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ABSTRACT SUBMISSION GUIDELINES

ABSTRACT TITLE

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Name(s) of author(s)

[Times NR 11 pt, Small caps, centre text, asterisk the corresponding author, underline presenting author, use superscript to denote affiliation (e.g.1), separate author by comma]

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Address(es) of author(s)

[Times NR 11, italic, centre text, use superscript for affiliation]

*Corresponding author: email address

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[Times NR 11 pt, justify text] Abstract should contain a brief introduction, objective(s), methodology, results, discussion and conclusion, highlighting the main points. It should be written single-spaced in a single paragraph **not exceeding 300 words**.

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ARTIFICIAL LIGHT POLLUTION INCREASES THE SENSITIVITY OF TROPICAL ZOOPLANKTON TO EXTREME WARMING

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Artificial light pollution and climate change are two important threats to the coastal ecosystems worldwide. However, the potential interaction of artificial light and extreme warming on coastal species is unknown. To address this issue, we exposed a tropical copepod *Pseudodiaptomus incisus* to one of twelve combinations of four photoperiods (0L:24D, 12L:12D, 18L:6D and 24L:0D - light: dark cycle) and three temperatures (26, 30 and 34°C). We quantified five key productivity parameters, including development time, body size of all 12 development stages, clutch size, hatching success and nauplii production. *P. incisus* had a larger body size and clutch size and higher nauplii production at the photoperiod of 12L:12D and 18L:6D than in continuous lighting condition (24L:0D). Copepods developed faster but showed smaller body size, clutch size, hatching success and nauplii production at 34 °C than at 30 and 26°C. Importantly, continuous lighting resulted in stronger reductions in body size, clutch size, hatching success and nauplii production at 34°C. Our results suggest that continuous lighting may increase the vulnerability of coastal zooplankton to climate change with ecological consequences.

Keywords: Artificial light pollution, Climate change, Copepods, Marine heatwave, Tropical ecosystem

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