

Stanford



Collin Closek

Thinking Matters (or TM) Lecturer
Stanford Introductory Studies - Thinking Matters

Bio

BIO

I am a Staff Scientist at the Stanford Center for Ocean Solutions and a Teaching Fellow in the Thinking Matters Program in the Office of the Vice Provost for Undergraduate Education at Stanford University. My research focuses on optimizing molecular and computational tools to address ecological and evolutionary questions. I have published in the areas of environmental change, ocean health, biodiversity, disease, eDNA, -omics, and aquaculture. I hold a B.S. in Biology from the University of Georgia, began my doctoral studies at the University of California, Merced, and earned my Ph.D. at Penn State. I completed two postdoctoral appointments, first as a joint-postdoctoral researcher at University of Washington's School of Aquatic and Fishery Sciences and University of Maryland's Institute for Marine and Environmental Technology. Second, I completed advanced collaborative training as a postdoctoral scholar at Stanford University's Woods Institute for the Environment in conjunction with the Department of Civil and Environmental Engineering. I enjoy exploring and teaching about the natural world, its diversity, complexities, and the challenges faced by our environment.

ACADEMIC APPOINTMENTS

- Lecturer, Stanford Introductory Studies - Thinking Matters

PROFESSIONAL EDUCATION

- B.S., University of Georgia, Athens , Biology (2005)
- Ph.D., The Pennsylvania State University, University Park , Biology (2014)

LINKS

- COS Profile: oceansolutions.stanford.edu/people/collin.closek
- THINK Profile: <https://undergrad.stanford.edu/people/collin-closek-0>
- closek.com: closek.com

Teaching

COURSES

2020-21

- Living with Viruses: THINK 61 (Win)
- The Cancer Problem: Causes, Treatments, and Prevention: THINK 23 (Spr)

2019-20

- How Does Your Brain Work?: THINK 15 (Aut)
- Living with Viruses: THINK 61 (Win)

- The Cancer Problem: Causes, Treatments, and Prevention: THINK 23 (Spr)

Publications

PUBLICATIONS

- **Environmental DNA reveals seasonal shifts and potential interactions in a marine community.** *Nature communications*
Djurhuus, A., Closek, C. J., Kelly, R. P., Pitz, K. J., Michisaki, R. P., Starks, H. A., Walz, K. R., Andruszkiewicz, E. A., Olesin, E., Hubbard, K., Montes, E., Otis, D., Muller-Karger, et al
2020; 11 (1): 254
- **Quantitative PCR assays to detect whales, rockfish, and common murre environmental DNA in marine water samples of the Northeastern Pacific.** *PLoS one*
Andruszkiewicz, E. A., Yamahara, K. M., Closek, C. J., Boehm, A. B.
2020; 15 (12): e0242689
- **Marine Vertebrate Biodiversity and Distribution Within the Central California Current Using Environmental DNA (eDNA) Metabarcoding and Ecosystem Surveys** *FRONTIERS IN MARINE SCIENCE*
Closek, C. J., Santora, J. A., Starks, H. A., Schroeder, I. D., Andruszkiewicz, E. A., Sakuma, K. M., Bograd, S. J., Hazenv, E. L., Field, J. C., Boehm, A. B.
2019; 6
- **Assessing eukaryotic biodiversity in the Florida Keys National Marine Sanctuary through environmental DNA metabarcoding.** *Ecology and evolution*
Sawaya, N. A., Djurhuus, A., Closek, C. J., Hepner, M., Olesin, E., Visser, L., Kelble, C., Hubbard, K., Breitbart, M.
2019; 9 (3): 1029–40
- **Acquisition of obligate mutualist symbionts during the larval stage is not beneficial for a coral host** *MOLECULAR ECOLOGY*
Hartmann, A. C., Marhaver, K. L., Klueter, A., Lovci, M. T., Closek, C. J., Diaz, E., Chamberland, V. F., Archer, F. I., Deheyn, D. D., Vermeij, M. A., Medina, M.
2019; 28 (1): 141–55
- **Evaluation of filtration and DNA extraction methods for environmental DNA biodiversity assessments across multiple trophic levels** *FRONTIERS IN MARINE SCIENCE*
Djurhuus, A., Port, J., Closek, C. J., Yamahara, K. M., Romero-Maraccini, O., Walz, K. R., Goldsmith, D. B., Michisaki, R., Boehm, A. B., Breitbart, M., Chavez, F. P.
2017: 314
- **Genetic and Manual Survey Methods Yield Different and Complementary Views of an Ecosystem** *FRONTIERS IN MARINE SCIENCE*
Kelly, R. P., Closek, C. J., O'Donnell, J. L., Kralj, J. E., Andrew, S. O., Samhuri, J. F.
2017; 3: 283
- **The Use of Filter-feeders to Manage Disease in a Changing World** *INTEGRATIVE AND COMPARATIVE BIOLOGY*
Burge, C. A., Closek, C. J., Friedman, C. S., Groner, M. L., Jenkins, C. M., Shore-Maggiok, A., Welsh, J. E.
2016; 56 (4): 573-587
- **Up in Arms: Immune and Nervous System Response to Sea Star Wasting Disease** *PLOS ONE*
Fuess, L. E., Eisenlord, M. E., Closek, C. J., Tracy, A. M., Mauntz, R., Gignoux-Wolfsohn, S., Moritsch, M. M., Yoshioka, R., Burge, C. A., Harvell, C. D., Friedman, C. S., Hewson, I., Hershberger, et al
2015; 10 (7)
- **Microbes in the coral holobiont: partners through evolution, development, and ecological interactions** *FRONTIERS IN CELLULAR AND INFECTION MICROBIOLOGY*
Thompson, J. R., Rivera, H. E., Closek, C. J., Medina, M.
2015; 4
- **Coral transcriptome and bacterial community profiles reveal distinct Yellow Band Disease states in *Orbicella faveolata*** *ISME JOURNAL*
Closek, C. J., Sunagawa, S., Desalvo, M. K., Piceno, Y. M., DeSantis, T. Z., Brodie, E. L., Weber, M. X., Voolstra, C. R., Andersen, G. L., Medina, M.
2014; 8 (12): 2411-2422