

Notes on *Potentilla paradoxa* and *P. supina*

Poznámky k *Potentilla paradoxa* a *P. supina*

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The author recognizes four subspecies within *Potentilla supina* L.: *P.s.* subsp. *supina* (Europe, rarely Anatolia), *P.s.* subsp. *costata* SOJÁK (the temperate zone of Asia), *P.s.* subsp. *arabica* SOJÁK (the Near East), and *P.s.* subsp. *paradoxa* (NUTT. ex TORR. et GRAY) SOJÁK (North America, the temperate zone of Asia, and very rarely in Czechoslovakia).

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About 150 years ago, *Potentilla paradoxa* NUTT. ex TORR. et GRAY was described in North America. As a diagnostic feature of this taxon, a ventral wedge-shaped projection to the achenes was reported, which represents a feature that is not found in the European *P. supina* L. Later on, this new taxon was also found to occur in Asia.

Views on the taxonomic status of *P. paradoxa* have varied substantially up to now. The American authors, although usually far from being splitters, treat *P. paradoxa* as a distinct species while the European and Asian taxonomists, although generally adopting a narrower species concept, relegate it into synonymy or regard it as a variety of *P. supina*. The latter opinion is also held by WOLF (Biblioth. Bot. 71 : 393, 1908), a monographer of the genus. According to WOLF (i.e., p. 391), there is a possibility to find achenes both with and without ventral projections not only in one plant but also in one flower. The latest Floras of Siberia and Middle Asia (e.g. PESCHKOVA in MALYSHEV et PESCHKOVA, Fl. Sibir. Centr. 2 : 571, 1979; ADYLOV in PACHOM., Consp. Fl. Asiae Mediae 5 : 186, 1976) do not mention *P. paradoxa*.

In my opinion, *P. paradoxa* has been overlooked unjustly in the Old World, and I recommend to classify it as a subspecies of *P. supina* (cf. SOJÁK, Folia Geobot. Phytotax. 4 : 207, 1969). The characters of *P.s.* subsp. *paradoxa* are significant and constant, and its inconsistent or confused taxonomic treatment is chiefly due to the inappropriate choice of diagnostic characters. The presence or absence of the ventral protuberance to the achenes may be important but is not decisive. The basic difference consists in the features of the achene surface. The brown or whitish, dull achenes of *P.s.* subsp. *supina* have almost smooth surface, or low, broad and blunt ridges are present. Reddish brown, slightly shiny achenes of *P.s.* subsp. *paradoxa* have thin, acute, often whitish lamellae. While in *P.s.* subsp. *supina* the flowers are downward pointing after anthesis, in *P.s.* subsp. *paradoxa* they point upwards.

P.s. subsp. *supina* is confined to Europe and Anatolia. All the other reports on the occurrence of *P.s.* var. *supina* in Asia may be referable to *P. heynii*

ROTH. *P.s.* subsp. *paradoxa* is the only representative of this complex in North America. In Asia, it occurs in the territory extending from Turkey to Kashmir and Soviet Middle Asia, and from the Altai to northern China. Extremely isolated localities were also found in Czechoslovakia (Týniště n. Orl., Ě. Bohemia, and between Lednice and Břeclav, S. Moravia).

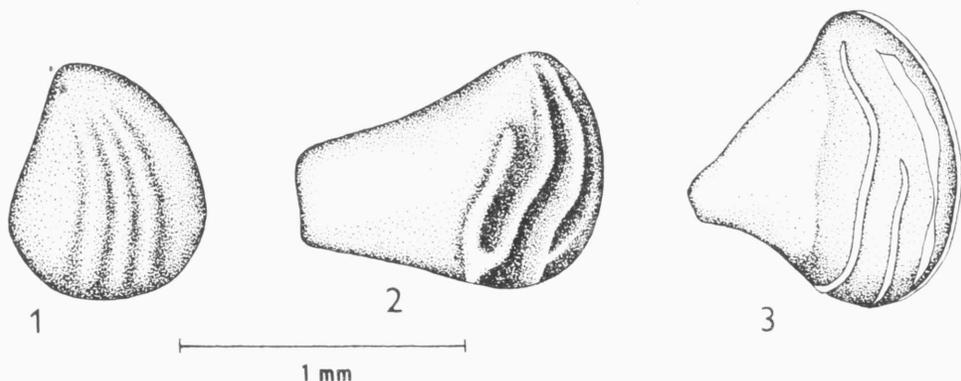


Fig. 1.—3. Achenes: 1. *Potentilla supina* subsp. *supina*, 2. *P.s.* subsp. *costata*, 3. *P.s.* subsp. *paradoxa*.

In the temperate zone of Asia, another subspecies of *P. supina* is found along with *P.s.* subsp. *paradoxa*. This new taxon, described as *P.s.* subsp. *costata* in what follows, is also characterized by large ventral projections to the achenes. However, its achene surface is brown, dull, with high blunt and broad brown ridges. It is common from the Urals to Vladivostok and northern China, and from Turkey to Kashmir and Soviet Middle Asia in the south.

Remarkable populations of *P. supina* occur in Iraq and the neighbouring countries of the Near East. These plants possess achenes of an intermediate appearance between the European *P.s.* subsp. *supina* and the Asian *P.s.* subsp. *costata*. The surface to their achenes resembles that of *P.s.* subsp. *costata* but the large ventral projection is always absent. These populations should also be accorded subspecific status, and I propose the name *P.s.* subsp. *arabica* for them in what follows.

Diagnoses of the new taxa:

P. supina subsp. ***costata*** SOJÁK, subsp. nova

Nuculi brunnescentes (non ferruginei), protuberantia ventrali laevi magna conico-cylindrica vel conica et costis altis latis obtusis brunneis (non albis) instructi. Typus: Sibiria occid., distr. Tjumeň: in pratis humidis prope pagum Išim, SOJÁK 16. 7. 1961, PR.

P. supina subsp. ***arabica*** SOJÁK, subsp. nova

Nuculi brunnescentes, costis altis latis obtusis praediti, in parte ventrali arcuatim elevati (protuberantia conico-cylindrica magna semper absente). Typus: Iraq, Falluja, ad Euphratem sub ponte, HADAČ 2718, 1. 10. 1960, PR.

SOUHRN

Potentilla paradoxa TORR. et GRAY má stálé znaky a je vhodné hodnotit ji jako subspecii druhu *P. supina* L.; kromě Sev. Ameriky roste v Asii od Turecka po Čínu a zcela izolovaně v ČR (rybníky u Lednice a u Týniště n. Orl.). V celé mírné zóně Asie je hojný další, dosud nepopsaný poddruh, *P.s.* ssp. *costata* SOJÁK, a na Předním Východě přechodný typ *P.s.* ssp. *arabica* SOJÁK.

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