



**KANGAROO ISLAND EXPEDITION**  
**SAM Biennial Survey**  
**17 – 25 October 2023**  
**Expedition Leaders' Report**



**The purposes of the Expedition**

Kangaroo Island is important scientifically and ecologically as well as being a very significant international tourist destination. While there is a degree of habitat protection in place, large-scale land clearing for agriculture was mandated by successive governments until the 1980s.

This has left the island vulnerable to more habitat loss, and the fires of 2019/20 had a devastating impact on the wild creatures of the island. This survey was intended to help scientists understand the impact of the fires as well as assess the survival of creatures in an unburned area.

The overriding context for the expedition is that while there have been various collections on Kangaroo Is, over all our knowledge and available collections are notably poor for fire-sensitive taxa and some leaf litter invertebrates remain amazingly rare in collections.

The habitat we focussed on is the largest remaining long-unburnt patch of Mallee woodland with a very dense heath understorey. The creek lines within this retain some special, and now endangered, spiders and probably other things. And there are also creatures that are likely to be there but that have never been recorded. The patch we stayed on (Yacka

Creeks) was without fire for over 50 years, in stark contrast to the rest of the wetter western side of the island.

We tried to be targeted about how we collected and wanted to focus particularly on actual gaps within collections, especially groups that have research/conservation potential.

In terms of projects happening already, **Dr Remko Leijs** has been surveying for Green Carpenter Bees and where we were based is in the centre of where these bees should occur. There was a detailed survey of grasstree flower stems and old Banksias which are the nesting habitat for this bee.

We conducted intensive surveys for the two fire-sensitive endangered spiders which both occur in the area - they have been wiped out it seems from many other places on the island. Flower-visiting insects were also well surveyed.

Our lead scientist was entomologist **Dr Matt Shaw**, known to many members through his fascinating evening presentations and his work on the 2021 Wintinna survey. Matt's interest is in mites, a very large animal group that is underappreciated and diverse, and with important roles in ecosystems.

The team also included Dr Remko Leijs and **Dr Ben Parslow**. Remko is an expert on Australian native bees and has been working with the Club for many years. Ben Parslow is the Museum's Collection Manager of Terrestrial Invertebrates. His research interests are focused on discovering new species and reconstructing the evolutionary relationships and history of parasitic wasps. We were joined by Harvestman expert **Dr Bruno Buzzato** for three days. Bruno is an academic at Flinders University.

Amongst our expeditioners, we were also very fortunate to include **Adjunct Associate Professor Geoff Allen**, an entomologist at the University of Tasmania whose research centres on insect behaviour, especially biological control, chemical ecology, pollination and insect movement. He kindly volunteered to work with the scientific team for the duration of the survey.

### **The timing of the Expedition**

The expedition was timed to coincide with emerging insect-attracting floral resources, and weather that was mild enough for pleasant camping and foraging. We also avoided the school holidays to ensure easier access to the Sealink ferry.

### **A summary of the activities**

**Monday 16 October.** The advance party (scientists, leaders and camp managers) arrived at the Yacka Creeks site and set up in 'The Castle', a large two-story converted shed that was our headquarters for the duration. We helped Mal and Val Hansen and their daughter Sharon set up the kitchen and the large adjacent room which was to become our dining, recreation and education space. We also inspected for and cleared obstructions to the main access tracks to the collecting and trapping sites. Signs guiding the main party to the camping ground were erected.

We then receded an area south of the main survey area called 'The Wedge'. This is part of the Ravine de Casoars wilderness area. This recce confirmed the need for both whistles and gaiters as the bush is much denser than in previous surveys. Scientists were set up in The Lodge (including Geoff Allen) a building about 500 metres south west of The Castle.

**Tuesday 17 October.** The main party arrived at the camping ground and set up camp. They then convoyed to The Castle where we held introductions and a safety briefing.

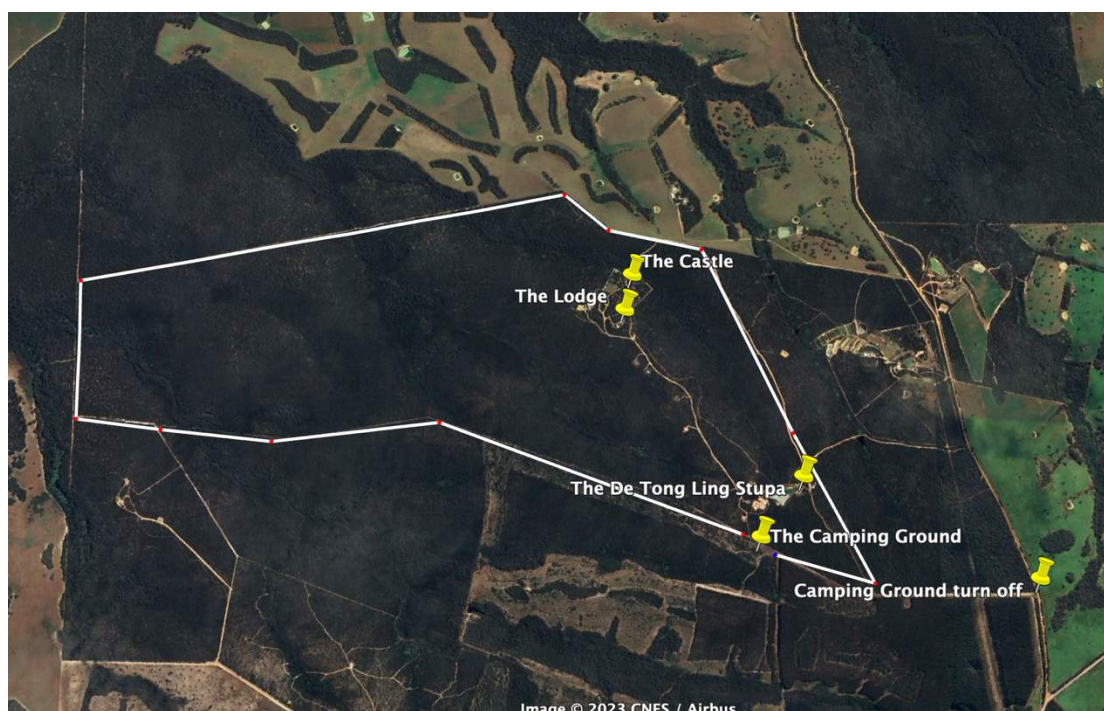
Hatbands and whistles were distributed. Matt introduced the scientific aims of the survey. All the scientists spoke about what they hoped to achieve.

Remko's short speech about the fate of the Green Carpenter Bee was very moving. We all felt deeply for him as we felt at that time there was very little likelihood of finding any individuals, let alone a viable population, and he and his wife Katja Hogendoorn have dedicated many years to their survival.

Val and Mal were introduced. The 3.5km night drive back to the camping ground needed to be cautious as there were dozens of Tamar Wallabies, Western Grey Kangaroos and Brush-tailed Possums crossing the tracks. We also saw Echidna and Heath Monitor. A monitor near the camp adopted Sharon Hansen but we suspect the relationship was food based. There was also a semi-tame Grey Shrike-thrush, adopted by Clasina, a resident who lives nearby and uses The Castle as her kitchen and bathroom.

Weather was cool and clear. Warm in the bush.

**Wednesday 18 October.** Pitfall traps and malaise traps were set up on the northern boundary, while Remko's group left for the western end of the island to Harvey's Return. The outer southern, western and northern boundary tracks of Yacka Creeks, were the main focus of the survey— see map below. The white lines are the survey tracks.



In the late afternoon, the scientists set up some tables outside The Castle and expeditioners helped them with leaf litter sorting. Inside Ben Parslow demonstrated insect pinning. In the evening Kimball Cuddihy and his partner Heidi came to dinner and Kimball gave a talk about the Yacka Creeks property. He spoke exceptionally well about the property and his personal journey in Buddhism. The Hansens excelled themselves with barramundi and salad, setting a standard we came to expect.

**Thursday October 19.** Active trapping and collecting. Hard work in warm conditions and dense bush. A notable wasp was caught by Ben using the car net, known as "Annette" a successor to "Priscilla". Remko's group found females of a type of bee formerly only known from male specimens. In the evening Trevor Ireland gave a very professional and

interesting presentation on the geology of Kangaroo Island. The Irelands also provided the data show and screen which were a boon for the evening presentations. Some expeditioners visited the pond next to the Stupa where they heard four species of frog known to be extant in southern South Australia – Spotted Grass, Bibron's Toadlet, Banjo and Common Froglet.

**Friday October 20.** A party went with Matt to the Seal Bay Conservation Park. Target species were spiders and scorpions. Rocky elevations with limestone and dense bush. Abundant scorpions.

A huge moment in the life of the camp was when a live female Carpenter Bee was found on the southern boundary track when Briony Dow and Colin Macdonald went for a mid-afternoon walk. They had been trained by Remko in the likely habitat, but the find was completely unplanned and a moment of great joy, despite the find not being any guarantee of the future of the species. Two other possibly active nests were found. These discoveries galvanised the whole camp.

Geoff Allen made an engaging presentation sharing his life through his research and work as an entomologist taking him to NSW, South Australia, California, Western Australia and since 1998 Tasmania. He was a tremendous asset to the expedition. He fitted in seamlessly with the scientific team and independently led survey groups.

Dr Bruno Buzatto from Flinders University was collected in the evening from Kingscote. His special interest is Harvestman arachnids.

**Saturday October 21.** Cool. Light rain at night. More collecting and searching. It was decided that all searching would happen in the main survey area and that there would be a shared lunch. Remko and his group searched other areas on the eastern side of Yacka Creeks for Carpenter Bees. Saturday evening was party night. Expeditioners were asked to wear an item of insect-related apparel. People got into the spirit of it and had a great night. Bill Marmion gave a humorous wine report. Bruno gave an excellent and engaging PowerPoint on his career as an entomologist with details about Harvestman's natural history. He would also search for the endemic miniature trapdoor spider which we so far had failed to find.

**Sunday October 22.** Colder weather. More collecting. Cuddie Cudmore found another active Carpenter Bee nest. People were getting tired but still fronting up. Insects were not abundant. Some people were taking occasional mornings or afternoons off which we did not discourage as long as we knew where they were. People have embraced the safety aspects and also the need to disinfect their feet to prevent the spread of *Phytophthora* fungus which is destroying the grass trees and Banksias.

Matt and Bruno's groups went to De Mole estate which is about 25 minutes north of Yacka Creeks. The target species were a very rare and ancient assassin spider, and a tiny Harvestman. The collecting area was next to the beautiful De Mole river – towering gum trees, tea trees, rushes, yaccas, a small river, and open enough to walk through fairly easily.

In the evening Matt talked about mites – a humorous and interesting presentation. Kimball came for dinner, and with Clasina they said that they would like to come to all the evening talks even if they didn't stay for dinner.

**Monday October 23.** Returned to De Mole estate. We were looking for the assassin spider which is so rare there has never been a male of the species found. These creatures come from deep time, hundreds of millions of years in the past. We were not to remove them from their habitat if we found one. We were also looking for tiny Harvestman, and these were

found in the leaf litter. The scientists were excited about the Harvestmen – but the assassin spider remained elusive. Remko and Ben collected for the whole day at the Wedge. Ben's evening presentation was on wasps. He is an excellent communicator and is loved by the expeditioners.

**Tuesday October 24.** Final day of collecting. Mainly devoted to retrieving the malaise traps and mini pitfall traps. The weather which had been very kind to us to this point was starting to threaten rain. The evening session was devoted to thanks and acknowledgements.

**October 25.** After a final cooked breakfast (a daily treat) people went back to the camping group to pack up and head for the ferry.

### **Successes**

- Finding targeted species and other species not expected to be found in the area,
- The level of effort, determination and persistence of the expeditioners over the eight days. People drew on reserves of energy and resilience such that the collecting effort was unrelenting throughout the duration of the survey.
- The way that the scientists inspired us all to find these creatures. We felt we were doing important work, and that we were making a contribution to science. The work became an exciting treasure hunt.
- The esprit de corps of the whole group. People shared their motor vehicles, looked out for one another, complied with the safety requirements, ensured that no one was left behind in the campsite, made their own lunches, did their dishes, and cleaned up the shared spaces.
- Mal, Val and Sharon's amazing efforts in the kitchen.
- Expeditioners, most notably Andy Pearce, who volunteered to work in the kitchen release to join the scientists and the Hansens so they could have a break, help with collecting, and take a tour of Yacka Creeks with Kimball.
- Bill and Cuddie's management of the wine ration.
- Geoff Allen's assistance to a local farmer concerned about an apparent insect attack on his gum trees.

### **People to acknowledge**

**Matt Shaw, Field Team leader.** This survey was Matt's brainchild. He put the team together, established the purpose and vision of the expedition, and negotiated the bureaucratic demands, all while doing a full-time job at the Australian Museum in Sydney.

**Kimball Cuddihy, Yacka Creeks Owner.** Kimball's role was more than just opening the gates to the property. He helped arrange and set up the infrastructure at The Castle and the camping ground (including two hire toilets which were much appreciated by everyone) and responded willingly to our calls for advice and help.

**Mal, Val and Sharon Hansen.** The kitchen is always the living heart of the camp, and this year was no exception. The food was fantastic as always and a major contributor to the morale of the camp.

**Geoff Neumann.** Geoff offered to prepare a photo book of the Expedition.

**Natalie Rollinson, Membership Liaison Officer.** Nat did a great job marketing the expedition and overseeing the finances.

**Helen Brakebrough, Sealink.** Helen was our main contact person at Sealink for the ferry group bookings and we found her to be a flexible, efficient, understanding and reassuring official. We wrote to the General Manager of Sealink to acknowledge her exemplary work.

**Rose and Alastair Dow  
Expedition Leaders  
November 2023**