

Hideaki OHBA\*: Notes on Himalayan *Sedum* (2)\*\*

大場秀章\*: ヒマラヤのベンケイソウ属について (2)\*\*

Recently I have examined specimens of *Sedum* collected from the Himalayan regions by the members of the British Museum expeditions. Among the collections 5 new species were found, and will be described in this and succeeding papers. I wish to express my thanks to the authorities in the British Museum (Natural History) for their kind helps for enabling me to study the collections in their charge.

(3) *Sedum* (*Rhodiola*) *mirabile* H. Ohba, sp. nov.

Species maxime insignis antheris dorsifixis (nec basifixis), a speciebus ceteris omnibus subgeneris *Rhodiolae* bene distinguendum.

Planta perennis ad 20 cm alta; radice longe dauciformi usque 8 mm crassa, radicellas 3-5 graciles emittente. Caudex brevissimus erectus subobconicus solidus non ramosus usque 1 cm longus praeter apicem circa 10 mm diametro, badius et glaber, basi versus radicem gradatim decrescens, parte apicali squamis modice obtectus. Squamae crassi-membranaceae complanatae badiae utrinque glabrae, late triangulares (SADT n. 77-78)<sup>1)</sup>, vulgo 5-6 mm longae 4-5 mm latae, apice attenuatae, margine paene integrae et plus minusve concavae. Caules floriferi numero 10-20, ex axillis squamarum singulariter evoluti, suberecti vel adscendentes, potius fastigiati, per anthesin usque 15 cm longi, simplices teretes et estriati, 0.8-1.8 mm diametro, sparsim foliati, glabri et laeves, post mortem eorum saltem intra unum annum remanentes. Folia alterna crassiscula complanata utrinque glabra decidua, longitudine internodia fere aequantia, sessilia et haud calcarata, magnitudine haud differentia eodem in caule (foliis 2-4 inferis exceptis); inferis textura squamis similibus, anguste vel ovate triangularibus, 20-25 mm longis 6-10 mm latis, post anthesin brunneolis; alteris spatulatis vel anguste

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\*\* Continued from 48: 327-331 (1973) of this journal.

1) The SADT numbers correspond to the numbers of definitions and figures by Systematic Association Committee for Descriptive Biological Terminology in *Taxon* 11: 145-156, 245-247 (1962).

obovatis (SADT n. 45) vel trullatis (SADT n. 56), (6-)10-15 mm longis (2.4-)2.8-4.5 mm latis, 3.3-3.6-plo longioribus quam latoribus, basi cuneatis vel decurrentibus, apice acute obtusis vel mucronulate rotundatis, margine integris sed sub lente (ca.  $\times 30$  magnificatione) minutissime papillatis (papillis minoribus quam 0.05 mm longioribus) etiam in exsiccatione plus minusve albo-marginatis, utrinque viridibus glabris et opacis; costa et venis utrinque non prominentibus, venatione camptodroma sed utrinque invisibili. Inflorescentia botryche disposita terminalis, per totam aetatem erecta circa 1-3 cm longa et 2-3 cm lata, floribus numero 7-10; pedunculo tereti 5-10 mm longo glabro et laevi; bractea sessili et ecalcarata, foliis caulis simili sed minore, spatulata vel trullata 6-11 mm longa 2.5-5 mm lata 2.2-2.5-plo longiore quam latiore, basi attenuata vel cuneata, apice minutissime mucronulate rotundata; pedicello glabro, sub anthesi tantum 0-1.5 mm longo sed vulgo post anthesin elongato ad 1.5-4 mm longo. Flores in Septembri hermaphroditi persaepe quinque-partiti campanulati et sursum florentes. Calyces 5.8-7 mm longi crassiusculi virides sed saltem per anthesin in lobis subrosei; tubo 2-3 mm longo basi in pedicellum gradatim decrescenti; lobis

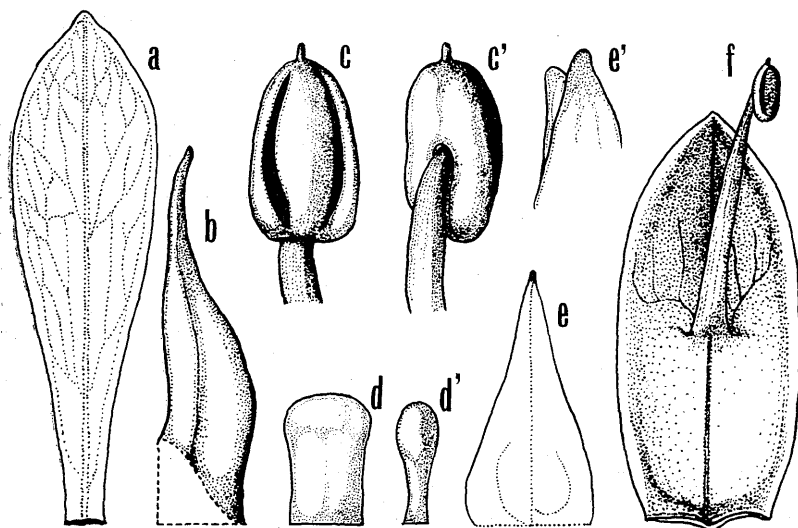


Fig. 1. *Sedum mirabile*. a. Leaf  $\times 5$ . b. Ovary  $\times 10$ . c and c'. Anther  $\times 25$ . d. and d'. Gland  $\times 20$ . e and e'. Calyx-lobe  $\times 10$  and  $\times$  ca. 20. f. Petal with a stamen  $\times 10$ .

basi in aestivatione paululum certe imbricativis, fere aequimagnis, erectiusculis et corollis alterne adpressis, intus leviter concavis, extus convexis sed ecarinatis, 3.5-4 mm longis 1.8-2.2 mm latis, 1.7-2-plo longioribus quam latioribus, anguste vel vere triangulariter ovatis, apice attenuatis vel attenuate acutis etiam persaepe extus appendice minutissima mucronulatis, margine paene integris et vix conspicuo concavis. Petala in aestivatione valvata, distincta, per anthesin (ca. 1/5 parte apicali excurvata excepta) erectiuscula, 5.5-6 mm longa 2.5-2.9 mm lata 2.2-2.4-plo longiora quam latiora, oblongo-elliptica apice rotundata sed persaepe appendice minutissime mucronulata, margine paene integra sed sub lente (ca.  $\times 30$  magnificatione) minutissime et brevissime crenulata, crassihabacea, extus obtuse carinata, intus complanata, in vivo exsiccatoque subrosea. Stamina numero vulgo 10, petalis paululum longiora, sub anthesi erecta; filamentis subulatis teretiusculis leviter obcompressis glabris subroseis basi circa 0.5 mm latis, oppositipetalis vulgo 2.8-3.1 mm supra basin orientibus et vulgo 3.7-4 mm longis, alternipetalis omnibus paululum brevioribus, circa 6 mm longis; antheris dorsifixis glabris fere ovoideis, post anthesin ut videtur saturate luteis sed ante eam colore ignotis, apice minutissime apiculatis, 0.7-0.9 mm longis, loculis duobus ad filamentum parallelis, per anthesin loculorum scissuris ventralibus leviter convexis per totam longitudinem loculi dehiscentibus. Glandulae, aspectu frontali suboblongae apice rotunde truncatae margine integrae, laterali peranguste obovatae vel clavatae, circa 1 mm longae 0.3 mm crassae 0.6 mm latae, in exsiccatione lutulente roseae. Gynoecia 5.5-6 mm longa sessilia erecta basi latere ventrali longitudine 1.3-1.5 mm connata: ovario suburceolato, latere dorsali leviter carinato et circa 1/3 supra basin plus minusve gibboso sed ventrali sine gibbositate, in stylum strictum circa 1.2 mm longum gradatim desinente et apice obscure stigmatoso; placenta marginali circa 2.3 mm longa, circa 1.3 mm supra basin sita, ovulis numero 12-16. Ovula anatropa per totam placentam inserta, supra adscendentia et infera horizontalia vel descendenda, fere ellipsoidea circa 0.8-1 mm longa circa 0.2 mm lata, apice rotundata; funiculo breviora quam 0.1 mm longiore. Folliculus ignotus.

Habitat in Bhutania. Sinchu La. 10500 ft. Cliff face. Pink flowers. (S. Bowes Lyon-5071 in Sept. 14, 1967—Holotypus in BM).

In general appearance, this species seems to be placed near *Sedum*

*Hobsonii* R.-Hamet or *S. brevipetiolatum* Fröd. of the subgenus *Rhodiola*. However, the new species is very unique in having dorsifixed stamens which may be found for the first time among the species in the Himalayan *Sedum* as well as in the subgenus *Rhodiola*.

(4) *Sedum* (*Rhodiola* § *Primuloides*) **Marnieri** R.-Hamet ex H. Ohba, sp. nov.

A *Sedo primuloide* Franchet, *S. humili* Hook. f. et Thoms. emend. R. Hamet et *S. Hobsonii* Prain ex R.-Hamet foliis rosulae caulisque semper sessilibus etiam inflorescentia multiflora (numero florum 6-24) statim dignoscendum.

Planta perennis pumila caespitosa in parte aerea (staminibus glandulaque glabris exceptis) sub lente insigniter breviter papillata. Radices carnosulae solidae apice 1-2 cm dimetiente ad 13 cm longae, in radicellas (1-)2-4 dauciformes ad 8 mm latas dividiuntur. Caudex aegre evolutus, apice foliorum numerosissimorum rosula obtectus, infra rosulam foliorum mortuorum fragmentis sparsim vestitus. Caules floriferi (e foliorum axillis rosulae orti et decidui quotannis) numero (1-)3-5(-9) simplices remotiuscule foliati adscendentes vel erectiusculi teretes vel teretiusculi, papillis brevissimis (0.05-0.1 mm longis) translucetibus densius obsiti. Folia rosulata sessilia crassiuscula complanata gladiata basi omnino fixa et ecalcarata, 15-20(-22) mm longa 2-2.2-3(-4.5) mm lata 7-10-plo longiora quam latiora, utrinque sub lente minutissime aspera et papillis brevissimis (0.05-0.1 mm longis et 10-25 pro 1 mm<sup>2</sup>) obsita, margine integra et sub lente prominenter papillata, in vivo (ex collectoribus) saepe rubella vel subrosea, ecarinata, venis invisibilibus. Caulium folia alterna crassiuscula complanata sessilia et paululum calcarata, in sicco saepe fugacia, angustissime ovata (SADT n. 36) vel angustissime elliptica (SADT n. 1), apice vere vel raro acuminate acuta basi truncata, utrinque papillis brevissimis (0.05-0.1 mm longis) translucetibus obsita, margine integra et sub lente prominenter papillata, 7-12(-14) mm longa (1-)1.5-2(-3) mm lata, (3.6-)4-5(-7)-plo longiora quam latiora, in media parte caulis vix majora, ecarinata et venis invisibilibus. Inflorescentia dichasialiter spisse composita terminalis, 15-45 mm longa 15-40 mm lata floribus (6-)10-18(-24) ornata, pedunculo estriato et sub lente distincte papillato (papillis 0.05-0.1 mm longis), bractea sessili obsolete subcalcarata vulgo foliis caulis simili sed saepe falcata vel anguste gladiata,

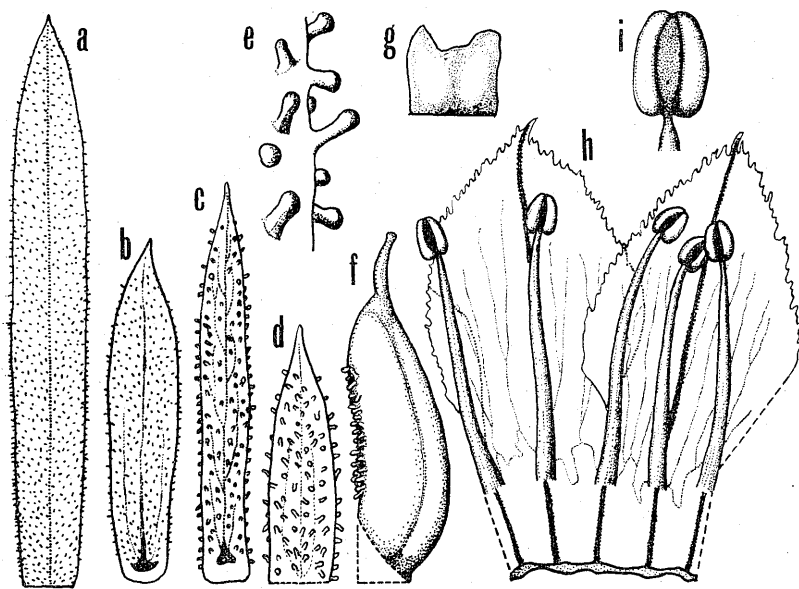


Fig. 2. *Sedum Marnieri*. a. Rosette-leaf  $\times 5$ . b. Cauline leaf  $\times 5$ . c. Bract  $\times 10$ . d. Calyx-lobe  $\times 10$ . e. Papillae on calyx  $\times ca. 100$ . f. Ovary  $\times 10$ . g. Gland  $\times 20$ . h. Anther  $\times 20$ . i. Petal with stamens  $\times 10$ .

3.5-6.5 mm longa 0.6-1.3 mm lata 5-9-plo longiore quam latiore, utrinque papillis brevissimis (0.05-0.12 mm longis et (20-)30-40(-50) pro 1 mm<sup>2</sup>) translucibus obsita, pedicello estriato et sub lente distincte papillato 2-3 mm longo. Flores hermaphroditi uniformes coarctati erigentes vel inclinati, aestivales, quinque- vel sex-partiti, in sicco 6-8 mm diametro. Calyces 4.0-4.5 mm longi, in vivo probabiliter crassiusculi et persaepe (ex collectoribus) rubri-virides, extus papillis translucibus brevissimis 0.05-0.1 mm longis sursum conspicue dense et deorsum sparse obsiti, profundissime in lobos divisi; lobis fere aequiformibus complanatis anguste vel triangle ovatis apice acutis vel raro acuminatis acutis margine integris, 3.5-4.2 mm longis circa 1 mm latis, ecarinatis, venis subparallelodromis sed invisibilibus. Petala (numero quinque vel sex) calyce 1.7-2.2-plo longiora, 7-7.7 mm longa 3.3-3.8 mm lata 2-2.2-plo longiora quam latiora, e basi ad circa 1/5 longitudinis (1.3-1.5-1.7 mm) connata, partibus liberis vere ovatis apice obtuse acutis, margine a media parte versus apicem gradatim valde irregulariter minutis-

sime erosis et versus basin gradatim fere integris, tenuibus et aliquantum carinatis, praeter marginemque venam papillis sparsis brevissimis globosis. translucens circa 0.02 mm dimetiente obsitis, venis marginem non attingentibus, subroseis et sub anthesi paulum patentibus. Stamina ut videtur in verticillum unum disposita sed numero 10 vel 12, petalis paulo breviora, filamentis subulatis glabris subroseis circa 4-5 mm longis, oppositipetala et alternipetala circa 1(-1.5) mm supra basin orientia; antheris basifixis circa 0.8 mm longis, in vivo forsan rubellis vel subroseis. Glandulae complanatae subrectangulatae circa 0.5-0.8 mm longae circa 0.7 mm latae, margine integrae sed apice paene emarginatae. Gynoecia quinque vel sex distincta sed basi leviter (longitudine circa 1 mm) connata, ovario (latere ventrali sparsim papillato excepto) glabro sessili erecto, latere ventrali sine gibbositate, basin versus decrescente, circa 5-6 mm longo, in stylum brevissimum gracilem circa 0.8 mm longum abrupte desinente et apice intus obscure stigmatoso circa 0.1 mm longo. Ovula in quoque loculo (12-)14-18(-20), anatropa circa 0.6 mm longa anguste obovoidea longitudinaliter striata apice obtusa et haud elongata.

Habitat in Nepalia centrali et occidentali. Centralis: Marsiandi. 12-13,000 ft. On rocks and in "mani" walls. Flowers pale rosy pink; rest of plant somewhat stained dark red; non-flowering plants make a nest rosette. (D. G. Lowndes-1506—Holotypus in BM; Isotypus in TI). Occidentalis: Between Purana Chugu and Tankia, Chugu Khola. 13,000 ft. Growing on open stony slopes. Cauline leaves reddish; petals pink; filaments pink; anthers red; pollen pale yellow. (O. Polunin, W. R. Sykes and L. H. J. Williams-5324, BM): Kimaling, north of Mustang. 13,000 ft. Amongst stones on dyke. Calyx reddish green; petals, filaments and anthers pink. (J. D. A. Stainton, W. R. Sykes and L. H. J. Williams-2369, BM): Damodar kund, north of Muktinath. 14,000 ft. Dry sandy slopes. Calyx pinkish green; corolla pink; filaments pink; anthers black. (Stainton, Sykes and Williams-2110, BM): Rolagaon, Suli Gad. 11,500 ft. Open stony slopes. Stem and cauline leaves tinged pink; petals pink; filaments pink; anthers red; ovaries pink. (Polunin, Sykes and Williams-3394, BM).

This species is apparently included in the *Sedum primuloides*-group of the subgenus *Rhodiola*, but clearly differs from the other species of the group by the sessile leaves, many-flowered inflorescence and the petals.

which connate about 1/5 of the whole length from the base.

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British Museum の御好意で同博物館所蔵のヒマラヤ産ベンケイソウ属の標本を検討したので、その結果をも合せてこのノートに記してゆくことにした。

(3) *Sedum mirabile* H. Ohba (新種) ブータンの Sinchu 峠で S. Bower Lyon によって採集されたイワベンケイ亜属の新種で、全体の形などはチベット産の *Sedum Hobsonii* Prain ex R.-Hamet や中国四川省康定附近で発見された *S. brevipeiolatum* Fröd. に多少似ている。しかし、雄蕊が明らかに側着である点はきわめて特異である。少なくとも既知のヒマラヤ産の全種類、イワベンケイ亜属の全種類はすべて底着雄蕊であって、側着雄蕊をもつ種類としては本種が最初の発見であると思われる。

(4) *Sedum Marnieri* R.-Hamet ex H. Ohba (新種) ヒマラヤ地方特産の *Sedum primuloides* 群の一種で、ロゼット葉、莖葉ともに無柄であること、花卉が基部から全長の程度合着すること、花序が多花である点などで既知のいずれの種類とも明らかに異なる。中部及び西部ネパールで採集され、故 R.-Hamet によって上記新名が用意されたが正式に発表されなかったのが惜まれる。

### ○ヤマオダマキの一品種 (浅野一男) Kazuo ASANO: A new form of *Aquilegia buergeriana*

日本産 *Aquilegia* 属は子房および袋果の毛の有無により、*A. buergeriana* と *A. flavellata* とに分けられ、前者は有毛でヤマオダマキ、オオヤマオダマキ、後者は無毛でオダマキ、ミヤマオダマキが数えられている。いずれも花卉は円頭で長い距をもっている。稀に距が発達しないものがあり、現在次の3品種が知られている。

1. マルザキヤマオダマキ *Aquilegia buergeriana* Sieb. et Zucc. forma *ecalcarata* (Makino) Kitamura, in Acta Phytotax. Geobot. 15: 5 (1953). 産地: 下野国日光, 陸中国気仙郡綾織村。

2. ホウカゾウ *Aquilegia flavellata* Sieb. et Zucc. forma *humiliata* (Makino) Kitamura, l. c. 園芸品。

3. リシリオダマキ *Aquilegia flavellata* Sieb. et Zucc. var. *pumila* Kudo forma *konoii* (Miyabe et Tatewaki) Kitamura, l. c. 産地: 利尻島。

マルザキヤマオダマキはヤマオダマキの品種で、花卉が円頭、萼片は暗紫色で、花卉の距が発達しない点以外はヤマオダマキと同じである。

1964年7月12日、キバナノヤマオダマキ *A. buergeriana* f. *flavescens* に距のない形のものを見つけた。長野県下伊那郡浪合村蛇峠山治部坂洞陣ケ畑沢で採集したのだが、花卉、萼片共に淡緑色で、この点キバナノヤマオダマキと異なるところがない。