

## *Sedum ryukyuense*, a Replacement Name for *Sedum uniflorum* (Crassulaceae)

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(Accepted on June 13, 2022)

*Sedum japonicum* Siebold ex Miq. is a species widely distributed in East Asia and has been subdivided into four subspecies and one variety. Molecular phylogenetic analyses and morphological comparisons in recent studies suggested that *S. japonicum* subsp. *uniflorum* H.Ohba, which is distributed from southern Kyushu to the Ryukyu Archipelago, and *S. japonicum* subsp. *boninense* (Yamam. ex Tuyama) H.Ohba, which is endemic to the Ogasawara Islands, should be treated as an independent species. Consequently, *Sedum boninense* Yamam. ex Tuyama is the correct name for subsp. *boninense* at species rank. As *S. uniflorum* Hook. & Arn. is a later homonym and *S. sasakii* Hayata which was treated as a synonym of subsp. *uniflorum* which is newly considered to be a synonym of *S. japonicum* subsp. *oryzifolium* (Makino) H.Ohba, I propose *Sedum ryukyuense* Takuro Ito as the new name for *S. japonicum* subsp. *uniflorum*.

**Key words:** *Classulaceae*, Japan, *Sedum japonicum*, *Sedum sasakii*, Taiwan, the Ryukyu Archipelago.

*Sedum japonicum* Siebold ex Miq., (*Crassulaceae*), which consists of four subspecies, subsp. *japonicum*, subsp. *boninense* (Yamam. ex Tuyama) H.Ohba, subsp. *oryzifolium* (Makino) H.Ohba, and subsp. *uniflorum* H.Ohba, and one variety, var. *senanense* (Makino) Makino, is widely distributed in East Asia (Ohba 2016). As *Sedum uniflorum* Hook. & Arn., originally assigned to this species, was a later homonym of *Sedum uniflorum* Raf. Ohba (2003) proposed to assign the second earliest name, *Sedum japonicum* Siebold ex Miq. to the species.

*Sedum japonicum* subsp. *uniflorum*, a combination for *S. uniflorum* at the subspecies rank, is a coastal subspecies distributed in the southern Kyushu–Ryukyu Islands of

Japan (Ito et al. 2018) (Fig. 1). Molecular phylogenetic analysis of *S. japonicum* including infraspecific taxa by Ito et al. (2018) revealed that this subspecies forms a clade with subsp. *boninense* and is not monophyletic with subsp. *japonicum*. The clade formed by subsp. *uniflorum* and subsp. *boninense* was a sister clade to the clade consisting of *S. lineare* Thunb., *S. sarmentosum* Bunge and *S. subtile* Miq. which are widely distributed in East Asia, and two species endemic to China. Accordingly, *S. japonicum* subsp. *uniflorum* and subsp. *boninense* are phylogenetically clearly distinct from subsp. *japonicum*, subsp. *oryzifolium* and subsp. *japonicum* var. *senanense*. In addition, morphological comparisons showed that subsp. *japonicum*, subsp. *oryzifolium*

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伊東拓朗：ベンケイソウ科コゴメマンネングサ *Sedum uniflorum* の置換名, *Sedum ryukyuense*

ベンケイソウ科マンネングサ属メノマンネングサ *Sedum japonicum* Siebold ex Miq. は4亜種と1変種からなり、東アジアに広く分布するとされていた (Ohba 2001)。先行研究の分子系統解析および形態比較から、九州南部から琉球列島にかけて分布するコゴメマンネングサ *S. japonicum* subsp. *uniflorum* H. Ohba と小笠原諸島特産のムニンタイトゴメ *S. japonicum* subsp. *boninense* (Yamam. ex Tuyama) H. Ohba は、いずれもメノマンネングサの種内分類群として扱うべきではないことが示唆された。そのため、それぞれ独立種として *S. uniflorum* Hook. & Arn. および *S. boninense* Yamam. ex Tuyama の学名が適用されてい

たが (Ito et al. 2020), *S. uniflorum* Hook. & Arn. は非合法名 (後続同名) であり、使用することはできない。そこで本研究では Ito et al. (2020) で *S. uniflorum* の唯一の異名とされている *S. sasakii* Hayata が正名となりうかどうか検証した。その結果、*S. sasakii* は、*S. japonicum* subsp. *oryzifolium* (Makino) H. Ohba の異名であることが判明し、コゴメマンネングサの正名となるべき学名が存在しないことがわかった。そこで本報告では、*S. uniflorum* Hook. & Arn. の置換名として、*Sedum ryukyuense* Takuro Ito を提唱した。

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