Doodia aspera R. Br. at Tom Bowling Bay

Maureen Young

The Australia fern Doodia aspera has been recorded from 3 sites in New Zealand - from near North Cape, from Kawakawa, and from Chelsea, near Auckland. However, Catherine Wilson and David Given in their book "Threatened Plants of New Zealand", concluded that there were possibly no wild populations remaining in New Zealand.

On 5 July 1990, while Frank Hudson and I were returning from a walk to North Cape, a patch of Doodia growing under a stunted manuka bush caught my eye, as several of the fronds possessed a curiously crested apex. Rapidly approaching darkness meant that there was no time to check the extent of the population, but the patch seen covered an area c. 1 metre square, and looked very healthy. It was situated on the western side of the Waitangi Stream, Tom Bowling Bay.

Patrick Brownsey has confirmed my suspicion that this fern is Doodia aspera, originally found by Carse, also at Tom Bowling Bay.

Voucher specimens have been deposited in AK, CHR, WELT.

FOOTNOTE "Tom Bowling" was the European name given to a young Maori chief, by the crew of a whaler on which he sailed. At the close of his whaling career he settled with his wife and four daughters on the shore of New Zealand's most northerly bay, to which he gave his name. (The story of Northland - A.H. Reed)

Cheeseman (Manual of the New Zealand Flora) spells the name "Tom Bowline", which certainly has a more nautical ring to it. Which spelling is correct is now probably lost in the mists of time, but Tom Bowling seems to be firmly established as the favourite.

Seeds and Stones

R.O. Gardner

A. Syzygium australe

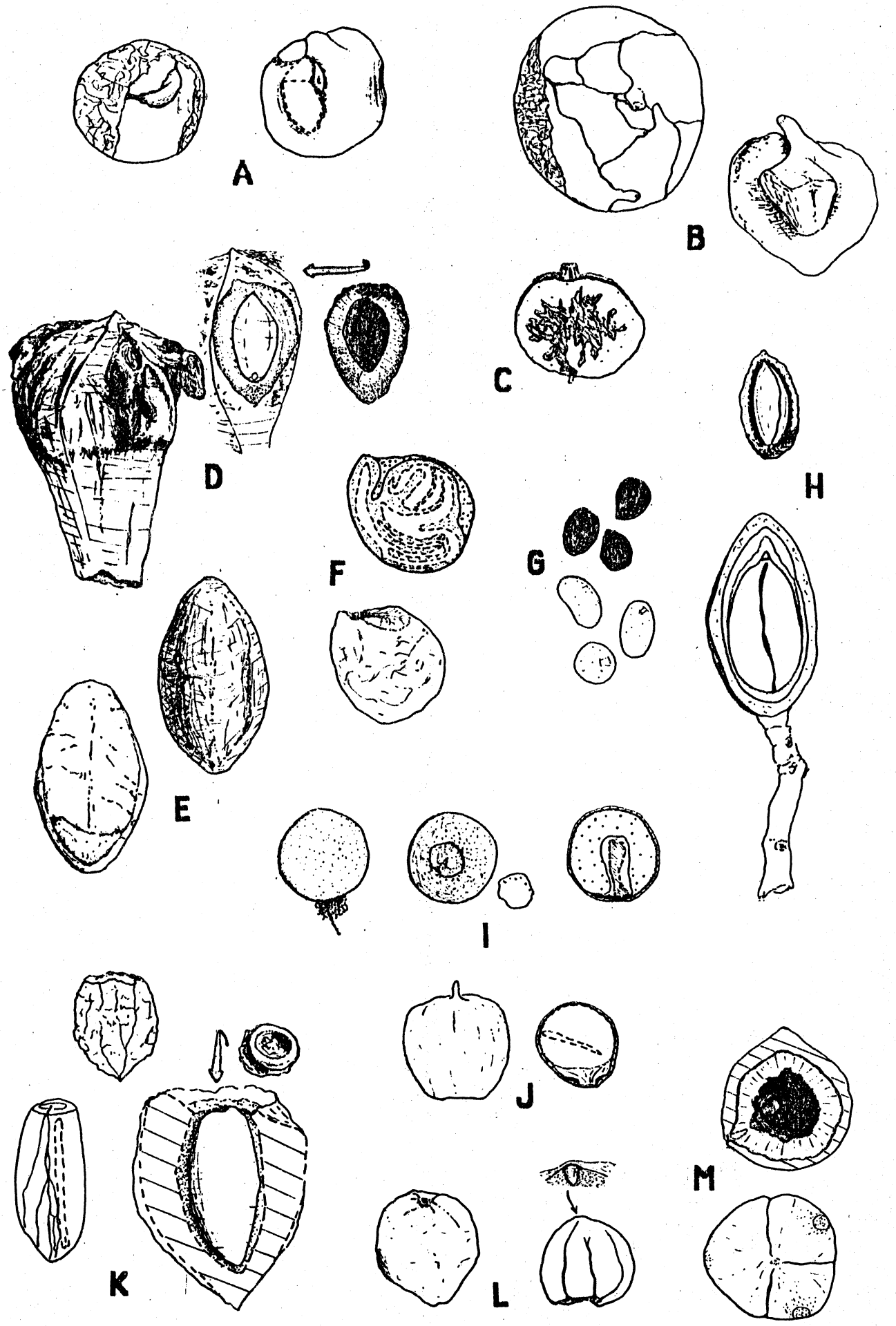
Left: Seed, coat peeled back to show the single embryo. x 4
Right: Embryo, front cotyledon cut to show shoot tip (t). x 4

B. Syzygium paniculatum (Myrtaceae)

Left: Seed, coat peeled back to show the numerous embryos. x 4
Right: Embryo, the two cotyledons very unequal. x 6

C. Waterhousea floribunda (Syzygium floribunda)

Fruit (dry), cut vertically to show the very thin layer of flesh and cotyledons with dark intrusive structure. x 3


A
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D. Vitex lucens, puriri

Left: Stone of fruit, 4-sided at base, and head with four areas of hooked outgrowths. x 4
Right: Chamber with seed (radicle pointing down) and inner face of the chamber's "door" (flaked-off outgrowth area). Note the dark weathering at the edges of the "door", where water has infiltrated. x 4

E. Coprosma robusta

Ventral and dorsal aspects of pyrene (seed + endocarp) showing the basiventral "trapdoor", where the radicle will emerge. x 10

F. Streblus smithii

Below: Pyrene. x 5
Above: Pyrene cut vetically; embryo with radicle (on left) and folded cotyledons in a gelatinous matrix (lightly stippled). Heavily-stippled material is nucellus or endosperm. x 5

G. Solanum laciniatum

Seeds (dark) and stone-cell masses. x 8

H. Beilschmiedia species

Below: B. tarairi. Fruit (fresh) cut vertically. 1-seeded, fleshy, a drupe but endocarp mostly gelatinous (testa at seed apex is also gelatinous). Note embryo's skirt of hairs. x 1
Above: B. tawaroa. Fruit (dried, incompletely-rehydrated) cut vertically to leave some flesh at base. Endocarp of leathery texture, with lignified innermost layer and relatively few gelatinous cells; embryo shrunken away from endocarp (air gap shown dark). x 1

I. Canna indica

Left: Seed, stomata on its surface, hairy funicle. x 4
Centre: Seed (viewed from below, the funicle removed) and detached "imbibition lid". Of a number of seeds that had been buried in damp soil for 2 months about half popped their lids on being put into boiling water.
Right: Seed, cut vertically to show embryo, air gap (unshaded) and copious endosperm. x 4

J. Elingamita johnsonii

Left: Fruit. x 2
Right: Stone, cut vertically to show thin-walled seed with oblique embryo in copious endosperm (stippled), and placental mass (vein-streaked) at base. x 2

K. Corokia cultivar

Above: Stone of fruit, with adherent vascular bundles. x 5
Below: Stone cut to show seed. To left, seed with vascular system and embryo; above, the stone's apical plug, as seen from inside. x 10

L. Cryptocarya obovata (cult. at Rocklands Hall, Gillies Ave.)

Left: Fruit, its skin and flesh derived from the perianth tube. x 2
Right: Seed, showing the two deeply-lobed cotyledons and nucellar tissue at base. x 2. Detail shows embryo apex. x 4

M. Jubaea chilensis, Chilean wine palm

Left: Stone of fruit from above. x 1
Right: Stone cut vertically, showing embryo at the pore of the largest segment and endosperm like that of a coconut. x 1

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