MixONET

SCOR WG 165 (Jan 2022 – Dec 2025)

Chairs: Aditee Mitra & George McManus

Mixotrophy in the **O**ceans: **N**ovel **E**xperimental designs and **T**ools for a new trophic paradigm

www.mixotroph.org/mixonet

19 members (17 countries):

Anukul Buranapratheprat (Thailand), Amany Ismael (Egypt), Áurea Ciotti (Brazil), Ahmed Al-Alawi (Oman), Beatriz Reguera (Spain), Fernando Unrein (Argentina), Hae Jin Jeong (S. Korea), Helga Gomes (USA), KB Padmakumar (India), Koji Suzuki (Japan), Luciana Santoferrara (USA), Maite Maldonado (Canada), Mengmeng Tong (China), Michaela Larsson (Australia), Patricio Diaz (Chile), Robinson Mugo (Kenya), Tina Šilović (France).

MixONET is focused on bringing the mixoplankton paradigm to resource managers, policy makers, & educators to enhance understanding of marine community structure and function.

The mixoplankton paradigm in marine ecology

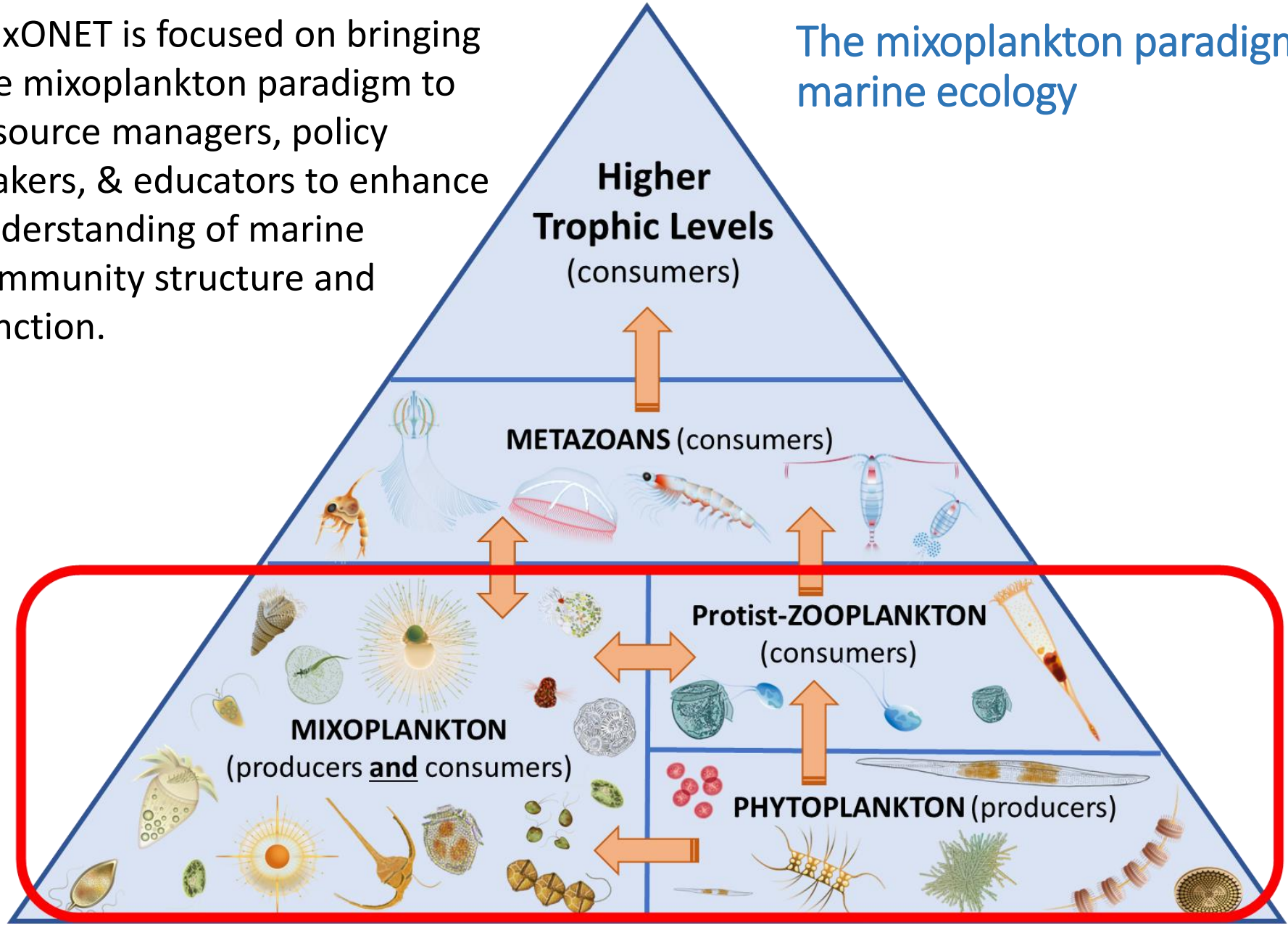
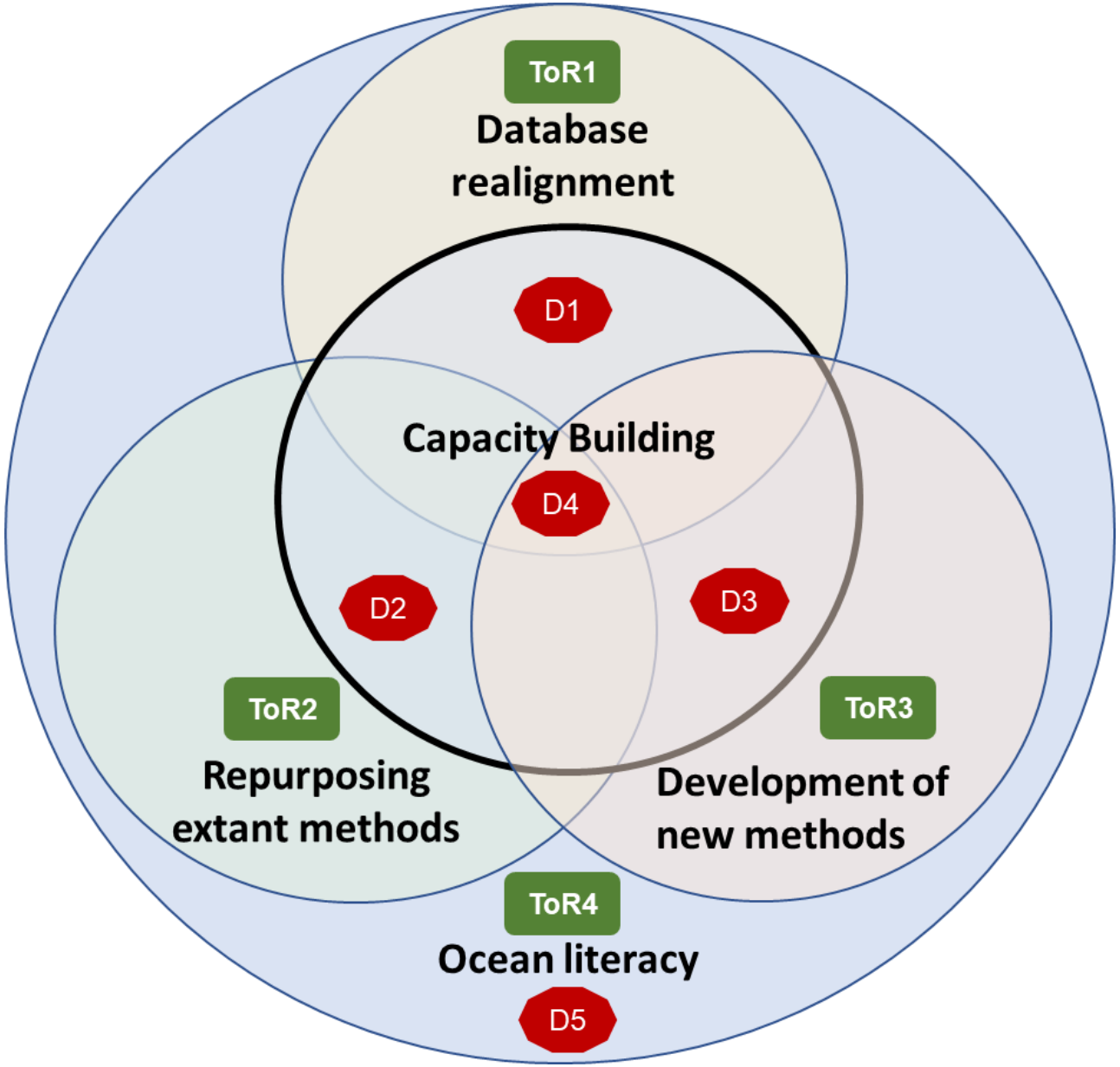
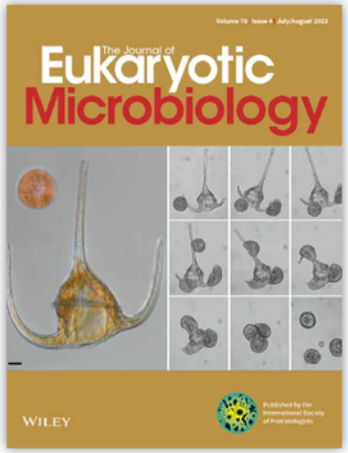


Figure from: Mitra & Leles (2023) https://doi.org/10.1007/978-3-031-34467-1_5

MixONET Terms of References



MixONET ToR1 Database realignment



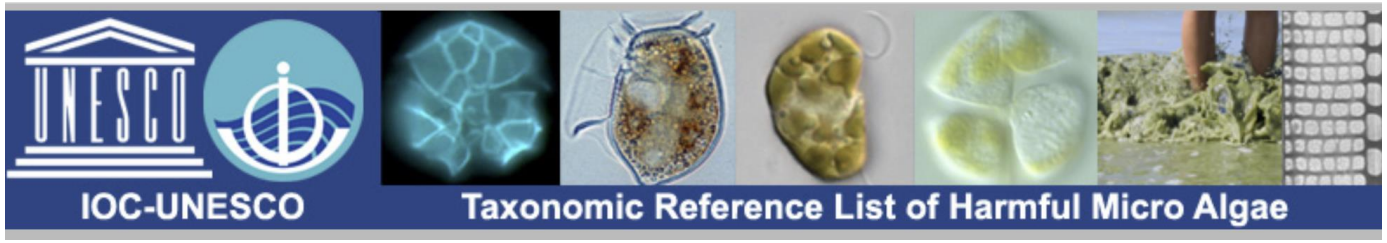
ORIGINAL ARTICLE | Open Access

The Mixoplankton Database (MDB): Diversity of photo-phago-trophic plankton in form, function, and distribution across the global ocean

Aditee Mitra, David A. Caron, Emile Faure, Kevin J. Flynn, Suzana Gonçalves Leles, Per J. Hansen, George B. McManus, Fabrice Not, Helga do Rosario Gomes, Luciana F. Santoferrara ... See all authors

First published: 27 February 2023 | https://doi.org/10.1111/jeu.12972 | Citations: 8

WoRMS World Register of Marine Species



Functional descriptions of all relevant MDB species added within species' 'Attributes'

- 81 MDB species were missing in WoRMS; have been added with AphiaIDs
- Functional descriptions of all MDB species added

The PR^2 databases

Three interconnected 18S rRNA databases

- PR2 reference sequence database
- PR2 primers
- metaPR2 metabarcodes

Ongoing

MixONET ToR2 Repurposing Extant Methods

Contents lists available at ScienceDirect

Harmful Algae

journal homepage: www.elsevier.com/locate/hal

Synchronic distribution of the dinoflagellate *Protoceratium reticulatum* and yessotoxins in a high stratified fjord system: Tidal or light modulation?

Patricio A. Díaz [a,b,*], Gonzalo Álvarez [c,d,e], Camila Schwerter [a], Ángela M. Baldrich [a,b], Iván Pérez-Santos [a,f,g], Manuel Díaz [h], Michael Araya [d], María Gabriela Nieves [i], Sergio A. Rosales [j,k], Guido Mancilla-Gutiérrez [a], Carla Arratia [j], Rosa I. Figueroa [l]

Open Access Article

An Unprecedented Bloom of Oceanic Dinoflagellates (*Karenia* spp.) Inside a Fjord within a Highly Dynamic Multifrontal Ecosystem in Chilean Patagonia

by Ángela M. Baldrich [1,2], Patricio A. Díaz [1,2], Sergio A. Rosales [3], Camilo Rodríguez-Villegas [1], Gonzalo Álvarez [4,5], Iván Pérez-Santos [1,6], Manuel Díaz [7], Camila Schwerter [1], Michael Araya [5] and Beatriz Reguera [8,*]

Environmental Science Processes & Impacts

ROYAL SOCIETY OF CHEMISTRY

CRITICAL REVIEW

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Cite this: *Environ. Sci.: Processes Impacts*, 2024, **26**, 16

Red tides in the Galician rías: historical overview, ecological impact, and future monitoring strategies†

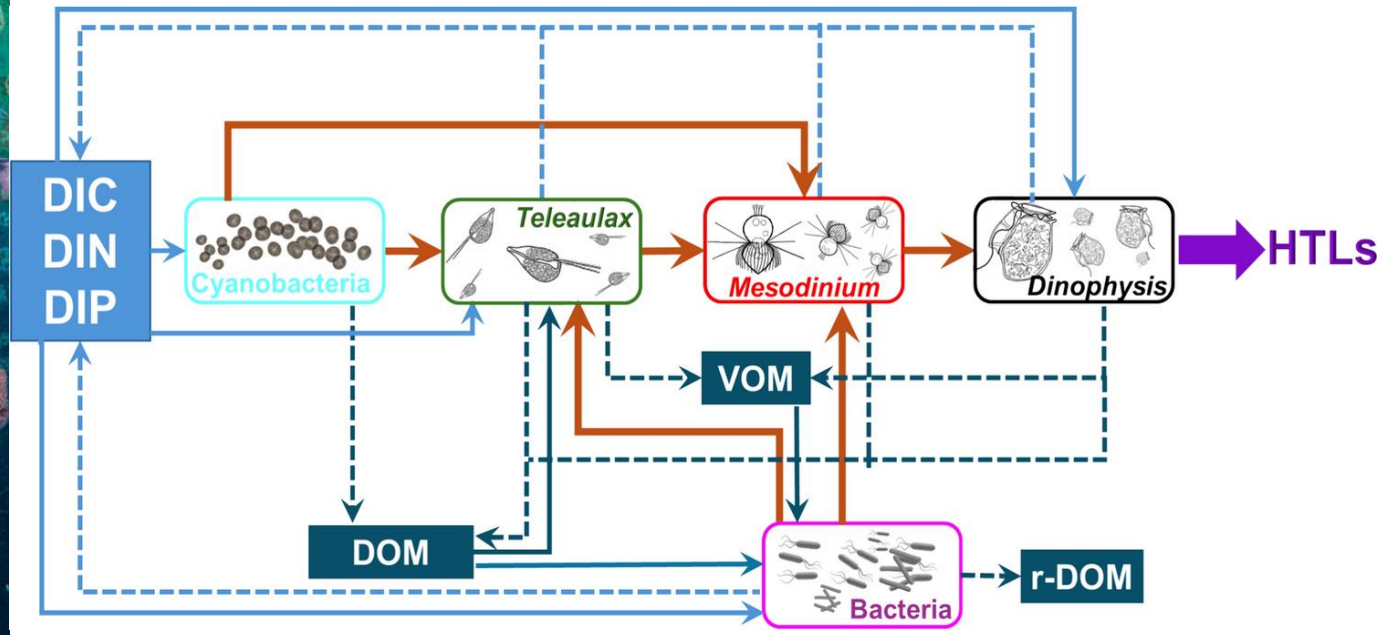
Rodríguez F., *[ab] Escalera L., [a] Reguera B.,[a] Nogueira E., [a] Bode A., [c] Ruiz-Villarreal M., [c] Rossignoli A. E.,[d] Ben-Gigirey B., [b] Rey V.[b] and Fraga S.[e]

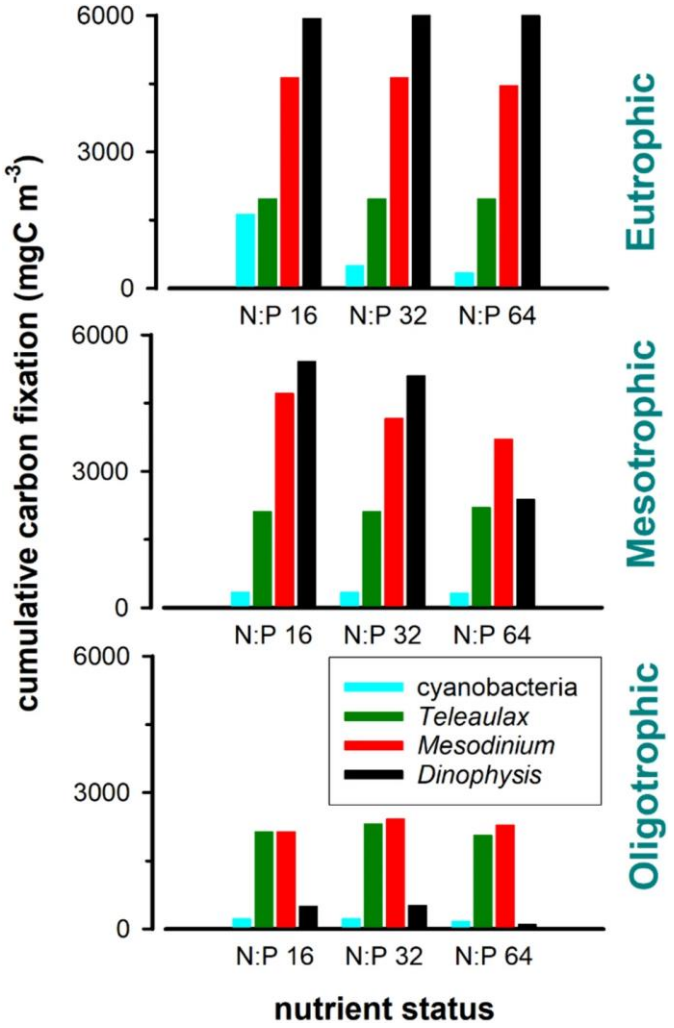
Open Access Article

Climate Change Stressors, Phosphate Limitation, and High Irradiation Interact to Increase *Alexandrium minutum* Toxicity and Modulate Encystment Rates

by Marta Sixto [1,2,*], Pilar Riobó [3], Francisco Rodríguez [1], Patricio A. Díaz [4] and Rosa I. Figueroa [1,*]

MixONET ToR3 Development of New Methods





MixONET ToR3 Development of New Methods

Journal of Plankton Research, 2024, 00, 1–6
https://doi.org/10.1093/plankt/fbae045
Original Article

OXFORD

Mixotrophs and Mixoplankton: Conceptual Integration into Aquatic Research

Quantum efficiency of chloroplasts retained from food by mixotrophic ciliate *Strombidium rassoulzadegani*

J. Grzywacz[1], M. Gorbunov[2] and G.B. McManus[1,*]

The Photosystem II inhibitor DCMU had a much greater effect on growth when ciliates contained green algal chloroplasts, compared to cryptophyte ones, suggesting greater integration of green plastids into the ciliate's metabolism.

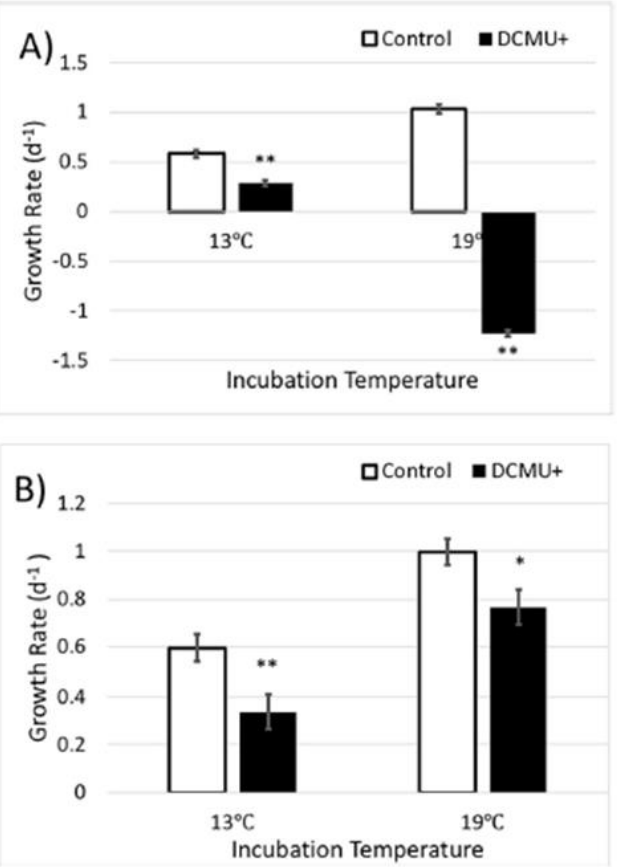


Fig. 5. Effect of DCMU on *S. rassoulzadegani* average growth rate when fed (**A**) PLY429 or (**B**) RHODO. Statistical significance is based on *t*-test: $P < 0.05$ (*) or $P < 0.01$ (**). Error bars represent SD for each treatment ($n = 3$).

Introduction to the theme section "Mixotrophs and mixoplankton: conceptual integration into aquatic research"

Running Header: Journal of Plankton Research I Volume XX I Number XX I Pages 0-00 I 2024
Running Header: S. Wilken and G. McManus I Mixotrophs and mixoplankton

Susanne Wilkena*, ✉ S.Wilken@uva.nl; George McManusb, ✉ george.mcmanus@uconn.edu

MixONET ToR4 Ocean Literacy