(1978) Proposal to reject the name *Corispermum orientale* (*Amaranthaceae*)

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(1978) ***Corispermum orientale*** Lam., Encycl. 2: 111. 16 Oct 1786 [*Dicot.*: *Amaranth.*], nom. utique rej. prop.
Typus: non designatus.

Since the description of the species, researchers have associated the name *Corispermum orientale* Lam. with plants morphologically close to *C. hyssopifolium* L. but having wingless fruits (e.g., Fenzl in Ledebour, Fl. Ross. 3: 758. 1851; Boissier, Fl. Orient. 4: 929. 1879; Iljin in Shishkin, Fl. SSSR 6: 150. 1936; Grubov, Pl. Asiae Centr. 2: 1–164. 1966; Jalas & Suominen, Atlas Fl. Europ. 5: 64–65. 1980; Lomonsova in Krasnoborov & Malyshev, Fl. Sibiri 5: 170. 1992; Aellen & Akeroyd in Tutin & al., Fl. Europ., ed. 2, 1: 120. 1993; Mosyakin in Tzvelev, Fl. Vost. Evropy 9: 67. 1996; Hedge in Rechinger, Fl. Iranica 172: 111. 1997). These wingless forms grow in the steppes and semideserts of Eastern Europe and Kazakhstan, with some extension into more southern regions along the Caspian Sea in eastern Caucasus and northern Iran. However, no significant investigation has been undertaken to clarify the taxonomy of specimens referred to *C. orientale*, which my study of fruit morphology and anatomy suggests can only be decided by the presence of mature fruits (Sukhorukov in Willdenowia 37: 63–87. 2007).

In the protologue, Lamarck (l.c.) diagnosed his new species with the phrase "foliis longis angustis linearibus, summitatibus floriferis subpaniculatis", with additional descriptive sentences in French. In Lamarck's time, it was the first known species of *Corispermum* having narrow leaves. However, many Asian species described later possess linear or lanceolate leaves, so Lamarck's information is not definitive.

Lamarck did not see plants of *Corispermum orientale* in situ; he indicated that the plant grew "dans le Levant", from which seeds were sent by "M. André" to the Jardin du Roi in Paris. If one searches the same volume of Lamarck's work (l.c.: 134, 217, 238, 456, 558, 560) for other occurrences of this personal name, it becomes clear that the indicated collector was André Michaux, who traveled through the Levant (generally applied to the region immediately east of the Mediterranean) on the way to Persia, sending seeds back to Thouin (then head gardener at the Jardin du Roi fide Stafleu & Cowan in Regnum Veg. 115: 297. 1986) in Paris (see Allorge, Medicographia 28: 307–308. 2006). Only one authentic specimen of *Corispermum orientale* is available in the historical collection of P (herb. Lamarck), a small part of a plant collected in the blooming stage and having a few unripe fruits (labeled "*Corispermum orientale*. enc. [Encyclopédie] du levant, de M. andre?", P-LA No. 00381158). Analysis of this specimen clearly indicates that the fruit wing is well developed and that the plant belongs much more likely to the "Aralocaspicum" group sensu mihi (Sukhorukov, l.c.), containing only *C. laxiflorum* Schrenk, *C. caucasicum* (Bunge) Grossh. and *C. aralocaspicum* Iljin, none of which are found in the Levant region (sensu stricto). In fact, none of the floras covering the various parts of this region (e.g., Aellen & Hillcoat in Rechinger, Fl. Lowland Iraq: 180–212. 1964; Mouterde, Nouv. Fl. Liban Syrie 1: 407–439. 1966; Zohary, Fl. Palest. 1: 136–179. 1966; Aellen in Davis, Fl. Turk. 2: 318. 1967; Boulos, Fl. Egypt 1:92–129. 1999) indicate that species of *Corispermum* occur there. If we therefore suppose that the collection was from an area visited by Michaux in northern Iran, where the latter two species occur, precise identification of this specimen would still not be possible, since *C. aralocaspicum* and *C. caucasicum* differ from each other only in the mature fruiting stage, and then only insignificantly. More importantly, *C. orientale* has never been used in this sense, so to take it up for one of these species now would be disruptive to nomenclature and conflict with Art. 57.1 of the ICBN (McNeill & al in Regnum Veg. 146. 2006).

On the other hand, conservation of the name *C. orientale* with a new type that would retain application of the name for plants with wingless fruits is also undesirable. The specimens from the eastern Caucasus, northern Iran, and the Eurasian semideserts to which this name has been applied belong to at least three different taxa with local and non-overlapping ranges (Sukhorukov, in prep.). The records from

other territories are either the result of misidentifications (Mosyakin in Fl. N. Amer. 4: 318, 321. 2003; Zhu & al. in Wu & Raven, Fl. China 5: 372. 2003), or belong to morphologically similar but phylogenetically distant taxa (Eastern Kazakhstan: *C. chinganicum* Iljin: Sukhorukov, l.c. 2007; Afghanistan: *C. rechingeri* Sukhor.: Ann. Naturhist. Mus. Wien, B 110: 153–158. 2009; Turkey: *C. anatolicum* Sukhor.: Willdenowia 40. 2010, in press). The maintenance of the name *C. orientale* would not clarify the taxonomy of the 'wingless' *Corispermum*; instead, a new critical revision of the Eurasian species is needed.

Acknowledgements

I thank Professor J. McNeill and Dr. J.H. Wiersema for valuable comments. The investigation was supported by the RFFR (project 08-04-00393).

(1979) Proposal to conserve the name *Odontarrhena obovata* (*Alyssum obovatum*) against *O. microphylla* (*A. microphyllum*) (*Cruciferae*)

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(1979) ***Odontarrhena obovata*** C.A. Mey. in Ledebour, Fl. Alt. 3: 61. Jul.-Dec. 1831 *[Dicot.: Cruc.]*, nom. cons. prop.
Typus: "[Russia, Altai] In apricis, siccis altaicis; leg. Ill. Ledebour et Dr. Bunge (Hb. Meyer)" (LE).

(=) *Odontarrhena microphylla* C.A. Mey. in Ledebour, Icon. Pl. 2: 15, t. 143. 1830 (sero), nom. rej. prop.
Lectotypus (German in Novosti Sist. Vyssh. Rast. 37: 252. 2005): "[NE Kazakhstan] 957. β. Legi in colle calcareo deserti songoro-kirgisici ad pedem montis Altyn-tubé d. 7 Sept. 1826 [C.A. Meyer] (Hb. Meyer)" (LE; iso: LE, P, W).

Alyssum obovatum (C.A. Mey.) Turcz. (in Bull. Soc. Imp. Naturalistes Moscou 10(1): 57. 1837) is the most widespread species of *Alyssum* L. in Asia and is the only one with a natural range from eastern Europe through central and northern Asia to the Far East and North America (Al-Shehbaz & al. in Pl. Syst. Evol. 259: 100. 2006; Warwick & al. in Canad. J. Bot. 85: 316, 326. 2008). In the past, the name *A. obovatum* was often treated as a synonym of two misapplied names: *A. alpestre* L., e.g., by Trautvetter (in Bull. Soc. Imp. Naturalistes Moscou 33(1): 100. 1860), Korshinsky (Fl. Vost. Evr. Ross. 1: 179. 1892), Krylov (Fl. Altai Gov. Tomsk. 1: 77. 1901), O. & B. Fedtschenko (Consp. Fl. Turkestanicae 2: 44. 1909), B. Fedtschenko (Rast. Turkestana: 460. 1915); and *A. sibiricum* Willd. by Busch (Fl. Sibir. Orient. Extremi 6: 553. 1931), Krylov (Fl. Zapadnoi Sibiri 6: 1365. 1931), An (in Cheo, Fl. Reipubl. Popularis Sin. 33: 123. 1987), and Ma (in Ma & al., Fl. Intramongol., ed. 2, 2: 646. 1990). Nyárády (in Notizbl. Bot. Gart. Berlin-Dahlem 11: 631–635. 1932) found that the latter epithet refers to the Balkan species, and applied the name *A. obovatum* for Siberian plants as he also did previously (Nyárády in Bul. Grăd. Bot. Univ. Cluj 9, 1–2: 1–68. 1929). Busch (in Komarov, Fl. SSSR 8: 346. 1939) agreed with the fact of misapplication of the name *A. sibiricum* but he assigned the name *Odontarrhena obovata* C.A. Mey. to synonymy of *A. tortuosum* Waldst. & Kit. ex Willd. and introduced for "*A. sibiricum* auct." the new name *A. biovulatum* N. Busch. In this, he was followed by Grubov (Consp. Fl. Mongol. People Rep.: 155. 1955), Popov (Fl. Srednei Sibiri 1: 522. 1957), Vassiljeva (in Pavlov, Fl. Kazakhstana 4: 278. 1961 & in Goloskokov, Ill. Opred. Rast. Kazakhstana 1: 454. 1969), and Kitagawa (Neolin. Fl. Manshur.: 326. 1979).

However, as the latter name completely corresponds to the original concept of the earlier validated *O. obovata* and in accordance with works of Nyárády (l.c. 1932; & in Analele Acad. Republ. Populare Române, ser. A, 1(3): 67–199. 1949), since the middle of the 20th century, the name *A. obovatum* has been firmly established and used in the majority of floristic treatments including more than twenty basic floras covering Europe, Asia, and America (e.g., Ball & Dudley in Tutin & al., Fl. Eur. 1: 304. 1963; ed. 2, 1: 368. 1993; Kotov in Fedorov, Fl. Evr. Chasti SSSR 4: 82. 1979; Berkutenko in Kharkevich, Sosud. Rast. Sovet. Dal'nego Vostoka 3: 106. 1988; Rybinskaya in Malyschev & Peschkova, Fl. Sibiri 7: 105. 1994; Zhou & al. in Wu & Raven, Fl. China 8: 61. 2001; Al-Shehbaz in Fl. N. Amer. 7: 250. 2010), and numerous local keys and floras. Only in the few cases given above, were the names *A. biovulatum* and *A. sibiricum* still applied, or else (Shermatov in Vvedensky & Pachomova, Opred. Rast. Sred. Azii 4: 161. 1974) *A. obovatum* was treated as a synonym of a broadly defined *A. tortuosum*. Although some earlier treatments in America recognized *A. americanum* Greene (Hultén, Fl. Alaska: 552. 1968; Welsh, Fl. Alaska: 180. 1974; Porsild & Cody, Vasc. Pl. Continental N.W.T., Canada: 341. 1980; Cody, Fl. Yukon Territ.: 316. 1996), most recent broad-scale works (e.g., Rollins, Crucifer. Continental N. Amer.: 106. 1993; Elven & al., Checkl. Panarctic Fl. Vasc. Pl. (http://www.binran.ru/infsys/paflist/taxon/dicots.htm, version 13.02.2008); Al-Shehbaz, l.c.) merge it into the synonymy of *A. obovatum*. German (in Novosti Sist. Vyssh. Rast. 37: 252. 2005) lectotypified *O. obovata* by the specimen, cited above.

By contrast the name *Alyssum microphyllum* (C.A. Mey.) Steud. (Nomencl. Bot. ed. 2, 1: 68. 1840) is much less known. Besides the monograph of Nyárády (l.c. 1949) in which an extremely narrow species concept is adopted, it is currently only accepted in three floras covering Siberia (Peschkova in Malyschev & Peschkova, Fl. Centr. Sibiri: 404. 1979; Rybinskaya, l.c.: 105; Baikov in Malyschev & al., Konspekt Fl. Sibir. Sosud. Rast.: 89. 2005) and in a few non-critical local keys based on the above floras. It is also included in four checklists (Dudley in J. Arnold Arbor. 45: 369. 1964; Czerepanov, Svod Dopolneniĭ Izmeneniĭ "Flore SSSR": 121. 1973; Sosud. Rast. SSSR: 121. 1981; & Vasc. Pl. Russia & Adjac. States (Former USSR): 128. 1995), in which *A. obovatum* is also included. As shown by German (in Turczaninowia 6(1): 46. 2003), despite being based on material from Kazakh upland, the name *A. microphyllum* since its last mention by O. & B. Fedtschenko (l.c.: 44, as *A. alpestre* var. *microphyllum* (C.A. Mey.) Regel) is totally omitted in basic floristic literature on Kazakhstan of