

A new *Asplenium* hybrid from Taiwan*

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Abstract. A rare, bipinnatifid *Asplenium* which had never been collected before in Taiwan was found in the Fushan Area, Chiayi Hsien. From the distribution patterns of the only other two *Asplenium* species growing nearby, and from its intermediate morphology, it is concluded to be a new hybrid and is described.

Key words: *Asplenium bullatum* Wall. ex Mett.; *Asplenium wrightii* Eat. ex Hook.; *Asplenium* × *wangii* Kuo; Natural hybrid; Taiwan.

Asplenium × *wangii* Kuo, hybr. nov.

A. bullatum Wall. ex Mett. × *A. wrightii* Eat.
ex Hook.

Chinese name: 王氏鐵角蕨 (Fig. 1).

Rhizome obliquo, squamis subulatis 0.5 cm longis vestito. Foliis fasciculatis. Stipite 15-40 cm longo, plumbeo-stramineo. Lamina 30-45 cm longa, 14-25 cm lata, bipinnatifida, acuminata, ovato-oblonga; pinnis petiolatis ca 18-22 utroque latere, inaequalibus, 9-13 cm longis, 1.8-3 cm latis; lobis obovatis obtusis apicem versus serratis, infimis 1.5-6 cm longis, 0.5-0.8 cm latis; venis in lobis pinnatis.

Rhizome short, stout, fronds tufted. Sterile fronds 45-85 cm long, 14-25 cm wide, bipinnatifid, dull-green throughout when dry, darker on the adaxial surface; stipes 15-40 cm long, scaly at base, with a few scattered, small scales in the upper portion, larger scales narrowly lanceolate,

5 mm long, 0.5 mm wide, dark brown, cells translucent, with a few protrudings at margin; lamina ovate-oblong, 30-45 cm long, 14-25 cm wide, the pinnae 18-22 pairs, with basal ones distinctly petiolate, double-serrate to deeply dissected at margin, the lobes generally obovate, with a few teeth at apex, otherwise entire, the lowest lobes on lower 2-3 pairs of pinnae enlarged and acutish at apex, ca. 3-6 cm long, the venation free, 1-pinnately divided in each lobe, the veinlets ending in teeth but not reaching the margin.

Holotype: Taiwan. Chiayi Hsien, Alishan region, Fushan, 1300-1400 m, Oct. 25, 1986, *B.J. Wang* 9600 (TAI).

Additional specimen examined: From the same locality and collected with the holotype, *B.J. Wang* 9601 (TAI).

The epithet *wangii* honors Mr. Bi Jao Wang, an enthusiastic fern collector, who had also collected the first specimens of *Phymatosorus nigrescens* (Blume) Pichi Sermolli from Taiwan and many other rare ferns, such as *Bolbitis scalpturata*

* Additional knowledge for the fern flora of Taiwan 4.
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Fig. 1. *Asplenium x wangii* Kuo

(Fée) Ching and *Schizaea biroi* Richter. Mr. Wang is still actively exploring the local ferns for a revised fern flora of Taiwan.

The gross morphology of *Asplenium x wangii*

is very close to that of *Asplenium wrightii*, except for its bipinnatifid lamina and the frond being more herbaceous in texture, dull green in color and larger in size, with smaller and fewer stipe

scales. These indicate a close affinity with *Asplenium bullatum*. Besides, *Asplenium* × *wangii* has deeply dissected lower pinnae, as mentioned before, which has their lobes morphologically approaching *Asplenium bullatum*, but the shape of the teeth is closer to that of *Asplenium wrightii* (Fig. 2). The state of the present hybrid is very much like that of *Asplenium* × *shikokianum* Makino from Japan, which is a hybrid of *Asplenium wrightii* and *Asplenium ritoense* Hayata (Nakaike, 1982).

The type locality of *Asplenium* × *wangii*, Fu-

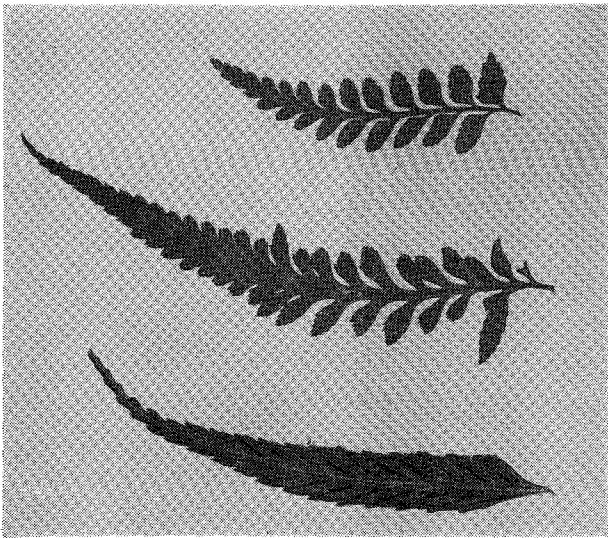


Fig. 2. Three middle pinnae of *Asplenium bullatum* Wall. ex Mett. (upper), *Asplenium* × *wangii* Kuo (middle), and *Asplenium wrightii* Eat. ex Hook.

shan, is at an elevation between 1300-1400 m. Its nearby vegetation is mostly cultivated *Phyllostachys makinoi* Hayata, but with some remnants of primary warm-temperate forests on mountain ridges and in steep ravines. *Asplenium* × *wangii* was found to be either a terrestrial plant or a low epiphyte in bamboo forest. Although the habitat of *Asplenium* × *wangii* is not so different from those of *Asplenium bullatum* and *Asplenium wrightii*, the latter two species are generally associated with primary forests. Moreover, these two species are separated by elevation. *Asplenium bullatum* is a rare fern generally distributed at a higher elevation between 1000-2400 m, but in Fushan it is quite abundant. On the other hand, *Asplenium wrightii* is a common fern found between 500-1800 m altitude, and is not rare in the Fushan region. Perhaps the unusual occurrence of *Asplenium bullatum* in the Fushan area provides the opportunity for the formation of the natural hybrid.

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臺灣產一新鐵角蕨類自然雜交種

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採自嘉義福山附近的一稀有植株，由其不稔性、形態上的中間型以及其親緣種在當地的分佈狀況，而確認為自然雜交種。本文依據國際植物命名規約，發表新雜種名。