

Thomas Claverie

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PROFESSIONAL EXPERIENCE

- 2012-Actual** **Postdoctoral Fellow:** “Diversification of fish morphology” Advisor: Prof. Peter Wainwright, Department of Evolution and Ecology, University of California, Davis (USA).
- 2008-2011** **Postdoctoral Fellow:** “Evolution of raptorial appendages in mantis shrimp (Crustacea).” Advisor: Dr. Sheila N. Patek, Department of Biology, University of Massachusetts, Amherst (USA) & Department of Integrative Biology, University of California, Berkeley (USA).

EDUCATION

- 2008** **Ph.D. in Biology:** “Cheliped morphology, behaviour and selective pressures in the squat lobster *Munida rugosa* (Fabricius, 1775).” Advisor: Dr I. Philip Smith, University Marine Biological Station, Millport (United Kingdom)
- 2003** **D.E.A. (Master’s degree) in Biodiversity of Fossils and Actual Ecosystems**
University of Lille (France)
Research advisor: Professor Peter M. J. Herman
- 2002** **Maîtrise (Bachelor’s degree + 1) in Biology of Populations and Ecosystems, option Marine Biology**
European Sea University Institute (IUEM) (Brest, France)
- 2001** **Licence (Bachelor’s degree) in Biology of Organisms**
University of Brest (France)
- 2000** **D.E.U.G. (Two Year Degree) in Life Sciences, Biology and Earth Sciences**
University of Bordeaux (France)

PUBLICATIONS

Claverie, T. & Patek, S. N. (In revision) Modularity and rates of evolutionary change in a power-amplified prey capture system. *Evolution*

Kamenos, N., Hoey, T., Nienow, P., Fallick, A., **Claverie, T.** (2012) Reconstructing Greenland Ice Sheet runoff using coralline algae, *Geophysical Research Letters* 40, 1095-1098

McHenry, M. J., **Claverie, T.**, Rosario, M. V. & Patek, S. N. (2012) Gearing for speed slows the predatory strike of a mantis shrimp. *Journal of Experimental Biology* 215, 1231-1245.

Claverie, T., Chan, E. & Patek, S. N. (2011) Modularity and scaling in fast movements: power amplification in mantis shrimp, *Evolution* 65, 443-461.

Staaterman, E. R., Clark, C. W., Gallagher, A. J., deVries, M. S., **Claverie, T.**, Patek, S. N. (2011) Rumbling in the benthos: the acoustic ecology of the California mantis shrimp and the presence of anthropogenic noise. *Aquatic Biology* 13, 97-105.

Claverie, T. & Smith, I. P. (2010) Allometry and sexual dimorphism in the chela shape of the squat lobster, *Munida rugosa*. *Aquatic Biology* 8, 179-187.

Staaterman, E. R., **Claverie, T.** & Patek, S. N. (2010) Disentangling defense: the function of spiny lobster sounds. *Behaviour* 147, 235-258.

Zack, T. I., **Claverie, T.** & Patek, S. N. (2009) Elastic energy storage in the mantis shrimp's fast predatory strike. *Journal of Experimental Biology* 212, 4002-4009.

Claverie, T. & Smith, I. P. (2009) Morphological maturity and allometric growth in the squat lobster *Munida rugosa*, *Journal of the Marine Biological Association of the UK* 89, 1189-1194.

Claverie, T. & Kamenos, N. (2008) Spawning aggregations and mass movements in subtidal *Onchidoris bilamellata* (Mollusca; Opisthobranchia), *Journal of the Marine Biological Association of the UK* 88, 157-159.

Claverie, T. & Smith, I. P. (2007) Functional significance of an unusual chela dimorphism in a marine decapod: specialisation as a weapon?, *Proceedings of the Royal Society B* 274, 3033-3038.

Claverie, T. & Smith, I. P. (2007) A comparison of the effect of three common tagging methods on the survival of the galatheid *Munida rugosa* (Fabricius, 1775), *Fisheries Research* 86, 285-288.

Bouma, T.J., van Duren, L.A., Temmerman, S., **Claverie, T.**, Blanco-Garcia, A., Ysebaert, T., & Herman, P.M.J. (2007) Spatial flow and sedimentation patterns within patches of epibenthic structures: Combining field, flume and modelling experiments, *Continental Shelf Research* 27, 1020-1045.

GRANTS AND FELLOWSHIPS

Claverie, T. (2010) Grant to attend conference: 2010 annual meeting of the Society for Experimental Biology, (SEB conference grants)

Claverie, T. (2006) Grant to attend conference: 3rd European Conference on Behavioural Biology, (ASAB conference grants)

Claverie, T. (2004) Sheina Marshall PhD studentship, University of London (University Marine Biological Station, Millport)

PRESENTATIONS AND PUBLISHED ABSTRACTS

Claverie, T. & Wainwright, P. C. (2013) Fractal radiation: repeated patterns of diversification along an axis of body elongation in fishes, *Society for Integrative and Comparative Biology*, San Francisco, CA, U.S.A.

Kamenos, N.A. , Hoey, T.B., Bedford, J. , **Claverie, T.**, Fallick, A., Lamb, C.M.A., Nienow, P. , O'Neill, S.R., Shepherd, I. & Thormar J. (2012) Abrupt Greenland Ice Sheet runoff and sea water temperature changes since 1821 recorded using coralline algae, 45th AGU meeting at San Francisco, CA, U.S.A.

Claverie, T. (2012) "Evolution de structures biologiques produisant des mouvements extrêmement rapides: modularité et morphologie fonctionnelle", 7th SMEF at Lyon, France

Claverie, T. (2011) Insight into the processes that drive the evolution of fast moving structures: modularity and functional morphology, 15th Evolutionary Biology Meeting at Marseilles, France

Claverie, T. & Patek, S. N. (2011) Modularity and the evolution of fast predatory appendages in mantis shrimp. 2nd International Congress on Invertebrate Morphology, Cambridge, MA, U.S.A.

Claverie, T. & Patek, S. N. (2010) Built for speed : shape, modularity and scaling in the raptorial appendage of mantis shrimp, *Society for Experimental Biology*, Prague, Czech Republic

Claverie, T. & Patek, S. N. (2010) Shape, size and performance of a crustacean predatory appendage. *Society for Integrative and Comparative Biology*, Seattle, WA, U.S.A.

Claverie, T. (2009) Evolution of raptorial appendage morphology in mantis shrimp. Division of Vertebrate Morphology, Northeast Regional Meeting, Providence, MA, U.S.A.

Claverie, T. & Patek, S. N. (2009) Force transmission versus speed amplification in four bar linkage mechanism: counterintuitive results in the mantis shrimp strike. *Society for Integrative and Comparative Biology*, Boston, MA, U.S.A.

Staaterman, E., **Claverie, T.** & Patek, S. N. (2009) Antipredator startle signal of the California spiny lobster (*Panulirus interruptus*). *Society for Integrative and Comparative Biology*, Boston, MA, U.S.A.

Zack, T. I., **Claverie, T.** & Patek, S. N. (2009) Elastic energy storage and the mantis shrimps powerful predatory strike. *Society for Integrative and Comparative Biology*, Boston, MA, U.S.A

Staaterman, E., **Claverie, T.** & Patek, S. N. (2008) Acoustic antipredator signals of the California spiny lobster. 2nd International Conference on Acoustic Communication by Animals, Corvallis, Oregon, U.S.A.

Claverie, T. & Smith, I.P. (2007) Social interaction and decapod claw morphology: the case of the long-clawed squat lobster, *Munida rugosa*. 11th Congress of The European Society for Evolutionary Biology, Uppsala, Sweden

Claverie, T. & Smith, I.P. (2006) Claw efficiency and behavioural interaction as key indicators to understand evolution of a dimorphism in *Munida rugosa* (Decapoda, Crustacea). 3rd European conference on Behavioural Biology, Belfast, United Kingdom

Claverie, T. & Smith, I.P. (2006) Do claw morphology and previous experience influence the outcome of agonistic interactions in the long-clawed squat lobster *Munida rugosa*? 11th International Behavioural Ecology Congress, Tours, France

Claverie, T. & Smith, I.P. (2005) Cheliped morphology in the long-clawed squat lobster, *Munida rugosa*. 6th International Crustacean Congress, Glasgow, United Kingdom

SEMINARS

2012 – Evolution & Ecology, UC Davis, USA

2010 – ISEM, Montpellier, France; *Univ Bourgogne*, Dijon, France; *Univ Bath*, United Kingdom; OSEB, Paris, France.

2007 – SAMS, Oban, United Kingdom.

REVIEWER FOR

2012 – *Ethology*, *Crustaceana*, *Biological Journal of the Linnean Society*, *Functional Ecology*

2011 – *Journal of Experimental Zoology*, *Biological Journal of the Linnean Society*

2010 – *Journal of Experimental Zoology*, *Aquatic Biology*, *Journal of Applied Ichthyology*.

2009 – *Journal of the Marine Biological Association of the United Kingdom*, *Fisheries Research*.

TEACHING EXPERIENCE

2010-2011 Guest lectures to undergraduate classes: Department of Biology, UMass Amherst
Immune response

2004-2007 Teaching assistant: seven intensive Marine Biology courses held at the University Marine Biological Station in Millport, for two weeks each in March/April and August/September:
Invertebrate and vertebrate zoology: guided students through laboratory experiments and animal identification, demonstrated and supervised sampling of the intertidal and subtidal environments.
Marine ecology: supervised and assisted students with experiments and measurements in classrooms and in the field.

2004-2005 Teaching assistant: two one-month introductory Marine Biology courses for high school students.
Zoology: presented marine fauna/flora and demonstrated behaviour and sampling methods.
Marine ecology: guided tours in intertidal environment and on boat during fauna sampling.

STUDENTS MENTORING

Trinh Nguyen, Laboratory Assistant, UC Davis
Christina Mitscock, Biology Undergraduate Research Apprentice, UMass Amherst
Danielle Cloutier, Laboratory Assistant, UMass Amherst
Joie Yonamine, Laboratory Assistant, UMass Amherst
Quan Tran, Laboratory Assistant, UMass, Amherst
Elliot Chan, Undergraduate Research Apprentice, UC Berkeley
Alexander Stubbs, Undergraduate Research Apprentice, UC Berkeley
Travis Zack, Undergraduate Research Apprentice, UC Berkeley

SKILLS

Field work:

- Sampling at sea from various research vessels (trawling, creeling, van Veen grabs, Niskin bottles)
- Scuba diving work (specimen collection, tagging, density survey, distance measurement, coring, photography, sound recording, video recording)
- Sampling and various measurements in intertidal environments
- Marine mammal dissection (dolphins, sperm whales)
- Field sites:
 - Australia (Lizard Island, Queensland), California (Catalina Island), France (Brittany, Bay of Biscay), French Polynesia (Moorea), Greenland (Kangerlussuaq fjord), Hawaii (Oahu), Netherlands (Oestershelde, Westerschelde), Scotland (western coast).

Laboratory work:

- Museum measurements (National Museum of Natural History, Smithsonian Institution, Washington, DC, USA; Australian Museum of Natural History, Sydney, Australia)
- Behavioural observations (design of arena for observation of agonistic interactions using video recording facilities, high speed video recording)
- Force measurements of crustacean claws (design and conception of measuring apparatus with pressure sensor, use of piezoelectric impact force sensor)
- Marine European faunal identification (crustaceans, molluscs, polychaetes, fish, zooplankton)
- Flume measurement (current velocity within and around vegetal simulated structure)

Analytical work:

Geometric morphometric, Phylogenetic comparative methods, Univariate and multivariate analysis, MySQL database, R programming, image analysis, capture re-capture analyses in Mark

UNIVERSITY SERVICE AND PROFESSIONAL SOCIETY MEMBERSHIPS

2010 Co-coordinator of the Behavior and Morphology discussion group at the University of Massachusetts, Amherst.

2005-2007 Research student representative on the Learning and Research Sub-Committees of the Management Committee at the University Marine Biological Station, Millport.

Association for the Study of Animal Behaviour, European Society for Evolutionary Biology, Society for Experimental Biology, Society for Integrative and Comparative Biology

ADDITIONAL INFORMATION

Language: French: native language, English: written, read, spoken, Spanish: read

Academic qualifications: 2010: French qualification for “maître de conférence” (equivalent lecturer) university and museum in section 67 (population biology) and 68 (organism biology).

Other qualifications: Sailing (US sailing: bareboat cruising and coastal navigation), Power boat: costal driving permit (French, California USA, Queensland Australia), car driving licence (French and California USA), Scuba diving (CMAS: 3 stars + Advanced Nitrox, PADI: dive master), Various first aid training, Sea survival training, Certificate for French summer camp instructor (BAFA).

REFERENCES

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Davis, CA 95616, USA
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Department of Biology
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