NUYTSLAND NATURE RESERVE

By Dr. A. A. Burbidge

Reserve No. A27632 was gazetted on June 25th 1965 for the purpose of "Primitive Area for the Preservation and Study of Flora, Fauna, Geological and Anthropological Features". It was proclaimed "Class A" on November 7th, 1969, and vested in the Western Australian Wildlife Authority on the same date.

The reserve is officially named the "Nuytsland Nature Reserve" after the Dutch explorer Pieter Nuyts who sailed this coast in 1627. The Nuytsland Nature Reserve embraces a long coastal strip of land representative of both the high cliffs of the Great Australian Bight and the ocean beaches, sand dunes, and sand plains in the vicinity of Eyre and Israelite Bay. An area of the Reserve extends inland across the Eyre Highway in the vicinity of Cocklebiddy, enabling travellers to see country unaltered by man's impact. The reserve is important for a number of reasons.

1. Biological

The reserve, and particularly the Israelite Bay area, represents the southern boundary of the overlap zone between the floras and faunas of the moist south-west and the desert.

From a botanical point of view Israelite Bay is at the southern end of the boundary between the South-West Province and the Eremean Province. This overlap zone is noted for the high degree of speciation and endemism which occurs along it. This means that a comparatively large number of plant species along the line have a very restricted distribution. One example at Israelite Bay is *Eucalyptus augustissima*, a mallee.

It also means that a large number of plant groups common in the southwest have their easternmost distribution at Israelite Bay. An example is the genus *Banksia*. Other plants are totally restricted to the reserve; one well known species is the only Western Australian *Correa* or Bell, this group being more developed in the east. Another species restricted to the reserve is *Pimelea serpyllifolia* which grows only on the cliffs.

From a zoological viewpoint the Israelite Bay area is the southern end of the boundary between the south-west (or Bassian) fauna and the Eyrean (or desert) fauna. Many species have their easternmost W.A. distribution in the area. Examples are the Honey Possum (*Tarsipes spencerae*), the Southern Bush Rat (*Rattus fuscipes*), the Pigmy Possum (*Cercartetus concinnus*), the Dunnart (*Sminthopsis murina*) and the Ashy Mouse (*Pseudomys albocinereus*). Many birds, e.g. the New Holland Honeyeater, Western Spinebill, White-cheeked Honeyeater, Little Wattle Bird and White-tailed Black Cockatoo also have their easternmost records in the area, and the picture is similar in other animal groups such as reptiles.

It is of scientific value to preserve animals such as these at the extremes of their range because often they show many adaptations to the more harsh climatic conditions than occur over the major part of their range and this gives an understanding of the factors controlling species distribution and influencing evolution.

Little Penguins (*Eudyptula minor*) nest in rock falls at the base of the cliffs and this is the only place in Australia where this species nests on the mainland—all other sites are on islands.

2. Palaeontological

During the ice ages of the past one to two million years (the Pleistocene Age) rainfall in the southern half of Australia underwent a series of fluctuations and on a number of occasions a humid corridor was opened up along the southern coastline between the now isolated south-eastern and south-western corners of the continent. This allowed the movement of many animals and plants from east to west and, to a lesser extent, from west to east. These movements are evidenced by situations where a number of closely related species occur in the south-west, all of which are derived from a parent stock in the south-east. Documentations are available of this in a number of animals groups including birds, frogs and insects. These migrations are also evidenced by fossil deposits of bones and pollen in caves and in areas covered by dunes and this is one of the main reasons the reserve was extended so far along the Bight coastline. Scientific work in this area is in its infancy and it may not be possible to develop this documentation in the future if the area is disturbed, either by grazing of domestic stock or by mining.

3. Scenic

The Nuytsland Nature Reserve contains one of Australia's scenic wonders, the 200 km long, 100 metre high cliffs at the southern extremity of the Nullarbor Plain. These cliffs are believed to be the longest unbroken cliffs in the world, and in the future they may become an important tourist attraction.

West of Point Culver a shoreline of cliffs and beach.

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West of Twilight Cove, where vertical cliffs meet the foaming sea.

4. Historical

The reserve contains much of the country traversed by John Eyre during his famous journey from South Australia to Albany in 1841. The country in the reserve remains in the same condition as when Eyre walked it. The reserve also embraces some of the old overland telegraph line constructed in 1876 and similarly shows the type of country through which the line was constructed using the primitive equipment then available.

5. Techtites

Techtites are small disc-shaped objects believed to be of extra-terrestrial origin. Yellow Lake and other lakes in the vicinity of Israelite Bay have yielded interesting specimens of techtites which are now lodged in the W.A. Museum. These specimens have been in demand for loan overseas. Deposits of Quaternary marine mollusc fossils, probably of different ages are also exposed in the lakes and are currently under study at the Western Australian Museum.