

A new species and a new combination in *Parasenecio* (Asteraceae)

You-Sheng Chen

State Key Laboratory of Systematic and Evolutionary Botany, Institute of Botany, Chinese Academy of Sciences, Beijing 100093, P. R. China (e-mail: maple@ibcas.ac.cn)

Received 29 June 2009, revised version received 21 Sep. 2009, accepted 11 Nov. 2009

Chen, Y. S. 2011: A new species and a new combination in *Parasenecio* (Asteraceae). — *Ann. Bot. Fennici* 48: 166–168.

Parasenecio dissectus Y.S. Chen, *sp. nova* (Asteraceae) from Hubei province (China) is described and illustrated. It is similar to *P. sinicus*, but differs from it by its much larger leaves usually with more lobes, smaller capitula, five phyllaries and florets, longer florets, shorter achenes and white pappus. *Parasenecio levingii* (C.B. Clarke) Y.S. Chen, *comb. nova* is proposed based on *Senecio levingii* from west Himalayan region.

The genus *Parasenecio* was established by Smith and Small (1922) based on *P. forrestii* from China. It occurs mainly in East Asia, with seven species in the Himalayan region, one species extending to North America and another species to Europe. *Parasenecio* is characterized by its caudate or sagittate anther tails, cylindrical filament collars and discoid capitula. Koyama (1969) provided a preliminary list of the eastern Asian species in this genus, but he wrongly included some *Ligularia* species with discoid heads here. Koyama (1978a, 1978b, 1979, 1995) recognized 39 species from China and 15 species from Japan, while Chen (1999) recognized 51 species in China and concluded that the genus includes about 60 species. He and Peng (2006) published a new taxon, *P. weiningensis* from Weining county, Guizhou province in China, but its morphology is very similar to *P. delphiniphyllus* (type collected from Qiaojia county, Yunnan), and the type localities of these two taxa are very close. The identity of *P. weiningensis* is doubtful and need further research. According to my present study, there are about 67 species in

Parasenecio, including a new species and a new combination presented in this paper.

***Parasenecio dissectus* Y.S. Chen, *sp. nova* (Fig. 1)**

Affinis Parasenecio sinico, a qua differt foliis majus et lobis plures, capitulis parvioribus, phyllariis et flosculis 5, acheniis brevibus, pappis albis.

TYPE: China. Hubei: without precise locality (possibly Fang hsien), 1885–1888, A. Henry 6487 (holotype GH).

ETYMOLOGY: The epithet *dissectus* refers to the deeply dissected leaves.

Perennial herbs to 1 m tall. Rhizome short, elongate with numerous fibrous roots. Stem solitary, erect, striate, glabrous. Leaves petiolate; petiole 2.5–9.5 cm long, glabrous; leaf blade rounded-ovate, 16–27 cm long, 15–35 cm wide, thinly papery, palmately and usually deeply (5–)6–9-lobed; lobes lanceolate or elliptic-lanceolate, both surface green, glabrous, basely 3–4-

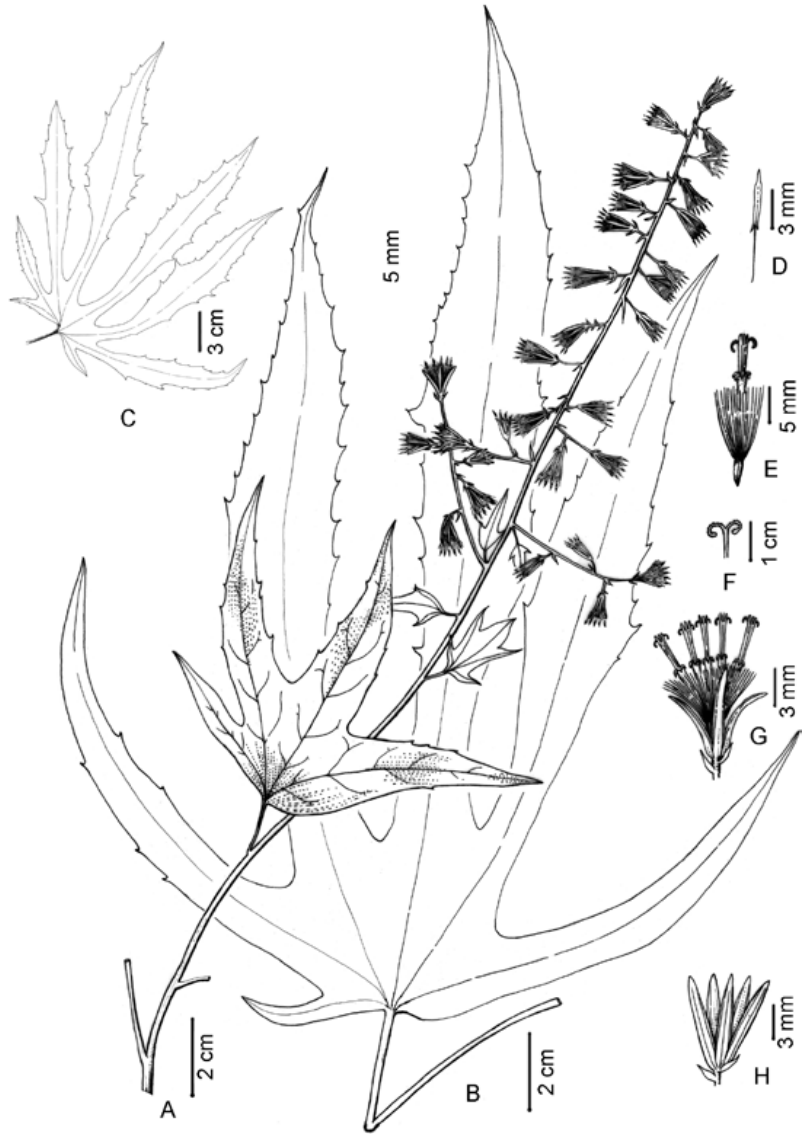


Fig. 1. *Parasenecio dissectus* (from the holotype, drawn by P. Liu). — **A:** Part of a flowering branch. — **B:** Middle leaf. — **C:** Lower leaf. — **D:** Anther. — **E:** Floret with pappus. — **F:** Stigma. — **G:** Capitulum. — **H:** Involucre.

veined, lateral veins furcate near base, veins adaxially impressed, abaxially raised, base subcordate, margin undulately fine-toothed, apex acuminate; central lobe larger, lateral lobes often 1-lobulate, lobule obliquely triangular; upper leaves gradually smaller, ovate, usually 5-lobed, with shorter petioles; uppermost leaves oblong, 3-lobed, 13–15 cm long, 8–10 mm wide, apex acuminate, margin entire, shortly petiolate. Capitula discoid, numerous, arranged in panicles about 20 cm long; peduncles 4–6 mm long, slender; rachis shortly hairy, base with 2 or 3 subulate bractlets. Involucres cylindrical, ca. 3 mm in

diameter, 10–12 mm high; phyllaries 5, in one series, linear, 7–8 mm long, ca. 1 mm wide, outer surface glabrous, apex acute, margin membranous. Florets bisexual, 5; corolla tube ca. 4 mm long; limb broadly tubular, ca. 4 mm long, with 5 lanceolate lobes of ca. 1 mm long. Anthers exserted from corolla, basally shortly caudate. Style arms excurved, apically truncate, penicillate, papillose. Achenes brown, cylindrical, ca. 3 mm long, glabrous, longitudinally ribbed. Pappus of capillary bristles, white, ca. 8 mm long.

Hiroshige Koyama had determined *A. Henry* 6487 as "*Parasenecio delphinifolia* group" in

2003. Undoubtedly, *P. dissectus* belongs to *Parasenecio* section *Delphiniifoliae* because of its palmately lobed leaf blade. *Parasenecio dissectus* is similar to *P. sinicus*, which occurs in Henan and Shaanxi provinces in China, but differs by its much larger leaves (10–20 cm long and 12–24 cm wide in *P. sinicus*) usually with more lobes, smaller involucre (8–10 mm in diameter in *P. sinicus*), by having five phyllaries and florets, shorter achenes (5–6 mm long in *P. sinicus*) and white pappus. *Parasenecio dissectus* is also similar to *P. delphinifolius*, endemic to Japan, but differs by its usually much larger leaves and more deeply lobed (9–15 cm long and 11–18 cm wide in *P. delphinifolius*), the lobes usually being lanceolate and much longer (usually 9–24.5 cm), and by smaller achenes (4–5 mm long in *P. delphinifolius*).

***Parasenecio levingii* (C.B. Clarke) Y.S. Chen, comb. nova**

Senecio levingii C.B. Clarke, Comp. Ind. 301. 1876. — *Cacalia levingii* (C.B. Clarke) R. Mathur in R. R. Rao et al., Fl. Ind. Enum. Aster. 20. 1988. — TYPE: India. Kashmir, Sonamurg, alt. 2833 m, *Levinge s.n.* (holotype CAL; isotype K, photo seen).

After examining the type specimen, I find this taxon conforms well to genus *Parasenecio* in East Asia. *Parasenecio levingii* is endemic to Kashmir, Himachal Pradesh and Uttar Pradesh in India, growing in forests at altitudes of 2800–2900 m. It is most similar to *P. hastata*, but can be distinguished by its smaller and densely arranged heads with phyllaries and florets about five.

Acknowledgements

The author is grateful to the curator of GH for loan of type specimens, N. J. Turland for taking photos of type specimens from K, and the Flora of China Project and the State Key Laboratory Program of Ministry of Science and Technology of the People's Republic of China for financial support.

References

- Chen, Y. L. 1999: *Parasenecio* W. W. Sm. et J. Small. — In: Chen, Y. L. (ed.), *Flora Reipublicae Popularis Sinicae* 77(1): 19–87. Science Press, Beijing. [In Chinese].
- He, S. Z. & Peng, H. 2006: *Parasenecio weiningensis* (Asteraceae), a new species from Guizhou, SW China. — *Annales Botanici Fennici* 43: 220–222.
- Koyama, H. 1969: Taxonomic studies on the tribe Senecioneae of eastern Asia. II. Enumeration of the species of eastern Asia. — *Memoirs of the Faculty of Science, Kyoto University, Series of Biology* 2: 137–183.
- Koyama, H. 1978a: Notes on some species of Chinese *Cacalia* 1. — *Acta Phytotaxonomica et Geobotanica* 29: 65–84.
- Koyama, H. 1978b: Notes on some species of Chinese *Cacalia* 2. — *Acta Phytotaxonomica et Geobotanica* 29: 171–178.
- Koyama, H. 1979: Notes on some species of Chinese *Cacalia* 3. — *Acta Phytotaxonomica et Geobotanica* 30: 65–83.
- Koyama, H. 1995: *Parasenecio* W. W. Sm. et J. Small. — In: Iwatsuki, K., Yamazaki, T., Boufford, D. E. & Ohba, H. (eds.), *Flora of Japan*, vol. IIIb: 47–53. Kodansha, Tokyo.
- Smith, W. W. & Small, J. 1922: A new genus of the *Compositae* from China. — *Transactions and Proceedings of the Botanical Society of Edinburgh* 38: 93–97.