

## HOULTUYNIA CORDATA THUNB. IN JAVA

by

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Towards the end of February 1936 we received living specimens of this species, which is hitherto known only from Japan, China, the Indochinese Peninsula und Himalaya, collected in West Java, Preanger Residency, by Mr H. W. KLURR, employé of the plantation Ardjoena, section Karang-Toemaritis. The specimens are exactly matched by those of Eastern Asia and were immediately recognized.

This isolated locality far from the specific area needs some comment. It is situated between a tea garden and a bamboo thicket at ca 1250 m altitude, in slight shadow. According to the information kindly supplied by Mr KLURR, the plant has been known to him for several years, but has only recently produced flowers. He showed it to numerous visitors and planters but nobody had ever seen this species before. The coolies also knew the species only from this locality, as well as some old natives well acquainted with forest plants. The native name *djoekoet hanjir* (Sund.) is derived from the strange smell of blood produced by the leaves. The natives even believe in the local legend that the plant has proceeded from the flesh and blood of a man who was killed by a tiger on the same spot. On account of the smell there has been some trouble with the coolies in charge of weeding. As is known from outside Malaysia, the plant is very persistent in a place if once settled, which quality it owes to the long and branched rhizomes, which easily produce buds, and occur to one foot depth. This ecology enables the plant to appear as a common weed in Japan near settlements.

The locality covers only ca 0.04 ha surface. The plant is present in the neighbouring bamboo thicket but is absent from a small piece of old forest towards a ravine near by. It was observed already in 1918. Afterwards it did not attract attention, as in course of time the tea

bushes grew older. The conspicuous appearance is probably to be attributed to heavy pruning in 1936, causing an increase of light and a stimulant to flowering.

There are three possibilities for an explanation of the occurrence of this plant in Java.

Firstly it could be supposed that it was originally planted or sown as an ornamental plant at the time that the tea gardens were laid out. However, *Houttuynia* is by no means a conspicuously ornamental plant. Further it should in this case be expected near the emplacement of the Ardjoena plantation and there rises the question of the origin of the seed or rootstocks. The only cultivated specimens extant in the Netherlands Indies are the Botanic Gardens at Buitenzorg and the mountain garden at Tjibodas on Mt Gedeh. In the registers of the Gardens, however, there is no trace of any *Houttuynia* distributed since 1887. Hence, the locality cannot be explained by intentional introduction.

Secondly, there is its unintentional introduction by man. As is known, tea seed was often introduced from Assam, where *Houttuynia* occurs indigenously, and in this way seeds may have been introduced unintentionally. However, tea seed is selected by immersion in water before sowing; those seeds which are heavier than water (or sugar solution) are kept separate from those floating on the surface. After that the seed is sown in germinating beds. This whole procedure is mainly done near the emplacement. Hence, when the tea is planted, there is hardly any chance that weeds arrive through impurity of seeds. Moreover, the foreman in charge with the laying-out of the section Karang-Toemaritis knows with certainty that no seeds, but stumps were used for the planting! In my opinion, the possibility of unintentional introduction can therefore also be excluded.

Thirdly there remains only one possibility, viz. that *Houttuynia* occurred locally in the original vegetation, and has stood the destruction of the forest and the introduction of tea gardens. Its ecological toughness enabled it to maintain itself and adapt itself as a weed, as it does in Japan. Several indigenous plants of the Javan mountains are able to do this, as I have enumerated formerly<sup>1)</sup>.

Plant-geographically *Houttuynia* shows the same range as a number of other "Himalayan" elements which show a discontinuous area between SE. Asia and West Java, as e.g. *Carex rara*, *Potentilla Mooniana*, *Halor-*

<sup>1)</sup> De Tropische Natuur 22, 1933, p. 175. Bull. Jard. Bot. Btzg. sér. III, 13, 1935, p. 303.

*rhagis micrantha*, *Stachys sericea* and others. And about the original occurrence of *these* plants there is not the slightest doubt.

Dr J. J. SMITH, in whose honour this article is written, also detected some plants of this type on his Preanger trips, viz. *Agapetes Griffithii* CLARKE and *Gardneria ovata* WALL.

And all of them are also exceedingly rare and known only from very local spots.

In my mind *Houttuynia* can now be recorded as indigenous to Java.

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