

ANNUAL REPORT: June 1, 2010 – May 31, 2011
(i.e., Summer 2010, AY 2010-2011)
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:	EFB202	Ecol Monitoring & Bio Assessment			Mammals Section of this course
FALL:	EFB 444	Biodiversity and Geog. Nature	3	69	
	EFB 644	Biogeography	4	9	
	EFB 797	Conservation Biogeography	1	8	
SPRING:	EFB483	Mammal Diversity	3	51	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 2010	EFB 420	Internship	5	1
	EFB 420	Internship	3	1
	EFB 899	Masters Thesis Research	3	1
	EFB 999	Doctoral Thesis Research	1	1
SPRING 2011:	EFB 420	Internship	3	1
	EFB 899	Masters Thesis Research	3	1
	EFB999 13	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>
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II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor _____
including advising for faculty on sabbatical leave
Fall, 2010 – 41 students (this includes 13 of D. Parry's students while he was on leave)
Spring, 2011- 35 (this includes some of G. Baldassarre's students while he was on leave)
Currently – 28 students

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

CO-MAJOR PROFESSOR

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

MEMBER, STEERING COMMITTEE (other than those listed above)
Jonathan Zysick – EFB

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Chair of Examining Committee – ESF 1 student
Chari of Examining Committee – SU 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)
NE Regional Conservation Needs Grant Program - Wildlife Management Institute - Climate Change,
Long-Distance Dispersal and Conservation of Northeastern Forest Wildlife - \$100,000, pending

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

Journal Publications:

Lomolino, M. V. 2010. Four Darwinian themes on the origin, evolution and preservation of island life.
Journal of Biogeography.

Books:

Lomolino, M. V., B. R. Riddle, R. J. Whittaker and J. H. Brown. 2010. Biogeography, 4th Edition. Sinauer Associates.

B. Non-refereed Publications

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

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

- Brown University – Guest Lecturer in General Ecology; Research Seminar on Evolution of Insular Body Size
- University of Miami – Research Seminar on the Marvels and Perils of Island Life

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.

Proposal Reviewer for SERDP – DoD; 8 proposals on biodiversity assessment
Proposal Reviewer for Naturalis, Netherlands Research Agency

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, magazine

2. Professional Society Membership

International Biogeography Society

The Wildlife Society

American Society of Mammalogists

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

Book reviews (2) for U. Chicago Press, University of California Press

b. Reviewer

- Approximately 15 reviews for various journals including Science, PNAS, TREE, Journal of Biogeography, Evolutionary Psychology, and Ecography.

Journal(s)

No. of manuscripts

Agency

No. of proposals

Other

c. Participation (workshops, symposia, etc.)

Name of workshop, etc.

Date

Place

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

Training in Classification and Regression Tree Analyses (CART); Salford Systems featured study GIS software, DIVA

D. Foreign Travel (Where, When, Purpose)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

Participated in accepted student receptions and overviews of departmental programs in wildlife and conservation for visiting parents and students.

B. College-level

Volunteer, ESF at the NYS Fair

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:

The course, Ecology and Conservation of Island Life, is one I am developing and hope to offer a graduate and upper level undergraduate course during the Fall semester of odd years. I offered a preliminary version of this 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, hopefully initiated as an exploratory course in the Fall of 2011.

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.

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.

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 research, I am continuing to develop collaborations with a researcher at Brown University and a paleoecologists from Rome, Greece and the Netherlands; these studies will 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 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 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 – tentative: Mammal portion of ESF 202 at Cranberry Lake

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 2011

a. Course(s) to be offered

EFB797 Conservation Biogeography/ Ecology, Evolution and Conservation of Island Life

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