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Nasturtium macrocarpum Boiss. transferred to Barbarea (Brassicaceae)

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ABSTRACT

AL-SHEHBAZ, I. A. & F. JACQUEMOUD (2000). Nasturtium macrocarpum Boiss. transferred to Barbarea (Brassicaceae). *Candollea* 55: 201-203. In English, English and French abstracts.

Nasturtium macrocarpum Boiss. is transferred to *Barbarea* as *Barbarea macrocarpa* (Boiss.) Al-Shehbaz & Jacquemoud. The generic boundaries between *Barbarea* and *Rorippa* are discussed.

RÉSUMÉ

AL-SHEHBAZ, I. A. & F. JACQUEMOUD (2000). Nasturtium macrocarpum Boiss. transferred to Barbarea (Brassicaceae). *Candollea* 55: 201-203. En anglais, résumés anglais et français.

Nasturtium macrocarpum Boiss. est transféré dans le genre *Barbarea* sous le nom *Barbarea macrocarpa* (Boiss.) Al-Shehbaz & Jacquemoud, et ses affinités sont exposées. Les limites génériques entre *Nasturtium* et *Barbarea* sont discutées.

KEY-WORDS: Nasturtium macrocarpum – Barbarea – Ceriosperma – BRASSICACEAE – Lebanon.

The species in question was originally described by BOISSIER (1849) as *Nasturtium macrocarpum* Boiss. and was kept in *Nasturtium* R. Br. by BOISSIER (1867), POST (1896), POST & DINSMORE (1932), BOULOUMY (1930), THIEBAUT (1936), and SCHULZ (1933, 1936). It was transferred to *Rorippa* Scop. by MOUTERDE (1970) and retained in this genus by ZOHARY & al. (1980). Finally the species was transferred by GREUTER & BURDET (1983) to the genus *Ceriosperma* (O. E. Schulz) Greuter & Burdet and was maintained there by GREUTER & al. (1986, 1993), without any indication about the definition and typification of this genus. For the reasons discussed below, we believe that *Nasturtium macrocarpum* is best accommodated in *Barbarea* R. Br., and it does not belong to *Nasturtium*, *Rorippa*, or *Ceriosperma*.

Barbarea macrocarpa is characterized by having woody caudex with petiolar remains of previous seasons, pinnatifid basal leaves with terminal lobe considerably larger than lateral ones, auriculate, often subleathery cauline leaves, bright yellow flowers with ascending-spreading parts, stout fruiting pedicels more than or about half as wide as the fruit, conspicuous midvein extending the full length of the fruit valve, narrowly linear fruits attenuate to apex gradually ending in style, minute stigma narrower than the style, and uniseriate, dark reddish brown to blackish, and coarsely reticulate seeds. This combination of characters is found in almost all species of *Barbarea*.

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Although several species of *Rorippa* resemble *Barbarea* in aspects of the foliage and flowers above, none has a woody caudex with petiolar remains, and all have slender fruiting pedicels mostly much narrower than half of the fruit width, fruit apex abruptly terminated into style, large stigmas wider than style, obscurely veined or veinless valves, and foveolate or rarely minutely reticulate, often yellowish to light brown seeds. The vast majority of *Rorippa* has globose to oblong or ovoid fruits with biseriate seeds, and narrowly linear fruits with uniseriate seeds are quite rare. In fact, some species of *Rorippa* that deviate from the above combination of characters are anomalous in the genus.

By assigning *Nasturtium macrocarpum* to any genus other than *Barbarea*, one immediately runs into the problem of finding its closest relative. In fact, BOISSIER (1867) pointed out (p. 182) that "Planta nexum inter *Nasturtium* et *Barbaream* praebens," but apparently subsequent authors overlooked this keen observation by Boissier. The species is most closely related to *B. minor* K. Koch and, to a lesser extent, to *B. brachycarpa* Boiss. On the basis of its treatment by COODE & CULLEN (1965), GREUTER & al. (1986) regard the two epithets as specific synonyms, *B. brachycarpa* Boiss. being the correct name, due to anteriority. Almost all other Middle Eastern and Caucasian works do not mention the species in their synonymy of *B. minor* (e.g., AVETISIAN, 1966; BOULOUMY, 1930; GROSSHEIM, 1950; HEDGE, 1968; MARDALEJSCHVILI, 1979; MOUTERDE, 1970; POST, 1896; POST & DINSMORE, 1932; RAGIMOV, 1953; THIEBAUT, 1936; ZOHARY & al., 1980. Neither did BUSCH (1909, 1939), describing a *B. minor* var. *eriopoda*, which COODE & CULLEN (1965) consider as a synonym of *B. brachycarpa*. Recently, HARTVIG & STRID (1987) added another variety to *B. minor* without taking *B. brachycarpa* in consideration in their comments. In our opinion, though very close, *B. minor* and *B. brachycarpa* may be distinguished, principally by their size, by the shape, pubescence and venation's patterns of their radical leaves, and their siliqua (rarely more than 4(5) loculate in *B. brachycarpa*, more than 5 to 7-8-10(14) loculate in *B. minor*).

Both *Barbarea macrocarpa* and *B. minor* are perennials with a distinct caudex, auriculate leaves, compressed fruits, and attenuate fruit apex terminated into a style to 3 mm long. From *B. minor*, *B. macrocarpa* is readily distinguished by having pectinate to finely pinnatisect cauline leaves, slender and flexuous infructescence rachises, and fruits (2.5-)4-6 cm long. By contrast, *B. minor* has toothed cauline leaves, stout and straight infructescence rachises, and fruits 1-2(-2.5) cm long.

Barbarea macrocarpa has no relatives whatsoever in *Rorippa* or *Nasturtium*. The latter genus consists of five species of aquatic plants with white flowers and lower nodes producing adventitious roots (AL-SHEHBAZ & PRICE, 1998).

Ceriosperma was initially described by SCHULZ (1933) as a section of *Nasturtium* with eight species all, except *N. macrocarpum,* restricted to Australia, Papua New Guinea, and Indonesia. SCHULZ (1933, 1936) did not typify the section, which was raised to the generic rank by GREUTER & BURDET (1983) without comments. Only *N. macrocarpum* was transferred by Greuter & Burdet as *C. macrocarpa* (Boiss.) Greuter & Burdet. In our opinion, JONSELL (1988) and HEWSON (1982) have correctly treated the members of sect. *Ceriosperma* (as enumerated by SCHULZ, 1933), excluding *N. macrocarpum*, in *Rorippa*. SCHULZ (1936) united *Rorippa* and *Nasturtium*, but he adopted that later-published *Nasturtium* for the combined genus.

Barbarea macrocarpa (Boiss.) Al-Shehbaz & Jacquemoud, **comb. nova**

≡ *Nasturtium macrocarpum* Boiss., Diagn. Pl. Orient. 8: 18. 1849.

≡ *Ceriosperma macrocarpa* (Boiss.) Greuter & Burdet in Willdenowia 13: 86. 1983.

Type: [Lebanon], "Antilibani inter Hasbeya et Rascheya," May 1846, *E. Boissier s.n.* (Holo-, G-BOIS!; iso-, G-BOIS!, G!).

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REFERENCES

AL-SHEHBAZ, I. A. & R. A. PRICE (1998). Delimitation of the genus Nasturtium (Brassicaceae). *Novon* 8: 124-126.

AVETISIAN, V. E. (1966). Brassicaceae. *In:* TAKHTAJAN, A. L. (ed.), *Fl. Armenia* 5: 61-301. Yerevan.

BOISSIER, E. (1849). *Diagnoses plantarum orientalium novarum* ser. 1, 8: 1-128. Paris.

BOISSIER, E. (1867). *Flora orientalis*. Vol. 1. Basileae, Genevae.

BOULOUMOY, L. (1930). *Flore du Liban et de la Syrie*. Paris.

BUSCH, N. A. (1909). Barbarea. *In*: KUSNEZOW, N., N. BUSCH & A. FOMIN (ed.), *Fl. Caucas. Crit.* 3: 308-319. Urev.

BUSCH, N. (1939). Barbarea. *In:* KOMAROV, V. L. (ed.), *Fl. CCCP* 8: 130-135. Moscow & Leningrad.

COODE, M. J. E. & J. CULLEN (1965). Barbarea. *In:* DAVIS, P. H. (ed.), *Fl. Turkey* 1: 433-438. Edinburgh

GREUTER, W. & H. BURDET (1983). Ceriosperma (O. E. Schulz) Greuter & Burdet. *In*: GREUTER, W. & T. RAUS (eds.) - Med-checklist notulae, 7. *Willdenowia* 13: 79-99.

GREUTER, W., H. BURDET & G. LONG (eds.) (1986). *Med-Checklist*. Vol. 3. Genève.

GREUTER, W. , R. K. BRUMMITT, E. FARR, N. KILIAN, P. M. KIRK & P. C. SILVA (eds.) (1993). Names in current use for extant plant genera. *Regnum Veg*. 129. Königstein.

GROSSHEIM, A. A. (1950). *Flora Kavkaza*, ed. 2. Moscow & Leningrad.

HEDGE, I. C. (1968). Cruciferae - Arabideae. *In:* RECHINGER, K. H. (ed.), *Fl. Iran*. 57: 193-218. Graz.

HARTVIG, P. & A. STRID (1987). New taxa and new records from the mountains of SW and SC Turkey. *Bot. Jahrb. Syst.* 66: 91-102.

HEWSON, H. J. (1982). Brassicaceae. *In:* BRIGGS, B. G. & al. (eds.), *Fl. Australia* 8: 231-357. Canberra.

JONSELL, B. (1988). Cruciferae. *In:* VAN STEENIS, C. G. G. J. (ed.), *Fl. Males.*, ser. 1: 10: 541-560. Dordrecht.

MARDALEJSCHVILI, T. K. (1979). Barbarea. *In*: KETSKHOVELI, N. N. (ed.), *Fl. Gruzii*, ed. 2, 5: 50-54. Tbilisi.

MOUTERDE, P. (1970). *Nouvelle flore du Liban et de la Syrie*. Vol. 2. Beirut.

POST, G. E. (1896). *Flora of Syria, Palestine, and Sinai*. Beirut.

POST, G. E. & J. E. DINSMORE (1932). *Flora of Syria, Palestine, and Sinai*. Ed. 2, vol. 1. Beirut.

RAGIMOV, M. A. (1953). Barbarea. *In:* KARIAGYN, I. I. (ed.), *Fl. Azerbaijan* 4: 240-242. Baku.

SCHULZ, O. E. (1933). Kurze Notizen über neue Gattungen, Sektionen und Arten der Cruciferen. *Bot. Jahrb. Syst.* 66: 91-102.

SCHULZ, O. E. (1936). Cruciferae. *In:* ENGLER, A. & K. PRANTL (eds.), *Nat. Pflanzenfam.*, ed. 2, 17B: 227-658. Verlag von Wilhelm Engelmann, Leipzig.

THIEBAUT, J. (1936). *Flore Libano-Syrienne*. Vol. 1. Cairo.

ZOHARY, M., C. C. HEYN & D. HELLER (1980). *Conspectus Florae Orientalis*. Fascicle 1. Jerusalem.

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