

## FULL CURRICULUM VITAE

**Alexander G. Cheroske**

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### EDUCATION

<b>University of Maryland, Baltimore County (U.M.B.C.)</b>	1999-2004	<b>Ph. D.</b> in Marine, Estuarine, and Environmental Sciences <u>Dissertation topic:</u> Ecological and behavioral relevance of color vision in stomatopod crustaceans. <u>Selected coursework:</u> Wildlife-habitat ecology and analysis, Theoretical and quantitative biology, Ecology of marine communities, Fishery science and management, Vision science, Scientific writing and communication
<b>University of Washington – Friday Harbor Laboratory</b>	1997	Summer course in Functional Morphology & Ecology of Fishes
<b>San Diego State University (S.D.S.U.)</b>	1994-1997	<b>M.S.</b> in Biology (concentration in Ecology) <u>Thesis topic:</u> Effects of physical and biological disturbances on coral reef algal turf communities. <u>Selected coursework:</u> Ecological research, Advanced population ecology, Animal physiology, Experimental design, Advanced population and community ecology
<b>University California Santa Barbara (U.C.S.B.)</b>	1988-1993	<b>B.A.</b> in Aquatic Biology

### TEACHING POSITIONS

<b>Full-time faculty</b> – Anatomy/physiology	2006-present	Mesa Community College
<b>Adjunct faculty</b> – Online human physiology	2006-present	Moorpark College
<b>Full-time faculty</b> – Anatomy/physiology & General Biology	2004-2006	Moorpark College
<b>Adjunct faculty</b> – Human anatomy & physiology	2004	Cerritos College
<b>Teaching Assistant</b> – Human anatomy	2000-2001	University of Maryland, Baltimore County
<b>Adjunct faculty</b> – Human anatomy & physiology	2000	Community College of Baltimore County
<b>Adjunct faculty</b> – Biology & Human anatomy/physiology	1997-1999	San Diego Miramar College
<b>Adjunct faculty</b> – Human anatomy	1997-1999	San Diego State University
<b>Teaching Assistant</b> – Human anatomy	1994-1997	San Diego State University

## EXPERIENCE

## RESEARCH POSITIONS

- Aquanaut** 2001 Aquarius Undersea Laboratory  
under Prof. Roy L. Caldwell NOAA Key Largo, FL  
Project: 10-day mission to assess polarized light and signaling underwater, stomatopod larval biology and population distribution. Over 41 hours of SCUBA dive time logged. Intensive experience working in close quarters with others and communicating with team members located back at headquarters.
- Research Specialist** 1997-1999 San Diego State University  
under Prof. Susan L. Williams  
Project: Population genetics and ecology of eelgrass *Zostera marina* and its interaction with an invasive mussel (*Musculista senhousia*) Duties included: Censusing, sampling and transplanting eelgrass (SCUBA), sediment core sampling, monitoring of temperature/water flow using data loggers. Assisted in the creation and execution of invasive mussel *in situ* growth and recruitment experiment. Managed large long-term data sets using Excel.
- Field Biologist** 1997 Coastal Resources Associates Inc.  
under Dennis Jung Vista, CA  
Project: Assessment of San Diego coastal areas for placement of artificial reefs by San Diego Gas & Electric. Duties included: Censusing of algae and invertebrates.
- Research Assistant** 1993 University of California  
under Prof. Scott Cooper Santa Barbara  
Project: Trophic interactions in stream systems. Duties included: Diel drift sampling, Surber sampling, aquatic invertebrate censusing and identification.
- Field Assistant** 1993 University of California  
under Dr. Donna Schroeder Santa Barbara  
Project: Feeding ecology of the blue rockfish (*Sebastes*). Duties included: Secchi disk sampling (SCUBA), feeding observations (SCUBA).

## PUBLICATIONS

- Cheroske, A. G., T. W. Cronin, M. K. Durham and R. L. Caldwell. (2009) Adaptive signaling behaviour in stomatopods under varying light conditions. *Mar. Fresh. Behav. Physio.* **42(4)**: 219-232.
- Cheroske, A. G., P. H. Barber and T. W. Cronin. (2006) Evolutionary variation in the expression of phenotypically plastic color vision in Caribbean mantis shrimps, genus *Neogonodactylus* *Mar. Biol.* **150(2)**: 213-220. DOI 10.1007/s00227-006-0313-5
- Cheroske, A. G., and T. W. Cronin. Variation in stomatopod (*Gonodactylus smithii*) color signal design associated with organismal condition and depth (2005) *Brain, Behavior and Evolution* **66**: 99-113.
- Cronin, T.W., N. Shashar, R.L. Caldwell, N. Marshall, A.G. Cheroske, and T. -H. Chiou (2004) Polarization signals in the marine environment. *Proc of SPIE.* **5158**:85-92.
- Cheroske, A.G., R.L. Caldwell, and T.W. Cronin. (2003). Adaptive color vision in *Pullosquilla litoralis* (Stomatopoda, Lysiosquilloidea) associated with spectral and intensity changes in light environment. *J. exp. Biol.* **206**:373-379.
- Cronin, T.W., N. Shashar, R.L. Caldwell, N. Marshall, A.G. Cheroske, and T. -H. Chiou (2003). Polarization vision and its role in biological signaling. *Integr. Comp. Biol.* **43**:549-558
- Cheroske, A.G., S.L. Williams, and R.C. Carpenter, (2000). Effects of physical and biological disturbances on algal turfs in Kaneohe Bay, Hawaii. *J. exp. Mar. Biol. Ecol.* **248**:1-34.

## INVITED PAPERS

Cheroske, A. G. 2003. "'Masters of their domain': Astounding vision and behavior of the mantis shrimp." Meeting of Invertebrate Volunteers, National Zoo, Washington D. C.

Cheroske, A. G. 2003. "'A View to a Kill?': Ecological and behavioral relevance of color vision in stomatopod crustaceans." Bermuda Biological Station, Bermuda.

Cheroske, A. G., R. L. Caldwell, and T. W. Cronin 2002. "'What color is the sky in your world?!' Adaptive color signaling systems in stomatopod crustacean." Marine Estuarine and Environmental Sciences Program Annual Meeting (Regional) University of Maryland Center for Environmental Studies, Horn Point Laboratory, Cambridge, MD.

Cheroske, A. G., R. L. Caldwell, and T. W. Cronin 2002. "A leopard can't change its spots. . .but what about a mantis shrimp? Adaptive color signaling systems in stomatopod crustacea." International Conference on Systematic and Evolutionary Biology VI (International) Patras, Greece.

## CONTRIBUTED PAPERS

Cheroske, A. G., R. L. Caldwell, T. W. Cronin and Tsy-Hui Chiou 2008. "Polarized signaling in mantis shrimp" Ocean Sciences Meeting (National), Orlando, FL

Cheroske, A. G., R. L. Caldwell, and T. W. Cronin 2007. "Variation in mantis shrimp visual and chemical signaling under different light conditions" Society of Integrative and Comparative Biology Meeting (National), Phoenix, AZ

Cheroske, A. G., P. H. Barber, and T. W. Cronin 2005. "Ecological requirements determine the expression of a phenotypically plastic color vision trait in three species of Caribbean mantis shrimp within the genus *Neogonodactylus* (Stomatopoda, Gonodactyloidea)." Society of Integrative and Comparative Biology Meeting (National), San Diego, CA

Cheroske, A. G. and T. W. Cronin 2004. "Color signal design in a stomatopod crustacean (*Gonodactylus smithii*) under varying light conditions." J.B. Johnston Club/Karger Workshop Annual Meeting (National), San Diego, CA

Cheroske, A. G. and T. W. Cronin 2004. "'Visual communication in the deep blue, see?:' Adaptive stomatopod signaling in different light environments." International Society for Neuroethology Meeting (International), Nyborg, Denmark.

Cheroske, A. G., M. Vorobyev, and T. W. Cronin 2004. "All in favor, say 'eye': Adaptive color and postural signaling by stomatopod crustaceans in different light environments." Society of Integrative and Comparative Biology Meeting (National), New Orleans, LA.

Cheroske, A. G., M. Vorobyev, and T. W. Cronin 2003. "Phenotypically plastic color vision in a stomatopod crustacean and its potential effects on color signaling in variable light environments." Western Society of Naturalists Meeting (National), Long Beach, CA.

Cheroske, A. G., R. L. Caldwell, and T. W. Cronin 2003. "Adaptive color vision in *Pullosquilla litoralis* (Stomatopoda, Lysiosquilloidea) associated with spectral and intensity changes in light environment." Marine Benthic Ecology Meeting (National), Groton, CT.

Cheroske, A. G. and T. W. Cronin. 2002. "A vision in white. . .and blue?: Flexibility in stomatopod color communication associated with different light environments." Marine Benthic Ecology Meeting (National), Orlando, FL.

## CONTRIBUTED PAPERS (continued)

Cheroske, A. G., M. Vorobyev, and T. W. Cronin., 2001. "Do you see what I see?: Effects of depth on color signaling in mantis shrimp." International Conference on Invertebrate Vision (International) Backaskog Castle, Sweden.

Cheroske, A. G., M. Vorobyev, and T. W. Cronin. 2001. "Do you see what I see?: Effects of depth on color signaling in mantis shrimp." Marine Benthic Ecology Meeting (National), Durham, NH.

Cheroske, A. G. and J. S. Jensen. 1998. "Ontogenetic diversity in performance and diet of two sympatric embiotocids (*Damalichthys vacca* and *Embiotoca lateralis*)" Society of Integrative and Comparative Biology Meeting (National), Boston, MA. Invited co-chair for Feeding and Foraging session.

Cheroske, A. G., S. L. Williams, and R. C. Carpenter. 1997. "The effects of physical disturbance on Hawaiian algal turf communities: Do rolling stones also gather no algae?" Marine Benthic Ecology Meeting (National), Portland, ME.

Cheroske, A. G., S. L. Williams, and R. C. Carpenter. 1997. "The effects of biological disturbance on Hawaiian algal turf communities." Western Society of Naturalists Meeting (International), La Paz, Baja Mexico.

Cheroske, A. G., S. L. Williams, and R. C. Carpenter. 1996. "The effects of physical disturbance on Hawaiian algal turf communities." Marine Benthic Ecology Meeting (National), Columbia, SC.

## FUNDING AND AWARDS

**Distance Learning and Mentoring Grant Award.** 2008. Development of online introduction to human anatomy and physiology (Bio 160). Mesa Community College

**Foundation of the California Community Colleges, Modeling Effective Educational Technology (MEET) Grant.** 2005. "MEET and greet for part-time biology faculty." \$2000.00

**Richard E. Wolf Jr. Doctoral Dissertation Endowment Award.** 2004. University of Maryland, Baltimore County

**Best Student Oral Presentation.** 2004. Cheroske, A. G., M. Vorobyev, and T. W. Cronin. "Phenotypically plastic color vision in a stomatopod crustacean and its potential effects on color signaling in variable light environments." Society of Integrative and Comparative Biology Meeting (National), Division of Invertebrate Zoology, New Orleans, LA.

**Best Student Poster Presentation.** 2004. Cheroske, A. G., and T. W. Cronin. "All in favor, say 'eye': Adaptive color and postural signaling by stomatopod crustaceans in different light environments." Society of Integrative and Comparative Biology Meeting (National), Division of Ecology and Evolution, New Orleans, LA.

**Sigma Xi Scientific Research Society, Grants-in-Aid Grant.** 2003. "Evolution of adaptive color vision in three species of Caribbean mantis shrimp within the genus *Neogonodactylus* (Stomatopoda, Gonodactyloidea)." \$1712.00.

**Sigma Xi Scientific Research Society, Grants-in-Aid Grant.** 2002. "Stomatopod color vision and signaling in variable light environments." \$1250.00.

**Marine, Estuarine and Environmental Sciences Fellow.** University of Maryland, Baltimore County, 1999-2000.

**Honorable mention in Best Student Paper competition.** 1998. "Ontogenetic diversity in performance and diet of two sympatric embiotocids (*Damalichthys vacca* and *Embiotoca lateralis*)." Co-authored by Jeffrey S. Jensen. Society of Integrative and Comparative Biology Meeting, (National) Boston, MA.

## PARTICIPATION IN PROFESSIONAL ASSOCIATIONS

American Academy of Underwater Sciences  
Human Anatomy and Physiology Society  
International Society for Neuroethology  
Sigma Xi Scientific Society  
Society of Integrative and Comparative Biology  
Western Society of Naturalists

## FIELD EXPERIENCE

Lizard Island, Australia (June 2006) – Stomatopod behavioral assays.

National Undersea Research Center, Key Largo, FL (October 2004) – Stomatopod collection (using SCUBA)

Bermuda Biological Station (July 2003) – Stomatopod collection (using SCUBA).

Lizard Island, Australia (June 2003) – Stomatopod behavioral assays.

Lizard Island, Australia (July-September 2002) – Measurement of environmental radiometry at various depths (using SCUBA) and stomatopod behavioral assays.

Lizard Island, Australia (October 2001) – Stomatopod collection (using SCUBA) and spectrometric quantification of body coloration.

Aquarius underwater habitat, Key Largo, FL (July 2001) – Ten-day mission that included over 41 hours of dive time. Mapping of stomatopod burrow and species distributions; collection of *Lysiosquilloid* monogamous pairs for genetic studies; larval stomatopod phototaxis studies; *in situ* behavioral studies of *Odontodactylus havanensis*

Heron Island, Australia (January 2001) – Stomatopod collection (using SCUBA) and spectrometric quantification of body coloration; fish collection.

Hawaiian Institute of Marine Biology, University of Hawaii, Oahu, HI (Januarys & Summers of 1995 and 1996) - *In situ* subtidal manipulative experiments; fish, invertebrate and algal censuses; water flow measurements.

## TECHNICAL SKILLS

### S.C.U.B.A.

I. A. N. T. D. certified, Nitrox diver, 2004.  
D. A. N. certified, oxygen administration, 2006.  
A. A. U. S. certified, research diver, 2001.  
U. C. S. B. certified, research diver, 1992.  
P.A.D.I. certified, advanced diver, 1992.  
P.A.D.I. certified, open-water diver, 1990.

### OTHER CERTIFICATIONS

C.P.R. and A.E.D. certified, American Heart Association 2008.

### EQUIPMENT

Digital video and still cameras  
Dissolved oxygen/temperature meters  
Fluorometric/spectrophotometric devices  
InterOcean S4 & Marsh-McBirney current meters  
Macintosh and PC computing (Excel, Powerpoint, Word)  
Univariate and multivariate statistics (S-Plus, SYSTAT, SuperAnova)

SERVICE

**Assistant Department Chair**, Department of Life Sciences, M.C.C. 2006-present.  
**President**, Graduate Association of Biology Students, U.M.B.C., 2002-2003.  
**Undergraduate research mentor**, supervising stomatopod research of Renate Young, U.M.B.C., 2002-2004.  
**Committee member**, Provost's Student Advisory Committee, U.M.B.C., 2002-2003.  
**Financial Planner and Fund-raising Chair**, Graduate Research Conference, U.M.B.C., 2002.  
**Senator**, Graduate Student Association, U.M.B.C., 2000-2002.

REVIEWER

**Journals:** *Journal of Sea Research*

REFERENCES

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