Considering the mossy forest as the climax plant association of the cloud zone, it is interesting to compare it with climax associations of temperate regions. The most striking fact which is at once evident is that we have here no single dominant species. We appear rather to have present a number of species of about equal stature no one of which has sufficient advantage over the others to approach dominance. All have rather small simple leaves decidedly coriaceous in texture. The most numerous appear to be various species of *Eugenia*. In their variety these trees agree rather with the second storey of the Dipterocarp forest than with the upper storey, in which there appears to be definite dominance of one or a few species. *Gordonia* and *Tetractonia* and possibly others certainly project above the bulk of their neighbours, but it is doubtful whether they protect the other trees in any way.

R. E. Holttum.

TWO HYBRID TREES OF HEVEA BRASILIENSIS × H. CONFUSA.

In the Gardens Bulletin, II (1919) p. 113, an account was given of a *Hevea* tree found in the Economic Garden, and determined to be *Hevea confusa*. That species is known to be a very inferior producer of rubber, and a danger to rubber-cultivation where its presence can lead to hybridisation. For that reason the tree was destroyed at once. It had newly fruited and seedlings had been raised of which two were kept for observation in a remote part of the Botanic Garden.

Those two have just flowered at the age of five years, and been destroyed in their turn, so that nothing of the objectionable type persists. They had been under observation through their growth, and their flowers have been very carefully examined: the result has been a complete demonstration that both trees were hybrids with H. *brasiliensis* as the male parent.

This demonstration of cross-pollination between the two species is not as interesting as another given by Mr. H. C. Pearson in the *India Rubber World* for October 1st, 1919, p. 46, for in that, seed of a fine *H. brasiliensis* in Trinidad produced plants which showed *H. confusa* in their constitution originating from a tree one-hundred yards away, the distance between the two parents having been very much less in the Singapore. But it is interesting as a demonstration of the great degree to which cross-fertilisation is carried in the Rubber tree. It is a cross in the opposite direction to Mr. Pearson's namely of male *H. brasiliensis* on female *H. confusa*. It is also a lesson that from a plantation of even pure *H. brasiliensis*, if first class seed is wanted, the inferior yielders should be removed, as cross-pollination occurs to such a great extent.

The two hybrid trees of the Botanic Gardens differed between themselves. The one had darker bark than the other, and leaves with more of the arching in them that characterises *H. obtusa*. Both had the white latex of *H. brasiliensis*, but that meagre as in *H. confusa*. When the flowers appeared, the males were found intermediate in shape, and to face earthwards as in *H. confusa*, and were softly downy outside, but the anthers were as in *H. brasiliensis*. Female flowers were very few, probably because the trees were flowering while still too young for full reproductiveness.

I. H. Burkill.

VARIETIES OF DIOSCOREA PENTAPHYLLA IN MALAYSIA.

This widely distributed species occurs in several varieties in Malaysia and with our present knowledge five may be defined. They are:—

Tubers elongated: rusty hair abundant on the above-ground parts: the leaflets broad .. .. *malaica*

Tubers not elongated: so that their length is not twice their greatest diameter:

Tubers not flattened, abundantly covered with roots, much lobed: rusty hair abundant on the above-ground parts: leaflets broad;

Leaflets large, up to 20 cm. by 6 cm.: flowers large: numerous large simple leaves produced among them .. .. .. *papuana*

Leaflets smaller, up to 10 cm. by 3.5 cm.: flowers small: simple leaves about 2 cm. by 2 cm. .. .. *javanica*

Tubers conspicuously flattened and relatively free from roots, much lobed: grey hairs present in the place of rusty red hairs;

Leaflets relatively large, up to 20 cm. by 4 cm.; flowers rather large: tubers as far as seen larger than in the next .. *palmata*

Leaflets relatively small, up to 14 cm. by 3.5 cm.: flowers relatively small: tuber as far as seen smaller than in the last .. *sacerdotalis*

The variety *malaica* is that which furnishes the "ubi jabbet" of the Sakais in the centre of the Malay Peninsula, and they not only eat it from wild sources but plant tubers in the neighbourhood of their houses. The Sakais of Northern Perak have another name