

# Stanford

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## Larry Crowder

Edward Ricketts Provostial Professor, Professor of Oceans, Senior Fellow at the Woods Institute for the Environment and Professor, by courtesy, of Biology

Curriculum Vitae available Online

### Bio

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#### BIO

Larry Crowder is the Edward F. Ricketts Provostial Professor of Marine Ecology and Conservation at Hopkins Marine Station, Stanford Doerr School of Sustainability and a senior fellow at the Stanford Woods Institute for the Environment. He is also Affiliated Faculty at Stanford Center for Ocean Solutions and Professor by Courtesy, Department of Biology. Previously, he was the Stephen Toth Professor of Marine Biology at Duke University. Dr. Crowder's research centers on predation and food web interactions, mechanisms underlying recruitment variation in fishes, population and food web modeling in conservation biology, and interdisciplinary approaches to marine conservation. He has studied food web processes in both freshwater and marine ecosystems, and has used observational, experimental, and modeling approaches to understand these interactions in an effort to improve management. He was principal investigator for a number of large interdisciplinary research projects including the South Atlantic Bight Recruitment Experiment (SABRE), OBIS SEAMAP (Spatial Ecological Analysis of Megavertebrate Animal Populations), and Project GLOBAL (Global Bycatch Assessment of Long-Lived Species). Current Interdisciplinary Projects include Dynamic Ocean Management in Costa Rica (DYNAMAR), Sea Turtle Research Experiment on the Thermal Corridor Hypothesis (STRETCH) and Traits-based tools to inform cross-jurisdictional fisheries management under climate change. He has also directed and participated in a number of research, analysis, and synthesis groups at the National Center for Ecological Analysis and Synthesis (NCEAS) and for the National Research Council's Ocean Studies Board. His recent research has focused on marine conservation, including research on bycatch, spatial ecological analysis, nutrients and low oxygen, sustainable seafood, ecosystem-based management, marine spatial planning, and governance. He is a AAAS Fellow and was awarded Duke University's Scholar/Teacher of the year award in 2008-2009. Larry was recently named National Geographic Explorer and received a lifetime achievement award from the International Sea Turtle Society.

Specialties: Bycatch, Coastal and Nearshore Environment, Dead Zones and Hypoxia, Dynamics Ocean Management, Ecosystem Health, Estuaries, Fisheries, Governance, Land-Sea Interactions, Ocean Pelagic Organisms, Ocean Conservation, Oil Spills, Small-Scale Fisheries, Social-Ecological Systems

#### ACADEMIC APPOINTMENTS

- Professor, Oceans
- Senior Fellow, Stanford Woods Institute for the Environment
- Professor, Biology
- Professor (By courtesy), Biology
- Member, Bio-X
- Senior Fellow, Stanford Woods Institute for the Environment

#### ADMINISTRATIVE APPOINTMENTS

- Science Director, Center for Ocean Solutions, (2011-2017)

## HONORS AND AWARDS

- National Geographic Explorer, National Geographic (2022)
- Lifetime Achievement Award, International Sea Turtle Society (2020)

## LINKS

- My Lab: <http://crowderlab.stanford.edu/>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Ecology, conservation, fisheries, protected species, ecosystem-based management

## Teaching

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### COURSES

#### 2023-24

- Marine Conservation Biology: BIO 173H, BIO 273H, OCEANS 173H, OCEANS 273H (Spr)
- Marine Conservation Biology - Seminar and Discussion Only: OCEANS 173HA, OCEANS 273HA (Spr)
- Ocean Conservation: Pathways to Solutions: OCEANS 6N (Win)
- Research Approaches for Environmental Problem Solving: ENVRES 330 (Spr)
- Science for Conservation Policy: Meeting California's Pledge to Protect 30% by 2030: BIO 101 (Win)

#### 2022-23

- Marine Conservation Biology: BIOHOPK 173H, BIOHOPK 273H (Spr)
- Marine Conservation Biology - Seminar and Discussion Only: BIOHOPK 173HA, BIOHOPK 273HA (Spr)
- Ocean Conservation: Pathways to Solutions: BIO 6N (Win)
- The Social Ocean: Human Dimensions of Coastal and Marine Ecosystems: ENVRES 220 (Win)

#### 2021-22

- Marine Conservation Biology: BIOHOPK 173H, BIOHOPK 273H (Spr)
- Marine Conservation Biology - Seminar and Discussion Only: BIOHOPK 173HA, BIOHOPK 273HA (Spr)
- Ocean Conservation: Pathways to Solutions: BIO 6N (Win)
- The Social Ocean: Human Dimensions of Coastal and Marine Ecosystems: ENVRES 220 (Win)

#### 2020-21

- The Social Ocean: Human Dimensions of Coastal and Marine Ecosystems: ENVRES 220 (Win)

## STANFORD ADVISEES

### Doctoral Dissertation Reader (AC)

Ceyenna Tillman

### Postdoctoral Faculty Sponsor

Michelle María Early

### Doctoral Dissertation Advisor (AC)

Christopher Knight, Taylor Souza

**Doctoral Dissertation Co-Advisor (AC)**

Safari Fang, Catherine Lee Hing, Chloe Mikles, Bianca Santos

**Master's Program Advisor**

Molly Glickman, Connor Gonzales

**Doctoral (Program)**

Christopher Knight

**GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS**

- Biology (School of Humanities and Sciences) (Phd Program)

**Publications**

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**PUBLICATIONS**

- **The effect of reef morphology on coral recruitment at multiple spatial scales.** *Proceedings of the National Academy of Sciences of the United States of America* Carlson, R. R., Crowder, L. B., Martin, R. E., Asner, G. P. 2024; 121 (4): e2311661121
- **Trait-based analyses reveal global patterns in diverse diets of albacore tuna (<i>Thunnus alalunga</i>)** *FISH AND FISHERIES* Hardy, N. A., Matuch, C., Roote, Z., George, I., Muhling, B. A., Jacox, M. G., Hazen, E. L., Bograd, S. J., Crowder, L. B., Green, S. J. 2023
- **Exploring climate-induced sex-based differences in aquatic and terrestrial ecosystems to mitigate biodiversity loss.** *Nature communications* Gissi, E., Schiebinger, L., Hadly, E. A., Crowder, L. B., Santoleri, R., Micheli, F. 2023; 14 (1): 4787
- **Projecting climate change impacts from physics to fisheries: A view from three California Current fisheries** *PROGRESS IN OCEANOGRAPHY* Smith, J. A., Buil, M., Muhling, B., Tommasi, D., Brodie, S., Frawley, T. H., Fiechter, J., Koenigstein, S., Himes-Cornell, A., Alexander, M. A., Bograd, S. J., Quiros, N., Crowder, et al 2023; 211
- **Priorities for synthesis research in ecology and environmental science** *ECOSPHERE* Halpern, B. S., Boettiger, C., Dietze, M. C., Gephart, J. A., Gonzalez, P., Grimm, N. B., Groffman, P. M., Gurevitch, J., Hobbie, S. E., Komatsu, K. J., Kroeker, K. J., Lahr, H. J., Lodge, et al 2023; 14 (1)
- **The influence of social cues on timing of animal migrations.** *Nature ecology & evolution* Oestreich, W. K., Ai, K. M., Crowder, L. B., McKenna, M. F., Berdahl, A. M., Abrahms, B. 2022
- **Land-dependent marine species face climate-driven impacts on land and at sea** *MARINE ECOLOGY PROGRESS SERIES* Blondin, H. E., Armstrong, K. C., Hazen, E. L., Oestreich, W. K., Santos, B. S., Haulsee, D. E., Mikles, C. S., Knight, C. J., Bennett, A. E., Crowder, L. B. 2022; 699: 181-198
- **Large-scale effects of turbidity on coral bleaching in the Hawaiian islands** *FRONTIERS IN MARINE SCIENCE* Carlson, R. R., Li, J., Crowder, L. B., Asner, G. P. 2022; 9
- **The diverse benefits of biodiversity conservation in global ocean areas beyond national jurisdiction** *FRONTIERS IN MARINE SCIENCE* Santos, B. S., Devereaux, S. G., Gjerde, K., Chand, K., Martinez, J., Crowder, L. B. 2022; 9
- **One ocean** *CONSERVATION SCIENCE AND PRACTICE* Crowder, L. B. 2022; 4 (5)

- **Acoustic signature reveals blue whales tune life-history transitions to oceanographic conditions** *FUNCTIONAL ECOLOGY*  
Oestreich, W. K., Abrahms, B., McKenna, M. F., Goldbogen, J. A., Crowder, L. B., Ryan, J. P.  
2022
- **Linking small-scale fisheries performance to governance attributes: A quantitative assessment from stakeholders' perceptions in the Americas and Europe** *MARINE POLICY*  
Ourens, R., Melnychuk, M. C., Crowder, L. B., Gutierrez, N. L., Hilborn, R., Pita, C., Defeo, O.  
2022; 136
- **Trait-based approaches to global change ecology: moving from description to prediction.** *Proceedings. Biological sciences*  
Green, S. J., Brookson, C. B., Hardy, N. A., Crowder, L. B.  
2022; 289 (1971): 20220071
- **Where do the billfish go? Using recreational catch data to relate local and basin scale environmental conditions to billfish occurrence in the Eastern Tropical Pacific** *FISHERIES OCEANOGRAPHY*  
Haulsee, D. E., Blondin, H. E., Logan, R. K., Crowder, L. B.  
2021
- **Climate change stressors and social-ecological factors mediating access to subsistence resources in Arctic Alaska** *ECOLOGY AND SOCIETY*  
Green, K. M., Beaudreau, A. H., Lukin, M. H., Crowder, L. B.  
2021; 26 (4)
- **Major challenges in developing marine spatial planning** *MARINE POLICY*  
Santos, C., Agardy, T., Andrade, F., Crowder, L. B., Ehler, C. N., Orbach, M. K.  
2021; 132
- **Fishers as foragers: Individual variation among small-scale fishing vessels as revealed by novel tracking technology** *FISHERIES RESEARCH*  
Frawley, T. H., Blondin, H. E., White, T. D., Carlson, R. R., Villalon, B., Crowder, L. B.  
2021; 238
- **Social relationship dynamics mediate climate impacts on income inequality: evidence from the Mexican Humboldt squid fishery** *REGIONAL ENVIRONMENTAL CHANGE*  
Elsler, L. G., Frawley, T., Britten, G. L., Crowder, L. B., DuBois, T. C., Radosavljevic, S., Gilly, W. F., Crepin, A., Schlüter, M.  
2021; 21 (2)
- **Dynamic Thermal Corridor May Connect Endangered Loggerhead Sea Turtles Across the Pacific Ocean** *FRONTIERS IN MARINE SCIENCE*  
Briscoe, D. K., Tomaszewicz, C., Seminoff, J. A., Parker, D. M., Balazs, G. H., Polovina, J. J., Kurita, M., Okamoto, H., Saito, T., Rice, M. R., Crowder, L. B.  
2021; 8
- **Social relationship dynamics mediate climate impacts on income inequality: evidence from the Mexican Humboldt squid fishery.** *Regional environmental change*  
Elsler, L. G., Frawley, T. H., Britten, G. L., Crowder, L. B., DuBois, T. C., Radosavljevic, S., Gilly, W. F., Crépin, A. S., Schlüter, M.  
2021; 21 (2): 35
- **How adaptive capacity shapes the Adapt, React, Cope response to climate impacts: insights from small-scale fisheries** *CLIMATIC CHANGE*  
Green, K. M., Selgrath, J. C., Frawley, T. H., Oestreich, W. K., Mansfield, E. J., Urteaga, J., Swanson, S. S., Santana, F. N., Green, S. J., Naggea, J., Crowder, L. B.  
2021; 164 (1-2)
- **WTO must ban harmful fisheries subsidies.** *Science (New York, N.Y.)*  
Sumaila, U. R., Skerritt, D. J., Schuhbauer, A., Villasante, S., Cisneros-Montemayor, A. M., Sinan, H., Burnside, D., Abdallah, P. R., Abe, K., Addo, K. A., Adelsheim, J., Adewumi, I. J., Adeyemo, et al  
2021; 374 (6567): 544
- **Promoting equity in scientific recommendations for high seas governance** *One Earth*  
Chapman, M. S., Oestreich, W. K., Frawley, T. H., Boettiger, C., Diver, S., Santos, B. S., Scoville, C., Armstrong, K., Blondin, H., Chand, K., Haulsee, D. E., Knight, C. J., Crowder, et al  
2021; 4 (6): 790-794
- **Online News Media Coverage of Sea Turtles and Their Conservation** *BioScience*  
Santos, B. S., Crowder, L. B.

2021; 71 (3): 305-313

- **Combining high temporal resolution whale distribution and vessel tracking data improves estimates of ship strike risk** *BIOLOGICAL CONSERVATION*  
Blondin, H., Abrahms, B., Crowder, L. B., Hazen, E. L.  
2020; 250
- **Organizational perspectives on sustainable ocean governance: A multi-stakeholder, meta-organization model of collective action** *MARINE POLICY*  
Berkowitz, H., Crowder, L. B., Brooks, C. M.  
2020; 118
- **A comparative analysis of dynamic management in marine and terrestrial systems** *FRONTIERS IN ECOLOGY AND THE ENVIRONMENT*  
Oestreich, W. K., Chapman, M. S., Crowder, L. B.  
2020
- **Operationalizing Ocean Health: Toward Integrated Research on Ocean Health and Recovery to Achieve Ocean Sustainability** *ONE EARTH*  
Franke, A., Blenckner, T., Duarte, C. M., Ott, K., Fleming, L. E., Antia, A., Reusch, T. H., Bertram, C., Hein, J., Kronfeld-Goharani, U., Dierking, J., Kuhn, A., Sato, et al  
2020; 2 (6): 557-565
- **Integrating climate change in ocean planning** *NATURE SUSTAINABILITY*  
Frazao Santos, C., Agardy, T., Andrade, F., Calado, H., Crowder, L. B., Ehler, C. N., Garcia-Morales, S., Gissi, E., Halpern, B. S., Orbach, M. K., Poertner, H., Rosa, R.  
2020
- **Shark fin trade bans and sustainable shark fisheries** *CONSERVATION LETTERS*  
Ferretti, F., Jacoby, D. P., Pfleger, M. O., White, T. D., Dent, F., Micheli, F., Rosenberg, A. A., Crowder, L. B., Block, B. A.  
2020
- **Mobile protected areas for biodiversity on the high seas.** *Science (New York, N.Y.)*  
Maxwell, S. M., Gjerde, K. M., Connors, M. G., Crowder, L. B.  
2020; 367 (6475): 252–54
- **COVID-19 reveals vulnerability of small-scale fisheries to global market systems.** *The Lancet. Planetary health*  
Knight, C. J., Burnham, T. L., Mansfield, E. J., Crowder, L. B., Micheli, F. n.  
2020; 4 (6): e219
- **Fishers' solutions for hammerhead shark conservation in Peru** *BIOLOGICAL CONSERVATION*  
Mason, J. G., Alfaro-Shigueto, J., Mangel, J. C., Crowder, L. B., Ardoin, N. M.  
2020; 243 (108460)
- **Rethinking megafauna.** *Proceedings. Biological sciences*  
Moleón, M. n., Sánchez-Zapata, J. A., Donázar, J. A., Revilla, E. n., Martín-López, B. n., Gutiérrez-Cánovas, C. n., Getz, W. M., Morales-Reyes, Z. n., Campos-Arceiz, A. n., Crowder, L. B., Galetti, M. n., González-Suárez, M. n., He, et al  
2020; 287 (1922): 20192643
- **Impacts of a shift to a warm-water regime in the Gulf of California on jumbo squid (*Dosidicus gigas*)** *ICES JOURNAL OF MARINE SCIENCE*  
Frawley, T. H., Briscoe, D. K., Daniel, P. C., Britten, G. L., Crowder, L. B., Robinson, C. J., Gilly, W. F.  
2019; 76 (7): 2413–26
- **Reaching consensus for conserving the global commons: The case of the Ross Sea, Antarctica** *CONSERVATION LETTERS*  
Brooks, C. M., Crowder, L. B., Osterblom, H., Strong, A. L.  
2019
- **Seasonal spatial segregation in blue sharks (*Prionace glauca*) by sex and size class in the Northeast Pacific Ocean** *DIVERSITY AND DISTRIBUTIONS*  
Maxwell, S. M., Scales, K. L., Bograd, S. J., Briscoe, D. K., Dewar, H., Hazen, E. L., Lewison, R. L., Welch, H., Crowder, L. B.  
2019; 25 (8): 1304–17
- **The market for sustainable seafood drives transformative change in fishery social-ecological systems** *GLOBAL ENVIRONMENTAL CHANGE-HUMAN AND POLICY DIMENSIONS*  
Travaille, K., Lindley, J., Kendrick, G. A., Crowder, L. B., Clifton, J.  
2019; 57

- **Community-level effects of spatial management in the California drift gillnet Fishery** *FISHERIES RESEARCH*  
Mason, J. G., Hazen, E. L., Bograd, S. J., Dewar, H., Crowder, L. B.  
2019; 214: 175–82
- **Key attributes related to fishery improvement project (FIP) effectiveness in promoting improvements towards sustainability** *FISH AND FISHERIES*  
Travaille, K., Crowder, L. B., Kendrick, G. A., Clifton, J.  
2019; 20 (3): 452–65
- **Heterogeneous Perceptions of Social-Ecological Change Among Small-Scale Fishermen in the Central Gulf of California: Implications for Adaptive Response** *FRONTIERS IN MARINE SCIENCE*  
Frawley, T. H., Crowder, L. B., Broad, K.  
2019; 6
- **Environmental and institutional degradation in the globalized economy: lessons from small-scale fisheries in the Gulf of California** *ECOLOGY AND SOCIETY*  
Frawley, T. H., Finkbeiner, E. M., Crowder, L. B.  
2019; 24 (1)
- **Parsing human and biophysical drivers of coral reef regimes.** *Proceedings. Biological sciences*  
Jouffray, J., Wedding, L. M., Norstrom, A. V., Donovan, M. K., Williams, G. J., Crowder, L. B., Erickson, A. L., Friedlander, A. M., Graham, N. A., Gove, J. M., Kappel, C. V., Kittinger, J. N., Lecky, et al  
2019; 286 (1896): 20182544
- **Parsing human and biophysical drivers of coral reef regimes** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*  
Jouffray, J., Wedding, L. M., Norstrom, A. V., Donovan, M. K., Williams, G. J., Crowder, L. B., Erickson, A. L., Friedlander, A. M., Graham, N. J., Gove, J. M., Kappel, C. V., Kittinger, J. N., Lecky, et al  
2019; 286 (1896)
- **Marine Spatial Planning** *WORLD SEAS: AN ENVIRONMENTAL EVALUATION, VOL III: ECOLOGICAL ISSUES AND ENVIRONMENTAL IMPACTS, 2ND EDITION*  
Santos, C., Ehler, C. N., Agardy, T., Andrade, F., Orbach, M. K., Crowder, L. B., Sheppard, C.  
2019: 571–92
- **The changing social world of the oceans** *PREDICTING FUTURE OCEANS: SUSTAINABILITY OF OCEAN AND HUMAN SYSTEMS AMIDST GLOBAL ENVIRONMENTAL CHANGE*  
Crowder, L. B., Swartz, W., CisnerosMontemayor, A. M., Cheung, W. W., Ota, Y.  
2019: 267–69
- **The impact of environmental change on small-scale fishing communities: moving beyond adaptive capacity to community response** *PREDICTING FUTURE OCEANS: SUSTAINABILITY OF OCEAN AND HUMAN SYSTEMS AMIDST GLOBAL ENVIRONMENTAL CHANGE*  
Oestreich, W. K., Frawley, T. H., Mansfield, E. J., Green, K. M., Green, S. J., Naggea, J., Selgrath, J. C., Swanson, S. S., Urteaga, J., White, T. D., Crowder, L. B., CisnerosMontemayor, A. M., Cheung, et al  
2019: 271–82
- **Combining fish and benthic communities into multiple regimes reveals complex reef dynamics.** *Scientific reports*  
Donovan, M. K., Friedlander, A. M., Lecky, J., Jouffray, J., Williams, G. J., Wedding, L. M., Crowder, L. B., Erickson, A. L., Graham, N. A., Gove, J. M., Kappel, C. V., Karr, K., Kittinger, et al  
2018; 8 (1): 16943
- **Integrating Dynamic Subsurface Habitat Metrics Into Species Distribution Models** *FRONTIERS IN MARINE SCIENCE*  
Brodie, S., Jacox, M. G., Bograd, S. J., Welch, H., Dewar, H., Scales, K. L., Maxwel, S. M., Briscoe, D. M., Edwards, C. A., Crowder, L. B., Lewison, R. L., Hazen, E. L.  
2018; 5
- **Safe Harbors: The Many Benefits of Marine Monuments and Sanctuaries** *FRONTIERS IN MARINE SCIENCE*  
Bruno, J. F., Saumweber, W., Crowder, L. B., Pendleton, L., Roady, S. E., Rouleau, T., Sakashita, M.  
2018; 5
- **Uncertainty analysis and robust areas of high and low modeled human impact on the global oceans.** *Conservation biology : the journal of the Society for Conservation Biology*  
Stock, A., Crowder, L. B., Halpern, B. S., Micheli, F.

2018

● **A dynamic ocean management tool to reduce bycatch and support sustainable fisheries** *SCIENCE ADVANCES*

Hazen, E. L., Scales, K. L., Maxwell, S. M., Briscoe, D. K., Welch, H., Bograd, S. J., Bailey, H., Benson, S. R., Eguchi, T., Dewar, H., Kohin, S., Costa, D. P., Crowder, et al  
2018; 4 (5): eaar3001

● **Characterizing habitat suitability for a central-place forager in a dynamic marine environment** *ECOLOGY AND EVOLUTION*

Briscoe, D. K., Fossette, S., Scales, K. L., Hazen, E. L., Bograd, S. J., Maxwell, S. M., McHuron, E. A., Robinson, P. W., Kuhn, C., Costa, D. P., Crowder, L. B., Lewison, R. L.  
2018; 8 (5): 2788–2801

● **Advancing the integration of spatial data to map human and natural drivers on coral reefs** *PLOS ONE*

Wedding, L. M., Lecky, J., Gove, J. M., Walecka, H. R., Donovan, M. K., Williams, G. J., Jouffray, J., Crowder, L. B., Erickson, A., Falinski, K., Friedlander, A. M., Kappel, C. V., Kittinger, et al  
2018; 13 (3): e0189792

● **Spatial management in small-scale fisheries: A potential approach for climate change adaptation in Pacific Islands** *MARINE POLICY*

Le Cornu, E., Doerr, A. N., Finkbeiner, E. M., Gourlie, D., Crowder, L. B.  
2018; 88: 350–58

● **Fit to predict? Eco-informatics for predicting the catchability of a pelagic fish in near real time** *ECOLOGICAL APPLICATIONS*

Scales, K. L., Hazen, E. L., Maxwell, S. M., Dewar, H., Kohin, S., Jacox, M. G., Edwards, C. A., Briscoe, D. K., Crowder, L. B., Lewison, R. L., Bograd, S. J.  
2017; 27 (8): 2313–29

● **Fit to predict? Eco-informatics for predicting the catchability of a pelagic fish in near real time.** *Ecological applications : a publication of the Ecological Society of America*

Scales, K. L., Hazen, E. L., Maxwell, S. M., Dewar, H., Kohin, S., Jacox, M. G., Edwards, C. A., Briscoe, D. K., Crowder, L. B., Lewison, R. L., Bograd, S. J.  
2017; 27 (8): 2313-2329

● **Reconstructing overfishing: Moving beyond Malthus for effective and equitable solutions** *FISH AND FISHERIES*

Finkbeiner, E. M., Bennett, N. J., Frawley, T. H., Mason, J. G., Briscoe, D. K., Brooks, C. M., Ng, C. A., Ourens, R., Seto, K., Swanson, S., Urteaga, J., Crowder, L. B.  
2017; 18 (6): 1180–91

● **Committing to socially responsible seafood.** *Science (New York, N.Y.)*

Kittinger, J. N., Teh, L. C., Allison, E. H., Bennett, N. J., Crowder, L. B., Finkbeiner, E. M., Hicks, C., Scarton, C. G., Nakamura, K., Ota, Y., Young, J., Alifano, A., Apel, et al  
2017; 356 (6341): 912-913

● **Ocean Research Priorities: Similarities and Differences among Scientists, Policymakers, and Fishermen in the United States.** *Bioscience*

Mason, J. G., Rudd, M. A., Crowder, L. B.  
2017; 67 (5): 418-428

● **Avoiding a crisis of motivation for ocean management under global environmental change.** *Global change biology*

Mumby, P. J., Sanchirico, J. N., Broad, K., Beck, M. W., Tyedmers, P., Morikawa, M., Okey, T. A., Crowder, L. B., Fulton, E. A., Kelso, D., Kleypas, J. A., Munch, S. B., Glynn, et al  
2017

● **Science-based management in decline in the Southern Ocean.** *Science*

Brooks, C. M., Crowder, L. B., Curran, L. M., Dunbar, R. B., Ainley, D. G., Dodds, K. J., Gjerde, K. M., Sumaila, U. R.  
2016; 354 (6309): 185-187

● **Translating sustainable seafood frameworks to assess the implementation of ecosystem-based fisheries management** *FISHERIES RESEARCH*

Hazen, L., Le Cornu, E., Zerbe, A., Martone, R., Erickson, A. L., Crowder, L. B.  
2016; 182: 149-157

● **Ocean planning in a changing climate** *NATURE GEOSCIENCE*

Santos, C., Agardy, T., Andrade, F., Barange, M., Crowder, L. B., Ehler, C. N., Orbach, M. K., Rosa, R.  
2016; 9 (10): 730

- **Bright spots among the world's coral reefs** *NATURE*  
Cinner, J. E., Huchery, C., MacNeil, M. A., Graham, N. A., McClanahan, T. R., Maina, J., Maire, E., Kittinger, J. N., Hicks, C. C., Mora, C., Allison, E. H., D'Agata, S., Hoey, et al  
2016; 535 (7612): 416-?
- **Active dispersal in loggerhead sea turtles (*Caretta caretta*) during the 'lost years'** *PROCEEDINGS OF THE ROYAL SOCIETY B-BIOLOGICAL SCIENCES*  
Briscoe, D. K., Parker, D. M., Balazs, G. H., Kurita, M., Saito, T., Okamoto, H., Rice, M., Polovina, J. J., Crowder, L. B.  
2016; 283 (1832)
- **Social drivers forewarn of marine regime shifts** *FRONTIERS IN ECOLOGY AND THE ENVIRONMENT*  
Hicks, C. C., Crowder, L. B., Graham, N. A., Kittinger, J. N., Le Cornu, E.  
2016; 14 (5): 253-261
- **Multi-year tracking reveals extensive pelagic phase of juvenile loggerhead sea turtles in the North Pacific.** *Movement ecology*  
Briscoe, D. K., Parker, D. M., Bograd, S., Hazen, E., Scales, K., Balazs, G. H., Kurita, M., Saito, T., Okamoto, H., Rice, M., Polovina, J. J., Crowder, L. B.  
2016; 4: 23-?
- **Are we missing important areas in pelagic marine conservation? Redefining conservation hotspots in the ocean** *ENDANGERED SPECIES RESEARCH*  
Briscoe, D. K., Maxwell, S. M., Kudela, R., Crowder, L. B., Croll, D.  
2016; 29 (3): 229-237
- **Filling historical data gaps to foster solutions in marine conservation** *OCEAN & COASTAL MANAGEMENT*  
Thurstan, R. H., McClenachan, L., Crowder, L. B., Drew, J. A., Kittinger, J. N., Levin, P. S., Roberts, C. M., Pandolfi, J. M.  
2015; 115: 31-40
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