

Cynosurus echinatus Linn.

I am indebted to *Mr. J. P. Kalaugher* for specimens collected by roadsides at Waihi. I believe this is the first record for the Auckland Provincial District.

Selaginella denticulata Link.

Has been known for many years as a garden escape at Pakaraka, Bay of Islands, and has lately appeared in great abundance on the banks of several swampy creeks in the neighbourhood; *T. H. Trevor!* I am also informed by *Mr. B. C. Aston* that it is not uncommon in several localities near Wellington. As it is now firmly established in the Bay of Islands locality, its further increase may be anticipated.

ART. X.—*Some Additions to the New Zealand Flora.*

By *T. F. CHEESEMAM*, F.L.S., F.Z.S., Hector Memorial Medallist, Curator of the Auckland Museum.

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1. *Ligusticum petraeum* Cheesem. n. sp.

Species cum *Angelica decipiens* Hook. f. et *Ligusticum aromaticum* Hook. f. confusa, a priore fructu, a posteriore foliis et floribus differt.

Herba aromatica, 5–13 cm. alta. Radix robusta, longe attenuata, ad apicem reliquis foliorum emarcescentium vestita. Folia numerosa, diffusa, 2.5–10 cm. longa, subcoriacea aut herbacea, pinnata; petioli 1–6 cm. longi, basi in vaginam expansi. Pinnae 4–8 jugae, 5–12 mm. longae, ovatae vel ovato-deltaeidae, profunde incisae; lobis acutis vel subacutis, nunquam piliferis. Pedunculi multi, graciles, nudi, foliis longiores aut breviores. Umbellae compositae, 2–4 cm. diam., 4–8-radiatae. Involucrum bracteae parvae, lineari-subulatae, basi dilatatae. Flores albi. Calycis lobi acuti. Carpella lineari-oblonga; stylis longis, recurvis.

Hab.—South Island: Abundant on the north face of Mount Owen, Nelson, alt. 4,000 ft., usually on the debris from limestone rocks; *T. F. C.* Also plentiful on the southern face of the same mountain; *W. Townson!* Broken River, Canterbury Alps, alt. 3,500 ft.; *T. F. C.* Takitimu Mountains, Southland, alt. 3,500 ft.; *D. Petrie!*

Very aromatic, 2–5 in. high. Root stout, long and tapering, clothed at the top with the bases of the old leaves. Leaves numerous, all radical, spreading, 1–4 in. long, subcoriaceous or herbaceous, pinnate; petiole from $\frac{1}{2}$ to $\frac{3}{4}$ of the length of the whole leaf, broadly sheathing at the base; leaflets 4–8 pairs, rarely more, $\frac{1}{5}$ – $\frac{1}{2}$ in. long, ovate or ovate-deltoid or broadly deltoid in outline, deeply and somewhat sharply incised, sometimes almost pinnate at the base; lobes obtuse or subacute, never hair-pointed. Flowering-stems or peduncles many, longer or shorter than the leaves, rather slender, not branched, naked or furnished with a small pinnatifid leaflet about the middle. Umbels compound, $\frac{3}{4}$ –1½ in. diam.; rays 4–8, slender, unequal, $\frac{1}{4}$ – $\frac{3}{4}$ in. long; involucre bracts small, linear; usually with a dilated base. Flowers white; calyx-lobes rather long, acute; styles very long, recurved. Fruit linear-oblong, $\frac{1}{8}$ in. long, not seen quite ripe.

This has much of the habit and appearance of *Angelica decipiens*, and the two are easily confounded in the absence of fruit. There is also a resemblance to some states of *L. aromaticum*; but in reality it differs in habit, in the spreading leaves with their much more remotely placed pinnae, in the unbranched flowering-stems, and particularly in the acute calyx-lobes, and the very long recurved styles. I have been acquainted with it for many years.

2. *Veronica Birleyi* N. E. Brown in *Kew Bulletin* for 1911, p. 345.

"Affinis *V. spathulatae* Benth., sed ramis crassioribus, foliis subsessilibus et pedunculis multo brevioribus differt."

"Suffrutex nanus, 10 cm. altus, ramosus; rami erecti, saepe flexuosi, 1-2 mm. crassi, puberuli demum sublignosi et glabri. Folia conferta vel inferiora ad 4 mm. remota, subsessilia, crassa, 6-9 mm. longa, 4-9 mm. lata, cuneato-obovata vel orbiculata, basi plus minusve cuneata, breviter et obtuse 3-7-loba, utrinque puberula, rubroincta. Flores pauci, magni, prope apicem ramorum axillares. Pedunculi 2-3 mm. longi, 1-2-flori, bibracteati; bracteae 4 mm. longae, lineari-spathulatae, obtusae, glanduloso-puberulae. Pedicelli 1-1.5 mm. longi, glanduloso-puberuli. Calyx 4-partitus; lobi 5-6 mm. longi, 2.5-2.75 mm. lati, oblongi, obtusi, glanduloso-puberuli. Corolla 'magna, 5-mera, alba' (Gibbs). Capsula 5 mm. longa, 4-4.5 mm. lata, glabra, in lobos oblongos obtusos 4 disrupta."

South Island: Between rocks on the top ridge of Mount Bonpland, near Lake Wakatipu, 2435 m., February, 1908; *Miss L. G. Gibbs* (No. 1172).

"Allied to *V. spathulata* Benth., but differs in having much stouter branches, subsessile leaves, a finer and entirely different pubescence, and very much shorter peduncles. The corolla, according to Miss Gibbs, was white, about $\frac{3}{4}$ in. in diameter, with 5 subequal lobes; several were collected, but unfortunately they were lost. The name is given in honour of Mr. Harry Birley, a well-known guide in the district, who accompanied Miss Gibbs when this plant was collected."

I must express my indebtedness to Miss Gibbs for furnishing me with one of the type specimens. Mr. Brown's description appears to have been overlooked by most New Zealand botanists, for when, a few years later, flowerless specimens were collected on the Copland Pass by Mr. P. Graham, Chief Guide at the Mount Cook Hermitage, they were described as a new species by Mr. D. Petrie, under the name of *Veronica Grahami*. (*Trans. N.Z. Inst.*, vol. 45, p. 273, 1913.)

In March, 1917, it was again collected by Mr. W. A. Thomson and Mr. J. Speden in considerable quantity at an elevation of 5,000 ft. on Mount Tennyson, near Garston, Lake Wakatipu. An excellent series of specimens was obtained, showing that the plant attains a somewhat greater size than had been supposed, a single plant sometimes covering an area 6 in. to 9 in. across. Late in autumn the old leaves become almost glabrous, but the younger shoots are always densely puberulous. The flowers vary in size from $\frac{1}{2}$ in. to $\frac{3}{4}$ in. in diameter.

As it seems important that the first description of this plant, and a knowledge of the original locality, should be readily accessible in the Dominion, I have placed the particulars on record herewith.

3. *Earina aestivalis* Cheesem. n. sp.

Affinis *E. mucronatae* a qua differt caulibus robustioribus firmioribusque, foliis latioribus et brevioribus, floribus majoribus, labello longiore, lobis lateralibus majoribus et acutioribus.

Hab.—North Island: Near Ahipara, *R. H. Matthews!* and at Kaaka, *H. Carse!* both localities in Mongonui County. In forest at Muriwai, and near the mouth of the Waitakare River; *T. F. C.* Forest by the Waikanae River, Wellington; *B. H. Morison!*

Rhizome creeping, much as in *E. mucronata*. Stems numerous, 9–18 in. long, suberect or drooping, smooth, compressed, rather broader and stouter than in *E. mucronata*, and firmer. Leaves 3–6 in. long, $\frac{1}{5}$ – $\frac{1}{3}$ in. broad, flat, stiff, erect, narrow-linear, acute or acuminate; midrib and veins conspicuous on the under-surface, not so evident above. Panicle terminal, 2–5 in. long; branches or racemes 3–7, rarely more, 1–1½ in. long, 4–7-flowered; bracts short and broad, clasping, many-striate. Flowers larger than in *E. mucronata*, $\frac{1}{3}$ in. diam. or more. Sepals and petals similar in size and shape, linear-oblong, subacute. Lip longer than in *E. mucronata*, and brighter in colour; lateral lobes wider and more acute. Column short, stouter.

I have been acquainted with this plant for several years, having gathered specimens at the mouth of the Waitakare River as far back as 1895. But the differences between it and *E. mucronata* are mainly comparative, and before describing it I was anxious to satisfy myself as to how far they were constant. Since then I have seen specimens gathered in several localities between the North Cape peninsula and Wellington; and as I find that the distinguishing characters—viz., stouter and stiffer habit, broader and more rigid leaves, larger flowers, longer lip with broader lateral lobes, and stouter column—are constant throughout, I cannot any longer refuse it distinction as a separate species. In addition to the above, there is the important fact that it flowers from the beginning of January to the first week in February, whereas the flowering period of *E. mucronata* is two months earlier at least, stretching from the first week in October to the middle or end of November. At Muriwai, a few miles to the north of the mouth of the Waitakare River, I observed it in full bloom on the 16th January, 1916; while typical *E. mucronata* growing in the vicinity had practically matured its capsules.

4. *Thelymitra aemula* Cheesem. n. sp.

Species ad *T. ixioideis* proxime accedit, sed differt columnae lobis lateralibus multo elongatis, et lobo mediano non cristato.

Caules robusti vel graciles, 18–60 cm. longi. Folium auguste lineare, crassum, canaliculatum. Folia caulina vel bracteae vacuae 2. Flores 3–8, caerulei, in racemum 4–10 cm longum dispositi. Sepala et petala oblonga vel ovato-oblonga, obtusa vel subacuta. Columna brevis, crassa, superne attenuata, 5-loba; lobis lateralibus elongatis, complanatis, penicillatis; lobo mediano breve, dorso non cristato.

Hab.—North Island: *Leptospermum* scrub at Birkdale, near Auckland; *H. B. Matthews!*

Stems stout or slender, 6–16 in. high. Leaf shorter than the stem, narrow-linear, thick, channelled in front. Cauline leaves or empty bracts 2, short. Flowers 3–8, about $\frac{1}{2}$ in. in diameter, blue, rather closely placed in a raceme 1½–4 in. long. Sepals and petals oblong or ovate-oblong, obtuse or subacute. Column short, stout, broad at the base, narrowed above, winged; the wing extending behind the anther and free from it except at the base, 5-lobed; the two lateral lobes twice the length of the others, flattened, fringed with cilia for the greater part of their length; middle lobe short and broad, thickened and denticulated at the tip, but smooth

at the back; the two intermediate lobes distinct from the central one, reaching half the height of the lateral lobes, broad, thick, and fleshy, jagged at the top. Anther broad, produced into a pointed tip that just overtops the level of the median lobe of the column-wing.

This interesting discovery is due to the activity of Mr. H. B. Matthews, so well known from the many additions made by him to the orchid flora of the North Cape peninsula. It is doubtless very closely allied to *T. axoides* and the Australian *T. canaliculata*, but appears to constantly differ in the lateral lobes of the column being much longer, flattened, and more copiously penicillate; and the middle lobe, although denticulate at the top, is not at all warted or crested at the back. The flowers appear to be invariably blue; but the column is surrounded by a narrow band of violet just below the lobes, above which the colour is bright yellow.

ART. XI.—*A New Variety of Pteris macilenta.*

By H. CARSE.

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Pteris macilenta A. Rich. var. *saxatilis* Carse var. nov.

Planta decumbens vel suberecta; quam typo in partibus omnibus minor tenuiorque Stipes 8–24 cm. longus, tenuis, canaliculatus, flavus, suffusus vel purpureus, glaber, infra squamosus. Frondes 10–36 cm. longae, 8–15 cm. latae, ovatae vel lanceolatae, valde membranaceae, haud lucidae ut in typo, 3–4-pinnatae. Rhachis fere filiformis. Pinnae primariae distantes, inferiores 8–18 cm. longae, adscendentes; pinna terminalis 25 mm. longa; segmenta ultima alte et acute dentata, apex saepe laciniatus. Sori in segmentorum sinubus brevissimi.

This variety of *Pteris macilenta* has for years appeared to me worthy of a distinctive name. It differs from the type in many important characters, and, while occasionally forms connecting it with the type on the one hand and with var. *pendula* on the other are seen, the usual form of this variety could not be mistaken. It is most plentiful in rather dry situations in forests, usually where detached rocks crop up.

The following are some of its main characters: The plant is decumbent or suberect, with a very short usually erect rhizome. Stipes 8–24 cm. long, slender, grooved, pale yellow, reddish-brown, or almost purple (as are the rhachises), darker at the base, quite smooth except for a few scales below. Fronds 10–36 cm. long, 8–15 cm. wide, ovate or lanceolate, very membranous, pale dull green, glabrous, 3- rarely 4-pinnate below; rachis almost filiform: primary pinnae distant, usually 6 pairs, lower opposite, 8–15 cm. long, obliquely placed on the stipes; terminal pinnae 25 mm. long. Secondary pinnae stalked, on the lower branches again pinnate, on the upper pinnatifid, terminal ones adnate and decurrent. Pinnules 12–20 mm. long. Ultimate segments deeply and sharply toothed, the apex often lacinate. Veins free, or very slightly anastomosing along the costa. Sori in notches between the segments, very short.

Hab.—Among detached rocks in hilly forests, Mongonui County, Bay of Islands, Whangarei, Manukau County; *H. C.* Coromandel Peninsula: *H. B. Matthews!* Thames; *D. Petrie!*