

Systematic position of *Sedum cepaea* L.Systematické zařazení *Sedum cepaea* L.

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Abstract — *Sedum cepaea* L. forms basal rosettes and therefore does not belong to the sect. *Epeteium*, but to the sect. *Cyprosedum*. Sect. *Cyprosedum* BERGER therefore must be renamed: sect. *Cepaea* KOCH. The correct name of sect. *Prometheum* BERGER is *Sempervivoides* BOISS.

Sedum cepaea L. is generally regarded as belonging to the section *Epeteium* BOISS. This section is characterised as follows (BERGER): "Plants hapaxanth, almost always annual; young sterile plants never forming rosettes, at most the leaves sometimes somewhat remotely rosette-like arranged, but never *Sempervivum*-like." The limits between the section *Epeteium* and the perennial section *Sedum* (*Seda genuina* KOCH) are, however, not sharply drawn. The present author observed in Pyrenees plants of *S. atratum* L. (sect. *Epeteium* !) with rooting non-flowering lateral branches. These branches having been broken off can develop new plants as in species of sect. *Sedum*. Also *S. villosum* L. (sect. *Epeteium*) exhibits in some localities (e. g. Neurazy in western Bohemia) rather numerous non-flowering stems which can persist and hibernate as in species of the section *Sedum* (the author was able to confirm this fact even by means of culture). In a locality in France (in the westernmost part of dpt. Pyrénées Orientales, near the boundary of Andorra) the author, however, could find only flowering stems, without any sterile stems. Therefore it seems, that some species of section *Epeteium* are more closely related to some species of section *Sedum* than to other species of *Epeteium*.

The section *Epeteium* differs much more sharply from the sections *Prometheum* BERGER and *Cyprosedum* BERGER, the members of which are hapaxanth, usually biennial plants, in the first year forming *Sempervivum*-like rosettes, in the second year flowering. As far as the author knows, no author has described or pictured these rosettes in *Sedum cepaea*, except in Flora RPR, where these rosettes are pictured, but without any mention in the description. In 1965 the present author had an opportunity to see natural localities of *S. cepaea* near St. Bertrand de Comminges (dpt. Haute Garonne, France). The plants of two different stages were observed there: young sterile plants of the first year and flowering plants of the second year. The first year's plants form dense *Sempervivum*-like rosettes (see plate I). Most of the rosettes form several axillary offsets bearing secondary lateral rosettes like in *Sempervivum*, but these lateral rosettes of *S. cepaea* never root and remain attached to the main rosette. Even the lateral rosettes broken off artificially do not root and die. Several rosettes have been taken 1. 8. 1965

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living and then planted in Klatovy, Czechoslovakia. In the next spring each rosette began to develop one terminal stem and all the leaves of rosettes withered and fell off very soon, so that even the very young flowering stems did not exhibit any rosettes. The stems of *Sedum cepaea* are usually branched at the base; these basal branches are products of the lateral rosettes.

Since *S. cepaea* forms rosettes in the first year, it cannot be a member of sect. *Epeteium*, but is more closely related to those species of *Sedum*, which are hapaxanth and form basal rosettes. These species are: *S. creticum* BOISS., *S. lampusae* (KOTSCHY) BOISS., *S. microstachyum* BOISS., *S. sempervivoides* FISCH. ex MARSCH. BIEB. and *S. pilosum* MARSCH. BIEB. The present author had an opportunity to examine the dried specimens of all these species except *S. microstachyum*. The fact, that the flowering plants of *S. cepaea* are found without rosettes, cannot be of greater importance, for from the specimens examined many flowering specimens of *S. sempervivoides* and *S. creticum* exhibit no rosettes too. Only in *S. lampusae* and in *S. pilosum* there were no specimens without rosettes.

These species can be divided in two groups: *S. sempervivoides* and *S. pilosum* have a flat-topped or at most hemispherical inflorescence (similar as in species of sect. *Telephium*), erect or only in upper part divergent petals and divergent mature follicles. *S. creticum* and *S. lampusae* have a paniculate, cylindrical or pyramidal inflorescence with an elongated main axis, divergent petals and erect follicles. *S. microstachyum* is known to the author only from the description; it is said to have an elongated inflorescence and divergent petals too. *S. cepaea* has an elongated inflorescence, divergent petals and erect follicles and therefore belongs to the same group (sect. *Cyprosedium* BERGER 1930) as *S. creticum*, *S. lampusae* and *S. microstachyum*.

BOISSIER (1872) has made his section *Sempervivoides* to include these hapaxanth species with rosettes. He included in this section *S. cepaea* too, although he believed that it did not form rosettes. The type species of this section is *S. sempervivoides* FISCH. ex MARSCH. BIEB., because the sectional name is derived from the name of this species and because this species is the first from the enumerated species. (For the same reasons *S. cepaea* L. is the type species of the section *Cepaea* KOCH 1836). BERGER excluded *S. cepaea* from the section *Sempervivoides* and divided the remainder of this section in two sections, which he called *Prometheum* BERGER 1930 (*S. sempervivoides*, *S. pilosum*) and *Cyprosedium* BERGER 1930 (*S. creticum*, *S. lampusae*, *S. microstachyum*). This is incorrect. We must retain the name *Sempervivoides* for the section containing *S. sempervivoides*, for the name *Sempervivoides* BOISS. 1872 has a priority before *Prometheum* BERGER 1930. The name *Cepaea* KOCH 1836 has a priority before *Cyprosedium* BERGER 1930, because *S. cepaea* belongs to the same section as the species of *Cyprosedium* BERGER 1930.

The whole citations follow:

Sedum L. sect. *Cepaea* KOCH, Syn. 258, 1836 p. p. (tantum quoad *S. cepaeam*).

Syn.: Genus *Cepaea* [CAESALP. ex] FOURR., Ann. Soc. Linn. Lyon, n. s. 16 : 384, 1868. — *Sedum* L. sect. *Sempervivoides* BOISS., Fl. Orient. 2 : 776, 1872 p. p. — *Sedum* L. sect. *Cyprosedium* BERGER in ENGLER et PRANTL, Nat. Pflanzenfam. ed. 2, 18a : 459, 1930. — *Sedum* L. sect. *Epeteium* BOISS. l. c. sensu BERGER l. c. p. p. (tantum quoad *S. cepaeam*). }

Plantae hapaxanthae, ante anthesin rosulas basales formantes, foliis rosularum florendi tempore delapsis vel persistentibus, post anthesin emortuae. Inflorescentia paniculata, valde elongata, cylindrica vel pyramidalis. Petala patentia. Folliculi (an etiam in *S. microstachyo* ?) erecti.

Species: *S. cepaea* L. (typus sectionis), *S. creticum* Boiss., *S. lampusae* (Kotschy) Boiss., *S. microstachyum* Boiss.

Sedum L. sect. *Sempervivoides* Boiss., Fl. Orient. 2 : 776, 1872 p. p.

Syn.: *Sedum* L. sect. *Prometheum* BERGER l. c. — *Rosularia* (DC.) STAFF sect. *Sempervivoides* (Boiss.) A. BORISS. in Fl. URSS 9 : 117, 1939.

Plantae hapaxanthae, ante anthesin rosulas basales formantes, foliis rosularum florendi tempore delapsis vel persistentibus, post anthesin emortuae. Inflorescentia corymboso-paniculata (interdum usque subcapitata), subplana usque hemisphaerica. Petala erecta, in parte superiori tantum divergentia. Folliculi divergentes.

Species: *S. sempervivoides* FISCH. ex MARSCH. BIEB. (typus sectionis), *S. pilosum* MARSCH. BIEB. — BORISSOVA transferred this section to the genus *Rosularia*.

BERGER placed *S. cepaea* L. close to *S. jaliscanum* WATS. from Mexico. Therefore the dried specimens of this species were examined too. This is a very different plant. Its flowers are very shortly stalked, nearly sessile and are arranged in unbranched one-sided cincinniform racemes or rather spikes. The subtending bracts are in some specimens very great, foliaceous, much longer than the subtended flowers; the flowers then can be regarded as solitary and axillary.

Souhrn

Sedum cepaea L. tvoří přizemní růžice. Proto nepatří do sekce *Epetium*, ale do sekce *Cyprosedum* BERGER, jež musí být proto přejmenována na *Cepaea* KOCH. Správné jméno sekce *Prometheum* BERGER je *Sempervivoides* Boiss.

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See also plate I in the appendix.



Plants of *Sedum cepaea* L. in the first year (collected 1. 8. 1965 in St. Bertrand de Comminges, photographed after transplanting in Klatovy).

Miloš Král: Systematic position of *Sedum cepaea* L.