

# Queensland's coastal sand dunes

## Coastal sand masses of southern Queensland

The southern Queensland region stretches from Coolangatta to Bundaberg and includes the nearby large sandy islands. The general distribution of coastal sand masses in this region is described in leaflet no.1-03.1. This leaflet deals with the coastal sand masses of Fraser Island.

Information on the coastal sand masses of Fraser Island (Figure 1) has been extracted from Thompson (1975). Like Stradbroke and Moreton Islands, Fraser Island consists mainly of windblown sand. The massive dunes were formed by sand blown inland by the south-east trade winds during past glacial periods when the sea level was lower than it is today.

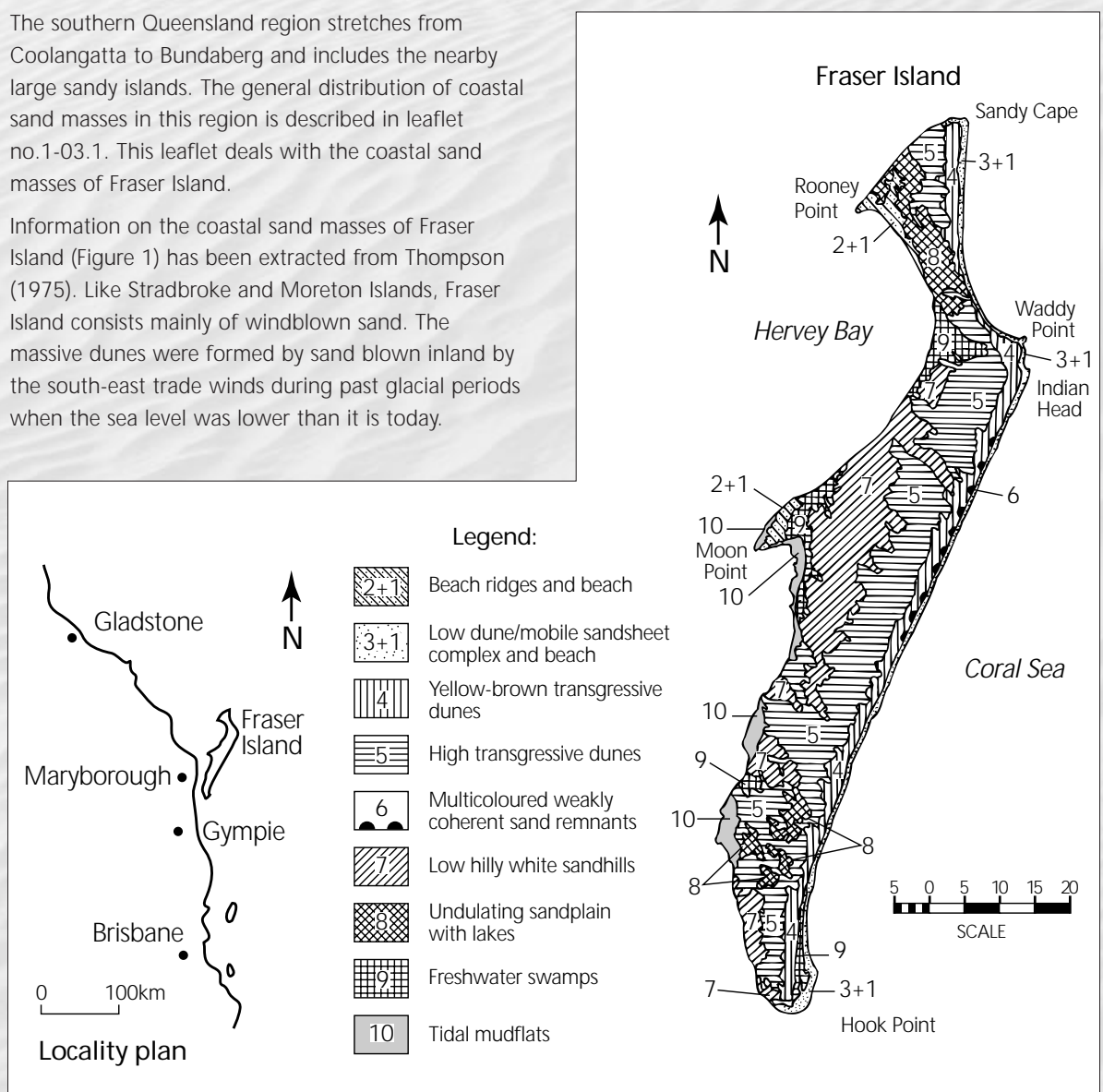


Figure 1. The coastal sand masses of Fraser Island (adapted from Thompson, 1975).

The eastern shoreline of Fraser Island is almost entirely dominated by broad sandy beaches and low foredunes or mobile sandsheet complexes. In several places the sea has eroded the older and higher dune deposits to form cliffs at the shore.

The low dune and mobile sandsheet complexes, less than 30m above sea level, are partially aligned to the dominant south-east winds. They consist of pale brown silica sands, and are sparsely vegetated and highly unstable, with many active blowouts.

Low transgressive dunes aligned parallel to the dominant south-east winds and generally stabilised by vegetation occur along the eastern coastline. These dunes are 30-60m above sea level and consist of yellow-brown silica sands blown from the beaches in recent geological time. The vegetation on the dunes ranges from Acacia-dominant scrub near the coastline to open eucalypt forest further inland.

High transgressive dunes up to 100-200m above sea level extend the length of the island and dominate the interior. They have been blown over the truncated

remnants of older sand deposits. In some places they extend across the island, with the 'noses' of the old sandblows forming part of the western shoreline. Their origin as sandblows aligned parallel to the south-east winds is evident on aerial photographs. The high dunes consist of silica sands and support an open forest vegetation in which blackbutt is common.

Thick deposits of white silica sands occur mainly as rolling and low hilly areas on the western side of the island. Most of the exposed areas have been modified by water erosion. These highly porous and infertile sands carry stunted woodland and heath vegetation.

Remnants of an undulating sandplain occur at the northern end of the island, with smaller areas in the central and southern parts of the island. The landscape is usually less than 30m above sea level and is characterised by numerous shallow lakes.

**Reference:** Thompson, C.H. (1975) Coastal areas of southern Queensland: Some land-use conflicts. Proc. R. Soc. Qd. 86(18): 109-120.



Low dune/mobile sandsheet complex near Waddy Point, Fraser Island.