

Gagria, a new genus of the Brassicaceae

Gagria, nový rod čeledi Brassicaceae

Miloš Král

KRÁL M. (1981): *Gagria*, a new genus of the Brassicaceae. — Preslia, Praha, 53 : 171—173.

A new genus *Gagria* M. KRÁL from Abchazia is described. It differs from the most closely related genus *Pachyphragma* (DC.) REICHENB. in having lobed leaves and in some details of flower morphology.

339 01 Klatovy 496/III., Czechoslovakia.

On June 6, 1978, the present author found in the lowest part of the valley of the stream Žoekvara (also Žovekvara) near Gagra in Abchazia, about 2 km from the mouth, on an edge of an oak forest, a colony (of several square decimetres) of an unknown sterile plant. None remnants of flowers or fruits were found. As this plant could not be identified, three plants from different places of the colony were taken living and then cultivated in Klatovy in western Bohemia. The transplanted plants grew very well and in autumn two of them produced stems with floral buds. The buds survived well without any protection the unfavourable winter 1978—79 and in April the flowers opened (simultaneously with the flowers of *Arabis nordmanniana* RUPR. originating from the same region). Unfortunately, the flowers did not produce any fruits (the colony probably originated from one seed and the plant is apparently self-sterile). However, even in the absence of the fruits the detailed study of the flower morphology made it possible to reveal the exact systematic position of the plant. It is described here as a new genus:

***Gagria* M. KRÁL, genus novum (Brassicaceae — Lepidieae — Thlaspidinae)**

Herbae perennes, glaberrimae. Rhizomatis rami apice in caules abbreviatis folia valde approximata fere rosulam basalem formantia gerentes transeunt. Folia basalia satis magna, longe petiolata, lobata, crispa. Caules floriferi ex axillis foliorum basalium orti, folia eorum basalibus similia sed minima, petiolata, exauriculata. Racemus simplex, ebracteatus. Sepala late ovalia, concava, suberecta. Petala oblonga, apice angustata, alba, ca. 5.5—6 × 1.5—2 mm magna. Filamenta simplicia, ad apicem sensim angustata; antherae subcordatae, parum latiores quam longiores. Glandulae nectariferae laterales semianulares, intus apertae, extus non emarginatae, processibus lateralibus extus flexis non auctae, medianae tuberculiformes, cum lateralibus non confluentes. Ovarium 4-ovulatum; stigma sessile. Fructus ignotus (ex ovario probabiliter silicula angustisepta).

Typus et species unica: *Gagria lobata* M. KRÁL.

Generi *Pachyphragmati* (DC.) REICHENB. maxime affinis est, quocum perennitate, foliis petiolatis, caulinis non auriculatis, racemo simplici, glandulis nectariferis medianis praesentibus, cum lateralibus non confluentibus, ovario 4-ovulato, stigmate sessili congruit, sed ab eo foliis lobatis, petalis oblongis, apice angustatis, usque 6 × 2 mm magnis (non obovatis, apice retusis, ca. 8 × 4 mm magnis), antheris subcordatis, parum latioribus quam longioribus differt. Genus *Physalidium* FENZL, cuius folia grosse lobato-crenata ea *Gagriae* parumper commemorant et quod cum *Gagria* glandulis nectariferis medianis praesentibus congruit, ab ea stylo evoluto, glandulis nectariferis medianis cum lateralibus confluentibus, racemo ramoso differt.

TOMŠOVIĆ (in litt.) expresses doubts whether it is suitable to describe a new genus without knowledge of ripe fruits and seeds in the family *Brassicaceae* where the fruits and seeds are highly important taxonomically. However, as mentioned above, in this case the exact taxonomic position of the plant can be determined even without knowledge of the fruits. The present author only somewhat hesitated as to the rank to be given to this plant: whether to broaden the conception of the genus *Pachyphragma* (DC.) REICHENB. and to include the new species in it or to establish a new genus. At last the rank of genus has been preferred as more appropriate with regard to the habit and morphological differences, with regard to the fact that both plants, although sympatric, probably represent old, relic, evolutionarily isolated taxa and with regard to the narrower generic conception newly adopted in the subtribe *Thlaspidinae* [*Thlaspi* L. being divided in *Thlaspi* L. s. str., *Microthlaspi* F. K. MEYER, *Noccaea* MOENCH and *Apterygium* (LEDEB.) GALUSHKO]. Besides, according to the present knowledge, the lobation of the leaves seems to have higher taxonomic significance in the subtribe *Thlaspidinae* than elsewhere in the *Brassicaceae*. No genus of this subtribe contains both species with lobed and those with non-lobed leaves (in *Teesdalia* R. BR. they are pinnatipartite, in *Physalidium* FENZL sublobate, in the others undivided or at most indistinctly lobed).

Gagria lobata M. KRÁL, sp. nova

Herba perennis, laxe caespitosa, glaberrima. Rhizoma ramosum, eius rami verticales vel obliqui, radicibus tecti, apice in caules steriles abbreviatus, folia valde approximata rosulam basalem fere formantia gerentes transeunt. Folia basalia longe petiolata; petiolus 10–14 cm longus, supra sulcatus, basi in vaginam transiens; lamina 6–10 × 5.5–8.5 cm magna, ambitu subtriangulário-ovata, subcordata usque suborbicularis, basi retusa vel (interdum asymmetrica) cordata, ima basi in petiolum decurrenti, margine irregulariter lobata et grosse crispa, lobis subtrianguláribus, integerrimis, apice rotundatis, sinibus plerumque rotundatis, lobo terminali plerumque producto et saepe in unum latus flexo (folia quamobrem asymmetrica). Caules floriferi ex axillis foliorum basaliu m orti, 15–20 cm alti, laxe foliati; folia eorum foliis basalibus similia sed multo minora, simpliciora et lobis acutis provisa, longe petiolata (petiolus 1–4.5 cm longus), media vel summa maxima (lamina usque 3.5 × 2.5 cm magna), basin caulis versus valde decrescens. Racemus simplex, ebracteatus, ante anthesin valde abbreviatus, corymbiformis, deinde normaliter elongatus. Pedicelli 7–11 mm longi, oblique subhorizontaliter patentes. Sepala late ovalia, tota valde concava, basi non saccata, viridula, late albomarginata, ca. 2–2.5 mm longa, suberecta. Petala oblonga, apice angustata, obtusa, basi sensim in unguiculum latum transeuntia, alba, ca. 5.5–6 mm longa, 1.5 usque paene 2 mm lata, dimidio basali suberecta, dimidio distali patentia. Stamina lateralía ca. 2 mm longa, mediana fere 3 mm longa; filamenta omnia simplicia, subteretia, crassa, a basi ad apicem sensim angustata; antherae ca. 0.5 mm longae, subcordatae, parum latiores quam longiores. Glandulae nectariferae laterales semianulares, intus apertae, medianae tuberculiformes, subtriangulares. Pistillum ca. 2.5 mm longum; ovarium ambitu subrhomboideum, parumper compressum, lateribus subcarinatum, sessile; ovula 4; stigma transverse subellipsoideum, sessile. Fructus ignotus.

Typus: Abchazia occid.; in margine silvae (*Quercus*) in fundo vallis fluminis Žoekvara apud opp. Gagra; solo lapidose-terreno, calcareo, rare. 6. 6. 1978 vivam legit M. KRÁL. Colitur in Bohemia occid., in horto in opp. Klatovy; 28. 4. et 30. 7. 1979 leg. M. KRÁL.

The description has been made according to the living plants in cultivation. Beside the generic characters cited above, *Gagria lobata* M. KRÁL differs from *Pachyphragma macrophyllum* (HOFFM.) BUSCH (which grows copiously in many places in the Žoekvara valley and elsewhere in western Abchazia) in being in all parts smaller and completely glabrous, and in the remarkably crispate leaves. *Pachyphragma* is described as being glabrous too but this

is not accurate: the young leaves are on the main veins beneath and on the distal part of the petiole sparsely covered with simple hairs. As far as can be judged from the single locality known, *Gagria* seems to prefer less shady and less wet habitats than *Pachyphragma*.

Two questions arose with the connection of the discovery of *Gagria*. Why it is so rare in the visited parts of western Abchazia? (It has been found only once during six weeks' of stay.) Why did it flower in cultivation in Klatovy but not in the natural station in the Žoekvara valley? The possible explanation is: It is probable that the locality found is a secondary one (the plants or their seeds having been floated down there by water) and that the original localities are in the very hardly accessible, possibly botanically unexplored upper parts of the Žoekvara valley where the climate is much more similar to that of central Europe than to that of the environment of Gagra.

The present author refuses the possibility that the self-sterility of this plant may be due to the hybridisation (of *Pachyphragma* with some species of another genus). In the environment of Gagra no species has been seen which could be considered as the second parent. And, last but not least, at least in central Europe no hybrids (intergeneric or interspecific) are cited in the tribe *Lepidieae* (ROTHMALER 1976).

SOUHRN

V práci je popsán nový rod čeledi *Brassicaceae*, *Gagria* M. KRÁL, ze západní Abcházie. Od nejbližší příbuzného rodu *Pachyphragma* (DC.) REICHENB. se liší laločnatými, hrubě kadeřavými listy a tvarem korunních plátek a prašníků.

ACKNOWLEDGEMENT

The author is greatly indebted to RNDr. P. Tomšovic, CSc., for valuable suggestions.

REFERENCES

- DAVIS P. H. [ed.] (1965): Flora of Turkey and the East Aegean Islands. Vol. 1. — Edinburgh.
GROSSGEJM A. A. (1950): Flora Kavkaza. Ed. 2. Vol. 4. — Moskva, Leningrad.
ROTHMALER W. [ed.] (1976): Exkursionsflora für die Gebiete der DDR und der BRD. Kritischer Band. — Berlin.
SCHULZ O. E. (1936): Cruciferae. In: A. ENGLER et K. PRANTL, Die natürlichen Pflanzenfamilien, ed. 2., 17b, p. 227—658. — Leipzig.

Received 22 October, 1980