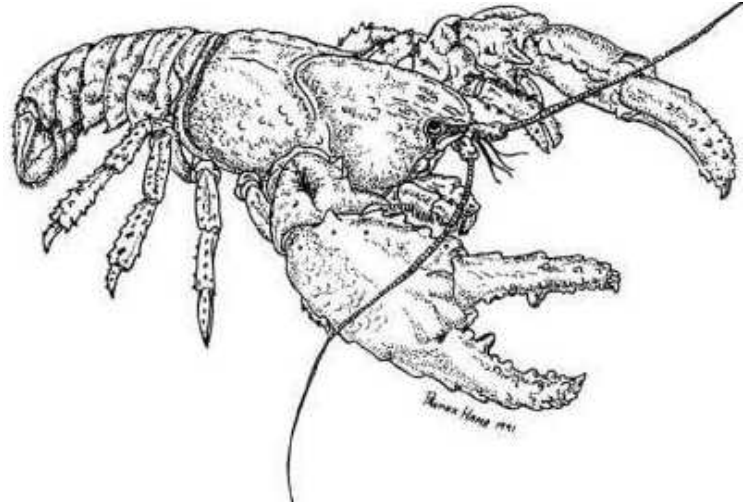


Disjunct Naturalists

WEBSITE OF THE CENTRAL NORTH FIELD NATURALISTS



Chirp1: Newsletter of 'A sound Idea': acoustic bird monitoring

by **Sarah Lloyd**

October: Spring Dawn Chorus month - what birds are in YOUR bush?

The dawn chorus is the time when most of the birds in the neighbourhood join each other in a concentrated bout of early morning singing. It is not only wonderful to listen to, it is also extremely informative. An acoustic recording of this event can tell us what birds are living in an area. Imagine how much we could learn through a coordinated effort to record at as many sites as possible across Tasmania within one month.

Sex and the spring dawn chorus

Bush birds respond to lengthening days and increased light intensity and soon after the winter solstice, after a period of relative quiet, they become noticeably more vocal. Birds use their songs to establish territories, ward off rival males and bond with mates; their singing is closely correlated to their breeding cycle, the production of sex hormones and the growth of gonads to several times their non-breeding volume and weight in small birds. Some birds start breeding in Tasmania in late winter, but spring is the peak breeding season in these temperate latitudes.



Superb Fairy Wren

Why October?



Scarlet Robin

By September migratory species (e.g. Striated Pardalotes, Swift Parrots and cuckoos) have returned to Tasmania to breed. By mid October residents and migrants will have established their breeding territories where they will remain while rearing their young. After that they will range over a much larger territory.

The size of a breeding territory will depend on its quality – that is, how much food is available. For a small bird like a Scarlet Robin, the average size is 3.2 ha, but the territories can vary in size from between 1.4 to twenty hectares. As different species have different foraging requirements there are many overlapping territories within an area.

Early birds ...

At Birrallee on October 17th 2005 sunrise was at 0521. The dawn chorus began well before it was light enough to see. (I had my headlamp on while taking notes.) At 415 a Silvereeye started singing from the gully, followed by a Superb Fairy-wren at 421. From 427 until 440, several small flocks of silvereyes flew south across the study site; by 445 a Pink Robin, Bassian Thrush, Forest Raven and Grey Fantail had joined the chorus and by 500 it was in full swing. Once the sun rose there was a noticeable lull.



Silvereeye

... and not so early birds!



Grey Shrike-thrush

Fortunately, for those people with an aversion to very early mornings, dawn is not necessarily the best time to record. There are some species that rarely sing **except** in the very early morning (e.g. the Bassian Thrush) but a recording at this time would miss some of the more common birds that are not early singers. (Birds sing in a set daily sequence, a sequence that does not change much from day to day.)

Grey Shrike-thrush, Golden and Olive Whistlers are late starters in the dawn chorus and pardalotes don't sing until after it is light. Unlike the Bassian Thrush, however, these birds are usually very vocal throughout the morning in spring and early summer.

This project aims to get recordings from many different locations across Tasmania, enabling us to get a picture of what's occurring where.

All recordings should be done in the mornings, and preferably before 9:00.

It would be great to have some recordings from the very early dawn chorus if anyone is willing. Remember that it is dark at this time so your site needs to be safe to access. If you're fortunate to live close to the bush as I do, it can simply be a matter of placing the recorder outside and going back to bed!

Recordings made before midday if the birds are vocal and active are also useful.

A Sound Idea: the project so far

Thanks to the efforts of more than 20 people, there are now over eighty 20-minute recordings from King Island in Bass Strait to Ketchem Bay on the rugged coast of southwest Tasmania. There are also species lists for each site.

The recordings make interesting listening. For instance, just after 7:00 am on the 24th November 2008 a Swift Parrot (*Lathamus discolor*) (listed as endangered under the *Tasmanian Threatened Species Protection Act 1995*) zoomed through the dry bushland at Bagdad north of Hobart; in early December several were recorded at Chauncey Vale and then, on December 11th 2008 one flew over Koonya on the Tasman Peninsular.

On February 21st at Watersmeet, Swansea, a Wedge-tailed Eagle, another endangered species, flew above the farmland, scaring the resident Noisy Miners and Tasmanian Native-hens. Late in May, another eagle flew above Myrtle Park.

But these recordings reveal much more than just chance encounters with

threatened species. They can tell us which native bush birds are able to persist in isolated bush remnants, suburban and semi-urban bushland, weed-infested coastal areas and private and public reserves.

It should come as no surprise that some of the richest near-natural sites for birds coincide with human settlement; birds also like to inhabit places with a reliable water supply near productive land. It is good to know that in some areas our activities don't adversely affect the local native birds. It is important that these areas are retained.

In any area of eucalypt forest with vegetation in good condition (i.e. with shrub, mid-canopy, upper canopy layers present) you should see resident birds such as fairy-wrens, thornbills, honeyeaters and whistlers throughout the year with migratory species returning in spring and summer. It was great to hear that the vegetation on the edges of St Helens, the gully at Heybridge and the dry bush at Bagdad support a healthy bird fauna.

Conversely, at two separate reserves on the outskirts of Hobart the presence of Noisy Miners was immediately apparent when I listened to the recordings. These pugnacious birds tend to aggressively exclude most other birds from their territory; in more degraded areas it is only the larger species such as magpies, butcherbirds and kookaburras that can put up with their attacks. That fact that there were also Spotted Pardalote, Golden Whistler, Grey Fantail and honeyeaters suggest that Noisy Miners don't completely dominate the sites and some careful planting should keep them at bay.

Noisy Miners are native honeyeaters that particularly like areas with little or no understorey. Planting shrubby understorey helps to stop them dominating an area. Studies have found that incorporating bi-pinnate wattles when replanting is particularly effective.

Feedback from participants in the project has been invaluable. Particular thanks to Richard Ashby who made extensive notes of the birds he heard while recording at Sisters Beach, Table Cape National Park, Cradle Mountain, Heybridge and Lake Gordon.

I compared his notes with the recordings. On several tracks I was unable to hear some birds he heard; on other tracks the Zoom recorded birds he did not hear. Some of the birds that were missed were those with high, soft calls such as thornbills, fantails and woodswallows. This is not unexpected as our ability to hear, especially high frequency sounds, deteriorates with age - one good reason for having an acoustic record of a survey site.

As well as missing sounds out of our range of hearing, we have the ability to hear selectively. Just think of being in a crowded room. We can 'tune - in' (or 'channel') to the person with whom we are speaking, while somehow not listening to all the other sounds in the room.

A remarkable example of this came on the first track I listened to. How could you NOT hear the loud incessant calling of a Masked Lapwing when in the field? - and yet this is just what happened. The sound of a Masked Lapwing is so ever-present for people living near its habitat that they subconsciously block it out.

Conversely, some birds are just quiet, especially in the non-breeding season. How easy it would be to miss 2 seconds of a quiet winter song of a Golden Whistler during a 20 minute field survey, or a distant Flame Robin interspersed with the raucous sounds of numerous native hens. Having a permanent acoustic record allows repeated listening. It also means that I can confer with others should there be unfamiliar sounds.

Thanks to A Sound Idea, a Flame Robin made it to the



bird list at the Tasmanian Arboretum at Eugenana for the first time in five years.

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Flame Robin

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