VEGETATION OF LION ISLAND, BROKEN BAY, NEW SOUTH WALES

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ABSTRACT


INTRODUCTION

Lion Island, (Lat. 33° 33' S, Long. 151° 19' E) situated at the entrance to Broken Bay, is a Nature Reserve administered by the New South Wales National Parks and Wildlife Service. The island is 560 m long and 280 m wide. It is highest at the eastern end (93 m a.s.l.) and descends to a saddle with a small rise (30 m a.s.l.) at the western end. There are cliffs on the eastern and southern sides. Geologically Lion Island is similar to the nearby Brisbane Water National Park. It is composed of a Hawkesbury Sandstone capping on the eastern end, with strata of the underlying Narrabean Group exposed elsewhere.

VEGETATION

The major vegetation is low woodland dominated mainly by *Angophora costata*, but with *Eucalyptus botryoides* as co-dominant on the eastern end of the island. Scattered tall shrubs of species such as *Banksia serrata* and *Exocarpos cupressiformis* are generally present, and a low shrub layer up to 2 m high is continuous over most of the island. *Xanthorrhoea arborea* and *Lomandra longifolia* are conspicuous in this layer with shrubs such as *Platysace lanceolata*, *Hakea sericea*, *Dodonea triquetra* and *Acacia ulicifolia*. The litter layer is very thick, commonly up to 10 cm deep and few herbs were recorded. There are scattered areas of bare rock. In 1973 the vegetation did not appear to have been burnt for many years.

At the western end of the island in a better protected saddle is low open-forest of *Banksia integrifolia* and *Casuarina littoralis* with a ground layer of *Adiantum aethiopicum*, *Lomandra longifolia* and *Commelina cyanea*. On more exposed sites this grades into scrub with *Leptospermum laevigatum* and *Banksia integrifolia*. *Lantana camara*, an exotic shrub species, is common in these situations.

On scree slopes at the eastern end of the island and exposed to the ocean, is herbland with *Commelina cyanea*, *Lobelia alata* and *Dichondra repens*. Shrubs of *Westringia fruticosa* are found in cracks between large sandstone boulders and higher up on cracks and ledges on the cliff faces. In one place the scrambling climber *Flagellaria indica* forms a dense low scrub.

**TABLE 1**

<table>
<thead>
<tr>
<th>Species recorded on Lion Island 1973–74</th>
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The list is not exhaustive.

* = exotic species

**PTERIDOPHYTES**

Adiantaceae

*Adiantum aethiopicum*

*Chelanthes tenella*

Aspleniaceae

*Asplenium obtusatum var. difforme*

Dennstaedtiaceae

*Histiopteris incisa*

*Pteridium esculentum*

Psilotaceae

*Psilotum nudum*
GYMNOSPERMS
Podocarpaceae
  Podocarpus spinulosus
Zamiaceae
  Macrozamia communis

ANGIOSPERMS
DICOTYLEDONS
Acanthaceae
  Pseuderanthemum variabile
Aizoaceae
  Carpobrotus glaucescens
Apiaceae
  Actinotus helianthi
  Apium prostratum
  Platysace lanceolata
  P. linearifolia
Asteraceae
  *Coryza canadensis
  *Gnaphalium luteo-album
  *Hypochoeris radicata
  Senecio minimus
Casuarinaceae
  Casuarina distyla
  C. littoralis
Chenopodiaceae
  Chenopodium polygonoides
  Rhagodia baccata
Convolvulaceae
  Dichondra repens
Crassulaceae
  Crassula sieberana
Dilleniaceae
  Hibbertia obtusifolia
Fabaceae
  Dillwynia retorta
  Hardenbergia violacea
  Kennedia rubicunda
  Pultenaea deanei
Goodeniaceae
  Goodenia belledifolia
  G. ovata
  Scaveola ramosissima
Lamiaceae
  Westringia fruticosa
Lobeliaceae
  Lobelia alata
Loranthaceae
  Muelleria celastroides
Menispermaceae
  Stephania japonica
Mimosaceae
  Acacia longifolia
  A. suaveolens
  A. silicifolia
Moraceae
  Ficus rubiginosa
Myrtaceae
  Acmena smithii
  Angophora costata
  Callistemon rigidus
  Eucalyptus botryoides
  E. paniculata
  Leptospermum laevigatum
Myrsinaceae
  Rapanea howittiana
  R. variabilis

Oleaceae
  Notelaea longifolia

Pittosporaceae
  Billardiera scandens
  Pittosporum undulatum

Polygonaceae
  Rumex brownii

Portulacaceae
  Calandrinia sp.

Proteaceae
  Banksia ericifolia
  B. integrifolia
  B. serrata
  Hakea dactyloides
  H. sericea
  Isopogon anethifolius
  Persoonia linearis
  Petrophile pulchella

Rutaceae
  Eriostemon australiasis
  E. buxifolius

Santalaceae
  Exocarpos cupressiformis

Sapindaceae
  Dodonaea triquetra

Solanaceae
  Solanum nodiflorum

Styelidaeae
  Styelidium productum

Thymelaeaceae
  Wikstroemia indica

Verbenaceae
  *Lantana camara

MONOCOTYLEDONS

Amaryllidaceae
  Crinum pedunculatum

Commelinaceae
  Commelina cyanea

Cyperaceae
  Caustis pentandra
  Schoenus imberbis
  Scirpus nodosus

Flagellariaceae
  Flagellaria indica

Iridaceae
  Patersonia glabrata

Liliaceae
  Caesia vittata
  Dianella caerulea
  D. revoluta

Orchidaceae
  Dendrobium linguiforme
  D. speciosum
  Pterostylis ophioglossa

Poaceae
  *Paspalum dilatatum
  Phragmites australis
  Poa affinis
  Spinifex hirsutus
  Themeda australis

Smilacaceae
  Smilax glycyphylla

Xanthorrhoeaceae
  Lamandra longifolia subsp. longifolia
  Xanthorrhoea arborea