

## Birridas

### What are *birridas*?

Thousands of years ago, when sea levels were much higher than they are today, *birridas* were landlocked saline lakes between sand dunes. A drop in sea level dried the lakes up creating the salty hollows we see today.

*Birridas* range in size from small, circular or oval depressions about 100m in diameter, to elongated or irregular depressions between the sand dunes that are several kilometres long. They are one of Shark Bay's spectacular visual attractions and a 'superlative natural phenomena' – one of the criteria for Shark Bay gaining World Heritage listing.

When the *birridas* were lakes, sulphate of lime (calcium sulphate dihydroxide) was deposited onto the lake floor. When the lakes dried up the sulphate of lime evaporated and became loose, powdery gypsum. In the past, some of these gypsum deposits were mined.

*Birridas* commonly consist of a central, raised platform ringed by a moat-like depression. The central section corresponds to the level of the water table during the late Pleistocene Period, about 10 000 years ago. The moat was formed when fresh groundwater seeped from the surrounding dunes and dissolved the gypsum on the periphery of the central platform. Today, during very high winter tides, when the groundwater level is raised, some moats fill with water to a shallow level.

Most *birridas* retain water for several months following rain, after which dormant eggs hatch and the *birridas* teem with small invertebrates such as horse-shoe crabs and brine shrimp. Wading birds such as ruddy turnstones (*Arenaria interpres*) and bar-tailed godwits (*Limosa lapponica*) that have migrated to Shark Bay from as far away as Siberia, can be seen feeding on these crustaceans.

### Where can I see *birridas*?

*Birridas* are common in Francois Peron National Park where there are more than 100 on the east coast of the Peron Peninsula. You will see *birridas* when driving around the park, however to appreciate the shapes and sheer number of *birridas* it is best to take a scenic flight.

### Spectacular flooded *birridas*

Some *birridas* are connected to the sea by channels and receive seawater. Where this occurs in Francois Peron National Park, for example in Big Lagoon, shallow bays have been created. These bays are important fish breeding and nursery areas, however, most *birridas* at Shark Bay are isolated.

### Salt adapted plants

Samphire (*Halosarcia* sp.) is the common plant found growing on the *birrida* islands and around the edge of the moat. Chenopods (salt tolerant plants) grow around the edge of the *birrida*, the most common being Frankenia and silver saltbush (*Atriplex bunburyana*). Sandalwood (*Santalum spicatum*) occurs on the slopes surrounding *birridas*.

For more fact sheets visit [www.sharkbay.org](http://www.sharkbay.org).



*A birrida is a rounded depression formed between sand dunes.*



*Big Lagoon in Francois Peron National Park is a spectacular example of a series of birridas connected to the ocean.*