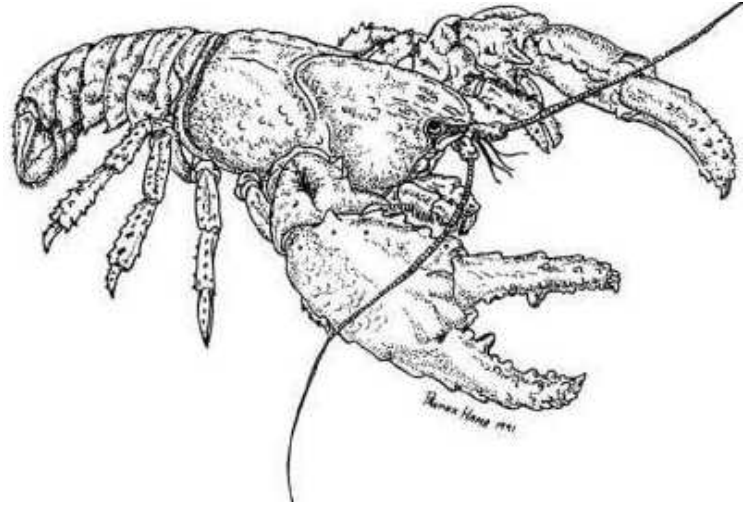


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A Sound Idea: acoustic monitoring of Tasmania's bush and forest birds

by **Sarah Lloyd**



Grey Fantail

The tropical rainforests of South America have more bird species than anywhere else in the world. They are remote, cover vast areas and any one location may have more bird species than Tasmania's bird fauna. Not only do these factors make bird monitoring difficult but there are very few researchers with the necessary skills (i.e. the ability to identify birds by their calls) to conduct meaningful surveys.

American ornithologist, the late Theodore (Ted) A. Parker III was a legend! He was able to identify 4,000 tropical bird species by their calls and, based on their vocalisation, he discovered several species new to science and recognised numerous species previously considered subspecies. He pioneered the use of tape recorders to survey birds in tropical forests and concluded that not only is acoustic monitoring a more effective way to monitor birds in some cases but that the use of recording devices should be required when surveying birds.

Tasmania does not have the species richness of tropical rainforests, nor does it cover a vast area. Nevertheless, there are difficulties in monitoring bird populations here. There are relatively few people with the necessary skills to monitor bush and forest birds effectively and governments seem reluctant to fund monitoring projects. If funding is received much of it goes on travelling to

and from the survey sites. In these days of rising petrol costs and a growing awareness of carbon footprints, making the most of the latest technology is a way to overcome these difficulties.

A sound idea is a project that takes a different approach to monitoring bush and forest birds by using digital sound recording devices. These devices (e.g. Zoom H2) are to sound recordists what compact digital cameras are to home photographers. They are relatively inexpensive, small, robust and have good quality inbuilt microphones. They require no technical expertise other than the ability to press a few buttons.

With a network of willing participants from around the state I hope to compile an aural record of different habitats. The project will record birds, frogs, and other vocal animals.

Anyone wanting to participate in the project will receive by registered post the Zoom H2 recorder and sheet of instructions. (*Birds Tasmania* has already purchased 3 Zoom H2 recorders.) The recorder should be placed outside away from mechanical sounds (mowers, chainsaws etc) and noisy water and left to record for a minimum of 20 minutes.

For people interested in helping with the project but who have an aversion to very early mornings I have decided, after listening to several sound files, that the peak of the dawn chorus singing in spring (this starts at around 0330 eastern standard time in Tasmania) is not a good time to record.

Firstly, the simultaneous singing of many different birds means that differentiating the species at a particularly rich site can be extremely difficult. The presence of some birds, most notably Silvereyes and Blackbirds, exacerbates the problem. Silvereyes sing relentlessly at dawn and have a tendency to imitate other species. Blackbirds can also dominate the dawn singing and are also accomplished mimics. With this in mind the recordings should be done between 0600 and 1000 depending on prevailing weather conditions.

Back at 'the lab' (i.e. my home at Black Sugarloaf) I listen to the recordings, and make an audio CD and compile locality lists to send to each participant.

Acoustic monitoring has several advantages over conventional bird surveys. Firstly, there is a permanent record of the survey site. If needs be the recording can be listened to repeatedly; this is valuable if there's a quiet bird or one that only vocalises once. Secondly, more than one person can listen to the recordings to verify species identification and thirdly there is no need for skilled observers to be in the field.

Ideally all sound files will be available to anyone who wants to do further studies on distribution or bird vocalisations. Already I've found it interesting to hear the regional variations in the calls of birds from different locations (The Yellow-throated Honeyeater at St Helens, for example, sounds quite different to the one at Birralelee). The study of regional variations in songs (sometimes referred to as dialects) is little studied in Australia, but is a growing area of interest overseas, especially in the US.

Several trial recordings have been done at the Blue Tier and Skyline Tier in northeast Tasmania with impressive results. Vocal species (e.g. Grey Shrike-thrushes and Golden Whistlers) tended to dominate the recordings but birds with quieter songs such as Black-faced Cuckoo-shrikes and Beautiful Firetails were also detected. The recording device is about as sensitive as the human ear (which varies considerably from person to person). Non-vocal species or species that call sporadically (e.g. raptors) are not recorded, but these birds are not likely to be picked up during conventional field surveys.

This is a really exciting new project that has the potential to involve many people keen to find out what birds occur in their area and to assist in bird monitoring.

Already several stories indicate that this project is about much more than just birds. When two women were moving the recording device away from dogs and mowers to a quieter location they found a colony of the exquisite Gunn's tree orchid (*Sarcochilus australis*) growing on a blanketleaf (*Bedfordia salicina*) unfortunately just inside the boundary of an area destined for logging. Another woman, who apparently never gets out of bed before 9 am, has at last discovered that dawn is the best time of the day – she was up at 6 am to place the recorder outside!

This project will result in an aural record of Tasmania's environment. Now that it's begun I lament the fact that it didn't happen years ago. How wonderful it would be to have an aural record of Tasmania from years, decades or even centuries ago. Unfortunately the technology was not available then. Now that it is, let's make the most of it!

[January 2022: The writer is no longer soliciting field recordings.]

References:

- Haselmayer, J. & Quinn, J.S. (2000) *A comparison of point counts and sound recording as bird survey methods in Amazonian Southeast Peru*. The Condor 102:887-893. The Cooper Ornithological Society 2000
- Parker, T.A. III (1991) *On the use of tape recorders in avifaunal surveys*. Auk, Vol.108

Notes on [downloading sound files](#) from the Zoom H2

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