ACSA Publications Listing
No. 12– September 2020
List moderator: Amy Slocombe

Journal Articles - *Conference Proceedings Articles* *Dissertations* - *Books & Chapters*

From the moderator

Thank you to everyone who contributed to this issue of the ACSA Publications Listing.

The ACSA Publication Listing is a quarterly electronic listing of publications in the field of citizen science within the Australian community. The listing is intended to share information with those interested in the Australian citizen science community.

If you are interested in obtaining a copy of one of the papers below, you can email the lead author who may send you a copy at their discretion.

Amy Slocombe

Abstracts of recently published journal articles

Widespread short-term persistence of frog species after the 2019–2020 bushfires in eastern Australia revealed by citizen science

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Fires change ecosystem composition and influence species extinction risk, yet information on the impact of fire on biodiversity is scant. The bushfires in southeastern Australia during the summer of 2019/20 were unprecedented in their extent and intensity, and postfire management decisions have been hindered by a lack of knowledge of the impact of fires on biodiversity. We examine the short-term persistence of frog species across southeastern Australia after these fires using records of calling frogs from the national citizen science project FrogID. We demonstrate widespread short-term persistence of frog species. Sixty-six frog species were detected in the firegrounds before the fire, and within 125 days postfire, 45 of these were detected. All 33 frog species with more than five records that were detected in the months of December–March prefire were detected postfire. While the short-term postfire persistence of so many frog species is a positive result, the population-level and longer-term

consequences of the fires remain unknown, as does the ability of frogs to persist with the changing fire regimes predicted as a consequence of global climate change. We illustrate the value of citizen science in collecting large-scale and rapid observations in response to increasing anthropogenically-driven ecological events.

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On a Fine Day in Shorncliffe the Sea Came Boiling Upwards Across the Bathers …

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Australia's historical scientific archives are open for investigation by citizen scientists, such as myself. They hold our unique primary scientific records, data and references, and they are found in universities, museums, state libraries and government agencies, national archives and on researchers' PCs. While our paper archives have recently been exposed to digitisation, modern digital scientific information is not being upgraded and collated into our modern digital knowledge-management 'data mining' global computational systems. I am writing this awareness article, flavoured with 40 years of seismological engagement and as a purposeful contribution in support of World Digital Preservation Day (22 November 2020), 'At Risk Digital Materials'. This paper establishes that Queensland has an incomplete 'public' history of local tsunami hazard occurrence. Further, it announces the discovery of a new meteotsunami meteorological hazard occurrence on 3 June 1917. By retrieving the various types of archived data, this paper questions and reflects on our society's lack of tsunami hazard preparedness, highlighting an obvious decline in scientific rigour in communicating such knowledge about our environment. This discussion of meteotsunamis illustrates the multivariate complexity of weather systems, with climate-change-related phenomena capable of creating coastal tsunami-like hazards commonly causally linked to undersea earthquakes and/or landslip or tectonic fault movement.

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http://www.royalsocietyqld.org/wpcontent/uploads/Proceedings%20128/Lynam_Web.pdf

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Citizen science and marine conservation: a global review

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Climate change, overfishing, marine pollution and other anthropogenic drivers threaten our global oceans. More effective efforts are urgently required to improve the capacity of marine conservation action worldwide, as highlighted by the United Nations Decade of Ocean

Science for Sustainable Development 2021–2030. Marine citizen science presents a promising avenue to enhance engagement in marine conservation around the globe. Building on an expanding field of citizen science research and practice, we present a global overview of the current extent and potential of marine citizen science and its contribution to marine conservation. Employing an online global survey, we explore the geographical distribution, type and format of 74 marine citizen science projects. By assessing how the projects adhere to the Ten Principles of Citizen Science (as defined by the European Citizen Science Association), we investigate project development, identify challenges and outline future opportunities to contribute to marine science and conservation. Synthesizing the survey results and drawing on evidence from case studies of diverse projects, we assess whether and how citizen science can lead to new scientific knowledge and enhanced environmental stewardship. Overall, we explore how marine citizen science can inform current understanding of marine biodiversity and support the development and implementation of marine conservation initiatives worldwide. This article is part of the theme issue 'Integrative research perspectives on marine conservation'.

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