Dragon Tree Soak — An Oasis in the Great Sandy Desert *by Clifford Young*

"A howling wilderness of spinifex and sand" was how one early explorer saw the Great Sandy Desert, a region covering more than 20 000 square kilometres in the north of Western Australia.

Although the region has scattered vegetation consisting mainly of spinifex, hummock grass, patches of mulga and some desert oak, water holes are scarce and far apart and are generally indistinguishable from the surrounding terrain.

However, a biological survey into the Great Sandy Desert in late 1977 discovered a lush soak with open pools of water, surrounded by tall trees and rushes, and teeming with wildlife.

Situated between two sand-dunes in the north-western corner of the desert, the oasis was first seen from a helicopter chartered by the Bureau of Mineral Resources which was conducting a geological survey of the area. The information was passed on to a biological team from the Department of Fisheries and Wildlife which was at that time only 25 kilometres away investigating the wildlife and vegetation of a relatively barren group of rock outcrops, the McLarty Hills.

Only a short stay at the soak was needed to convince the biological party that the area was unique in Western Australia and worthy of preservation. An application to the Government to have the soak and the surrounding area declared an A-Class Reserve was officially approved in March, 1979.

Dragon Tree Soak, as it came to be known, only covers an area of about 0.5 hectares although the total area of the surrounding reserve is more than 14 000 hectares. It was named after the predominance of Dragon Flower Trees *(Sesbania formosa)* which surround the soak in contrast to the more usual paperbarks *(Melaleuca)* found in wet or damp situations throughout the State.

The biological team which first surveyed the soak comprised a biologist, Mr N.L. McKenzie of the W.A. Wildlife Research Centre, and Mr A.S. George, a botanist from the Western Australian Herbarium.

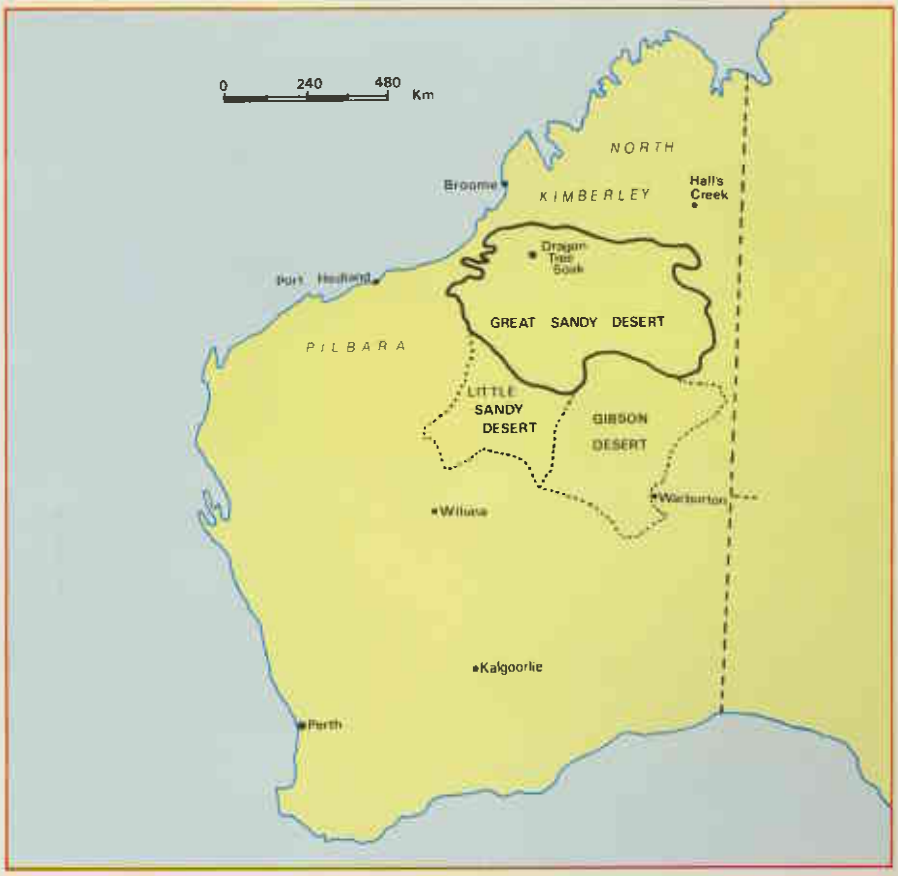
Mr McKenzie described how they found the soak. "A Departmental survey had been carried out the previous year in the Edgar Ranges, about 100 kilometres north of the McLarty Hills. We had also spent considerable time in the Kimberleys, and the logical extension of that work was to continue south into the Great Sandy Desert.

"We also had a requirement at that time to select possible sites for reserves in the Great Sandy Desert which would cover habitats which were particularly unique to the area in terms of vegetation and animal life.

"As a bonus, a geological party from the Bureau of Mineral Resources was conducting a mapping exercise in the north-western portion of the desert and offered to take us to the McLarty Hills by helicopter for a brief visit. The geological party was camped on the Anketell Ridge which lies to the south-east of the McLarty Hills and we drove there together with two assistants who would explore the immediate area around the ridge during our absence.

"Before we left for the Hills, a member of the geological party mentioned to us that he had seen a swamp in the area which was unlike anything else he had seen in the surrounding desert. As it was close to where we were going, we arranged that the helicopter would take us there after we had explored the McLarty Hills.

"The McLarty Hills turned out to be a very barren piece of landscape and after spending four days there, during which time we only caught one small marsupial mouse, we were glad to leave and were looking forward to our first glimpse of the soak.



Small open pools of water, tall *Setaria formosa* trees, and thick rushes provided a haven for birdlife at the soak. (Photo N. McKenzie)

▲ The surrounding sand dunes and spinifex also support a rich fauna collection including geckos. (Photo N. McKenzie)

▲ McLarty Hills (Photo N. McKenzie)

▲ Dragon Trees *(Sesbania formosa)* on the northern side of Dragon Tree Soak showing the remarkable contrast between the richly vegetated soak and the surrounding arid land. (Photo N. McKenzie)

▼ McLarty Hills (Photo N. McKenzie)

▼ The McLarty Hills, only 25 kilometres north-east of Dragon Tree Soak provides a stark contrast to the soak's lush vegetation and wildlife. (Photo N. McKenzie)

▲A heavy mist hangs over the sand dunes the morning after the biologists arrived at Dragon Tree Soak. The vegetation found close to the soak is denser and supports more tall shrubs and trees than the surrounding desert. (Photo N. McKenzie)

"During the flight to the soak we could see a gradual change in the nature of the terrain below us. From a barren dry landscape covered with scattered shrubs and hummock grass, we began to see claypans and samphire patches with thicker stands of desert walnuts. the colour of the sand dunes was also changing to a richer red.

"We landed beside a green grassy sward only metres away from the edge of the swamp which was ringed with trees up to 14 metres high. However, what impressed us the most was the noise . . . there were birds calling from everywhere."

As their time at the soak was limited, the two hastily set up camp and advanced into the swamp to record species of plants and animals and to collect samples. In particular, Norm McKenzie thought the conditions were ideal to provide a refuge for a night-parrot, one of Australia's rarest birds.

However, his plans to capture one with a mist net set up near the edge of the soak were thwarted within minutes of setting the net up by a bronzewing pigeon which blundered into the net, knocking it to the ground and creating enough noise in the process to scare away any night parrots which may have been in the area.

The following morning Norm spent more than three hours quietly observing birds coming in to drink at one of the open pools within the swamp. During that time he recorded more than 20 different species including Zebra Finches, Pied Butcher Birds, White-plumed Honeyeaters, Cockatiels, Rainbow Bee-eaters, Rufous Whistlers and Mistletoe Birds.

Several species of raptors, including an Australian Goshawk, a Spotted Harrier and Nankeen Kestrels, were also sighted flying over and around the swamp.

However, one of the most interesting finds was a group of Clamorous Reed Warblers *(Acrocephalus stentoreus),* a bird which, although common in other parts of Australia, particularly in swamps and marshes, was not expected to be seen in the middle of the Great Sandy Desert.

Mammals trapped at the soak also turned out to be surprising . . . almost every single one was a common housemouse (Mus musculus). These animals seemed to find conditions around the swamp ideal compared to the barren country surrounding them.

The dunes and interdune area immediately around the soak were also explored with some interesting results. On the western side of the soak was a small cleared area with a number of empty fuel drums indicating it was an old helicopter pad which had probably been used during mineral exploration in the area.

Alongside one of the drums Norm McKenzie found some weathered dingo scat which he collected. Later analysis showed the scat contained the jawbones of at least two marsupial moles *(Notoryctes typhlops),* an animal about which little is known as it has only rarely been seen.

Mr McKenzie said he believed the scat was no older than two or three years and the marsupial moles would probably have been found and eaten within about 20 kilometres of Dragon Tree Soak.

This made the reserve particularly important as there is no recent evidence that any other reserves within Western Australia harbour this species of animal.

On their return to the geologist's camp on the Anketell Ridge, they found their assistants, Mr Ken Youngson and Mr Jim Rolfe, had also been busy collecting specimens from around the area, one of which was a mummified bat. On close inspection the bat proved to be a White-striped Bat *(Tadarida australis)* which, although previously found in the Little Sandy Desert and the Gibson Desert, had not been found as far north as the Great Sandy Desert.

It has since been seen frequently patrolling the dunes and is now regarded as common in the area.

Following the success of this brief excursion into the Great Sandy Desert, a major biological survey was undertaken in 1979, the results of which are currently being compiled for publication. Full details of the expedition to Dragon Tree Soak are expected to be included in the publication.