

Mr. Bentham in his "Flora Australiensis" of *Peplidium* and *Microcarpæa*, two genera closely allied to *Glossostigma*, I find that the style is described as "short, dilated into a broad spathulate lamina curved over the stamens," being almost the same language made use of in describing the pistil of *Glossostigma*. It would be interesting to know whether these two genera possess the singular irritability now noticed.

ART. XLVIII.—*Description of a new Species of Polypodium.*

By T. F. CHEESEMAN, F.L.S.

[Read before the Auckland Institute, 19th November, 1877.]

DURING an excursion made in January last for the purpose of examining the vegetation of the district between the Waipa River and Raglan, I was greatly interested by collecting an evidently undescribed species of *Polypodium* at an altitude of about 2,000 feet on the Pirongia Mountain. A few days later, the same plant was gathered on the summit of the isolated mountain Karioi, between Raglan and Aotea. As in all probability it will be found that the species extends from these two localities southwards through the little known Upper Waipa and Mokau districts, and perhaps even still further south, I have thought it advisable to draw up a brief account of its distinguishing characters in order that the attention of collectors in other parts of the colony may be directed to it. I will not, however, confer a name upon the species, as this may have been already done in England, specimens having been forwarded to Kew immediately after its discovery.

Polypodium (Phymatodes), sp. nov.

Rhizome stout, woody, as thick as the fore-finger, densely clothed with large tawny ovate-lanceolate spreading scales. Stipes 6–12 inches long, quite glabrous, erect, smooth, and glossy. Frond dark green, 1–2 feet in length, 8–12 inches broad, in the upper part cut, down to within a short distance of the rachis, into numerous linear acuminate entire lobes; sub-pinnate below. Lobes varying in number from 5–14 on a side, 4–8 inches long, usually about $\frac{1}{2}$ inch wide, lower ones often narrowed towards their bases. In large specimens it often happens that the lower lobes are free to the main rachis, so that the frond might be described as pinnate in the lower half. Texture sub-coriaceous, or sometimes almost papyraceous; both sides quite glabrous; main veins indistinct, areolæ rather large, with included free veinlets. Sori rather small, in a single row, nearer the margin than the midrib, slightly immersed.

Hab. Pirongia Mountain, not uncommon above 2,200 feet alt. ; Karioi Mountain, near the summit of the highest peaks, alt. 2,300 feet.

From the above description it will be seen that the species is closely allied to the variable and widely distributed *P. billardieri*, but from all the forms of this plant it can readily be distinguished by the rhizome being densely clothed with shaggy spreading scales entirely different in appearance from the closely appressed squamæ with which the rhizome of *P. billardieri* is furnished. It is also a larger plant, the fronds being often over 2 feet in height ; the lobes are far more numerous and much narrower ; the venation is more indistinct, the texture thinner, and the sori smaller. In addition, I failed to observe any tendency to the polymorphism of the fronds so well marked in both *P. billardieri* and its near ally *P. pustulatum*. All the plants seen had their fronds uniformly lobed in a pinnate manner as described above, and simple-fronded specimens could not be found. I should perhaps mention that the ordinary forms of *P. billardieri* and *P. pustulatum* were abundant in the same locality ; indeed, the three plants could be seen growing side by side.

NOTE.—22nd December, 1877. Since writing the above I have been informed that a new *Polypodium* has been recently discovered by Mr. H. C. Field in the forest country to the west of Ruapehu. Not having seen specimens I am unable to state positively that Mr. Field's plant is the same as mine, but from the description given to me I have but little doubt that the two are identical.

ART. XLIX.—*Note on a branched Nikau Tree.* By S. PERCY SMITH.
Plate XV.

[*Read before the Auckland Institute, 22nd October, 1877.*]

THE following short note has reference to a nikau palm, which in its manner of growth presents some features of an abnormal character. It was discovered by one of the survey parties growing in the forests at the base of the Tangihua Mountains, Whangarei, and it was on a late visit to that district that I had an opportunity of seeing this vegetable curiosity.

Most people are acquainted with the ordinary nikau palm (*Areca sapida*) of New Zealand, with its smooth cylindrical stem encircled with equal rings of annual growth, and surmounted with a luxuriant crown of wide-spreading leaves. The stem is nearly always quite straight without branch or knot or bend in it to spoil its symmetry. The subject of this note, however, has eleven separate and distinct branches growing from one parent stem, most