

Saussurea megacephala (Asteraceae), a new species from Xizang, China

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Received 29 June 2009, revised version received 7 Dec. 2009, accepted 23 Dec. 2009

Chen, Y. S. 2011: *Saussurea megacephala* (Asteraceae), a new species from Xizang, China. — *Ann. Bot. Fennici* 48: 142–144.

Saussurea megacephala C.C. Chang ex Y.S. Chen, *sp. nova* (Asteraceae) is described and illustrated from southeastern Xizang, China. Its morphology is compared with that of *S. przewalskii* and *S. semifasciata*.

Saussurea is one of the largest genera in the tribe Cardueae (Asteraceae) and includes approximately 400 species (Lipschitz 1979). It is the largest genus of Asteraceae in China, as 264 species are recorded to be native in China according to *Flora Reipublicae Popularis Sinicae* (Shih & Jin 1999).

While examining *Saussurea* specimens in PE, the author found that Chao-Chien Chang had recognized a new species, named “*Saussurea megacephala* sp. nov.” on two herbarium sheets with the same collection number (C. W. Wang 65881). After careful study, I agree that it is indeed a new species.

***Saussurea megacephala* C.C. Chang ex Y.S. Chen, *sp. nova* (Fig. 1)**

Affinis S. przewalskii, a qua differt caulis crassis et longioribus, laminis utrinque glabris, foliis superis integris, linearibus, capitulis majoribus, involucri phyllis 6–7 seriatis, dense villosis, pappis longioribus, uniseratis.

TYPE: China. Xizang: Zayti, Tsa-wa-rung, Re-su-la, Gerda, on rock side in *Juniperus* woods, 3500 m,

VIII.1935, C. W. Wang 65881 (holotype PE00392881; isotype PE00392882).

ETYMOLOGY: The epithet *megacephala* refers to the large capitula.

Perennial herbs from short rhizome, 60–70 cm tall, unbranched. Stems erect, stout, 10–17 mm in diameter, hollow, sparsely puberulent. Basal leaves mostly withered; leaves sparsely arranged along stem, lower and basal leaves petiolate, blade lanceolate, 13–16 cm long, 1–2.5 cm wide, both surface glabrous, margin coarsely dentate, apex acute, base cuneate, gradually decurrent to petiole, petiole 1–6 cm long; middle and upper leaves sessile, blade lanceolate, gradually merging into bracts, 4–9 cm long, 2.5–12 mm wide, margin denticulate to entire (uppermost ones), apex acuminate. Bracts sessile, leafy, linear, margin entire, 10–15 mm long, 0.8–1 mm wide. Capitula homogamous, discoid, usually 3–4, sessile, glomerate at end of stem, with up to 100 florets. Involucre globose, 20–25 mm in diameter, 18–22 mm high; phyllaries 6–7-seriate, imbricate, brownish, coriaceous, triangular-oblong, oblong-ovate or lanceolate, margin entire, abaxially villous, apex acuminate; outer phyllaries triangular-oblong, 9–10 mm

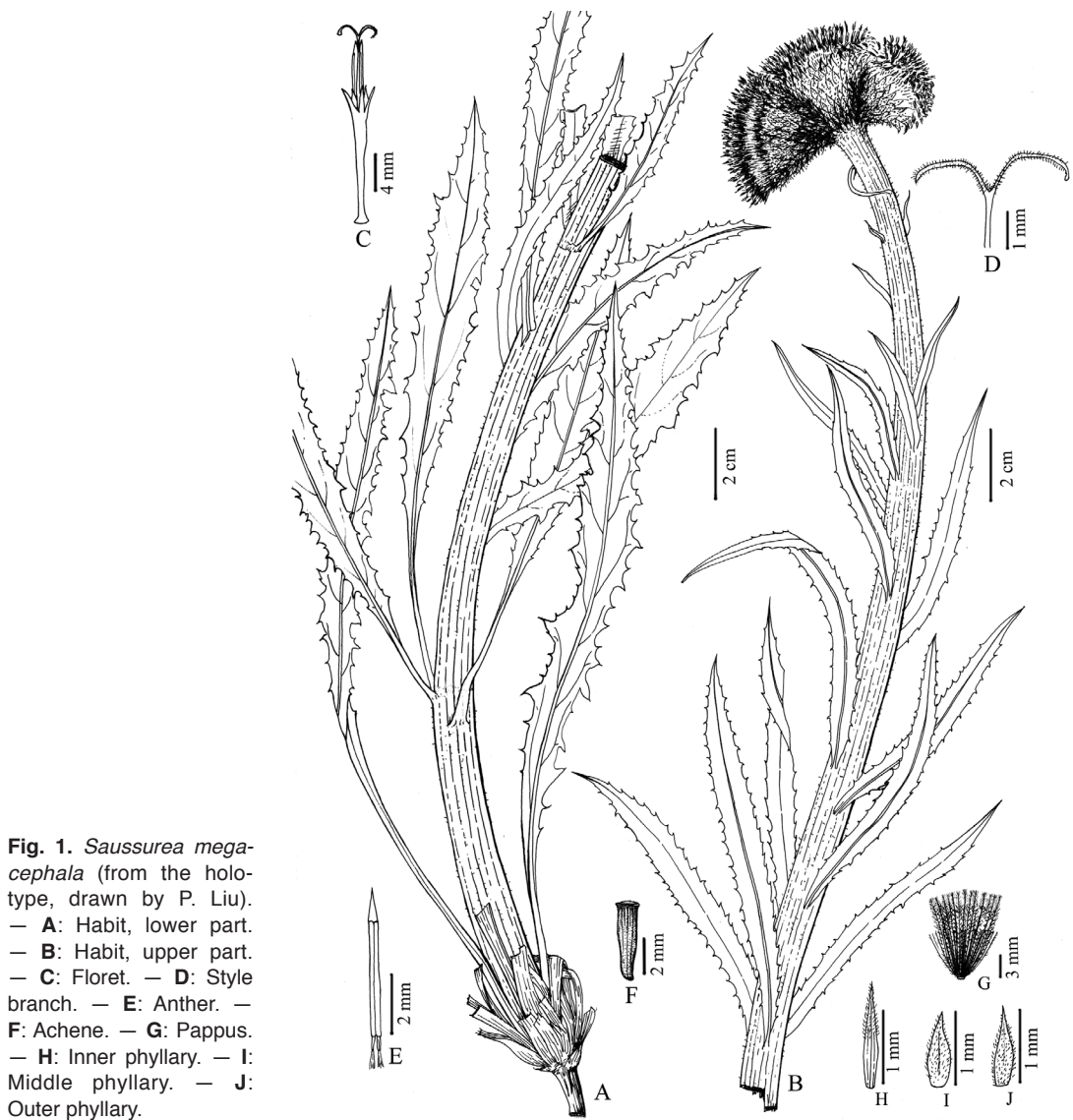


Fig. 1. *Saussurea megacephala* (from the holotype, drawn by P. Liu). — **A:** Habit, lower part. — **B:** Habit, upper part. — **C:** Floret. — **D:** Style branch. — **E:** Anther. — **F:** Achene. — **G:** Pappus. — **H:** Inner phyllary. — **I:** Middle phyllary. — **J:** Outer phyllary.

long, 2.8–3.0 mm wide, apex acuminate, abaxially brown, densely villous; middle phyllaries oblong-ovate, 8–10 mm long, 2.5–2.8 mm wide, apex acuminate, abaxially brown, densely villous; innermost phyllaries lanceolate, 14–15 mm long, 2–2.1 mm wide, apex acuminate, abaxially brown, densely villous in upper part. Receptacle densely setose, bristles yellowish brown, spine-like, 5–6 mm long, persistent. Florets numerous, bisexual, fertile, corolla tubular-funnelform, dark purple, glabrous, tube ca. 7 mm long, limb 7–8 mm long, with 5 lobes ca. 3 mm long. Anthers 6–7 mm long, apical appendage acute,

basal appendages with long lacerate tails ca. 1 mm long; style ca. 15 mm long, branches 1.5–2 mm long, very hairy externally, stigmatic papillae all over inner surfaces of style branch above collar. Achenes cylindroid, 2.8–3(–4) mm long, 0.5–1 mm wide, glabrous, brown, longitudinally striate; pappus of two series, outer series of 5–6 mm long scabrid bristles, easy to fall off, inner series yellowish white plumose bristles, bristles 16–20, 11–14 mm long, connate at base to a ring, falling off as a whole. Flowering in August.

Saussurea megacephala grows on rock side in *Juniperus* forests at the altitude of about

Table 1. Morphological differences between *Saussurea megacephala*, *S. przewalskii* and *S. semifasciata*.

Features	<i>S. megacephala</i>	<i>S. przewalskii</i>	<i>S. semifasciata</i>
Stem	60–70 cm long, 10–12 mm in diameter, sparsely puberulent	6–30(–45) cm long, 4–5(–8) mm in diameter, densely white arachnoid	24–67 cm long, 6–8 mm in diameter, sparsely pubescent or glabrous
Basal leaves	usually withered	usually numerous	usually withered
Leaf indumentum	both surfaces glabrous, green to light green	adaxially glabrous or sparsely white arachnoid, abaxially densely white arachnoid	both surfaces glabrous, green to light green
Leaf shape	lower leaves with long petioles, margin coarsely dentate; upper leaves entire, sessile	all leaves similar in shape, margin coarsely dentate, petiolate	all leaves similar in shape, sessile, margin serrulate, base decurrent to stem-wing
Capitula number	3–4	6–12(20)	6–20
Involucre diameter	20–25 mm	6–10 mm	20–30 mm
Bracts or uppermost leaves	much shorter than congested heads	much longer than congested heads	shorter than congested heads
Phyllary indumentum	densely villous	sparsely pubescent	densely white pubescent
Phyllary color	brown	blackish purple	black
Inner pappus	11–14 mm long	6–8 mm long	ca. 14 mm long

3500 m. It is presently known only from its type locality in southeastern Xizang, bordering with Yunnan province.

Saussurea megacephala may be most similar to *S. przewalskii*, which belongs to *Saussurea* subgenus *Saussurea* section *Cyathidium* and also occurs in southeastern Xizang. *Saussurea przewalskii* occurs widely in Eastern Xizang, Yunnan, Sichuan, Shaanxi, Gansu and Qinghai, while *S. megacephala* is presently only known from one locality in southeastern Xizang. *Saussurea megacephala* is also similar to *S. semifasciata*, which belongs to *Saussurea* subgenus *Saussurea* section *Pycnophala*. The main morphological differences between *S. megacephala*, *S. przewalskii* and *S. semifasciata* are summarized in Table 1.

Acknowledgements

I am grateful to Ms. P. Liu for drawing the illustration and the State Key Laboratory Program of Ministry of Science and Technology of the People's Republic of China for financial support.

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