

Darwin Project Information

Project Ref Number	15/018
Project Title	Developing land snail expertise in South and Southeast Asia
Countries	Sri Lanka, India, Nepal, Thailand, Laos, Vietnam, Malaysia
UK Contract Holder Institution	The Natural History Museum, London (NHM)
Host country Partner Institutions	The Wildlife Heritage Trust (WHT), Sri Lanka Ashoka Trust for Research in Ecology and the Environment (ATREE), India Centre for Biological Conservation (CBC), Nepal Chulalongkorn University, Thailand National University of Laos Hanoi University of Science, Vietnam (now including Vietnam National Museum of Nature and Department of National Parks) Universiti Sains Malaysia
Other Partner Institution(s)	University of Nottingham, University of Cambridge, University of Antwerp.
Darwin Grant Value	£262,657
Start/End dates of Project	Start date: 1 May 2006 End date 30 th June 2010
Reporting period	Reporting period 1 st April 2009 to 31 st March 2010 Annual Report 3 (No Annual Report for 2007/2008 following MTR)
Project Leader Name	Fred Naggs
Project website	www.nhm.ac.uk/tropicalsnails
Author(s) and main contributors, date	Fred Naggs in consultation with Dinarzarde Raheem and the following project leaders: Somsak Panha (Thailand); Rohan Pethiyagoda (Sri Lanka); N. Aravind (India); Prem Budha (Nepal). 11 th June 2010

1. Project Background

The phylum Mollusca are second only to Arthropoda in terrestrial diversity. They are powerful research tools in evolutionary biology and are valuable for understanding patterns of global biological diversity and conservation needs. They are sensitive indicators of habitat change as exemplified by the fact that there are more recorded extinctions of land snails than for all other animal groups combined. There are few terrestrial malacologists world wide and very few in tropical countries where the greatest diversity of species occurs. This project seeks to build expertise and capacity in land snail work in South and Southeast Asia to foster regional cooperation and build on the regional centre of expertise available at Chulalongkorn University, Thailand

2. Project Partnerships

The project has been extended to 31st March 2011, primarily to allow completion of the illustrated guides to the land snails of the Western Ghats, India, and to those of Nepal. All remaining funding will be needed for these publications but the international collaboration is continuing and in some areas, notably Malaysia and Vietnam, is expanding. Our collaborators work within extensive national networks, academic institutions, government agencies and NGOs. For example, in Thailand our project personnel are based in three universities and Prof. Panha is a visiting lecturer throughout Thailand and gives numerous presentations about our projects, particularly on the National Biodiversity Training Programme. All country project partners have contacted National CBD focal points and provide NFPs with project updates.

Thailand

Fred Naggs acts as consulting editor for *Tropical Natural History* (previously *The Natural History Journal of Chulalongkorn University*) and with Professor Somsak Panha, jointly supervises two new PhD students working on land snail projects. Chris Wade, UK Darwin Initiative project partner on this project based at the University of Nottingham, is also supervising a snail project PhD student at Chulalongkorn University. The World Congress in Malacology <http://www.wcm2010.com/symposium.asp> is to be hosted in Phuket in July and we are arranging sessions that will highlight the Darwin initiative project. Dinarzade Raheem will be organising and chairing the session: *Community Ecology of Tropical Forest Land Snails* and Fred Naggs will be organising and chairing the session: *The Systematics of Asian Land Snails* with the keynote address *A decade of Darwin Initiative projects in Asia* (Annex 3). Fred Naggs is serving on the World Congress Organisation Committee. We will be holding a workshop to launch an Asian land snail interest/research group and opening up membership of the project discussion group SnailAsia@googlegroups.com to any interested individuals.

Malaysia

With funding from the British Council, the Malaysian partnership is progressing extremely well with field programmes in place and joint surveys in progress with University of Malaysia, Penang, University of Nottingham and NHM. Fred Naggs is also working with the University of Malaysia Sabah in mentoring Liew Thor-Seng, a Rubenstein Encyclopaedia of Life Scholar, on a review of the snails of Sabah

Laos

The partnership in Laos is more limited and relies on direct participation with Thai partners.

Vietnam

Fred Naggs has established a MoU between the NHM and the Department of National Parks and the Vietnam National Museum of Nature under which a wide range of activities are taking place.

Sri Lanka

Rohan Pethiyagoda, our Sri Lankan project partner now lives in Australia.

India

Fred Naggs has set up a MoU between the Science Group at the NHM and ATREE for pursuing future collaboration.

Nepal

Fred Naggs continues to supervise Prem Budha's PhD with Thierry Backeljau at the University of Antwerp.

UK partnerships

University of Nottingham

Collaboration with Chris Wade at the University of Nottingham has progressed well and our molecular studies and publications have continued to demonstrate ancient origins for some faunal components and the phylogenetic distinctness of some taxa that enhances their previously unrecognised conservation value as rare or unique representatives of ancient lineages. In addition to describing a new family based on a Thai type genus (accepted for publication by the *Zoological Journal of the Linnean Society*) we have established a previously unrecognised higher level phylogenetic structure for the Stylommatophora, the main land snail group. This will form a basis for erecting a new higher level taxonomy for the group. Chris Wade is the fund holder for a British Council project with our Malaysian partners.

University of Cambridge

Richard Preece's (University Museum of Zoology Cambridge) expertise in patterns of change in land snail faunal composition through time is of considerable value in establishing past habitat and climate change in our study areas. This will allow informed projections of the pattern and impact of future climate change to be developed. Project partners from India, Nepal and Thailand have also had the benefit of access to the Benson collection in Cambridge University Museum of Zoology, a major reference collection of Asian taxa rich in type material (see: http://www.nhm.ac.uk/resources/research-curation/projects/tropical-land-snails/publications/archiv_nat_hist.pdf)

The UK lead institution: The Natural History Museum, London

The Natural History Museum provides key resources with unparalleled regional specimen and literature reference material that provides the essential tools for identifying survey material and building national databases and reference collections. We have had an excellent team and outstanding support in the Zoology Department. Financial management has been provided by Jeni Stewart; our database work and Geographical Information (GIS) investigations have been supported by Jim Chimonides. Additional support in delivering computer generated reports and illustrated species lists was provided by Tim Conyers. We also have excellent support for imaging work from Harry Taylor (NHM Public Engagement Group). Our ecological work is carried out with collaboration from the Soil Biodiversity group in the Department of Entomology. Fred Naggs has extensive experience of land snail systematics and Dinarzade Raheem has considerable expertise in the systematics and ecology of South Asian snails, of public outreach and of running land snail field projects in Asia. Engagement with CBD objectives is an extension of the traditional activity of research and collections services at the NHM.

University of Antwerp

Thierry Backeljau, University of Antwerp, has joined in collaborating with the project in Nepal, is providing additional training in malacology for Prem Budha and has accepted Prem Budha's research output as the basis for a PhD project jointly supervised with Fred Naggs. We are currently exploring the potential for collaboration with the NHM, University of Antwerp and the Vietnamese by using molecular methods for processing large numbers of undescribed species. We are also planning to take on joint supervision of Vietnamese post-graduate research students.

3. Project progress

3.1 Progress in carrying out project activities

The original project timetable finished on 31st March 2009; the project extension is primarily to allow the completion of laminated folding guides, books and online faunal guides. With most project related activity being no longer funded by the Darwin Initiative, much of the current collaboration is post project legacy activity.

However, two valuable five week visits to the NHM in June/July 2009 were made by our Indian and Nepalese partners with Darwin Initiative project funding. The visits were primarily for working up field collections and identifying material by comparison with NHM reference collections.

Close collaboration continues with the Thai research group, which runs a very active field programme and is established as a hub of regional activity. The Chulalongkorn University based journal has been upgraded and the new journal name *Tropical Natural History* reflects its global scope <http://www.biology.sc.chula.ac.th/TNH/index.html>. Several members of the Thai Mollusca Research group have visited the NHM on Thai funding during the reporting period.

Using land snails as evolutionary models the Thai group presented the central exhibit to celebrate the 200th anniversary of the birth of Charles Darwin and 150 years since the publication of *On the Origin of Species* held at the Science Park, Ministry of Science and Sinrindhorn Permanent Science Camp under the patronage of Princess Maha Chakri Sinrindhorn (February to December 2009).

Training

Having completed their PhD's during the course of the project three lecturers (Dr Prasankok, Dr Kongim, Dr Tumpeesuwan), have resumed their posts in three different Thai universities where they are continuing their snail research and including land snail studies in their teaching programmes. Two have been appointed to lectureships at Chulalongkorn University (Dr Sucharit, Dr Tongkerd) where we have two new PhD students and one new MSC student jointly supervised by Somsak Panha (Chulalongkorn), Fred Naggs (NHM) and Chris Wade (Nottingham). There are also plans for the Thai group to extend their training of our current Malaysian project MSc students in Bangkok and to have joint PhD studentships between Chulalongkorn University and Universiti Sains Malaysia, Penang.

Training in Nepal has been greatly enhanced by Prem Budha having been appointed as a full-time lecturer at Tribhuvan University, Kirtipur. We have planned the MSc courses that he is running on Taxonomy and Malacology jointly. In addition to formal training Prem is a member of several forest community committee groups, two in Chitawan one in Kurintar and one in Bandipur. In these he promotes awareness about forest biodiversity and sustainable forest use, using snails as both examples of biodiversity, how they can be exploited as a food source, their importance as pests to cultivation and how they can be controlled as pest species.

3.2. Progress towards Project Outputs

Three laminated folding guides have been completed in the current reporting period (Table 2). Work continues on the illustrated species list for the Western Ghats, India, and for Nepal.

3.3 Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	2006 Total	2007 Total	2008 Total	2009 Total	Total to date	Number planned for this reporting period	Total planned from application
Established codes							N/A	
1A	Thai PhD students	2	2	2	2 (new)	4		3
	1 Nepalese PhD student	1	1	1	1	1		
1B	Thai PhDs awarded			2				
2	Nepalese MSc research students	2	2	2	2 (new)	2		2
4A	Number of undergraduate students receiving training 1.Thailand 5 lecturers in 3 universities plus 1 professor average 20 students each = 120 students per year from year 3 plus 50 students on short courses 2. Nepal 20 per year	(3 x 20 + 50 + 20)	160	300	300	400		210
4B	Students on mollusca courses in Sri Lanka, India, Nepal and Thailand records not fully collated (details will be provided in final report)	2	4	4	4	16		4
4C	Nepalese MSc biology students taking courses in malacology and taxonomy	0	20	36	50	106		0
4D	Number of training weeks provided	Approx 30	Approx 30	Approx 50	Approx 50	Approx 160		Not listed
6A	People receiving training on workshops and field trips. Approx 100 each year across all country projects details not fully collated (details will be provided in final report)	100	100	100	100	400		150
6B	Training weeks provided	7	5	5	5	22		5
7	Training manuals and information posters	1	1	1		3		4
8	Weeks spent by project staff in host countries	19	45	6	14	84		65
9	Action plans incorporated in publications and pest reports	0	0	3	0	3	8	
10	Field guides	1			2	3	8	
11A	Papers published in peer reviewed journals	4	3	6	0	11	0	
11B	Number of papers submitted to peer reviewed journals	4	3	6	3	16	12	
12A	Computer databases for all project partners now abandoned following MTR. SE Asian database will be hosted in Thailand						7	

Code No.	Description	2006 Total	2007 Total	2008 Total	2009 Total	Total to date	Number planned for this reporting period	Total planned from application	
13A	Collections set up in Nepal, Malaysia and Vietnam and collections for Laos, Malaysia and Vietnam established in Thailand					6		6	
13B	Enhancement of national collections in Thailand and India and regional SE Asian collections in Thailand					2		2	
14A	National workshops/seminars specifically on project	4	4	2	1	11		7	
15A	Press releases	4	4	4	0	12		10	
15B	Local press releases	2	2	2	0	6		4	
16A	Project agenda publication in <i>Natural History Journal of Chulalongkorn University</i> newsletter objectives not followed up by project partners who favoured replacement by online news/discussion group at SnailAsia@googlegroups.com	1				1 + online news/discussion site with regular items / updates		7 but superseded by online communication at SnailAsia@googlegroups.com and publication given to website www.nhm.ac.uk/tropicalsnails	
16B	Copies of <i>NHJCU</i> distributed to libraries in Thailand and internationally	1000				No direct measure of online hits but large number of enquiries generated from website viewers		3,000 copies based on printed updates	
16C	UK news circulation					Online access as above		Not listed	
17A	Regional dissemination Networks established	1 Asian network established via SnailAsia@googlegroups.com and plans for launch of updated version and possible Asian Malacological Society to be launched at 2010 World Congress							1
17B	Networks enhanced	Network for Thai research group centred at Chulalongkorn University and extending to previous Chulalongkorn post docs now lecturers in other Thai universities							1
18A	Number of national TV programmes/features	3 feature TV programmes in Thailand plus extensive news coverage of exhibitions and princesses' visits				3++		2	
19A	Local radio broadcasts in India and Nepal	2	2			4		4	
20	£1, 316 of equipment supplied to Nepal at start of project	£1,316				£1,316		£1,316	

Code No.	Description	2006 Total	2007 Total	2008 Total	2009 Total	Total to date	Number planned for this reporting period	Total planned from application
22	Number of permanent field plots set up in Sri Lanka and India	9						9
23	Value of resources raised from sources other than Darwin	In addition to securing the matching funding set out in the project proposal we have secured a number of supporting grants that will be fully tabulated in the final report.						

Table 2 Publications

Type (eg journals, manual, CDs)	Detail (author, year, title)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
Journal	Raheem, D.C. Naggs, F. Chimonides, J. Preece, R.C. Eggleton, P. 2009. Fragmentation and pre-existing species turnover determine land-snail assemblages of tropical rain forest	<i>Journal of Biogeography</i> 36 : 1923-1938		free
Journal	Bangon Kongim, B. Sutcharit, C. Tongkerd, P. Tan Shau-Hwai, Quynh, N.X. Naggs, F. and Panha, S. 2010. Karyotype Variations in the Genus <i>Pollicaria</i> (Caenogastropoda: Pupinidae)	<i>Zoological Studies</i> 49 : 125-131		free
Booklet	Panha, S. Sutcharit, C. Tongkerd, P. & Naggs, F. 2009. <i>An illustrated guide to the land snails of Thailand</i>	Biodiversity research & Training Program, Bangkok, Thailand		free
Booklet	Raheem, D.C. Naggs, F. Aravind, N.A. & Preece, R.C. 2009. <i>An illustrated guide to the land snails of the Western Ghats of India</i>	The Natural History Museum, London		free
Booklet	Raheem, D.C. Budha, P. Naggs, F. Preece, R.C. 2010. <i>An illustrated guide to the land snails of Nepal.</i>	The Natural History Museum, London		free
Abstract	Naggs, F, Raheem, D.C. 2010. A decade of Darwin Initiative projects in Asia.	Tropical Natural History Supplement 3		free

3.4 Progress towards the project purpose and outcomes

The project purpose: to develop a long-term relationship between the NHM and Chulalongkorn University, establishing Chulalongkorn University as a regional centre of land snail expertise has been achieved. The Thai research group has undoubtedly become a regional centre of expertise. Firm links are established between the Thai research group and all SE Asian partner countries, especially with Malaysia that has joint research in progress and exchanges of research students. Hosting the World Congress of Malacology in Phuket in 2010 will demonstrate this to a global audience. The long-term relationship with the NHM is dependent on the NHM continuing to retain expertise in land snails; the long-term future of land snail work in Thailand has been assured by five research students having been appointed to tenured university posts.

3.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

The project's impacts on biodiversity and sustainable use are diverse. For example, our research on the impact of forest fragmentation on species survivorship and on survivorship in different types of transformed habitat in Sri Lanka is of wide applicability. We have demonstrated the need for establishing forest corridors for medium to long term species survival; it is absolutely clear that conserving isolated forest fragments will not be sufficient. We have demonstrated that certain transformed habitats, most notably traditional 'home gardens' support a significant subset of forest species and are important reservoirs of diversity that have a major role to play in sustainable agricultural practice and conservation. Our findings on the conservative nature of the distributional ranges of many species show that un-quantified factors limit distribution ranges and that for many taxa distribution ranges persist even when habitats are transformed. Thus, in these instances, introducing taxa to areas outside of their natural range as a conservation measure have a poor chance of success. Our work in SE Asia is demonstrating the degree of endemism in limestone hill environments, highlighting that the increasingly rapid loss of limestone hills through quarrying and extraction for cement production is in direct conflict with conservation of biodiversity. How to reconcile the need for commercial products of high economic value with the need for conservation is a significant challenge. The first step is to highlight the issue and one obvious measure would be to set aside some area of each limestone outcrop for conservation. In Nepal we are working with community forest groups helping them to understand the difference between native, mostly detritivore species harmless to harvesting of traditional forest products and pest species that are almost exclusively exotic alien species. Research underwrites all of these measures and goals and, having established a number of project partners in research careers, we have set in place the means for providing sustained input to establishing informed practice for the future.

4. Other comments on progress not covered elsewhere

As outlined above, much of the current collaboration is legacy activity, is no longer funded by the Darwin Initiative and is an extension beyond the original remit of the project.

Malaysia

Collaboration with Malaysia continues under British Council and other funding. Fred Naggs and Chris Wade carried out a field programme in Western Malaysia with a team from the University of Malaysia, Penang (2nd March – 7th April 2009). Professor Zulficar Yasin, Dr Aileen Tan worked with Fred Naggs at the NHM with two undergraduate students Ms NorhanisM. Razalli and Ms Siti Balkhis Abu Bakar from 8th to 22nd October 2009.

Thailand

Professor Somsak Panha and Dr Chirasak Sutcharit visited Fred Naggs at the NHM from 12th April to 30th April 2010 with two undergraduate students, Ms Ratmanee Chanabun and Ms Thita Krutchuen, working on polychaetes.

India

Fred Naggs worked with Aravind in Tamil Nadu and Kerala (3rd -18th November 2009) and, in addition to furthering their research collaboration drafted a MoU between Science Groups at the NHM and the Ashoka Trust for Research in Ecology and the Environment. This MoU was subsequently signed (Annex 3) and forms the basis for furthering collaboration between the NHM and ATREE.

Vietnam

Fred Naggs obtained funding from NHM Special Funds to support field work in Vietnam and for Luong Van Hao, Department of National Parks, to work with him at the NHM for two months (February –March 2010) working up snail survey collections. Fred Naggs negotiated a MoU between the NHM, Vietnam National Museum of Nature and Vietnam Department of National Parks that provides a basis (Annex 4) for collaboration across the whole range of Museum activities. As a result, the NHM Planning and Design Consulting Team are working on setting up an exhibition in Hanoi in collaboration with VNMN. Harald Schneider, Department of Botany, NHM, has carried out a preliminary field project in Vietnam under the MoU (Annex 5) and Lukas Rüber, Department of Zoology, NHM, has carried out a preliminary fish survey (Annex 6).

5. Sustainability

Sustainability is most assured in India, Nepal, Thailand, Malaysia and Vietnam where project staff hold or have gained permanent posts. The project partner in Laos holds a lectureship but he has not worked independently so far and his continued involvement with the project's subject matter is likely to be dependent on his continuing to collaborate with our Thai partners.

6. Dissemination

The project has achieved an extremely high profile in Thailand and royal patronage has generated enormous publicity. The Thai research group is also the most secure because of the six tenured positions held in three Thai universities.

7. Project Expenditure

As agreed by Eilidh Young in email dated 11/06/2010, this report is being submitted without financial information

Table 3 Table 4 Project expenditure during the reporting period (Defra Financial Year 1 April 2009 to 31 March 2010)

Item	Budget (please indicate which document you refer to if other than your project application or annual grant offer letter)	Expenditure	Variance
Rent, rates, heating, overheads etc			
Office costs (eg postage, telephone, stationery)			
Travel and subsistence			
Printing c/f to 2010-2011			
Conferences, seminars, etc			
Capital items/equipment (specify)			
Others (specify) Audit Consumables Overhead			
Salaries (specify by individual)			
TOTAL			

Annex 1 Project's full current logframe

LOGICAL FRAMEWORK

19. Please enter the details of your project onto the matrix using the note at Annex B of the Guidance Note. This should not have substantially changed from the Logical Framework submitted with your Stage 1 application. Please highlight any changes.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Goal:</p> <p>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> • the conservation of biological diversity, • the sustainable use of its components, and • the fair and equitable sharing of benefits arising out of the utilisation of genetic resources 			
<p>Purpose</p> <p>To develop a long-term relationship between the NHM and Chulalongkorn University, establishing Chulalongkorn University as a regional centre of land snail expertise.</p>	<p>Setting up land snail projects in South and Southeast Asia that are supported regionally and with long-term cooperation from the NHM. Establish reference collections, national databases and a regional database, provide training, develop research output with raised standards, publish local snail guides. Develop and publish conservation strategies based on snails as key indicators.</p>	<p>Outputs from survey based projects in India, Nepal, Thailand, Laos, Cambodia and Vietnam: establishment of reference collections; publication of results in peer-reviewed journals; publication of field and other guides. Web access to regional database and other outputs.</p>	<p>1. Political problems may limit activity in some of the associate partner countries. 2. Significant further increases in fuel prices and costs of international flights would result in adjustments to international travel arrangements.</p>
<p>Outputs</p> <p>1. Illustrated species lists for six countries. 2. Field guides for six countries. 3. Taxonomic revisions. 4. Compilation of national databases and regional database. 5. Publication of research papers and conservation strategies. 6. Dissemination of outputs on WWB and through media. 7. Build specimen reference collections. 8. Contribute material to Frozen</p>	<p>1. Publication of illustrated species lists for regions covered in project in India, Nepal, Thailand, Laos, Cambodia and Vietnam. 2. Publication of six field guides. Suitable for use by schools, universities and naturalists. 3. Publication of taxonomic revisions. 4. Web access to regional database. 5. Publication of research papers on distribution, faunal origins, status and conservation. 6. Project web site, media coverage. 7. Collections established in partner countries. 8. Contribution of material to Frozen ark</p>	<p>1. Published illustrated colour species lists. 2. Publication of six coloured field guides. 3/5. Submission for publication of taxonomic revisions and research papers (minimum of 12 papers: revised objective from partners). 4. Database available on web. 6. Access available to project web site; publication / presentation of media coverage. 7. Collections held in institutes. 8. Material held in Frozen Ark collections.</p>	<p>Collaboration with Thailand is well established and proven to be robust and reliable. Some of the subsidiary partner countries are politically unstable and adjustments may have to be made, contracting activities in some countries, expanding in others.</p> <p>Partnerships in subsidiary countries hold up.</p>

Ark – new objective			
<p>Activities</p> <p>Conduct field surveys, establish reference collections, establish database, analyse data, publish research, prepare illustrated species lists in printed and electronic form. Prepare field guides: communicate information on web and gain media coverage.</p>	<p>Activity Milestones</p> <p>Year 1. Launch project with training workshop at Chulalongkorn University with international partners. Years 1 and 2: run field programs. Years 1, 2 and 3: two members of Thai group spend two months per year working on identifying material (includes Laotian, Cambodian and Vietnamese) at NHM. Year 2: Indian and Nepalese partners work up their collections in London. Year 2: publish illustrated species lists. Year 3: publish illustrated guides to snails in the Western Ghats, India, Thailand and areas covered in surveys in Nepal, Laos, Cambodia and Vietnam. Submit a minimum of twelve papers to be published in peer-reviewed journals, covering subject areas presented in proposal, including conservation, and including results from work in Sri Lanka. Database to be available on web.</p>	<p>Assumptions</p> <p>This is an ambitious project and we recognise that capacities for participation vary greatly in different partner countries and assume that Defra will allow contraction in some areas and expansion in others if appropriate.</p>	

Annex 2

Tropical Natural History, Supplement 3, July 2010

©2010 by Chulalongkorn University

17th International Congress of UNITAS MALACOLOGICA

World Congress of Malacology

18-24 July 2010, Phuket, Thailand

Annex 3

MEMORANDUM OF UNDERSTANDING

Between

**Ashoka Trust for Research in Ecology and the Environment (ATREE),
Bangalore, India**

and

The Natural History Museum (NHM), London, UK

Annex 4

Memorandum of Understanding between The Natural History Museum and Vietnam National Museum of Nature and Hoang Lien Park

Annex 5

Review of NHM activities in Vietnam – Botany by Harald Schneider (1 June 2010)

Annex 6

Review of NHM activities in Vietnam
Lukas Rüber, Department of Zoology