

Hideaki OHBA\*: Notes on Himalayan *Sedum* (1)\*\*

大場秀章\*: ヒマラヤのベンケイソウ属について (1)\*\*

The Himalayas are one of the centers of distribution in the genus *Sedum* (Crassulaceae). In the region the species of *Sedum* show a remarkable diversity and variation in external morphology. Therefore, sometimes it is difficult to distinguish a certain species distinctly from its close allies. Although over 50 species of *Sedum* have hitherto been described from the region, our knowledge on them is still insufficient. In 1972, I had an opportunity to make a field survey in the central and eastern Himalayas as a member of the 5th Botanical Expedition to Eastern Himalaya organized by the University of Tokyo (Leader: Dr. Hiroo Kanai). In this series of papers, new or previously misinterpreted taxa of *Sedum* from the Himalayas will be published, and some critical groups of species will also be discussed.

I wish to express my sincere thanks to Prof. Emeritus Hiroshi Hara of the University of Tokyo, for his guidance and encouragement throughout the course of my study. I am deeply indebted to Dr. Hiroyoshi Ohashi, the University of Tokyo, who continuously gave me valuable advices. My sincere thanks are also due to Prof. Emeritus Arika Kimura of Tohoku University, who read critically the Latin description. The courtesy of the curators of several herbaria for allowing me examining specimens is also much appreciated. Abbreviations of the herbarium names are those of the Index Herbariorum, Part 1 (Lanjouw & Stafleu, ed. 5, 1964).

1) *Sedum phariense*, a new species from Tibet.

During my stay in Calcutta in 1972 I found that several specimens of *Sedum* collected from Tibet were erroneously identified as *S. bupleuroides* Wall. ex Hook. f. et Thomson in the Indian Central National Herbarium, Botanical Survey of India, Calcutta (CAL). These specimens differ apparently from the species in having serrate leaves, glabrous axis of inflorescence, smaller and hermaphrodite flowers and straight styles. Especially in

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having bisexual flowers these specimens are remarkable among *S. bupleuroides* and its allied species. Therefore, the specimens should be considered as representing a new species. The new species is closely related to *S. bhutanense* Praeger, but is characterized in having more or less finely serrate leaves, smaller and hermaphrodite flowers but in lacking papillae or puberulous hairs on the inflorescence-axis.

***Sedum phariense* H. Ohba, sp. nov.**

Inter species subgeneris *Rhodiolae* praecipue inflorescentia bracteata et foliis serratis *Sedo bhutanensi* Praeger affine, a quo autem flore hermaphrodito et axe inflorescentiae haud papillato differt.

Planta perennis, caudice hypogaeo erectiusculo carnosio et irregulatim subcylindrico, caule aereo erectiusculo ab apice caudicis deciduo quotannis, subtereti glabro simplici (10-)12-20(-22) cm longo, basi foliis squamosis late vel vere triangularibus castaneis vel badiis 5-7 mm longis persistentibus dense suffulto. Folia alterna crassa glabra elliptica vel anguste ovata vel ovata 1-2.1 cm longa 4-7 mm lata, in media parte caulis majora, margine irregulariter et remotiuscule serrata sed in dimidio inferiore subintegra, basi sessilia ecalcarata et leviter vel aegre cordata, apice rotundata vel obtusa vel obtuse acuta. Inflorescentia dichasialiter composita densa (vulgo dicitur cyma in descriptionibus *Sedorum*) terminalis, pedunculo glabro, bractea foliis caulis simili sed minore 8-9 mm longa 1.5-2 mm lata, pedicello glabro 2-3 mm longo. Flores hermaphroditi, solitarii ad apicem pedicelli, circa 6 mm diametro, plerumque quinquepartiti. Calyces 1.5-1.8 mm longi profunde et aequae in lobos divisi, lobis in vivo probabiliter crassiusculis glabris, anguste triangularibus apice acutis vel obtuse acutis 1.2-2.4 mm longis basi circa 0.6 mm latis, in sicco badiomaculatis. Petala quinque, ad basin leviter (longitudine circa 0.2 mm) connata, tenuia glabra, anguste obovata apice rotundata 3.2 mm longa 0.9-1.1 mm lata, sub anthesi, ut videtur, effusa et forsitan dilute rubella. Stamina modo obdiplostemonis disposita, sed numero saepe 8-10, petalis fere aequilonga, filamentis subulatis glabris, oppositipetalis circa 1 mm supra basin orientibus et 1.4-1.6 mm longis, alternipetalis (2.2-)2.4-2.6 mm longis, antheris basifixis 0.3 mm longis, probabiliter purpureis sub anthesi. Glandulae subrectangulatae 1.1-1.4 mm longae circa 0.5 mm latae, margine integrae sed apice emarginatae, circiter in quarta superiore recurvatae, in vivo verisimiliter aurantiacae. Gynoecia

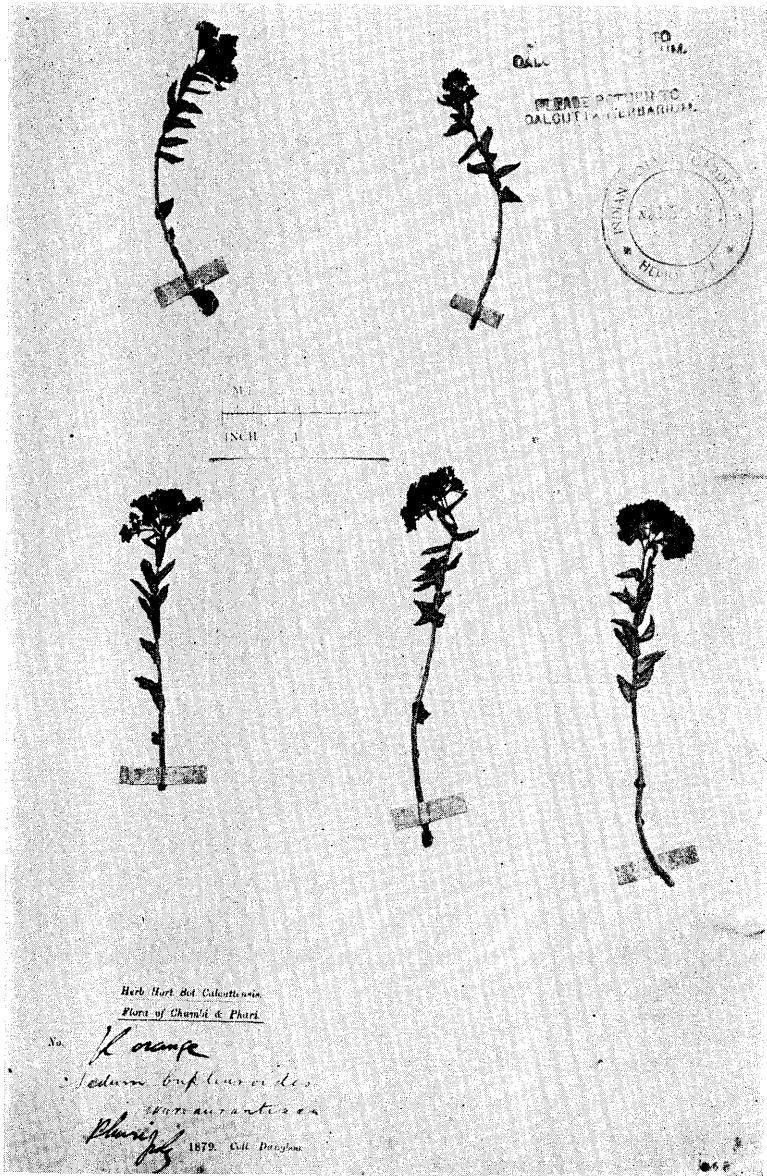


Fig. 1. The type specimen of *Sedum phariense* in CAL.

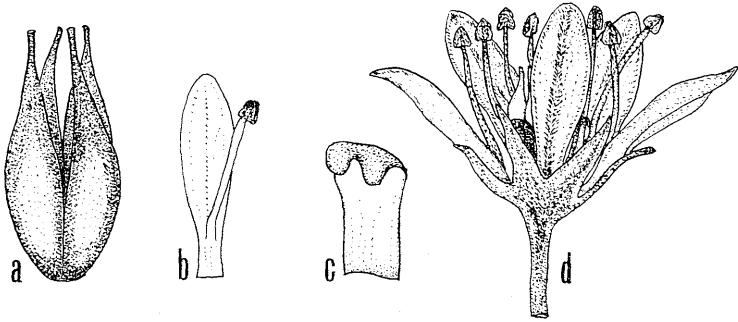


Fig. 2. *Sedum phariense*. a. Ovary ( $\times 16$ ). b. Petal ( $\times 8$ ). c. Gland ( $\times 16$ ). d. Flower ( $\times 8$ ).

quinque distincta sed basi leviter connata, ovario glabro erecto fere urceolato, latere ventrali sine gibbositate, basin versus decrescenti, circa 2 mm longo, in stylum brevissimum gracilem circa 0.2 mm longum producto et apice intus stigmatoso.

Habitat in Tibetico prope Phari<sup>1)</sup> [Dungboo s.n. in July 1879, n. 159421 (holotypus), n. 159409 et n. 159427 in Herbario Nationali Centrali Indico Calcuttensi, CAL] et prope Kang Loo<sup>2)</sup> [Dr. King's collector s.n. in Aug. 2, 1882, n. 159414 in Herb. Calcuttensi].

2) *Sedum Thomsonianum* H. Ohba. The relationships between *S. bhutanense* Praeger and *S. elongatum* Wall. ex Hook. f. et Thomson are much controversial. They are often considered as conspecific (e.g. Fröderström 1930). But Praeger (1921) distinguished *S. bhutanense* from *S. elongatum* by hardly stalked or sessile smaller leaves, less leafy (? bracteate) and many-flowered cymes, etc. Moreover, the inflorescence-axis of *S. bhutanense* is glabrous and slightly mamillate, while that of *S. elongatum* is pubescent. Based on this difference both species are easily separable. Generally the character on indumentum is one of the most stable characters in the genus *Sedum*. Accordingly, *S. bhutanense* and *S. elongatum* are better recognized as distinct from each other. However, as *S. elongatum* Wall. ex Hook. f. et Thomson (1858) is a later homonym of *S. elongatum* Ledebour (1844-46), it becomes necessary to publish a new name as follows:

1) ca. 27°44'N et 89°09'E.

2) ca. 28°04'N et 89°19'E.

***Sedum Thomsonianum* H. Ohba, nom. nov.**

*S. elongatum* Wall. ex Hook. f. et Thomson in Journ. Proc. Linn. Soc. 2: 98 (1858), non Ledebour (1844-46).

**Literature cited**

Fröderström, H. 1930. The genus *Sedum* L. A systematic essay. Part 1. Acta Horti Gothoburgensis 5: Appendix 75pp. (esp. 43-45). Praeger, R.L. 1921. An account of the genus *Sedum* as found cultivation. Journ. Royal Hort. Soc. 46: 1-314 (esp. 41-49).

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ヒマラヤ地方はベンケイソウ属の分布の中心のひとつで著しい多様性を示している。また外部形態の変異の幅も広く、しばしば種間の区別がむずかしくなる場合も多い。この地方からはすでに 50 種類以上のベンケイソウ属植物が発表されているが、研究が進むにつれて未知の種類と思われるものも見出され、また既知の種類の再検討も必要になってきたのでそれらを順次発表してゆきたいと思う。

1. 東京大学第 5 次インド植物調査 (1972) の際にカルカッタにあるインド国立中央植物標本館でベンケイソウ科の標本を検討することができた。その中に、古くシッキムとブータンの間に突き出したチベットの Phari と Kang Loo で採集されたイワベンケイ亜属 (*Rhodiola*) の標本が数点あり、研究の結果新種と判り *Sedum phariense* として報告した。花序に苞葉のあることなどから、*S. bupleuroides* に近縁の一種と考えられ、特に *S. bhutanense* に近い性質を示している。しかし、小形の両性花をもつことや、花序の軸が無毛でかつ微小突起などを生じぬことなどで明らかに区別される。欧文欄に詳しい記載を発表した。

2. *Sedum elongatum* Wall. ex Hook. f. et Thomson には先行する同名の植物があるので *Sedum Thomsonianum* という新名を提唱した。本種は後に Praeger が発表した *S. bhutanense* に近い種類であるが、葉に明らかな柄のあること、花序には苞葉が多く花がまばらに着くこと、さらに花序の軸が有毛な点などで異なる。

□J. C. Willis: **A Dictionary of the Flowering Plants & Ferns.** ed. 8. Revised by H. K. Airy Shaw. Cambridge Univ. Press. 1973. 8,800 円。シダ植物以上の科名、属名が殆んど網羅されているので非常に便利な本である。1966 に出された 7 版から 40 頁ほどふえている。これはその後の新属が入れられたことにもよるが、主にラン科植物の属間雑種名を新たに加えたことによるようである。末尾に本書でとりあげた科名と、Melchior 編の Engler's Syllabus 及び Bentham & Hooker の Genera Plantarum であつまっている科名との対照表が新たに加えられている。(山崎 敬)