

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

of which separate from the main trunk at about five feet from the ground and after rising some ten feet higher some of them divide again into other branches.

The tree itself is about nine inches in diameter at the ground, and about six inches just before it divides, the branches being from three to four inches each in diameter. The total height of the tree is about thirty feet, and each branch is crowned with a fine head of luxuriant leaves, forming altogether a most beautiful object. The forest around contains hundreds of ordinary nikaus with single stems, but none with any sign of branches. There was no fruit on the tree, though others in the vicinity were in bearing; this may not, however, be owing to any barrenness in it, for it is stated that the palms do not bear seed every year. It would be rather interesting to ascertain whether the seeds of this particular tree would produce branched offspring like itself.

Since seeing this tree I have made inquiries of several old bushmen and others with a view of eliciting whether they had ever seen or heard of the like before, and with one exception have been answered in the negative. In this case my informant stated that he had seen a deformed specimen which had divided into two branches—the cause of which he attributed to accident—such as the falling of a tree into its head, by which it would become divided but still have sufficient vitality to recover the blow. I do not attempt to assign any cause why this tree differs from its fellows, but simply bring the matter before the Society as an example of a marked deviation from a general form of vegetable life. The accompanying sketch (pl. XV.), copied from a rough one taken on the ground, will give a much better idea of the tree than any description I can give.

ART. L.—*Notes on Ferns.* By T. H. POTTS.

[Read before the Philosophical Institute of Canterbury, 6th December, 1877.]

THE writer offers a few notes on the habits and localities of some of our ferns, trusting they may be of some interest, as habitats are given not mentioned in "Hooker's Handbook." One cannot fail to notice the great changes that are daily taking place in the natural aspect of the country. More especially is this the case in forest lands, where a vast amount of timber has been used up or destroyed within the past ten years. Ten years ago is about the date of Dr. Hooker's most valuable Handbook of the New Zealand Flora. In that work of reference, "abundant throughout the islands" is a constantly-recurring phrase as applied to ferns. This