



## The identity of *Ligularia emeiensis* (Asteraceae, Senecioneae), a name overlooked since its publication

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*Ligularia emeiensis* (Asteraceae, Senecioneae), which was described in 1991 from Emei Shan, Sichuan, China, has been overlooked and not treated even in the account of the genus *Ligularia* in the *Flora of China* published in 2011. It is found to be identical with *L. dentata* subsp. *sutchuenensis* and is thus synonymized herein.

Key words: Compositae, Sichuan, synonymy, taxonomy

### Introduction

*Ligularia emeiensis* Kitamura (1991: 148) was described on the basis of three gatherings, *J. Murata 11571* (KYO; Fig. 1A), *W.P. Fang 15048* (KUN, KYO, PE, SZ; Fig. 1B, C) and *C.L. Chow 6943* (KYO, SZ; Fig. 1D), all from Emei Shan, Sichuan, China, with the first designated as the holotype. In the protologue, the author gave only a full Latin description for his new species, not noting its affinity. Since its publication *L. emeiensis* has been totally overlooked by later authors. Even in their account of the genus *Ligularia* Cassini (1816: 198) for the *Flora of China*, Liu & Illarionova (2011) did not treat it.

The description of a new species of *Ligularia* from Emei Shan, a fairly well-botanized mountain, caught our attention. An examination of the type material of *L. emeiensis*, however, has immediately convinced us that it is identical with *L. dentata* subsp. *sutchuenensis* (Franchet 1892: 307) Illarionova (2014: 369).

As pointed out by Illarionova (2014), *Ligularia dentata* (Gray 1859: 395) Hara (1939: 318), a species widely distributed in China and Japan and highly variable morphologically, had been previously confused with *L. hodgsonii* Hooker (1863: t 5417). She elaborated on the taxonomic history of these two species and clarified much of the confusion involving them, stressing that they are distinguishable in the inflorescence structure and the flowering sequence of the capitula. According to her, the inflorescence in *L. hodgsonii* is racemose or corymbose, with large cymbiform foliose bracts at the base of the peduncle throughout the whole inflorescence, and the capitula blossom acropetally. This species occurs only in Japan and the Kuril Islands. In contrast, the inflorescence in *L. dentata* is corymbose, only the lower foliose bracts are wide while the upper ones are narrowly lanceolate or absent, and the capitula blossom basipetally. This species occurs in both China and Japan. As a result, she considered that all the Chinese specimens previously referred to *L. hodgsonii* should belong to *L. dentata*. She classified further *L. dentata* into two subspecies, subsp. *dentata* and subsp. *sutchuenensis*, with the latter differing from the former in the smaller capitula (with ray flowers 5–8 cm in diameter; involucre 0.6–1.5 cm in diameter vs. with ray flowers 7–12 cm in diameter; involucre 1.5–2.5 cm in diameter) and geographical range (southwestern and central China, Myanmar and Vietnam vs. Japan and eastern China).

After a critical examination of ample herbarium material and living plants in the wild, we agree with Illarionova (2014) on the treatment of *L. dentata* and *L. hodgsonii*. The former species is indeed divisible into two not very clearly differentiated subspecies, i.e. subsp. *dentata* and subsp. *sutchuenensis*, and *L. emeiensis* lies in the variation range of subsp. *sutchuenensis*. The following taxonomic treatment is therefore necessary.

### Taxonomic treatment

*Ligularia dentata* subsp. *sutchuenensis* (Franchet) Illarionova (2014: 369). *Senecio yesoensis* var. *sutchuenensis* Franchet (1892: 307). Fig. 1.



**FIGURE 1.** Type specimens of *Ligularia emeiensis* (= *L. dentata* subsp. *sutchuenensis*). **A.** China, Sichuan, Emei Shan, *J. Murata* 11571 (holotype, KYO). **B.** Same locality, *W.P. Fang* 15048 (paratype, KYO). **C.** Same locality, *W.P. Fang* 15048 (isoparatype, KUN). **D.** Same locality, *C.L. Chow* 6943 (paratype, KYO).

Type:—CHINA. Chongqing: Chengkou, collection date unknown, *P.G. Farges 133* (holotype P00723342!, isotypes K!, P!).

= *Ligularia emeiensis* Kitamura (1991: 148), **syn. nov.**

Type:—CHINA. Sichuan: Emei, Emei Shan, Hongzhu Shan, 600 m, 27 October 1981 (not 29 October 1981 as stated in the protologue), *J. Murata 11571* (holotype KYO!). Fig. 1A.

For a full synonymy see Illarionova (2014).

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