



## A “rediscovered” record of *Ainsliaea brandisiana* (Asteraceae) from Thailand and its biogeographic significance

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### Abstract

*Ainsliaea brandisiana* was regarded as distributed only in southeastern Myanmar. Koyama once reported the occurrence of *A. brandisiana* in Thailand in 1983, whereas Tseng thought it was a new species and described it as *A. spanocephala* in 1988. This treatment was accepted by Freire in 2007. Thus, the record of *A. brandisiana* from Thailand reported by Koyama was not valid. However, during a field trip in Phu Soi Dao National Park of northeastern Thailand, we found a remarkable species of *Ainsliaea* growing in mountain forests at the elevation of 1600 m. After detailed and comprehensive examination, we determined that it was *A. brandisiana*. This “rediscovered” record of *A. brandisiana* suggested a close phytogeographical connection between the mountain forests flora of southeastern Myanmar and that of northeastern Thailand, although they were separated by the lowlands rain forests of Thailand peninsula. We proposed a new hypothesis that there might be a plant migration route connecting southeastern Myanmar, northeastern Thailand and the Hengduan Mountains. Here, we described and illustrated *A. brandisiana* and provided photographs of its live specimens in the field, its habitat, morphological details of its floret, its distribution map and a key to all the known species of *Ainsliaea* from Thailand.

### Introduction

*Ainsliaea* Candolle (1838: 13) (Asteraceae) is an Asiatic genus consisting of ca. 50 species (Freire, 2007; Gao *et al.*, 2011). The genus is characterized by unbranched stem, congested leaves at the basal or near median part of the stem, few florets (often 3), deeply unequally 5-lobed corollas and plumose pappus. Koyama (1983) once reported the occurrence of *A. brandisiana* Kurz (1872: 318) in Thailand based on two specimens collected from Phu Luang, Loei, Thailand. But after checking the specimens cited by Koyama (1983), Tseng (1988) thought the species recorded by Koyama (1983) was different from *A. brandisiana* by its cordate leaf bases and subsequently described it as a new species, i.e. *A. spanocephala* Y. C. Tseng (1988: 74). Freire (2007) accepted Tseng's (1988) treatments and thought there was no distribution of *A. brandisiana* in Thailand. However, during a field trip in Thailand, we found a remarkable species of *Ainsliaea* under mountain forests of Phu Soi Dao located at the Thailand-Laos border regions with an elevation of 1600 m. After detailed morphological observation, we determined the species as *A. brandisiana* (Figs. 1–3). It was the fourth species of *Ainsliaea* recorded from Thailand. The other three species were *A. latifolia* (Don 1825: 169) Schultz (1861: 190), *A. spanocephala* and *A. spicata* Vaniot (1903: 117).

Thus the species *Ainsliaea brandisiana* is disjunctly distributed in the mountain forests of southeastern Myanmar (Martaban) and northeastern Thailand (Phu Soi Dao) (Fig. 4). The two localities are separated by the rain forests occurring in the lowlands of Thailand peninsular (Takhtajan, 1986; Breckle, 2002; Maxwell, 2004). However, geographically both localities are connected to the huge Hengduan Mountains of southwestern China through the largely northern-southern-ward mountain chains between the three of them. Interestingly, the distribution center of the genus *Ainsliaea* is right in the Hengduan Mountains (Wu, 1988; Gao *et al.*, 2011). One of its species, *A. latifolia*, is even widely distributed in the mountain forest of Myanmar, Thailand and the Hengduan Mountains (Freire, 2007; Gao *et al.*, 2011). These imply that species of *Ainsliaea* could disperse through the mountain chains between the three of them and the Hengduan Mountains may serve as a corridor between mountain forest flora of Myanmar and that of Thailand. Based on these distribution patterns, we propose a hypothesis that there may be a migration route connecting