



The identity of *Saussurea rhytidocarpa*, and a new species of *Saussurea* (Asteraceae) from China

YOU-SHENG CHEN

State Key Laboratory of Systematic and Evolutionary Botany, Institute of Botany, Chinese Academy of Sciences, 20 Nanxincun, Xiangshan, Beijing 100093, China

Abstract

Examination of the type material of *Saussurea rhytidocarpa* confirms that it is a synonym of *S. leontodontoides*. The commonly recognized *S. rhytidocarpa* in Chinese herbaria and literature is different from its type material, and belongs to a new species, *S. shangrilaensis* Y. S. Chen.

Key words: Compositae, identity, new species, *Saussurea* sect. *Strictae*

Introduction

Saussurea DC. is one of the largest genera in the tribe *Cardueae* (Asteraceae) and includes above 400 species (Lipschitz 1979; Shi & Raab-Straube 2011). It is the largest genus of Asteraceae in China, with 289 species recorded as native according to *Flora of China* (Shi & Raab-Straube 2011).

When studying H. Smith's Asteraceae specimens collected from Sichuan Province of China, Handel-Mazzetti (1938) described many new species, including *Saussurea rhytidocarpa* Handel-Mazzetti (1938: 331). When Handel-Mazzetti published the name *S. rhytidocarpa*, he did not provide a detailed morphological description of the taxon, and only mentioned a few diagnostic characters: “*Differt a S. leiocarpa praecedente paleis plurimis achaenio duplo longioribus et achaeniis transverse rugosis*”. This brief descriptive matter did not allow of a certain interpretation of the taxon. Without access to the type material, Lipschitz (1979) listed *S. rhytidocarpa* as an uncertain species. In *Vascular Plants of the Hengduan Mountains*, Chen & Li (1994) cited a specimen from Daocheng, southwestern Sichuan (*T. T. Yu 12985*) as “*S. rhytidocarpa*”. Also without controlling the type material of *S. rhytidocarpa*, Shih & Jin (1999) gave a morphological description of “*S. rhytidocarpa*” based on *T. T. Yu 12985*. But after I checked the type material of *S. rhytidocarpa* (*H. Smith 3443*: Songpan, Northern Sichuan) from UPS, I found the type of *S. rhytidocarpa* to be the same as *S. leontodontoides* (Candolle 1838) Schultz Bipontinus (1846: 330). I agree with the treatment of *S. rhytidocarpa* as a synonym of *S. leontodontoides* in *Flora of China* (Shi & Raab-Straube 2011). After further studies in collections and several field expeditions, I found more specimens similar to *T. T. Yu 12895*, and these specimens in fact represent an undescribed new species.

Taxonomic treatment

Saussurea shangrilaensis Y. S. Chen, sp. nov. (Figs. 1, 2, 3B & 3D)

Saussurea rhytidocarpa sensu Chen & Li (1994: 2119) and Shih & Jin (1999: 135), non Handel-Mazzetti (1938)

Type:—CHINA. Sichuan: Daocheng, Kongkaling, Tsungu, margin of woods, 3700 m, 29 August 1937, *T. T. Yu 12985* (holotype PE; isotypes A, KUN, PE).

TABLE 1. (Continued)

Features	<i>S. leiocarpa</i>	<i>S. leontodontoides</i>	<i>S. polystichoides</i>	<i>S. shangrilaensis</i>
Rachis	2–3 mm wide, winged	2–5 mm wide, winged	less than 1 mm wide, not winged or slightly winged	less than 1 mm wide, not winged or slightly winged
Capitula diameter	1.5–2 cm	1.5–3 cm	1.5–2.5 cm	1.2–1.5 cm
Phyllary color	centre green, margin purple	centre green, margin purple	green	centre green, margin black
Phyllary size	7–14 × 1.5–2.5; inner phyllaries distinctly longer than outer ones	9–21 × 1.5–4 mm; inner phyllaries distinctly longer than outer ones	9–16 × 1–2 mm; inner phyllaries distinctly longer than outer ones	12–16 × 1–2 mm; inner phyllaries similar to outer ones
Phyllary apex	reflexed	appressed	in inner phyllaries appressed, in outermost ones patent	patent
Achene	ca. 4.5 mm, ribbed, smooth	ca. 4 mm, slightly transversely rugose	2–4 mm, ribbed, smooth	ca. 3 mm, distinctly transversely rugose
Inner pappus	1–1.1 cm	1.5–1.7 cm	1.2–1.5 cm	ca. 1 cm
Distribution	China (W Sichuan)	China (Qinghai, W Sichuan, Xizang, NW Yunnan), NE and NW India, Kashmir, Nepal	China (S Tibet), Bhutan, N India, Nepal	China (SW Sichuan, NW Yunnan)

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