

Short Note

Asplenium gueinzianum Mett. ex Kuhn (Aspleniaceae), Newly Discovered in Thailand

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An addition to the Pteridophyte flora of Thailand, *Asplenium gueinzianum* Mett. ex Kuhn, is reported for the first time. This newly recorded species is described and illustrated. Its taxonomic confusion with *A. laciniatum* D. Don and *A. varians* Wall. ex Hook. & Grev. was noted.

The spleenwort ferns, including the genus *Asplenium* L. and their putative segregates, consist of about 700 species¹, and belong to the family Aspleniaceae in the order Polypodiales². In Thailand, 37 species have previously been recorded^{3,4}. Here, we report an additional species for Thailand, *Asplenium gueinzianum* Mett. ex Kuhn, which was found during a botanical trip to Doi Phe Pun Nam, Chiang Mai Province, northern Thailand. It was first described by Mettenius in 1868 and has been reported from South Africa eastwards to the western Himalayas, south India, Taiwan and Japan, at altitudes ranging from 200 - 2,000 m^{5,6}.

This study is based on specimens collected from Doi Phe Pun Nam, Chiang Mai Province, northern Thailand. For comparison, we also examined herbarium

material deposited in B, BM and K (Herbarium abbreviations are according to Holmgren and Holmgren, 2008)⁷. The morphological characters of the Doi Phe Pun Nam specimens (*P. Suksathan* 4147) matched well with the key to the species and description of *A. gueinzianum* Mett. ex Kuhn in Khullar (1994)⁶. They also fitted well with the herbarium and type specimens, which are deposited in Berlin. Accordingly, *A. gueinzianum* is newly recorded for Thailand. The description below is based on the Thai material.

Asplenium gueinzianum Mett. ex Kuhn (Fig. 1)

Asplenium gueinzianum Mett. ex Kuhn, Fil. Afr. 103. 1868. HB. 486. 1868.– *A. laciniatum* sensu Hook. et auct. non D. Don, Sp. Fil. 164, 200A. 1860.– *A. laciniatum* var. *acutipinna* Bir, J. Indian Bot. Soc. 43: 558. 1964.– *A. laciniatum* var. *subintegrifolium* Bir, J. Indian Bot. Soc. 43: 558. 1964. Type: Port Natal, South Africa. *Gueinzius* s.n. (holotype, B!).

Rhizome short, erect, bearing fronds in a tuft; scales linear to oblong-lanceolate, gradually narrowing towards apex, about 3.5

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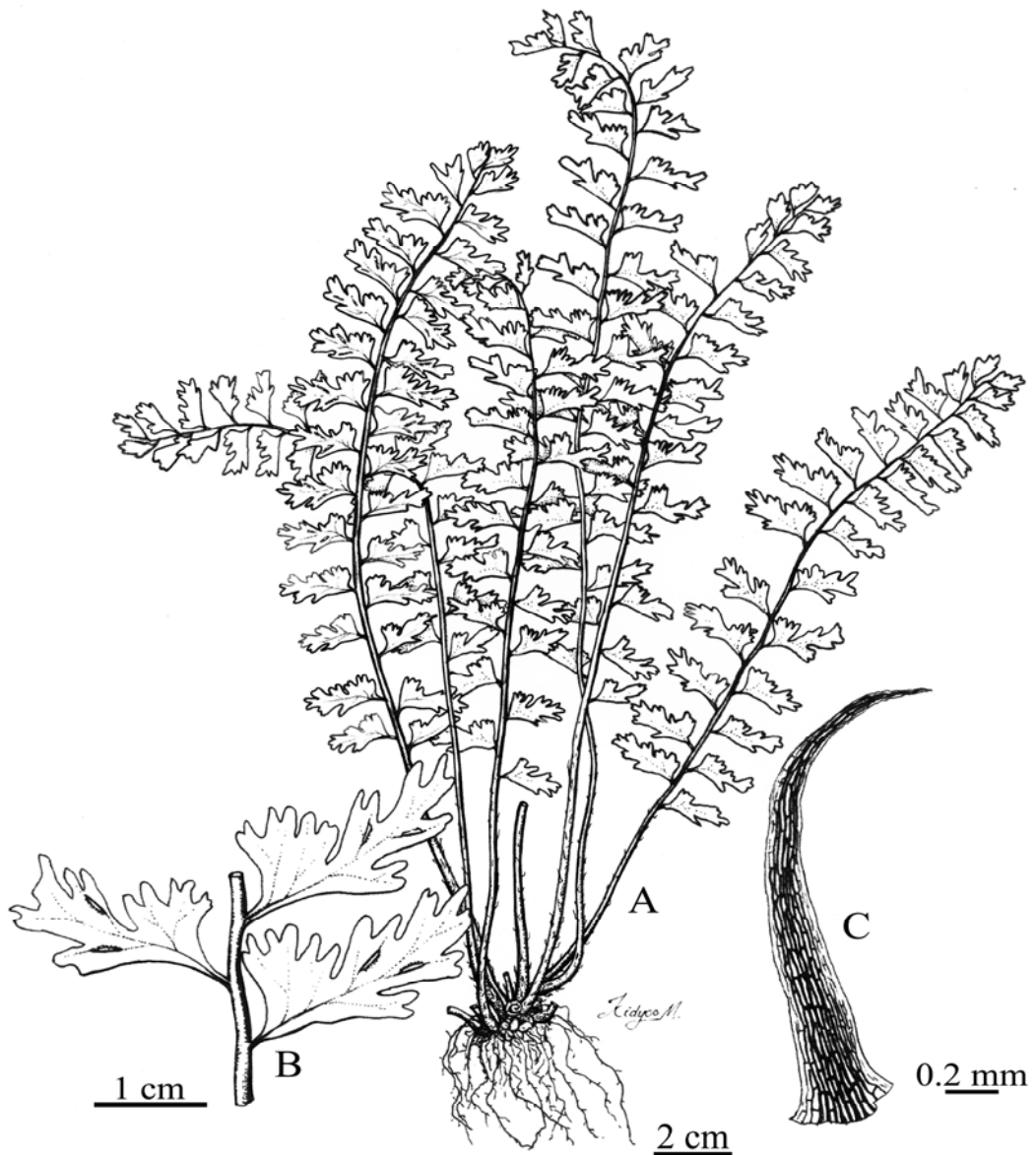


FIGURE 1. *Asplenium gueinzianum* Mett. ex Kuhn. A. Habit, B. Pinnae enlarged showing sori and C. Rhizome scale. Drawn by Manit Kidyoo from P. Suksathan 4147 (QBG).

by 0.5 mm, dark brown, clathrate, fimbriate to almost entire. *Stipe* 2 - 10 cm long, castaneous or stramineous upwards, glabrous, grooved above. *Lamina* 1-pinnate-pinnatifid, apex pinnatifid, about 5 by 3 cm at base; rachis green, grooved above, glabrous;

pinnae shortly stalked, 12 - 24 pairs, with 3 - 6 segments below an indistinctly dissected apical portion, about 2 by 1 cm; ultimate segments spatulate, round and toothed at apex, cuneate at base, herbaceous, green, glabrous; proliferous on upper surface;

veins forked, visible, each entering a tooth of ultimate segments. Sori elongated, 1 to 5 for each pinnule, up to 2-3 mm long; indusia membranaceous, almost entire.

Specimens Examined.– P. Suksathan 4147 (QBG); Gueinzius s.n. (holotype, B!).

Thailand.– NORTHERN: Chiang Mai (Doi Phe Pun Nam).

Distribution.– S. Africa, Ceylon, S. India, Himalaya, Sri Lanka, China, Indochina, Taiwan, Japan and Hawaii.

Ecology.– On muddy rocks in dense forests at 1,800-2,000 m alt.

Note.– *A. gueinzianum* was misnamed by Hooker (1864)⁸ as *A. laciniatum* D. Don and has been used erroneously for a long time. But the true *A. laciniatum* is the species Hooker named as *A. varians*, which is a synonym of *A. laciniatum*⁹. So the name *A. varians* Wall. ex Hook. & Grev. in Flora of Thailand³ must therefore be replaced by *A. laciniatum* D. Don. These two species are rare species in Thailand, only being collected once each so far.

A. gueinzianum and *A. laciniatum* can be identified using the following key. This has been extracted from the Flora of Thailand, Aspleniaceae account³ and has been amended to include the new species and new name of Thai Asplenium:

- 32. Pinnae up to 3 cm long
 - 33. Stipe glabrous. Lamina herbaceous
 - 34. Pinnae gemmiferous above
.....**38. *A. gueinzianum***
 - 34. Pinnae not gemmiferous
.....**16. *A. laciniatum***
 - 33. Stipe densely scaly. Lamina narrowly elliptic, chartaceous to subcoriaceous.....**37. *A. rockii***
- 32. Pinnae more than 3 cm long
 - 35. Pinnae 3-8 cm long
 - 36. Ultimate segments linear, entire
.....**14. *A. thunbergii***

- 36. Ultimate segments oblong to spatulate.....**17. *A. interjectum***
- 35. Pinnae up to 10 cm or more long
 - 37. Frond tripinnatifid or more compound
 - 38. Stipe green; sometimes gemmiferous.....
.....**15. *A. tenuifolium***
 - 38. Stipe purplish to nearly black, shining; not gemmiferous
.....**35. *A. confusum***
 - 37. Frond bipinnate
 - 39. Stipe and rachis glabrous. Ultimate segments obtuse at apex.....**33. *A. nitidum***
 - 39. Stipe and rachis minutely scaly. Ultimate segments acute to moderately acute at apex.....**36. *A. affine***

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