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Assistant 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:

Best Fisheries Paper, 10th Annual North Pacific Marine Science Organization Conference, October 2001

Teaching Excellence Award. Biology Department, University of California San Diego, June 1996

Graduation with Honors, University of California San Diego, June 1993

Phi Beta Delta National Honor Society, University of California San Diego, May 1991

RESEARCH INTERESTS:

Biogeography, Ecology and Conservation of far-ranging Marine Birds 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?

RESEARCH EXPERIENCE:

Associate Professor of Oceanography

Hawaii Pacific University, Honolulu, HI., August 2013 - present

Assistant Professor of Oceanography

Hawaii Pacific University, Honolulu, HI., January 2008 - July 2013

Adjunct Professor

Duke University Marine Laboratory, Beaufort, NC., January 2008 – present

Visiting Scholar

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

Research Scientist

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

COMPETITIVE GRANTS:**Past Support (since coming to HPU, 01 / 2008):**

(05/15/08 – 05/15/09) National Fish and Wildlife Foundation Marine Debris Program: \$ **24,259**
 North Pacific Plastic Debris and Seabird Research
 Investigators: **Hyrenbach** / Lavender

(06/01/08 - 12/31/08) Spring 2008 HPU TSEP Grant: \$ **5,000**
 Do illegal fisheries in the high seas threaten Hawaiian Albatross?
 Investigators: **Hyrenbach** / Hester

(06/01/08 - 12/31/08) Bonnell Cove Foundation: \$ **5,000**
 Satellite tracking of Black-footed Albatross from Kure Atoll
 Investigators: Hester / **Hyrenbach** / Keiper

(06/01/08 - 12/31/08) National Marine Monument - NOAA: \$ **15,000**
 Satellite tracking of Black-footed Albatross from Kure Atoll
 Investigators: Hester / **Hyrenbach** / Keiper

(06/01/08 - 12/31/08) Cordell Bank National Marine Sanctuary - NOAA: \$ **5,000**
 Black-footed Albatross - Winged Ambassadors for Ocean Stewardship
 Investigators: Hester / **Hyrenbach** / Keiper

(03/01/09 – 01/31/10) Spring 2009 HPU TSEP Grant: \$ **4,000**
 Seabird Surveys Onboard NOAA Ecosystem Research Division Cruises
 Investigators: **Hyrenbach** / Howell

(05/01/09 – 10/31/09) Mellon 8 Faculty Research / Teaching Partnership: \$ **3,500**
 Comparative Foraging Ecology of Seabirds in Contrasting Ecosystems
 Investigators: Karnovsky / **Hyrenbach**

(01/01/09 - 12/31/10) Fish and Wildlife Service (USFWS): \$ **33,000**
 Foraging ecology of two Hawaiian seabird guilds: Tuna birds (Wedge-tailed Shearwaters & Red-footed Boobies) versus Solitary Foragers (Brown Boobies & Red-tailed Tropicbirds)
 Investigators: Young / **Hyrenbach** / Shaffer / Suryan

(12/01/09 – 05/31/11) National Fish and Wildlife Foundation Marine Debris Program: \$ **33,941**
 Non-lethal assessment of plastic ingestion in live seabirds
 Investigators: **Hyrenbach** / Titmus

(01/01/10 – 05/15/11) Fall 2009 HPU TSEP Grant: \$ **6,900**
 Green Sea Turtle Foraging Habitat in Kailua Bay (Oahu)
 Investigators: **Hyrenbach** / Francke

(06/01/10 – 05/31/11) Marisla Foundation: \$ **35,000**
 Seabirds as Bio-Indicators of Pelagic Plastic Debris in the North Pacific Ocean
 Hester / Nevins / **Hyrenbach**

(07/01/10 – 06/30/11) NOAA-NFA-NFAPO-2010-2002272: \$ **29,946**
 Increasing the quality and capacity for marine science research and education at H.P.U.
 Investigators: Jensen / **Hyrenbach**

(01/01/11 – 12/31/11) Fall 2010 HPU TSEP Grant: \$ **2,700**
 Participation in the Federal Marine Protected Area Advisory Committee
 Investigators: **Hyrenbach**

- (06/01/11 – 05/31/12) Marisla Foundation: \$ **35,000**
Seabirds as Bio-Indicators: Developing Metrics of Pelagic Plastic Debris in the North Pacific Ocean
Hester / Nevins / **Hyrenbach**
- (06/01/11 – 05/31/12) Mohamed bin Zayed Species Conservation Fund: \$ **10,000**
High-seas threats for Black-footed albatross from Kure Atoll
Investigators: **Hyrenbach** / Hester / Vanderlip
- (06/01/11 – 05/31/12) NOAA - Marine National Sanctuary Program: \$ **20,000**
Winged Ambassadors: Tracking Albatross for Ocean Stewardship
Investigators: Hester / **Hyrenbach** / Adams / Vanderlip
- (01/01/12 – 12/31/12) Fall 2010 HPU TSEP Grant: \$ **2,700**
Continued Participation in the Federal Marine Protected Area Advisory Committee
Investigators: **Hyrenbach**
- (06/01/12 – 05/31/13) Marisla Foundation: \$ **35,000**
Seabirds as Bio-Indicators: Developing Time Series of Pelagic Plastic Debris in the North Pacific Ocean
Investigators: Hester / Nevins / **Hyrenbach**
- (07/01/12 – 12/31/13) California Sea Grant: \$ **5,000**
Geospatial Marine Conservation Approaches - Society for Conservation Biology Symposium
Investigators: **Hyrenbach** / Wedding / Halpin
- (07/01/12 – 06/30/14) National Fish and Foundation: \$ **54,333**
High-seas threats for Black-footed albatross from Kure Atoll
Investigators: **Hyrenbach** / Hester / Vanderlip
- (09/01/12 – 08/31/13) USFWS Monitoring Program: \$ **38,599**
French Frigate Shoals Biological Monitoring Data Quality Control and Analyses
Investigators: Hartzell / **Hyrenbach** / Underwood
- (06/01/13 – 05/31/14) Marisla Foundation: \$ **35,000**
Seabirds as Bio-Indicators: Tracking Pelagic Plastic Debris in the North Pacific Ocean
Investigators: Hester / Nevins / **Hyrenbach**
- (01/01/14 – 12/31/14) Disney Foundation: \$ **24,500**
Integrated Wedge-tailed Shearwater Colony Protection
Investigators: Johnson / **Hyrenbach**

Current Support

- (06/01/14 – 05/31/15) Marisla Foundation: \$ **35,000**
Ecosystem Bio-Indicators of Pelagic Plastic Debris North Pacific Food Webs
Investigators: Hester / Nevins / **Hyrenbach**
- (08/01/14 – 07/31/15) Fall 2012 HPU TSEP Grant: \$ **6,500**
Developing capacity for stable isotopic analysis of seabird / tuna diets.
Investigators: **Hyrenbach**

REFEREED JOURNAL PUBLICATIONS (since coming to HPU, 01 / 2008):

Lyday, S.E., Ballance, L.T., Field, D.B., and **Hyrenbach, K.D.** 2014. 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. Submitted to *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., Balance, 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., Bouludier, 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. Submitted to *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*, 84 (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.

Abdulla, A., Gomei, M., **Hyrenbach, D.**, Notarbartolo-di-Sciara, G., T. Agardy. 2008. Current challenges towards a network of representative marine protected areas in the Mediterranean: a need to prioritize the protection of underrepresented habitats. *ICES Journal of Marine Science* 66: 22-28.

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

Notarbartolo-di-Sciara, G., Agardy, T., **Hyrenbach, D.**, Scovazzi, T., and Van Klaveren, P. 2008. The Pelagos Sanctuary for Mediterranean Marine Mammals. *Aquatic Conservation* 18(4): 367-391.

OTHER PUBLICATIONS AND REPORTS (since coming to HPU, 01 / 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.

McClatchie, S., Goericke, R., Koslow, J.A., Schwing, F.B., Bograd, S.J., Charter, R., Watson, W., Lo, N., Hill, K., Gottschalk, J., L'Heureux, M., Xue, Y., Peterson, W.T., Emmett, R., Collins, C., Gaxiola-Castro, G., Durazo, R., Kahru, M., Mitchell, B.G., **Hyrenbach, K.D.**, Sydeman, W.J., Bradley, R.W., Warzybok, P., and Bjorkstedt, E. 2008. The State of the California Current, 2007-2008: La Niña Conditions and Their Effects on the Ecosystem. California Cooperative of Oceanic Fisheries Investigations Reports 49: 39-76.

Hyrenbach, D., Cañadas, A. & Sagarminaga, R. 2008. Spatially-explicit Conservation in the Alborán Sea: Predictive Habitat Models and Gap Analysis Guide Pelagic Protected Area Designs. European MPA Symposium, Sept. 25 – 28, 2007, Murcia, (Spain).

Louzao, M., Arcos, J.M., **Hyrenbach, D.** & Oro, D. 2008. Marine protected areas for the conservation of Mediterranean Procellariiformes. European MPA Symposium, Sept. 25 – 28, 2007, Murcia, (Spain).

Arcos, J.M., Bécarea, J., Rodríguez, B., Ruiz, A., Ramírez, I., Amorim, P., Gerales, P., Meirinho, A., Paiva, V., Viada, C., Louzao, M., & **Hyrenbach, D.** 2008. Marine Important Bird Areas (IBAs): towards the effective protection of seabirds at sea. European MPA Symposium, Sept. 25 – 28, 2007, Murcia, (Spain). Available online at: <http://www.alboranseaconsevation.org/resources.htm>

PUBLIC OUTREACH ARTICLES (since coming to HPU, 01 / 2008):

Hyrenbach, K.D. & Johnson, W. 2014. Five years of Wedge-tailed Shearwater monitoring and habitat restoration at the Freeman Seabird Preserve: 2009 – 2013. 'Elepaio, 74(3): 5-6.

Hyrenbach, K.D. & Johnson, W. 2013. 2012: Record breeding shearwater count at the Freeman Seabird Preserve. 'Elepaio, 73(2): 13-14.

Hyrenbach, K.D. & Johnson, W. 2012. 2011: A Mixed Year at the Freeman Seabird Preserve. 'Elepaio, 72(2): 13-14.

PROFESSIONAL SERVICE (since coming to HPU, 01 / 2008):

Chair, HPU CNCS Undergraduate Curriculum Committee, September 2014 - present.

Member, Hawaiian Monk Sea Recovery Team, July 2014 – Present.

Faculty Mentor, Marine Science Club (MSC), Hawai'i Pacific University , August 2013 - Present

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

Member, Western Pacific Regional Fishery Management Council Protected Species Committee, July 2013 - Present

Scientific Editor, Public Library of Science (PLoS-1), July 2011 – present.

Member, Federal Marine Protected Area Advisory Committee, July 2010 – present.

Chair, HPU CNCS Undergraduate Curriculum Committee, January 2009 – September 2011.

Member, HPU CNCS Undergraduate Curriculum Committee, September 2008 – December 2008.

Review Editor, Marine Ecology Progress Series. March 2006 – present

PROFESSIONAL MEMBERSHIPS:

Hawai'i Audubon Society

American Society for Limnology and Oceanography

Pacific Seabird Group

Society for Conservation Biology