

PATRICK A. RAFTER

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EDUCATION / ACHIEVEMENTS

Assistant Professor. University of South Florida College of Marine Science. Dec. 2023-
Assistant Researcher. UC Irvine. July 2022-December 2023
Assistant Project Scientist. Keck Carbon Cycle Laboratory

11. Rafter, P.A., D.M. Sigman, K.R.M. Mackey. (2017) New production requires recycled iron in the eastern equatorial Pacific. doi.org/10.1038/s41467-017-01219-7

Ocean Memory Seed Grant (Art / Science Collaboration). An analog analysis of the ocean and climate: Exploring Ocean Memory and the materiality of historic data. \$10,000. **Rafter Lead PI.** 2020.

NSF MG&G 20132340. Collaborative Research with Mathis Hain (UCSC).

Organizer for OCB Meeting: Marine Carbon Dioxide Removal (2020-2022)
First-Generation BEES (Becoming an Environmental & Earth Scientist) (2020-present). Founder.
So Cal BOOM (Biogeochemical Ocean Observations)

University of Southern California. Rethinking iron fertilization & the marine biological pump on seasonal to ice age timescales. 2018.

Oregon State University. Iron recycling is critical for new primary production in all nitrate-rich, iron-limited ocean regions. 2018.

Wally Broecker's Changelings / Comer Foundation Climate Conference. A song of Ice and Fire and CO : linking seafloor volcanism and CO

RESEARCH FIELD EXPERIENCE ()

Project director. Sargasso Sea. CTD, plankton tows, cruise). 7 days on . 2013.

filtering and more (November BATS

Project director. Sargasso Sea. CTD, plankton tows, days on . 2013.

filtering and more (April BATS cruise). 7

Project director. Sargasso Sea. CTD, plankton tows, cruise). 5 days on . 2012.

filtering and more (November BATS

Project director. Sargasso Sea. CTD, plankton tows, days on . 2012.

filtering and more (July BATS cruise). 5

Project director. Sargasso Sea. CTD, plankton tows, Atlantic Time Series (BATS) cruise). 5 days on . 2012.

filtering and more (April Bermuda

Multi-coring, box-coring, seawater sampling in the Santa Barbara Basin. 5 days on the . 2008.

Gravity

Chair: AGU 2017:

Chair: Goldschmidt 2016: Goldschmidt Geochemistry:

Chair: Ocean Sciences 2016:

Chair: Goldschmidt 2013 (17c: Changing ocean oxygen: Past, present, future)

Reviewer: AGU-Geophysical Research Letters (>15), AGU-Global Biogeochemical Cycles (>10), AGU-Journal of Geophysical Research-Oceans (>5), AGU-Paleoceanography (>10), Deep Sea Research (2), Earth and Planetary Science Letters (2), EGU-Biogeosciences (2), Limnology and Oceanography (>5), Marine Chemistry (2), National Geographic Society (1), National Research Foundation-South Africa (2), Nature Geoscience (1), NSF OCE-Marine Geology and Geochemistry (>10), NSF OCE-Chemical Oceanography (>5), NSF-International Ocean Discovery Program (2), Philosophical Transactions of the Royal Society A (1). Nature Geoscience (2), Science (1).

MEDIA

UCI News (March 29, 2023). UC Irvine Earth system scientists uncover ice-age shift in Pacific Ocean circulation. <https://news.uci.edu/2023/03/29/uc-irvine-earth-system-scientists-uncover-ice-age-shift-in-pacific-ocean-circulation/>

news|wise (March 29, 2023). UC Irvine Earth system scientists uncover ice-age shift in Pacific Ocean circulation. <https://www.newswise.com/articles/uc-irvine-earth-system-scientists-uncover-ice-age-shift-in-pacific-ocean-circulation?sc=rssn>

Newsbreak (March 29, 2023). Scientists uncover ice-age shift in Pacific Ocean circulation. <https://www.newsbreak.com/massachusetts-state/2974116365173-scientists-uncover-ice-age-shift-in-pacific-ocean-circulation>

Phys.org (March 29, 2023). Scientists uncover ice-age shift in Pacific Ocean circulation. <https://phys.org/news/2023-03-scientists-uncover-ice-age-shift-pacific.html>

(March 30, 2023). ! " # \$ % & ' () * + , - . / 0 1 2 3 # 4 5 6 7 8 (UC Irvine Earth system scientists uncover ice-age shift in Pacific Ocean circulation). <https://tiisys.com/blog/2023/03/30/post-119350/>

EurekaAlert! (March 29, 2023). UC Irvine Earth system scientists uncover ice-age shift in Pacific Ocean circulation. <https://www.eurekaalert.org/news-releases/984380>

Environmental Monitor (March 7, 2018). <https://www.fondriest.com/news/iron-hoarding-recycling-aquatic-plants-pacific.htm>

Geochemical News (Feb 20, 2018). Top Story:

<https://phys.org/news/2018-02-oceanographers-mystery-phytoplankton-survival-nutrient-poor.html>
UC Irvine News (Feb 14, 2018).

. <https://news.uci.edu/2018/02/14/uci-oceanographers-solve-mystery-of-phytoplankton-survival-in-nutrient-poor-pacific/>