

## Elizabeth R. Dumont

Department of Biology  
University of Massachusetts  
221 Morrill Science Center  
Amherst, MA 01003-9297  
Tel: 413 545-3565 Fax: 413 545-3243  
E-mail: [bdumont@bio.umass.edu](mailto:bdumont@bio.umass.edu)  
Lab web page: [www.biomesh.org](http://www.biomesh.org)

### Education

Ph.D.	1993	S.U.N.Y. at Stony Brook, Anthropology
M.A.	1989	S.U.N.Y. at Stony Brook, Anthropology
B.A.	1985	Indiana University (Bloomington), Anthropology (with honors)

### Academic Positions

2006 - present	Associate Professor, Department of Biology, University of Massachusetts, Amherst
2001 - 2006	Assistant Professor, Department of Biology, University of Massachusetts, Amherst
1996 - 2001	Assistant Professor, Department of Anatomy, Northeastern Ohio Universities College of Medicine
1996 - present	Research Associate, Section of Mammals, Carnegie Museum of Natural History
1993 - 1996	Postdoctoral Teaching Fellow, Department of Neurobiology, University of Pittsburgh, School of Medicine

### Grant Support

2008 - 2012	<b>National Science Foundation</b> , Division of Biological Databases and Bioinformatics, "Biomesh: A digital resource collection on the biology-engineering interface" (P.I.) Direct Costs: \$670,425 (includes \$7,500 REU supplement), Indirect Costs: \$320,913
2006	Research Leadership Award. Office of the Vice Provost for Research, UMass Amherst. (P.I.) Total award: \$6,000 in matching funds
2005 - 2008	<b>National Science Foundation</b> , Division of Integrative Organismal Biology, "Finite element analyses of the mammalian skull: The impact of biting behavior." (P.I.) Direct Costs: \$225,042, Indirect Costs: \$108,034
1999 - 2002	<b>National Science Foundation</b> , Ecological and Evolutionary Physiology Program, "The ecomorphology of mammalian frugivores: A test of congruence between cranial morphology and feeding behavior." (P.I.) Total award: \$238,150
1999 - 2000	<b>National Science Foundation</b> , Doctoral Dissertation Improvement Grant to doctoral student Christopher Nicolay. "The ecomorphology of feeding performance in nectar-feeding bats." Total award: \$ 7,955

- 1995 - 1998 **National Science Foundation**, Ecological and Evolutionary Physiology Program, "The function of nonprismatic enamel in fruit and nectar-feeding mammals: A study of the interplay between dental structure, oral physiology and dietary niche." (P.I.) Total award: \$81,500
- 1995 University of Pittsburgh Medical School, "Salivary chemistry of African fruit- and nectar-feeding bats." (P.I.) Total award: \$1,500  
University of Pittsburgh, Central Research Development Fund, "Enamel structure and dietary adaptation in Central American fruit bats." (P.I.) Total award: \$4,139  
American Museum of Natural History, Theodore Roosevelt Fund, "Enamel structure and dietary adaptation in Central American fruit bats." (P.I.) Total award: \$1,650
- 1994 University of Pittsburgh, Center for Latin American Studies, "Nonprismatic enamel in Central American fruit bats: an integrative study of dental structure, oral physiology and dietary niche." (P.I.) Total award: \$2,975
- 1993 University of Pittsburgh Medical School, Teaching Development Grant, (P.I.) Total award: \$2,500
- 1989 - 1991 **National Science Foundation**, Doctoral Dissertation Improvement Grant, "Functional and phyletic features of mammalian dental enamel: evidence for primate higher-level relationships." With graduate advisor David W. Krause (P.I.). Total award: \$8,054
- 1987 Sigma Xi, Grant in Aid of Research, "Affinities of the Plagiomenidae (Mammalia: Dermoptera?): Enamel ultrastructural evidence." (P.I.) Total award: \$300

### **Honors and Awards**

- 2009-2010 Family Research Scholar, Center for Research on Families, UMass Amherst.
- 2007 Plenary Speaker, 14<sup>th</sup> International Bat Research Congress, Merida, Mexico
- 2006 - 2007 Lilly Teaching Fellow, UMass Amherst.
- 2006 Host, 86th annual meeting of the American Society of Mammalogists held at UMass Amherst, June 17-21, 2006 (co-Host Virginia Hayssen, Smith College).
- 2003 - 2007 Chairman, Board of Directors, North American Society for Bat Research (elected Board Member 2001-2007)
- 1999 Teacher of the Year - voted by the Northeastern Ohio Universities College of Medicine Class of 2002

## PUBLICATIONS

### Peer-Reviewed Journal Publications (♦ denotes a student)

Dechmann, D.K.N., S. Santana ♦ and E.R. **Dumont**. (In Press) Roost making in bats – adaptations for excavating active termite nests. *Journal of Mammalogy*.

Slater, G. ♦, E.R. **Dumont** and B. van Valkenburgh (In Press). Implications of predatory specialization for skull form and function in canids. *Journal of Zoology*.

Reinholt, L.E. ♦, A.M. Burrows, T.P. Eiting, E.R. **Dumont** and T.D. Smith. (In Press) Brief Communication: Histology and micro CT as methods for assessment of facial suture patency. *American Journal of Physical Anthropology*.

**Dumont**, E.R. I.R. Grosse and G. Slater. ♦ (2009). Requirements for comparing the performance of finite element models of biological structures. *Journal of Theoretical Biology*. 256:96–103.

Tanner ♦ J.B., E.R. **Dumont**, S.T. Sakai, B.L. Lundrigan, and K.E. Holekamp. (2008). Of arcs and vaults: The biomechanics of bone-cracking in spotted hyenas (*Crocuta crocuta*). *Biological Journal of the Linnean Society*, 95(2):246.

Carmody ♦ K.L., M.P. Mooney, G.M. Cooper, C.J. Bonar, M.I. Siegel, E.R. **Dumont** ,and T.D. Smith. (2008) Relationship of premaxillary bone and its sutures to deciduous dentition in non human primates. *Cleft Palate Craniofacial Journal*, 45(1):93–100.

**Dumont**, E.R. (2007) Feeding mechanisms in bats: Variation within the constraints of flight. *Integrative and Comparative Biology*, 47:137-146.

Werle, S.F., N.A. Johnson, E.R. **Dumont** and P. Parasiewicz. (2007) Ecological dissimilarity analysis: A simple method of demonstrating community-habitat correlations for frequency data. *Northeastern Naturalist*, 14(3):439–446.

Grosse, I.R., E.R. **Dumont**, A. Tolleson ♦ and C.E. Coletta. ♦ (2007) Techniques for modeling muscle-induced forces in finite element models of skeletal structures. *Anatomical Record - Advances in Integrative Anatomy and Evolutionary Biology*, 290(9):1069-1088.

**Dumont**, E.R. and C.W. Nicolay. ♦ 2006. Cross-sectional geometry of the dentary in plant-visiting bats. *Zoology*, 109:66-74.

**Dumont**, E.R., J. Piccirillo ♦, and I.R. Grosse. 2005. Finite element analysis of biting behavior and bone stress in the facial skeletons of bats. . *Anatomical Record - Advances in Integrative Anatomy and Evolutionary Biology*, 293:319-330.

**Dumont**, E.R., G. W. Weiblen, and J. Winkelmann. 2004. Preferences of fig wasps and fruit bats for figs of functionally dioecious *Ficus pungens*. *Journal of Tropical Ecology*, 20:233-238.

**Dumont**, E.R. and R. O’Neil. ♦ 2004. Fruit hardness, feeding behavior, and resource partitioning in Old World fruit bats (Family Pteropodidae). *Journal of Mammalogy*, 85:8-14.

- Vandoros, J. D. and E.R. **Dumont**. 2004. Use of the wings in manipulative and suspensory behaviors during feeding by frugivorous bats. *Journal of Experimental Zoology*, 301:361-366.
- Dumont**, E.R. 2004. Patterns of diversity in cranial shape among plant-visiting bats. *Acta Chiropterologica*, 6:59-74.
- Dumont**, E.R. and A. Herrel. 2003. The effects of gape angle and bite point on bite force in bats. *Journal of Experimental Biology*, 206:2117-2123.
- Bonaccorso, F. J., J. R. Winkelmann, E.R. **Dumont**, and K. Thibault. 2002. Home range of *Dobsonia minor* (Pteropodidae): A solitary, foliage-roosting fruit bat in Papua New Guinea. *Biotropica*, 34: 138-146.
- Dumont**, E.R., S.G. Strait, and A. R. Friscia. ♦ 2000. Abderitid marsupials from the Miocene of Patagonia: An assessment of form, function, and evolution. *Journal of Paleontology*, 74(6): 1161-1172.
- Nicolay CW. ♦ and E.R. **Dumont**. 2000. An experimental analysis of feeding behavior in a nectarivorous bat, *Syconycteris australis*. *Mammalia*, 64: 155-161.
- Dumont**, E.R. 1999. The effect of food hardness on feeding behavior in frugivorous bats (Family Phyllostomidae): An experimental study. *Journal of Zoology*, 248: 219-229.
- Dumont**, E.R., K.R. Etzel, and J.D. Hempel. 1999. Bat salivary proteins segregate according to diet. *Mammalia*, 62: 159-166.
- Wood, C.B., E.R. **Dumont**, and A.W. Crompton. 1999. New studies of enamel microstructure in Mesozoic mammals: a review of enamel prisms as a synapomorphy of Mammalia. *Journal of Mammalian Evolution*, 6: 177-214.
- Maas, M.C. and E.R. **Dumont**. 1999. Built to last - A microscopic view of the morphology and evolution of primate dental enamel. *Evolutionary Anthropology*, 8: 133-152.
- Dumont**, E.R. 1997. Cranial shape in fruit, nectar and exudate feeders: Implications for interpreting the fossil record. *American Journal of Physical Anthropology*, 102: 187-202.
- Dumont**, E.R. 1997. Salivary pH and buffering capacity in frugivorous and insectivorous bats. *Journal of Mammalogy*, 78:1210-1219.
- Dumont**, E.R. 1996. Enamel prism morphology in molar teeth of small eutherian mammals. *Scanning Microscopy*, 10: 349-370.
- Dumont**, E.R. 1996. Variation in quantitative parameters of enamel microstructure as assessed using confocal microscopy. *Archives of Oral Biology*, 41: 1053-1063.
- Dumont**, E.R. 1995. The effects of sectioning angle on measurements of enamel prisms: Implications for comparative studies. *Archives of Oral Biology*, 40: 959-966.
- Dumont**, E.R. 1995. Mammalian enamel prism patterns and enamel deposition rates. *Scanning Microscopy*, 9: 429-442.

**Dumont, E.R.** 1995. Correlations between enamel thickness and dietary adaptation among extant primates and chiropterans. *Journal of Mammalogy*, 76: 1127-1136.

**Dumont, E.R.** 1986. Mid-facial tissue depths of white children: An aid in facial feature reconstruction. *Journal of Forensic Science*, 31: 1463-1469.

### **Peer-Reviewed Book Chapters**

**Dumont, E.R.** and S. Swartz. (In press) Biomechanical approaches and ecological research. In Ecological and Behavioral Methods for the Study of Bats, T.H. Kunz and G. Jones (eds). [This chapter was a Solicited Review.]

**Dumont, E.R.** 2006. The correlated evolution of cranial morphology and feeding behavior in new world fruit bats. Pp. 160-177 In: Functional and Ecological Morphology of Bats. T.H. Kunz, G. McCracken, and Z. Akbar (eds). Oxford University Press, New York.

**Dumont, E.R.** 2003. Bats and fruit: An ecomorphological approach. Pp. 398-429 In: Ecology of Bats. T.H. Kunz and B. Fenton (eds). University of Chicago Press, Chicago. [This chapter was a Solicited Review.]

**Dumont, E.R.** 2000. Cranial morphology and diet in gliding marsupials and flying lemurs. Pp. 249-272 In: Biology of Gliding Mammals. R.L. Goldingay and J.S. Scheibe (eds). Filander Press, Fürth.

**Dumont, E.R.** and T.M. Bown. 1997. New caenolestoid marsupials from Miocene deposits of Colombia. Pp. 207-212 In: Vertebrate Paleontology in the Neotropics: The Miocene Fauna of La Venta, Colombia. R.F. Kay, R.H. Madden, R.L. Cifelli and J.J. Flynn (eds). Smithsonian Institution Press.

### **Invited Conference Symposia**

- 2008 Society of Vertebrate Paleontology, Austin Texas
- 2007 Society for Integrative and Comparative Biology, Phoenix  
International Congress for Vertebrate Morphology, Paris, France  
Plenary Speaker, 14<sup>th</sup> International Bat Research Congress, Merida, Mexico  
Geomagic Convergence (Industry-based Conference, Raleigh)
- 2006 Society of Vertebrate Paleontology, Toronto, Canada
- 2004 Society for Experimental Biology, Edinburgh, Scotland  
International Congress for Vertebrate Morphology, Boca Raton, Florida
- 2001 International Bat Research Congress, Kuala Lumpur, Malaysia
- 2000 Australasian Bat Research Conference, Tocal, Australia

### **Invited Departmental Seminars**

- 2008 Texas Tech University, Department of Biological Sciences

Iowa State University, Department of Bioinformatics  
Missouri University of Science and Technology, Department of Computer  
Science

- 2007 UMass Amherst, Program in Organismic and Evolutionary Biology
- 2006 Florida Southern University, Department of Biology
- 2005 Brown University, Department of Anatomy
- 2004 Northeastern University, Department of Biology
- 2003 Boston University, Department of Biology  
University of Maine, Department of Biology
- 2002 Harvard University, Concord Field Station
- 2001 University of Akron, Department of Biology  
Oklahoma State University, Department of Zoology  
Smithsonian Tropical Research Institute, Barro Colorado Island, Panama
- 1999 Marshall University, Keynote Speaker, Sigma Xi Banquet
- 1998 CSIRO Tropical Forest Research Institute, Atherton, Australia
- 1997 S.U.N.Y at Stony Brook, Department of Anatomical Sciences
- 1996 Ohio University, Department of Biological Sciences  
University of Colorado (Boulder), Department of Biology  
University of Costa Rica (San Jose), Department of Biology

**Contributed Conference Presentations** (last three years only; ♦ denotes a student)

**Dumont**, E.R., Grosse, I.R. and G.J. Slater. ♦ 2009. Comparing the Performance of Finite Element Models of Biological Structures. Society for Integrative and Comparative Biology.

Leysen, H. ♦, **Dumont**, E.R., Adriaens, D. 2009. Stress Distribution and Morphological Specializations in the Feeding Apparatus of a Seahorse (Syngnathidae: *Hippocampus reidi*). Society for Integrative and Comparative Biology.

Santana, S.E. ♦ and E.R. **Dumont**. 2009. Connecting Performance and Behavior: The Evolution of Bite Performance and Biting Behavior in Bats. Society for Integrative and Comparative Biology.

Ide, C. ♦, De Schepper, N., **Dumont**, E.R., Herrel, A., Adriaens, D. 2009. Divergent Head Shape Variation in European eel: How Well Does Skeletal Morphology Reflect Functional Demands? Society for Integrative and Comparative Biology.

Eiting, T.P.♦. and E.R. **Dumont**. 2009. A Comparative Analysis of Olfactory Communication in Bats. Society for Integrative and Comparative Biology.

Tanner, J.B. ♦, E.R. **Dumont**, S.T. Sakai, B.L. Lundrigan and K.E. Holekamp. 2009. The Role of the Fronto-Parietal Sinus During Bone-Cracking in Spotted Hyenas. Society for Integrative and Comparative Biology, Boston, MA.

Kunz, T.H., Munoz-Romo, M., **Dumont**, E.R., Riskin, D.K. and S.M. Swartz. 2009. Non-flight Use of Wings by Bats. Society for Integrative and Comparative Biology.

**Dumont**, E.R., K. Rex ♦ and C. Voigt. 2008. Associations Between Nitrogen Isotope Ratios and Cranial Morphology in Phyllostomid Bats. North American Society for Bat Research.

Santana, S.E. ♦, D.K.N. Deschman and E.R. **Dumont**. 2008. Roost-making Behavior and Bite Force of Bats Living Inside Active Termite Nests. Society for Integrative and Comparative Biology.

Mouritsen, D.A. ♦, E.R. **Dumont** and P.C. Dechow. 2008. Material Property Analysis in Craniofacial Cortical Bone of Small Mammals. International Association for Dental Research. Toronto, Canada.

Reinholt L.E. ♦, A.M. Burrows, E.R. **Dumont** and T.D. Smith. 2008. Microanatomical Assessment of Fusion in Facial Sutures of Bushbabies. American Association of Physical Anthropologists.

Slater, G. J. ♦, E.R. **Dumont** and B. Van Valkenberg. 2007. Implications of Predatory Specialization for Skull Form and Function in Canids. Society for Vertebrate Paleontology.

**Dumont**, E.R. 2007. Flight and the Evolution of Feeding in Bats. Society for Vertebrate Paleontology.

**Dumont**, E.R. 2007. The Ecomorphology and Mechanics of Feeding in Phyllostomid Bats: A Review and Synthesis of Future Directions. Plenary Presentation. International Bat Research Congress, Merida, Mexico.

**Dumont**, E.R. and I.R. Grosse. 2007. 3D Imaging and Biomechanics: Finite Element Modeling in Comparative Vertebrate Morphology. International Congress on Vertebrate Morphology, Paris, France.

**Dumont**, E.R. 2007. The Evolution of Feeding Mechanisms in Bats: Balancing the Costs of Morphology and Flight. Society for Integrative and Comparative Biology.

**Dumont**, E.R., I.R. Grosse and S.F. Werle. 2006. 3D Imaging and Biomechanics: Bringing 3D Finite Element Modeling to Comparative Biology. Society for Vertebrate Paleontology, Ottawa.

**Dumont**, E.R., Grosse, I.R. and C.E. Coletta ♦. 2006. Applying muscle forces to finite element models of bone: how much modeling precision is necessary? Society of Integrative and Comparative Biology.

**Dumont**, E.R., A. Herrel, and R. Medellin. 2006. Feeding Behavior, Bite Force and Ecology of the Wrinkle-Faced Bat, *Centurio senex*. North American Symposium for Bat Research.

### **Field Experience:**

- 1999 - present Expedition Leader. Collection of behavioral, biomechanical and ecological data from bats in Panama, Australia, Papua New Guinea, Costa Rica, Dominican Republic, and Jamaica.
- 1995 - 1999 Expedition Leader. Survey of salivary chemistry among bats, marsupials and primates and the collection of data describing the physical and chemical properties their foods in Costa Rica, Panama, Australia, and Papua New Guinea.
- 1995 Member, Joint Expedition (Carnegie Museum of Natural History and University of Addis Ababa) to conduct a mammalian biodiversity survey in North-Central Ethiopia.
- 1989 Member, Joint Expedition (S.U.N.Y. at Stony Brook and Museo de Ciencias Naturales, Buenos Aires) to Argentina to collect Miocene mammals (two expeditions to Chubut and Santa Cruz Provinces, one in January and another in December).

## TEACHING

### Courses - University of Massachusetts, Amherst

**Mammalogy** (Bio548, 4 credits, average enrollment = 65). This course entails lectures and readings on the comparative biology and evolutionary relationships of mammals. The laboratory portion involves detailed introduction to the New England mammalian fauna and a survey of all mammalian orders. Lab exercises emphasize ecology, anatomy and morphological adaptations. I am solely responsible for this course, provide all the lectures, and developed the laboratory exercises. I have taught this course seven times since 2001.

**Tropical Field Biology** (Bio 497H, 3 credits, average enrollment = 26). This Honors course provides students with informative lectures on topics in tropical biology and one-on-one mentorship through the process of developing and executing independent research projects. The highlight of the course is conducting research projects over their spring break at the Virgin Islands Environmental Research Station in St. John (USVI). During each of the six times I have participated in this team-taught course, I provided lectures and supervised the development, execution, analysis and presentation of 4-6 independent undergraduate research projects.

**Biology of Social Issues** (Bio105, 3 credits, average enrollment = 300). This General Education course is designed to provide non-majors with the basic scientific knowledge that an informed citizen needs to develop thoughtful positions on controversial questions related to medical ethics, environmental degradation, biotechnology, and evolution. My role in this course was to develop 1/3 of the lectures and an exam covering that material. This is a team-taught course. I have taught this course four times since 2001.

**Discussion Group on Gender and Science** (Fall, 2008). As leader of this Thursday Lunch Discussion Group for the graduate program in Organismic and Evolutionary Biology (OEB), I developed an integrated series of readings surrounding the issue of gender and science. The readings were drawn from peer-reviewed literature and designed to address issues including the

relationship of gender to hiring, negotiation, salary, tenure, promotion, family, and job satisfaction. All members of OEB and the Department of Biology community were welcomed to attend. Weekly attendance ranged between 15 and 25 graduate students and faculty.

**Art/Biology Studio Research** (Bio497R, 3 credits, average enrollment = 18). This course was an experimental collaboration between the Biology and Art Departments. Undergraduates from both departments worked independently and in small, integrated groups to develop multimedia science education exhibits. I taught this course twice with a faculty member from the Art Department.

**Courses at Other Universities** (prior to employment at UMass)

Northeastern Ohio Universities College of Medicine (Assistant Professor, 1996-2001)

Human Gross Anatomy (lecturer and laboratory instructor)

Developmental Medicine (lecturer, normal embryology)

Mammalian Evolution (guest lecturer)

Introduction to Physical Anthropology (guest lecturer)

Problem Based Learning Facilitator

The University of Pittsburgh Medical School (Postdoctoral Teaching Fellow, 1993-1996)

Gross Anatomy of the Human Body (member curriculum design group, lecturer, laboratory instructor, problem based learning facilitator)

Surgical Anatomy (curriculum design and laboratory instruction)

Gross Anatomy for Graduate Students (curriculum design, lecturer, laboratory instructor)

Structure, Development, and Function of Specialized Tissue (laboratory instructor, problem based learning facilitator)

**Supervision of Undergraduate Research (University of Massachusetts only)**

**Honors Theses (Major Advisor)**

Mat Weissinger (BS in Engineering, expected Spring 2009) The effect of progressive decimation on the performance of finite element models. (I serve as co-mentor)

Paul Chatelaine (B.S. in Biology, Spring 2007). The ontogeny of biting performance in shrews (*Blarina brevicauda*).

Huai-Ti Lin (B.S. in Biology and Physics, Spring 2006). A novel magnetic method for collecting measuring 2D kinematic data.

Jamie Green (B.S. in Biology, Spring 2004), Functional implications of variation in cranial base flexion among bats (Order Chiroptera).

Kathryn Lipson (B.S. in Biology, 2003), Testing the 'triangle of support' model of masticatory function.

Jason Vadoros (B.S. in Biology 2003), Use of the wings in manipulative and suspensory behaviors by fruit bats.

Foad Rashek (B.S. in Biology 2003), Inter- and intra-specific variation in tooth sharpness among fruit bats.

**Undergraduate Independent Study Projects**

I have supervised 21 undergraduate independent study projects since arriving at UMass Amherst in the fall of 2001 (two were co-mentored). These projects have ranged from original laboratory research to detailed review papers and the development of a

searchable on-line database. One student was supported through the NSF Undergraduate Mentoring in Environmental Biology (UMEB) program. In addition to Biology majors, I have supervised interdisciplinary projects for students majoring in Classics, Physics, and Mechanical Engineering. Of these students, over half were either women or minorities.

## **Supervision of Graduate Student Research**

### **Major Advisor**

Sharlene Santana, entered OEB program in September of 2005  
Tom Eiting, entered OEB program in September of 2007  
Natasha Korobov, non-thesis M.S. 2004, OEB, UMass Amherst.  
Alta Dawson, non-thesis M.S. 2003, OEB, UMass Amherst.  
Chris Nicolay, Ph.D. 2001, (Currently an Associate Professor, Department of Biology, University of North Carolina, Asheville)

### **Member, Graduate Committees**

#### Doctoral:

Eric Dewar (Ph.D. 2008, OEB, UMass Amherst)  
Philip Bergman (Ph.D. 2008, OEB, UMass Amherst)  
Suzette Stephens (Ph.D. 2005, Natural Resources Conservation, UMass Amherst)  
Andrea Ward (Ph.D. 2005, OEB, UMass Amherst)  
Tim Koneval (Ph.D. 2003, Biology, UMass Amherst)  
Alistair Evans (Ph.D. 2003, Zoology, Monash University, Australia)  
Gina Semprebon (Ph.D. 2002, Biology, UMass Amherst)  
Scott LeRoy (Ph.D. 1999, Kent State University)  
Stephanie Belovitch (Ph.D. 1999, Kent State University)  
Rich May (Ph.D. 1997, Kent State University)  
Petra Van der Mark (Ph.D. 1997, Kent State University)

#### Masters:

Diana Walden (M.S. 2008, Natural Resources Conservation, UMass Amherst)  
Anna Gabella (M.S. 2007, OEB, UMass Amherst)  
Reilly O'Neal (M.S. 1999, Kent State University)  
Amy Harrison (M.S. 1998, Kent State University)

## **PROFESSIONAL SERVICE**

2008-2011	Associate Editor, Journal of Mammalogy
2008, 2009	NSF Panel Member, Postdoctoral Program in Biological Bioinformatics
2008	Invited Participant, Amphibian Ontology Workshop (St. Louis)
2007 - present	Developer, Instructor and Host of annual 7-day workshop, "Finite Element Modeling in Biology", held on the UMass Amherst Campus.
2006	Host, 86th annual meeting of the American Society of Mammalogists held at UMass Amherst, June 17-21, 2006 (co-Host Virginia Hayssen).

- 2005 NSF Panel Member, Doctoral Dissertation Improvement Grants, Division of Integrative Organismal Biology
- 2003 - present Member, Scientific Advisory Board, Lubee Bat Conservancy, Gainesville
- 2003 Consultant to the Rabies Unit, Center for Disease Control (CDC)
- 2003 - 2007 Chairman, Board of Directors, North American Society for Bat Research (elected Board Member 2001-2007)
- 2003 Chairman, Student Prize Committee, North American Society for Bat Research (Committee Member 1998 - 2003)
- 2002 Ad Hoc grant reviewer for the National Geographic Society, the Miami Metro Zoo, and the Lubee Foundation
- 2001 Co-organizer of symposium entitled "New Perspectives in Functional Morphology" 12<sup>th</sup> International Bat Research Conference (Kuala Lumpur, Malaysia)
- 1999 - 2001 Member, J.T. Gregory Prize Committee, Society of Vertebrate Paleontology
- 1996 - present Ad Hoc reviewer, National Science Foundation Programs in Ecological and Evolutionary Physiology, Ecology, Integrative Organismal Biology, Physical Anthropology, HOMINID, Ecology, Databasing and Bioinformatics, Biological Resource Collections, and Environmental Biology
- 1992 Co-organizer of symposium entitled "Enamel Microstructure in Mammalian Evolution" Society of Vertebrate Paleontology, (Toronto, Canada)

**Reviewer:** *Acta Chiropterologica, Anatomical Record, American Journal of Physical Anthropology, American Museum Novitates, Archives of Oral Biology, Biotropica, Conservation Biology, Evolution, Journal of Anatomy, Journal of Experimental Biology, Journal of Human Evolution, Journal of Mammalogy, Journal of Morphology, Journal of Tropical Biology, Journal of Zoology (London), International Journal of Primatology, Paleobiology, Physiological and Biochemical Zoology, PNAS, Proceedings of the Royal Society of London, Scanning Microscopy, Southeastern Naturalist* (Guest Editor), University of Chicago Press

**Professional Associations:** *American Society of Mammalogists, Association of Tropical Biologists, North American Society for Bat Research, Society for Integrative and Comparative Biology*

#### UNIVERSITY SERVICE (UMASS AMHERST ONLY)

- 2008 Member, Ecological Physiology Search Committee  
Member, OEB AQAD Preparation Team  
Member, Search Committee, Clerk IV position

- 2008 - present      Director, Natural History Collections  
Member, President's Council, Massachusetts Academy of Sciences
- 2007 - 2008        Member, Ad Hoc Faculty Hiring Priority Committee  
Member, Search Committee for Interim Chair  
Member, Biology AQAD Research Committee
- 2006 - present     Associate Director and Chair of Admissions, Graduate Program in  
Organismic and Evolutionary Biology
- 2006                Member, Evolutionary Ecology Search Committee  
Personnel Committee Representative, Genomics Search Committee
- 2005                Member, Darwin Fellow Search Committee  
Member, Ad Hoc Faculty Hiring Priorities Committee  
Developed cross-college collaborations between NSM and the School of  
Engineering (MIE Department) and between NSM and HFA (Art  
Department)
- 2005 - present    Member, Biology Department Space Committee  
Member, Institutional Animal Care and Use Committee
- 2004 - 2007        Member, Personnel Committee
- 2003                Member, committee to evaluate the OEB preliminary exam experience  
Member, workgroup to develop administrative component of Evolutionary  
Synthesis Center Pre-Proposal  
Member, Ad Hoc Faculty Hiring Priority Committee
- 2002 – 2006        Member, Admissions Committee, Graduate Program in Organismic and  
Evolutionary Biology
- 2001– present     Member, Steering Committee, Graduate Program in Organismic and  
Evolutionary Biology  
Curator of Mammals, UMass Natural History Collections  
Member, Steering Committee, UMass Natural History Collections  
Attendee, OEB Thursday Lunch Discussion Group

#### **OUTREACH (UMASS AMHERST ONLY)**

- 2009                Research highlighted in Mass High Tech Magazine
- 2008                Radio Interviews - Valley Free Radio and WFCR  
Research highlighted in "2008 Report on Research" – UMass Amherst  
Interview on careers in science for 6<sup>th</sup> grade girls from the Common  
School (Amherst)
- 2007 - 2008        NEAGEP diversity outreach recruiter

- The Notch Visitor Center – Public talk on bat biology
- 2005, 2006, 2008 Mentored undergraduate students in the development of educational displays in Morrill Science Center
- 2005 Dumont lab research featured in Medical Imaging Magazine’ and the Strand7 newsletter (Strand7 is a finite element software manufacturer)  
Bat education, Girl Scouts
- 2003 Expert interview on local bats for the Springfield Herald  
Presentation for 10<sup>th</sup> grade Career Day, Monson High School
- 2003, 2004 Judge, Regional Science Fair
- 2001, 2003, 2008 Seminars for BIOTAP program
- 2001- present Receive and respond to inquiries from local community members concerning bats and other mammals