POSTERS

Title: Acoustic Surveys For Western Ground Parrots: Human Observers Vs Digital Technology

Authors: Sarah Comer, Abby Berryman, Saul Cowen, Jeff Pinder, Cam Tiller, Chris Powell, Lucy Clausen and Allan Burbidge

Institution: Department of Biodiversity, Conservation and Attractions

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We have been surveying the critically endangered Western Ground Parrot (WGP) (*Pezoporus flaviventris*) using two acoustic methods: human observers (staff and volunteers) have undertaken listening surveys for decades, and autonomous recording units (ARUs) have now been used extensively for more than five years. Challenges of these methods include the logistics of and training for observer participation in remote sites, difficulty of distinguishing WGP calls from those of tawny-crowned honeyeaters (for both humans and software), time required to obtain an adequate library of reference calls for automated recognition, time required to develop recognisers or manually scan field recordings, and deterioration of microphones during extended field use. Many valuable lessons have contributed to improving acoustic monitoring for WGP, including:

1. the need to understand the ecology of the target species in order to optimise sampling strategies, particularly with respect to temporal activity patterns of WGP;
2. survey results differing between humans and ARUs, with each detecting some calls that the other misses and results may also differ between different ARUs;
3. there is a high error rate (especially false positives) from recognisers we have been able to develop using currently available software, meaning that scanning of spectrograms by a skilled observer may be more efficient; and
4. human observers provide added value to acoustic data, and their involvement contributes substantially in terms of awareness raising.

Human and ARU acoustic surveys complement each other in determining WGP occupancy and revealing meaningful population trends.