

75th Annual Meeting of the Psychological Society of America

July 13-22, 2021
Virtual via Whova

https://whova.com/portal/webapp/evhf_202101



reversible in a dose- and time-dependent manner. Using droplet digital PCR, we also confirmed inducer dependent transcriptional activation starts within minutes of inducer application without any detectable expression in the uninduced controls. The system described here expands the molecular and synthetic biology toolkits in algae and will facilitate future gene discovery and metabolic engineering efforts. This research is supported by the Office of Biological and Environmental Research in the DOE Office of Science È grant # DE-SC0008595

Kittle III, R.P., University of Louisiana at Lafayette, USA, c000269538@louisiana.edu; Richards, J.L., University of Louisiana at Lafayette, USA, joer207@gmail.com; Nguyen, A., University of Louisiana at Lafayette, USA, a.nguyen210@gmail.com; Gabriel, D.L., Research Center in Biodiversity and Genetic Resources, University of the Azores, Portugal, danielalgabriel@gmail.com; Sauvage, T., Instituto de Biociências, Universidade Federal do Rio Grande do Sul, Brazil, tomsauv@gmail.com; Schmidt, W.E., University of Louisiana at Lafayette, USA, william.schmidt@louisiana.edu; Fredericq, S., University of Louisiana at Lafayette, USA, slf9209@louisiana.edu

A NEW CRUSTOSE SPECIES OF *PHYMATOLITHON* (HAPALIDIALES, CORALLINOPHYCIDAE) FROM THE MEDITERRANEAN SEA (ABU QIR, EGYPT)?

Phymatolithon is one of the most studied and ecologically important crustose coralline algae (CCA) because of their dominance in various marine ecosystems worldwide. The taxonomic history of the genus has been complex, and the genus has been revised multiple times on the basis of morphological and molecular analyses. As part of recent macroalgal diversity survey in the Mediterranean and Red Sea, we report on CCA specimens collected in June 2011 via snorkeling along rocky reef habitats of Abu Qir on the Mediterranean coast of Egypt. Comparative DNA sequence analysis of the plastid genes *rbcL* and *psbA* suggests a potentially new species of *Phymatolithon*. SEM revealed coaxial thallus construction, the presence of cell fusions and absence of secondary pit connections in the perithallium, and an epithallium with 1-2 cell layers. Sequencing of additional genes and morphological analyses are ongoing to confirm unambiguous species identity.

Kolzenburg, R., University of Portsmouth, UK, regina.kolzenburg@gmail.com; Ragazzola, F., University of Portsmouth, UK, federica.ragazzola@port.ac.uk; Tamburello, L., Ischia Marine Centre, Stazione Zoologica Anton Dohrn, Italy, laura.tamburello@szn.it; McQuaid, C., Rhodes University, South Africa, c.mcquaid@ru.ac.za; Zardi, G.I., University of Algarve, Portugal and Rhodes University, South Africa, zardi73@yahoo.it; Nicastro, K. R., University of Algarve, Portugal, katynicastro@gmail.com

PHOTOSYNTHETIC RESPONSE TO A WINTER HEATWAVE IN LEADING AND TRAILING EDGE POPULATIONS OF AN INTERTIDAL RED ALGAE

Global and local instabilities related to anthropogenic actions are affecting terrestrial and marine ecosystems. Especially habitat-forming macroalgae species like coralline algae, play vital roles in temperate intertidal and coastal ecosystems, however, warming in countless regions around the world negatively affected abundance as well as distribution patterns. Marine heatwaves (MHWs) caused by anthropogenic climate change are developing to become forceful key factors of change on an ecosystem level and are increasing in intensity, duration and frequency. Despite recent research efforts, knowledge about variability in fitness-related physiological traits in trailing (i.e., warmer, low latitude) versus leading (i.e., colder, high latitude) edge populations is limited. We tested if leading (Iceland) and trailing (Spain) marginal populations of the fundamentally important intertidal macroalgae *Corallina officinalis* show photophysiological resilience and recovery capability when exposed to an ambient and future winter MHW scenario. Our study reveals that ambient and future winter sea surface temperature conditions in