

## Curriculum Vitae Peter M. Buston

### Academic Address

University of California, Santa Barbara  
National Center for Ecological Analysis and Synthesis  
735 State Street, Suite 300  
Santa Barbara, CA 93101-5504

Tel: (805) 892-2527  
Fax: (805) 892-2510  
E-mail: buston@nceas.ucsb.edu

### Interests

Behavioural ecology, Population ecology, Marine Ecology,  
Evolutionary ecology, Evolutionary psychology, Conservation biology.

### Education

- 2002 Ph.D. Neurobiology and Behavior, Cornell University, Ithaca, NY, USA.  
Dissertation: Group structure of the clown anemonefish *Amphiprion percula*.
- 1993 B.A. Hons. Zoology, Oxford University, Oxford, UK.  
Thesis: Context dependent spine production in an epifaunal bryozoan.

### Current Position

- 2004 Postdoctoral Fellow. National Center for Ecological Analysis and Synthesis.  
Research: Ecology and evolution of hermaphroditic breeding systems.

### Honors & Awards

- 2002 Postdoctoral Fellowship, to conduct independent research.  
National Science Foundation and the University of California
- 2001 Whittaker Award, for the best graduate student paper.  
Department of Ecology and Evolutionary Biology, Cornell University.
- 2000 Excellence Fellowship, in recognition of outstanding graduate work.  
College of Agriculture and Life Sciences, Cornell University.
- 2000 Clark Distinguished Teaching Award.  
College of Arts and Sciences, Cornell University.
- 1999 Outstanding Graduate Teaching Assistant Award.  
Department of Neurobiology and Behavior, Cornell University.
- 1995 Doctoral Dissertation Improvement Grant.  
National Science Foundation
- 1991 Biological Sciences Award.  
Pembroke College, Oxford University.

**Publications****In print**

- 2004 Buston, P. M., Munday, P. L. & Warner, R. R. Sex change and body size in animals. *Nature* 428: online.
- 2004 Buston, P. M. Territory inheritance in the clown anemonefish. *Proceedings of the Royal Society, Series B (Suppl.)* 271: S252-S254
- 2004 Buston, P. M. Does the presence of non-breeders enhance the fitness of breeders? An experimental analysis in the clown anemonefish *Amphiprion percula*. *Behavioral Ecology and Sociobiology* (online).
- 2003 Buston, P. M. Size and growth modification in clownfish. *Nature* 424: 145-146.
- 2003 Buston, P. M. & Emlen, S. T. Cognitive processes underlying human mate choice: the relationship between self-perception and mate preference in Western society. *Proceedings of the National Academy of Sciences of the USA* 100: 8805-8810.
- 2003 Buston, P. M. Forcible eviction and prevention of recruitment in the clown anemonefish. *Behavioral Ecology* 14: 576-582.
- 2003 Buston, P. M. Mortality is associated with social rank in the clown anemonefish. *Marine Biology* 143: 811-815.
- 2000 Jenkins, A. P., Buston, P. M. & G. R. Allen. Two new species of freshwater gudgeons (Eleotridae: Mogurnda) from Lake Kutubu, Papua New Guinea. *Ichthyological Exploration of Freshwaters* 11: 47-54.

**In review**

- 200X Buston, P. M., Cant, M. A., Heg, D., Dierkes, P. & Taborsky, M. Fish size hierarchies are the product of individual strategic growth.
- 200X Buston, P. M., Reeve, H. K., Cant, M. A., Vehrencamp, S. L. & Emlen, S. T. Conceptual synthesis of concessions and restraint models of reproductive skew.

**In preparation**

- 200X Buston, P. M. The ecology and evolution of sex change: a new perspective.
- 200X Buston, P. M. & Emlen, S. T. Are there marked sex differences in selectivity of mate preference in Western society?
- 200X Buston, P. M., Bogdanowicz, S. M., Wong, A., & Harrison, R. G. Clownfish groups are not composed of close relatives: microsatellite DNA variation in *Amphiprion percula*.
- 200X Buston, P. M., Bascompte, J. Conservation and management of clownfish: the effect of harvesting strategies on population persistence.

**Research Grants & Fellowships**

2002 - 2005	Ecology and evolution of hermaphroditic breeding systems. • National Science Foundation and the University of California	\$150,000
1994 - 2002	Breeding system of the clown anemonefish <i>Amphiprion percula</i> . • National Science Foundation, Dissertation Improvement Grant (1) • Christensen Fund, Research Institute Fellowship (3) • Cornell University, Departmental Summer Research Support (7) • Cornell University, Research Travel Grant (2) • Andrew W. Mellon, Student Research Grant (2) • Cornell Chapter of Sigma Xi, Grants in Aid of Research (6) • Cornell University, Graduate Conference Travel Grant (3) • A.M.N.H., Lerner Gray Fund for Marine Research (1) • Percy Sladen Memorial Fund, Small Grant (1) • Sigma Xi, Grants-in-Aid of Research (1) • <u>International Women's Fishing Association, Scholarship (1)</u>	\$10,000 \$19,230 \$11,500 \$ 3,000 \$ 2,100 \$ 2,100 \$ 1,125 \$ 1,050 \$ 750 \$ 500 \$ 500
	TOTAL	\$51,205
1997	Ecology of the fishes of Lake Kutubu, Papua New Guinea. • World Wide Fund for Nature, Research Grant.	\$15,000
1992	Ecology of black-and-rufous elephant-shrews, Tanzania. • Grants from multiple sources.	\$16,000
1991	Radio-telemetry of nocturnal arboreal ship rats, New Zealand. • Grants from multiple sources.	\$15,000

## Teaching Experience

### Lecturer

- 2001 Fall • Guest lecturer, Biology of Fishes: lectured on the ecology and evolution of hermaphroditic breeding systems.

### Instructor

- 2001 Fall • Evolutionary Biology, Writing in the Majors: designed, taught, and assessed a writing intensive course in evolutionary biology.
- 2001 Fall • Cornell SCUBA Program: took full responsibility for PADI open water, advanced open water, and rescue diver instruction and certification. (*Also Fall 1999, Fall 1998, and Fall 1996*).
- 1999 Fall • Animal Behavior, Writing in the Majors: designed, taught, and assessed a writing intensive course in animal behavior.

### Head Teaching Assistant

- 2002 Spring • Macroevolution: developed discussion sections and assignments on systematic methods, species concepts, changes in species composition, species selection, and the role of development in evolution.
- 2001 Fall • Writing in the Arts and Sciences: assisted in the instruction of graduate students involved in the teaching of Writing in the Majors courses.
- 1999 Fall • Animal Behavior: designed new discussion sections to provide an introduction to modeling animal behavior, and to explore use of behavioral ecology in conservation and management. Also designed a new practical to investigate the cognitive mechanisms underlying human mating strategies, and assisted with the logistics of a 300 student lecture course. (*Also Fall 1998*).
- 1999 Spring • Modeling Behavioral Evolution: guided students as they developed models on a wide range of topics (including foraging, parent offspring conflict, cooperation, and cultural evolution), using a wide range of methods (including optimal discrimination theory, game theory, kin selection theory, dynamic programming).

### Teaching Assistant

- 2002 Fall • Facilitator, Internship in Education: helped new graduate teaching assistants to develop pedagogical skills. (*Also Fall 2001, Fall 1998, and Fall 1996*).
- 1998 Fall • Animal Behavior. (*Also Fall 1996*).
- 1998 Spring • Evolutionary Biology.
- 1996 Spring • Introductory Biology. (*Also Spring 1995*)
- 1995 Fall • Introductory Biology. (*Also Fall 1994*).

**Invited Seminars**

- 2004 Department of Zoology, University of Cambridge, Cambridge, UK.  
M. Burrows, host.
- 2004 Department of Behavioural Ecology, Zoological Institute, University of Bern,  
Switzerland. M. Taborsky, host.
- 2004 Estación Biológica de Doñana, CSIC, Sevilla, Spain.  
J. Bascompte, host.
- 2004 Bamfield Marine Science Center, University of British Columbia, Bamfield, British  
Columbia, Canada. C. Bates, host.
- 2004 Department of Biology, New Mexico State University, Las Cruces, New Mexico, USA.  
D. Bailey, host.
- 2002 Department of Ecology, Evolution, and Marine Biology, University of California, Santa  
Barbara, CA, USA. R. Warner, host.
- 2002 Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ,  
USA. M. Wikelski, host.
- 2001 Department of Psychology, McMaster University, Hamilton, Ontario, Canada.  
S. Balshine, host.
- 2001 Division of Life Sciences, University of Toronto, Scarborough, Ontario, Canada.  
M. Andrade, host.
- 2001 Department of Biology, McGill University, Montreal, Quebec, Canada.  
A. Vincent, host.
- 2000 Museum of Vertebrate Zoology, Department of Integrative Biology, University of  
California, Berkeley, CA, USA. E. Lacey, host.

**Conference Presentations**

- 2004 Cognitive processes underlying human mate choice.  
10<sup>th</sup> International Behavioral Ecology Congress, Jyväskylä, Finland.
- 2002 Resolution of potential evolutionary conflict over group membership in the clownfish.  
9<sup>th</sup> International Behavioral Ecology Congress. Montreal, Canada.
- 2000 The roles of habitat saturation, recruitment, and eviction in structuring resident  
populations of a coral reef fish: evidence from the clown anemonefish.  
8<sup>th</sup> International Behavioral Ecology Congress. Zurich, Switzerland
- 1998 Ecology, Mating Systems, and the Evolution of Hermaphroditism.  
Ecological and Evolutionary Ethology of Fishes Conference. Seattle, USA.

**Professional Reviews**

2004	Nature	Oikos
	Trends in Ecology and Evolution	Oecologia
	Proceedings of the Royal Society	Marine Biology
	Behavioral Ecology and Sociobiology	Journal of Fish Biology
	Behavioral Ecology	Biological Bulletin
	Ethology	Canadian Journal of Zoology

**Professional Societies**

- 2004 International Society for Behavioral Ecology  
Professional Association of Diving Instructors.

**Professional Responsibilities**

- 2004 Seminar coordinator, National Center for Ecological Analysis and Synthesis.
- 1999 Holiday party coordinator, Department of Neurobiology and Behavior, Cornell University.
- 1998 El Supremo, the graduate student representative to the faculty, Department of Neurobiology and Behavior, Cornell University
- 1995 Seminar coordinator, Department of Neurobiology and Behavior, Cornell University.
- 1994 Social hour coordinator, Department of Neurobiology and Behavior, Cornell University.

**Professional Coverage**

- 2004 Science, Editor's Choice  
Sugden, A. Waiting for Nemo. *Science* 303: 1439-1441.
- Trends in Ecology and Evolution, Update  
Borgerhoff Mulder, M. Are men and women really so different? *TREE* 19: 3-6.
- 2003 Animal Behavior Society, News  
[http://www.animalbehavior.org:8080/ABS/ABSNews/1057891338/index\\_html](http://www.animalbehavior.org:8080/ABS/ABSNews/1057891338/index_html)
- Animal Behavior Society, News  
[http://www.animalbehavior.org:8080/ABS/ABSNews/1057631875/index\\_html](http://www.animalbehavior.org:8080/ABS/ABSNews/1057631875/index_html)
- New Scientist, News  
<http://www.newscientist.com/news/news.jsp?id=ns99993928>
- New Scientist, News  
<http://www.newscientist.com/news/news.jsp?id=ns99993887>
- 2002 Nature, Science Update  
<http://www.nature.com/nsu/020708/020708-4.html>

**Popular press coverage****In the papers**

- 2003 New York Times  
<http://query.nytimes.com/gst/abstract.html?res=F70611FE3F590C7B8CDDAE0894DB404482>
- New York Times  
<http://query.nytimes.com/gst/abstract.html?res=F0091FFE3C580C768DDDAE0894DB404482>

**On the radio**

- 2003 National Public Radio, Science Friday  
<http://discover.npr.org/features/feature.jhtml?wflid=1330843>
- Canadian Broadcasting Company, Quirks and Quarks  
<http://www.cbc.ca/quirks/archives/03-04/oct25.html>

**On the web**

- 2003 CNN  
<http://edition.cnn.com/2003/TECH/science/07/01/potentials.attract/>
- CNN  
<http://www.cnn.com/2003/TECH/science/08/04/nemo.clownfish/index.html>

**References**

**Stephen T. Emlen**, J G Schurman Professor  
Department of Neurobiology and Behavior  
Cornell University  
Ithaca, NY 14853 USA

Tel: 607 254 4327  
Fax: 607 254 4308  
E-mail: stel@cornell.edu

*Stephen Emlen was the co-chair of my Ph.D. committee, was the course instructor for Animal Behavior when I earned the Clark Distinguished Teaching Award, and represents the field of Behavioral Ecology.*

**Paul W. Sherman**, Professor  
Department of Neurobiology and Behavior  
Cornell University  
Ithaca, NY 14853 USA

Tel: 607 254 4333  
Fax: 607 254 4308  
E-mail: pws6@cornell.edu

*Paul Sherman was the co-chair of my Ph.D. committee, and represents the field of Behavioral Ecology.*

**H. Kern Reeve**, Associate Professor  
Department of Neurobiology and Behavior  
Cornell University  
Ithaca, NY 14853 USA

Tel: 607 254 4352  
Fax: 607 254 4308  
E-mail: hkr1@cornell.edu

*Kern Reeve was a member of my Ph.D. committee, was the course instructor for Modeling Behavioral Evolution which I taught in 1999, and represents the field of Behavioral Ecology.*

**Amy R. McCune**, Associate Professor  
Department of Ecology and Evolutionary Biology  
Cornell University  
Ithaca, NY 14853 USA

Tel: 607 254 4217  
Fax: 607 255 8088  
E-mail: arm2@cornell.edu

*Amy McCune was a member of my Ph.D. committee, was the course instructor for Macroevolution which I taught in my final year of graduate school, and represents the fields of Ichthyology and Evolutionary Biology.*

**Robert R. Warner**, Professor  
Department of Ecology, Evolution, and Marine Biology  
University of California, Santa Barbara.  
Santa Barbara, CA 93106 USA

Tel: 805 893 2941  
Fax: 805 893 4724  
E-mail: warner@lifesci.ucsb.edu

*Robert Warner is a collaborator on my postdoctoral research, and represents the fields of Marine Ecology and Population Ecology.*