

Additional knowledge for the fern flora of Taiwan

7. *Pteris wulaiensis* Kuo, a new species

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Abstract. A new species, *Pteris wulaiensis* Kuo, collected from Wulai, Taipei is described and illustrated. Diagnostic features of this species are discussed and compared with those of closely related species. The somatic chromosome number of *P. wulaiensis* was counted as $2n=58$.

Key words: Fern flora of Taiwan; *Pteris wulaiensis* Kuo, sp. nov.; Somatic chromosome number.

Shieh (1966) was the first to revise the genus *Pteris* of Japan, Ryukyu and Taiwan. Thereafter, a few more taxa of this genus were added to this region by Kurata (1967, 1968, 1969). In Taiwan, 27 *Pteris* taxa were initially reported by Shieh (1967), who later added one more species in the Flora of Taiwan (Shieh, 1975). An additional, long overlooked species was re-collected and reported by DeVol and Kuo (1979).

In an investigation of the vascular flora of a small drainage basin in Wu-lai area on June 14, 1988, Mr. San-Jie Moore (牟善傑), a student of mine, came across a *Pteris* species which had never been reported before. The plant belongs to *Pteris fauriei* Hieron. group. All plants of this group bear deeply dissected pinnae and entire pinnules. Its Taiwan members include *P. linearis* Poir., *P. biaurita* L., *P. bella* Tagawa, *P. scabristipes* Tagawa, *P. setuloso-costulata* Hay. and *P. fauriei*. A comparison of this specimen with *Pteris* taxa reported from regions adjent to Taiwan (Nakaike, 1982; Copeland, 1958; Price, 1972; Ching *et al.*, 1964; Tardieu-Blot and Christensen, 1939-40; Anonymous, 1974; Wu, 1983; Wu *et al.*, 1932; Christensen and Ching, 1933) supports its recognition as a new species. The most closely related species of the present taxon is perhaps *Pteris yakuinsularis* Kurata. This has mature fronds of ca. 1 m long, whereas our plant has comparatively smaller fronds, to only about 65 cm in length. This character is

rather constant throughout the population of the new species.

***Pteris wulaiensis* Kuo, sp. nov.** (Fig. 1) 烏來鳳尾蕨

Rhizoma breviter repens, frondibus aggregatis. Stipes 34-37 cm longus, 1-2 mm latus, stramineus, basi brunnescens; squamis castaneis, lineari-subulatis, ca. 2 mm longis, centro atro-castaneis. Lamina ovata, 28-33 cm longa, 16-22 cm lata, imparibipinnatipartita, membranacea. Pinnaterrimalis lanceolata, apicem versus sensim attenuata, apice caudato-acuminata, basi late cuneata, 10-13.5 cm longa, 2.2-2.7 cm lata; pinnis lateralibus oppositis vel suboppositis, 6-7-jugis, lineari-lanceolatis, apice caudato-acuminatis, pinnis infimis maximis, 10-14.5 cm longis, 5-6.5 cm latis. Laciniae lineares, falcatae, apice obtusae, basi 5 mm latae, margine integrae. Costa pinnarum teres, supra sulcata, ad insertionem costarum laciniarum setulosa; costis laciniarum raro supra parce setulosis, venis bifurcatis, marginem attingentibus. Sori marginales, indusiis membranaceis, linearibus ca. 0.3 mm latis, integris.

Type: Taiwan. Taipei County: Tataoshan (大刀山), Wulai (烏來), alt. 500 m, June 14, 1988, S. J. Moore 4383 (Holotype, TAI; isotype, Z).

Chromosome number: $2n=58$ (Fig. 2)

Habitat: Terrestrial in bamboo plantation, on muddy ground.

Additional specimens examined: Taipei County:



Fig. 1. *Pteris wulaiensis* Kuo. A, frond; B, stipe-scale; C, pinnules.

Yünhsienleyuan (雲仙樂園), Wulai, Kuo & Hu 15557 (TAI).

Pteris wulaiensis is morphologically intermediate between *P. fauriei* and *P. bella*. In form and texture of frond *P. wulaiensis* is similar to *P. bella*, but the shape of pinnules (Fig. 1C) is almost that of *P. fauriei*. *P. wulaiensis* is easily distinguished from *P. bella* by its stramineous or more or less brownish but never shining axis (*P. bella* has a shining, dark-brownish main axis), and from *P. fauriei* by its stipe-scale which has a strikingly darker central portion and translucent margins (Fig. 1B).

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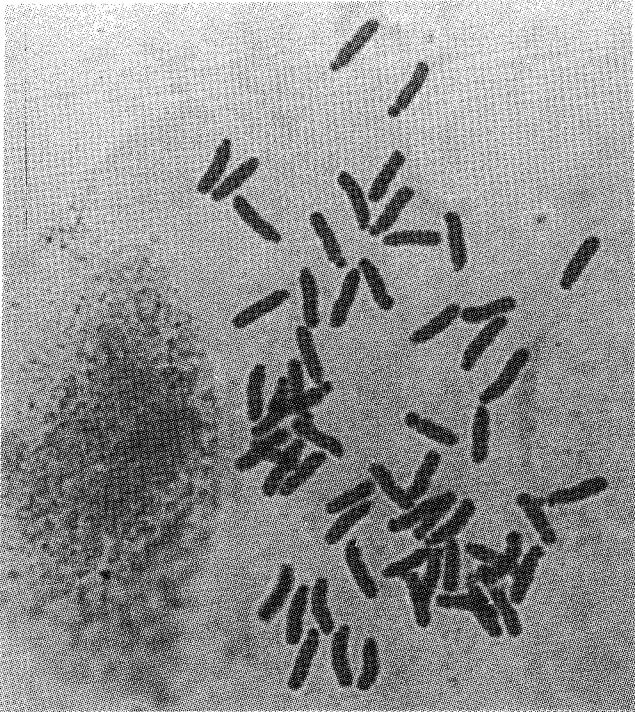


Fig. 2. Somatic chromosomes from root tip of *Pteris wulaiensis* Kuo, $2n=58$.

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台灣蕨類植物的新知見(7) 台產鳳尾蕨屬一新種，烏來鳳尾蕨

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