

## Birds in Plantations - Kangaroo Island 2018 Quick Summary Report

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This year is the first time that bird surveys have been conducted in KIPT plantations managed by PF Olsen on Kangaroo Island. The plantations were visited between 3rd and 18<sup>th</sup> November 2018, with twenty-two volunteer surveyors taking part. 86 surveys were completed, across 37 different properties or control sites. Surveys were conducted using the same methodology as in Victoria and Western Australia: 20 minute – 2ha transects, with all birds seen and/or heard recorded by surveyors. As in the other southern Australian sites, transects were placed in three main different habitat types, or treatments: plantation stands, remnant habitat within plantations and paired control sites in nearby national park (Flinders Chase National Park). Surveys in plantation stands were further separated into edge transects (at the edge of a stand, with various neighbouring habitat types) and internal transects.

### Abundance and Diversity

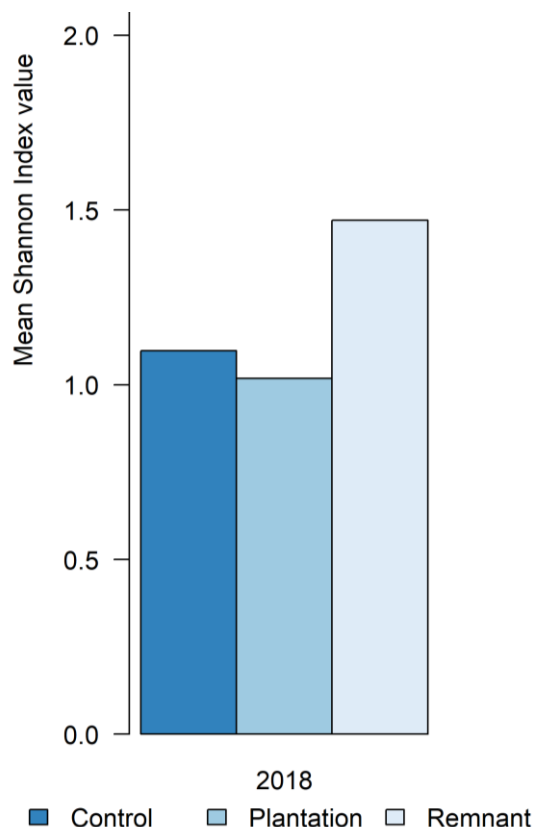
During the survey period 869 individual birds were counted, 742 of these were recorded on survey transects. Only birds recorded on transects are included in the following summaries (Table 1), as “off-transect” sightings may have been in different habitat types.

**Table 1.** Summary of the number of surveys, bird abundance and diversity across the three main survey types, plantation stands, remnant habitat patches within plantations and control sites (national park areas outside plantations).

Survey type	Number of surveys	Number of species	Total abundance (average)	Shannon Index
<b>Plantation stands</b>	56	31	465 (8.30)	1.018
<b>Plantation remnants</b>	17	21	186 (10.94)	1.470
<b>Control sites</b>	13	23	87 (6.69)	1.098
<b>OVERALL</b>	86	38	742	1.116

38 different bird species were seen, the top five most commonly reported being Red Wattlebird, Crescent Honeyeater, Superb Fairy-wren, Brown Thornbill and Grey Currawong. Average abundance was highest within the remnant habitat, with

generally high numbers of birds observed in the plantation properties. A Shannon Diversity Index was calculated for each transect, and the average (mean) index value calculated for each of the three transect types (Figure 1). Remnant habitat patches recorded the highest Shannon Index, indicating that these remnant patches may be playing an important role in maintaining bird diversity at a landscape level.



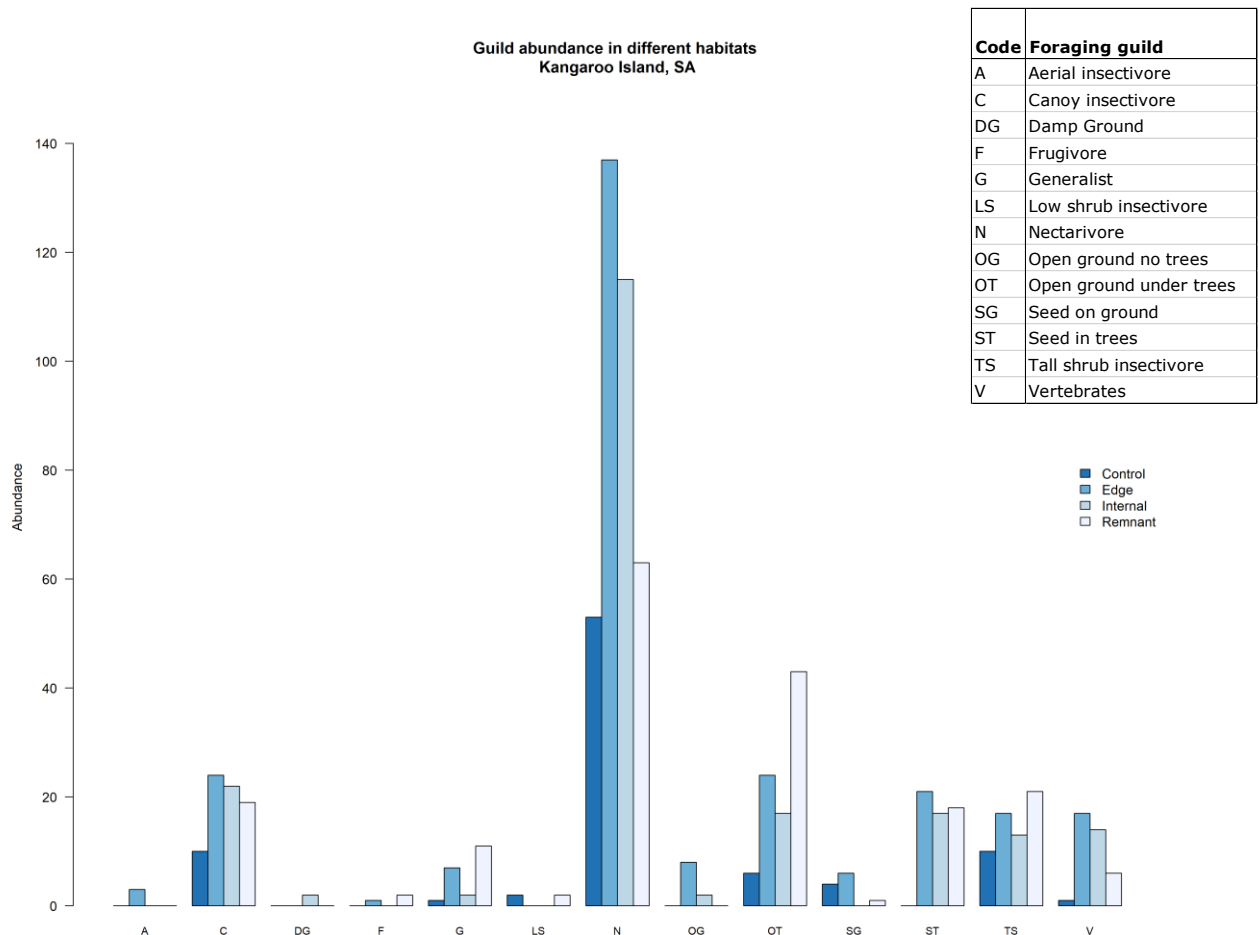
**Figure 1.** Mean Shannon Diversity indices recorded from the three different survey types, plantation stands, remnant habitat on plantations and control sites in nearby national park.

### Conservation Priority Species

There were no bird species from the Federal EPBC list or the South Australian Endangered/Vulnerable/Rare Species lists recorded on KIPT properties during 2018. However, 33 of the 38 different bird species recorded during the surveys are part of the Kangaroo Island Narrow-leaved Mallee Woodland ecological community (KI Mallee Woodland) list. The KI Mallee Woodland is an EPBC listed critically endangered ecological community that only occurs on Kangaroo Island. The KI narrow-leaved mallee tree (*Eucalyptus cneorifolia*) is the key plant species for this community and occurs in patches across Kangaroo Island. Although this community is mainly characterised by vegetation type, the bird species related to this community will provide important ecological roles including seed dispersal and pollination. If KIPT properties can contribute to the maintenance of these bird species' populations this may have wider conservation benefits for remnant KI Mallee Woodland patches nearby.

## Foraging Guilds

Australian bird species can be classified into different foraging guilds, depending on both the type of food favoured by each species, and the methods employed to find the food. Members of 13 guild groups were recorded on Kangaroo Island, however, six of these guilds only had one representative (Figure 2).



**Figure 2.** Abundance of different foraging guild types in four different habitats: control sites, plantation edges transects, plantation internal transects and remnant habitat patched in plantations.

The most abundant foraging guild recorded during the 2018 surveys were nectarivorous species (N, Figure 2). This group feeds on flowering plants and blue gum plantations probably provide a source of food for members of this guild, which may explain the high numbers recorded in the plantation transects. The nectarivores recorded this year included seven species of honeyeater and two parrot species.

The second most abundant foraging guilds were canopy insectivores (C, species such as cuckoos and pardalotes) and bird species which forage on open ground under trees (OT) like the Superb Fairy-wren. The final report will include a more detailed summary of the guild structures, accounting for survey effort.

## Survey success

Considerable support from Shauna Black (KIPT) and Hugh Watters (PF Olsen Australia) contributed to the smooth running of the surveys on Kangaroo Island.

The number of volunteer surveyors was encouraging and hopefully will be maintained next year. However, a large proportion of the volunteers were not experienced bird surveyors. This may mean the number of species recorded will improve in later surveys as volunteers become more experienced. There were also difficulties moving through the habitat, particularly in control sites and some remnant habitat patches, due to very thick vegetation. Next year it is important to communicate with volunteers that it is not necessary to move across the whole transect, or in a straight line during the surveys. Some of the more difficult transects, particularly in control sites, can also be relocated to account for this.