

I am sorry that the lovely illustration of the whole seaweed which had been sent to Hazel is not available, but here is a rough tracing of the features of the species, from the Journal. Figures 1, 2 and 3: Showing 3 stages in the development of the monostromatic discs on the surface of the leaves of the host X 500.

Figure 4: Showing a fruiting, tubercular disc attached on the margin of the leaf without erect fronds. X 250.

Figure 5: Showing a relatively immature erect frond from a tubercular base. Semi-diagrammatic.

Figure 6: Showing a surface view of a portion of a medium-sized frond producing an abundance of gonidia. X 600.

Figures 7 and 8: Showing a surface view of a portion of the frond, 7 with irregular arrangement of the cells, and 8 with cells arranged regularly in rows crosswise and lengthwise. X 600.

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#### BOTANY OF TASMANIA - A GLIMPSE

By: Jack Ballin

In January 1971 as part of my annual vacation, I decided to visit a third rain forest in Australia. I had already visited the rain forest of New England, N.S.W. and that of Southern Queensland, where in both places, I was thrilled to see colourful parrots flying amongst the tree ferns, *Dicksonia antarctica* in the former - *Cyathia leichartiana*, a thorny one, in the latter.

One other accessible rain forest was in the northern part of Tasmania's largest National Park, Cradle Mt. - Lake St. Clair, in Tasmania's mid north west.

Day 1 started at Waldheim (means forest home) 3,000 ft. above sea level, annual rainfall 90". However I was only in the rain forest for a few hours, arriving late afternoon and the rest of the first week was spent in walking through the first 40 miles of the Park's 50 mile track, the final 10 miles being finished in a launch trip on Lake St. Clair to the southern terminus Derwent Bridge where I saw the Tasmanian Hen, a bit like our Weka though sillier.

The Waldheim rain forest resembles Arthur's Pass where these notes are being written, but without the surrounding peaks. Waldheim is a small settlement of chalets in the midst of the forest. The high

rainfall here precludes Eucalyptus growth which genus only started to reappear lower down the track with rainfall about 60". However, there are exceptions to this rule since I am told that Eucalyptus can occur in Tasmania in 140" rainfall areas. At Waldheim my daughter Sarah and I had our first glimpse of the two largest pines, King William or King Billy (*Athrotaxis selaginoides*) which grows to 150' and has been recorded to 800 years old, and the Pencil Pine (*A. cupressoides*) smaller about 70'. Other firsts were aplenty; Tasmania's own two *Nothofagus*, the mainland has only one and aren't you told about it; the bigger *N. cunninghami* which is called Myrtle here, grows 100' to 150' and often has on it a smaller basket fungus similar to, but a different species, than seen on our *N. menziesii* which it resembles. A smaller Beech (*N. gunnii*) with leaves resembling that of a Hazelnut tree usually grows as a straggling shrub on the mountains about tree line. It is popularly called "Tanglefoot" and is Tasmania's only deciduous tree.

Abounding was the Celery Top Pine (*Phyllocladus asplenifolius*). This grows to 60' but I only saw specimens to about 14'. At dusk we had a chance to slip up to Hounslow Heath through scrub of *Leptospermum* spp., *Melaleuca squarosa* with mauve and pink fluffy spherical flowers. On the way up to the Heath were *Boronia* species with pink and white flowers common Creeping *Hibbertia* (*angustifolia*) with large yellow flowers - there is a larger species, a low bush *H. procumbens* which I saw on the coast near Hobart. An agreeable find on a dead pine log was Malings Fern, although a small specimen.

Back near the chalets at dusk odd marsupials arrived, the very tame Rufous Wallaby and the very shy so called Native Cat, spotted.

Day 2 started with our crossing a flat leading to a stiff 1000' climb to a higher plateau at the base of Cradle Mountain, and the flats are covered with what at first glance, reminded one of back-home Snowgrass but actually it is a Sedge; the omnipresent Buttongrass (*Gymnoschoenus spaerocephala*). Here appeared the White Iris (*Diplarrhena moraea*). The floor of both flats upper and lower is covered everywhere by the small tangling Umbrella Fern (*Gleichenia circinata*). We passed Dove Lake and growing on the rocks was the lovely Christmas Bell *Blandfordia punicea* (*Liliaceae*) beyond camera range! but in full deep red flower. The ubiquitous *Celmesia longifolia* began to appear. (Dr. David Given has another name for it he tells me), but we had to wait until the next flat at 4000' before seeing the less common *C. saxifragoides* (there are only two *Celmesias* in Tasmania and only one on the mainland). I am afraid I would not resist telling botanists I met that we had 60 species, 45 of which I have seen in the field.

Reaching the higher plateau I started to feel more at home with *Sphagnum* amongst Cushion Plants or Bolster Plants as they are called there; *Lycopodium* spp. *Astelia alpina* (query) called Pineapple grass;

Donatia n.z.; Phyllachne colensoi, Abrotanella forsteriodes, Pterygopappus lawrencii, a lovely sage green mat; Dracophyllum minimum, numerous white flowered Genetians, large yellow flowering Helichrysum, Brachycome spp (14 of them in Tasmania); Drosera spp. and D. binata; Gaultheria spp., Craspedia spp. with lovely golden flower heads; Utricularia dichotama, mauve flowers which look like our U. monatha though taller; large flowering clumps of Euphrasia brownii. I do not know whether this is named after Brown who was Flinder's botanist on the Ranges exploration - that Brown is the man after whom Brownian movement is named - known to physicists.

In drier rock parts at this level, 4000' were Cassinias, Wahlenbergias, the smaller pines Diselma archeri with tiny opposite decussate leaves and the Creeping Pine (Microachrys tetragona) square stem and bright red cones like small raspberries - the plants I saw were no bigger than our D. laxifolium; Dwarf Pine (Microstrolus hookeriana) with spiral leaves.

In the same area species of Epachridaceae started to appear; Cyathodes parvifolia; C. straminea; C. glauca (straminea distinguished by rolled cigar like leaf buds) and as the track wound on we were in acres of varied coloured flowering Honey Richea (R. scoparia) some of the bushes being completely obscured by tightly packed flowers, reds, orange, yellow, cream and white and the tall palm-like R. pandanifolia. The stem of the Richea scars as leaves are shed, a useful distinction from Dracophyllum. The leaves of R. scoparia are needlelike and hard on the knees. There are 9 Richeas in Australia, 8 confined to Tasmania. In amongst the Richeas and equally profuse were the Boronias, lemon scented (B. citriodora) reminding us of its citrus affinity and a pink flowered species (B. pilosia).

Coprosmas appeared on the track and I found out the hard way that at least one species had very sharp hard spikes. Also one in flower appeared to have petals. Coprosma species listed for the area in the handbook are billiardiera, C. nitida; C. moorei, repens. Common on the high flats is the Proteaceae Mountain Rocket (Bellendena montana) with its clusters of flame coloured flowers.

The night of the first day was spent near Lake Windermere, main interests being in the Pine-Eucalypt association and numerous Acacias (and incidentally Wombats roaming near their caves).

Day 2 took us across Pine Forest Moor to cross the upper reaches of the River Forth and heading into forest where the common trees were Native Laurel which is (Anopteris glandulosus); Native Lilac (Prostanthera lasianthos) also known as Christmas Tree with large yellow flowers; Needle Bush (Hakea acicularis). Plentiful also was the Tasmanian Waratah (Telopea truncata) which unfortunately had finished flowering and Honeysuckle (Banksia marginata).

The last two days were spent between the Pelion 2,800 ft. and DuCane Huts, 3,200 ft. and more pine forest. Seen here and before was *Drimys lanceolata* with crimson branchlets and the shrubs with bright red berries of *Aristotelia peduncularis* in the open areas; the Green Bottle Brush (*Callistemon viridiflorus*) (Myrtaceae).

Near DuCane Hut, day 4, was the first sight of the brightly flowered tree Leatherwood (*Eucryphia lucida*) famous for its honey. Appearing in the forest was the Tasmanian Sassafras, an aromatic, smooth-barked tree, famous for its "Sassy Beer".

Near the DuCane areas of the Park there is a series of very beautiful waterfalls in the upper reaches of the Mersey River and branches, in one of these the cliffs were packed with what looked like *Blechnum volcanicum* and the Mountain Lily (*Milligania langifolia*). Incidentally *B. capense* and *B. penna-marina* are common throughout.

The track wound on to the Narcissus Hut 2,430 ft. at the head of Lake St. Clair. Here we noted Guitar Plant (*Lomatia tinctoria* and *L. polymorpha*) and the charmingly flowered bush the Bauera Rose (*B. rubioides*), small *Olearia* Bushes - there are 22 species in Tasmania; several species of small *Pimelea* and the pink flowered Trigger Plant (*Stylidium graminifolium*) this seen all along the track.

In the latter part of the trip between Pelion and DuCane, five ground Orchids were noted but I could identify only *Gastrodia*. On the day out along the Lake was a Beech-Eucalypt association but apparently the latter does not do well under these conditions.

The second week was spent in sightseeing, disappointing was the inability to get to the Frecinet National Park on the east coast, but several other coastal trips were made where the lovely She Oak (*Casurina stricta*) was seen and the crimson flowered *Epacris impressa*. The trip to the Mt. Field area was interesting among other things for seeing the Climbing Heath (*Prionotes cerinthoides*) unfortunately the crimson bell flowers were not seen. On the way to Mt. Field was the very beautiful Russell Falls abounding in tree ferns and filmy ferns.

A trip to the summit of Mt. Wellington 4,000 ft. by car on a tar-sealed road was saddened by the immense amount of damage by the fire. However *Celmesia longifolia* has made an amazing reappearance and is rife. *C. saxifragoides* is also there I believe. Here on the mountain was seen large mauve *Erigeron* and the largest flowering *Euphrasia* I have seen. It was mauve, profuse and very attractive.

Tasmania is an exciting place botanically and of course this is a very limited list and may well have errors, if so I would be pleased to have these published in a future edition.

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BOTANICAL FINDS DURING RECENT FIELDWORK

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ARTHURS PASS NATIONAL PARK

A botanical survey of A.P.N.P. began in the summer of 1970-71 and our parties have been collecting quantitative sample data for a description of vegetation, making a comprehensive herbarium including cryptogamic specimens and mapping the vegetation. Together with Martin Heine and Chris Ecroyd we have made some interesting botanical finds.

Alseuosmia pusilla is a small, few-branched, straggling shrub, looking much like a pepper-leaf, but having bright red berries. We found it in the mixed podocarp-Quintinia-Weinmannia forest at Kelly's Ck.

Jovellana repens: Mats of this weak-stemmed herb, with pretty little white "lady's slipper" flowers, spotted purple inside, are found on the banks of streams in the flood-plain podocarp forest dominated by Podocarpus spicatus and P.dacrydioides, between Otira and Deception rivers.

Rubus parvus: Under scrub, Taramakau riverbed (not in the Park). This is a very attractive species with large starry white flowers.

Asplenium falcatum: Large, pendant clumps of this handsome fern occur on trees (Weinmannia racemosa and others) on the slopes from the Otira Valley and Deception to the Taramakau.