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Professor of Oceanography
Hawaii Pacific University
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EDUCATION:

Ph.D. Biological Oceanography, January 2001
Scripps Institution of Oceanography, University of California San Diego, La Jolla, CA

B.Sc. Ecology, Behavior and Evolution, June 1993
University of California San Diego, La Jolla, CA

AWARDS:

Hawai'i Pacific University (HPU), Paid Research Leave in Chile, Spring 2017 Semester
Hawai'i Pacific University (HPU), Golden Apple Award for Best Graduate Teaching, 2015
Pew Fellowship in Marine Conservation, 2007
Best Fisheries Paper, 10th North Pacific Marine Science Organization Conference, 2001
Teaching Excellence. Biology Department, University of California San Diego, 1996
Graduation with Honors, UC San Diego, 1993
Phi Beta Delta National Honor Society, UC San Diego, 1991

RESEARCH INTERESTS:

Biogeography, Ecology and Conservation of far-ranging Marine Vertebrates and Management of their Pelagic Systems. Design of Pelagic Reserves for Marine Megavertebrates. Application of Marine Spatial Planning in the Pelagic Realm. What physical mechanisms define predictable foraging hotspots in pelagic systems? How can managers use natural history and oceanography to design effective management actions in the open ocean? How can Marine Protected Areas and Marine Spatial Planning help to manage human impacts on marine vertebrates and their oceanic habitats?

CURRENT APPOINTMENTS:

Professor of Oceanography

Hawaii Pacific University, Honolulu, HI, August 2019 - present

Co-Director

Center for Marine Debris Research, Waimanalo, HI, May 2019 - present

Research Associate

Oikonos Ecosystem Knowledge, Kailua, HI, July 2004 – present

RESEARCH EXPERIENCE:

Adjunct Professor

Duke University Marine Laboratory, Beaufort, NC, January 2008 – December 2012

Visiting Scholar

University of Washington, Seattle, WA, June 2005 – December 2007

Research Scientist

Duke University Marine Laboratory, Beaufort, NC, July 2002 – December 2007

REFEREED JOURNAL PUBLICATIONS (since coming to HPU, January 2008):

Jung, M.R., et al. including **Hyrenbach, K.D.** 2018. Polymer Identification of Plastic Debris Ingested by Pelagic-Phase Sea Turtles in the Central Pacific. *Environmental Science & Technology* 52: 11535 - 11544.

Yamashita, Rei, et al. including **Hyrenbach, K.D.** 2018. Global Monitoring of Persistent Organic Pollutants (POPs) Using Seabird Preen Gland Oil. *Archives of Environmental Contamination and Toxicology* 75(4): 545-556.

Gagne, T., **Hyrenbach, K.D.**, Hagemann, M., Bass, O., Pimm, S., MacDonald, M., Peck, B., and Van Houtan, K. 2018. Seabird Trophic Position Across Three Ocean Regions Tracks Ecosystem Differences. *Frontiers in Marine Science*, section Global Change and the Future Ocean. *Frontiers in Marine Science*, 5:317. DOI: 10.3389/fmars.2018.00317

Gagne, T., **Hyrenbach, K.D.**, Hagemann, M., and Van Houtan, K. 2018. Trophic signature of pelagic ecosystems in seabirds. *Science Advances*, 4(2), eaao3946 DOI: 10.1126/sciadv.aao3946

Donnelly-Greenan, E., **Hyrenbach, D.**, Beck, J., Fitzgerald, S., Nevins, H., and Hester, M. 2018. First quantification of plastic ingestion by Short-tailed Albatross *Phoebastria albatrus*. *Marine Ornithology*, 46 (1): 79-84

Youngren, S.M., Rapp, D.C., **Hyrenbach, K.D.** 2018. Plastic ingestion by Tristram's Storm-petrel (*Oceanodroma tristrami*) chicks from French Frigate Shoals, Northwestern Hawaiian Islands. *Marine Pollution Bulletin*, 128: 369–378

Jung, M.R., et al. **Hyrenbach, K.D.** 2018. Validation of ATR FT-IR to identify polymers of plastic marine debris, including those ingested by marine organisms. *Marine Pollution Bulletin*, 127: 704–716.

Hyrenbach, K.D., Hester, M.M., Adams, J., Titmus, A.J., Michael, P., Wahl, T., Chang, C.-W., Marie, A., and Vanderlip, C. 2017. Plastic ingestion by Black-footed Albatross *Phoebastria nigripes* from Kure Atoll, Hawai'i: Linking chick diet remains and parental at-sea foraging distributions. *Marine Ornithology* 45: 225-236.

Rapp, D.C., Youngren, S.M., Hartzell, and **Hyrenbach, K.D.** 2017. Community-wide patterns of plastic ingestion in seabirds breeding at French Frigate Shoals, Northwestern Hawaiian Islands. *Marine Pollution Bulletin*, 123: 269–278.

Michael, P.E., Jahncke, J., and **Hyrenbach K.D.** 2016. Placing Local Aggregations in a Larger-scale Context: Hierarchical Modeling of Black-footed Albatross Dispersion. PLoS ONE 11(4): e0153783 doi:10.1371/journal.pone.0153783

Wedding, L.M. Maxwell, S. **Hyrenbach, D.**, Dunn, D.C., Roberts, J., Briscoe, D., Hines, E., and Halpin, P.N. 2016. Geospatial Approaches to Support Pelagic Conservation Planning and Adaptive Management. *Endangered Species Research*, 30: 1–9.

Pravder, H., Prestridge, C, and **Hyrenbach, K.D.** 2015. Wedge-tailed Shearwater breeding phenology at the Freeman Seabird Preserve, O‘ahu, Hawai‘i. *‘Elepaio*, 75(3): 17-21.

Lyday, S.E., Ballance, L.T., Field, D.B., and **Hyrenbach, K.D.** 2015. Shearwaters as ecosystem indicators: Towards fishery-independent metrics of fish abundance in the California Current. *Journal of Marine Systems*, DOI: 10.1016/j.jmarsys.2014.08.010

Nilsen, F., **Hyrenbach, K.D.**, Fang, J., and Jensen, B. 2014. Use of indicator chemicals to characterize the plastic fragments ingested by Laysan albatross. *Marine Pollution Bulletin*, 87: 230-236.

Lopez, J.U., **Hyrenbach, K.D.**, Littnan, C., and Ylitalo, G.M. 2014. An exploration of the geographic variation of persistent organic pollutants in the Hawaiian monk seal (*Monachus schauinslandi*) from the Main Hawaiian Islands. *Endangered Species Research*, 24: 249-262.

Hyrenbach, K.D., Gleichman, J.S., and Karnovsky, N.J. 2013. Diving behavior of Wedge-tailed Shearwaters rearing chicks on Lehua islet. *‘Elepaio*, 74(1): 1-4.

Hyrenbach, K.D., Hester, M.M., Johnson, J.A., Lyday, S., Bingham, S., and Pawloski, J. 2013. First evidence of plastic ingestion by White-tailed Tropicbirds from O‘ahu, Hawai‘i. *Marine Ornithology*, 41: 167-169.

Michael, P., Jahncke, J., and **Hyrenbach, K.D.**, 2013. Relative influence of static and dynamic features on black-footed albatross habitat use in central California Sanctuaries. *Fisheries Oceanography*, 23(1): 18-31.

Guy, T.J., Jennings, S.L., Suryan, R.M., Melvin, E.F., Bellman, M.A., Ballance, L.T., Blackie, B.A., Croll, D.A., Deguchi, T., Geernaert, T.O., Henry, R.W., Hester, M., **Hyrenbach, K.D.**, Jahncke, J., Kappes, M.A., Ozaki, K., Roletto, J., Sato, F., Sydeman, W.J., and Zamon, J.E. 2013. Overlap of North Pacific albatrosses with the U.S. west coast groundfish and shrimp fisheries. *Fisheries Research*, 147: 222-234.

Francke, D.L. Hargrove, S.A., Vetter, E.W., Winn, C.D., Balazs, G.H., and **Hyrenbach, K.D.** 2013. Behavior of juvenile green turtles in a coastal neritic habitat: Validating time–depth–temperature records using visual observations. *Journal of Experimental Marine Ecology and Biology*, 444: 55 – 65.

Adams, J., MacLeod, C., Suryan, R.M., **Hyrenbach, K.D.**, and Harvey, J.T. 2012. Summer-time use of west coast US National Marine Sanctuaries by migrating sooty shearwaters (*Puffinus griseus*). *Biological Conservation*, 156: 105-116.

Lewison, R., Oro, D., Godley, B., Underhill, L., Bearhop, S., Wilson, R., Ainley, D., Arcos, J.M., Boersma, P.D., Borboroglu, P., Boulinier, T., Frederiksen, M., Genovart, M., González-Solís, J., Green, J.A., Grémillet, D., Hamer, K.C., Hilton, G.M., **Hyrenbach, K.D.**, Martínez-Abraín, A., Montevecchi, W.A., Phillips, R.A., Ryan, P.G., Sagar, P.M., Sydeman, W.J., Yorio, P., Wanless, S., Watanuki, Y., and Weimerskirch, H. 2012. Research Priorities for seabirds: Improving seabird conservation and management in the 21st century. *Endangered Species Research*, 17: 93–121.

Hyrenbach, K.D. 2011. Tale of two years: Monitoring Wedge-tailed Shearwaters at the Freeman Seabird Preserve, O’ahu. *‘Elepaio*, 71(3): 17-18.

Titmus, A.J., and **Hyrenbach, K.D.** 2011. Habitat associations of marine birds and floating debris in the North East Pacific at two spatial scales. *Marine Pollution Bulletin*, 62(11): 2496-2506.

Gilman, E., Dunn D., Read, A., Warner, R., and **Hyrenbach, K.D.** 2011. Designing Criteria Suites to Identify Sites and Networks of High Value Across Manifestations of Biodiversity. *Biodiversity Conservation*, 20(14): 3363-3383.

Schick, R.S., Halpin, P.N., Read, A.J., Urban, D.L., Best, B.D., Good, C.P. Good, Roberts, J.J. Roberts, LaBrecque, E.A., Dunn, C., Garrison, L., **Hyrenbach, K.D.**, McClellan W.A., Pabst, D.A., Palka, D.L., Stevick, P., and Whitehead, H. 2011. Community structure in pelagic cetaceans. *Marine Ecology Progress Series*. 434: 165-193.

Nur, N., Jahncke, J., Herzog, M., **Hyrenbach, K.D.**, Ainley, D.G., Wiens, J.A., Ballance, L.T., Morgan, K., Zamon, J.E., and Stralberg, D. Where the Wild Things Are: Predicting Hotspots of Seabird Aggregations in the California Current System. *Ecological Applications*, 21(6):2241-2257.

Hooker, S.K., Cañadas, A., **Hyrenbach, K.D.**, Corrigan, C., Polovina, J.J., Reeves, R.R. 2011. Making marine protected area networks effective for marine top predators. *Endangered Species Research*, 13:203-218.

Ainley, D.G., **Hyrenbach, K.D.**. 2010. Top-Down and Bottom-Up Factors Affecting Seabird Population Trends in the California Current System (1985-2006). *Progress in Oceanography*, 54 (3-4): 242-254

Nevins H-R, Adams, A., Moller, H., Newman, J., Hester, M., **Hyrenbach, K.D.** 2009. International and cross-cultural management in conservation of migratory species. *Journal of the Royal Society of New Zealand*, 39(4): 183-185.

Hart K.M., **Hyrenbach K.D.** 2009. Satellite telemetry of marine mega -vertebrates. *Endangered Species Research*, 10: 9-20.

Louzao, M., Bécarea, J., Rodríguez, B., **Hyrenbach, K.D.**, Ruiz, A., Arcos, J.M. 2009. Combining vessel-based surveys and tracking data to identify key marine areas for seabirds: a conservation application. *Marine Ecology Progress Series*, 391: 183-197.

Halpin, P.N., Read, A.J., Fujioka, E., Best, B.D., Donnelly, B., Hazen, L.J., Kot, J., Urian, K., LaBrecque, E., Dimatteo, A., Cleary, J., Good, C., Crowder, L.B., **Hyrenbach, K.D.** 2009. OBIS-SEAMAP: The World Data Center for Marine Mammal, Sea Bird, and Sea Turtle Distributions. *Oceanography*, 22: 96-107.

Hebshi, A.J., Duffy, D.C., **Hyrenbach, K.D.** 2008. Associations between seabirds and subsurface predators around Oahu, Hawaii. *Aquatic Biology*, 4: 89-98.

OTHER PUBLICATIONS AND REPORTS (since coming to HPU, January 2008):

Marrero, M., Hester, M., **Hyrenbach, D.**, Michael, P., Adams, J., Vanderlip, C., Keiper, C., Stock, J., Collins, A., Alvarez, T. 2012. Winged Ambassadors: Ocean Literacy Through the Eyes of Albatross. *Current Journal of Marine Education*, 28(2): 26-30.

Hyrenbach, K.D. 2010. Pelagic Reserves for Marine Top Predators: How Big and How Many? *Current Journal of Marine Education*, 26(2): 29-33.

Hyrenbach, D., Nevins, H., Hester, M., Keiper, C., Webb, S., Harvey, J. 2009. Seabirds Indicate Plastic Pollution in the Marine Environment. In: *Marine debris in Alaska: coordinating our efforts : proceedings of the Marine Debris in Alaska Workshop, February 14-15, 2008, Anchorage, Alaska / Michael Williams and Erika Ammann, (Editors), Fairbanks : Alaska Sea Grant College Program, University of Alaska Fairbanks, pp. 57-61.*

Hyrenbach, K.D. 2008. Around our necks. *Natural History* 117 (5): 6 (2).

Hyrenbach, K.D. 2008. Applying Spatially-explicit Measures for Albatross Conservation, Pp. 118-120. In: De Roi, T., Jones, M., Fitter, J. (Eds). *Albatross: their world, their ways.* Firefly Books, Buffalo, NY.

PROFESSIONAL SERVICE (since coming to HPU, January 2008):

Member, HPU DNS FPRC, September 2019 – present

Chair, HPU CNCS Curriculum Committee, September 2017 – present

Chair, HPU DNS FPRC, September 2016 – December 2016

Member, HPU CNCS Curriculum Committee, September 2016 – December 2016

Member, HPU FARPAC, September 2015 – May 2016

Member, HPU DNS FPRC, September 2015 – May 2016

Chair, HPU CNCS Curriculum Committee, September 2014 – August 2016

Hawaiian Monk Sea Recovery Team, July 2014 – July 2019

Faculty Mentor, MSMS Club, Hawai'i Pacific University, August 2013 – July 2015

Chair, Marine Science Masters' Program, Hawai'i Pacific University, August 2013 – July 2014

WESTPAC Protected Species Committee, July 2013 –

Scientific Editor, *Public Library of Science (PLoS-1)*, July 2011 – Present

Federal Marine Protected Area Advisory Committee, July 2010 – June 2014

Chair, HPU CNCS Curriculum Committee, January 2009 – September 2011 Member, HPU CNCS Curriculum Committee, September 2008 – December 2008

Review Editor, *Marine Ecology Progress Series.* March 2006 – Present