Rungulla National Park Bush Blitz Expedition

TERN Ecosystem Surveillance – May 2022

The Terrestrial Ecosystem Research Network (TERN) Ecosystem Surveillance platform conducts field surveys and sampling across a national network of plots and transects to provide the environmental monitoring data, samples, advice and terrestrial ecosystem mapping needed for improved monitoring and assessment of Australia's major ecosystems. The ecosystem research platform helps scientists and land managers better detect and quantify change in vegetation structure and composition, land cover and soil characteristics.

TERN attended the 2022 Bush Blitz Expedition at Rungulla National Park in May 2022. Over the past 13 years, TERN has co-located plots at many Bush Blitz locations, prior and post expedition. This is the second formal Bush Blitz expedition attended by TERN, the first being the Far West Coast SA expedition in 2021. Staff from the Ecosystem Surveillance team attended the first week of the expedition to 'set-up' two one-hectare monitoring plots. One plot was nominated in an existing enclosure managed by the Queensland Parks and Wildlife Service, and the second plot was newly established and located in a homogenous dominant vegetation type in the park. The two plots fulfilled the requirement of the Bush Blitz 'standard sites' that are routinely collected on each expedition.

The TERN field team later accessed Rungulla National Park (27-30 May 2022) to complete the sampling of the two monitoring plots. These plots contribute to the network of almost 1,000 long term ecological monitoring plots across Australia. The standardised method follows the AusPlots Rangelands Survey Protocols manual (White et al., 2012), also available at https://www.tern.org.au/field-survey-protocols/. A rich temporal dataset of vegetation, soil and landscape attributes are collected on the monitoring plots, as well as Herbarium specimens representing the floristic composition on the plot, and associated leaf tissue samples stored in silica gel. The soil from a one metre soil pit is characterised and bulk density soil samples collected. To supplement the soil pit information, nine subsites within the plot are sampled where soil metagenomic samples are collected. TERN Australia Soil and Herbarium Collection is available for loan https://www.tern.org.au/field-sample-library/.

TERNs' attendance during the first week of the expedition gave TERN an opportunity to connect with the wider biological collection's community, and for cross pollination with Bush Blitz and partners, including the Queensland Herbarium, Australian Tropical Herbarium, Queensland Museum, The University of NSW and The Queensland Parks and Wildlife Service.

Once herbarium identifications are confirmed, the full dataset for the two plots sampled at Rungulla National Park, uniquely labelled QDAGUP0032 and QDAGUP0033, will be available via the TERN EcoPlots platform for both vegetation and soils attributes. The 'ausplotsR' is an R package that facilitates the extraction and preparation of TERN Australian ecosystem monitoring data.

References

White, A, Sparrow, B., Leitch, E., Foulkes, J., Flitton, R., Lowe, A.J., Caddy-Retalic, S. (2012). AusPlots Rangelands Survey Protocols Manual. Version 1.2.9. Terrestrial Ecosystem Research Network and The University of Adelaide Press. https://doi.org/10.25901/5f2ca309cc9c2

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