i>Ratufa bicolor</i> (Sparrmann, 1778)	Malayan Giant Squirrel/ Black Giant Squirrel	Kathbirali	DD	—	MEF
		Muridae	<i>Bandicota bengalensis</i> (Gray, 1835)	Indian Mole Rat/ Lesser Bandicoot Rat	Indur	NO	—
<i>Bandicota indica</i> (Bechstein, 1800)	Bandicoot Rat/ Large Bandicoot Rat/ Greater Bandicoot Rat		Bara Indur/ Dhari Indur	NO	—	W	

	<i>Millardia meltada</i> (Gray, 1837)	Metad Rat/ Soft-furred Rat/ Soft-furred Field Rat	—	DD	—	W
	<i>Mus booduga</i> (Gray, 1837)	Indian Field Mouse/ Little Indian Field Mouse	Metho Indur	NO	—	W
	<i>Mus musculus</i> Linnaeus, 1758	House Mouse	Nengti Indur	NO	—	W
	<i>Nesokia indica</i> (Gray, 1830)	Short-tailed Bandicoot Rat/ Short-tailed Mole Rat	—	DD	—	?
	<i>Rattus norvegicus</i> (Berkenhout, 1769)	Bram Rat	—	DD	—	?
	<i>Rattus rattus</i> Linnaeus, 1758	Common House Rat/ Black Rat	Indur	NO	—	W
	<i>Tatera indica</i> (Hardwicke, 1807)	Antelope Rat/ Indian Gerbil	Kangaru Indur	DD	—	?
	<i>Vandeleuria oleracea</i> Bennett, 1832	Long-tailed Tree Mouse/ Indian Long-tailed Tree Mouse/ Palm Mouse	—	DD	—	MEF
Rhizomyidae	<i>Cannomys badius</i> (Hodgson, 1841)	Bay Bamboo Rat/ Lesser Bamboo Rat	—	DD	—	NE ?
Hystriidae	<i>Atherurus macrourus</i> Linnaeus, 1758	Brush-tailed Porcupine/ Asiatic Brush-tailed Porcupine	Shojaru	DD	—	DF, MEF, SB
	<i>Hystrix indica</i> Kerr, 1792	Indian Crested Porcupine/ Indian Porcupine	Shojaru	EN	—	W

-- Status code: EN – Endangered, NO – Not Threatened, DD – Data Deficient

-- Distribution code: W – Wide, E – East, Wc – West, NE – North-East, SE – South-East, DF – Deciduous Forest, MEF – Mixed Evergreen Forest, SB –

-- Sundarbans Mangrove Forest

-- Total number of species: 25

-- N.B. Previous names are given in square brackets

Table 1. Criteria Adopted by IUCN Bangladesh

Factor	Criteria for Assessment	Score
Extent of occurrence (km ²)	>72000, <72000, <36000, <18000, <9000, <4500	0-5
Suspected change in population in the last 20 years	Increase in population, no change, slightly reduced, moderately reduced, highly reduced, no longer in the wild	0-5
Habitat fragmentation	Not fragmented, slightly fragmented, slightly to moderately fragmented, moderately fragmented, highly fragmented, very highly fragmented	0-5
Habitat condition	Not degraded, slightly degraded, moderately degraded, degraded, highly degraded, lost	0-5
Habitat status (%age of protection in the area of occurrence)	>50, <50, <35, <20, <05, 00	0-5
Human impact	High positive, moderate positive, none, low negative, moderate negative, high negative	0-5
Intrinsic capacity to adapt	Very high, high, moderate, moderate to low, low, very low	0-5

Categories of threat (threatened when the species scores an average of 2.4 or more): Critically Endangered (CR): >3.5; Endangered (EN): 3-3.5; Vulnerable (VU): 2.4-2.9; Data Deficient (DD): When data available on <4 factors.

Rodent Behaviour -- Network Questions and Answers

Satyendra Kumar Tiwari and Kay Hassall from Distt Umari in M. P. wrote the following letter to RISCINSA:

"We are writing to as your assistance regarding the explanation of rodent behaviour in Bandhavgarh National Park. During this present season (March) we have noticed that many trees of the species Palash (*Butea monosperma*) and Tendu (*Diospyros melanoxylon* Roxb.) have been gnawed at the base to a height of approximately two feet up the trunk and in some cases completely circling the tree. This we are presuming is the work of the porcupine (*Hystrix indica*) as the teeth marks and other evidence shows it to be the act of a large rodent, through we have not actually seen the animal in action.

We have not observed damage of this kind to trees in any previous season during the last ten or so years and were wondering why this was happening.

Is the rodent lacking in some kind of food as the last two years have been particularly dry, or is this a natural phenomenon and perhaps there are simply more porcupines in the park? Why would the mammal choose these particular trees to eat and are they indeed being eaten or is the behaviour for some other reason? We are presuming the trees encircled by the gnawing will eventually die as their bark and means of nourishment has been totally stripped away. We request your rodent network to solve this mystery and look forward to receiving your reply."

Answer -- 6.06.2000

It is well known and documented that various species of rodents gnaw different plants/crops, much of which serves merely to wear down the incisors. Most such observations go unnoticed or unrecorded due to lack of workers in the field. However to mention in particular some of the rodents which are responsible for gnawing the bark/trunk portions are (a) *Meriones hurrianae* (b) *Tatera indica* (c) *Bandicota bengalensis* (d) *Sigmodon hispidus* (e) *Rattus cutchicus* (f) *Golunda eliotti* (g) Field mice (h) *Thomomys bottae* (pocket gophers) and (i) *Microtus californicus*

It is interesting to note that both the trees viz palash (*Butea monosperma*) and Tendu (*Diospyros melanoxylon*) which are gnawed at the base comes under the category of "Medicinal plants". The literature survey suggests that the bark of both plants act as excellent astringent and useful in diarrhoea and dysentery. Also, the bark of palash is used in snake bites and when chewed along with sugar candy relieves abnormal thirst.

In the letter it has been mentioned that previous last two years have been particularly dry and the rodent (whichever responsible for gnawing the palash trees) must have exhibited this type of behaviour to relieve its thirst?

The other reasons of gnawing may be attributed to derive some nutrients/components essential for their physiological function (the rodents gnaw bones which may also be for supply of calcium). The palash bark furnishes important exudation - butea gum, kino - tannins and gallic acids, soluble mucilage and ash, and pyrocatechin; the Tendu bark - tannin, pectin and glucose (Literature survey).

Personally I am of the opinion that the other important factor which needs attention is the "texture" component of trees bark/trunk. Because in our earlier studies we have found that different species of rodents prefer different hardness and texture for feeding/gnawing.

Dr. K. Muktha Bai, Scientist, Central Food Technological Research Institute, Mysore 570 013, Karnataka. Fax 821 515 440

Answer : 5 June 00 -- Feeding behaviour of rodent species in Bandhavgarh National park.

Girdling orchard and forest trees is usual type of damage caused by species of porcupines. However, according to M/S. Tiwari & Hassali (2000), this type of damage in Palash and Tendu trees of Bandhavgarh was observed only during the present year, and not in the previous years. It is very difficult to provide right interpretation of such phenomenon without field observation. Still on the basis of existing literature I like to provide the available information on the selection of food species by rodents. Broad diets are common for majority of rodent species as availability of food changes in most environment. Whether or not a generalized or specialised diet will be optimal depends on a number of factors, including the absolute abundance of potential food, the relative value of potential food, and the relative abundance of potential food types. A number of theoretical studies have shown that a generalised diet containing a relatively high diversity of food items will be selectively favoured at a period (1) during a decrease in the absolute abundance of food, (2) during a period of increased energetic requirements, (3) during a

decrease in the diversity of food type, (4) when selection favours maximizing the rate of energy in take per unit time, and (5) when food is uniformly distributed in space. In contrast, a specialised diet containing a relatively low diversity of food items will be selectively favoured under the reverse situation. Sudden change in the food habit of Porcupine in Bandhavgarh may be attributed to any of the following factors.

1. Influx of porcupine population either due to migration or decrease in the population of predator species, resulting increased intraspecific competition for food.
2. Influx in the population of other sympatric species of similar food habits resulting increased interspecific competition for food.
3. Shortage in the regular food items due to recent changes in agricultural and forestry practice and policy in the area / drought, flood or other reasons.

There may be many other factors responsible for the change of feeding behaviour, but all these hypothesis to be tested in the field.

Dr. Sujit Chakraborty, Scientist - 'SE', Zoological Survey of India Prani Vigyan Bhavan, M-Block, New Alipore, Calcutta - 700 053

Answer -- 30 June 00

This has a reference to the letter from M/s Tiwari & Hassalls. In this connection I am to state that the letter appears to be containing incomplete information. It raises certain doubts, I shall put it straight in the following point-wise manner.

1. Have the observers noticed any fallen or broken quills near or around these trees?
2. Have they noticed any live burrow opening near any of these trees mentioned in their letter? Because porcupines are fossorial in habit. Detecting live burrow opening and sighting fallen quills can be considered as direct evidences.
3. Number of rodent species are omnivorous in habit and can change their dietary habits to some extent depending on the availability and nature of food.
4. Study on live burrow openings will help the observers to draw inference on the population status of porcupines in the park.
5. I doubt if the trees with fairly good girth will die due to gnawing in the bark by porcupines. Gnawing is a natural and compulsory act for any rodent species. Because act of gnawing helps the rodents to keep the permanent growth of incisors in check. Rodents prefer to gnaw at hard surfaces. Attempts to gnaw even on aluminium surfaces by rats and bandicoots are well known. Otherwise they will die its own death due to life-long growth of the inwardly curved incisors.
6. The rodent species referred to in the letter may be finding these plant species effective for dual purposes (1) for gnawing and (2) some sort of nourishments from the bark tissues.

Hope, these points may throw some light in solving "the mystery" reported by M/s Tiwari and Hassalls.

Dr. M.S. Pradhan, Zoological Survey of India, Western Regional Station Vidya Nagar, Sector No.29, Post Box No.3053, P.C. N.T. Post, Near Akurdi Railway Station, Rawet Road, Pune 411 044

Rat - a - tattle

Editor: Sally Walker
Editorial advisors: Iswar Prakash, Sanjay Molur

Rat - a - tattle is the semi-annual Newsletter of the Rodentia, Insectivora, Scandentia Conservation & Information Network of South Asia RISCINSA. This is Vol.1, No.1, October 2000 RISCINSA . . . for Ratters in Bangladesh, Bhutan, India, Nepa, Maldive s, Pakistan, and Sri Lanka. Rat-a-tattle is published as a section of the monthly magazine ZOO's PRINT as a service to the rodentia, etcetera community who may not yet be members of the network and to conservation actioners and enthusiasts at large.

Rat - a - tattle and the activities of RISCINSA have been funded by the Society for Conservation of Species and Populations, Munich.

RISCINSA,
79 Bharati Colony, Peelamedu
Coimbatore 641 004 T.N.
Ph. 422 563 159 Fx. 422 563 269
Email : zooreach@vsnl.com

