

Forming the western boundary of the Shark Bay World Heritage Property, Dirk Hartog, the largest island off the WA coast, has a fascinating history and valuable biodiversity.

Andrew Burbidge relates some of the island's history and discusses its values as a national park.



by Andrew Burbidge

# Our largest island

Occupying about 60,000 hectares, Dirk Hartog Island is the largest island in Western Australia as well as the westernmost point of Australia. Forming the western boundary of Shark Bay, it is situated in an arid but remarkably biodiverse area. Dirk Hartog has a long European history dating back to the earliest days of the exploration of Australia, and is part of the Shark Bay World Heritage Property. Although there has been a sheep station on the island for nearly 150 years, the intention is to convert the pastoral lease into a national park in the near future.

Prior to about 6,000–7,000 years ago, when sea levels were lower, Dirk Hartog Island would have been part of the mainland and would, undoubtedly, have been visited by Aboriginal Australians. However, by the time that European explorers arrived, it was



uninhabited—the lack of fresh water was probably the main reason.

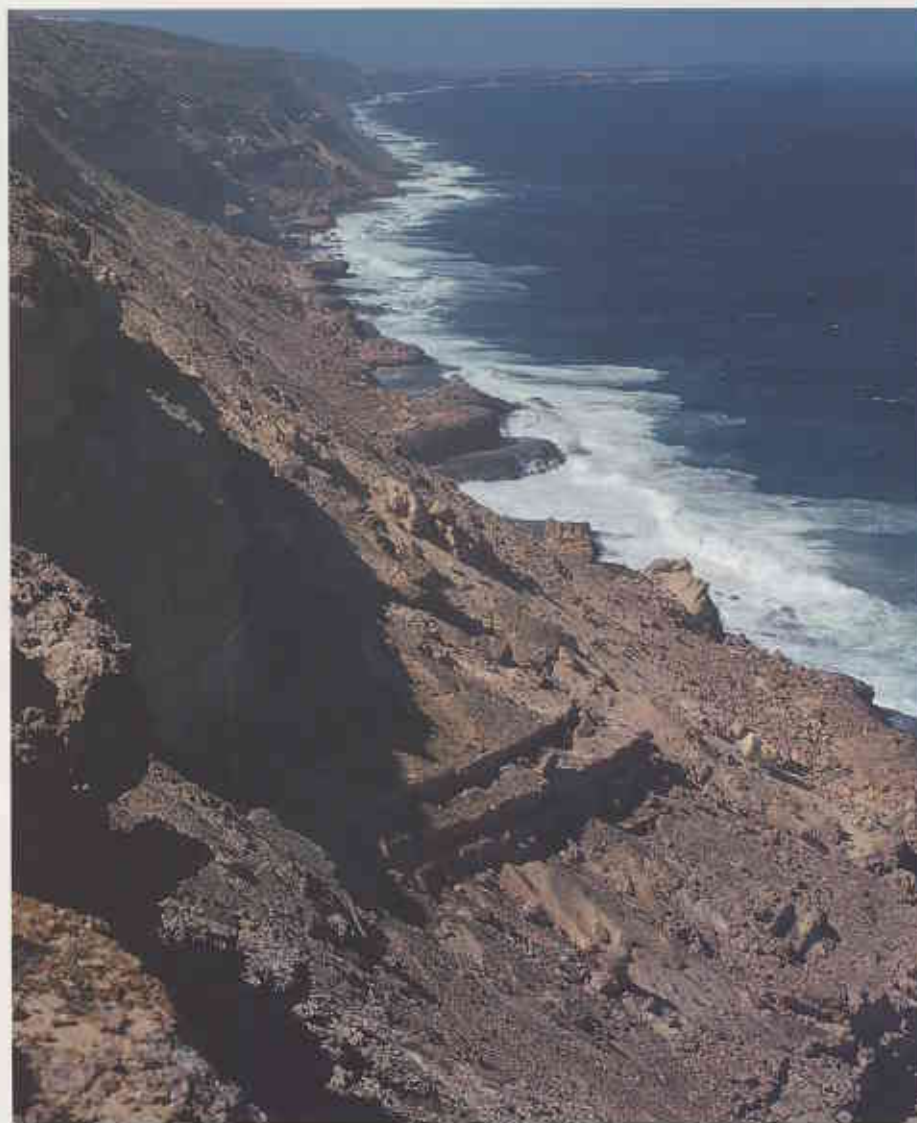
### EUROPEAN EXPLORATION

The island is probably best known as the site of the first proven European landing in Australia—by Dirck Hatichs (Dirk Hartog), the master of the Dutch ship *Eendrach*, on 25 October 1616. The landing was at the northern tip of the island—later named Cape Inscription, because the crew left a pewter plate, bearing a record of their visit, nailed to a post. Eighty-one years

later, in 1697, Cape Inscription was again visited by a Dutch East India Company ship, this time the *Geelwinck* commanded by Willem de Vlamingh. He discovered Dirk Hartog's plate, and took it back to Holland, replacing it with one of his own on a new post.

Englishman William Dampier, in the *Roebuck*, was the next visitor to Dirk Hartog Island, staying between 16 and 21 August 1699. In his *Voyage to New Holland*, Dampier wrote of the island's vegetation: 'The grass grows in great Tufts, as big as a bushel, here and there a Tuft: being intermix'd with much Heath, much of the kind we have growing on our Commons in England'. He collected the earliest known plant specimens from anywhere in Australia; these are now in the Fielding-Druce Herbarium at Oxford University in England. Most of the 24 specimens collected by Dampier that remain from this voyage were from Dirk Hartog Island. Dampier did not see Hartog's and Vlamingh's posts, as he landed about five kilometres south-east of Cape Inscription, at a place now known as Dampier's Landing.

On 30 March 1772, the Frenchman Louis-François-Marie Aleno de Saint-Aloüarn, in the ship *Gros Ventre*, anchored in Turtle Bay. On 30 March, Ensign Mingault landed and took possession of the land in the name of the King of France, burying a bottle containing a parchment recording the event, and burying two French coins nearby. In January 1998, an expedition led by Philippe Godard of Noumea, assisted by Max Cramer, Kim Cramer, John Eckersley, Tom Brady and Chris Shine from Geraldton, discovered a French *écu* bearing the head of King Louis XV and dated 1766 at a site on the cliff top overlooking Turtle Bay.



#### Previous page

Main: Turtle Bay.

Photo – Clay Bryce/Lochman  
Transparencies

Insets from left: Sandhill frog.

Photo – Jiri Lochman

Lantern flower (*Abutilon oxycarpum*).

Photo – Babs & Bert Wells

Mingkiri (sandy inland mouse).

Photo – Jiri Lochman

Left: On the west coast, cliffs form a striking barrier to the seas of the Indian Ocean.

Photo – Andrew Burbidge

**Right:** The historic posts at Cape Inscription have been replaced with modern replicas.

Photo – Andrew Burbidge

**Below right:** Vlamingh's plate can be viewed at the WA Maritime Museum in Fremantle.

Photo – Patrick Baker © Western Australian Maritime Museum

**Below far right:** The Tamala rose (*Diplolaena grandiflora*) occurs from near Geraldton to North West Cape.

Photo – Alex George



The silver coin, which was encased in a lead capsule, is believed to be associated with the Saint-Aloüarn expedition. A further search by the WA Maritime Museum located a bottle similar to that buried by Mingault, but if it had ever contained a parchment, insects had consumed it long ago!

The next European visitors were members of the French Baudin expedition, in the *Naturaliste* and *Géographe*, in 1801 and 1803. Many features in Shark Bay bear French names emanating from this expedition. A party from the *Naturaliste* found Vlamingh's plate lying on the ground and took it on board ship, where Commander Emmanuel Hamelin had it cleaned and nailed to a new post. Hamelin also had a plate erected to commemorate their own visit (said to have been to the north-east corner of the island). Cape Inscription was named at this time. In 1818, Louis de Freycinet, a member of Baudin's expedition, returned in *L'Uranie* and took Vlamingh's plate to France. It was later presented by the Government of France to the Western Australian Government in 1947 and can be seen in the Western Australian Maritime Museum in Fremantle. Hartog's plate is in the Rijksmuseum in Amsterdam.

Phillip Parker King, in HM Brig *Bathurst*, anchored under Cape Inscription on 20 January 1822 and, seeing the two posts on its summit, landed, but was disappointed to discover the plates were missing. Botanist Alan Cunningham, who accompanied King on his voyages, collected plants from the island. George Grey made a brief visit in March 1839, landing near Quoin Bluff and noting that the vegetation



'looks exactly like a Scottish heath'. In 1842, the French whaler *Perseverant* slipped its cable and ran ashore on the island near Cape Levillain. Five men died of scurvy and the remaining crew sailed away in four boats after camping on the island for ten weeks.

In March 1858, Captain H M Denham visited Shark Bay in HMS *Herald* and landed at Dirk Hartog Island. Among his crew was the botanist William Milne, of the Royal Botanical Garden Edinburgh, who collected several plants, including cone-spike angianthus (*Angianthus milnei*), a small yellow-flowered member of the Asteraceae family (the daisies). Denham named Turtle Bay after the loggerhead turtles (*Caretta caretta*) that nested there—the bay remains a very important nesting site for this threatened species. Denham, like many of his contemporaries, thought that the country would benefit from the addition of European animals and he liberated rabbits and pigeons on Dirk Hartog Island. Fortunately, neither survived.

Near Quoin Bluff, the *Herald's* crew found dry pits, an iron tank, some bottles and old shoes; relics of an earlier visit, either a base camp set up by the



Austin exploring expedition in 1854 or the remains of an 1850 military camp (see page 22).

By the early 1860s, the first 'squatter' had arrived on Dirk Hartog. F L von Bibra set up a camp in that year, but as he was a major player in the guano trade, he may have been more interested in the guano deposits rather than running sheep. Sheep were introduced by the late 1860s or early 1870s, and the island has been a sheep station ever since. It was known for some time as 'Brown's Station' after one of the early station owners. A pastoral lease was granted in 1899.

## PLANTS

Several vegetation types are present. The most widespread is tall open heath, usually dominated by umbrella bush (*Acacia ligulata*), but four species of mallees also occur. Low open heath with hummock grass is also widespread; the hummock grasses or spinifexes (*Triodia plurinervata* and *T. danthonioides*) are both common.



Low heath with spinifex is the vegetation that reminded Dampier and Grey of English or Scottish heath. The grass that 'grows in great Tufts', described by Dampier, was doubtless spinifex.

A 1972 survey and other work has revealed 237 species of indigenous plants growing on the island. Shark Bay lies at the boundary of the South-West and Eremaean Botanical Provinces and Dirk Hartog has slightly more plant species from the former. However, the flora is clearly transitional. Some 34 species of weeds have been recorded; several, such as buffel grass (*Cenchrus ciliaris*), were doubtless introduced in an attempt to improve feed for the sheep.

## MAMMALS

The island once had a rich and abundant mammal fauna. Today, in spite

of its large size, only five species of small native mammals remain: two species of bats and three ground-dwelling mammals—the little long-tailed dunnart (*Sminthopsis dolichura*), the noodji or ash-grey mouse (*Pseudomys albocinereus*) and the mingkiri or sandy inland mouse (*P. hermannsburgensis*). The worst effect of the sheep station was the introduction of cats, which probably became feral soon after it was established. Because of the lack of detailed survey, we do not know precisely how many species of mammals became extinct as a result. We do know that boodies (*Bettongia lesueur*) occurred there, as Freycinet's expedition and the *Herald* expedition collected skulls. It has been assumed that the banded hare-wallaby (*Lagostrophus fasciatus*) occurred on the island, as it was reported by the Baudin Expedition. However, no specimen has ever been collected and some doubt remains.

Some idea of the island's former diversity of mammal species can be

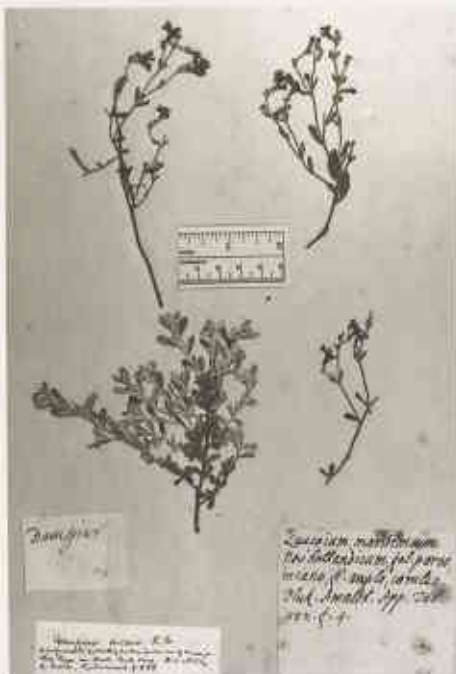


gained from research into mammal distribution, based on subfossil deposits, by Dr Alex Baynes of the Western Australian Museum. His work suggests that 13 non-flying species once occurred on the island. Species that are no longer present are the chuditch (*Dasyurus geoffroii*), mulgara (*Dasyercus cristicauda*), dibbler (*Parantechinus apicalis*), western barred bandicoot (*Perameles bougainville*), woylie (*Bettongia penicillata*), boodie, wopilkara or greater stick-nest rat (*Leporillus conditor*), dayang or heath rat (*Pseudomys shortridgei*), wildjin or desert mouse (*Pseudomys desertor*) and djoongari or Shark Bay mouse (*Pseudomys fieldi*). The two remaining native rodents have to compete with the introduced house mouse. As well as sheep, goats are fairly common and are damaging the native vegetation.

Local people recall that the wallabies had disappeared by the 1920s. As far as mammal conservation is concerned, Dirk Hartog is a microcosm of mainland Australia—introduced predators have eradicated many species.

## BIRDS, REPTILES AND FROGS

Dirk Hartog's birds have been well studied and more than 80 species have been recorded. Three subspecies occur



**Above left:** Low open heath in northern parts of the island reminded explorers of English and Scottish heaths.  
Photo – Andrew Burbidge

**Above:** Umbrella bush (*Acacia ligulata*) is a common shrub on the island.  
Photo – Jiri Lochman

**Left and far left:** The specimen of *Dampiera incana* from William Dampier's collection alongside a picture of a living plant.  
Photos – Alex George

**Right:** The little long-tailed dunnart is one of the few survivors from what was once a rich mammal fauna.

**Centre right:** Subfossil remains of the chuditch suggest that it occurred on Dirk Hartog Island before cats established there in the 1800s.

**Below centre right:** The wopilkara (or greater stick-nest rat) also occurred on the island before cats were introduced. Photos – Jiri Lochman

**Far centre right:** The southern emu-wren is common on Dirk Hartog Island.

**Bottom:** The Dirk Hartog Island black-and-white subspecies of the white-winged fairy-wren is unique to the island. Photos – Babs & Bert Wells

nowhere else and have been listed as vulnerable. They are the Dirk Hartog Island white-winged fairy-wren (*Malurus leucopterus leucopterus*), the Dirk Hartog Island southern emu-wren (*Stipiturus malachurus hartogi*), and the Dirk Hartog Island rufous fieldwren (*Calamanthus campestris hartogi*). One species—the thick-billed grasswren (*Amytornis textilis*)—has become locally extinct, probably because of the effects of grazing on critical nesting habitat, perhaps combined with cat predation, although it is difficult to understand why one small bird has disappeared while others have not. Fairy-wrens, emu-wrens, scrub-wrens and field-wrens are common, which led ornithologist Thomas Carter, after a visit in 1917, to suggest that 'Dirk Hartog Island might be called an island of wrens, as at least ninety of every hundred land-birds seen are wrens'.

Shark Bay supports enormous numbers of pied cormorants, and Dirk Hartog Island has the largest breeding colony in the State. The colony, at Quoin Bluff South, usually comprises more than 2,000 breeding pairs. Noted ornithologist F Lawson Whitlock estimated that there were more than 2,500 pairs in August 1920, the same number that I estimated in September 1972. Numbers do vary—in September 1997, Phil Fuller and I counted about 600 nests. Another large colony occurs on Freycinet Island, a tiny island east of the Cararang Peninsula, south-south-east of Useless Loop. This colony had more than 1,500 nests in May 1997,





**Far left:** Pied cormorant colony at Quoin Bluff South.  
Photo – Babs & Bert Wells

**Left:** The king brown (or mulga) snake is the only large poisonous snake on Dirk Hartog Island.

**Above:** Loggerhead turtles are an endangered species. The nesting colony on Dirk Hartog is the largest in Western Australia.  
Photos – Jiri Lochman

so the cormorants may move between the two islands.

The guano produced by the pied cormorants in Shark Bay was a valuable early resource to Western Australian agriculture. Captain Daniel Scott and T F Gilman discovered guano on Egg Island in 1850. On the expiry of Scott's one-year lease, the Government stationed a protective military force of 15 men from the 99th Regiment on Dirk Hartog Island to protect the guano, pearl shell and timber resources from illegal removal, and to assist in the examination of the Shark Bay and Exmouth Gulf regions. However, the party was withdrawn after a year. F L von Bibra, who held the concession from the government to mine guano in Shark Bay between 1880 and 1888, estimated that the cormorants renewed the guano at the rate of 80 tons (72.5 tonnes) per annum!

Several species of lizards have been recorded, including one species of skink (*Ctenotus youngsoni*), which is restricted to Dirk Hartog Island and some nearby areas. One large poisonous snake, the king brown or mulga snake (*Pseudechis australis*), is found on the island, and one frog species, the sandhill frog (*Arenophryne rotunda*),

also occurs there. It survives in this arid place because it does not require open water to breed.

Loggerhead turtles breed at Turtle Bay, at the northern end of the island. They are listed internationally as critically endangered, and in Australia as endangered, and this island breeding rookery is the largest in WA. The lack of foxes on the island means that the eggs and hatchlings are safe from this voracious introduced species. However, other threats, such as drowning in fishing nets, are of concern and are being addressed.

## A FUTURE NATIONAL PARK

Dirk Hartog Island has many attributes that suggest it should be a national park. It is one of the State's most important historic sites, it is situated within the Shark Bay World

Heritage Property, it is the westernmost point of Australia and it has a wealth of nature conservation values. It is also becoming increasingly important as a recreation destination.

The island's conversion to national park was first recommended in 1972 in the Conservation Through Reserves Committee report to the Environmental Protection Authority, and negotiations are under way with the current leaseholders to bring that about by purchasing the pastoral lease.

Once Dirk Hartog Island becomes a national park, a major challenge will be to remove the feral cats and to reintroduce the mammals that once occurred there. If that challenge is overcome, it will be a fantastic place to see how Australian mammals lived before the arrival of cats, foxes and other pests.

Dr Andrew Burbidge is Deputy Director, Biodiversity Conservation in the Department of Conservation and Land Management. He first visited Dirk Hartog Island with Alex George in 1972 at the invitation of Sir Thomas Wardle, who then owned the pastoral lease. Andrew can be contacted on (08) 9405 5128 or by email (Andrew.Burbidge@calm.wa.gov.au).

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Thirteen years in the making, the Cape to Cape Track offers a unique view of WA's most popular national park. See page 28.



Karijini's new visitor centre provides a cultural and environmental focus point for visitors. See 'Karijini Calling' on page 10.



Dirk Hartog Island is our largest island. It has a fascinating history and a valuable biodiversity. Find out why on page 17.



'Landscape at the Heart' is an account of the first LANDSCOPE Expedition to the Carnarvon Range at the edge of the Little Sandy Desert. See page 40.



Does the delicate work of Western Australia's botanical artists have a place in the high-tech world of science? See page 23.

## COVER

Aboriginal names have always been part of Australia's history, and many of the well known names for Australian animals are in common use today. 'Ancient animals, ancient names' (page 35) makes a case for adopting more Aboriginal names for our native mammals. The brush-tailed phascogale, for example, was known to Nyoongar people as the 'wambenga'.

Cover illustration by Philippa Nikulinsky

