Helen F. Yan

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Education

Ph.D. **James Cook University** **Townsville, Australia** **July 2021**
Research Hub for Coral Reef Ecosystem Functions, ARC Center of Excellence for Coral Reef Studies, College of Science and Engineering
Advisor: Dr. David R. Bellwood
Natural Sciences and Engineering Research Council of Canada (NSERC) Postgraduate Scholarship – Doctoral
Australian Research Council Laureate Doctoral Scholarship

B.Sc. (Hons) **Simon Fraser University** **Vancouver, Canada** **2012-2018**
Major in Biological Sciences, Concentration in Ecology, Evolution, and Conservation
President & Dean's Honour Roll

Research Experience

Research Assistant **2020-2021**
Department of Biological Sciences (Simon Fraser University, B.C.)

- Developed lab assignments for upper-division undergraduate course in marine biology
- Generated nautical charts of local waters using open-source data in GIS
- Created introductory R scripts for beginners with an introduction to basic statistical modelling
- Provided R scripts for data cleaning and management to course teaching assistants

Research Assistant **2018 – 2021**
The Marine Biodiversity and Conservation Lab (Simon Fraser University, B.C.)

- Conducting global analysis to model and predict the presence of sawfishes (family Pristidae) in data-deficient countries
- Incorporating socioeconomic and ecological country-based metrics with extent of occurrence maps for each species
- Collating open-source data and calculating social indices at various scales using GIS

Research Assistant **2016 – 2019**
The Marine Ecology Lab (Simon Fraser University, B.C.)

- Assisted four Ph.D. candidates on field research and data collection for their theses in Nassau and Cape Eleuthera (the Bahamas) and Vancouver Island (B.C.)
- Conducted numerous subtidal field work using both snorkel and SCUBA in temperate seagrass meadows (Vancouver Island, B.C.)
- Measured characteristics of seagrass meadows by implementing light and temperature loggers, quantifying shoot density, mapping meadow bounds, and collecting seagrass and epifauna samples
- Quantified diurnal and nocturnal herbivory on coral patch reefs using snorkel and SCUBA methods by surveying and identifying various fish and invertebrates, measured reef characteristics, and conducted lab feeding trials of invertebrate macroalgal grazers
- Collected and dissected the stomachs of large predatory groupers from artisanal fishery landing sites to determine diet composition
- Processed lab samples, such as analyzing sediment core samples to identify infauna and determine sediment size, acid-washed and measured seagrass biomass, and measured chlorophyll content using a fluorometer

Interim Programme Officer **2019**
International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Shark Specialist Group (SSG)

- Responsible for managing workshop logistics and coordinating with international workshop participants while overseeing and creating budgets
- Organizing weekly meetings under the Global Shark Trends Project with international collaborators

Research Contractor **2019**
Fisheries and Oceans Canada

- Collated data of global invasive species' geospatial occurrences from the peer-reviewed literature

Honours Researcher **2017 – 2018**
Collaboration between the Marine Ecology Lab (Simon Fraser University, B.C.) and the Coast and Estuaries Division of the Australian Rivers Institute (Griffith University, QLD)

- Thesis: *Connecting the dots: The role of redundant and complementary connections in the maintenance of ecosystem function*; Supervisors: Dr. Isabelle Côté (Simon Fraser University) and Dr. Rod Connolly (Griffith University)
- Led design of experimental system, protocol, and data collection and analysis process

Publications

*****Shared first author

HF Yan, JM Casey, N Knowlton, JE Duffy & SJ Brandl. Low compositional stability after disturbance reduces functioning in diverse, tropical fish communities. In revision, *Ecology*.

4. HV Watkins*****, **HF Yan***, JC Dunic & IM Côté. (2021). Research biases create overrepresented 'poster children' of marine invasion ecology. *Conservation Letters* **14**, e12802.

3. **HF Yan**, PM Kyne, RW Jabado, RH Leeney, LNK Davidson, DH Derrick, B Finucci, RP Freckleton, SV Fordham & NK Dulvy. (2021). Overfishing and habitat loss drives range contraction of iconic marine fishes to near extinction. *Science Advances* **7**, eabb6026. **Media coverage by The New York Times, CNN, and BBC.*

2. NK Dulvy & **HF Yan**. (2020). Conservation: Goldilocks nations for restoring reef sharks. *Current Biology* **30**, R1415-R1418.

1. FT Francis, K Filbee-Dexter, **HF Yan** & IM Côté. (2019). Invertebrate herbivores: Overlooked allies in the recovery of degraded coral reefs? *Global Ecology and Conservation* **17**, e00593.

Awards & Scholarships

NSERC Postgraduate Scholarship – Doctoral ($63,000)	2021
ARC Laureate Scholarship ($108,376)	2021
Pacific Ecology and Evolution Conference Best Talk Runner-up (non-monetary)	2021
IDEAS Symposium People's Choice Award (non-monetary)	2021
IDEAS Symposium Best Oral Presentation (non-monetary)	2019
NSERC Undergraduate Research Award ($4,500)	2018

Biological Sciences Undergraduate Research Award ($1,000)	2018
International Mobility Award ($1,000)	2017
Vice-President Research – Undergraduate Student Research Award ($4,500)	2016
The B.C. Secondary School Summit Entrance Scholarship ($3,000)	2012

Presentations

Pacific Ecology and Evolution Conference 2021
Bamfield Marine Sciences Center, B.C. (virtual conference)
Bayes' Baes: A stats resource for ecologists by ecologists

Inter-Departmental Ecology and Aquatic Systems Symposium 2021
Simon Fraser University, B.C. (virtual conference)
Adjust your prior expectations

Inter-Departmental Ecology and Aquatic Systems Symposium 2020
Simon Fraser University, B.C.
Stability of tiny fish communities across latitudes

Eco-Evo Retreat 2019
Brackendale, B.C.
Where are they now: Predicting extinction in global sawfish populations

Pacific Ecology and Evolution Conference 2019
Bamfield Marine Sciences Center, B.C.
Connecting the dots: The role of connections in the maintenance of ecosystem function

Inter-Departmental Ecology and Aquatic Systems Symposium 2019
Simon Fraser University, B.C.
Where are they now: Predicting extinction in global sawfish populations

Northeast Pacific Shark Symposium 2018
Seattle Aquarium, WA
Filling the gaps: Assessing the status of sawfish populations in data-deficient countries

Inter-Departmental Ecology and Aquatic Systems Symposium 2017
Simon Fraser University, B.C.
Herbivory on coral reefs: Are parrotfish always the heroes?

Certifications

Rescue Diver 2019
Professional Association of Diving Instructors (PADI)
**over 40 recreational dives in temperate and tropical waters*

Scientific Research Diver 2018
Canadian Association for Underwater Science (CAUS)
**over 80 research dives in temperate and tropical waters*

First Aid Attendant 2020
Red Cross Emergency First Aid & CPR-C (re-certification)

Pleasure Craft Operator Card 2016
Transport Canada

Emergency Oxygen Provider 2016
Professional Association of Diving Instructors (PADI)

Workplace Hazardous Material Information System (WHMIS) 2014
Simon Fraser University

Service & Leadership

Conference organizer 2020
Inter-departmental Ecology and Aquatic Systems Symposium

Journal reviewer
PLOS One, Thalassas

Community & Volunteer Activities

Community Volleyball Coach (Vancouver, B.C.) 2014 – 2019
- Facilitated the skill development of girls aged 7-16 throughout the Lower Mainland through coordinated practices and camps
- Led teams through various tournaments throughout Canada

Student Athlete Advisory Committee Member (Simon Fraser University, B.C.) 2013 – 2016
- Organized social and academic opportunities for student athletes both within the university and the community
- Planned and led fundraisers for the Make-A-Wish Foundation
- Voted on league-wide policy changes for the Great Northwest Athletic Conference (GNAC) as part of the National Collegiate Athletic Association (NCAA)

Science AL!VE High School Coordinator (Simon Fraser University, B.C.) 2014
- Designed the curriculum to provide the necessary training for high school volunteers
- Partnered with numerous professors to create mentorship and educational activities for high school students
- Conducted free science camps in remote aboriginal communities in Haida Gwaii for kids ages 5-14