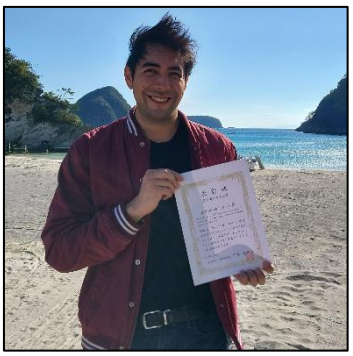
Curriculum Vitae (CV)

Joshua Masataro Heitzman

joheitzman@gmail.com
Orcid ID: 0000-0002-8275-5006



Work History

Post-doctoral researcher (April 2024 to Present)
School of Molecular Biology
Arizona State University (USA)
Advisor: Liza Roger Dr. Sc.
Research Topic: coral-symbiont interactions, dysbiosis, ROS, heat stress

Academic History

Doctor of Science, Biological Sciences (April 2021 to March 2024)
Life and Environmental Sciences – Biological Sciences
Shimoda Marine Research Center, University of Tsukuba (JAPAN)
Thesis Title: "Coral-algae interactions in the Anthropocene"
Thesis Defense Date: January 2023
Advisor: Sylvain Agostini Dr. Sc.

Master's in science, Biological Sciences (April 2019 to March 2021)
Life and Environmental Sciences – Biological Sciences
Shimoda Marine Research Center, University of Tsukuba (JAPAN)
Thesis Title: "Recurrent disease outbreak in a high latitude marginal coral community"
Thesis Defense Date: February 2021
Advisor: Sylvain Agostini Dr. Sc.

Bachelor's in science (September 2014 to March 2019)
Life and Environmental Sciences – Biological Sciences
Shimoda Marine Research Center, University of Tsukuba (JAPAN)
Dissertation Title: "Recurrent disease outbreak in a high latitude marginal coral community"
Dissertation Defense Date: February 2019
Advisor: Sylvain Agostini Dr. Sc.

High School (September 2010 to June 2014)
Galileo Academy of Science and Technology
San Francisco, California, United States of America

Scholarships, Grants and Awards

University of Tsukuba Scholarship (for living expenses, Sept. 2014 to Mar. 2015)

JASSO Scholarship (for living expenses), Type 1 (Apr. 2020 to Mar. 2021)
Scholarship Number: 620-06-009221

JASSO Scholarship (for living expenses), Type 1 (Apr. 2021 to Mar. 2024)
Scholarship Number: 621-06-500387

JST SPRING Scientific Grant (Oct. 2021 to Mar. 2024 500,000 yen per year)
Project Name: "*Coral-algae interactions under ocean acidification*"
Grant Number: JPMJSP21242021

Japanese Coral Reef Society Travel grant for the 5th Asia-Pacific Coral Reef Symposium (June 2023, 100,000 yen)

Best Oral Presentation Award for the 26th Japanese Coral Reef Symposium (Nov. 2023)
Presentation Title: "Coral skeleton dissolution is accelerated by turf algal settlement under ocean acidification"

Publications

Heitzman, J.M., Iijima, L., Mitushasi, G., Spatafora, D., Wada, S., Harvey, B., Kurihara, H., Agostini, S., 2024. *Turf algae drives coral bioerosion under high CO_2*. Communications Earth and Environment, *In Review*

Heitzman, J.M., Mitushasi, G., Spatafora, D., Agostini, S., 2023. *Seasonal coral-algae interactions drive White Mat Syndrome coral disease outbreaks*. Science of The Total Environment 900, 166379. https://doi.org/10.1016/j.scitotenv.2023.166379

Heitzman, J.M., Caputo, N., Yang, S.-Y., Harvey, B.P., Agostini, S., 2022. *Recurrent disease outbreak in a warm temperate marginal coral community*. Marine Pollution Bulletin 182, 113954. https://doi.org/10.1016/j.marpolbul.2022.113954

Agostini, S., Houlbrèque, F., Biscéré, T., Harvey, B.P., **Heitzman, J.M.**, Takimoto, R., Yamazaki, W., Milazzo, M., Rodolfo-Metalpa, R., 2021. *Greater Mitochondrial Energy Production Provides Resistance to Ocean Acidification in "Winning" Hermatypic Corals*. Frontiers In Marine Science 7. https://doi.org/10.3389/fmars.2020.600836

International Presentations

Heitzman, Joshua, Caputo, N., **Yang, SY.** (presenter), Agostini, S. *Recurrent disease outbreaks in a warm temperate marginal coral community*. in: International Taiwan Coral Reef Symposium, Taiwan (2022, Oral)

Heitzman, Joshua, Caputo, N., Yang, SY., Agostini, S. *Recurrent disease outbreaks in a warm temperate marginal coral community*. in: 14th International Coral Reef Symposium, Online, Germany (2021, Oral)

Heitzman, Joshua, Caputo, N., Yang, SY., Agostini, S. *Recurrent disease outbreaks in a warm temperate marginal coral community*. in: 15th International Coral Reef Symposium, Online, Germany (2022, Oral)

Heitzman, Joshua, Hirata, A., Mitushasi, G., Agostini, S. *Coral-algae interactions under ocean acidification*. in: 5th Symposium on the Ocean in a High-CO_2 World, Online, Peru, (2022, Oral)

Heitzman, Joshua, Iijima, L., Mitushasi, G., Wada, S., Harvey, B., Kurihara, H., Agostini, S. *Turf algae drives coral dissolution in a high CO_2 world* in: 5th Asia-Pacific Coral Reef Symposium, Singapore (2023, Oral)

Domestic Presentations

Heitzman, Joshua, Agostini, S. *Recurrent disease outbreaks in a high latitude marginal coral community*. in: 21st Japanese Coral Reef Symposium, University of the Ryukyus, Okinawa, Japan (2018, Poster)

Heitzman, Joshua, Hirata, A., Mitushasi, G., Agostini, S. *Coral-algae interactions under ocean acidification*. in: JST-SPRING Fellowship Poster Session, University of Tsukuba, Online, Japan (2022 & 2023, Poster)

Heitzman, Joshua, Caputo, N., Yang, SY., Agostini, S. *Recurrent disease outbreaks in a warm temperate marginal coral community*. in: 22nd Japanese Coral Reef Symposium, University of Hokkaido, Hokkaido, Japan (2019, Oral)

Heitzman, Joshua, Caputo, N., Yang, SY., Agostini, S. *Recurrent disease outbreaks in a warm temperate marginal coral community*. in: 23rd Japanese Coral Reef Symposium, Online, Japan (2020, Oral)

Heitzman, Joshua, Hirata, A., Mitushasi, G., Agostini, S. *Coral-algae interactions under ocean acidification*. in: 25th Japanese Coral Reef Symposium, Ishigaki, Japan (2022, Oral)

Heitzman, Joshua, Iijima, L., Mitushasi, G., Spatafora, D., Wada, S., Harvey, B., Kurihara, H., Agostini, S., *Coral skeleton dissolution is accelerated by turf algal settlement under ocean acidification*. in: 26th Japanese Coral Reef Symposium, Sendai, Japan (2023, Oral)

Heitzman, Joshua, Caputo, N., Yang, SY., Agostini, S. *Epizootiology of a temperate coral disease driven by thermal stress and macroalgal interactions*. in: Japanese Geoscience Union Meeting 2021, Online, Japan (2021, Oral)

Heitzman, Joshua, Caputo, N., Yang, SY., Agostini, S. *Coral-algae interactions under ocean acidification*. in: Japanese Geoscience Union Meeting 2022, Online, Japan (2022, Oral)

Certifications

California (US) Driving License

PADI Open Water - ~20 scientific research dives per year, +100 dives total

Research Techniques and Abilities

Field Monitoring (transects, quadrats, etc.)

Statistical analysis (R software)

Mapping software (QGIS)

Image analysis (ImageJ - FijiJ)

Mass Spectrometry (EA IsoLink CN IRMS System)

Microsensor experience and proficiency (Unisense O_2 & pH microsensors)

Microbial community assessment (PCR, 16S, QIIME2)

Environmental assessment (TSS, POC, FDOM, TA, pH, etc.)

Coral and symbiont physiological assessment (buoyant weight, chl. & protein conc., zoox. density, etc.)

Incubation system construction, usage and troubleshooting (e.g. Neptune Systems APEX)

SEM, fluorescence and light microscopy

Leadership and supervision experience (TA & RA)

Outreach and Volunteer Work

TARA Pacific, Public Outreach, Kobe city, Japan, July 2018

IOP (Izu Oceanic Park), Public Outreach, Ito city, Japan, July 2019

TARA JAMBIO, Microplastic Collection Outreach, Shimoda city, Japan, September 2020

Tsukuba Global Science Week, ICONA-JSPS Kick-off Symposium (Moderator), Online, September 2021

Tsukuba Latin America Online Exchange (Moderator), Online, March to April 2022