



Volume 2, Number 1

December 2001

Message to RISCINSA Members and supporters

RISCINSA was initiated nearly two years ago. Since that time we have been trying to find the rodent specialists of India and then the South Asian region. We have a small network of about 40 people which we hope will grow with time. We feel there are other specialists in this region that we have not discovered. If you know any, please tell us about them, or vice versa.

From the Administrative Office, we have been concentrating on building contacts for the network so that it could be more effective. These have taken the form of establishing a relationship with various specialist groups, e.g. the Rodent Specialist Group, the Insectivore Specialist Group and the Small Mammal Subgroup of the Reintroduction Specialist Group. We are now representing the Rodent and the Insectivore Specialist Groups in this region and have sent all RISCINSA members names and C.V. information via the Directory to the respective Chairs of these groups. We have a working relationship with the Small Mammal Subgroup of the Reintroduction Specialist Group and its Chair, Mike Jordan, is our external advisor.

We have also made contacts with external specialists who have had direct, hands-on, successful experience in conservation action with rodents and insectivores. Dr. Mike Jordan of Sparsholdt College is one and Mr. Glen Gaikhorst of the Perth Zoo's Native Species Breeding Programme. With these contacts we can conduct an outstanding training in conservation of rodents and insectivores.

We have also been searching for a sponsor for RISCINSA and this year we succeeded in this, with help from Mr. Nick Ellerton, an old friend from the UK zoo community who convinced his institution, the Knowsley Safari Park, to sponsor our network and a training course. This sponsorship is intended to continue and we will not disappoint Lord Stanley, Earl of Derby, the owner of Knowsley who has agreed for this generous support.

We have collected some useful materials on rodent biology, care, etc. which we are in the process of distributing or informing how to obtain. And finally, we produced our Directory of members with their C.V. and list of publications.

This year we will conduct a training workshop (see p. 4 inside) and also plan a Conservation Assessment and Management Plan (CAMP) workshop for rodents and insectivores as mentioned in last newsletter. This should take place in November or early December.

Finally, we have only one article by an India contributor for the newsletter. We would like to hear from all of our members and would appreciate their contributing material for this newsletter. The newsletter can come out more often if there is member news to report. This, of course, is up to you.

Have a very Happy 2002. We hope to meet all of you this year and build a very successful conservation network for rodents and insectivores.

Sally Walker, Editor

New Members since last newsletter (old members on back page)

Bahir, Mr. Mohamed Mujyhaba
Research Associate, Wildlife Heritage Trust
95, Cotta Road, Colombo 08, Sri Lanka

Bhaduaria, Dr. Ahibaram Singh
Assoc. Prof., Department of Entomology
C.S.A. University of Agri. Technology
Kanpur 208 002, Uttar Pradesh, India

Haberl, Dr. Werner
Chair, IUCN SSC Insectivore Specialist
Group, Hamburgerster, 11, A-1050 Vienna,
Austria

Idris, Dr. Mohammad
AICRP on Rodent Control,
Central Arid Zone Research Institute,
Jodhpur 342 003, Rajasthan, India

Maheswaran, Dr. Gopinath
Bombay Natural History Society
Mumbai, 400 023, Maharashtra, India

Neelanarayanan, Dr. P., Lecturer
Department of Zoology
Nehru Memorial College, Puthanampatty
Tiruchirapally 621 007, Tamil Nadu, India

Priya, Ms. K. Padma, Researcher
Zoo Outreach Organisation
Coimbatore 641 004, Tamil Nadu, India

Rana, Dr. B.D.
Project In charge (AICRP on Rodent Control)
Central Arid Zone Research Institute
Jodhpur 342 003, Rajasthan, India

Reza, Mr. Ali
Assistant Programme Officer
IUCN Bangladesh Country Office
Dhanmondi, Dhaka 1209, Bangladesh

Srivastava, Dr. Dinesh Chandra
Entomology Division, Indian Institute of
Sugarcane Research, Dilkusha,
Lucknow 226 002, Uttar Pradesh, India

Shrestha, Dr. Tej Kumar
G.P.O. Box 6133, Kathmandu, Nepal

Tripathi, Dr. Rakesh Sharan
Scientist, AICRP on Rodent control
Central Arid Zone Research Institute
Jodhpur 342 003, Rajasthan, India

Protection of Coconut (*Cocos nucifera*) palms from Porcupine (*Hystrix indica* Kerr) damage

A.K. Chakravarthy and A.C. Girish*

Introduction

There has been a wide spread incidence of debarking in cultivated palms such as coconut and oil palm by porcupine in parts of Karnataka, South India (Chakravarthy, A.K. 1993-2000 personal observations). Debarking by porcupine was noticed in forest, park and avenue trees in parts of Rajasthan (Sharma and Prasad, 1992) and in commercial crop plantations like Cashew in different parts of India (Agarwal and Chakraborty, 1992). Such instances of damage by porcupines have also been documented outside India (McIntyre, 1972). To determine the economic and ecological implications of debarking by porcupines studies were initiated at Central Plantation Crops Research Institute (CPCRI) – seed farm – Kidu during 1996 to 1999.

Methods to prevent porcupine damage to coconut palms: CPCRI – seed farm – Kidu (12° 27'N lat. 74°35' long, 281m AMSL) – Coastal Karnataka, is situated 90 km south east of Mangalore, on Mangalore-Subramanya road. CPCRI comprises of 120 ha with laterite soil.

Field observations on porcupine damage to coconut palms were observed through out the year in the seed farm. In addition, observations on extent of damage were also recorded.

Management practices: A set of 25 palms with uniform growth was selected to study the effect of crop protection practices on porcupine damage.

Coal tar: Coal tar, a liquid formulation having insecticidal / rodenticidal properties, was poured around the trunk of the palm up to a height of 1m from the ground. About 1L of the liquid is required to cover the base of one palm.

Japan black: Japan black, a strong black liquid formulation having insecticidal/rodenticidal properties was smeared on the trunk of the palm up to 1m from the ground. About 1L of the liquid is required to cover the base of one palm.

Bamboo thatch: A thorny festoon of bamboo sticks was tied firmly with binding wire around the trunk of the palm from the base up to a height of 0.7m, to serve as a mechanical barrier to porcupines.

Metallic mesh: A metallic mesh (1.5" x 1.5") was tied firmly with the binding wire around the trunk of the palm from the base up to about 0.7m to serve as mechanical barrier to porcupines.

10G Thimet: 10G thimet mixed with 3.5g of sand and sealed in perforated polybags (20,10 cm) were kept half buried in the soil at the base of the palm. The odour emanating from the thimet granules served as a chemical repellent for the porcupines.

Waste lubricant oil: Waste lubricant oil having repellent properties was smeared around the trunk of the palm up to 1m from the ground. About 1kg of waste lubricant oil is required per palm.

Weeding: At the base of the palms all the grass and weeds

were removed and the basin was maintained clean through out the year. Palms with basins covered with lush growth of vegetation served as control.

Racumin (0.75% w/w) tracking powder: About 250mg was sprayed around the burrow of the porcupine. It was observed that the porcupines stopped using these burrows. Hence racumin served as a chemical repellent.

Watch and ward: Two persons with torches visited the plot during night for two hours by making auditory sounds. The sound repelled the porcupines.

Results and discussion:

All the above-mentioned treatments proved effective against porcupines. But the degree and the period of protection to palms varied as shown in table 1. The study on cost-benefit ratio and the impact on yield are under progress. The pastes, liquid formulations and oils are washed away during rains therefore must be applied often. Farmers find covering the base of palm seedlings with bamboo thatch, the most convenient, as the material is easily available. Moreover it is effective, cheap and ecofriendly. Trapping porcupines using indigenous wooden traps has proved effective in certain situations.

Table 1. Efficacy of different methods/treatments for protecting coconut palms against porcupine damage, at CPCRI, Kidu, Coastal Karnataka.

Treatment	No of days for which the palm remained protected
Lacing coal tar	60
Lacing Japan black	95
Lacing waste lubricant oil	45
Covering base with bamboo thatch	210
Covering base with metallic mesh	250
Application of 10G Thimet	30
Application of Racumin (0.75%)	40

References

Agarwal, V.C. and Chakraborty, S. (1992). The Indian crested porcupine, *Hystrix indica* Kerr. In: (Eds: Ishwar Prakash and P.K. Ghosh) "Rodents in Indian Agriculture", Scientific publishers, Jodhpur. Pp.25-30.

McIntyre, E.G. (1972). Barkstripping – A natural phenomenon, *J.R. Scottish For. Soc.* 26: 43-50

Sharma D. and S.N. Prasad (1992). Tree barking and habitat use of porcupine (*Hystrix indica* Kerr) in Sariska National Park in Western India. *Mammalia*. 56(3): 351-361.

Acknowledgement

Authors express their sincere gratitude to the authorities of U.A.S., Bangalore and I.C.A.R., New Delhi for encouragement and support.

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IUCN SSC Reintroduction Specialist Group, Small Mammal Section Chair -- RISCINSA External Advisor



Mike Jordan, Chair, Small Mammal Subgroup, RSG, SSC, IUCN

Mike Jordan was introduced to RISCINSA last issue. Since that time he has become the head of a newly formed Small Mammal Section of the IUCN SSC Reintroduction Specialist Group. We are very fortunate to have Mike as our External Advisor. Mike has also agreed to formulate a Training Workshop on a variety of conservation tools for rodent conservation.

Mike is a professor in the Animal Management Section of Sparsholt College Hampshire, teaching both *in situ* as well as *ex situ* management theory and practice. He is deeply involved in the zoo community of UK and Europe, serving as the Chair of the UK and European Taxon Advisory Group.

Elsewhere on these pages are several items contributed by Mike, e.g. a description of the Reintroduction Specialist Group's Small Mammal Subgroup, a first draft of a training course outline, The potential for exhibiting and interpreting small mammals, A review of foraging niches in Rodents and their implications for captive management.

IUCN/SSC Reintroduction Specialist Group – Small Mammal Section.

The Re-introduction Specialist Group (RSG) is one of the more than 120 Specialist Groups of the IUCN Species Survival Commission (SSC). It is one of the five disciplinary groups (as opposed to most SSC Specialist Groups which deal with single taxonomic groups), covering a wide range of plant and animal species.

The Re-introduction Specialist Group's vision is:
To promote the restoration of plant and animal species diversity and ecological processes through sustainable re-introductions, based on best available practices to achieve

viable populations in their natural habitats. This vision will be achieved through enhancing sound re-introductions with professional guidance, with provision of tools such as the 'IUCN Guidelines for Re-introductions' and by promoting awareness of the role of the re-introduced species in biodiversity conservation. The RSG network comprises over 300 members world-wide. These members represent a wide range of expertise in the multiple aspects of re-introduction, as well as a variety of institutions including zoos, botanic gardens, government natural resource sectors, universities and NGOs.

The RSG is organised into 11 sections each with a Chairman, under the overall guidance of a Chairman, Vice-Chairman and Secretariat. The Sections represent various taxa and areas of interest, with the aim of providing a point of contact and information for the taxon specific issues of re-introduction, whilst at the same time providing overall guidance on the fundamental aspects common to all re-introduction work.

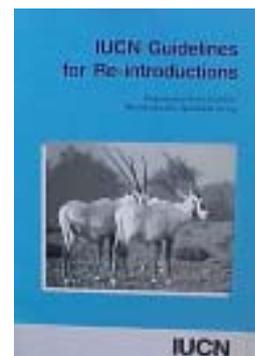
One of these 11 sections is the Small Mammal Section, formed specifically to address the issues and considerations of working with 'r selected' species such as Rodents, Insectivores and Tree Shrews. Their short life spans, high mortality, high reproductive rates and classic "boom and bust" population dynamics creates a number of issues and challenges for captive breeding and re-introduction work.

If you are involved in small mammal release work or interested in more details on the role of the Small Mammal Section of the RSG then please contact:

Mike Jordan, Chair – IUCN SSC Reintroduction Specialist Group (Small Mammal Section)
Animal Management Section, Sparsholt College Hampshire
Sparsholt, Hants. SO21 2NF UK
E-mail: mjordan@sparsholt.ac.uk

Or if you are interested in re-introductions in general and the work of the RSG please contact:

Pritpal S. Soorae, Senior Conservation Officer
IUCN/SSC Re-introduction Specialist Group (RSG)
P.O. Box 45553, Abu Dhabi, United Arab Emirates (UAE)
E-mail: PSoorae@erwda.gov.ae



The potential for exhibiting and Interpreting small mammals

Mike Jordan

The exhibition of Rodents and Insectivores has traditionally played a minor role in most zoological collections, yet these two groups comprise a massive number of mammalian species. There are 2021 species of Rodents (43.7% of all mammals) and a further 428 of Insectivores, over 50% of all mammals are members of these two orders. Rodents and Insectivores represent a massive, largely unexplored potential resource for most zoological collections.

From an educational viewpoint they occupy a massive diversity of ecological niches, from commensal species such as Western House Mouse (*Mus domesticus*) to tropical arboreal species such as Prevost's Squirrel (*Callosciurus prevosti*). In habit they are incredibly diverse and species exist that occupy almost all habitats and represent a wide array of ecological specialisations, with a wider geographical distribution than any other group.

The husbandry requirements of many species are very modest and so it can be relatively easy and cost effective to accommodate and appropriately interpret a number of displays across different areas of a collection. They can represent either a key display in their own right or be exhibited as reinforcement for other displays of larger species to emphasise particular educational themes or concepts.

From a conservation viewpoint there are more Rodent species currently categorised as threatened by the IUCN than for any other mammalian order, with 330 species. Amongst the Insectivores there are 152 threatened species, including 66 species among the White-toothed Shrews (*Crocidura* spp.) alone, this is more than for any other mammalian genera. Many species and subspecies are very restricted in distribution and particularly vulnerable to natural disaster or habitat loss and yet their normally high reproductive rate makes them prime candidates for successful captive propagation and management.

Our knowledge of many species remains exceedingly poor and there is still much valuable research which can be conducted on captive Rodents and Insectivores. The taxonomy of many groups is only poorly known and even basic biological information such as reproductive cycles, litter sizes, age of weaning etc. is often uncertain or remains unpublished for a large number of species.

As increasingly high standards are expected of zoological collections today and in the future our utilisation of species of Rodent and Insectivore for display should increase. The massive numbers of species and diversity represent very many opportunities for first class display and interpretation whilst at the same time making a real contribution to conservation and research of many highly threatened and poorly known species.

PROPOSED TRAINING FOR MID-2002

One of the projects for 2002 is to conduct a training workshop in a variety of conservation biology tools, including field techniques for establishment of population and distribution information, the use of captive propagation in conservation and education, and interactive management of small populations (including reintroduction, strengthening or restocking).

Zoo Outreach Organisation, which hosts RISCINSA, has conducted a number of such workshops and tries to bring together some external resource persons for fresh ideas and untried techniques as well as experts from inside the country.

We would like comments from RISCINSA members about the subject areas so far suggested for the workshop. We are planning to have Dr. Mike Jordan, introduced in last two issues, as the lead trainer as he has much experience in such training as well as experience in captive management and reintroduction in the United Kingdom. Also Mr. Glen Gaikhorst from Perth Zoo, Australia will be with us to share the immense and very successful experience Perth Zoo and their wildlife authority have in breeding small mammals for conservation and reestablishing or strengthening depleted populations. If funds permit, we will also try and get Werner Haberl of the Insectivore Specialist Group who is an experienced field man and is keenly interested in the workshop.

The workshop can be from 3-5 days. We will circulate a questionnaire among members in due course to find out what is feasible in terms of dates, duration, etc. In the meantime we welcome your suggestions of specific techniques you would like to learn or see demonstrated. We would also like to hear your preferences in terms of in-country resource persons to teach practical techniques.

Programme draft

RISCINSA MEMBERS INVITED TO SUGGEST MODIFICATIONS etc.
Lecture/ demonstration. Introduction to field techniques: Field trapping and monitoring techniques.

Case studies from United Kingdom and Australia

Small mammal diversity and conservation, the role of captive breeding: Basic introduction to number of species, ecological diversity and the number of species that are globally threatened. The role of captive breeding for conservation of small mammals.

Practical Basic handling and restraint procedures: Practical workshop session on different techniques and equipment for handling and restraint. Sexing of animals, welfare issues.

Lecture/ demonstration Captive management and care: Husbandry and population management regimes.

Lecture Reproductive Biology: Small mammal reproduction. Assessment of reproductive status and managing populations.

Practical Handling and marking procedures: Practical workshop session on handling techniques and different methods for marking and monitoring individuals.

Discussion of potential for endangered species breeding and reintroduction in India.

Reintroduction planning -- long term.

Reintroduction of small mammals (rodents, insectivores)

Monitoring of reintroduced animals.

Discussion and personal commitments.

IUCN SSC Insectivore Specialist Group, South Asia -- now represented by RISCINSA

Last August someone forwarded us a notice in Mammal list-serve that the ISG (Insectivore Specialist Group, SSC IUCN) was looking for potential candidates to fill voluntary positions such as "Regional Co-ordinators" or "Sub-regional Co-ordinators" and "Species Specialists", as well as RLA (Red List Authorities) and a RLA focal point for high biodiversity / low access regions.

We responded to this request by describing the RISCINSA network and offering its services to ISG, sending a list of members for selection as species specialists are difficult to access.

Thus began a scintillating email association with Dr. Werner Haberl, Chair, Insectivore Specialist Group. Dr. Haberl's much abbreviated C.V. is included on the next page. His contact details are below along with the excellent websites he manages about shrews and dormice. Those of you studying these groups may contact Dr. Haberl for direction if you have taxonomic or other questions and problems.

Dr. Werner Haberl, Chair, Insectivore Specialist Group
IUCN Species Survival Commission
Hamburgerstr. 11, A-1050 Vienna, Austria
Email: shrewbib@sorex.vienna.at
The Shrew Shrine: <http://members.vienna.at/shrew>
The Dormouse Hollow: <http://www.gllirarium.de/dormouse>
IUCN / ISG: <http://members.vienna.at/shrew/itses.html>

Dr. Haberl is a new Chair for the Insectivora Specialist Group so is in the process of reorganising the group. It is a good time for you to write to him if you are interested in taking a special role. We have sent the RISCINSA Directory which has a good summary of everyone's C.V. who sent it, but if you would like to introduce yourself personally, please go for it.

Dr. Haberl is interested in the long-promised field techniques workshop, a CAMP for South Asian insectivores and in forwarding the solidification of an insectivore community both nationally and regionally in South Asia.

We are pleased to represent the ISG in South Asia. Dr. Ishwar Prakash, Scientific Chair of RISCINSA will, of course, be the Technical Chair of ISG, South Asia. Sanjay Molur will be Red List Advisor and Sally Walker, Administrative Chair.

Our activities will be, for the most part, the same; but as representative of ISG, SSC, they will take on a greater significance and have more impact. We look forward to working with Dr. Haberl and SSC in this way.



Dr. Werner Haberl
Chairman, Insectivore Specialist Group
Species Survival Commission
IUCN - The World Conservation Union
Hamburgerstrasse 11
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E-mail: shrewbib@sorex.vienna.at



2 December, 2001

Dr. I. Prakash
RISCINSA Zoological Survey of India
107 Kamla Nehru Nagar
Jodhpur 342 009 Rajasthan India

Dear Dr. Prakash,

The Insectivore, Tree Shrew and Elephant Shrew Specialist Group (ITSSES) was recently split into the Insectivore Specialist Group (ISG) and the Afrotheria Specialist Group, the latter which is chaired by G. Rathbun and, among other mammal groups, took over the Tenrecidae (tenrecs), Chrysochloridae (golden moles) and Macroscelididae (elephant shrews). The ISG remains in charge of shrews (Soricidae), hedgehogs (Erinaceidae), moles, desmans and shrew moles (Talpidae), solenodons (Solenodontidae) and tupaias (Scandentia).

The Insectivore Specialist Group is currently re-organizing membership, setting new goals and proposals for new action plans. I would like to invite you and your colleagues in RISCINSA to represent the IUCN Insectivore Specialist Group in South Asia until the end of my chairmanship (2003) and would be grateful for any co-operation.

There are a number of insectivore species in Asia and many are still unknown regarding their biology, distribution and conservation status. I believe that RISCINSA members can contribute to the group.

I would be grateful if your network would accept this invitation. As you know, participation in SSC Specialist Groups is voluntary. The ISG would not be able to offer any financial support to RISCINSA but I can write a letter of recommendation for specific projects, if they are approved by the IUCN and if they are within the scope of the ISG.

Yours sincerely,

Dr. Werner Haberl
Chair, Insectivore Specialist Group

CC: Sally Walker, Administrative Chair
Sanjay Molur, Red List Advisor



Dr. Werner Haberl

Biographical information about Dr. Werner Haberl

Werner Haberl was born on 17. March 1963 in Cairo, Egypt but his nationality is Austrian. He has enjoyed an eclectic life, having been born in Egypt, attended primary school in Australia and Austria, attended secondary school in Fiji Islands, finishing in Vienna. He received his Ph.D. or "*Doktor der Philosophie*" from the Faculty of Formal- and Natural Sciences, University of Vienna in 1994 for his dissertation "*On the ecology and behaviour of Austrian shrews...*" In 1995 Dr. Haberl received the "*Fritz Frank-Förderpreises*" (Fritz Frank Prize) from the German Society of Mammalogy for PhD Thesis. In the same year he published "*The Shrew Bibliography*" (Soricidae, Insectivora) followed by further publications on small mammal ecology and behaviour.

Dr. Haberl has founded several useful Internet Forums, e.g. "*The Shrew Site*" / "*The Shrew Shrine*" for which he has been awarded prizes and awards. He is also Editor of the Discussion Forum and Newsletter "*Shrew Talk*". He compiled the Internet pages of ITSES (Insectivore, Tree Shrew and Elephant Shrew Specialist Group) for IUCN SSC and this year became Chairperson of the reorganised Insectivore Specialist Group. In 1999, Haberl started the Internet Forum "*The Dormouse Hollow*" (International Scientific Forum on the Biology of Dormice (*Gliridae*) and is Editor of the Newsletter "*Dormouse Talk*".

He is engaged in field studies in several countries, including Slovenia and South Africa as well as closer to him. He is in demand as a guest lecturer. He is a Scientific Researcher and Project Leader (Population Ecology and Monitoring of Small Mammals in the National Park Neusiedler See (Austria) at the Biological Station Neusiedler See, A-7142 Illmitz, Austria since 1999. He has organised and participated in numerous conferences and meetings. His various memberships include German Society of Mammalogy, American Society of Mammalogists, Birdlife International, IUCN, SSC: Insectivore Specialist Group, National Geographic Society, Rodentia and Insectivora Conservation & Information Network of South Asia and Consortium of Aquariums, Universities and Zoos

Websites by Werner Haberl

The Shrew Shrine: <http://members.vienna.at/shrew>

The Shrew Bibliography: <http://members.vienna.at/shrew/shrewbib.html>

Shrew Talk Newsletter: <http://members.vienna.at/shrew/shrewtalk.html>

The Dormouse Hollow: <http://www.glirarium.de/dormouse>

IUCN/SSC/ISG: <http://members.vienna.at/shrew/itses.html>

From SSC Newsletter -- The ISG and the Splitting of ITSES

The Insectivore, Tree Shrew and Elephant Shrew Specialist Group (ITSES) was recently split into the Insectivore Specialist Group (ISG) and the Afrotheria Specialist Group, the latter which is chaired by G. Rathbun, and, among other mammal groups, took over the Tenrecidae (tenrecs), Chrysochloridae (golden moles) and Macroscelididae (elephant shrews). The ISG remains in charge of shrews (*Soricidae*), hedgehogs (*Erinaceidae*), moles, desmans and shrew moles (*Talpidae*), solenodons (*Solenodontidae*) and tupaia (*Scandentia*). The number of species is still under revision, as new species and subspecies are still found, especially tropical African Soricidae. We still do not know how many species exist. Future basic research will concern the distribution and ecology of these species.

The taxonomy is still controversial. Including the Scandentia in the ISG has both traditional and practical reasons, - at least it is way to try to create some activity for species that previously had little or no attention. The ISG and the Afrotheria SG will continue to exchange information and ideas so that we all can do a better job on behalf of "our" animals. Web sites will be cross-referenced and newsletters will be exchanged.

ISG Group Structure

After the publication of the "Status Survey and Conservation Action Plan for Eurasian Insectivores" (1995) the group has been somewhat inactive, but with the participation of new and old members will hopefully become more productive. A few longtime members have retired and expressed that they will be unable to actively serve the ISG. However, they will advise wherever possible. Some members of the former ITSES have moved to the Afrotheria SG.

The "new" Insectivore Specialist Group is currently re-organizing membership, setting new goals and proposals for new action plans. The current organization of the group involves the appointment of section-, regional- and country co-ordinators. J. Merritt (CMNH, U.S.A.) acts as vice chair and R.M. Baxter (UFH, R.S.A.) acts as administrative chair. Among others, section co-ordinators are S. Churchfield and R. Hutterer (shrews), N. Reeve (hedgehogs), H. Whidden, J. Ottenwalder and C. Woods (solenodons) and K. Helgen (tupaia). As of September 2001, the ISG counts approximately 40 active members. We will undoubtedly continue to add new members through time, which will share their knowledge and expertise.

Future challenges

Every structural change of a group requires time. As soon as the ISG is re-organized, we plan to work on new conservation action plans and Red List assessments. The Status Survey and Conservation Action Plan for African Insectivora will be revised. The "Shrew Bibliography" on CD-ROM is planned to be updated. The ISG Newsletter, currently planned to start as an e-mail service, will be edited by W. Haberl and R.M. Baxter. Depending on funds, we plan to publish this newsletter in printed form. The ISG website (former ITSES website) will be revised and updated.

Congresses

Two congresses concentrating on insectivore matters will enhance contacts between members and promote scientific progress. These are the 4th Desman Meeting held at Laboratoire Souterrain, Moulis, Pyrénées, France from 18-20 October 2001 and the International Colloquium on the Biology of the Soricidae II to be held at Powdermill Biological Station, Pennsylvania, U.S.A. from 14-18 October 2002. As of 1 July 2001, 70 participants representing 21 countries are registered to attend the latter, which will cover all aspects of soricid biology.

Werner Haberl
Chair, Insectivore Specialist Group
shrewbib@sorex.vienna.at

IUCN SSC Rodent Specialist Group, South Asia -- now represented by RISCINSA

Our relationship with the IUCN SSC Insectivore Specialist Group seemed so mutually beneficial that we wrote to Dr. Giovanni Amori, Chairman, Rodent Specialist Group, and asked him if he would like us to represent his group as well. He responded very cordially and positively with the following invitation letter which is reproduced below. He also contributed, at our request, a short precis of the needs and direction of the Rodentia Specialist Group. This is also reproduced below, followed by Dr. Amori's abbreviated biography.

Again, Specialist Groups are begin reorganised now. We have sent all your names to Dr. Amori so that he can consider you for the RSG but if you would like to write to him yourself, his address is :

Dr Giovanni Amori
Evolutionary Genetics Center
Via dei Sardi 70
00185 Rome - Italy

Tel + 39 06 49917828
Fax + 39 06 4457529

**IUCN – The world Conservation Union
SPECIES SURVIVAL COMMISSION
RODENT SPECIALIST GROUP**

Prof. Ishwar Prakash
Scientific and Technical Chair RISCINSA
Jodhpur, Rajasthan INDIA

Cc: Sally Walker
Convenor and Administrative Chair RISCINSA
Zoo Outreach Organisation, Coimbatore INDIA

Dear Prof Prakash,

I appreciated the establishment of a network of rodent experts in South Asia. Moreover I consider the Conservation Assessment and management Plan Workshop for Rodentia you are planning very appropriate and useful for the Red List assessment and more in general for the Rodent Specialist Group activities. For these reasons I would like to invite RISCINSA to represent the Rodent Specialis Group, SSC, IUCN in South Asia.

As you know, Rodent SG is unable to contribute financially to the RISCINSA network, but I can provide letters of endorsement to raising funds when necessary.

I am looking forward to collaborate with you.

Giovanni Amori
Chair, Rodent Specialist Group

IUCN/SSC Rodent Specialist Group Giovanni Amori (Chairman)

Status survey and Action Plan at the moment have been compiled only for North America and Australia.

For Europe, Western Asia, Russia, India, Central and South America the Action Plans are at the draft stage and need further revision. Little progress has been made in such regions as Africa or South-East Asia. Even taxonomic knowledge is sometimes basic, if we consider that more than 30 species and at least 8 genera have been discovered in the last 8 years.

Currently a species/specific approach to rodent diversity conservation seems to be above our financial and logistic possibilities. With the aim to provide governments and conservation organizations with some easy references to global rodent conservation priorities, we considered appropriate to convoy resources toward sopraspecific taxa (genera, subfamily or family) of conservation concern. At least two conservation strategies are required to maintain rodent diversity at the genus level.

Charismatic vertebrates may act as “umbrella” species for funding active conservation of large tracts of natural habitat, thus offering a concrete chance to maintain entire assemblages of native rodents including threatened endemics.

However, especially in the case of restricted-range or island taxa no alternatives exist to the implementation of species-specific strategies, including research, creation of protected areas, control of exotic species, translocation and so on. Funding of specific conservation projects for these genera is the first step to maintain the exceptional diversity of rodents on our planet.



Biographical information of Giovanni Amori

Giovanni Amori was born September 25, 1952 in Rome, Italy where he lives today with his wife and two children.

In 1980 he took a degree, Italian "Laurea" in Biological Sciences at the "La Sapienza" University of Rome. Title of the Thesis: The zoogeography and synecology of rodents of peninsular and insular Italy, with notations on some morphotaxonomic aspects). Shortly afterwards in 1982/1983 Dr. Amori received the Italian Ministry of Foreign Affairs scholarship by Mammal Research Institute, Bialowieza, Poland. From 1983/1990 he researched under the National Research Council specialization scholarship (Evolutionary biology and Ecology) in Rome.

Currently he is a Researcher at the Centro di Genetica Evoluzionistica, CNR (National Research Council), Rome.

Some current research areas are Evolutionary genetics, taxonomy and systematics of European species of insectivores and rodents, and the Biogeography, ecology and conservation of old world small mammals

He has been engaged in university teaching since 1998 at University "Roma Tre", Rome in Applied Ecology.

He is a member of the following professional societies :

A.M.S., American Mammal Society
A.T.IT., Associazione Teriologica Italiana
S.E.M., Societas Europaea Mammalogica
S.I.B., Società Italiana di Biogeografia
U.Z.I., Unione Zoologica Italiana Mammal Society

Other related activities include :

- associate editor of *Hystrix* journal from 1996-up to now.
- member of the Scientific Committee of "European Center for Nature Conservation", from 1996 up to now.
- President of the Italian Mammal Society. 1996-1998.
- Chairman of "SSC/IUCN Rodent Specialist Group". 1996-2000.
- member of the Editorial board of "Biologia e conservazione della fauna" journal, from 1998-up to now.
- member of the Editorial board of CHM (Clearing-House Mechanism) Italia. From 1998 up to now.
- Member of the Editorial board of "Journal for Nature Conservation", from 2000- up to now
- member of Scientific Authority of Italian CITES. 2000-2003.
- Chairman del "SSC/IUCN Rodent Specialist Group". 2000-2003.

He is author of more than 67 publications relevant to conservation. His most recent "in press" are

AMORI G., GIPPOLITI S., Lagomorph and rodent diversity in Italy: taxonomic account and a preliminary identification of conservation priorities. *Biologia e conservazione della fauna*.

AMORI G., GIPPOLITI S., Rodents and the bushmeat harvest in central Africa. Occasional Paper IUCN



CAPIZZI D., BATTISTINI M., AMORI G., Analysis of the distribution of the Hazel dormouse *Muscardinus avellanarius* in a Mediterranean fragmented woodland. *Italian Journal of Zoology*

GIPPOLITI S., AMORI G., Anthropochorous wild mammal taxa and conservation lists. *Conservation Biology*

GIPPOLITI S., AMORI G., Global priorities for rodent conservation and the role of zoological gardens. EAZA, Copenhagen

AMORI G., GIPPOLITI S., A review of rodent conservation status. *Mammal Review* (submitted).



Historical rodents: from the world's first biodiversity project and the Barrackpore Menagerie, by Sally Walker

In the early 19th century an incredible project was conceived to collect, describe and illustrate the vertebrate biodiversity of the Indian subcontinent. The world's first "regional biodiversity project", was officially known as the "Institution for Promoting the Natural History of India", hereafter "IPNHI."

The Project consisted of a living collection of birds, mammals and an occasional reptile, maintained in a menagerie situated in the garden in the Summer Residence belonging to the Governor General of Bengal.

Due to the lack of foresight of the governments which followed that which set up the project, the IPNHI lurched along on a very small budget from about 1804 - 1808 when it was officially closed. The menagerie remained open (in varying states of development and decline), however, for 75 more years, until 1880 when it sent the last animals to the new Alipore Zoological Garden.

Lord Arthur Wellesley, who proposed and set up the project during his tenure as Governor General of Bengal, commented that "knowledge of ... the Natural History of India was defective as many common birds and quadrupeds were unknown or had been inaccurately described." He was very correct, as only 108 of the 410 mammals we consider native to India today, had been described by 1807.

Dr. Francis Hamilton-Buchanan, Wellesley's personal surgeon, who had extensive experience in survey and documentation of species and all natural elements as well as culture and economy, served as Director of the Project.

Wellesley ordered officials from the entire subcontinent to send live birds and quadrupeds to Dr. Buchanan who proceeded to describe and illustrate them with his small staff. Strayed and misplaced priorities prevented this Project from either being completed or recognized but a substantial number of mammals, more of birds and a few reptiles were covered from the specimens sent and they survive today in mostly unpublished paintings and



Mus arboreus B. Tree Rat. Natural History Drawings, Vol. 3, page 513 Buchanan Hamilton Collection

Mus arborus B. Gaychua Indoor of the Bengalese

The animal lives on coconut trees, and where these do not grow, on Bamboos, from whence its name Tree rat is derived. Each pair builds a nest within the cavity of the branches, and there bring forth four, five, or six young. This is in Bhadur month, which corresponds with part of August, and September. They eat grain, which they collect in their nest and they destroy the coconuts when young, and these are their most favourite food. They never live in houses, but at night come there to steal.

In shape this has a very strong resemblance to the Ienkoo Indoor being more elegantly formed than the common rat, and having a much narrower face, and much larger, eyes. Its tail however exactly resembles that of the common rat, and consists of a great number of very narrow scaly rings, that have between them short bristles, which are generally approximated to each other three by them. Like (*Gerbillus indicus*) Ienkoo it frequently sits erect on the hinder legs, but this also I observe in the common rat. The irides are dark, the whiskers black, the ears naked. The upper teeth are not divided by a furrow like their of the Ienkoo, the incisors are yellow, and those of the lower jaw are parallel. The upper parts of the body are a dark iron grey consisting of black and tawny hairs, of which the former are the longest and most numerous. The lower parts and legs are white. The naked parts of the nose and toes are a pale flesh colour. The hinder feet extend to the back joint. A full grown male measured, from the nose to the tail, seven inches, tail seven inches & a half. A female measured eight inches and a half with nine inches of tail.

By Francis Buchanan Hamilton

manuscript. In the Manuscript, there are descriptions for 24 mammals, 114 birds and 3 reptiles. The number of illustrations is uncertain because not all were catalogued upon their arrival to the East India Office and reached the East India House very sporadically.

The descriptions contain obvious errors, some grotesque, but are of great historical interest and, considering the period and what literature and communications systems were available at the time, a remarkable achievement. The paintings are detailed and accurate, some of them better than any before. The legacy of this collection is immensely significant.

First of all, Francis Buchanan's and his assistants' descriptions and drawings of mammals and birds at Barrackpore were a potential contribution to the natural history of a continental region. That these were not published is no reflection on the Project but on the lack of foresight, scientific ineptitude and spiteful politics of the the various governmental officers whose priorities seem to have strayed along the way.

The IPNHI was very much ahead of its time -- it predated the Linnean Society Zoological Club by 18 years, the Zoological Society of London by 22 years and the first issue of the Indian Journal of Natural History by 36 years. It may well have influenced Stamford

Raffles, founder of London Zoo, who is known to have visited the Barrackpore Menagerie at least once.

The living collection, although long since vanished, lives on in the descriptions and drawings commissioned by the company and faithfully rendered by Buchanan. The packets of drawings and illustrations also were completely neglected for two centuries. Today there is an undertaking to edit and annotate these descriptions by this writer. Perhaps one day the IPNHI and the Barrackpore Menagerie can be introduced to the world in a beautiful book.

Of the two dozen mammals, the four rodents with both descriptions and drawings have been selected for presentation to members of RISCINSA. Some short excerpts from the descriptions have been included in this short article. RISCINSA members who are interested in the history of natural history can assist with this fascinating project if they so desire. Write to Sally Walker, Society for Promotion of the History of Zoos and Natural History, c/o ZOO, Box 1683, Peelamedu, Coimbatore 641 004 Tamil Nadu, India.

***Mus leucus* Gerbils Natural History Drawings, Vol. 3, page 513 Buchanan Hamilton Collection**



***Mus Iencus* B (*Gerbillus indicus* Horded J. xxx VIII:274) Lenkoo Indoor of the Bengalese**

This species of rat lived in holes which it digs in the abrupt banks of rivers and ponds according to the information of the natives it eats rice and never enters houses. The man who brought the specimens never found in their holes anything except dried grass. People of the low cast called Doolea eat this species of Rat.

This is a slenderer, and more elegant animal than the common Indoor or *Mus decumanus*. Like other rats it frequently sits on its hinder legs while with the fore feet it smooths the hair of its face. A full grown female from the nose to the root of the tail measured eight inches. The tail was nearly of the same length.

The side view of the nose is rather sharp, and the snout is somewhat elongated and covered with hair to the very extremity. The face is narrow, and at the upper angles is terminated by the ears which are erect, blunt, very thin, and almost naked. The under jaw is very short. In each jaw there are two very long incisors. Those below are very slender and remote from each other those above are broader are situated close together, and are deeply divided by a longitudinal furrow, so as to resemble four teeth. The whiskers are numerous, long and stiff. The eyes are very large, black, and prominent. The fore legs and feet are considerably smaller than the hinder ones and have only four slender distinct toes, the outer most of which is the shortest. On these the claws are sharp, long and straight. In place of the thumb is a small knob with a blunt nail. The hinder feet have five toes, of which the two lateral ones are short. Each toe has a long white claw. [incomplete] Francis Buchanan Hamilton

***Mus malabaricus* Bandicoot rat Natural History Drawings, Vol. 3, page 512 Buchanan Hamilton Collection**



Ieria Indoor of the Bengalese

This rat lives in the neighbourhood of lakes and besides grain eats snails, muscles, and the other shell fish that are found in fresh water. It never comes into houses. In the language spoken by the lowest caste in Bengal Ieria signifies strong, and this is very applicable to a rat, which is so much larger than the common kind.

In its character the Ieria has a strong resemblance to the common Indoor or *Mus decumanus* but, when the two are placed together, many differences may be observed. In the first place the Ieria is much larger. a full grown male from nose to tail measures 10 7/10 inches, and the tail measures 8 3/4 inches. The head in proportion is longer, the face narrower, and the eyes larger. The tawny part of the hair is much paler than that of the brown rat, and on the belly, and lower part of the sides the hair is nearly white. The black bristles are much more numerous, and in proportion are longer. Although these two animals are of different sizes and habits, it will be very difficult to find out an essential character, by which they could be distinguished. The tail of the Ieria consists of many very narrow rings. From between these proceed many short bristles, which are disposed in little fascicles.

By Francis Buchanan Hamilton.

***Atherma fasciculata* Shaw Brush-tailed porcupine Natural History Drawings, Vol. 3, page 514 Buchanan Hamilton Collection**



***Hystrix spicigera* B.**

Mr. Macro surgeon at Chittagong has sent to the Menagerie two living specimens one a male, the other a female. They were brought from the hills and as far as Mr. Macro understands, their habits are pretty much the same with those of the Porcupine of the plains. The one as well as the other burrows in the earth, lives upon roots, and is found either in pairs, or in families.

The head is oblong and very blunt in the nose and from the nostrils to the ears about three inches in length. The ears are erect, blunt, and about three fourths of an inch in length. They are almost naked, and are placed about an inch assunder. [incomplete] **By Francis Buchanan Hamilton.**

Real Conservation Breeding and Reintroduction of Small Mammals The Native Species Breeding Programme at Perth Zoo

Sally Walker

A visit to the Native Species Breeding Programme at Perth Zoo is an experience in outstanding practice and implementation in zoo conservation as compared to the pompous theories and incorrect practice one sees in some zoos in this hemisphere. It is a refreshing change and a stimulus to recommitment to the tool of captive propagation as a conservation solution.



Perth is located in Western Australia which has suffered from the wrongful introduction of the European fox (*Vulpes vulpes*) and the domestic cat (*Felis catus*). These are not the only species which have been introduced into Australia; there are many. These have, however, resulted in the decline of a number of native species -- many of them endemic marsupials -- to fragmented and isolated populations. These populations have been categorised as Threatened (either Critically Endangered, Endangered or Vulnerable) under the IUCN Red List Criteria.

Correction of the problem of introduced or "Alien" species has been undertaken by a government department known as CALM, the Department of Conservation and Land Management. CALM has done predator control which created an environment with conditions suitable for the native species to become re-established and recover.

Enter the zoo or captive breeding. Zoos and captive propagation programmes have no meaning unless the conditions which caused decline or extirpation of native species are corrected. This is laid out clearly in the Guidelines of the SSC, IUCN Reintroduction Specialist Group, but are very rarely adhered to in our part of the world. That, among

many other reasons, is why there have been almost no genuinely successful reintroduction programmes in S.Asia.

In Western Australia the wildlife authority and other organisations as well as the zoo work together to strengthen or re-establish threatened populations to the wild. The goal of the Native Species Breeding Program (NSBP) in Perth Zoo is to support threatened Species Recovery Plans by providing animals for release into the wild and conducting scientific research into the reproductive biology of threatened fauna. Some of the animals which are part of this programme are:

Numbat (*Myrmecobius fasciatus*)

The Numbat was once categorised as Endangered but has been reclassified as Vulnerable after CALM and Perth Zoo together re-established a number of populations which now total over 2000. The zoo bred 95 numbats since they started the programme in 1993 and provided 59 of them for release in sites selected by CALM. As the numbat is a specialised marsupial which eats only termites, the zoo had to establish and perfect a termite breeding facility. When we visited, they provided the guidelines for this to us for circulation to zoo professionals in South Asia who might require a supply of termites for captive populations.



Keeper inspects animals in outdoor holding enclosures.

Chuditch (*Dasyurus geoffroii*)

Chuditch is also called a quoll and is the largest marsupial predator in Western Australia. Although the western quoll occurred in about 70% of Australia at the time of European settlement, by late 1980's they were

Endangered with less than 6000 left in SW Western Australia. Perth Zoo has bred 300 quolls for release; they have been reclassified as Vulnerable.

Western Swamp Tortoise (*Pseudemydura umbrina*)

The Western Swamp Tortoise is a unique species, the only member of its genus with no close relationship with any chelidae. Currently categorised as Critically Endangered, this species occurs only in fragmented locales in a 5 km strip in Western Australia. Perth Zoo has bred 374 tortoises and released 267. It will take time for this species to demonstrate sufficient stability to be downlisted.

Dibbler (*Parantechinus apicalis*)

Dibbler (Endangered) is a small carnivorous marsupial found only on two islands off Western Australia, Perth Zoo has bred 134 island Dibblers, of which 86 have been released to one of the islands to establish a fresh population. More recently the mainland Dibbler has been the focus of recovery efforts. Perth Zoo is putting research and breeding efforts now into the recovery of the mainland Dibbler.

Djoongari (*Pseudomys fieldi*)

Also known as the Shark Bay Mouse, Djoongari (Vulnerable) was known only on one island prior to 1993. An estimated 6000-7000 population is all there are of one of Australia's most geographically restricted mammals. Perth Zoo has bred more than 150 Djoongari. Now 126 have been released to multiple sites in the NW Western Australia. These are being monitored by CALM.



Special breeding box for mice

Research in Zoos

Why is it that South Asian zoos are not showing such results? One reason is surely their staff and infrastructure.

Comparing your best South Asian zoo with Perth Zoo, it is easy to see what is missing.

- Perth Zoo has had a Director of Research since 1996 and a full research facility



Fully equipped lab at NSBP, Perth Zoo

- Perth Zoo is one of the six nodes of the national programme "Marsupial Cooperative Research Centre" as a full research partner

- As a result of this partnership, the Research Programme is fully funded.

- Perth Zoo has had a Conservation Geneticist of its own since 1996. Findings from his studies have been used in preparation of management and translocation plans for these species.

- Perth Zoo and the Western Australian Department of Conservation and Land Management work together to reintroduce threatened fauna into their former ranges.



Keeper with device for training small mammals to fear predators.

Although some countries in South Asia pay lip service to cooperation between wildlife agency and zoos, the lack of other elements and also the difficulty of genuine cooperation within a severe

hierarchical service prevents the communication and respect for all parties necessary to achieve genuine cooperation.

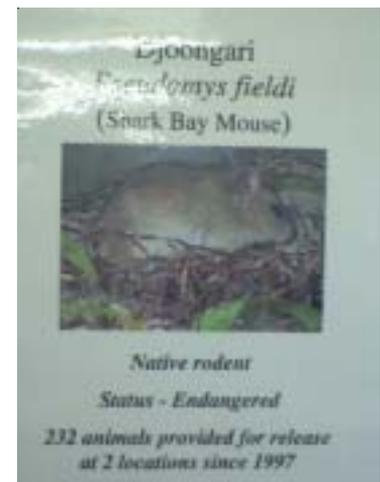
Another aspect which prevents a genuine conservation success in South Asian countries is the emphasis on large mammals which are expensive to keep, sometimes difficult to breed (but not always), difficult to move around for mixing gene pools, and almost impossible to reintroduce. All of the species taken up by Perth Zoo and CALM are small bodied mammals and reptiles. These have their own difficulties and problems but they also have many advantages, not the least of which is a short generation time and small body size. With these characteristics it is possible to keep and breed a large number of animals in a small space and in a short period of time. There is time for failures, experimentation and correction. When there is a success, the lift given to the staff and the zoo community in general is enormous. Australians have tremendous respect for their zoos as scientific institutions because they get results.

South Asian zoos and breeding centres have their own problems which perhaps Australian zoos do not but there is no reason to think they could not achieve much with more practically directed effort.

Perhaps the academic community could be useful in this respect, by taking up some species for cooperative breeding. There are a number of rodents and insectivores in South Asia which were assessed as threatened by IUCN and by the various national efforts. These could be bred with an eye to developing expertise and investigation done whether the habitat problems could be solved to justify reintroduction.

This is something for RISCINSA members to think about. If anybody is going to do it, it will be you. A CAMP workshop is coming up this year in which more species will be assessed in a better way and categorised. A training workshop will precede even this so that members will have a better idea of what is involved.

For further information on these programmes, visit Perth Zoo website <http://www.perthzoo.wa.gov.au>.



Djoongari (*Pseudomys fieldi*)
Shark Bay Mouse

RISCINSA for Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka*

With a new government forming in Afghanistan, many individuals in the academic community are returning to that country and projects which were long delayed due to the political situation are likely to resume. Afghanistan is a disputed area with regard to its regional geography -- some geographers list it with South West Asia and some with South Asia. Even in the Encarta Map CD Programme, it is listed in both regions in different articles ! and it is documented in the CD that its correct region is a question.

In forming our regional networks, we considered including Afghanistan but ultimately did not due to the difficulties of communicating with anyone there as well as the fact that it was neat and convenient to include only countries belonging to SAARC, the South Asian Association for Regional Cooperation. Myanmar is another such region which is considered part of South Asia by some geographers and South West Asia by others. For Myanmar, which belongs to the Association of South East Asian Nations (ASEAN) we have taken the attitude that the part of Myanmar which is attached to South Asia and for which there is information and researchers available, we will include in invitations to our workshops. Thus, a researcher from Myanmar will attend our upcoming Chiroptera CAMP Workshop in January.

For Afganistan, since that country is so badly in need of any connections and information, we would like to take the view that any work that can be done in conservation should be encouraged in every possible way. There are good people there who are interested in re-building their country's institutions and repairing their environment. Although what we can do for them is very small compared to their challenge, perhaps a little moral support would go a long way in some cases.

We welcome discussion on this issue.

Articles about rodentia, etcetera of South Asian desert area

Part of Afganistan, of course, adjoins Pakistan and shares species and biotopes with that country. Some years ago the Pakistan Museum of Natural History, US Fish and Wildlife Service and several other organisations organised a workshop in Pakistan for which there is a publication : *Biodiversity of Pakistan* (Eds : S.A. Mufti, C.A. Woods & S.A. Hasan) 1997.

Some of the articles in this publication deal with RISCINSA species and give some insight into the biodiversity of a harsh desert environment.

Members of RISCINSA interested in this region or ecosystem can order xerox copies of these articles by contacting us. You may email us at <zooreach@vsnl.com> or write a letter to the address listed on the last page of this newsletter. Cost is approximately Rs. 1 per page plus postage, which depends on where you are located.

Citation :

In: *Biodiversity of Pakistan* (Eds : S.A. Mufti, C.A. Woods & S.A. Hasan) 1997. Pakistan Museum of Natural History.

Articles relevant to rodent biologists:

Biodiversity in muroids (Rodentia, Mammalia) during Miocene, Potwar Plateau, Pakistan. I.U. Cheema, A.R. Rajpar and S.M. Raza*. *Pakistan Museum of Natural History, Garden Avenue, Shakarparian, Islamabad. Oil and Gas Development Corporation, Islamabad.

Biodiversity of small mammals in the mountains of Pakistan (high or low). Charles A. Woods & C. William Kilpatrick*

* Florida Museum of Natural History, Gainesville, FL, U.S.A. Department of Biology, University of Vermont, Burlington, VT, U.S.A.

Biodiversity and conservation of the Deosai plateau, northern areas, Pakistan. Charles A. Woods¹, C.W. Kilpatrick², M. Rafique³, Muqarrab Shah³ and Waseem Khan⁴

1. Florida Museum of Natural History, Gainesville, FL 32611, USA; 2. University of Vermont, Burlington, VT 05401, USA;

3. Pakistan Museum of Natural History, Islamabad; 4. Government College, Islamabad.

Biodiversity in Cholistan desert, Punjab, Pakistan. Abdul Aleem Chaudhry, Anwar Hussain, Mansoor Hameed and Riaz Ahmad.*

*Punjab Wildlife Research Institute, Faisalabad, Pakistan.

Mammals of Afghanistan

The table of rodents and insectivores of Afghanistan printed in the next three pages is an excerpt of information from an upcoming book, *Mammals of Afghanistan* by Kushal Habibi. Mr. Habibi, an Afgan wildlife biologist currently settled in the United States, has permitted us to use some of the information from his book to complete a list of Rodents and Insectivores of South Asia for our RISCINSA network.

Many thanks to Mr. Habibi for this preview of his book.

Insectivores of Afghanistan

By Kushal Habibi from an upcoming book "Mammals of Afghanistan"

Names	Distribution and status
<i>Hemiechinus auritus</i> (Gmelin, 1770) Long-eared hedgehog Pashto: <i>auzd gwazey jezgey</i> Dari: <i>khar pushtak gush daraz</i>	Distribution: Predominantly found in the steppe and semi-desert regions. Specimens collected by the Street Expedition (Hassinger, 1973) are from Paghman, Kunduz and Mazare Sharif. In the Helmand delta it occurs near Zaranj and Kandahar (Habibi, 1977). Outside Afghanistan it is distributed from Cyrenaica through Egypt, the Arabian peninsula and the Indian sub-continent to Mongolia (Ellemann and Morrison-Scott, 1951). Status: Common in arid steppes near cultivations.
<i>Hemiechinus megalotis</i> (Blyth, 1845) Afghan hedgehog Pashto: <i>afghani jezgey</i> Dari: <i>khar pushtak afghani</i>	Distribution: In the eastern sections of Afghanistan its range extends from Kabul to Charikar and Koh Daman. In Kabul it is found in suburban farms and gardens (Gaisler et al., 1967). Niethammer's (1965) collection includes specimens from Dashte Nawar and Chamkani on the border zone of monsoon forests in Paktiya. Status: Common in the steppe zone.
<i>Paraechinus hypomelas</i> (Brandt, 1836) Brandt's hedgehog Pashto: <i>kuchney jezgey</i> Dari: <i>khar pushtak kochak</i>	Distribution: The only known collections of this species are from the Jalalabad vale in eastern Afghanistan by the Street Expedition (Hassinger, 1973), and by Scully (1887) from Kandahar. Status: Unknown.
<i>Suncus murinus</i> (Linnaeus, 1766) House Shrew	Distribution: The wet biotopes of eastern Afghanistan. Specimens collected by the Street Expedition (Hassinger, 1973) are from Jalalabad and Laghman. Niethammer (1965) reports trapping it in Asadabad, Kunar province. Status: Unknown.
<i>Crociodura russula</i> (Hermann, 1780) Common White-toothed shrew	Distribution: Widespread in areas which have free access to water in the east. Specimens have been collected from Paghman, Ghazni and Nuristan by the Street Expedition (Hassinger, 1973). Niethammer (1965) collected samples from northwest and central Afghanistan near the Shibar and Salang passes Status: Unknown.
<i>Crociodura suaveolens</i> (Pallas, 1811) Lesser White-toothed shrew	Distribution: Occurs in the northern steppes. Hassinger (1973) records specimens along shallow irrigation ditches near Mazar-e-Sharif. Status: Unknown.
<i>Crociodura zarudnyi</i> (Ognev, 1928) Pale Gray Shrew	Distribution: Occurs in the mountainous and steppe regions. To the east it has been recorded from Ghazni and Gardez. The Street Expedition collected samples from the Shibar pass in central Afghanistan and Ishkashem at the entrance to the Wakhan corridor (Hassinger, 1973). This pale shrew has been described as <i>C. pergrisea</i> in Iran and Pakistan (Lay, 1967; Roberts, 1977). Status: Unknown.

Attention !

2nd International Conference on Rodent Biology and Management to be held in Indonesia, October 2002.

This conference is expected to attract over 100 participants from Australia, China, S&SE Asia, Europe, Africa and both North and South America. The primary emphasis of the conference is ecologically-based rodent management, but it will include sessions on systematics, ecology, conservation and rodent-vectored diseases of humans and livestock. The organisers are currently organising speakers for sessions on systematics, conservation and ecology.

For anyone interested in building contacts in the SE Asian region, we can promise an outstanding opportunity to interact with scientists and research managers from many regional countries including Indonesia, Vietnam, Laos, Cambodia and China.

At this stage the organisers are looking for expressions of interest rather than firm commitments. Contact :

Ken Aplin
CSIRO Rodent Research Group
Canberra, ACT, Australia
www.cse.csiro.au/research/VFP/rodents/



Knowsley Park – sponsor of RISCINSA

Knowsley Safari Park has a very long history. It was a menagerie in the 19th century, established by the 13th Earl of Derby, Sir Edward Stanley, who was also the President of the prestigious Zoological Society of London for two decades and a respected naturalist. He recorded observations of the animals which he collected and bred. In those days the menagerie was only open to very small groups by application only, but it was one of the most comprehensive private collections in the world.

In 1971, after some years of neglect, Knowsley opened as a Safari Park which was then a new idea for "zoos". Knowsley Safari followed Woburn Safari, which was the first in UK. Knowsley Safari Park consists now of nearly 600 acres of mostly free ranging wildlife from most continental areas. Knowsley has bred an impressive number of animals and cooperates with other zoos in UK and Europe to breed for conservation.

The focus of Knowsley Safari is predominantly large animals which can be

easily seen from vehicles, but for the discerning visitor there are many exciting sightings of native birds and mammals if one is patient. Knowsley provides a safe haven for some of these native creatures.

Knowsley wanted to make a contribution to conservation in South Asia where Animal Manager, Nick Ellerton, has been a help and support to Zoo Outreach Organization for some years. We are very happy to have a sponsor, and that too with such a noble history and exciting future.

Mammals of Afghanistan

The table of insectivores of Afghanistan printed above is an expert of information from an upcoming book, Mammals of Afghanistan by Kushal Habibi. Mr. Habibi has permitted us to use some of the information to complete a list of Rodents and Insectivores of South Asia for our network.

If Mr. Habibi permits, next issue we will publish a similar list of the Rodents of Afghanistan.



Rodent and Insectivore news bits and bites from around the world

ENGLAND -- Paignton Zoo helps out with dormouse recovery

Common by name but not by nature, the Common Dormouse is now a threatened species in England. Although the species is called the "Common Dormouse" it is threatened with extinction. There is now a national project to help save the species. A few weeks ago four pairs of dormice which were bred at the Paignton Zoo, UK were released at a site in Cambridgeshire. Another 16 pairs which were prepared for release at the zoo were also returned to the wild.

The project is headed by English Nature and also involves other conservation groups such as the People's Trust for Endangered Species. It follows a drastic reduction in the number of the animals now found in the UK - a result of the loss of forest and hedgerow habitat. There are fewer than 500,000 in the wild. The small mice like woodland, but don't cross roads, so if habitat is lost on one side of a road, they won't cross over to the other side

They have a special corner of the Paignton called "Dormouse City," by the zoo staff. This area is not open to the public because the dormouse are being prepared for release. They need to be checked by the vets and given all injections. The project started with just one breeding pair saved from a building on the Channel Tunnel in 1998.



Adult dormouse



Dormouse and mouse "pups" at Paignton Zoo

ENGLAND -- RSPCA/UFAW Rodent Meeting

The 6th meeting of the rodent welfare group was held at St Catherine's College, Oxford. Over the years, these meetings have grown in importance, and now attract interest from around the world. They offer an excellent opportunity for the exchange of information and the spread of best practice throughout the laboratory animal industry (as do the related UFAW/RSPCA Rabbit and Carnivore group meetings).

Presentations at this meeting discussed the provision of socially or physically enriched housing, such as floor pens for rats and the successful introduction of enrichment items in toxicology studies. Dr. David Jones of the Medicines Control Agency indicated that there were no regulatory reasons why enrichment should not be allowed as long as there were no effects on the outcome of the study. Other papers provided updates on proposed changes to European legislation, new methods of assessing rodent welfare, and the natural behaviour of rats in the wild.

Reports on these meetings are usually published in *Animal Technology*, and that of the first UFAW/RSPCA Carnivore group meeting will appear in the April edition of the above journal. Further information about the Rodent group can be gained from Dr. Penny Hawkins of the RSPCA (phawkins@rspca.org.uk), and of the Rabbit and Carnivore groups from UFAW's Deputy Director Dr. Robert Hubrecht.

UFAW News-Sheet, No. 37, March 2001 P.



"Trapped like rodentia"
(Apologies to Gary Larson)

BELGIUM -- reported in the Times of India, New Delhi, 14.8.2001

Rats can be ideal landmine detectors: with proper training, they could turn out to be man's best friend, at least if the man in question lives in an area with unmapped minefields. Apopo, a Belgian charity, is exploring the use of African giant pouched rats as biosensors capable of locating landmines.

Not a new idea, researchers have studied ways to harness bees' and cockroaches' keen senses of smell to detect explosives, and dogs are already used in de-mining work. But according to the chief scientist at Apopo, rats offer a number of advantages when it comes to locating mines.

Despite their impressive size for a rodent (25 cm from nose to tail when full grown), they are too light to set off mines if they tread on them. They are also faster learners than dogs, and their behaviour is easier to decipher and control than an insect's. Unlike dogs, rats do not require the care and attention of a dedicated trainer. Since they live on a diet of nuts and fruit, they are cheaper to feed than their canine competitors. They are easier to house and transport than dogs, and being African animals, are immune to most of the tropical diseases that afflict imported dogs. The rats' only weakness is that they are nocturnal, and therefore prone to heat stroke. To train their rats, Apopo's scientists blow air containing explosive traces at the animals. Using food rewards - bananas and avocados - the researchers have taught their rats to signal what they sniff by pushing levers. The 80 or so rats, known as Victor, Stefan, Nicholas and so on are able to detect smaller amounts of explosive than most existing biosensors.

Apopo is exploring two ways of putting the rats to work. One would be to use the rats directly to detect landmines: they would be taught to scratch at the soil to indicate a mine. The alternative is the opposite idea, having the rats confirm areas to be free of mines. This would involve using mobile field laboratories, keeping the rats caged and cool and collecting soil samples for them to sniff for explosives.

Following two years of laboratory work in Belgium, Apopo scientists have now moved to Sokoine University of Agriculture in Tanzania, where they are conducting field tests with local scientists. The charity is also planning to conduct tests in Angola, in conjunction with Menschen gegen Minen, a German de-mining organisation. If all goes well, Victor, Stefan and their colleagues could graduate from providing protein to sweeping for mines within the next two years. (*The Economist*)

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**Rat - a - tattle**

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