

Stanford



David Cade

Postdoctoral Scholar, Hopkins Marine Station

Curriculum Vitae available Online

Bio

BIO

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HONORS AND AWARDS

- Anne T. and Robert M. Bass Fellowship, Stanford University (2014)
- Outstanding Achievement Award for High Impact Paper, Hopkins Marine Station (2014-2015)

PROFESSIONAL EDUCATION

- Master of Science, Oregon State University , Oceans and Atmospheric Science (2014)
- Doctor of Philosophy, Stanford University , BIO-PHD (2019)
- Master of Arts, Stanford University , ED-MA (2005)
- Bachelor of Arts, Brown University , Mathematics (2002)
- Master of Science, Oregon State University , Ocean, Earth and Atmospheric Sciences (2014)

STANFORD ADVISORS

- Jeremy Goldbogen, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Minke whale feeding rate limitations suggest constraints on the minimum body size for engulfment filtration feeding.** *Nature ecology & evolution* Cade, D. E., Kahane-Rapport, S. R., Gough, W. T., Bierlich, K. C., Linsky, J. M., Calambokidis, J., Johnston, D. W., Goldbogen, J. A., Friedlaender, A. S. 2023
- **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
- **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-Rapport, 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
- **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.

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- **Intra-seasonal variation in feeding rates and diel foraging behaviour in a seasonally fasting mammal, the humpback whale.** *Royal Society open science*
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2022; 9 (7): 211674
- **Acoustic signalling and behaviour of Antarctic minke whales (*Balaenoptera bonaerensis*).** *Royal Society open science*
Casey, C. B., Weindorf, S., Levy, E., Linsky, J. M., Cade, D. E., Goldbogen, J. A., Nowacek, D. P., Friedlaender, A. S.
2022; 9 (7): 211557
- **Feeding characteristics and prey profitability in five herring-feeding killer whales (*Orcinus orca*) in northern Norway** *MARINE MAMMAL SCIENCE*
Matika, A. F., Jourdain, E., Cade, D. E., Karoliussen, R., Hammond, P. S.
2022
- **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., Fahrbach, J., Kahane-Rapport, S. R., Oestreich, W. K., Bejder, L., Bierlich, K. C., Burrows, J. A., Calambokidis, J., Chenoweth, et al
2022; 225 (5)
- **Evidence for Size-Selective Predation by Antarctic Humpback Whales** *FRONTIERS IN MARINE SCIENCE*
Cade, D. E., Kahane-Rapport, S. R., Wallis, B., Goldbogen, J. A., Friedlaender, A. S.
2022; 9
- **The effect of group size on individual behavior of bubble-net feeding humpback whales in the southern Gulf of Maine** *MARINE MAMMAL SCIENCE*
Mastick, N. C., Wiley, D., Cade, D. E., Ware, C., Parks, S. E., Friedlaender, A. S.
2022
- **Baleen whale inhalation variability revealed using animal-borne video tags.** *PeerJ*
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- **Tools for integrating inertial sensor data with video bio-loggers, including estimation of animal orientation, motion, and position** *ANIMAL BIOTELEMETRY*
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- **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.
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- **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#Rapport, S. R., Warren, J. D., Calambokidis, J., Fahrbach, J. A., Friedlaender , A. S., Hazen, E. L., Kotze , D., McCue, S., Meyer , et al
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- **Context-dependent variability in the predicted daily energetic costs of disturbance for blue whales.** *Conservation physiology*
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- **Remoras pick where they stick on blue whales.** *The Journal of experimental biology*
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- **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.
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- **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.
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- **Animal-Borne Metrics Enable Acoustic Detection of Blue Whale Migration.** *Current biology : CB*
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- **An Algorithmic Approach to Natural Behavior.** *Current biology : CB*
 Hein, A. M., Altshuler, D. L., Cade, D. E., Liao, J. C., Martin, B. T., Taylor, G. K.
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- **Energetic and physical limitations on the breaching performance of large whales.** *eLife*
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- **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.
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- **Determining forward speed from accelerometer jiggle in aquatic environments.** *The Journal of experimental biology*
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- **Determining forward speed from accelerometer jiggle in aquatic environments** *JOURNAL OF EXPERIMENTAL BIOLOGY*

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- Cade, D. E., Barr, K. R., Calambokidis, J., Friedlaender, A. S., Goldbogen, J. A.
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- **Context-dependent lateralized feeding strategies in blue whales** *CURRENT BIOLOGY*
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 - **How Baleen Whales Feed: The Biomechanics of Engulfment and Filtration.** *Annual review of marine science*
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 - **Hydrodynamic properties of fin whale flippers predict maximum rolling performance.** *Journal of experimental biology*
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 - **Kinematic Diversity in Rorqual Whale Feeding Mechanisms** *CURRENT BIOLOGY*
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 - **Insights into the Underwater Behavior, Species Interactions, and Biomechanics of Baleen Whales using Suction-Cup Attached Video and Inertial Sensors**
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 - **Depths, migration rates and environmental associations of acoustic scattering layers in the Gulf of California** *DEEP-SEA RESEARCH PART I-OCEANOGRAPHIC RESEARCH PAPERS*
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 - **An automatic and quantitative approach to the detection and tracking of acoustic scattering layers** *LIMNOLOGY AND OCEANOGRAPHY-METHODS*
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