

Some problems in the genus *Adonis*: *Chrysocyathus* contra *Calathodes*

Některé problémy uvnitř rodu *Adonis*: *Chrysocyathus* contra *Calathodes*

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CHRTEK J.¹⁾ et Z. SLAVÍKOVÁ²⁾ (1979): Some problems in the genus *Adonis*: *Chrysocyathus* contra *Calathodes*. — Preslia, Praha, 51 : 279–280.

Falconer's generic name *Chrysocyathus* is used for the perennial, mountain or high-mountain species of *Adonis* L. s. l. with petiolate leaves and is not considered as a synonym of the genus *Calathodes* Hook. f. et THOMS.

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In two previous papers (CHRTEK et SLAVÍKOVÁ 1978, IMAM, CHRTEK et SLAVÍKOVÁ 1977) we suggested and justified the division of the genus *Adonis* L. s. l. into three independent genera, viz. *Adonis* L. s. str. (all annual species), *Adonanthe* SPACH s. str. (= *Adonanthe* SPACH sect. *Consiligo* DAL.) and *Chrysocyathus* FALCONER (= *Adonanthe* SPACH sect. *Ancistrocarpium* SPACH). It remains to explain why we have used Falconer's generic name *Chrysocyathus*, which is sometimes considered as a synonym of the genus *Calathodes* Hook. f. et THOMS., for the perennial, mountain or high-mountain species of *Adonis* L. s. l. with petiolate leaves.

FALCONER gave the description of the genus *Chrysocyathus* for the first time in a letter to Dr. Royle, which was published in 1839 (FALCONER 1839). In this letter he mentions first the genera *Hepatica*, *Ceratocephalus* and *Callianthemum*, and continues (FALCONER 1839: 17) "... Further, I have got a new Ranunculaceous genus, new unless JACQUEMONT has got it, having the habit of *Trollius* in its leaves and mode of inflorescence, 8 herbaceous sepals, 24 strap-shaped petals, plane with no fovea at the claw, and solitary transversely attached ovula, being neither pendulous nor erect. It forms a transition from *Adonis* to the Ranunculeae. This is another blank filled up in the desiderata so pointedly mentioned by you. I have called the genus *Chrysocyathus*. It grows intermixed with *Trollius*, 'inter nives deliquescentes', and till I examined it I took it for a *Trollius*."

Falconer's letter with the description of the genus was published again, without any change, in the following year (ROYLE 1840).

It is interesting that HOOKER f. et THOMSON in their flora of India (1855) do not mention the genus *Chrysocyathus* at all. Of the genus *Adonis* they have only two species, namely *A. aestivalis* L. and *A. pyrenaica* DC. They first mention the genus *Chrysocyathus* as late as 1872 (HOOKER f. et THOMSON 1872) as a synonym of *Adonis chrysocyathus* Hook. f. et THOMS. This is probably because only after Falconer's death (Falconer died on Jan. 31, 1865 in London) did they obtain his collections from Kashmir.

The fact that HOOKER f. et THOMSON (1872) used FALCONER's generic name as the species epithet for their earlier species *A. pyrenaica* and used it as a synonym proves clearly that they attached the genus *Chrysocyathus* to the genus

Adonis, not to the genus *Calathodes* HOOK. f. et THOMS. The genus *Calathodes* was described in 1855 (HOOKER f. et THOMSON 1855) and is characterized i.a. as follows (1855 : 40): “. . . Sepala 5, ovalia, aestivatione imbricata, colorata. Petala 0. Stamina indefinita . . . Ovaria 10 vel plura . . . Ovula 8—10 prope basin ovarii, . . .” In a remark after the generic description they write: “This is a very remarkable plant, which has the flower of *Caltha* with the divided leaves of *Trollius*”. In *Calathodes* HOOKER f. et THOMSON placed only the one species known at that time, viz. *C. palmata* HOOK. f. et THOMS. from Sikkin. This genus, poor in species (even now it includes only 2—3 species), occurs in the eastern Himalayas, China and Taiwan.

If Falconer's description of the genus *Chrysocyathus* is compared with the description of *Calathodes*, it is immediately evident that the genera are substantially different, especially as regards flower structure. It is also interesting to compare the distribution of the genera *Chrysocyathus* and *Calathodes*. Falconer described the genus *Chrysocyathus* from Kashmir, where no representative of the genus *Calathodes* occurs. Thus Falconer could not have described any species of *Calathodes* from Kashmir.

A comparison of the descriptions of *Chrysocyathus*, *Calathodes* and *Adonis* leads us to the same conclusion as HOOKER f. et THOMSON (1872), who identified the genus *Chrysocyathus* with *Adonis*. BOBROV (1937) took the same view. The identity of *Chrysocyathus* with *Calathodes*, as indicated in Index Kewensis (1893) or e.g. in WILLIS (1973) we regard as incorrect, because of the morphological and geographical discrepancies in the descriptions which we have discussed above.

SOUHRN

Autoři článku ukazují, že rodové jméno *Chrysocyathus* FALCONER se vztahuje na vytrvalé, horské až vysokohorské druhy rodu *Adonis* L. s. l. s řapíkatými listy a nelze je v žádném případě přiřazovat k rodu *Calathodes* HOOK. f. et THOMS. jak to činí někteří autoři i v současné době.

REFERENCES

- BOBROV E. G. (1937): *Adonis* L. In: Flora SSSR. Tom. 7 : 528—539. — Moskva, Leningrad.
- CHRTEK J. et Z. SLAVÍKOVÁ (1978): Gliederung der Gattung *Adonis* in drei Gattungen. — Preslia, Praha, 50 : 22—25.
- FALCONER (1839): Extracts from Letters addressed to Dr. Royle, V. P. R. et F. L. S., Prof. Math. Med., King's College. — Proc. Linn. Soc., London, 1 : 13—18.
- HOOKER J. D. et T. THOMSON (1855): Flora Indica. Tom. 1. — London.
- (1872): Ranunculaceae. In: HOOKER J. D., The Flora of British India. Tom. 1, p. 1—30. — London.
- IMAM M., J. CHRTEK et Z. SLAVÍKOVÁ (1977): Die Gattung *Adonis* L. in Ägypten. — Publ. Univ. Herb. Cairo, no. 7—8: 261—271.
- Index Kewensis (1893): Index Kewensis plantarum phanerogamarum. Tom. 1. — Oxonii.
- ROYLE J. F. (1840): Illustrations of the Botany and other Branches of the natural History of the Himalayan Mountains and of the Flora of Cashmere. Tom. 3. — London.
- WILLIS J. C. (1973): A dictionary of the flowering plants and ferns. Ed. 8 (by H. K. Airy Shaw). — Cambridge.

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