ASTELIA AND COLLOSPERMUM

This key to the Astelias and Collospermums of the Auckland district has been lifted bodily (altering only the reference numbers) from Dr. L.B.Moore's Australasian Asteliads.N.Z.Journ. Bot.4:#2.June 1966.p.201. For the benefit of those who have only the 1925 Cheeseman to work from -

solandri	in the key equals	cunninghamii	in Cheeseman
nervosa	"	cockaynei	"
grandis	"	nervosa	"
fragrans	"	nervosa	"
Collospermum	"	solandri	"

solandri has been further divided into 2 subspecies (not included in the key) solandri and hookerana. E.D.H.

Main stem and leaves brittle, leaf lamina breaking cleanly if folded transversely towards the adaxial side; leaf sheath open upwards forming a water-holding container, the long scales confined to a well-defined zone at the extreme base; abaxial leaf scales with peltate platelets; perianth tube deeply cup shaped, membranous; ovary trilocular; funicle hairs long and mucilaginous - COLLOSPERMUM - 1

main stem and leaves tough with strong fibres except in very small plants; leaf sheath usually keeled, in old leaves rarely containing water, long scales over whole sheath, occasionally very sparse; abaxial leaf scales without peltate platelets; perianth tube if membranous, so short as to be hardly visible, if appreciably long or deep, then more or less fleshy; ovary tri- or unilocular, funicle hairs if present, very short - ASTELIA - 2

1 - leaves broad; fruit red or yellow; seed dull-surfaced, longitudinally ridged, embedded in long colourless mucilage tubes; ovary wall without median large mucilage duct in each locule - Collospermum HASTATUM (Col.)Skottsberg

leaves narrow; fruits milky-white, showing black seeds through pericarp; seed glossy, smooth, mucilage tubes surrounding base only; ovary wall usually if not always with median large mucilage duct in each locule - Collospermum MICROSPERMUM (Col.)Skottsberg

2 - ovary unilocular; seeds more or less globose to terete, with thickened or projecting funicle - subgenus ASTELIA - 3

ovary trilocular; seeds usually with some flattened faces; funicle little if at all thickened - 4

3 - leaf with a close group of 3 lateral nerves extending well above mid-length; outer tepals externally scaly to tip; fruit red with distinct style; female inflorescence stiffish; usually terrestial and tall - Astelia TRINERVIA T.Kirk

leaf without a close group of 3 lateral nerves in upper half; outer tepals glabrous at tip; fruit yellow-green to dark brown; style very short; female inflorescence lax; usually epiphytic, but often growing on the ground - Astelia SOLANDRI A.Cunn.

4 - inflorescence many-branched, standing well up within, or drooping out from tuft of leaves; fruit white, flushed with magenta, seated on membranous remnants of perianth; seeds not shining, with many flat faces meeting along rather sharp edges; leaf just above the sheath tightly folded about a strong keel, the lamina covered adaxially with a silvery pellicle, abaxially showing a number of subequal nerves - subgenus ASTELIOPSIS - Astelia BANKSII A.Cunn.

inflorescence few- to many-branched, standing stiffly erect, the peduncle usually hidden within the tuft of leaves; fruit strong orange to yellow, more or less flushed with red, the persistent perianth more or less fleshy and brightly coloured; seeds shining, rounded, inner faces more or less flattened by mutual pressure; leaves various, but none with the same combination of characters as in A.banksii - subgenus TRICELIA - 5

5 - leaf lamina almost glabrous adaxially when mature, though in young leaves adaxial scales are always present and may be conspicuous - 6

leaf lamina covered adaxially with long-persistent pellicle of coherent scales, either obvious or seen only when leaf is bent or bruised - 7

6 - leaf lamina with one large nerve (costa) on each side of midrib; inflorescence large, racemes numerous, spreading, usually at least 3 subtended by each lower spathe; lowland to montane - 8

8 - leaves arcuate to drooping in upper half, narrowly tapering and rarely as much as 1.5cm wide at 15cm from tip; costae more prominent abaxially than midrib, often reddish adaxially, other nerves fairly even in size; female perianth at flowering enclosing ovary to about middle, becoming fleshy and brightly coloured and splitting to form an orange saucer on which ripe fruit sits - Astelia FRAGRANS Col.

leaves rather stiffly erect, though extreme tip droops when leaves are very long, tapering less narrowly and often 2cm or more wide at 15cm from tip; costae hardly more prominent abaxially than midrib, rarely if ever reddish adaxially, other nerves of several orders of size; female perianth at flowering enclosing ovary to above middle and more or less urceolate, but becoming fleshy, orange and spreading at fruiting - Astelia GRANDIS Hook.f. ex T.Kirk

7 - leaf lamina not thickly felted abaxially; inflorescence large, usually at least 10cm long, raceme-axes more or less uniform in diameter throughout their length; flowers relatively large, with outer tepals as much as 4 x 2.5mm - 9

9 - inflorescence simple, most spathes subtending only 1 raceme, occasionally more in lower 1-2 spathes - 10

10 - leaf lamina with adaxial pellicle well developed, the scales often more or less ruffled up, especially near the margins; perianth relatively long, urceolate, more or less enclosing fruit base - Astelia NERVOSA Hook.f.

MOSS IN BUSH BLOCK NEAR WAIPIPI - - - J.T.Linzey

A collection of moss material was made from a bush section near Waipipi 20 May 1967. The area is located on the south side of the junction of Creamery, Coronation and Kellands Roads, at an altitude of 200ft, 2¼ miles from the west coast. It is protected from the sea by a range of low hills some 600ft, in height. The rolling hill country is developed on Pleistocene sediments of lossely consolidated silts, dissected by 'consequent' stream erosion. A deep gulley with a small streamlet in its base bisected the bush area. Observation of the adjacent road cutting shows a shallow soil profile of clay loam. The development of the moss flora is poor and the total quantity of material is less than the number of species would indicate. Four major factors account for this -

(1) The forest floor is formed of loose litter and bare consolidated earth, and mosses, either on banks or level areas beneath the trees, are rare.
(2) There is a general absence of rock and large stones. Thus rupestral species are absent.
(3) The stream bed has no stable substrate and no firm banks, so typical hygrophyllous mosses are not present.
(4) The forest structure is open and the relative humidity is low, even in the steep sided gulley carrying the stream. The overhead canopy is however dense enough to exclude sufficient light to inhibit the growth of many species that could tolerate drier conditions. Consequently the majority of the corticolous growth is confined to the lower parts of the trunks of the trees and their exposed roots.