

DARWIN INITIATIVE PROJECT SCHEDULE ref: 162/08/214

Organisation name : The Natural History Museum

Name of project : Land snail biodiversity in Sri Lanka

Project purpose : To transfer skills and resources to Sri Lanka by initiating a project for the Zoological Survey of Sri Lanka and by enhancing the resources of Peradeniya University.

Project objectives : to carry out molluscan collecting surveys, to provide distributional information, a computerised database and core reference collections at ZSSL and Peradeniya University; to prepare a guide to snail fauna; to prepare a field guide; to publish a guide to the synanthropic/pest species; to train personnel at the host institution (NHM); to undertake research projects; to train groups of teachers for the National Curriculum biodiversity course unit.

Length of project : October 1999 for three years

Total project cost : £207,003 (Darwin funding + funding derived from other sources)

Darwin funding profile : 1999/2000 £37,275; 2000/2001 £41,028; 2001/2002 £39,088; 2002/2003 £19,640

Other sources of funding : NHM salaries £51,282, NERC funding of £18,690 covers the isotope costs. Land Rover supplying 2 vehicles for £20,000 (retail value in UK £46,000).

Expenditure profile : see Table A

Target outputs : see Table B

Implementation timetable with milestones : see Table C

Key staff inputs : see Table D

Reporting requirements :

30 April 2000	Annual report (1.10.1999 to 31.3.2000)
31 October 2000	Six month report (1.4.2000 to 30.9.2000)
30 April 2001	Annual report (1.4.2000 to 31.3.2001)
31 October 2001	Six month report (1.4.2001 to 30.9.2001)
30 April 2002	Annual report (1.4.2001 to 31.3.2002)
31 October 2002	Six month report (1.4.2002 to 30.9.2002)
31 December 2002	Final report.

Arrangements for monitoring trainee outcomes : Professor Arulpragasam will act as the co-ordinator administering the programme in Sri Lanka. The two survey leaders will also be in continuous contact with F. Naggs by e-mail. Professor Arulpragasam will have direct responsibility for including Advanced Level teachers in the programme and for monitoring related outcomes.

Table A

PROJECT COST					
Total Darwin Grant : £137,031					
Annual Darwin Grant					
♦ 1999/2000 £37,275					
♦ 2000/2001 £41,028					
♦ 2001/2002 £39,088					
♦ 2002/2003 £19,640					
DARWIN GRANT : EXPENDITURE DETAILS					
Expenditure details	1999/2000	2000/01	2001/02	2002/03	Total
Rents, rates, heating, lighting, cleaning					----
Postage, telephone, stationery					600
Travel, subsistence					37,800
Printing					5,000
Conferences, seminars, training					2,000
Capital items : computing equipment, books					10,400
Other: service charges, use of libraries					50,229
Salaries					31,002

Table B

PROJECT OUTPUTS		
Year	Output ref. no.	Details
1999/2000	8	F. Naggs and P. Mordan visit Sri Lanka for 4 weeks.
	4A;4B;4C;4D; 14	<p>One week workshop held at Peradeniya; now to be held in Colombo. The first 3 days will provide intensive training for the core survey teams; the remaining 2 days will launch the project to a wider audience: representative Advanced Level biology teachers and participating members of the academic community (selection of these groups will be the responsibility of Professor Arulpragasam). The objectives and methods (taxonomy, identification, surveying, mapping) will be presented and supported with practical sessions.</p> <p>2 Sri Lankans [post-graduate research assistants] involved full-time, a further 2-3 part time [post-graduate and undergraduates, from various universities and from the Colombo Museum. There will probably be more than the 2-3 projected. Their participation will be in the form of on the job training under the supervision of the research assistants and the amount of time they spend on the project cannot be set at this stage] with 20-30 (per year, 10:20:20:10 = minimum 60[4C]) engaged on short training /field work experience. These are primarily the Advanced Level teachers, again they will be given on-the-job training and it will be Professor Arulpragasam's responsibility to organise this.</p>
	7	Preliminary guide to be produced for workshop.
	15A;B	Press release
	16A;B;C	Newsletter established locally
	18A;19A	TV and Radio appearances
	22	Establish minimum of 10 field plots (up to 500 additional schools research plots will be established during the remainder of the project)
8	F Naggs visits Sri Lanka for 2 weeks to supervise the project and review progress with partners (January)	
2000/2001	4C;4D;17A	Training of approx. 20 teachers continues; this cascades down to further 4,000 teachers and subsequently to pupils
	4A;4B	Training of undergraduate students continues
	8	F Naggs visits Sri Lanka for 2 weeks to supervise the project and review progress with partners (January)
2001/2002	4C;4D	Training of approx. 20 teachers continues; this cascades down to further 4,000 teachers
	5	4-week visit to NHM by 4 Sri Lankan partners (August)

	4A;4B	Training of undergraduate students continues
	5	4-week visit to NHM by 4 Sri Lankan partners (August)
	8	F Naggs visits Sri Lanka for 2 weeks to supervise the project and review progress with partners (January)
	11B	First papers submitted (August)
	14B	Attend World Congress of Malacology, Vienna, and present paper (September)
2002/2003	4C	Training of approx. 10 teachers continues; this cascades down to further 2,000 teachers
	4A;4B	Training of undergraduate students continues
	8	F Naggs visits Sri Lanka for 2 weeks to supervise the project and review progress with partners (January)
	8	P Mordan and F Naggs to visit Sri Lanka for one week (September)
	9	Action Plan completed (September)
	11A;B	Final papers published (2) and submitted (September)
	12A;13A	Databases and collections formally handed over to ZSSL Colombo and Peradeniya University (September).
	14A	Final 2-day workshop in Sri Lanka (September)
	15A;B	Press releases (September)
	18A;19A	TV and Radio appearances (September)
	20	Formally hand over 2 4-wheel-drive vehicles; computers, software; GPS units (September). Total retail value in Sri Lanka when new approx £40,000.
	7;10	Main survey published; field guide and pest-species booklet with publisher (December)
	14B	Attend World Congress of Malacology and present paper (2004)

Our plans are that two A-level teachers will work with each group at different times throughout the year; the amount of time that each will spend on the project will have to be agreed locally under the overall direction of Prof. Arulpragasam.

Table C

PROJECT IMPLEMENTATION TIMETABLE	
Date	Key milestones
1999/2000	
October	<p>Working copies of the literature compilation and type figures available</p> <p>One week workshop held at Peradeniya</p> <p>Site visits carried out to the collection storage facilities at Peradeniya and the ZSSL in Colombo</p> <p>Detailed strategy worked out for processing and storage of reference collections</p> <p>2 weeks fieldwork carried out [FN+ PM + DR+KR] to establish sampling practice and methods and material worked through to final storage, mapping and databasing.</p>
November	<p>Programme of surveys started in the rainforests of SW Sri Lanka, highland forests and synanthropic habitats. 2 Sri Lankans [post-graduate research assistants Ms D. Raheem based at ZSSL, the RA at Peradeniya is to be appointed] involved full-time, a further 2-3 part time [post-graduate and undergraduates, from various universities and from the Colombo Museum. There will probably be more than the 2-3 projected. Their participation will be in the form of on the job training under the supervision of the research assistants and the amount of time they spend on the project cannot be set at this stage] with 20-30 engaged on short training /field work experience [Duration and frequency of training to be determined by Prof. Arulpragasam].</p>
January	<p>F Naggs visits Sri Lanka for 2 weeks to supervise the project and review progress with partners.</p>
2000/2001	
August	<p>First 4 week visit to NHM by 4 Sri Lankan partners to train in methods of curation, exploratory use of some of the research and literature facilities available [Ranawana + Research Assistant; Raheem + Colombo Museum Research Student].</p>
January	<p>F Naggs visits Sri Lanka for 2 weeks to supervise the project and review progress with partners.</p>
2001/2002	
August	<p>Second 4 week visit to NHM by 4 Sri Lankan partners to train in methods of curation, exploratory use of some of the research and literature facilities available [Personnel as previous year, but it is possible that there may be</p>

	replacements]
January	F Naggs visits Sri Lanka for 2 weeks to supervise the project and review progress with partners.
2002/2003	
September	<p>Workshop in Sri Lanka. The results of the 3-year programme will be consolidated and reviewed. The 2-day workshop will present the results to the academic community and interested groups and individuals in Sri Lanka. Venue to be confirmed.</p> <p>3 books submitted for publication. The main survey will be published in-house and be available by December 2003; publication date of the field guide and pest-species guide will depend on the publisher. We have a provisional agreement with Hill House Publishers to produce the guides.</p>

The fieldwork will finish by the end of September 2003. Analysis of the results will be an ongoing process starting as soon as distribution data begins to be acquired; it is likely that the data will be an analytical resource for many years. Papers: two will be produced before the end of the programme; its too early to give detailed information on the remaining papers that will be produced but work on these should be in preparation by September 2000.

The subsidiary training will stem from the direct participation of the Advanced Level teachers, firstly from those participating in the October 1999 workshop and secondly from those who join the programme (estimated at 60 over the 3 years) for short periods. This will be ongoing throughout the programme.

Seminars will be presented at the NHM by visiting Sri Lankan participants in August 2000 and August 2001. In addition, papers will be presented at meetings of the Malacological Society of London, and at local universities in Sri Lanka. We will have the opportunity to include members of the Tamil academic community and have arranged a visit to the Eastern University at Batticaloa during the October, 1999 visit. We will present a seminar and anticipate that active participation of the University will follow. This will be developed opportunistically, but no funding has been set aside for their participation.

The next two World Congress will be held in September 2001 (Vienna) and 2004 (venue to be decided); an interim report will be presented at the former, a final report at the latter.

Table D

KEY STAFF INPUTS				
Name	Grade/Position			
F C Naggs	Project coordinator			
P B Mordan	Deputy project coordinator			
J Lawton	No longer participating			
M Leng	Carrying out isotope analysis			
K D Arulpragasam	Overall coordinator in Sri Lanka and coordinator from ZSSL			
K B Ranawana	Coordinator from Peradeniya University			
Peradeniya research assistant				
Colombo research assistant				
STAFF TIME ALLOCATIONS (% of time spent on this work)				
Name	1999/2000	2000/2001	2001/2002	2002/2003
F C Naggs	34	22	22	18
P B Mordan	28	18	18	18
M Leng	5	5	5	0
K D Arulpragasam	20	20	20	20
K B Ranawana	90	90	90	90
Peradeniya research assistant	100	100	100	100
Colombo research assistant	100	100	100	100