

New combinations in the genus *Oreomecon* (*Papaveraceae*)

Новые комбинации в роде *Oreomecon* (*Papaveraceae*)

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Abstract. New nomenclatural combinations at the rank of species in the genus *Oreomecon* Banfi, Bartolucci, J.-M. Tison et Galasso are published for the 61 taxa previously included in the genus *Papaver* L. or recently transferred to the genus *Oreomecon* at the rank of subspecies.

Keywords: *Oreomecon*, *Papaver*, section *Meconella*, poppies, nomenclatural combinations.

Аннотация. Обнародована 61 новая номенклатурная комбинация в ранге вида в роде *Oreomecon* Banfi, Bartolucci, J.-M. Tison et Galasso для таксонов, ранее рассматриваемых в роде *Papaver* L. или недавно перенесенных в род *Oreomecon* в ранге подвидов.

Ключевые слова: *Oreomecon*, *Papaver*, секция *Meconella*, маки, номенклатурные комбинации.

Traditionally, turfy rosette taproot perennial poppies (*Papaver* L.) with one-flowered leafless peduncles and bristly capsules are assigned to the section *Meconella* Spach (= *Scapiflora* Rchb. ex Elkan, nom. illeg.). E. Banfi et al. (2021), based on an analysis of morphological characters and data from molecular phylogenetic studies, concluded that species of the genus *Papaver* section *Meconella* should be treated as a distinct genus *Oreomecon* Banfi, Bartolucci, J.-M. Tison et Galasso. The validity of this taxonomic decision is confirmed by the results of a number of molecular phylogenetic studies, probably only partially at the moment, due to a limited number of the species included in the analysis. However, on the one hand, molecular phylogenetic studies clearly demonstrated the phylogenetic unity of the section, and on the other, it is sharply separated from other species of the genus *Papaver* (Kadereit et al., 1997; Carolan et al., 2006; Liu et al., 2014; Peng et al., 2023).

When establishing the genus *Oreomecon*, its authors transferred there from *Papaver* four Asiatic species, one European species with two subspecies and one Arctic species (Banfi et al., 2021). Most recently, 16 more combinations were published in *Oreomecon*, including 14 ones at the rank of species (Galasso et al., 2023; Grey-Wilson, 2023). Until now, however, transfer to *Oreomecon* was not carried out for the vast majority of accepted *Papaver* taxa of the section *Meconella* from the Arctic and

Subarctic, Siberia, Far East, as well as the northwestern part of North America (POWO, 2023). Considering this circumstance, nomenclatural changes are necessary, especially in the context of announced publication of an updated version of the checklist of vascular plants of the Asian Russia (Chepinoga et al., 2023).

All the nomenclatural novelties in the genus *Oreomecon* are at the rank of species, following the monotypic species concept accepted in the above-mentioned checklist.

Nomenclatural novelties

Oreomecon alaskana (Hultén) Krivenko, comb. nova. ≡ *Papaver alaskanum*, 1937, Fl. Aleutian Isl.: 190.

Oreomecon alexandri (V. V. Petrovsky) Krivenko, comb. nova. ≡ *Papaver pulvinatum* Tolm. subsp. *alexandri* V. V. Petrovsky, 2019, Ann. Bot. Fenn. 56, 4–6: 371.

Oreomecon ammophila (Turcz.) Krivenko, comb. nova. ≡ *Papaver nudicaule* L. var. *ammophilum* Turcz. 1842, Bull. Soc. Imp. Naturalistes Moscou, 15, 1: 98.

Oreomecon anadyrensis (V. V. Petrovsky) Krivenko, comb. nova. ≡ *Papaver anadyrense* V. V. Petrovsky, 1983, Bot. Zhurn. 68, 2: 229.

Oreomecon angustifolia (Tolm.) Krivenko, comb. nova. ≡ *Papaver angustifolium* Tolm. 1930, Trudy Bot. Muz. 22: 369.

Oreomecon anjuica (Tolm.) Krivenko, comb. nova. = *Papaver anjuicum* Tolm. 1975, Arktichesk. Fl. SSSR, 7: 25.

Oreomecon atrovirens (V. V. Petrovsky) Krivenko, comb. nova. = *Papaver atrovirens* V. V. Petrovsky, 1983, Bot. Zhurn. 68, 2: 231.

Oreomecon baitagensis (Kamelin et Gubanov) Krivenko, comb. nova. = *Papaver baitagense* Kamelin et Gubanov, 1990, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 95, 2: 86.

Oreomecon calcarea (V. V. Petrovsky) Krivenko, comb. nova. = *Papaver calcareum* V. V. Petrovsky, 1983, Bot. Zhurn. 68, 2: 232.

Oreomecon canescens (Tolm.) Krivenko, comb. nova. = *Papaver canescens* Tolm. 1931, Zhurn. Russk. Bot. Obshch. 16: 77.

Oreomecon chakassica (Peschkova) Krivenko, comb. nova. = *Papaver chakassicum* Peschkova, 1994, Fl. Sibir. 7: 18.

Oreomecon chionophila (V. V. Petrovsky) Krivenko, comb. nova. = *Papaver chionophilum* V. V. Petrovsky, 1983, Bot. Zhurn. 68, 2: 233.

Oreomecon coloradensis (Fedde) Krivenko, comb. nova. = *Papaver nudicaule* L. var. *coloradense* Fedde, 1909, Repert. Spec. Nov. Regni Veg. 7: 256.

Oreomecon columbiana (Fedde ex Björk) Krivenko, comb. nova. = *Papaver columbianum* Fedde ex Björk, 2019, Phytoneuron, 2019-6: 5.

Oreomecon coreana (Nakai) Krivenko, comb. nova. = *Papaver coreanum* Nakai, 1928, Sci. Knowl. 8: 42.

Oreomecon czekanowskii (Tolm.) Krivenko, comb. nova. = *Papaver czekanowskii* Tolm. 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 20: 172.

Oreomecon denalii (Gjaerev.) Krivenko, comb. nova. = *Papaver denalii* Gjaerev. 1964, Kongel. Norske Vidensk. Selsk. Skr. (Trondheim), 1963 (4): 42.

Oreomecon detritophila (V. V. Petrovsky) Krivenko, comb. nova. = *Papaver detritophilum* V. V. Petrovsky, 1985, Bot. Zhurn. 70, 1: 114.

Oreomecon discolor (Hultén) Krivenko, comb. et stat. nov. = *Papaver macounii* Greene var. *discolor* Hultén, 1945, Acta Univ. Lund. 2, 41, 1: 803. = *Oreomecon macounii* (Greene) Galasso, Banfi et Bartolucci subsp. *discolor* (Hultén) Galasso, Banfi et Bartolucci, 2023, Pl. Rev. 5, 4: 58.

Oreomecon gorodkovii (Tolm. et V. V. Petrovsky) Krivenko, comb. nova. = *Papaver gorodkovii* Tolm. et V. V. Petrovsky, 1973, Bot. Zhurn. 58, 8: 1128.

Oreomecon hirsuta (Tolm.) Krivenko, comb. nova. = *Papaver anomalum* Fedde var. *hirsutum* Tolm. 1971, Novosti Sist. Vyssh. Rast. 7: 157.

Note. Apparently, one of the few known species of the genus with completely glabrous capsules.

Oreomecon hultenii (Knaben) Krivenko, comb. nova. = *Papaver hultenii* Knaben, 1959, Opera Bot. 3, 3: 49.

Oreomecon hypsipetes (V. V. Petrovsky) Krivenko, comb. nova. = *Papaver hypsipetes* V. V. Petrovsky, 1985, Bot. Zhurn. 70, 1: 113.

Oreomecon interius (V. V. Petrovsky) Krivenko, comb. et stat. nov. = *Papaver pulvinatum* Tolm. subsp. *interius* V. V. Petrovsky, 1980, Bot. Zhurn. 65, 5: 657.

Oreomecon jacutica (Peschkova) Krivenko, comb. nova. = *Papaver jacuticum* Peschkova, 1994, Fl. Sibir. 7: 19.

Oreomecon jugorica (Tolm.) Krivenko, comb. nova. = *Papaver radicum* Rottb. subsp. *jugoricum* Tolm. 1923, Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 4: 86.

Oreomecon kuvajevii (Schaulo et Sonnikova) Krivenko, comb. nova. = *Papaver kuvajevii* Schaulo et Sonnikova, 2003, Turczaninowia, 6, 4: 5.

Oreomecon labradorica (Fedde) Krivenko, comb. nova. = *Papaver nudicaule* L. var. *labradoricum* Fedde, 1909, Pflanzenr. (Engler), 4 (40): 377.

Oreomecon laestadiana (Nordh.) Krivenko, comb. nova. = *Papaver radicum* Rottb. subsp. *laestadianum* Nordh. 1932, Bergens Mus. Årbog (Årbok), 2: 49.

Oreomecon leiocarpa (Turcz.) Krivenko, comb. nova. = *Papaver nudicaule* L. var. *leiocarpum* Turcz. 1838, Bull. Soc. Imp. Naturalistes Moscou, 11, 1: 86.

Oreomecon leucotricha (Tolm.) Krivenko, comb. nova. = *Papaver leucotrichum* Tolm. 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 20: 176.

Oreomecon longiscapa (Rändel) Krivenko, comb. et stat. nov. = *Papaver rubroaurantiacum* (Fisch. ex DC.) C. E. Lundstr. subsp. *longiscapum* Rändel, 1974, Feddes Repert. 84, 9–10: 683.

Oreomecon luculenta (Björk) Krivenko, comb. nova. = *Papaver luculentum* Björk, 2019, Phytoneuron, 2019-6: 7.

Oreomecon mcconnelli (Hultén) Krivenko, comb. nova. = *Papaver mcconnelli* Hultén, 1945, Acta Univ. Lund. 2, 41, 1: 803.

Oreomecon microcarpa (DC.) Krivenko, comb. nova. = *Papaver microcarpum* DC. 1821, Syst. Nat. 2: 71. = *Oreomecon nudicaulis* (L.) Banfi, Bartolucci, J.-M. Tison et Galasso subsp. *microcarpa* (DC.) Grey-Wilson, 2023, Pl. Rev. 5, 4: 57.

Oreomecon minutiflora (Tolm.) Krivenko, comb. nova. = *Papaver minutiflorum* Tolm. 1960, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 20: 180.

Oreomecon multiradiata (V. V. Petrovsky) Krivenko, comb. nova. = *Papaver multiradiatum* V. V. Petrovsky, 1983, Bot. Zhurn. 68, 2: 234.

Oreomecon nivalis (Tolm.) Krivenko, comb. nova. = *Papaver nivale* Tolm. 1930, Svensk Bot. Tidskr. 24: 42.

Oreomecon orientalis (Tolm.) Krivenko, comb. nova. = *Papaver lapponicum* (Tolm.) Nordh. subsp. *orientale*

Tolm. 1932, Trudy Polyarn. Komiss. 13: 7. $\equiv$ *P. pospelo-vae* Barkalov et Chepinoga, 2023, Botanica Pacifica, 12, 2: 124, pro nom. nov., non *P. orientale* L. 1753.

Oreomecon paucistamina (Tolm. et V. V. Petrovsky) Krivenko, comb. nova. $\equiv$ *Papaver paucistaminum* Tolm. et V. V. Petrovsky, 1973, Bot. Zhurn. 58, 8: 1129.

Oreomecon polaris (Tolm.) Krivenko, comb. nova. $\equiv$ *Papaver radicum* Rottb. subsp. *polare* Tolm. 1923, Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 4: 87.

Oreomecon pseudoradicata (Kitag.) Krivenko, comb. nova. $\equiv$ *Papaver pseudoradicatum* Kitag. 1942, Rep. Inst. Sci. Res. Manchoukuo, 6, 4: 122, “pseudo-radicatum”.

Oreomecon pulvinata (Tolm.) Krivenko, comb. nova. $\equiv$ *Papaver pulvinatum* Tolm. 1932, Trudy Bot. Muz. 24: 269.

Oreomecon pygmaea (Rydb.) Krivenko, comb. nova. $\equiv$ *Papaver pygmaeum* Rydb. 1902, Bull. Torrey Bot. Club, 29: 159.

Oreomecon roseoalba (Björk) Krivenko, comb. nova. $\equiv$ *Papaver roseoalbum* Björk, 2019, Phytoneuron, 2019-6: 10.

Oreomecon rubroaurantiaca (Fisch. ex DC.) Krivenko, comb. nova. $\equiv$ *Papaver nudicaule* L. var. *rubro-aurantiacum* Fisch. ex DC. 1821, Syst. Nat. 2: 70, “rubro-aurantiacum”.

Oreomecon saichanensis (Grubov) Krivenko, comb. nova. $\equiv$ *Papaver saichanense* Grubov, 1955, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 17: 15.

Oreomecon schamurinii (V. V. Petrovsky) Krivenko, comb. nova. $\equiv$ *Papaver schamurinii* V. V. Petrovsky, 1985, Bot. Zhurn. 70, 1: 116.

Oreomecon setosa (Tolm.) Krivenko, comb. nova. $\equiv$ *Papaver rubroaurantiacum* Fisch. ex DC. subsp. *setosum* Tolm. 1930, Svensk Bot. Tidskr. 24: 39.

Oreomecon smirnovii (Peschkova) Krivenko, comb. nova. $\equiv$ *Papaver smirnovii* Peschkova, 1977, Novosti Sist. Vyssh. Rast. 14: 239.

Oreomecon stanovensis (Petroch.) Krivenko, comb. nova. $\equiv$ *Papaver croceum* Ledeb. subsp. *stanovense* Petroch. 1972, Vysokogornaya Flora Stanovogo Nagorya: 96.

Oreomecon stubendorffii (Tolm.) Krivenko, comb. nova. $\equiv$ *Papaver stubendorffii* Tolm. 1931, Zhurn. Russk. Bot. Obshch. 16: 80.

Oreomecon suaveolens (P. Fourn.) Krivenko, comb. et stat. nov. $\equiv$ *Papaver pyrenaicum* (L.) Willd. subsp. *suaveolens* P. Fourn. 1936, Quatre Fl. France: 372. $\equiv$ *Oreomecon alpina* (L.) Banfi, Bartolucci, J.-M. Tison et Galasso subsp. *suaveolens* (P. Fourn.) Banfi, Bartolucci, J.-M. Tison et Galasso, 2021, Nat. Hist. Sci. 9, 1: 69.

Oreomecon tatica (A. Nyár.) Krivenko, comb. nova. $\equiv$ *Papaver alpinum* L. subsp. *taticum* A. Nyár. 1942, Acta Geobot. Hung. 5, 1: 19.

Oreomecon tenella (Tolm.) Krivenko, comb. nova. $\equiv$ *Papaver tenellum* Tolm. 1930, Svensk Bot. Tidskr. 24: 40.

Oreomecon tolmatscheviana (N. S. Pavlova) Krivenko, comb. nova. $\equiv$ *Papaver tolmatschevianum* N. S. Pavlova, 1999, Bot. Zhurn. 84, 2: 112.

Oreomecon tschuktschorum (Tolm.) Krivenko, comb. et stat. nov. $\equiv$ *Papaver pulvinatum* Tolm. subsp. *tschuktschorum* Tolm. 2019, Ann. Bot. Fenn. 56, 4–6: 373.

Oreomecon turczaninovii (Peschkova) Krivenko, comb. nova. $\equiv$ *Papaver turczaninovii* Peschkova, 1994, Fl. Sibir. 7: 30, pro nom. nov. $\equiv$ *P. nudicaule* L. var. *calcareum* Peschkova, 1979, Fl. Tsentralnoi Sibiri, 1: 379, non *Oreomecon calcarea* (V. V. Petrovsky) Krivenko, vide supra ($\equiv$ *Papaver calcareum* V. V. Petrovsky, 1983).

Oreomecon udocanica (Peschkova) Krivenko, comb. nova. $\equiv$ *Papaver pseudocanescens* Popov subsp. *udocanicum* Peschkova, 1977, Novosti Sist. Vyssh. Rast. 14: 238.

Oreomecon variegata (Tolm.) Krivenko, comb. nova. $\equiv$ *Papaver variegatum* Tolm. 1975, Arktichesk. Fl. SSSR, 7: 20.

Oreomecon walpolei (A. E. Porsild) Krivenko, comb. nova. $\equiv$ *Papaver walpolei* A. E. Porsild, 1939, Rhodora, 41: 231.

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References

- Banfi E., Bartolucci E., Tison J.-M., Galasso G. 2021 [publ. 23.02.2022]. A new genus for *Papaver* sect. *Meconella* and new combinations in *Roemeria* (Papaveraceae) in Europe and the Mediterranean area // Nat. Hist. Sci. Vol. 9, № 1. P. 67–72. <https://doi.org/10.4081/nhs.2022.556>
- Carolan J. C., Hook I. L., Chase M. W., Kadereit J. W., Hodkinson T. R. 2006. Phylogenetics of *Papaver* and related genera based on DNA sequences from ITS nuclear ribosomal DNA and plastid *trnL* intron and *trnL*–F intergenic spacers // Ann. Bot. (Oxford). Vol. 98, № 1. P. 141–155. <https://doi.org/10.1093/aob/mcl079>
- Chepinoga V. V., Seregin A. P., Barkalov V. Yu., Ebel A. L., Efimov P. G., Friesen N. V., Gontcharov A. A., Kechaykin A. A.,

- Knyazev M. S., Korobkov A. A., Korolyuk E. A., Kosachev P. A., Luferov A. N., Melnikov D. G., Nikiforova O. D., Ovzinnikova S. V., Schekhovstova I. N., Troshkina V. I. 2023. New combinations and new names in vascular plants of Asian Russia // *Bot. Pacifica*. Vol. 12, № 2. P. 120–133. <https://doi.org/10.17581/bp.2023.12s06>
- Galasso G., Banfi E., Bartolucci F. 2023. New combinations in *Oreomecon* // *Pl. Rev.* Vol. 5, № 4. P. 58.
- Grey-Wilson C. 2023. Saving *Meconopsis* // *Pl. Rev.* Vol. 5, № 4. P. 54–57.
- Kadereit J. W., Schwarzbach A. E., Jork K. B. 1997. The phylogeny of *Papaver* s. l. (*Papaveraceae*): polyphyly or monophyly? // *Pl. Syst. Evol.* Vol. 204, № 1–2. P. 75–98. <https://doi.org/10.1007/BF00982533>
- Liu Y.-C., Liu Y.-N., Yang F.-S., Wang X.-Q. 2014. Molecular phylogeny of Asian *Meconopsis* based on nuclear ribosomal and chloroplast DNA sequence data // *PLoS ONE*. Vol. 9, № 8. Art. e104823. <https://doi.org/10.1371/journal.pone.0104823>
- Peng H.-W., Xiang K.-L., Erst A. S., Lian L., Ortiz R. D. C., Jabbour F., Chen Zh.-D., Wang W. 2023. A complete genus-level phylogeny reveals the Cretaceous biogeographic diversification of the poppy family // *Molec. Phylogen. Evol.* Vol. 181. Art. 107712. <https://doi.org/10.1016/j.ympev.2023.107712>
- POWO: Plants of the World Online. 2023 / Royal Botanic Gardens, Kew. <http://www.plantsoftheworldonline.org/> (Accessed 19.12.2023).