

2015 MBE Faculty Publications

Babcock

Ortiz de Zárate, V. and E. A. Babcock. 2015. Estimating individual growth variability in albacore (*Thunnus alalunga*) from the North Atlantic stock; aging for assessment purposes. *Fisheries Research*. doi:10.1016/j.fishres.2015.07.030

Harford, W. J., C. Ton, and E. A. Babcock. 2015. Simulated mark-recovery for spatial assessment of a spiny lobster (*Panulirus argus*) fishery. *Fisheries Research* 165:42-53. doi: 10.1016/j.fishres.2014.12.024

Babcock, E. A., W. J. Harford, R. Coleman, J. Gibson, J. Maaz, J. Foley and M. Gongora. 2015. Bayesian depletion model estimates of spiny lobster abundance at two marine protected areas in Belize with or without in-season recruitment. *ICES Journal of Marine Science* 72 (Suppl. 1):i232–i243. doi: 10.1093/icesjms/fsu226

Baker

Wirshing HH, Baker AC (2015) Molecular and morphological species boundaries in the gorgonian octocoral genus *Pterogorgia* (Octocorallia: Gorgoniidae). *PloS One* 10 (7), e0133517

Aswani S, Mumby PJ, Baker AC, Christie P, McCook LJ, Steneck RS, Richmond RH (2015) Scientific frontiers in the management of coral reefs. *Frontiers in Marine Science* 2:50 doi: 10.3389/fmars.2015.00050

Cunning R, Silverstein RN, Baker AC (2015) Investigating the causes and consequences of symbiont shuffling in a multi-partner reef coral symbiosis under environmental change. *Proceedings of the Royal Society Series B* 282: 20141725 doi: 10.1098/rspb.2014.1725

Cunning R, Vaughan N, Gillette P, Capo TR, Maté JL, Baker AC (2015) Dynamic regulation of partner abundance mediates response of reef coral symbioses to environmental change. *Ecology* 96:1411–1420. <http://dx.doi.org/10.1890/14-0449.1>

Silverstein RN, Cunning R, Baker AC (2015) Change in algal symbiont communities after bleaching, not prior heat exposure, increases heat tolerance of reef corals. *Global Change Biology* 21: 236–249, doi: 10.1111/gcb.12706doi: 10.1111/gcb.12706

Brand

Maze, G., J.J. Olascoaga, and L. Brand. 2015. Historical analysis of environmental conditions during Florida Red Tide. *Harmful Algae* (in press).

Crawford

Dayan DI, Crawford DL, Oleksiak MF (2015) Phenotypic plasticity in gene expression contributes to divergence of locally adapted populations of *Fundulus heteroclitus*. *Molecular Ecology* 24, 3345-3359.

Du X, Crawford DL, Oleksiak MF (2015) Effects of Anthropogenic Pollution on the Oxidative Phosphorylation Pathway of Hepatocytes from Natural Populations of *Fundulus heteroclitus*. *Aquat Toxicol* 165, 231-240.

Nunez JC, Seale TP, Fraser MA, et al. (2015) Population Genomics of the Euryhaline Teleost *Poecilia latipinna*. *PLoS ONE* 10, e0137077.

Criales

Maria M. Criales, Laurent M. Cherubin & Joan A. Browder (2015) Modeling Larval Transport and Settlement of Pink Shrimp in South Florida: Dynamics of Behavior and Tides, Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science, 7:1, 148-176, DOI: 10.1080/19425120.2014.1001541

D'Alessandro

Shulzitski, K., Sponaugle, S., Hauff, M., Walter, K., D'Alessandro, E.K., Cowen, R.K. (2015) Close encounters with eddies: oceanographic features increase growth of larval reef fishes during their journey to the reef. *Bio. Letters* 11(1) DOI: 10.1098/rsbl.2014.0746

Fieber

A. T. Kempzell and L. A. Fieber. 2015. Age-related deficits in synaptic plasticity rescued by activating PKA or PKC in sensory neurons of *Aplysia californica*. *Front. Aging Neurosci.* 7:173. doi: 10.03389/fnadi.2015.00173

A. T. Kempzell and L. A. Fieber. 2015. Aging in sensory and motor neurons results in learning failure in *Aplysia californica*. *PLoS ONE* 10(5): e0127056. doi:0.1371/journal.pone.0127056

Glynn

Glynn PW, Riegl B, Purkis S, Kerr JM, Smith TB (2015) Coral reef recovery in the Galápagos Islands: the northernmost islands (Darwin and Wenman). *Coral Reefs* DOI 10.1007/s00338-015-1280-4

Manzello DP, Enochs IC, Bruckner A, Renaud PG, Kolodziej G, Budd DA, Carlton R, Glynn PW (2015) Galápagos coral reef persistence after ENSO warming across an acidification gradient. *J Geophys Res* 41:9001-9008

Riegl B, Glynn PW, Wieters E, Purkis S, d'Angelo C, Wiedenmann J (2015) Water column productivity and temperature predict coral reef regeneration across the Indo-Pacific. *Nature Sci Repts* DOI 10.1038/srep08273

Grosell

Edmunds, R.C., Gill, J.A., Baldwin, D.H., Linbo, T.L., French, B.L., Brown, T.L., Esbaugh, A.J., Mager, E.M., Stieglitz, J., Hoenig, R., Benetti, D., Grosell, M., Scholtz, N.L. & Incardona, J.P. (2015): Corresponding morphological and molecular indicators of crude oil toxicity to the developing hearts of mahi mahi. *Scientific Reports, Nature*. In press.

Esbaugh, A.J., Secor, S.M. & Grosell, M. (2015): Renal plasticity in response to feeding in the Burmese python, *Python molurus bivittatus*. *Comp.Biochem.Physiol.* 188A 120-126.

Ruhr, I, Mager, E., Takeji, Y. & Grosell, M. (2015): The differential role of renoguanylin in osmoregulation and apical Cl-/HCO₃- exchange activity in the posterior intestine of the Gulf toadfish (*Opsanus beta*). *Am.J.Physiol.* 309(4), R399-409.

Esbaugh, A.J., Secor, S.M. & Grosell, M. (2015): Characterization of carbonic anhydrase XIII in the erythrocytes of the Burmese python, *Python molurus bivittatus*. *Comp.Biochem.Physiol.* 187B, 71-77.

Wood, C.M. & Grosell, M. (2015): Electrical aspects of the osmorepiratory compromise: TEP responses to hypoxia in the euryhaline killifish (*Fundulus heteroclitus*) in fresh water and sea water. *J.Exp.Biol.* 218, 2152-2153.

Brix, K.V., Esbaugh, A.J., Mager, E.M. & Grosell, M. (2015): Comparative evaluation of Na⁺ uptake in *Cyprinodon variegatus variegatus* (Lacepede) and *Cyprinodon variegatus hubbsi* (Carr) (Cyprinodontiformes, Teleostei): Evaluation of NHE function in high and low Na⁺ freshwater. *Comp.Biochem.Physiol.* 185A, 115-124.

Langdon

Ekstrom, J. A., L. Suatoni, S. R. Cooley, G. Waldbusser, J. E. Cinner, J. Ritter, R. Van Hoodonk, C. Langdon, M. Beck, L. M. Brander, D. Rittschof, P. Edwards and K. Wellman (2015). "Vulnerability and adaptation of US shellfisheries to ocean acidification." *Nature Climate Change* 5: 207-214.

Ezzat, L., E. Towle, J.-O. Irisson, C. Langdon and C. Ferrier-Pagès (2015). "The relationship between heterotrophic feeding and inorganic nutrient availability in the scleractinian coral *T. reniformis* under a short-term temperature increase." *Limnology and Oceanography*: doi:10.1002/lno.10200.

Talley, L. D., R. Feely, B. M. Sloyan, R. Wanninkhof, M. Baringer, J. L. Bullister, C. A. Carlson, S. C. Doney, R. A. Fine, E. Firing, N. Gruber, D. A. Hansell, M. Ishii, G. C. Johnson, K. Katsumata, R. M. Key, M. Kramp, C. Langdon, A. M. MacDonald, J. T. Mathis, E. L. McDonagh, S. Mecking, F. J. Millero, C. W. Mordy, T. Nakano, C. L. Sabine, W. M. Smethie, J. H. Swift, T. Tanhau, A. M. Thurnherr, M. J. Warner and J.-Z. Zhang (2015). "Changes in Ocean Heat, Carbon Content, and Ventilation: A Review of the First Decade of GO-SHIP Global Repeat Hydrography." *Annu. Rev. Mar. Sci.* doi: 10.1146/annurev-marine-052915-100829.

Towle, E., I. Enochs and C. Langdon (2015). "Threatened Caribbean Coral Is Able to Mitigate the Adverse Effects of Ocean Acidification on Calcification by Increasing Feeding Rate." *PLoS ONE* 10(4): e0123394.

Towle, E. K., R. Carlton, C. Langdon and D. P. Manzello (2015). "In-situ measurement of metabolic status in three coral species from the Florida Reef Tract." *Regional Studies in Marine Science*. doi:/10.1016/j.rsma.2015.09.007.

Waldbusser, G. G., B. Hales, C. J. Langdon, B. A. Haley, P. Schrader, E. L. Brunner, M. W. Gray, C. A. Miller and I. Gimenez (2015). "Saturation-state sensitivity of marine bivalve larvae to ocean acidification." *Nature Clim. Change* 5(3): 273-280.

Wanninkhof, R., L. Barbero, R. Byrne, W.-J. Cai, W.-J. Huang, J.-Z. Zhang, M. Baringer and C. Langdon (2015). "Ocean acidification along the Gulf Coast and East Coast of the USA." *Continental Shelf Research* 98: 54-71.

Lirman

Santos, R., D. Lirman, and S. Pittman. 2015. Long-term spatial dynamics in vegetated seascapes: fragmentation and habitat loss in a human-impacted subtropical lagoon. *Marine Ecology* (In Press). DOI: 10.1111/maec.12259

Schopmeyer, S., and D. Lirman. 2015. Occupation dynamics and impacts of damselfish territoriality on recovering populations of the threatened staghorn coral, *Acropora cervicornis*. *PLOS One* (In Press).

Lohr, K., S. Bejarano, D. Lirman, S. Schopmeyer, and C. Manfrino. 2015. Optimizing the productivity of a coral nursery focused on staghorn coral *Acropora cervicornis*. *Endangered Species Research* 27:243-250.

McManus

Yñiguez A, McManus JW, Collado-Vides L (2015). Consequences of morphological plasticity and fragmentation on two-dimensional space occupation of coral reef macroalgae. *Ecological Modelling* 309–310:128–142

Zhu L, Qualls WA, Marshall JM, Arheart KL, DeAngelis DL, McManus JW, Traore SF, Doumbia S, Schlein Y, Muller GC, Beier JC (2015) A spatial individual-based model predicting a great impact of copious sugar sources and resting sites on survival of *Anopheles gambiae* and malaria parasite transmission. *Malaria Journal* (2015) 14:59, (open access 15 pages), DOI 10.1186/s12936-015-0555-0.

Oleksiak

Du, X., D. L. Crawford and M. F. Oleksiak, 2015. Effects of Anthropogenic Pollution on the Oxidative Phosphorylation Pathway of Hepatocytes from Natural Populations of *Fundulus heteroclitus*. *Aquat Toxicol* 165: 231-240.

Dayan, D. I., D. L. Crawford and M. F. Oleksiak, 2015. Phenotypic plasticity in gene expression contributes to divergence of locally adapted populations of *Fundulus heteroclitus*. *Mol Ecol* 24(13): 3345-3359.

Richardson

Clegg, I, Borger-Turner, JL, Eskelinen, HC (2015) C-Well: The Development of Welfare Assessment Measures and Protocols for Captive Bottlenose Dolphins (*Tursiops truncatus*). *Animal Welfare* 24: 367-282

Kuczaj II, SA, Eskelinen HC, Jones BL, Borger-Turner, JL (2015) Gotta go, Mom's calling: Dolphin (*Tursiops truncatus*) mothers use individually distinctive acoustic signals to call their calves. *Animal Behavior and Cognition* 2(1): 88-95

Eskelinen, HC, Winship, KA, & Borger-Turner, JL (2015). Sex, age, and individual differences in bottlenose dolphins (*Tursiops truncatus*) in response to environmental enrichment. *Animal Behavior and Cognition*, 2(3), 241–253.

Towle

Towle, E. K., R. Carlton, C. Langdon and D. P. Manzello (2015). "In-situ measurement of metabolic status in three coral species from the Florida Reef Tract." *Regional Studies in Marine Science*. doi: 10.1016/j.rsma.2015.09.007

Voss

Roper, CFE, H Judkins, NA Voss, E Shea, E Dawe, D Ingrao, L Greene, PL Rothman, and IH Roper, 2015. A compilation of recent records of the giant squid *Architeuthis dux* Steenstrup, 1857 (Cephalopoda) from the Western North Atlantic Ocean, Newfoundland to the Gulf of Mexico. *American Malacological Bulletin*, vol 33: pages 78-88.