

# Stanford

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## Collin Closek

Basic Life Scientist

Stanford Woods Institute for the Environment

### Bio

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#### BIO

I am a Staff Scientist at the Stanford Center for Ocean Solutions. 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

- Basic Life Science Research Associate, Stanford Woods Institute for the Environment

#### 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](https://oceansolutions.stanford.edu/people/collin.closek)
- THINK Profile: <https://undergrad.stanford.edu/people/collin-closek-0>
- closek.com: [closek.com](https://closek.com)

### Teaching

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#### 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

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### 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., Samhour, 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