

# CURRICULUM VITAE

## James A. Coyer

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### Education:

B.S. (Biology) 1970      University of Wisconsin-Eau Claire  
Ph.D. (Biology) 1979      University of Southern California

### Current Interests:

Understanding phylogeny and phylogeography of *Fucus* spp and *Zostera* spp (eelgrass) in the Northern Hemisphere; examining the role of sea urchins in determining community structure in giant kelp forests off southern California

### Professional Positions:

2014-present      Affiliate Research Professor, School of Marine Science and Ocean Engineering,  
University of New Hampshire

2013-present      Assistant Director of Academic Programs; Shoals Marine Laboratory, Cornell University

1998-2012      Senior Research Associate, Dept. of Marine Benthic Ecology and Evolution, University  
of Groningen, The Netherlands

1981-present      Core Faculty, Cornell University (Shoals Marine Laboratory, summer program); recipient  
of Stifel Faculty Fellowship 2002, 2003, 2004

1992-98      Assistant Research Scientist, Dept. of Biology, University of California-Los Angeles

1990-92      Research Associate, Dept. of Molecular Genetics and Cell Biology, Univ. of Chicago

1986-90      Postdoctoral Fellow, Dept. of Microbiology, State University of New York-Stony Brook

1981-86      Chair and Assistant Professor, Division of Science and Mathematics, Marymount College

1980-81      Oceanographer, Ocean Sciences Department, Interstate Electronics Corp., Anaheim, CA

1980-81      Consultant, California Department of Fish and Game, Area of Special Biological  
Significance Surveys

1980      Lecturer, Department of Ecology and Evolutionary Biology, University of California-  
Irvine

1976-81      Supervisor, USC Hyperbaric Chamber, Catalina Marine Science Center

- 1970-present Over 2600 logged dives using scuba, surface-supplied, and saturation techniques
- 2002-present Member, Dive Control Board, Shoals Marine Laboratory

### Teaching Experience:

- 1981-present Shoals Marine Laboratory: *Underwater Research*, summer
- 2013-present University Centre in Svalbard: *Arctic Marine Molecular Ecology* (co-instructor)
- 2003-2004 University of Groningen: *Marine Phylogeography* (docent), *Marine Biology* (guest docent)
- 2001-2004 University of Amsterdam: *Tropical Aquatic Biology* (guest docent)
- 1997 California State University-San Jose (Moss Landing Marine Lab): *Laboratory Tools for Physiological and Molecular Ecology* (Fall quarter)
- 1997 National Institute of Oceanography, Goa, India: one-month mini-course, *Molecular Techniques for Oceanographers*
- 1994 Indo-US Workshop on Trophic Dynamics, Goa, India; Sponsored by Office of Naval Research and Indian National Institute of Oceanography
- 1981-86 Marymount College (lecture/laboratory):
- a. *General Biology I* (majors)
  - b. *General Biology II* (majors)
  - c. *Human Anatomy and Physiology* (non-majors)
  - d. *Biology of Animals* (non-majors)
  - e. *Introduction to Marine Biology* (non-majors)
  - f. *Natural and Political History of Baja California* (interdisciplinary)
  - g. *A Naturalist in Coastal Environments* (interdisciplinary)
  - h. *The Sea of southern California: Its Art, Literature, and Science* (interdisciplinary)
  - i. *The Art of Being Human* (interdisciplinary)
- 1980 University of California-Irvine: *Coastal Ecology* (lecture, non-majors)

### Publications:

- Smolina, I., S. Kollias, A. Jueterbock, **J.A. Coyer**, G. Hoarau. 2016. Variation in thermal stress response in two populations of the brown seaweed, *Fucus distichus*, from the Arctic and subarctic intertidal (in press, R. Soc. open sci. 150429.<http://dx.doi.org/10.1098/rsos.150429>)
- Johansson, M.J, F. Alberto, D.C. Reed, P.T. Raimondi, N.C. Coelho M.A. Young, P.T. Drake C.A. Edwards, K. Cavanaugh, J. Assis, L.B. Ladah, T.W. Bell, **J.A. Coyer**, D.A. Siegel, E.A. Serrão. 2015. Seascape drivers of *Macrocystis pyrifera* population genetic structure in the northeast Pacific. (in press, Mol. Ecol.).
- J. E. Duffy, P. L. Reynolds, C. Boström, **J. A. Coyer**, M. Cusson, S. Donadi, J. G. Douglass, J. S. Eklöf, A. Engelen, B. Klemens Eriksson, S. Fredriksen, L. Gamfeldt, C. Gustafsson, G. Hoarau, M. Hori, K.

- Hovel K. Iken, J. S. Lefcheck, P-O. Moksnes, M. Nakaoka, M. I. O'Connor, J. L. Olsen, J. P. Richardson, J. L. Ruesink, E. E. Sotka, J. Thorm.ar, M. A. Whalen, and J J. Stachowicz. 2015. Biodiversity mediates top-down control in eelgrass ecosystems: A global comparative-experimental approach. *Ecol. Lett.* Jul;18 (7):696-705 doi: 10.1111/ele.12448
- Hoarau, G., **J. A. Coyer**, M.C.W.C. Geisbers, A. Jueterbock, and J.L. Olsen. 2015. Pre-zygotic isolation in the macroalgal genus *Fucus* from four contact zones spanning 100-10,000 years: a tale of reinforcement? *R. Soc. open sci.*2: 140538
- Alstatt, J., R. Ambrose, J. Carroll, **J. Coyer**, J. Wible, and J. Engle. 2014. Eelgrass meadows return to Frenchy's Cove, Anacapa Island: recovery ten years after successful transplantation. *West. N. Amer. Nat.* 7: 500-517
- Olsen, J.L., **J.A. Coyer**, and B. Chesney. 2014. Numerous mitigation transplants of the eelgrass *Zostera marina* shuffle genetic diversity and may promote hybridization with *Z. pacifica* within the Southern California Bight: Implications for sustainability and management. *Biol. Conserv.* 176:133-143.
- Franssen, S.U., J. Gu, G. Winters, A-K. Huylmans, I. Wienpahl, M Sparwel, **J.A. Coyer**, J.L. Olsen, T.B.H. Reusch, and E. Bornberg-Bauer. 2014. Genome-wide transcriptomic responses of the seagrasses *Zostera marina* and *Nanozostera noltii* under a simulated heatwave confirm functional types. *Mar. Genomics* 15:65-73.
- Jueterbock, A., S. Kollias, I. Smolina, J.MO. Fernandes, **J.A. Coyer**, J.L. Olsen, and G. Hoarau. 2014. Thermal stress resistance of the brown alga *Fucus serratus* along the North-Atlantic coast: acclimatization potential to climate change. *Mar. Genomics* 13:27-36.
- Lee, K.M., G.H. Boo, **J.A. Coyer**, W.A. Nelson, K.A. Miller, and S.M. Boo. 2014. Distribution patterns and introduction pathways of the cosmopolitan brown alga *Colpomenia peregrina* using mt *cox3* and *atp6* sequences. *J. Appl. Phycol.* 26:491-504.
- Pearse, J.S., M.H. Carr, C.H. Baxter, J.M.Watanabe, M.S. Foster, D.L. Steller, **J.A. Coyer**, B. Konar, D.O. Duggins, and P.K. Dayton. 2013. Kelpbeds as classrooms: perspectives and lessons learned. *Smithsonian Contri. Mar. Sci.* 39:133-142.
- Coyer, J.A.**, G. Hoarau, A. Tronholm, J. Kuo, J. Veldsink, and J.L. Olsen. 2013. Phylogeny and temporal divergence of the Zosteraceae using one nuclear and three chloroplast loci. *Syst. Biodivers.* 11:271-284 (*voted "Outstanding Paper of 2013"*)
- Olsen, J.L., **J.A. Coyer**, W.T. Stam, F.E. Moy, H. Christie, and N.M. Jørgensen. 2013. Eelgrass, *Zostera marina*, populations in northern Norwegian fjords are genetically isolated and diverse. *Mar. Biol.* 486: 121-132.
- Jüeterbock, A., L. Tyberghein, H. Verbruggen, **J.A. Coyer**, J.L. Olsen and G. Hoarau. 2013. Climate change impact on seaweed meadow distribution in the North Atlantic intertidal. *Ecol. Evol.* 3:1356-1373
- Lee, K-M, E.C. Yang, **J.A. Coyer**, G. C. Zucarello, W-L Wang, C.G. Choi, and S.M. Boo. 2012. Phylogeography of the seaweed *Ishige okamurae* (Phaeophyceae): Evidence for glacial refugia in the northwest Pacific region. *Mar. Biol.* 159:1021-1028.

- Canovas, F., C. Mota, J.F. Costa, E. A. Serrão, **J.A. Coyer**, J.L. Olsen, and G. Pearson. 2011. Development and characterization of 35 single nucleotide polymorphism markers for the brown algal, *F. vesiculosus* L. Eur. J. Phycol. 46:342-351.
- Wahl, W., V. Jormalainen, B.K. Eriksson, **J.A. Coyer**, M. Molis, H. Schubert, M. Dethier, A. Ehlers, R. Karez, I. Kruse, M. Lenz, G. Pearson, S. Rohdey, S.A. Wikström, and J.L. Olsen. 2011. Stress ecology in *Fucus*: abiotic, biotic and genetic interactions. Adv. Mar. Biol. 59:37-105.
- Zipperle, A.M., **J.A. Coyer**, K. Reise, W.T. Stam, and J.L. Olsen. 2011. An evaluation of small-scale genetic diversity and the mating system in *Zostera noltii* on an intertidal sandflat in the Wadden Sea. Ann. Bot. 107:127-133.
- Coyer, J.A.**, G. Hoarau, J. Van Schiak, P. Luijckz, and J.L. Olsen. 2011. Trans-Pacific and trans-Arctic pathways of the intertidal macroalgal *Fucus distichus* reveal multiple glacial refugia and colonization from the North Pacific to the North Atlantic. J. Biogeogr. 38:756-771.
- Coyer, J.A.**, G. Hoarau, J.F. Costa, B. Hogerdijk, E. A. Serrão, E. Billard, M. Valero, G. A. Pearson, and J. L. Olsen. 2011. Evolution and diversification within the brown macroalgae *Fucus spiralis*/*F. vesiculosus* species complex in the North Atlantic. Mol. Phylo. Evol. 58:283-296.
- Coyer, J.A.**, G. Hoarau, G.A. Pearson, C. Mota, T. Alpermann, U. John, A. Jüterbock, and J.L. Olsen. 2011. Genomic scans detect signatures of selection along a salinity gradient in populations of the intertidal seaweed *Fucus serratus* on a 12 km scale. Mar. Gen. 4:41-49.
- Zipperle, A. M., **J.A. Coyer**, K. Reise, W.T. Stam, and J.L. Olsen. 2010. Water fowl grazing in autumn enhances spring seedling recruitment of intertidal dwarf eelgrass (*Zostera noltii*). Aquat. Bot. 93:202-205
- Olsen, J.L., F.W. Zechman, G. Hoarau, **J.A. Coyer**, W.T. Stam, M. Valero, and P. Åberg. 2010. The phylogeographic architecture of the furoid seaweed *Ascophyllum nodosum*: an intertidal “marine tree” and survivor of more than one glacial-interglacial cycle. J. Biogeogr. 37:842-856
- Pearson, G. A., G. Hoarau, A. Lago-Leston, **J.A. Coyer**, N.J. Miller, M. Kube, K. Henckel, E. Serrão, E. Corre, W.T. Stam, and J.L. Olsen. 2009. An Expressed Sequence Tag (EST) analysis of the intertidal brown seaweeds *Fucus serratus* (L.) and *F. vesiculosus* (L.) (Heterokontophyta, Phaeophyceae) in response to abiotic stressors. Mar. Biotechnol. doi 10.007/s10126-009-9208-z
- Zipperle, A. M., **J.A. Coyer**, K. Reise, W.T. Stam, and J.L. Olsen. 2009. Clonal architecture in an intertidal bed of the dwarf eelgrass *Zostera noltii* in the northern Wadden Sea. Mar. Biol. 156: 2139-2148.
- Brawley, S. H., **J.A. Coyer**, A.M.H. Blakeslee, G. Hoarau, L.E. Johnson, J.E. Byers, W.T. Stam, and J.L. Olsen. 2009. Historical invasions of the intertidal zone of Atlantic North America through the lens of trade, war, and famine. PNAS. 106:8239-8244.
- Zipperle, A.M., **J.A. Coyer**, K. Reise, W.T. Stam, and J.L. Olsen. 2009. Evidence for persistent seed banks in dwarf eelgrass, *Zostera noltii*, in the German Wadden Sea. Mar. Ecol. Prog. Ser. 380: 73-80
- Hoarau, G., **J.A. Coyer**, and J.L. Olsen. 2009. Paternal leakage of mitochondrial DNA in a *Fucus* hybrid zone. J. Phycol. 45:621-624.

- Poortvliet, M., J.L. Olsen, K.A. Selkoe, **J.A. Coyer**, and G. Bernardi. 2009. Isolation and characterization of 11 microsatellite primers for a temperate reef fish, the California sheephead (*Semicossyphus pulcher*). *Mol. Ecol. Res.* 9:429-430
- Coyer, J.A.**, G. Hoarau, B. Beszteri, G. Pearson, and J.L. Olsen. 2009. Expressed sequence tag derived polymorphic SSR markers for *Fucus serratus* and amplification in other species of *Fucus*. *Mol. Ecol. Res.* 9:168-170.
- Coyer, J.A.**, G. Hoarau, K. Sjøtun, and J.L. Olsen. 2008. Being abundant is not enough: a decrease in effective population size over eight generations in a Norwegian population of the seaweed, *Fucus serratus*. *Biol. Letters*, 4: 755-757 (**An F1000 recommended citation in Dec 2008**)
- Coyer, J.A.**, K.A. Miller, J.M. Engle, J. Veldsink, A. Cabello-Pasini, W.T. Stam, and J.L. Olsen. 2008. Eelgrass meadows in the California Channel Islands and adjacent coast reveal a mosaic of two species, evidence for introgression, and variable clonality. *Ann. Bot.* 101:73-88.
- Coyer, J.A.**, G. Hoarau, W.T. Stam, and J.L. Olsen. 2007. Hybridization and introgression in a mixed population of the intertidal seaweeds *Fucus distichus* and *F. serratus*. *J. Evol. Biol.*, 20: 2322-2333.
- Hoarau, G., **J.A. Coyer**, J. Veldsink, W.T. Stam, and J.L. Olsen. 2007. Glacial refugia and recolonization pathways in the brown seaweed *Fucus serratus*. *Mol. Ecol.* 16:3606-3636.
- Hoarau, G., **J.A. Coyer**, W.T. Stam, and J.L. Olsen. 2007. A fast and inexpensive DNA extraction/purification for brown macroalgae. *Mol. Ecol. Notes* 7: 191-193.
- Coyer, J.A.**, G. Hoarau, G.A. Pearson, E.A. Serrão, W.T. Stam, and J.L. Olsen. 2006. Convergent adaptation to a marginal habitat by homoploid hybrids and polyploid ecads in the seaweed genus *Fucus*. *Biol. Letters* 2: 405-408.
- Coyer, J.A.**, G. Hoarau, M. Skage, W.T. Stam, and J.L. Olsen. 2006. Origin of *Fucus serratus* populations on Iceland and the Faroes: a microsatellite-based assessment. *Eur. J. Phycol.* 41:235-246.
- Coyer, J.A.**, G. Hoarau, M-P. Oudot-LeSecq, W.T. Stam, and J.L. Olsen. 2006. A mtDNA-based phylogeny of the brown algal genus *Fucus* (Heterokontophyta; Phaeophyta). *Mol. Phylo. Evol.* 39:209-222.
- Diekmann, O.E., **J.A. Coyer**, J. Ferreira, J.L. Olsen, W.T. Stam, G.A. Pearson, and E.A. Serrão. 2005. Population genetics of *Zostera noltii* along the western Iberian coast: consequences of small population size and habitat discontinuity. *Mar. Ecol. Prog. Ser.* 290:89-96
- Vroom, P., L.J. Walters, K.S. Beach, **J.A. Coyer**, J.E. Smith, M.J. Abgralle, D. Byron, K. DeAngelis, B. Konar, J. Liss, R. Okano, C.A. Roberts, L. Wick, M. Wo, S. Miller, and C.M. Smith. 2005. Hurricane induced propagation and rapid regrowth of the weedy brown algae *Dictyota* in the Florida Keys. *Florida Sci.* 68:161-174.
- Coyer, J.A.**, O.E. Diekmann, E.A. Serrão, G. Procaccini, N. Milchakova, G. Pearson, W.T. Stam, and J.L. Olsen. 2004. Population genetics of the dwarf seagrass *Zostera noltii*, throughout its biogeographic range. *Mar. Ecol. Prog. Ser.* 281:51-62.
- Roberson, L.M., and **J.A. Coyer**. 2004. Variation in blade morphology of the kelp *Eisenia arborea*: Phenotypic plasticity or inherited trait? *Mar. Ecol. Prog. Ser.* 282:115-128.

- Coyer, J.A.**, T.B.H. Reusch, W.T. Stam, E.A. Serrão, G. Pearson, G. Procaccini, and J.L. Olsen. 2004. Characterization of microsatellite loci in the dwarf eelgrass, *Zostera noltii* and cross-reactivity with *Z. japonica*. (Zosteraceae). *Mol. Ecol. Notes* 4: 497-499.
- Olsen, J.L., W.T. Stam, **J.A. Coyer**, T.B.H. Reusch, et al. 2004. North Atlantic phylogeography and large-scale population differentiation of the seagrass, *Zostera marina* L. *Mol. Ecol.* 13:1923-1941.
- Coyer, J.A.**, G. Hoarau, W.T. Stam, and J.L. Olsen. 2004. Geographically-specific heteroplasmy of mitochondrial DNA in the seaweed, *Fucus serratus* (Heterokontophyta: Phaeophyceae, Fucales). *Mol. Ecol.* 13:1323-1326.
- Beach, K.L., L. Walters, H. Borgeas, C. Smith, **J. Coyer**, and P. Vroom. 2003. The impact of *Dictyota* spp. on *Halimeda* populations of Conch Reef, Florida Keys. *J. Exp. Mar. Biol. Ecol.* 297:141-159.
- Vroom, P., C.M. Smith, **J.A. Coyer**, C.L. Hunter, L. Walters, K. Beach, and J. Smith. 2003. Field biology of *Halimeda tuna* (Bryopsidales, Chlorophyta) across a depth gradient: Comparative growth, survivorship, recruitment, and reproduction. *Hydrobiologia* 501:149-166.
- Coyer, J.A.**, A.F. Peters, W.T. Stam, and J.L. Olsen. 2003. Post-ice age recolonization and differentiation of *Fucus serratus* L. (Fucaceae: Phaeophyta) populations in Northern Europe. *Mol. Ecol.* 12:1817-1829.
- Beach, K., L. Walters, P. Vroom, C. Smith, **J. Coyer**, and C. Hunter. 2003. Variability in the ecophysiology of *Halimeda* spp. on Conch Reef, Florida Keys. *J. Phycol.* 39:633-643.
- Walters, L., C.M. Smith, **J.A. Coyer**, C.H. Hunter, K. Beach, and P. Vroom. 2002. Asexual propagation in the coral reef macroalga *Halimeda* (Chlorophyta, Bryopsidales): production, dispersal and attachment of small fragments. *J. Exp. Mar. Biol. Ecol.* 278:47-65.
- Levin, P.S., **J.A. Coyer**, R. Petrik, and T.P. Good. 2002. Community-wide effects of non-indigenous species on temperate rocky reefs. *Ecology* 83: 3182-3193
- Coyer, J.A.**, A.F. Peters, G. Hoarau, W.T. Stam, and J.L. Olsen. 2002. Hybridization of the marine seaweeds, *Fucus serratus* and *F. evanescens* (Heterokontophyta; Phaeophyceae) in a century-old zone of secondary contact. *Proc. R. Soc. Lond. B.* 269:1829-1834.
- Coyer, J.A.**, A.F. Peters, G. Hoarau, W.T. Stam, and J.L. Olsen. 2002. Inheritance patterns of ITS1, chloroplasts, and mitochondria in artificial hybrids of the seaweeds, *Fucus serratus* and *F. evanescens* (Heterokontophyta: Phaeophyceae). *Eur. J. Phycol.* 37:173-178.
- Coyer, J.A.**, J.H. Veldsink, K. Jones, W.T. Stam, and J.L. Olsen. 2002. Characterization of microsatellite loci in the marine seaweeds, *Fucus serratus* and *F. evanescens* (Heterokontophyta; Fucaceae). *Mol. Ecol. Notes* 2:35-37.
- Coyer, J.A.**, G.S. Smith, and R.A. Andersen. 2001. Evolution of *Macrocystis* spp (Phaeophyceae) as determined by ITS1 and ITS2 sequences. *J. Phycol.* 37:574-585.
- Carroll, J.C. J.M. Engle, **J.A. Coyer**, and R.F. Ambrose. 2000. Long-term changes and species interactions in a sea urchin-dominated community at Anacapa Island, California, pp 370-378. In: Proceedings of the Fifth California Islands Symposium. US Dept. of Interior, Minerals Management Service at the Santa Barbara Museum of Natural History: Santa Barbara, CA.

- Rivest, B.R., **J.A. Coyer**, and S.T. Tyler. 1999. The first known invasion of a free-living marine flatworm. *Biol. Invasions*. 1:393-394.
- Coyer, J.A.**, J.L. Olsen, and W.T. Stam. 1997. Genetic variability and spatial separation in the sea palm kelp, *Postelsia palmaeformis* (Phaeophyceae) as assessed with M13 fingerprints and RAPDs. *J. Phycol.* 33:561-568 (*nominated for "Paper of the Year"*)
- Coyer, J.A.**, A. Cabello-Pasini, H. Swift, and R.S. Alberte. 1996. N<sub>2</sub>-fixation in marine heterotrophic bacteria: dynamics of environmental and molecular regulation. *Proc. Natl. Acad. Sci.* 93:3575-3580.
- Coyer, J.A.** 1995. Use of a rock as an anvil for breaking scallops by yellowhead wrasse (*Halichoeres garnoti*). *Bull. Mar. Sci.* 57:548-549.
- Coyer, J.A.**, D.L. Robertson, and R.S. Alberte. 1995. Genetic variability and parentage in the giant kelp, *Macrocystis pyrifera* (Phaeophyceae) using multi-locus DNA fingerprinting. *J. Phycol.* 31:819-823.
- Coyer, J.A.**, D.L. Steller, and R.S. Alberte. 1995. A field-compatible method for extraction of fingerprint-quality DNA from *Macrocystis pyrifera* (Phaeophyceae). *J. Phycol.* 31:177-180.
- Coyer, J.A.**, D.L. Robertson, and R.S. Alberte. 1994. Genetic variability within a population and between diploid/haploid tissues of *Macrocystis pyrifera* (Phaeophyceae). *J. Phycol.* 30:545-552
- Carroll, J.C., J.M. Engle, **J.A. Coyer**, and R.F. Ambrose. 1993. Long-term changes and species interactions in a kelp forest/sea urchin community at Anacapa Island. In: *Eighth Annual Information Transfer Meeting: Oil Spill Prevention and Response, Minerals Management Service*, pp. 165-168.
- Ambrose, R.F., J.M. Engle, **J.A. Coyer**, and B.V. Nelson. 1993. Changes in urchin and kelp density at Anacapa Island, California, Pg. 199-208. In: F.G. Hochberg (Ed.). *The Third California Channel Island Symposium: Recent Advances in Research on the California Islands*. Santa Barbara Museum of Natural History: Santa Barbara, CA.
- Coyer, J.A.**, and S.J. Hall. 1993. Predation on small northern anchovy (*Engraulis mordax*) by large silversides (Atherinidae). *Cal. Fish Game* 79:82-84.
- Coyer, J.A.**, R.F. Ambrose, J.M. Engle, and J.C. Carroll. 1993. Interactions between corals and algae on a temperate zone rocky reef: mediation by sea urchins. *J. Exp. Mar. Biol. Ecol.* 167:21-37.
- Coyer, J.A.**, J.M. Engle, and R.C. Zimmerman. 1992. Discovery of a fertile *Pelagophycus* x *Macrocystis* (Phaeophyta) putative hybrid and subsequent production of F<sub>2</sub> sporophytes in the laboratory. *J. Phycol.* 28:127-130.
- Coyer, J.A.**, J. Andersen, S. Forst, M. Inouye, and N. Delihis. 1990. *micF* RNA in *ompB* mutants of *Escherichia coli*: different pathways regulate *micF* RNA levels in response to osmolarity and temperature. *J. Bact.* 172:4143-4150.
- Holbrook, S.J., M.H. Carr, R.J. Schmitt, and **J.A. Coyer**. 1990. The effect of giant kelp on local abundance of reef fishes: the importance of ontogenetic resource requirements. *Bull. Mar. Sci.* 47:104-114.

- Coyer, J.A.**, J. Andersen, and N. Delihis. 1989. Association of higher molecular weight ribonucleoproteins of 7S particle preparations with multimers of transcription factor IIIA. *FEBS Letters* 257:159-162.
- Coyer, J.A.**, J. Andersen, and N. Delihis. 1987. *Xenopus* transcription factor protein IIIA (TFIIIA) binds to a DNA hairpin of similar structure to the stem-loop containing helix V of the 5S RNA. *Fed. Proc.* 46:1203.
- Coyer, J.A.**, J.M. Engle, R.F. Ambrose, and B.V. Nelson. 1987. Utilization of purple and red sea urchins (*Strongylocentrotus purpuratus* Stimpson and *S. franciscanus* Agassiz) as food by the white sea urchin (*Lytechinus anamesus* Clark) in the field and laboratory. *J. Exp. Mar. Biol. Ecol.* 105:21-38.
- Coyer, J.A.** 1986. The mollusc assemblage associated with fronds of giant kelp (*Macrocystis pyrifera*) off Santa Catalina Island, California. *Bull. Southern Calif. Acad. Sci.* 85:129-138.
- Holbrook, S.J., R.J. Schmitt, and **J.A. Coyer**. 1985. Age-related dietary patterns of sympatric adult surfperch. *Copeia* 4:986-994.
- Coyer, J.A.** 1984. The invertebrate assemblage associated with the giant kelp *Macrocystis pyrifera* at Santa Catalina Island, California: a general overview with emphasis on amphipods, copepods, mysids, and shrimps. *Fish. Bull., U.S.* 82:55-66.
- Schmitt, R.J., and **J.A. Coyer**. 1983. Variation in surfperch diets between allopatry and sympatry: circumstantial evidence for competition. *Oecologia* 58:402-410.
- Coyer, J.A.**, and A.C. Zaugg-Haglund. 1982. A demographic study of the elk kelp, *Pelagophycus porra* (Laminariales, Lessoniaceae), with notes on *Pelagophycus* x *Macrocystis* hybrids. *Phycologia* 21:399-407.
- Schmitt, R.J., and **J.A. Coyer**. 1982. The foraging ecology of sympatric marine fish in the genus *Embiotica* (Embiotocidae): importance of foraging behavior in prey size selection. *Oecologia* 55:369-378.
- Coyer, J.A.** 1982. Observations of the reproductive behavior of the giant kelpfish, *Heterostichus rostratus* Girard (Pisces: Clinidae). *Copeia* 2: 344-350.
- DeMartini, E.E., and **J.A. Coyer**. 1981. Cleaning and scale-eating in juveniles of the kyphosid fishes *Hermosilla azurea* and *Girella nigricans*. *Copeia* 4:785-789.
- Coyer, J.A.** 1980. Possible cleaning behavior by juvenile California sheephead, *Semicossyphus pulcher*. *Bull. Southern Calif. Acad. Sci.* 79:126-127.

## Reports, Books:

- Coyer, J.**, D. Steller, and J. Witman. 2012. *The Underwater Catalog. A Guide to Methods in Underwater Research*. 3<sup>rd</sup> Ed. Shoals Marine Laboratory, Ithaca, NY.
- Coyer, J.A.** 2007. Algal biogeography. Pp. 24-30. In: Denny, M. and S.L. Gaines (eds.). *Encyclopedia of Tidepools and Rocky Shores*. Univ. of California Press.
- Behrents, K.C., R.A. Wells, and **J.A. Coyer**. 1984. The influence of fish predators on the distribution and abundance of *Diadema antillarum*. NOAA Technical Memorandum OAR NURP-2. 23 p.



**Coyer, J.A.**, and J.M. Engle. 1981. California marine waters, areas of special biological significance, reconnaissance survey report. Santa Catalina subareas II and IV, Los Angeles, County. State Water Resources Control Board, Water Qual. Mon. Rpt. 191 p.

Engle, J.M., and **J.A. Coyer**. 1981. California marine waters, areas of special biological significance, reconnaissance survey report. Santa Catalina Island subarea III, Los Angeles County. State Water Resources Control Board, Water Qual. Mon. Rpt. 81 p.

### **Oral Presentations:**

- 2014 Invited Seminar, Univ. of Connecticut: “Phylogeny and phylogeography of seagrasses (*Zosteraceae*): Implications for management”. Groton, CT, USA
- 2013 Invited Seminar, Universitiet i Nordland: “Connectivity of seagrass populations”. Bodø, Norway
- 2013 Invited Seminar, Univ. of New Hampshire: “Ice Age Signature in the intertidal seaweed, *Fucus*”. Dover, NH, USA
- 2012 Invited Paper, Korea Phycological Society: “Tracking *Fucus* with DNA throughout the northern hemisphere: connectivity of populations and dispersal of genotypes”. Gangneung, Korea
- 2012 Invited Seminar, Chungnam National University: “Microsatellites: development and use for population Biology”, Daejeon, Korea
- 2010 Invited Seminar, Chungnam National University: “Connectivity: Causes and Consequences in *Fucus serratus* and *F. distichus*”. Daejeon, Korea
- 2009 Invited Seminar, University of Puerto Rico: “Connectivity: causes and consequences in the genus *Fucus*”. San Juan, Puerto Rico.
- 2009 Contributed paper, Western Society of Naturalists: “mtDNA and microsatellite analysis of the intertidal alga *Fucus distichus* reveal multiple colonizations of the North Atlantic from the North Pacific and two glacial refugia”. Seaside, CA, USA.
- 2008 Invited paper, Dutch-Flemish Phycologists Association. “A mtDNA and microsatellite-based phylogeography of *Fucus distichus* in the North Pacific and North Atlantic”. Gent, Belgium.
- 2007 Contributed paper, Western Society of Naturalists: “Eelgrass meadows in the California Channel Islands and adjacent coast reveal a mosaic of two species, evidence for introgression, and variable clonality”. Ventura, CA, USA.
- 2006 Invited paper, Population Genetics and Genomics of Algae workshop, AWI. “Rockweeds rock: moving from population genetics to genomics in *Fucus*”. Bremerhaven, Germany.
- 2004 Invited Symposium Speaker, XVIII International Seaweed Symposium: “A Pacific Origin of the genus *Fucus*”. Bergen, Norway.
- 2003 Contributed paper, Western Society of Naturalists: “Evolution in the genus *Fucus* as inferred by mtDNA sequences”. Long Beach, CA, USA.
- 2002 Contributed paper, 37<sup>th</sup> European Marine Biological Symposium; “Dispersal of the dwarf eelgrass *Zostera noltii* in Northern Europe as inferred from microsatellite analysis”. Reykjavik, Iceland

- 2001 Contributed paper, Population Genetics and Evolution of Seagrasses (workshop), "Microsatellite Development in *Zostera*". Ischia, Italy.
- 2001 Contributed paper, British Phycological Society; "Genetic differentiation in the intertidal seaweed, *Fucus serratus*, as determined by microsatellite analysis". Liverpool, England.
- 1999 Contributed paper, Western Society of Naturalists: "Genetic differentiation and isolation-by-distance in the intertidal seaweed, *Fucus serratus*". Monterey, CA, USA
- 1999 Contributed paper, European Phycological Congress: "Population structure of *Fucus* spp. in the Skagerrak-Kattegat (Baltic Sea) as determined by microsatellites". Montecatini, Italy
- 1997 Contributed paper, Western Society of Naturalists: "Patterns of *Macrocystis pyrifera* evolution as determined by ITS1 and ITS2 sequences". Monterey, CA, USA
- 1996 Invited paper, II Congreso Mexicano de Ficología, Universidad Autónoma de Baja California-Ensenada: "Genetic variability and relatedness in the kelps *Macrocystis* and *Postelsia* and the diatom *Skeletonema* as assessed with M13 fingerprinting and RAPD's". Ensenada, Baja California, Mexico
- 1996 Contributed paper, Phycological Society of America: "Genetic variability and spatial separation of the kelp *Postelsia palmaeformis* based on DNA fingerprinting". Santa Cruz, CA, USA
- 1994 Contributed paper, Western Society of Naturalists: "Parentage analysis by multi-locus DNA fingerprinting in giant kelp, *Macrocystis pyrifera*". Monterey, CA, USA
- 1990 Contributed paper, Western Society of Naturalists: "Long-term interactions among populations of sea urchins, orange cup corals, and macroalgae at Anacapa Island California". Monterey, CA, USA
- 1985 Contributed paper, Western Society of Naturalists: "Utilization of purple (*S. purpuratus*) and red (*S. franciscanus*) urchins as food by the white urchin (*Lytechinus anamesus*) in the field and laboratory". Santa Barbara, CA, USA
- 1980 Contributed paper, Western Society of Naturalists: "A demographic study of the elk kelp, *Pelagophycus porra* (Lessoniaceae), with notes on *Pelagophycus* x *Macrocystis* hybrids". Monterey, CA, USA
- 1979 Contributed paper, Western Society of Naturalists: "The mobile invertebrate assemblage associated with the giant kelp, *Macrocystis pyrifera*". Fullerton, CA, USA
- 1978 Contributed paper, Undersea Medical Society, North Pacific and Gulf of Mexico Chapter: "The southern California diving accident: a profile". San Antonio, TX, USA
- 1978 Invited paper, Southern California Academy of Science Symposium on Surfperch: "Resource partitioning, niche shift, and character displacement in *Embiotica jacksoni* and *E. lateralis* from the California Channel Islands". Fullerton, CA, USA

### Poster Presentations:

- 2008 "Detecting signatures of salinity-influenced selection among populations of the seaweed *Fucus serratus* using genomic scans" World Conference on Marine Biodiversity, Valencia, Spain

- 2005 “Post-glacial recolonization patterns in the brown seaweed *Fucus serratus*” 10<sup>th</sup> Congress of the European Society for Evolutionary Biology, Krakaw, Poland.
- 2005 “A microsatellite-based assessment of *Fucus serratus* population on Iceland and The Faroes reveals patterns of species invasions. 10<sup>th</sup> Congress of the European Society for Evolutionary Biology, Krakaw, Poland.
- 2002 “Population structure of the seaweed *Fucus serratus* (Phaeophyceae) along European coastlines since the last glacial maximum”. 1<sup>st</sup> Annual CORONA meeting, Appledore Island, Maine, USA
- 2001 “Hybridization of the marine seaweeds, *Fucus serratus* and *F. evanescens* (Heterokontophyta; Phaeophyceae) in a century-old zone of secondary contact”. Molecular Evolution: Evolution, Genomics, Bioinformatics. Sorrento (Naples), Italy
- 1999 “Population structure of *Fucus* sp in the Skagerrak-Kattegat (Baltic Sea) as determined by microsatellites”. 7<sup>th</sup> Congress of the European Society for Evolutionary Biology, Barcelona, Spain

### **Research Cruises/Field Work:**

- 2011 Field work in Bodø (Norway), under auspices of NSF-sponsored *Zostera* Experimental Network (northern hemisphere-wide)
- 2008 Field work in Svalbard (Norway), under auspices of Marine Genomics Europe and Schure-Beijerinck-Popping Funds
- 2007-8 Field work in Bergen, Norway, under auspices of Schure-Beijerinck-Popping Funds and Norwegian Directorate for Nature Management
- 2006-7 Field work in Tromsø, Norway, under auspices of NWO and Schure-Beijerinck-Popping Funds
- 2005 Field work on Honshu and Hokkaido Island, Japan, under auspices of NWO Travel Grant
- 2004 Field work along western Norwegian coastline (from Bergen to Kirkenes) (NWO Grant)
- 2000- Long-term intertidal monitoring of *Fucus* hybrids (intertidal) at Blushøj, Denmark (NOW Grant)
- 2000- Long-term intertidal monitoring of *Zostera noltii* populations (intertidal) at Sylt, Germany
- 2003-4 Laboratory and field work at Sandgerði, Iceland under auspices of IHP (Improving Human Potential) Programme of the European Commission, administered by University of Iceland
- 2000 Aquanaut, NOAA/National Undersea Research Center (Aquarius), to investigate the ecological significance of growth and reproduction by *Halimeda* across a depth gradient
- 1998 Aquanaut, NOAA/National Undersea Research Center (Aquarius), to investigate daily carbon budgets, growth, and sexual reproduction by *Halimeda* across a depth gradient
- 1994 Aquanaut, NOAA/National Undersea Research Center (Aquarius), to investigate the ecological significance of vegetative fragmentation by *Halimeda*: mechanisms along a depth gradient

- 1994 Co-investigator, collection of *Prochloron* in shallow subtidal regions of Palau and on-site extraction of DNA for study on evolution of chlorophyll binding protein
- 1993-94 Co-investigator, three trips to Miyako Jima Island, Japan to investigate carbon cycling and calcification in tropical algae; sponsored by RITE Corporation of Japan (Kyoto)
- 1987 Invited scientist, University of Washington cruise (RV *Alpha Helix*) to Aleutian Islands to examine coastal community/food web structures among kelp, otter, and urchin dominated island ecosystems. Assisted with the collection of sea urchins and quantification of subtidal community structure.
- 1985 Aquanaut, NOAA/USC National Undersea Research Program (NURP) Operational Undersea Science Program, to investigate aspects of recruitment and substratum preference in the elk kelp
- 1983 Aquanaut, NOAA's Underwater Laboratory System-1 (Hydrolab) to investigate influence of predators on activity patterns and abundance of the long-spined urchin *Diadema antillarum* (Mission NULS83-6)
- 1977-85 Invited scientist, 12 cruises to various northern and southern California Channel Islands to conduct diving surveys of the shallow subtidal flora and fauna for the Channel Island Research Program
- 1980 Interstate Electronics Corp. OSV *Antelope* (EPA) cruise to Dredged Material Disposal Sites along the Louisiana coast. Water and sediments were collected for standard shipboard analysis, as well as shoreside analysis of dissolved and particulate trace metals, chlorinated and petroleum hydrocarbons, grain size, etc. Macrofauna were collected for shoreside identification, tissue trace metals, and tissue chlorinated hydrocarbons
- 1974 Invited scientist, joint Los Angeles County Museum of Natural History and Instituto del Mar of Peru cruise to the Guano Islands off Peru to conduct the first diving (scuba) survey of the inshore fishes, crustaceans, and molluscs; and to collect deep water organisms in the surrounding areas using conventional deep-sea sampling gear
- 1973 USC-Los Angeles County Museum of Natural History cruise (*Velero IV*) to Costa Rica and offshore Cocos Island, to collect and analyze water, to collect midwater and benthic organisms for biogeographical studies, and to conduct productivity studies of phytoplankton