

## PLANTS OF UNUSUAL ECONOMIC VALUE ON TAIWAN

by

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We all know that men can not live without plants. But people today are no longer merely content to have food and clothing. He desires many other commodities as well, and raw materials incidentally increase man's debt to the plants.

Taiwan is an island located in the subtropics. There are quite a number of plants which can be used by man in special ways that are not well known to the average person. The purpose of writing this article is to introduce some of these plants native to this island and tell of their special economical uses. This report will be continued in each succeeding issues of *Taiwania* with a discussion of one or two such plants in each issue.

### CHRYSANTHEMUM-FLOWER WOOD

(Plate 1 & 3)

*Bauhinia Championi* Benth. (pl. 1) is a woody vine native to Taiwan, and also found in South China and Hongkong. It is found in the forests of the mountainous region of the island up to an altitude of 1,400 meters. This woody climber has tendrils serving to support it by clinging to the large tree. The young branches, underside of the leaves and inflorescences are hairy with minute tomentum, but otherwise the plant is glabrous. Its leaves are broad, divided for about one-third their length into two broad obtuse lobes. Its tendrils are simple; leaves are opposite; racemes simple or several clustered together at the ends of the branches, four to eight inches long, flowering nearly from the base. Flowers are pedicellate and white. Calyx-tube is very short, lobes lanceolate. Petals are scarcely longer than or only equal to the calyx, with a few hairs outside. Three of the ten stamens are normal and are about twice as long as the calyx, the other seven are very minute or wanting. The pod is flat and about three inches long and one inch broad, with three to five seeds in each pod.

The wood is reddish brown in color having a chrysanthemum like polystele formed by an anomalous secondary growth resulting from intensified growth of parenchyma distant from the cambium. The original regularly formed continuous xylem is split into irregular units by the growth of pith and xylem parenchyma (pl. 3, fig. 2). Because of the anomalous growth it makes the wood show a very beautiful flower-like appearance (pl. 3, fig. 1). The wood is used to make small artistic objects such as bowls, plates, vases, cigarette holders, ink bottles and other small articles (pl. 3, fig. 3). Most of them are used for the purpose of interior decoration.

Bauhinia grows wild on the mountainous regions of this island. Since the vine of Bauhinia is small in diameter and it is very valuable, it would be a wise policy to cultivate it and thus solve the problem of supply, for there is a big demand for articles made from this beautiful wood.

### BASKETS FROM GLEICHENIA STIPES

(Plate 2)

Members of Gleicheniaceae are terrestrial ferns with long creeping, dichotomously branched rhizomes. The stipes and rachises are long and the leaves clamber over other vegetation. The terminal pinnae are once or more pinnately compound. The fern is pseudodichotomously branched by the abortion of terminal pinnae and the repetitive development of lateral pinnae. They are widely distributed throughout tropical and subtropical regions. On the mountainous regions of this island we often find large areas of such vegetation.

The leaves of certain species are repeatedly forked and are capable of indefinite apical development. Growth of the clambering vine-like leaves over the other vegetation results in an impenetrable thicket. Because of the indefinite apical development, the frond becomes a plant having an exceedingly long rachis. The vine-like leaves of *Dicranopteris* often have a length of 3-5 meters and may attain a length of 15 meters or more.

By using the long stipes together with the rachises baskets of various kinds are made. There are two types. Ones made from either the stipe and rachis of *Dicranopteris Warburgii* (Christ) Nakai or *Dicranopteris linearis* (Burm.) Underw. which is better looking basket but less durable than the second type, which is made from the stipes and rachis of *Hicriopteris longissima* (Bl.) Ching or *Hicriopteris Norrisii* (Mett) Ching.

After removing the leafy pinnae from the rachis of the *Dicranopteris* species they are ready for use without further treatment. The stipe and rachis is smooth and glossy and has a natural brown coloration. The color varies in degree with the age of the plant. They are used for making baskets for carrying fruits or other small light objects and have a very artistic appearance (pl. 2, figs. 1 & 3).

The stipe and rachis of *Hicriopteris* is larger and stronger than that of *Dicranopteris*. And the way of preparing these for use is different from that of *Dicranopteris*. In this case the material is dried and then the cortex is peeled off. Therefore it is only the central part or the stele which is used as the raw material for making the baskets. It is rough and not as smooth and shiny as that of other kind but is more durable and can support a heavier load. It is yellowish white and so is usually dyed with colors (pl. 2, fig. 2).

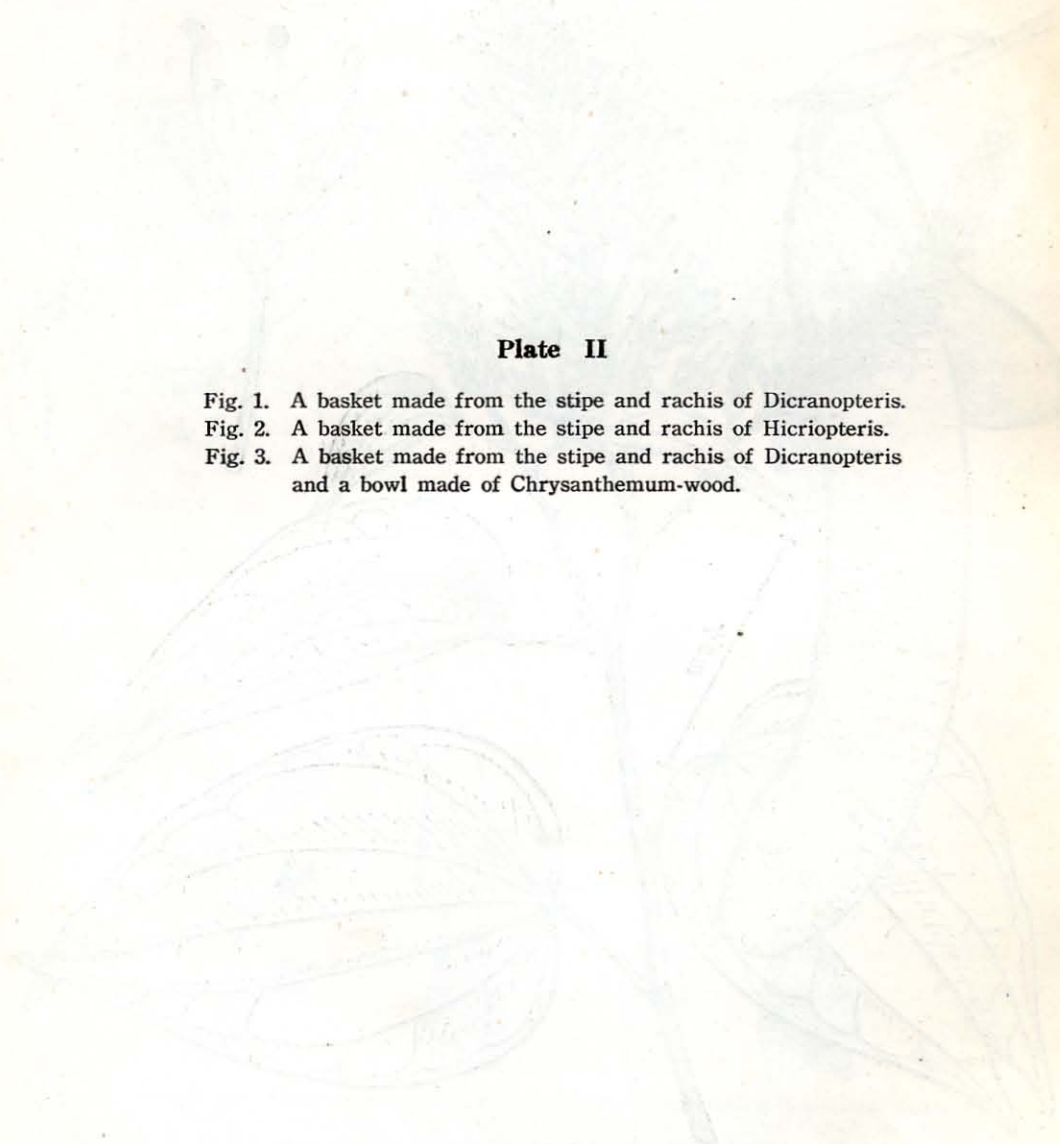


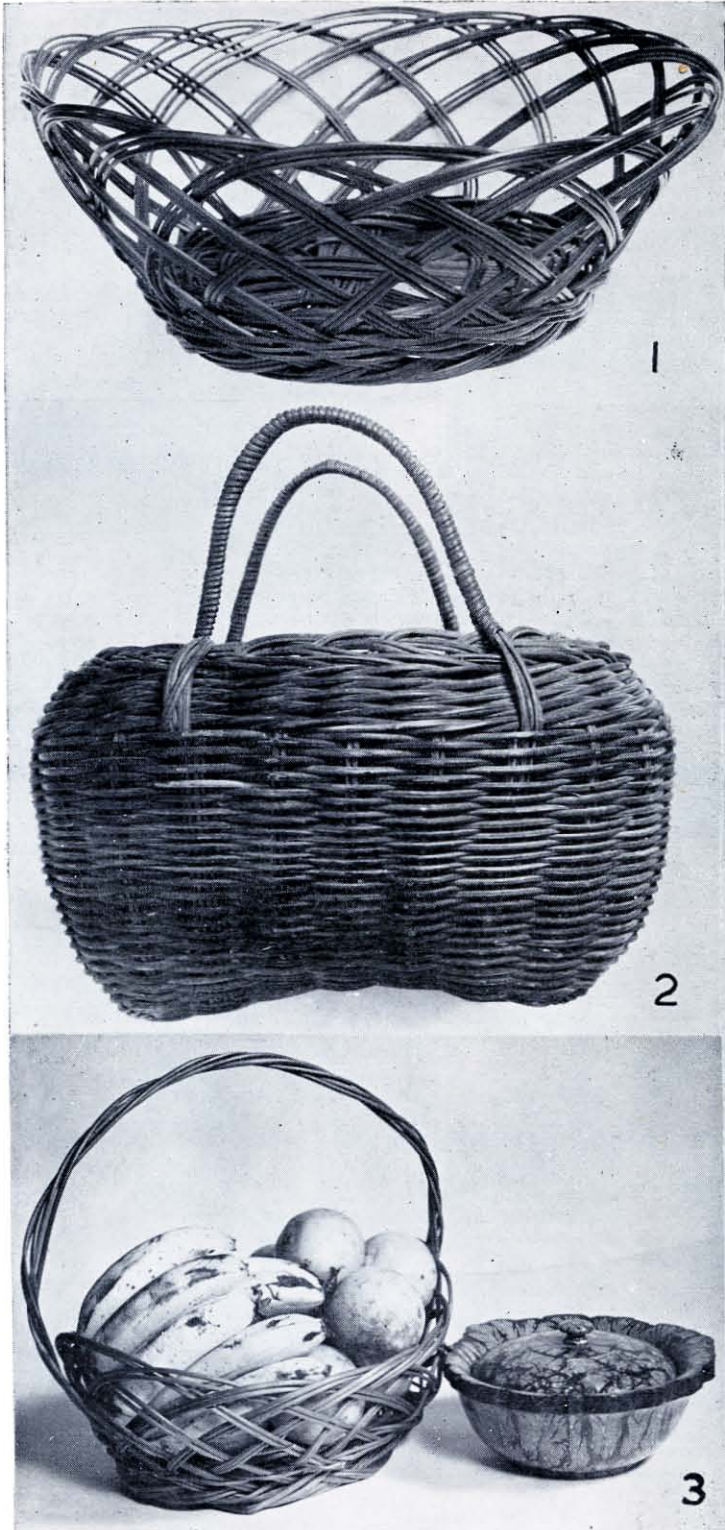


*Bauhinia Championi* Benth.: A branch with flowers and fruits.

**Plate II**

- Fig. 1. A basket made from the stipe and rachis of *Dicranopteris*.  
Fig. 2. A basket made from the stipe and rachis of *Hicriopteris*.  
Fig. 3. A basket made from the stipe and rachis of *Dicranopteris*  
and a bowl made of *Chrysanthemum*-wood.







### **Plate III**

- Fig. 1. A piece of Chrysanthemum-wood.
- Fig. 2. A photomicroscopic C. S. of the stem of *Bauhinia Championi* ( $\times 4$ ).
- Fig. 3. Articles made by Chrysanthemum-wood.

