

**Dr. Jeffrey C. Drazen**  
*Professor of Oceanography*  
University of Hawaii at Manoa

**Education**

- 2000      **Ph.D. in Marine Biology**, Scripps Institution of Oceanography, UCSD  
1993      **B.A. in Biology and Marine Science**, University of San Diego

**Professional Positions**

- 2014 –      **Professor**, Department of Oceanography, UH Manoa  
2010 – 2016 **Chair, Biological Oceanography Division**, UH Manoa  
2009 – 2014 **Associate Professor**, Department of Oceanography, UH Manoa  
2004 – 2009 **Assistant Professor**, Department of Oceanography, UH Manoa  
2007 – 2015 **Affiliate Faculty**, Hawaii Institute of Marine Biology, UH Manoa  
2001 – 2004 **Postdoctoral Research Fellow**, Monterey Bay Aquarium Research Institute  
1999 – 2000 **Instructor**, Biology Department, University of San Diego  
1994 – 2000 **Research Assistant**, Marine Biology Research Division, SIO-UCSD

**Awards**

- 2012      ONR Summer Faculty Fellow  
2015      Klaus Wyrski Graduate Teaching Excellence Award  
2015      JIMAR Senior Fellow  
2016      UH Chancellor's Citation for Meritorious Teaching

**Grant Activity and Other Awards**

**Current Research Support**

3/17 – 2/20. GB Moore Foundation. Ecosystem-wide survey of biodiversity, connectivity and ecosystem function across the deep seafloor biome of the CCZ to help assess and manage the impacts of polymetallic nodule mining. C. R. Smith, J. C. Drazen, M. J. Church, T. Dahlgren, A. Glover, and A. Sweetman. \$2,403,687

7/14 – 7/17. NSF-OCE. Collaborative Research: Isotopic insights to mercury in marine food webs and how it varies with ocean biogeochemistry. B. Popp, J. Drazen, C. Hannides, K. Seraphin, J. Blum, C. Benitez-Nelson. \$339,730

**Past Research Support**

6/13 – 12/16. UK Seabed Resources Ltd/ Lockheed Martin. Benthic Biological Baseline Studies in the CCZ: Megafaunal, Macrofaunal, Microbial and Larval Studies, and Project Oversight. C. Smith, J. C. Drazen and M. Church. \$2,495,704 UH portion (Drazen budget = \$348,640)

10/13 – 12/16/ NSF-OCE. Evaluating the relative importance of suspended and sinking particles to the meso and bathypelagic food web in the central North Pacific. J. C. Drazen, B. N. Popp, H. Close, K. Seraphin. \$587,945

9/11 – 9/15. NSF-OCE. Collaborative Research: Controls on hadal megafaunal community structure: a systematic examination of pressure, food supply, and topography. T. Shank, J. C. Drazen and P. Yancey. \$469,289 (UH portion and includes a supplement).

- 6/14-6/15. Division of Aquatic Resources, State of Hawaii. Evaluating Spatial and Temporal Patterns in Deep 7 Bottomfish Populations in the Main Hawaiian Islands. \$398,706
- 7/14 – 9/16. ONR. Understanding the foraging ecology of beaked and short-finned pilot whales in Hawaiian waters. W. Au and J. Drazen. \$430,381
- 11/14 – 12/14. Schmidt Ocean Institute. Studying the ecology and geology of the Marianas Trench – the deepest place on earth. J. C. Drazen, P. Fryer, T. Shank, P. Yancey, A. Jamieson, D. Mayor, H. Ruhl, A. Rowden, S. Hulme. 30 days of shiptime on RV Falkor
- 7/07 – 6/14. Division of Aquatic Resources, State of Hawaii. Evaluating the Effectiveness of Restricted Fishing Areas for Improving the Bottomfish Fishery in the Main Hawaiian Islands. J. C. Drazen. \$2,574,000
- 6/10 – 6/13. NSF/NOAA CAMEO. A novel tool for validating trophic position estimates in ecosystem-based fisheries models. B. Popp, J. C. Drazen, M. Landry, C. Holl, and B. Olson. \$426,800 (UH component)
- 9/12 – 8/13. UH Seagrant. Foraging ecology and mercury bioaccumulation in Hawaiian bottomfish. Dana K. Sackett, Jeffrey C. Drazen, Brian Popp, Robert Humphries, Alfred Asato. \$3,418
- 10/09 – 9/12. PFRP. Examining Pelagic Food Webs using Multiple Chemical Tracers. Jeffrey C. Drazen, Brian N. Popp, C. Anela Choy, Peter D. Nichols, Charles F. Phleger and Robert J. Olson. \$193,048
- 9/11 – 9/12. National Geographic Society. Assessing Deep-Sea Biodiversity and Community Structure off Hawaii. Jeffrey C. Drazen. \$13,448
- 11/10 – 8/11. Schmidt Ocean Institute. Abyssal scavenger ecology of the western North Atlantic. J. C. Drazen. \$25,187 and 20 days of shiptime on RV Lone Ranger
- 9/07 – 8/11. NSF-OCE. An investigation of patterns in deep-sea demersal fish metabolism and feeding rates. J. C. Drazen. \$630,886 (includes a supplement)
- 5/07 – 6/10. NOAA- Monuments. An investigation of deep-sea communities and habitats of the Northwestern Hawaiian Islands Marine National Monument. J. C. Drazen. \$123,835
- 7/09 – 6/10. NOAA-PIRO. Review and refinement of the EFH and HAPC designations for the Hawaiian Bottomfish Deep Species Complex. Christopher Kelley and Jeff Drazen. \$105,205
- 3/09 – 2/10. Kahoolawe Island Reserve Commission. Assessing Kaho‘olawe Island Reserve’s bottomfish populations: a potential benchmark for main Hawaiian Island restricted fishing areas. Jeffrey C. Drazen. \$30,793
- 6/08 – 6/09. NOAA-PIRO. Acoustic tracking of bottomfish in and around a restricted fishing area off Niihau. Christopher Kelley, Kevin Weng, Frank Parrish, and Jeff Drazen. \$150,000
- 6/06 – 9/08. PFRP. Assessment of the impacts of mesoscale oceanographic features on the forage base for oceanic predators. J. C. Drazen and R. Domokos. \$89,325 (UH component)
- 10/07 – 9/08. Hawaii Seagrant. Project Development Grant: The Ecology of Mercury in Top Predators and Their Prey from Pelagic Ecosystems Surrounding Hawaii. J. C. Drazen. \$9,841

### **Field Work**

Chief scientist on 11 and cochief scientist on 5 research cruises representing 418 days at sea since hire and lab group has conducted ~250 days at sea aboard smaller vessels (30-40ft).

### **Course Instruction**

OCN627 *Ecology of Pelagic Marine Animals*, every spring 2005 – present  
 OCN630 *Deep-Sea Biology* – fall 2009, 2011, 2013, 2015

OCN430 *Introduction to Deep-Sea Biology* – fall 2013, 2015  
OCN331 *Living Resources of the Sea* – Fall 2015, 2016

#### Guest lecturer for

BIO602 *Marine Biology: Process and Impacts* – spring 2013, 2014  
BIOL404 *Advanced Topics in Marine Biology* – spring 2006, 2008, 2010, 2011, 2012  
GG639 *Stable Isotope Biogeochemistry* – spring 2011  
OCN100 *Global Environmental Science Seminar* – fall 2010  
OCN201 *Introduction to Oceanography* – Spring 2004  
OCN331 *Aquatic Living Resources* – fall 2014  
OCN490 *Communication of Research Results* – fall 2004, 2005, 2006, 2009, 2011, 2015  
OCN621 *Biological Oceanography* – spring 2006  
OCN628 *Benthic Ecology* – spring 2005, 2015

Leader for instructional research cruise aboard R/V Kilo Moana 2 days in March 2006, 3 days Feb 2009, 6 days in March 2011.

#### **Advising**

**Postdoctoral Mentor for** Cordelia Moore (10/10 – 1/12), Dana Sackett (4/12 – 4/15), Clifton Nunnally (7/12 – 5/15)

**Graduate advisor for** John Yeh (MS 08), Lisa DeForest (MS, 08), C. Anela Choy (MS 08, PhD 13), Nicole Condon (MS 11), Jason Friedman (MS 11), William Misa (MS 12), Jamie Gove (coadvisor with McManus, PhD 13), Mackenzie Gerring (PhD), Astrid Leitner (PhD), Kristen Gloeckler (MS 16), Phoebe Woodworth-Jefcoats (coadvisor with Jeff Polovina, PhD)

Served or Serving on the MS and PhD committees of 37 students from various departments and at other institutions (U. of San Diego, HPU)

Served or Serving as academic advisor for 21 GES students

Mentored an additional 2 high school and 18 undergraduate students in research

#### **Selected Service Activities**

Board member, Scientific Advisory board of Shanghai Ocean University's Hadal Science and Technology program, 2015 – present

Review Panel member (2016) for NOAA-PIFSC Ecosystem Science External Review

PhD Exam restructuring committee (2012 – 2013)

Acting Department Chair (Feb 15<sup>th</sup> – March 31<sup>st</sup>, 2013)

Biological Oceanography Division head (Fall 2010 – Fall 2016)

Marine Biology degree planning committee (2008, 2009- 2012)

Guest presentations for a variety of K-12 schools (2006-present)

NSF RET for Michelle Kay, 6<sup>th</sup> grade science teacher (2008-2010)

Steering committee member for Global Deep-Sea Fisheries Workshop, Monaco 2010

Co-chair for Deep Sea Fish Biology Symposium, Glasgow 2013

Science stories and images have been featured in several museum exhibitions and educational non-profits including Waikiki Aquarium, Windsor Nature Discovery, Natural History Museum of London,

Natural History Museum – Basel, BBC, Underwater World, Muséum d'Histoire Naturelle, Oceana, Whaletimes Inc., Abysses – a travelling exhibition by Bloom Association, “Creatures of the Abyss” by Science North

Science press has been featured in local and international news including ScienceNow, Science Magazine, Nature News, The Economist, National Geographic TV series “Alien Deep”, ABC Science News, New York Times, Discover Magazine, National Public Radio, Scientific American  
Featured in acclaimed TV and online science show “Voice of the Sea” KFVE, 6pm Sundays  
2014 Deep-Sea Lab: 2013 SOEST open house -  
<http://www.k5thometeam.com/category/274791/voice-of-the-sea-season-1>  
2015 Food Webs of the Open Ocean - <https://youtu.be/xndnBPhzZDI>  
2015 Scientists at Sea - <https://youtu.be/sdPapN9jr1M>

## Publications (79)

### Refereed publications in scholarly journals (\*graduate student in my group, # undergraduate student in my group, ^postdoc in my group)

- ^Sackett D, Kelley CD, **Drazen JC** (2017) Spilling over deepwater boundaries; evidence of spillover from two deepwater protected areas in Hawaii. *Marine Ecology Progress Series* 568: 175-190.
- \*Gerringer, M.E., Popp, B.N., Linley, T.D., Jamieson, A.J., **Drazen, J.C.** (2017) Feeding ecology of hadal fishes; Comparative analyses of stomach contents and compound specific stable isotopes of individual amino acids. *Deep Sea Research I* 121: 110-120.
- Linley, T.D., Stewart, A., McMillan, P., Clark, M., \*Gerringer, M., **Drazen, J.C.**, Fujii, T., Ichino, M.C., Jamieson, A.J. (2017) Bait attending fishes of the abyssal zone and hadal boundary: community structure, functional groups and species distribution in the Kermadec, New Hebrides and Mariana trenches. *Deep Sea Research I* 121:38-53.
- \*Woodworth-Jefcoats, P., Polovina, J., **Drazen, J.C.** (2017). Climate change is projected to reduce carrying capacity in North Pacific marine ecosystems. *Global Change Biology* 23(3):1000-1008.
- Drazen, J.C.**, Sutton, T.T. (2017). Dining in the deep: The feeding ecology of deep-sea fishes. *Annual Reviews in Marine Science* 9: 337-366.
- Hetherington, E.D., Olson, R.J., **Drazen, J.C.**, Lennert-Cody, C.E., Ballance, L.T., Kaufmann, R.S., Popp, B.N. (2016). Spatial food-web structure in the eastern tropical Pacific Ocean based on compound-specific nitrogen isotope analysis of amino acids. *Limnology and Oceanography* 62: 541-560.
- ^Nunnally C, Friedman J, **Drazen J** (2016) Respiration of hadal invertebrates measured in situ in the Kermadec trench. *Deep Sea Research I* 118, 30-36.
- \*Fernandez-Arcaya, U., **Drazen, J.C.**, Murua, H., Ramírez-Llodra, E., Bahamon, N., Recasens, L., Rotllant, G., Company, J.B. (2016). Bathymetric gradients of fecundity and egg size in fishes: a Mediterranean case study. *Deep Sea Research I* 116, 106-117.
- Gaither, M.R., Violi, B., Gray, H.W., Neat, F., **Drazen, J.C.**, Grubbs, D., Roa-Varón, A., Sutton, T., Hoelzel, A.R. (2016). Depth as a driver of evolution in the deep sea: insights from grenadiers (Gadiformes: Macrouridae) of the genus *Coryphaenoides*. *Marine Ecology Progress Series* 104, 73-82.
- Linley TD, \*Gerringer ME, Yancey PH, **Drazen JC**, Weinstock CL, Jamieson AJ (2016) Fishes of the hadal zone including new species, in situ observations, depth records of Liparidae. *Deep-Sea Res I* 114: 99-110.

- ^Moore CH, **Drazen JC**, Radford B, Kelley C, Newman SJ (2016) Improving essential fish habitat designation to support sustainable ecosystem-based fisheries management. *Marine Policy* 69: 32-41
- Misa, W.F.X.E., Richards, B.L., DiNardo, G.T., Kelley, C.D., Moriwake, V.N., **Drazen, J.C.** (2016). Evaluating the effect of soak time on bottomfish abundance and length data from stereo-video surveys. *Journal of Experimental Marine Biology and Ecology* 479: 20-34
- Gove JM, McManus MA, Neuhemier AB, Polovina JJ, **Drazen JC**, Smith CR, Merrifield MA, Freidlander AM, Ehses JS, Young C, Dillon AK, Williams GJ (2016) Near-island biological hotspots in barren ocean basins. *Nature Communications* 7:10581
- ^Sackett, D., **Drazen, J.C.**, \*Choy, C.A., Popp, B., Asato, A., Pitz, G.L. (2015). Mercury sources and trophic ecology and for Hawaiian bottomfish. *Environmental Science & Technology* 49(11):6909-6918.
- Abecassis M, Polovina J, Baird RW, Copeland A, **Drazen JC**, Domokos R, Oleson E, Jia Y, Schorr GS, Webster DL, Andrews RD (2015) Characterizing a foraging hotspot for short-finned pilot whales and Blainville's beaked whales off the west side of the Island of Hawai'i with tagging and oceanographic data. *PLOS One* 10(11): e0142628. doi:10.1371/journal.pone.0142628
- \*Choy CA, Popp BN, Hannides CCS, **Drazen JC** (2015) Trophic structure and isotopic depth gradients within a pelagic fish assemblage of the central North Pacific Subtropical Gyre ecosystem. *Limnology and Oceanography* 60 (4): 1156-1171
- Bradley, C. J., N. J. Wallsgrove, \*C. A. Choy, **J. C. Drazen**, #D. K. Hoen, E. D. Hetherington, and B. N. Popp (2015). Trophic position estimates of teleosts using amino acid compound specific isotopic analysis. *Limnology and Oceanography: Methods* 13 (9): 476-493.
- Drazen JC**, \*Friedman JR, \*Condon N, #Aus E, \*Gerringer ME, Keller AA, Clarke E (2015) Enzyme activities of demersal fishes from the shelf to the abyssal plain. *Deep-Sea Res I* 100: 117-126.
- Ichino MC, Clark MR, **Drazen JC**, Jamieson A, Jones DOB, Rowden AA, Shank TM, Yancey PH, Ruhl HA (2015) The distribution of benthic biomass in hadal trenches: a modelling approach to investigate the effect of surface primary production and lateral organic sediment transport. *Deep-Sea Res I* 100: 21-33
- Hannides, C. C. S., **J. C. Drazen**, B. N. Popp, and \*C. A. Choy (2015). Mesopelagic zooplankton metabolic demand in the North Pacific Subtropical Gyre. *Limnology and Oceanography* 60:419-428.
- Friedlander AM, Stamoulis KA, Kittinger JN, **Drazen JC**, Tissot BN (2014) Understanding the scale of marine protection in Hawai'i: from community-based management to the remote northwestern Hawaiian Islands Marine National Monument. *Advances in Marine Biology* 69: 153-203.
- #Hoen, D.K., Kim, S.L., Hussey, N.E., Wallsgrove, N.J., **Drazen, J.C.**, Popp, B.N. (2014) Amino acid <sup>15</sup>N trophic enrichment factors of four large carnivorous fishes. *Journal of Experimental Biology* 453: 76-83.
- Stein, D.L., **Drazen, J.C.** (2014). *Paraliparis hawaiiensis*, a new species of snailfish (Scorpaeniformes: Liparidae) and the first described from the Hawaiian Archipelago. *Journal of Fish Biology* 84(5): 1519-1526.
- Robison BH, Seibel BA, **Drazen JC** (2014). Deep-sea octopus conducts the longest-known egg-brooding period of any animal. *PLoS ONE* 9(7): e103437. doi:10.1371/journal.pone.0103437
- Yancey, P.H., \*Gerringer, M.E., **Drazen, J.C.**, Rowden, A.A., Jamieson, A.J. (2014). Marine fish may be biochemically constrained from inhabiting deepest ocean depths. *Proceedings of the National Academy of Sciences, USA*. 111:4461-4465.

- ^Sackett, D., K., **Drazen, J.C.**, Moriwake, V.M., Kelley, C.D., Schumacher, B.D. and Misa, W.F.X.E. (2014). Marine protected areas for deepwater fish populations: an evaluation of their affects in Hawaii. *Marine Biology* 161: 411-425.
- Barry, J.P., Buck, K.R., Lovera, C., Brewer, P.G., Seibel, B.A., **Drazen, J.C.**, Tamburri, M.N., Whaling, P.J., Kuhnz, L., Pane, E. F. (2013). The response of abyssal organisms to low pH conditions during a series of CO<sub>2</sub>-release experiments simulating deep-sea carbon sequestration. *Deep Sea Research I* 92: 249-260.
- Blum, J.D., Popp, B.N., **Drazen, J.C.**, \*Choy, C.A., Johnson, M.W. (2013). Methylmercury production below the mixed layer in the North Pacific Ocean. *Nature Geosciences*. 6: 879-884.  
doi:10.1038/ngeo1918
- \*Choy, C.A., #Portner, E., #Iwane, M., **Drazen, J.C.** (2013). Diets of five important predatory mesopelagic fishes of the central North Pacific. *Marine Ecology Progress Series* 492: 169-184.
- \*Choy, C.A., **Drazen, J.C.** (2013) Plastic for dinner? Frequent debris ingestion by large pelagic fishes from the central North Pacific subtropical gyre *Marine Ecology Progress Series* 485: 155-163
- Dale, J.J., **Drazen, J.C.**, Holland, K. N. (2013) Stingray life-history trade-offs associated with nursery habitat use inferred from a bioenergetics model. *Marine Biology* 160: 3181-3192.
- Drazen, J.C.**, #Dugan, B., Friedman, J.R. (2013). Red muscle proportions and enzyme activities in deep-sea demersal fishes off California. *Journal of Fish Biology* 83: 1592-1612.
- #Fleury, A. and **Drazen, J.C.** (2013) Abyssal scavenging communities attracted to Sargassum and fish in the Sargasso Sea. *Deep Sea Research I* 72: 141-147
- Hafner, N, **Drazen, J.C.**, Lubecke, V. M. (2013) Fish Heart Motion Measurements with a Body-Contact Doppler Radar Sensor. *IEEE Sensors Journal* 13: 408-414
- Hannides, C.C.S., Popp, B.N., \*Choy, C.A., **Drazen, J.C.** (2013) Midwater zooplankton and suspended particle dynamics in the North Pacific Subtropical Gyre: a stable isotope perspective. *Limnology and Oceanography* 58: 1931-1946.
- \*Misa, W.F.X.E., **Drazen, J.C.**, Kelley, C.D., Moriwake, V.N. (2013). Establishing species-habitat associations for 4 eteline snappers with the use of a baited stereo-video camera system. *Fishery Bulletin* 111: 293-308.
- ^Moore, C.H., **Drazen, J.C.**, Kelly, C.D., \*Misa, W.F.X.E. (2013). Deepwater marine protected areas of the main Hawaiian Islands: the importance of integrating context when establishing baselines. *Marine Ecology Progress Series* 476:167-183
- #Wilson, S., Yeh, J., Korsmeyer, K.E., **Drazen, J.C.** (2013) Metabolism of shallow and deep-sea benthic crustaceans and echinoderms in Hawaii. *Marine Biology* 160: 2363-2373
- \*Choy, C. A., P. C. Davison, **J. C. Drazen**, A. Flynn, E. J. Gier, J. Hoffman, J. P. McClain-Counts, T. W. Miller, B. N. Popp, S. W. Ross, and T. T. Sutton. (2012). Global trophic position comparison of two dominant mesopelagic fish families (Myctophidae, Stomiidae) using amino acid nitrogen isotopic analyses. *PLoS One* 7: e50133
- \*Condon, N.E., \*Friedman, J.R., **Drazen, J.C.** (2012) Metabolic enzyme activities in shallow- and deep-water chondrichthyans: Implications for metabolic and locomotory capacity. *Marine Biology* 159: 1713-1731
- De Leo, F. C., **J. C. Drazen**, E. W. Vetter, A. A. Rowden and C. R. Smith (2012). The effects of submarine canyons and the oxygen minimum zone on deep-sea fish assemblages off Hawaii. *Deep-sea Research I* 64:54-70.

- Devine, J. A., Watling, L., Cailliet, G., **Drazen, J.**, Duran Munoz, P., Orlov, A. M., Bezaury, J. (2012) Evaluation of potential sustainability of deep-sea fisheries for Grenadiers (Macrouridae). *Journal of Ichthyology* 52: 709-721
- Drazen, J. C.** and Haedrich, R. L. (2012). A continuum of life histories in deep-sea fishes. *Deep-Sea Research I* 61:34-42.
- Drazen, J.C.**, Bailey, D.M., Ruhl, H., Smith, K.L., Jr. (2012) The role of carrion supply in the abundance of deep-water fish off California. *PLoS ONE* 7: e49332
- Drazen, J.C.**, Yeh, J. (2012) Respiration of four species of deep-sea demersal fishes measured in situ in the eastern North Pacific. *Deep-Sea Research I* 60:1-6.
- \*Friedman, J.R., \*Condon, N, **Drazen, J.C.** (2012) Gill surface area and metabolic enzymes of demersal fishes associated with the oxygen minimum zone off California. *Limnology and Oceanography* 57: 1701:1710.
- O'Malley, J.M., **Drazen, J.C.**, Popp, B.N., Toonen, R.J., Gier, E. (2012). Spatial Variability in Growth and Prey Availability of Lobsters in the Northwestern Hawaiian Islands *Marine Ecology Progress Series* 249:211-220.
- Drazen, J. C.**, De Forest, L., and Domokos, R. (2011). Micronekton abundance and biomass in Hawaiian waters as influenced by seamounts, eddies, and the moon. *Deep-Sea Research* 58:557-566.
- Drazen, J.C.**, Yeh, J., \*Friedman, J.R., and \*Condon, N. (2011) Metabolism and enzyme activities of pacific hagfish from shallow and deep water. *Comparative Biochemistry and Physiology A* 159:182-187.
- Laxson, C.J., \*Condon, N.E., **Drazen, J.C.**, Yancey, P.H. (2011) Decreasing urea:trimethylamine N-oxide ratios with depth in chondrichthyes: a physiological depth limit? *Physiological and Biochemical Zoology* 84: 494-505.
- Merritt, D., M. K. Donovan, C. Kelley, L. Waterhouse, M. Parke, K. Wong and **J. C. Drazen**. (2011). BotCam: A baited camera system for non extractive monitoring of bottomfish species. *Fishery Bulletin* 109:56-67.
- Yeh, J. and **Drazen, J. C.** (2011). Baited camera observations of deep-sea megafaunal scavenger ecology on the California slope. *Marine Ecology Progress Series* 424: 145-156.
- \*Choy, C. A., Popp, B. N., Kaneko, J. J. and **Drazen, J. C.** (2009). The Influence of Depth on Mercury Levels in Pelagic Fishes and their Prey. *Proceedings of the National Academy of Sciences, USA* 106: 13865-13869.
- \*De Forest, L. and **J. C. Drazen** (2009). The influence of a Hawaiian seamount on a mesopelagic micronekton community. *Deep-Sea Research I* 56(2): 232-250.
- Drazen, J. C.**, Phleger, R., and Nichols, P. D. (2009). Lipid compositions and diet inferences in abyssal macrourids of the eastern North Pacific. *Marine Ecology Progress Series* 387:1-14. **Featured Article**
- \*Yeh, J. and **J. C. Drazen** (2009). Depth zonation and bathymetric trends of deep-sea megafaunal scavengers of the Hawaiian Islands. *Deep-Sea Research I* 56(2): 251-266.
- Drazen, J. C.** (2008). Energetic patterns in grenadier fishes; implications for fisheries. In "Grenadiers of the World Oceans: Biology, Stock assessment, and Fisheries." Orlov, A and T. Iwamoto (eds). *American Fisheries Society* volume 63: 203-223.
- Drazen, J. C.**, B. N. Popp, \*L. De Forest, \*C. A. Choy, and T. Clemente and K. L. Smith. (2008). Bypassing the abyssal benthic food web: macrourid diet in the eastern North Pacific inferred from stomach content and stable isotopes analyses. *Limnology and Oceanography* 53(6): 2644-2654.



- Drazen, J. C.**, C. F. Phleger, M. A. Guest, and P. D. Nichols (2008). Lipid, sterols and fatty acids of abyssal polychaetes, crustaceans, and a cnidarian and from the north-east Pacific Ocean: food web implications. *Marine Ecology Progress Series* 372: 157-167.
- Drazen, J. C.**, C. F. Phleger, M. A. Guest, and P. D. Nichols (2008). Lipid, sterols and fatty acid composition of abyssal holothurians and ophiuroids from the north-east Pacific Ocean: food web implications. *Comparative Biochemistry and Physiology B* 151:79-87.
- Barry, J. P. and **Drazen, J. C.** (2007). Response of deep-sea scavengers to ocean acidification and the odor from a dead grenadier. *Marine Ecology Progress Series* 350: 193-207.
- Drazen, J. C.** (2007). Depth related trends in proximate composition of benthic and benthopelagic fishes. *Deep-Sea Research I* 54: 203-219.
- Drazen, J. C.** and B. A. Seibel (2007). Depth-related trends in metabolism of benthic and benthopelagic deep-sea fish. *Limnology and Oceanography* 52(5): 2306-2316.
- Drazen, J. C.**, K. R. Reisenbichler, and B. H. Robison (2007). A comparison of absorption and assimilation efficiencies between four species of shallow- and deep-living fishes. *Marine Biology* 151(4): 1551-1558.
- Ferry-Graham, L. A., **J. C. Drazen**, and V. Franklin (2007). Laboratory observations of reproduction in deep-water zoarcids *Lycodes cortezianus* and *Lycodapus mandibularis* (Teleostei: Zoarcidae). *Pacific Science* 61(1): 129-139.
- Samerotte, A. L., **J. C. Drazen**, G. L. Brand, B. A. Seibel, and P. H. Yancey (2007). Correlation of trimethylamine oxide and habitat depth within and among species of teleost fish: An analysis of causation. *Physiological and Biochemical Zoology* 80 (2): 197-208.
- Seibel, B. A. and **J. C. Drazen** (2007). The rate of metabolism in marine animals: Environmental constraints, ecological demands and energetic opportunities. *Philosophical Transactions of the Royal Society of London B*, 362: 2061-2078.
- Stein, D. L., **J. C. Drazen**, K. L. Schlining, L. Kuhnz, and J. P. Barry (2006). Snailfishes of the central California coast: video, photographic, and morphological observations. *Journal of Fish Biology* 69: 970-986.
- Drazen, J. C.**, L. Bird, and J. P. Barry (2005). Development of a hyperbaric fish trap/respirometer. *Limnology and Oceanography: Methods* 3:488-498.
- Drazen, J. C.** and B. H. Robison (2004). Direct observations of the association between a deep-sea fish and a giant scyphomedusa. *Marine and Freshwater Behaviour and Physiology* 37(3): 209-214.
- #Gutowska, M., **J. C. Drazen**, and B. H. Robison (2004). Digestive chitinolytic activity in marine fishes of Monterey Bay, California. *Comparative Physiology and Biochemistry A* 139(3): 351-358.
- Voight, J. R. and **J. C. Drazen**. (2004) Hatchlings of the deep-sea octopus *Graneledone boreopacifica* are the largest and most advanced known. *Journal of Molluscan Studies* 70(4): 400-402.
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