

ANNUAL REPORT: June 1, 2011 – May 31, 2012
(i.e., Summer 2011, AY 2011-2012)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: Mark V. Lomolino

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>	<u>No. of Lab. Sections</u>
SUMMER:					
FALL:	EFB 496	Diversity & Conserv. Island Life	1	12	
	EFB 797	Conservation Biogeography	1	4	
	EFB 420	Internship	3	1	
SPRING:					
	EFB 483	Mammal Diversity	4	69	4
	EFB 796	Biodiversity of Mammals	4	1	

NOTE: PLEASE INDICATE WHICH COURSE(S) HAD A SERVICE-LEARNING COMPONENT AND BRIEFLY EXPLAIN THE NATURE OF THIS COMPONENT. For examples of service-learning in courses, see: <http://www.esf.edu/students/service/courses.htm>. Service-learning is a form of structured experiential education in which students engage with the community to be active learners, to enrich their sense of civic responsibility, and to explore practical application for course content. Faculty oversight, reflective thinking, and reciprocity are key components of service-learning. EFB courses currently listed with service-learning components include: 416/6/1, 486, 518, 521, 532, 446/646.

2. Non-Scheduled Course Offerings (e.g., 496, 899, 999)

	<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>
FALL:	EFB 899	Masters Thesis Research	1	1
	EFB 899	Doctoral Thesis Research	1	1
SPRING:	EFB 899	Masters Thesis Research	9	1
	EFB 899	Doctoral Thesis Research	1	1

3. Continuing Education and Extension (short courses, workshops, etc.)

4. Guest Lecture Activities

	<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
SPRING:	EFB 210	DIVERSITY OF LIFE – Guest Lecture – Evolution and Diversity of Mammals	1

II. STUDENT ADVISING

- A. Number of undergraduates for whom you are the student's official advisor _24_ and unofficial advisor _____
- B. Graduate Students: (Name, degree sought, starting date, month & year; if a degree was completed, please give date and full citation for the thesis or dissertation).

MAJOR PROFESSOR

Katherina Bendz, Ph.D., August, 2005 to present
Natasha Karniski, MS, August 2009 to present
Kyle Kowaite, MPS – Applied Ecology, August 2011 to present

CO-MAJOR PROFESSOR

MEMBER, STEERING COMMITTEE (other than those listed above)

Co-Chair, International Advisor to Dissertation Committee of Roberto Rozzi, Evolution in Paleo-Insular Mammals, Rome, Italy

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Chair of Examining Committee – ESF 1 student

III. RESEARCH COMPLETED OR UNDERWAY

- A. Departmental Research (unsupported, boot-legged; title - % time spent)
- Island Biogeography Theory and Practice – 5%
 - Body Size Evolution in Insular Mammals – 15%
 - Evolution and Conservation of Elephants – 5%
 - Atlas of Long Distance Dispersal – 5%
- B. 1. Grant-supported Research (source, subject, amount - total award and current year, award period starting and ending dates; list graduate research assistants supported by each grant)
- NSF – Of Mice and Mammoths: Toward a General Theory of Body Size Across Space and Time
requested \$420,681; received partial funding for initial period of grant (1 ½ years) of \$100,000

2. Research Proposals pending (include information as in B.1., above).

3. Research Proposals submitted, but rejected (include information as in B.1., above)

IV. PUBLICATIONS (Full bibliographic citation, i.e., do not use "with Jones," or "Jones, et al."; please list only publications published, in press, or actually submitted during this reporting period --- **do not list manuscripts in preparation**).

A. Refereed Publications

Lomolino, M. V., D. F. Sax, M. R. Palombo and A. A. van der Geer. 2012. Of mice and mammoths: evaluations of causal explanations for body size evolution in insular mammals. *Journal of Biogeography* 39:842-854.

B. Non-refereed Publications

C. Papers Presented at Science Meetings (give title, date, occasion, and location)

Overview: Ecological and Evolutionary Responses of Mammals to Climate Change – NE Naturalist Conference, April 2012, Syracuse, NY

D. Public Service Presentations (lectures, seminars, etc. to and for the public; give group or occasion, date(s), and attendance)

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local):

2. Industrial and Commercial Groups, etc.

B. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

VI. PROFESSIONAL DEVELOPMENT

A. Professional Honors and Awards (for teaching, research, outreach, etc.)

B. 1. Activities in Professional Organizations (offices held, service as chairman, member, participant or consultant)

Advisory Board, International Biogeography Society; Frontiers of Biogeography, online journal

2. Professional Society Membership

3. Other Professional Activities

a. Editorial activity

- Approximately 10 reviews for various journals

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

Journal(s)

No. of manuscripts

Agency

No. of proposals

Other

Outside Reviewer for Tenure and Promotion Decision – University of Rochester

Outside Reviewer for Tenure and Promotion Decision – Utah State University

Advisor Coordinator – Postdoctoral Research Associate – Georgios Lyras (Greece), Paleobiology and evolution of insular mammals (NSF Supported research)

c. Participation (workshops, symposia, etc.)

Name of workshop, etc.

Date

Place

C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.

D. Foreign Travel (Where, When, Purpose)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

Teaching Evaluations for P&T Committee

B. College-level

C. University-wide, including Research Foundation

VIII. SUMMARY OF SIGNIFICANT ACTIVITIES AND ACCOMPLISHMENTS DURING THIS REPORTING PERIOD, ESPECIALLY THOSE MOST NOTEWORTHY AND RELATIVE TO THE COLLEGE'S AND DEPARTMENT'S MISSION. One

paragraph on each of the following would be most helpful: this past year, what have you done for our students, department/college, and self professionally? NOTE: The information in this section (along with the supporting specific information elsewhere in this report) should be your strongest case for being considered for a discretionary raise, which I'll continue to award based on your contributions to the department and college this reporting period.

Course development:

Ecology and Conservation of Island Life: I offered a preliminary version of this course as a 1 credit graduate course (EFB797) to 10 graduate students during Fall, 2009. Based on evaluations, the course was very well received and there would be much interest for a 2 or 3 credit course. Therefore, I developed and offered this as an exploratory course in the Fall of 2011. Given the very positive reactions of the students, I plan to add this as a course offering in alternate years, fall semesters, as a 3 credit course to upper level undergraduate students and graduate students

The series of seminars I have developed – Conservation Biogeography, continues as a graduate level, 1 credit course. I hope to continue this course in alternate semesters, with the topic for the Fall semester of 2012 being Ecology and Conservation of Soundscapes.

Research and Scholarship:

Publication of the 4th Edition of Biogeography – Lomolino, Riddle, Whittaker and Brown, Sinauer Associates. This thoroughly revised and full-color edition should continue to be the leading text in the field of biogeography, and we continue to plan and update the book in preparation for its next publication.

Expanded research program on ecology, evolution and biogeography of body size to include effects of climate change (dissertation topic of Katherina Searing) and evolution of body size in extant native, introduced and extinct insular mammals is now funded and establishing international collaborations with colleagues in Italy, Greece and the Netherlands.

Development of proposal on the broad-scale dispersal which should ultimately contribute to a continental-scale Atlas of Long-Distance Dispersal. This information, the abilities of animals to cross significant barriers, is essential to understanding and predicting abilities of populations of these species to adapt to environmental challenges including those associated with climate and landscape change. Proposal are being revised and prepared for various agencies including the SERDP, environmental research branch of DoD.

IX. A. FUTURE PLANS, AMBITIONS, AND POTENTIAL CONTRIBUTIONS FOR YOUR OWN PROFESSIONAL DEVELOPMENT AND THE ENHANCEMENT OF THE PROGRAM IN ENVIRONMENTAL AND FOREST BIOLOGY (brief summary)

In teaching, I will continue to develop my current course offerings, and explore the potential to offer a short course in field mammalogy and/or biogeography at one of our field stations (AEC or TIBS). I am also planning to complete the development of the course described earlier – a graduate and upper level undergraduate course on the ecology, evolution and conservation of island life to be offered as a two or three credit course at ESF in alternate, fall semesters and as a separate, summer field course.

In research, I am continuing to develop collaborations with a researcher at Brown University and a paleoecologists from Rome, Greece and the Netherlands; these studies focus on evolutionary and geographic variation of body size of non-native, introduced mammals, and a related study of body size variation and potential anthropogenic downsizing of elephants. Ultimately, we plan to combine these research activities with development of a course on the ecology, evolution and conservation of island life to be taught in alternate summers at sites in the Mediterranean and Caribbean or Northeastern North America.

In service, I will continue advising undergraduate and graduate students and contribute to development of the majors in Conservation Biology and Wildlife Sciences, and increase my contributions to departmental and college-wide service.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2012

- a. Course(s) to be offered
- b. Proposed research activity
 - Continue research on Body Size Evolution in Paleo-insular and Introduced Mammals – NSF.
 - Apply for funding to initiate research on long-distance dispersal of vertebrates across major barriers of North America
 - Assist graduate student on studies of effects of climate change on body size of North American mammals, and on the effects of climate change (and snow) on movements of Adirondack Mammals

Continue Collaborative Research on

- Geographic Range Collapse in Endangered Species
- An Integrative Theory of Island Biogeography
- Body Size Evolution of Mammals on Islands

c. University, professional society, and public service – see above

2. Fall Semester 2012

- a. Course(s) to be offered
 - EFB 444/644 – Geography of Nature/Conservation Biogeography
 - EFB797 Conservation and Ecology of Soundscapes
- b. Proposed research activity
 - same as above
- c. University, Professional society, and public service
 - see above

3. Spring Semester 2012

- a. Course(s) to be offered
 - EFB 483 Mammal Diversity
 - EFB 683 Biodiversity of Mammals
- b. Proposed research activity
 - same as above
- c. University, professional society, and public service – see above