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Conference Abstract

Improving Data Quality in Citizen Science Apps for Conservation Biology

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Abstract

Field data collection by Citizen Scientists has been hugely assisted by the rapid development and spread of smart phones as well as apps that make use of the integrated technologies contained in these devices. We can improve the quality of the data by increasing utilisation of the device in-built sensors and improving the software user-interface. Improvements to data timeliness can be made by integrating directly with national and international biodiversity repositories, such as the Atlas of Living Australia (ALA).

I will present two Citizen Science apps that we developed for the conservation of two of Australia's iconic species – the koala and the echidna. First is the Koala Counter app used in the Great Koala Count 2 – a two-day Blitz-style population census. The aim was to improve both the recording of citizen science effort as well as to improve the recording of "absence" data which would improve population modelling. Our solution was to increase the transparent use of the phone sensors as well as providing an easy-to-use user interface. Second is the EchidnaCSI app – an observational tool for collecting sightings and samples of echidna.

From a software developer's perspective, I will provide details on multi-platform app development as well as collaboration and integration with the Australian national biodiversity repository – the Atlas of Living Australia. Preliminary analysis regarding data quality will be presented along with lessons learned and paths for future research. I also

seek feedback and further ideas on possible enhancements or modifications that might usefully be made to improve these techniques.

Keywords

citizen science, data quality, mobile, app, smartphone, ALA, biodiversity, integration, software, UI, conservation

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