

Sub-genus *Leptopteris*.

2. *O. hymenophylloides*, Presl.
3. *O. superba*, Colenso.

Division III.—*Scaphiobrya*.

Tribe XXI.—*Marattiaceæ*.

Gen. XL.—*Marattia*, Smith.

1. *M. fraxinea*, Smith.

Tribe XXII.—*Ophioglosseæ*.

Gen. XLI.—*Ophioglossum*, Linn.

1. *O. costatum*, Br.
2. *O. gramineum*, Willd.
3. *O. lusitanicum*, Linn. (?)
4. *O. minimum*, Armstrong.

Gen. XLII.—*Botrychium*.

1. *B. dissectum*, Muhlenberg.
2. *B. cicutarium*, Swartz.

NOTE.—Doubtful genus *Deunstaedia*, Bern.

sps. *D. Dubia*, J. Sm.

*Dicksonia dubia* of many authors. *Davallia dubia* of gardens and some New Zealand herbaria. Barren fronds of a fern referred to this have often been obtained in Canterbury and Otago, but I have not been able to obtain any native specimens in fruit, and perhaps the plant may turn out to be *Microlepia forsteri*. Many other ferns are said to grow in New Zealand, but their occurrence requires authentication.

ART. XLVII.—*Description of a new species of Metzgeria; also a brief notice of the finding of Bæoniyses heteromorphus*, Nyl., in New Zealand.

By W. COLENZO, F.L.S.

[Read before the Hawkes' Bay Philosophical Institute, 12th July, 1880.]

*Metzgeria* (Symphyogyna) *rugulosa*, n.s.

*Plant* terrestrial, sub-erect, of close half imbricate growth, forming little beds; *root* creeping, densely tomentose, colour light brown; *stipe* 2–3 in. long, sub-flexuose, whitish, translucent, semi-succulent, two-nerved downwards from the fork (four-nerved above), nerves very distinct; *frond* darkish green, very membranaceous, drooping outwardly, flabellate and kidney-shaped in outline, 10–12 lines broad, 5–7 lines long, forked, symmetrical, each main division trichotomously divided and two-nerved, semi-rugulose on upper surface glabrous; *segments* linear, 2–3 lines long, 1 line broad,

bifid, emarginate, transparent, midrib very apparent and extending to margin at emarginate apex, margins entire; *fructification* 3–5 on one frond, from below at the fork of main division of frond, and again at each fork of the secondary divisions; *calyptra* tubular, 3 lines long, very slightly incised at top (somewhat resembling the tubular capsule of *Cerastium vulgatum*), at first white, but after flowering bearing a pale reddish tinge; *involucre* crisped and fimbriate; *capsule* (immature) at first linear-elliptic, dark coloured, enclosed in tubular calyptra, 1 line long, afterwards seated on long whitish succulent fruit-stalk, 10–12 lines long, bursting into four red-brown valves, cohering by their apices.

This interesting and curious little plant has very much of the appearance of a stipitate *Symphyogyna*, to which genus I should undoubtedly have referred it had I not fortunately (after much research) found it in fruit. It is very like *S. flabellata* in general appearance, though quite distinct, and without fruit, and at first sight might easily be confounded with it. It has many natural characters in common with that genus, but from the position of its ventral fructification it is placed (provisionally) under *Metzgeria*. It seems, however, to serve to unite those two genera. Although closely resembling *Symphyogyna flabellata* in some particulars, it differs from it not merely in the situation of its fructification, but also in its involucre, the scale being much more crisped and even fimbriated (which, in that species, has plain margins), while the top of its calyptra is very much less incised (which, in that species, is largely cut and fimbriated), and the segments of its fronds, instead of being obtuse, as in that plant, are emarginate. It also largely differs in its habit of growth. Another peculiarity is its bearing two manner of fronds from the same rhizome: one, the larger and often fruitful one, as described; the other is much smaller, and, though forked, is less cut, and more palmate or sub-flabellate in outline, with the upper part of the stipe winged, its colour a light green, quite glabrous and smooth, and highly transparent. At first I had supposed it to be another species, but subsequent and frequent examination has confirmed its forming with the other and larger frond only one plant.

*Hab.*—On the banks of a watercourse in a deep, secluded, damp glen, on the west side of the main road, about four miles south from Norsewood, in the “Seventy-mile bush,” May, 1880, with immature fruit; and again in October, 1880, with fruit fully ripened, and passing. Hitherto I have only detected it growing in one small spot, though there plentifully.

*Bæomyces heteromorphus*, Nyl.

*Thallus* constaceous, spreading, thin, greyish or dull-white; *apothecia* reddish flesh-coloured, orbicular, flat or very slightly depressed, with a finely crenelated margin, 1–5 together, separate rarely confluent, on a thick

short stipe (*podetium*), which is generally cylindrical in the lower part and sub-branched in the upper, each branchlet terminating in an apothecium.

*Hab.*—On sub-vertical clayey banks, in the forest ("Seventy-mile bush"), between Norsewold and Daneverk, forming large patches, and growing with *B. rufus*.

I was much pleased in detecting this pretty little plant, especially in finding it growing together with its allied species *B. rufus*; the contrast between them was great, in the thallus as well as in apothecia, and showed advantageously. Hitherto, I believe, this species has only been found in Tasmania.

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ART. XLVIII.—*The Ferns of Scinde Island (Napier).*

By W. COLENSO, F.L.S.

[Read before the Hawke's Bay Philosophical Institute, 11th October, 1880.]

I HAVE often thought that it would not be undesirable to bring to your notice the ferns of Scinde Island; that is, I regret to say, those which *were* here until lately, for many of them are no longer to be found within its limits.

And this fact of some of them having already become extinct (like much of the old, striking, and curious indigenous vegetation of the extensive flats and plains adjoining) is another reason, with me, for putting on record those ferns that formerly existed here, which I myself have often seen and, with one solitary exception, gathered. For, in times to come, it might well be doubted whether any ferns—save, of course, the common ubiquitous *Pteris esculenta*—could have ever inhabited this small high, dry, and isolated islet-like limestone mound, destitute of fresh-water.

And there is yet another valid reason, viz., that among them were two, if not three, peculiar ferns, which are also local and comparatively rare in New Zealand.

In the "Handbook of the New Zealand Flora," by Sir J. D. Hooker, 31 genera of ferns, containing 120 species (exclusive of varieties), are described; some of those however have not yet been detected within the area of New Zealand proper, but only in far-off outlying localities—as Chatham, Auckland, and Kermadec Islands. Here, within this small area of Scinde Island, containing only 660 acres (and now comprised within the Borough of Napier), there were no less than eleven of those 31 genera, or one-third of the whole; and of the said 120 species, fourteen, together with, at least, one new species, not known to Dr. Hooker, making a total of fifteen.