

Systematic Studies of Asian *Saussurea* (*Asteraceae*) VIII. Three New Species from Honshu, Japan

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Three new species of the genus *Saussurea* from Honshu, Japan are described. *Saussurea* (subg. *Theodorea*) *nakagawae* Kadota from Sado Island, Niigata Pref. is distinguished from *S. pulchella* (Fisch. ex Hornem.) Fisch. by having longer involucre with more or longer bracts, 11–12-seriate involucre phyllaries and narrowly ovate outer phyllaries. *Saussurea nakagawae* is the fourth species of subsect. *Theodorea-vera* sect. *Theodorea* of subg. *Theodorea* (Cass.) Lipsch. The name, subsect. *Theodorea-vera* is validated here. *Saussurea mihokokawakamiana* Kadota from Mt. Kagonotoyama, the Asama Mountains, Nagano Pref. differs from *S. triptera* Maxim. by having almost wingless stem, narrowly triangular-ovate cauline leaves, loose racemose synflorescence, larger cylindrical to campanulate involucre and 8–9-seriate involucre phyllaries with caudate tips. *Saussurea mihokokawakamiana* is similar to *S. kimbuensis* Nakai in involucre phyllaries with caudate tips and narrowly ovate-triangular leaves but differs from it by larger involucre and 8–9-seriate involucre phyllaries. *Saussurea yamagataensis* Kadota from the Murayama area, Yamagata Pref. is different from *S. sendaica* (Franch.) Franch. ex Koidz. by having horizontal rhizomes with longer internodes, narrowly ovate cauline leaves, stem pubescent with pale greenish, long multicellular hairs, longer cylindrical involucre and 11–12-seriate involucre phyllaries.

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Key words: Honshu, Japan, new species, *Saussurea mihokokawakamiana*, *Saussurea nakagawae*, *Saussurea yamagataensis*.

This is part of a series of systematic studies of East Asian *Saussurea* (*Asteraceae*) (Kadota 1987–2015). Here three new species from Honshu, central Japan are described.

In October 2015 withered plants of *Saussurea* were found in Sado Island, Niigata Prefecture, Chubu district. It was clear that the plants belong to subg. *Theodorea* because they had annual, perpendicular, fusiform roots and involucre phyllaries with conspicuous, fan-

shaped appendages. However, unfortunately their involucre were seriously damaged by wind and rain. Later, field examination was done at the locality in September 2016 with the aids of Mr. S. Nakagawa, Mr. H. Yanagita and Ms. Y. Watanabe. As a result of this examination it is clarified that the plants are characterized by longer involucre and 11–12-seriate involucre phyllaries and differs from both *S. japonica* (Thunb.) DC. and *S. pulchella* (Fisch. ex

門田裕一：アジア産トウヒレン属（キク科）の分類学的研究 VIII. 本州産の3新種

トウヒレン属ヒメヒゴタイ亜属ヒメヒゴタイ節ヒメヒゴタイ節 (*Saussurea* subg. *Theodorea* sect. *Theodorea* subsect. *Theodorea-vera*) の1新種，サドヒゴタイ *Saussurea nakagawae* Kadota を記載した。サドヒゴタイはヒメヒゴタイ *S. pulchella* (Fisch. ex Hornem.) Fisch. に似るが，①総苞が細長く，②数多くの苞葉があり，③総苞片が11-12列であり，④総苞外片が長卵形である点で異なる。この亜節は東アジア固有で，これまでに4種が知られており，サドヒゴタイは5番目の種となる。併せて，ヒメヒゴタイ亜節 subsect. *Theodorea-vera* Kitam. ex Kadota を正式に記載した。本種は佐渡島の固有種で，海岸草原に生育する。種形容語（種小名）は本種を発見された，佐渡市在住の中川清太郎氏への献名である。

トウヒレン亜属 subg. *Saussurea* においては次の2種を記載した。トウミトウヒレン *Saussurea mihokokawakamiana* Kadota はヤハズヒゴタイ *S. triptera* Maxim. に似るが，①茎にはほとんど翼がなく，②茎葉は長卵状三角形，ときに鈍形，基部は浅い心形～切形で，③頭花は疎らな総状花序につき，④総苞はより大型

で，筒形～鐘形，⑤総苞片は8-9列，基部は倒卵形で，先端は著しく長く尾状に伸びる点で異なる。キンブヒゴタイ *S. kimbuensis* Nakai は茎に翼がなく，葉身が長卵状三角形で，総苞片の先端が尾状に長く伸びる点でトウミトウヒレンに似るが，総苞片が5列で，総苞が直径5 mm，長さ10-11 mm とより小さい点で異なる。種形容語は本種の存在に気付かれた，上田市在住の川上美保子氏への献名である。和名は基準産地の籠ノ登山が長野県東御市に位置するため。トウミトウヒレンは浅間山系の固有種である。

ヤマガタトウヒレン *Saussurea yamagataensis* Kadota はセンダイトウヒレン *S. sendaica* (Franch.) Franch. ex Koidz. に似るが，それに比べて，①地下茎が横走して，節間が長く，②総苞片は11-12列で狭卵形，③総苞が筒形でより長く，④葉身が長卵形，⑤茎に淡緑色で多細胞の長毛が多い点などで異なる。奥羽山脈の山形県側に限られ，同県村山地方の山形市と上山市に分布し，温帯域の林間の草地や夏緑林の林縁に生育する。

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