

# Stanford

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## Jeremy Goldbogen

Associate Professor of Oceans and, by courtesy, of Biology

Curriculum Vitae available Online

### Bio

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#### ACADEMIC APPOINTMENTS

- Associate Professor, Oceans
- Associate Professor (By courtesy), Biology
- Member, Bio-X

#### HONORS AND AWARDS

- Terman Fellowship, Stanford University (2017-2020)
- Young Investigator Award, Office of Naval Research (2016-2020)
- Hoagland Award for Teaching Innovation, Vice Provost for Undergraduate Education, Humanities and Sciences Dean's Office, Stanford University (2015)

#### PROFESSIONAL EDUCATION

- BSc, University of Texas at Austin , Zoology (2002)
- MSc, Scripps Institution of Oceanography, University of California - San Diego , Marine Biology (2005)
- PhD, University of British Columbia , Zoology (2010)

### Teaching

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#### COURSES

##### 2023-24

- Bio-logging and Bio-telemetry: OCEANS 14H (Spr)
- Environmental Change and Marine Biodiversity: OCEANS 125H, OCEANS 225H (Spr)
- Get to Know Your Oceans: OCEANS 300A (Aut)

##### 2022-23

- Environmental Change and Marine Biodiversity: BIO 125, BIOHOPK 125H, BIOHOPK 225H, OCEANS 125, OCEANS 225 (Spr)
- Topics in Comparative and Environmental Physiology: BIOHOPK 234H (Spr)

##### 2021-22

- Topics in Comparative and Environmental Physiology: BIOHOPK 234H (Sum)

##### 2020-21

- Topics in Comparative and Environmental Physiology: BIOHOPK 234H (Sum)

## STANFORD ADVISEES

### Postdoctoral Faculty Sponsor

Ashley Blawas, David Cade

### Doctoral Dissertation Advisor (AC)

Hannah Clayton, James Fahlbusch

### Doctoral (Program)

James Fahlbusch

## Publications

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### PUBLICATIONS

- **Submesoscale coupling of krill and whales revealed by aggregative Lagrangian coherent structures.** *Proceedings. Biological sciences*  
Fahlbusch, J. A., Cade, D. E., Hazen, E. L., Elliott, M. L., Saenz, B. T., Goldbogen, J. A., Jahncke, J.  
2024; 291 (2017): 20232461
- **Cheap gulp foraging of a giga-predator enables efficient exploitation of sparse prey.** *Science advances*  
Videsen, S. K., Simon, M., Christiansen, F., Friedlaender, A., Goldbogen, J., Malte, H., Segre, P., Wang, T., Johnson, M., Madsen, P. T.  
2023; 9 (25): eade3889
- **Minke whale feeding rate limitations suggest constraints on the minimum body size for engulfment filtration feeding.** *Nature ecology & evolution*  
Cade, D. E., Kahane-Rappaport, S. R., Gough, W. T., Bierlich, K. C., Linsky, J. M., Calambokidis, J., Johnston, D. W., Goldbogen, J. A., Friedlaender, A. S.  
2023
- **How Whales Dive, Feast, and Fast: The Ecophysiological Drivers and Limits of Foraging in the Evolution of Cetaceans** *ANNUAL REVIEW OF ECOLOGY AND SYSTEMATICS*  
Goldbogen, J. A., Pyenson, N. D., Madsen, P. T.  
2023; 54: 307-325
- **Oceanic giants dance to atmospheric rhythms: Ephemeral wind-driven resource tracking by blue whales.** *Ecology letters*  
Ryan, J. P., Benoit-Bird, K. J., Oestreich, W. K., Leary, P., Smith, K. B., Waluk, C. M., Cade, D. E., Fahlbusch, J. A., Southall, B. L., Joseph, J. E., Margolina, T., Calambokidis, J., DeVogelaere, et al  
2022
- **Blue whales increase feeding rates at fine-scale ocean features.** *Proceedings. Biological sciences*  
Fahlbusch, J. A., Czapanskiy, M. F., Calambokidis, J., Cade, D. E., Abrahms, B., Hazen, E. L., Goldbogen, J. A.  
2022; 289 (1981): 20221180
- **Baleen whale prey consumption based on high-resolution foraging measurements.** *Nature*  
Savoca, M. S., Czapanskiy, M. F., Kahane-Rappaport, S. R., Gough, W. T., Fahlbusch, J. A., Bierlich, K. C., Segre, P. S., Di Clemente, J., Penry, G. S., Wiley, D. N., Calambokidis, J., Nowacek, D. P., Johnston, et al  
2021; 599 (7883): 85-90
- **Animal-Borne Metrics Enable Acoustic Detection of Blue Whale Migration.** *Current biology : CB*  
Oestreich, W. K., Fahlbusch, J. A., Cade, D. E., Calambokidis, J., Margolina, T., Joseph, J., Friedlaender, A. S., McKenna, M. F., Stimpert, A. K., Southall, B. L., Goldbogen, J. A., Ryan, J. P.  
2020
- **Energetic and physical limitations on the breaching performance of large whales.** *eLife*  
Segre, P. S., Potvin, J., Cade, D. E., Calambokidis, J., Di Clemente, J., Fish, F. E., Friedlaender, A. S., Gough, W. T., Kahane-Rappaport, S. R., Oliveira, C., Parks, S. E., Penry, G. S., Simon, et al  
2020; 9
- **Why whales are big but not bigger: Physiological drivers and ecological limits in the age of ocean giants.** *Science (New York, N.Y.)*  
Goldbogen, J. A., Cade, D. E., Wisniewska, D. M., Potvin, J., Segre, P. S., Savoca, M. S., Hazen, E. L., Czapanskiy, M. F., Kahane-Rappaport, S. R., DeRuiter, S. L., Gero, S., Tonnesen, P., Gough, et al

2019; 366 (6471): 1367–72

- **Extreme bradycardia and tachycardia in the world's largest animal** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Goldbogen, J. A., Cade, D. E., Calambokidis, J., Czapanskiy, M. F., Fahlbusch, J., Friedlaender, A. S., Gough, W. T., Kahane-Rappaport, S. R., Savoca, M. S., Ponganis, K. V., Ponganis, P. J.  
2019; 116 (50): 25329–32
- **Memory and resource tracking drive blue whale migrations** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Abrahms, B., Hazen, E. L., Aikens, E. O., Savoca, M. S., Goldbogen, J. A., Bograd, S. J., Jacox, M. G., Irvine, L. M., Palacios, D. M., Mate, B. R.  
2019; 116 (12): 5582–87
- **Predator-informed looming stimulus experiments reveal how large filter feeding whales capture highly maneuverable forage fish.** *Proceedings of the National Academy of Sciences of the United States of America*  
Cade, D. E., Carey, N. n., Domenici, P. n., Potvin, J. n., Goldbogen, J. A.  
2019
- **Physiological constraints on marine mammal body size** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Goldbogen, J. A.  
2018; 115 (16): 3995–97
- **Context-dependent lateralized feeding strategies in blue whales** *CURRENT BIOLOGY*  
Friedlaender, A. S., Herbert-Read, J. E., Hazen, E. L., Cade, D. E., Calambokidis, J., Southall, B. L., Stimpert, A. K., Goldbogen, J. A.  
2017; 27 (22): R1206–R1208
- **A hydrodynamically active flipper-stroke in humpback whales** *CURRENT BIOLOGY*  
Segre, P. S., Seakamela, S., Meyer, M. A., Findlay, K. P., Goldbogen, J. A.  
2017; 27 (13): R636–R637
- **Independent evolution of baleen whale gigantism linked to Plio-Pleistocene ocean dynamics.** *Proceedings. Biological sciences*  
Slater, G. J., Goldbogen, J. A., Pyenson, N. D.  
2017; 284 (1855)
- **How Baleen Whales Feed: The Biomechanics of Engulfment and Filtration.** *Annual review of marine science*  
Goldbogen, J. A., Cade, D. E., Calambokidis, J., Friedlaender, A. S., Potvin, J., Segre, P. S., Werth, A. J.  
2017; 9: 367–386
- **Kinematic Diversity in Rorqual Whale Feeding Mechanisms** *CURRENT BIOLOGY*  
Cade, D. E., Friedlaender, A. S., Calambokidis, J., Goldbogen, J. A.  
2016; 26 (19): 2617–2624
- **Blue whales (*Balaenoptera musculus*) optimize foraging efficiency by balancing oxygen use and energy gain as a function of prey density.** *Science advances*  
Hazen, E. L., Friedlaender, A. S., Goldbogen, J. A.  
2015; 1 (9)
- **Stretchy nerves are an essential component of the extreme feeding mechanism of rorqual whales** *CURRENT BIOLOGY*  
Vogl, A. W., Lillie, M. A., Piscitelli, M. A., Goldbogen, J. A., Pyenson, N. D., Shadwick, R. E.  
2015; 25 (9): R360–R361
- **Baleen-Plastic Interactions Reveal High Risk to All Filter-Feeding Whales from Clogging, Ingestion, and Entanglement** *OCEANS-SWITZERLAND*  
Werth, A. J., Kahane-Rappaport, S. R., Potvin, J., Goldbogen, J. A., Savoca, M. S.  
2024; 5 (1): 48–70
- **Energy densities of key prey species in the California Current Ecosystem** *FRONTIERS IN MARINE SCIENCE*  
Price, S. E., Savoca, M. S., Kumar, M., Czapanskiy, M. F., McDermott, D., Litvin, S. Y., Cade, D. E., Goldbogen, J. A.  
2024; 10
- **Spin-leap performance by cetaceans is influenced by moment of inertia.** *The Journal of experimental biology*  
Fish, F. E., Nicastro, A. J., Cardenas, K. L., Segre, P. S., Gough, W. T., Kahane-Rappaport, S. R., St Leger, J., Goldbogen, J. A.

2023

- **Behavioural responses of fin whales to military mid-frequency active sonar.** *Royal Society open science*  
Southall, B. L., Allen, A. N., Calambokidis, J., Casey, C., DeRuiter, S. L., Fregosi, S., Friedlaender, A. S., Goldbogen, J. A., Harris, C. M., Hazen, E. L., Popov, V., Stimpert, A. K.  
2023; 10 (12): 231775
- **Acoustic behavior of gray whales tagged with biologging devices on foraging grounds** *FRONTIERS IN MARINE SCIENCE*  
Clayton, H., Cade, D. E., Burnham, R., Calambokidis, J., Goldbogen, J.  
2023; 10
- **Formation of a fringe: a look inside baleen morphology using a multimodal visual approach.** *Journal of morphology*  
Vandenberg, M. L., Cohen, K. E., Rubin, R. D., Goldbogen, J. A., Summers, A. P., Misty Paig-Tran, E. W., Kahane-Rappaport, S. R.  
2023
- **A three-dimensional, dynamic blue whale model for research and scientific communication** *MARINE MAMMAL SCIENCE*  
Segre, P. S., Martin, J., Irschick, D. J., Goldbogen, J. A.  
2023
- **Seasonal gain in body condition of foraging humpback whales along the Western Antarctic Peninsula** *FRONTIERS IN MARINE SCIENCE*  
Bierlich, K. C., Hewitt, J., Schick, R. S., Pallin, L., Dale, J., Friedlaender, A. S., Christiansen, F., Sprogis, K. R., Dawn, A. H., Bird, C. N., Larsen, G. D., Nichols, R., Sherwood, et al  
2022; 9
- **Fast and Furious: Energetic Tradeoffs and Scaling of High-Speed Foraging in Rorqual Whales** *INTEGRATIVE ORGANISMAL BIOLOGY*  
Gough, W. T., Cade, D. E., Czapanskiy, M. F., Potvin, J., Fish, F. E., Kahane-Rappaport, S. R., Savoca, M. S., Bierlich, K. C., Johnston, D. W., Friedlaender, A. S., Szabo, A., Bejder, L., Goldbogen, et al  
2022; 4 (1): obac038
- **Intra-seasonal variation in feeding rates and diel foraging behaviour in a seasonally fasting mammal, the humpback whale.** *Royal Society open science*  
Nichols, R. C., Cade, D. E., Kahane-Rappaport, S., Goldbogen, J., Stimpert, A., Nowacek, D., Read, A. J., Johnston, D. W., Friedlaender, A.  
2022; 9 (7): 211674
- **An accelerometer-derived ballistocardiogram method for detecting heartrates in free-ranging marine mammals.** *The Journal of experimental biology*  
Czapanskiy, M. F., Ponganis, P. J., Fahlbusch, J. A., Schmitt, T. L., Goldbogen, J. A.  
2022
- **High-speed chases along the seafloor put Bryde's whales at risk of entanglement** *CONSERVATION SCIENCE AND PRACTICE*  
Segre, P. S., di Clemente, J., Kahane-Rappaport, S. R., Gough, W. T., Meyer, M. A., Lombard, A. T., Goldbogen, J. A., Penry, G. S.  
2022
- **The limits of convergence in the collective behavior of competing marine taxa.** *Ecology and evolution*  
Burford, B. P., Williams, R. R., Demetras, N. J., Carey, N., Goldbogen, J., Gilly, W. F., Harding, J., Denny, M. W.  
2022; 12 (3): e8747
- **Scaling of maneuvering performance in baleen whales: larger whales outperform expectations.** *The Journal of experimental biology*  
Segre, P. S., Gough, W. T., Roualdes, E. A., Cade, D. E., Czapanskiy, M. F., Fahlbusch, J., Kahane-Rappaport, S. R., Oestreich, W. K., Bejder, L., Bierlich, K. C., Burrows, J. A., Calambokidis, J., Chenoweth, et al  
2022; 225 (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
- **Evidence for Size-Selective Predation by Antarctic Humpback Whales** *FRONTIERS IN MARINE SCIENCE*  
Cade, D. E., Kahane-Rappaport, S. R., Wallis, B., Goldbogen, J. A., Friedlaender, A. S.  
2022; 9
- **Advancing the Interpretation of Shallow Water Marine Soundscapes** *FRONTIERS IN MARINE SCIENCE*  
McKenna, M. F., Baumann-Pickering, S., Kok, A. M., Oestreich, W. K., Adams, J. D., Barkowski, J., Fristrup, K. M., Goldbogen, J. A., Joseph, J., Kim, E. B., Kugler, A., Lammers, M. O., Margolina, et al

2021; 08

- **Tools for integrating inertial sensor data with video bio-loggers, including estimation of animal orientation, motion, and position** *ANIMAL BIOTELEMETRY*  
Cade, D. E., Gough, W. T., Czapanskiy, M. F., Fahlbusch, J. A., Kahane-Rappor, S. R., Linsky, J. J., Nichols, R. C., Oestreich, W. K., Wisniewska, D. M., Friedlaender, A. S., Goldbogen, J. A.  
2021; 9 (1)
- **Sympatry and resource partitioning between the largest krill consumers around the Antarctic Peninsula** *MARINE ECOLOGY PROGRESS SERIES*  
Friedlaender, A. S., Joyce, T., Johnston, D. W., Read, A. J., Nowacek, D. P., Goldbogen, J. A., Gales, N., Durban, J. W.  
2021; 669: 1-16
- **Too big to study? The biologging approach to understanding the behavioural energetics of ocean giants.** *The Journal of experimental biology*  
Watanabe, Y. Y., Goldbogen, J. A.  
2021; 224 (13)
- **Scaling of oscillatory kinematics and Froude efficiency in baleen whales.** *The Journal of experimental biology*  
Gough, W. T., Smith, H. J., Savoca, M. S., Czapanskiy, M. F., Fish, F. E., Potvin, J., Bierlich, K. C., Cade, D. E., Clemente, J. D., Kennedy, J., Segre, P., Stanworth, A., Weir, et al  
2021
- **Modelling short-term energetic costs of sonar disturbance to cetaceans using high-resolution foraging data** *JOURNAL OF APPLIED ECOLOGY*  
Czapanskiy, M. F., Savoca, M. S., Gough, W. T., Segre, P. S., Wisniewska, D. M., Cade, D. E., Goldbogen, J. A.  
2021
- **Biomechanically distinct filter-feeding behaviors distinguish sei whales as a functional intermediate and ecologically flexible species** *JOURNAL OF EXPERIMENTAL BIOLOGY*  
Segre, P. S., Weir, C. R., Stanworth, A., Cartwright, S., Friedlaender, A. S., Goldbogen, J. A.  
2021; 224 (9)
- **MARINE MAMMALS: ADAPTATIONS FOR AN AQUATIC LIFE. (Book Review)** *QUARTERLY REVIEW OF BIOLOGY*  
Book Review Authored by: Goldbogen, J.  
2021; 96 (1): 43–44
- **Predator#scale spatial analysis of intra#patch prey distribution reveals the energetic drivers of rorqual whale super#group formation** *Functional Ecology*  
Cade, D. E., Seakamela , M., Findlay, K. P., Fukunaga , J., Kahane#Rappor, S. R., Warren, J. D., Calambokidis, J., Fahlbusch, J. A., Friedlaender , A. S., Hazen, E. L., Kotze , D., McCue, S., Meyer , et al  
2021
- **Context-dependent variability in the predicted daily energetic costs of disturbance for blue whales.** *Conservation physiology*  
Pirotta, E. n., Booth, C. G., Cade, D. E., Calambokidis, J. n., Costa, D. P., Fahlbusch, J. A., Friedlaender, A. S., Goldbogen, J. A., Harwood, J. n., Hazen, E. L., New, L. n., Southall, B. L.  
2021; 9 (1): coaa137
- **Microplastics and microfibers in surface waters of Monterey Bay National Marine Sanctuary, California.** *Marine pollution bulletin*  
Kashiwabara, L. M., Kahane-Rappor, S. R., King, C. n., DeVogelaere, M. n., Goldbogen, J. A., Savoca, M. S.  
2021; 165: 112148
- **Quick guide Blue whales** *CURRENT BIOLOGY*  
Goldbogen, J.  
2020; 30 (23): R1399–R1400
- **Remoras pick where they stick on blue whales.** *The Journal of experimental biology*  
Flammang, B. E., Marras, S., Anderson, E. J., Lehmkuhl, O., Mukherjee, A., Cade, D. E., Beckert, M., Nadler, J. H., Houzeaux, G., Vazquez, M., Amplo, H. E., Calambokidis, J., Friedlaender, et al  
2020; 223 (Pt 20)
- **The scale of the whale: using video-tag data to evaluate sea-surface ice concentration from the perspective of individual Antarctic minke whales** *ANIMAL BIOTELEMETRY*  
Linsky, J. J., Wilson, N., Cade, D. E., Goldbogen, J. A., Johnston, D. W., Friedlaender, A. S.  
2020; 8 (1)

- **A perfectly inelastic collision: Bulk prey engulfment by baleen whales and dynamical implications for the world's largest cetaceans** *AMERICAN JOURNAL OF PHYSICS*  
Potvin, J., Cade, D. E., Werth, A. J., Shadwick, R. E., Goldbogen, J. A.  
2020; 88 (10): 851–63
- **From a calf's perspective: humpback whale nursing behavior on two US feeding grounds** *PEERJ*  
Tackaberry, J. E., Cade, D. E., Goldbogen, J. A., Wiley, D. N., Friedlaender, A. S., Stimpert, A. K.  
2020; 8: e8538
- **Blue whales.** *Current biology : CB*  
Goldbogen, J. n.  
2020; 30 (23): R1399–R1400
- **The advantages of diving deep: Fin whales quadruple their energy intake when targeting deep krill patches** *FUNCTIONAL ECOLOGY*  
Friedlaender, A. S., Bowers, M. T., Cade, D., Hazen, E. L., Stimpert, A. K., Allen, A. N., Calambokidis, J., Fahlbusch, J., Segre, P., Visser, F., Southall, B. L., Goldbogen, J. A.  
2019
- **Lunge Feeding in Rorqual Whales.** *Physiology (Bethesda, Md.)*  
Shadwick, R. E., Potvin, J., Goldbogen, J. A.  
2019; 34 (6): 409–18
- **Differential Vulnerability to Ship Strikes Between Day and Night for Blue, Fin, and Humpback Whales Based on Dive and Movement Data From Medium Duration Archival Tags** *FRONTIERS IN MARINE SCIENCE*  
Calambokidis, J., Fahlbusch, J. A., Szesciorka, A. R., Southall, B. L., Cade, D. E., Friedlaender, A. S., Goldbogen, J. A.  
2019; 6
- **Anthropogenic disturbance in a changing environment: modelling lifetime reproductive success to predict the consequences of multiple stressors on a migratory population** *OIKOS*  
Pirotta, E., Mangel, M., Costa, D. P., Goldbogen, J., Harwood, J., Hin, V., Irvine, L. M., Mate, B. R., McHuron, E. A., Palacios, D. M., Schwarz, L. K., New, L.  
2019; 128 (9): 1340–57
- **Foraging energetics and prey density requirements of western North Atlantic blue whales in the Estuary and Gulf of St. Lawrence, Canada** *MARINE ECOLOGY PROGRESS SERIES*  
Guilpin, M., Lesage, V., McQuinn, I., Goldbogen, J. A., Potvin, J., Jeanniard-du-Dot, T., Doniol-Valcroze, T., Michaud, R., Moisan, M., Winkler, G.  
2019; 625: 205–23
- **Diving Behavior and Fine-Scale Kinematics of Free-Ranging Risso's Dolphins Foraging in Shallow and Deep-Water Habitats** *FRONTIERS IN ECOLOGY AND EVOLUTION*  
Arranz, P., Benoit-Bird, K. J., Friedlaender, A. S., Hazen, E. L., Goldbogen, J. A., Stimpert, A. K., DeRuiter, S. L., Calambokidis, J., Southall, B. L., Fahlman, A., Tyack, P. L.  
2019; 7
- **Behavioral responses of individual blue whales (*Balaenoptera musculus*) to mid-frequency military sonar.** *The Journal of experimental biology*  
Southall, B. L., DeRuiter, S. L., Friedlaender, A., Stimpert, A. K., Goldbogen, J. A., Hazen, E., Casey, C., Fregosi, S., Cade, D. E., Allen, A. N., Harris, C. M., Schorr, G., Moretti, et al  
2019; 222 (Pt 5)
- **Behavioral responses of individual blue whales (*Balaenoptera musculus*) to mid-frequency military sonar** *JOURNAL OF EXPERIMENTAL BIOLOGY*  
Southall, B. L., DeRuiter, S. L., Friedlaender, A., Stimpert, A. K., Goldbogen, J. A., Hazen, E., Casey, C., Fregosi, S., Cade, D. E., Allen, A. N., Harris, C. M., Schorr, G., Moretti, et al  
2019; 222 (5)
- **Memory and resource tracking drive blue whale migrations.** *Proceedings of the National Academy of Sciences of the United States of America*  
Abrahms, B., Hazen, E. L., Aikens, E. O., Savoca, M. S., Goldbogen, J. A., Bograd, S. J., Jacox, M. G., Irvine, L. M., Palacios, D. M., Mate, B. R.  
2019
- **Grouping reduces the metabolic demand of a social squid** *Marine Ecology Progress Series*  
Burford, B. P., Carey, N., Gilly, W. F., Goldbogen, J. A.  
2019; 612: 141-150

- **Scaling of swimming performance in baleen whales.** *The Journal of experimental biology*  
Gough, W. T., Segre, P. S., Bierlich, K. C., Cade, D. E., Potvin, J. n., Fish, F. E., Dale, J. n., di Clemente, J. n., Friedlaender, A. S., Johnston, D. W., Kahane-Rapport, S. R., Kennedy, J. n., Long, et al  
2019
- **Filtration area scaling and evolution in mysticetes: trophic niche partitioning and the curious cases of sei and pygmy right whales** *BIOLOGICAL JOURNAL OF THE LINNEAN SOCIETY*  
Werth, A. J., Potvin, J., Shadwick, R. E., Jensen, M. M., Cade, D. E., Goldbogen, J. A.  
2018; 125 (2): 264–79
- **Allometric scaling of morphology and engulfment capacity in rorqual whales.** *Journal of morphology*  
Kahane-Rapport, S. R., Goldbogen, J. A.  
2018
- **Allometric scaling of morphology and engulfment capacity in rorqual whales** *JOURNAL OF MORPHOLOGY*  
Kahane-Rapport, S. R., Goldbogen, J. A.  
2018; 279 (9): 1256-1268
- **A Dynamic State Model of Migratory Behavior and Physiology to Assess the Consequences of Environmental Variation and Anthropogenic Disturbance on Marine Vertebrates** *AMERICAN NATURALIST*  
Pirotta, E., Mangel, M., Costa, D. P., Mate, B., Goldbogen, J. A., Palacios, D. M., Huckstadt, L. A., McHuron, E. A., Schwarz, L., New, L.  
2018; 191 (2): E40–E56
- **Determining forward speed from accelerometer jiggle in aquatic environments.** *The Journal of experimental biology*  
Cade, D. E., Barr, K. R., Calambokidis, J. n., Friedlaender, A. S., Goldbogen, J. A.  
2018; 221 (Pt 2)
- **Determining forward speed from accelerometer jiggle in aquatic environments** *JOURNAL OF EXPERIMENTAL BIOLOGY*  
Cade, D. E., Barr, K. R., Calambokidis, J., Friedlaender, A. S., Goldbogen, J. A.  
2018; 221 (2)
- **FILTER FEEDING** *ENCYCLOPEDIA OF MARINE MAMMALS, 3RD EDITION*  
Croll, D. A., Tershy, B. R., Newton, K. M., de Vos, A., Hazen, E., Goldbogen, J. A., Wursig, B., Thewissen, J. G., Kovacs, K. M.  
2018: 363-368
- **The evolution of foraging capacity and gigantism in cetaceans** *Journal of Experimental Biology*  
Goldbogen, J. A., Madsen, P. T.  
2018; 221
- **Resource partitioning facilitates coexistence in sympatric cetaceans in the California Current** *ECOLOGY AND EVOLUTION*  
Fossette, S., Abrahms, B., Hazen, E. L., Bograd, S. J., Zilliacus, K. M., Calambokidis, J., Burrows, J. A., Goldbogen, J. A., Harvey, J. T., Marinovic, B., Tershy, B., Croll, D. A.  
2017; 7 (21): 9085–97
- **Comparative Three-Dimensional Morphology of Baleen: Cross-Sectional Profiles and Volume Measurements Using CT Images** *ANATOMICAL RECORD-ADVANCES IN INTEGRATIVE ANATOMY AND EVOLUTIONARY BIOLOGY*  
Jensen, M. M., Saladrugas, A. H., Goldbogen, J. A.  
2017; 300 (11): 1942–52
- **Structure and Function in the Lunge Feeding Apparatus: Mechanical Properties of the Fin Whale Mandible** *ANATOMICAL RECORD-ADVANCES IN INTEGRATIVE ANATOMY AND EVOLUTIONARY BIOLOGY*  
Shadwick, R. E., Goldbogen, J. A., Pyenson, N. D., Whale, J. A.  
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