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Sedum creticum C. PRESL — a forgotten species

Sedum creticum C. PRESL — zapomenutý druh

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KRÁL M. (1987): *Sedum creticum* C. PRESL — a forgotten species. — Preslia, Praha, 59 : 307—310.

A completed description of *Sedum creticum* C. PRESL is given and its relationships are discussed. A new genus *Helladia* M. KRÁL is proposed for three Greek species of *Sedum* s. lat. with basal rosettes, axillary flowering stems and free petals.

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In 1828 PRESL described a new species *S. creticum* C. PRESL in OKEN, Isis 21 : 273. 1828. As the journal Isis is rare and little known the full citation of PRESL's diagnosis follows here:

„— — — — Sedum Cotyledon Sieb. nec Jacq. — est nova spec.: Sedum creticum Presl. — Affine Sedo spathulato Waldst. Kit. (quod recte monente celeb. Sprengelio a S. cepaea non differt), sed cum S. heptapetalo Poir., quocum Spreng. in syst. veget. 2. p. 437 conjugit, nullam affinitatem habet. Nam inflorescentia in nostro cretico paniculata, non racemosa filiformis ut in S. heptapetalo; flores in planta cretica duplo triplove majores non caerulei; nec nostrum annuum, quum S. heptapetalum certe annuum sit."

This diagnosis, although very brief and not allowing the recognition or the identification of the plant, must be considered as a valid publication of the species as it is "a statement of that which in the opinion of its author distinguishes the taxon from others". (*Sedum heptapetalum* POIRET is *Oreosedum caeruleum* (L.) GRULICH.)

The publication of *S. creticum* C. PRESL as well as the fact that the unidentical homonym species *Sedum creticum* BOISS. et HELDR. in BOISS. Diagn. 2.10 : 16. 1849 is antedated by PRESL's species escaped the attention of the later authors for 149 years. Only in 1977 MAIRE published a new name *S. cretense* MAIRE, Fl. Afr. Nord 14 : 356, fig. 140, 1977 for *S. creticum* BOISS. et HELDR. non C. PRESL. However, he said nothing about the identity of *S. creticum* C. PRESL; he probably did not see it.

In order to solve this problem the original material of *S. creticum* C. PRESL present in PRC has been studied. This material consists of two sheets. The first sheet bears one whole plant with badly preserved basal rosette, one isolated flowering stem and three labels. The first label (evidently the original one) bears inscription:

F. W. SIEBER
Sedum Cotyledon. Sieber
Lassiti

The second label (in PRESL's handwriting):

creticum PRESL

Sedum Sieberi Pr.
S — — Cotyledon Sieber nec Jacq.
In insula Creta ad Lassiti. Sieber

The third label (evidently subsequently added by curators):

Sedum creticum fide Kew Index
Presl

The second sheet bears one plant with well developed basal rosette and a label with inscription:

Sedum Cotyledon Sieber
Lassiti

In PRC there are two other sheets designated "Sedum creticum fide Kew Index", one of them also "Sedum Cotyledon Sieber, Lassiti" (nothing in Presl's handwriting), but the plants on these sheets proved to be *Rosularia serrata* (L.) A. Berger.

The study of the material reveals that *S. creticum* C. Presl is a perennial plant with a basal rosette and with flowering stems arising from axils of rosette leaves (whereas Boissier's homonym species is a hapaxanth plant with a flowering stem terminating the rosette). Presl's species is therefore most closely related to *Oreosedum tristriatum* (Boiss.) Grulich and *S. tymphaeum* Quézel et Contandr. It differs from *O. tristriatum* in having the hairs only 0,05—0,15 mm long, obtuse sepals and petals with only one darker stripe. In all these features it agrees with *S. tymphaeum* but it differs from this species (according to the description) in having longer and narrower basal leaves, smaller flowers and glabrous carpels. Therefore *S. creticum* C. Presl is not identical with any other described species and requires an adequate description.

Considering the reevaluation and reclassification of *Sedoideae* in Europe a question arose as to the generic appurtenance of these three species. According to the criteria used by Grulich (1984) they would belong to *Oreosedum* (with the exception that the carpels of *S. tymphaeum* are said to be divergent at the maturity; besides that, the styles are somewhat longer than are those of *Oreosedum* and resemble those of *Petrosedum*), but they would be unique in this genus in having axillary flowering stems. In this character they agree with most species of the genus *Rosularia* (DC.) Stapf. However, this genus seems to be rather heterogeneous and according to Grulich (1984) its delimitation from *Oreosedum* Grulich is unsatisfactory. The main features of *Rosularia*, i.e. rosulate leaves and united petals, are in various degrees present in some species of *Oreosedum* too, especially in *O. winkleri* (Willk.) Grulich which could be classified as a *Rosularia* according to the characters mentioned above but on the other hand it is said to be connected by a full range of intermediates to *O. hirsutum* (All.) Grulich (Webb 1964) which is a typical *Oreosedum*. Uniting of these two genera would result in creating of an unnatural even more heterogeneous genus. This situation could be solved by using another distinguishing character. As in the *Crassulaceae* the position of the flowering stems seems to have a great taxonomic significance it would be recommendable to leave in *Rosularia* only the species with axillary flowering stems (in agreement with Ohba's definition) and to remove to *Oreosedum* the species with terminal flowering stems (unless

some argument against this will be found). This procedure would reduce the heterogeneity of *Rosularia* but would not increase the diversity of *Oreosedum*. As the present author did not study the considered species he gives up to publish the new combinations in *Oreosedum*.

In this respect the three species mentioned above agree with *Rosularia* but differ from this genus in having free petals. As this distinction is clear cut (there are no known transitions resembling those existing between the choripetalous and sympetalous *Oreoseda*), in order not to increase the heterogeneity of existing genera, especially of *Rosularia*, a new genus is proposed here to include these three species:

Helladia M. KRÁL, genus novum hoc loco

Herbae perennes glanduloso-pilosae; folia basalia in caudicis apice rosulam formantia, spathulata, oblongo-spathulata usque lineari-spathulata, apice rotundata, etiam in anthesi persistentia; caules floriferi ex axillis foliorum basalium orientes, ascendentes usque erecti, 2—12 cm alti; folia in caulibus floriferis alterna, foliis basalibus minora; inflorescentia simpliciter racemosa usque corymbosa vel basi paniculata, pauciflora; pedicelli satis longi, calyce longiores; flores bisexuales, pentameri; sepala 5, lanceolata vel ovata, acuta vel obtusa; petala 5, lanceolata, acuta vel longe acuminata, sepalis longiora, rosea usque purpurea vel alba, libera; stamina 10; carpella 5, erecta vel in *H. tymphaea* (secundum descriptionem) in maturitate divergentia, glabra vel glandulosa; ovaria lanceolata vel oblonga; styli in apice dorsi ovariorum siti, subulati, tenues; stigmata punctiformia.

Typus: *Sedum creticum* C. PRESL 1828.

Species 3, Graeciam (Creta inclusa) inhabitantes.

A genere *Oreosedo* GRULICH caulibus floriferis lateralibus, ex axillis foliorum rosularum basalium orientibus, a genere *Rosularia* (DC.) STAPF petalis liberis, a genere *Meterostachyde* NAKAI petalis liberis, foliis apice rotundatis et pilositate differt.

Sedum sect. *Balfouria* H. OHBA which probably represents an independent genus too seems also to be related to *Helladia* but differs (according to the description) in having yellowish petals and inflorescences with three primary axes.

Clavis specierum generis *Helladiae*

1a) Pili 0,6—1,2 mm longi; sepala valde acuta; petala striis obscurioribus tribus ornata.
H. tristriata (BOISS.) M. KRÁL, comb. nova hoc loco (basionymum: *Sedum tristriatum* BOISS. Diagn. Pl. Or. Nov. 2.10 : 16. 1849; synonymum: *Oreosedum tristriatum* (BOISS.) GRULICH, Preslia 56 : 45. 1984).

b) Pili 0,05—0,15 mm longi; sepala obtusa; petala stria obscuriori unica ornata 2

2a) Folia rosularum breviora et latiora (10—12 × 3—4 mm); sepala 3—4 mm longa; petala 7—9 mm longa et 3—4 mm lata, apice acuta;;carpella glandulosa.
H. tymphaea (QUÉZEL et CONTANDR.) M. KRÁL, comb. nova hoc loco (basionymum: *Sedum tymphaeum* QUÉZEL et CONTANDR. Candollea 20 : 62. 1965 (non rite publ.) et Taxon 16 : 240. 1967).

b) Folia rosularum longiora et angustiora (15—25 × 2—3 mm); sepala ca. 1,5—2 mm longa; petala ca. 3,5—4,5 mm longa et 1—1,5 mm lata, apice longe, paene caudato-acuminata; carpella glabra.
H. cretica (C. PRESL) M. KRÁL

Helladia ***cretica*** (C. PRESL) M. KRÁL comb. nova et descr. compl. hoc loco.

Basionymum: *Sedum creticum* C. PRESL in OKEN, Isis 21 : 273. 1828 (non *S. creticum* BOISS et HELDR. in BOISS. 1849).

Synonyma: *Sedum Cotyledon* SIEBER in sched. non JACQ.; *S. Sieberi* C. PRESL in sched.

Herba perennis. Caudes elongatus, ca. 5—6 mm crassus, cicatricibus foliorum delapsorum et basibus caulium floriferorum veterum tectus, apice foliorum rosulam gerens. Folia caudicis rosulatim approximata, oblongo-spathulata usque lineari-spathulata, apice rotundata, basi perlonge attenuata et sensim in basin petioliformem transeuntia, 15—25 mm longa, 2—3 mm lata, minute glanduloso-puberula (pilis 0,05—0,1 mm longis) vel glabrescentia, etiam in anthesi

persistentia. Caules floriferi 1 vel pauci, axillares, erecti, 6—12 cm alti, minute glanduloso-puberuli, pilis 0,05—0,15 mm longis. Folia in caulibus floriferis alterna, minora (usque 5—6 mm longa), linearia, obtusa, plerumque puberula, rarius glabrescentia. Inflorescentia simpliciter racemosa vel basi paniculata, ambitu ± oblonga, pauciflora et satis laxa, 2—4 cm longa, glanduloso-puberula, ramis oblique erectopatentibus, 1—3-floris; bracteae in parte inferiori inflorescentiae tantum evolutae, parvae (infimae tantum nonnumquam foliis caulinis similes), flores plerique ebracteati; pedicelli flore breviores usque sublongiores, 3—5 mm longi. Flores pentameri. Sepala ovata, apice rotundata, ca. 1,5—2 mm longa. Petala lanceolata, apice longe, paene caudato-acuminata, ut videtur rosea vel purpurea, linea mediana obscuriori unica percursa, ca. 3,5—4,5 mm longa et 1—1,5 mm lata, libera. Stamina 10, petalis ± aequilonga; filamenta filiformia; antherae semiorbiculares, basi subcordatae. Carpella erecta (orthocarpia), petalis ± aequilonga, glabra; ovaria oblonga, in apice dorsi subito in stylum subulatum tenuem ca. 1—1,3 mm longum attenuata; stigmata punctiformia.

Lectotypus: In insula Creta ad Lassiti; leg. SIEBER (planta dextra). In PRC, in herbario typorum Nr. 764.

The statement in Med-Checklist Vol. 3 that *S. creticum* C. PRESL and *S. creticum* BOISS. et HELDR. (= *Cepaea cretensis* (MAIRE) H. OHBA et M. KRÁL in praep.) are conspecific is not true. As stated above, BOISSIER's species is a hapaxanth plant with a flowering stem terminating the rosette and therefore cannot be included in the genus *Helladia*. Besides that it differs from PRESL's species in having shorter and broader rosette leaves (8—18 mm long and 5—6 mm broad), shorter pedicels (about 1 mm long), broader petals (2—2,25 mm broad) glandular-pubescent on the outside and ovaries glandular-pubescent on the suture.

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SOUHRN

Je podán doplněný popis opomíjeného a nedostatečně popsaného druhu *Sedum creticum* C. PRESL a je pojednáno o jeho systematickém zařazení. Je navržen nový rod *Helladia* M. KRÁL pro tři řecké druhy *Sedum* s. lat. s přízemními růžicemi, úžlabními květními lodyhami a volnými korunními plátky.

REFERENCES

CONTANDRIOPOULOS J., QUÉZEL P. et ZAFFRAN J. (1965): A propos de deux Sedum de la flore grecque. — Bull. Soc. Bot. France, Paris, 112 : 462—466.

GREUTER W., BURDET H. M. et LONG G. (1986): Med-Checklist, Vol. 3. — Genève et Berlin-Dahlem (West-Berlin).

GRULICH V. (1984): Generic division of Sedoideae in Europe and the adjacent regions. — Preslia, Praha, 56 : 29—45.

OHBA H. (1978): Generic and infrageneric classification of the Old World Sedoideae (Crassulaceae). — J. Fac. Sci. Univ. Tokyo, sect. III, 12 : 139—198.

QUÉZEL P. et CONTANDRIOPOULOS J. (1965): Contribution à l'étude de la flore du Pinde central et septentrional et de l'Olympe de Thessalie. — Candollea, Genève, 20 : 51—90.

QUÉZEL P. et CONTANDRIOPOULOS J. (1967): A propos de quelques espèces nouvelles des montagnes grecques. — Taxon, Utrecht, 16 : 239—240.

WEBB D. A. (1964): Sedum L. — In: TUTIN T. G. [red.]: Flora Europaea, Vol. 1 : 356—363. — Cambridge.

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