Validation of "*Thorakomonas robusta*" (Korshikov) Demchenko (*Phacotaceae*, *Chlorophyceae*) with nomenclature notes on the genus

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Demchenko (2010a) described a new species of *Thoracomonas* Korshikov (*Phacotaceae, Chlorophyceae*, as "*Thorakomonas*") from temporary water bodies of Kiev in Ukraine and proposed a new combination, *Thoracomonas robusta* (Korshikov) Demchenko (2010a: 514, as "*Thorakomonas*"). Later in the same year his paper was translated into English and reprinted in *International Journal on Algae* (Demchenko 2010b). This designation is invalid as full and direct reference to author of basionym and place of valid publication, with page and plate references and date was not indicated (Turland & al. 2025, Art. 41.5) in both publications. Demchenko's designation is validated below.

When Korshikov (1925: 166 [Russian], 192 [German]) described the genus *Thoracomonas* he employed the prefix "*Thorac-*" rather than "*Thorak-*" (see also Korshikov 1938: 135). Either would have been acceptable, but as the former was the prefix adopted by Korshikov when he described this genus, it cannot be altered.

The Russian version of the article, however, differs in content from German version, being more like a preliminary account and contains information that is more floristic in nature, including details not apparent in the German part. The latter thus constitutes the taxonomic treatment including the novelties only and text is very clear and structured. Thus, the German text has all information for valid publication of new taxa including figures. Korshikov (1925: 166) indicated in a heading in the Russian part of the article "*Thoracomonas sabulosa* n. gen. et. sp." suggesting that this species was intended as the type. But it is only possible formally to combine a species with a generic description if the genus is monotypic. Two species of the genus were included in the paper: *Thoracomonas sabulosa* Korshikov and *Thoracomonas irregularis* Korshikov. We thus regard "n. gen. et sp." as a *lapsus* and accept the treatment in German-language part where a type is not designated. Art. 38.6(b) (Madrid Code, Turland & al. 2025) in any event specifies that a genus with a *descriptio generico-specifica* must be monotypic at the time of description. Loeblich (1967: 230) subsequently lectotypified the genus with *Thoracomonas irregularis* Korshikov.

Thoracomonas robusta (Korshikov) Demchenko ex Levanets & Guiry, *comb. nov.*
Basionym: *Pteromonas robusta* Korshikov *Zhurnal Instytutu Botaniky Akademiyi Nauk / Journal de l'Institut Botanique de l' Académie des Sciences de la RSS d'Ukraine* 21-22(29-30): 353 (Ukrainian), 358 (Russian), 359 (English), pl. 1: figs 1–8; pl. 2: figs 9–19, 1939.
Replaced designation: "*Thoracomonas robusta"* (Korshikov) Demchenko, *nom. inval*. (Demchenko 2010a: 514, as '*Thorakomonas'*).
Lectotype (**here designated**): [icon!] Korshikov (1939: pl. 1: fig. 5, line drawing of a single cell from a single gathering, ICN Art. 40.6, reproduced here as pl. 1: fig. 5).
Description: Korshikov (1939: 353-355 [Ukrainian], 358 [Russian], 359-360 [English]).
Diagnostic figures: Korshikov (1939: pl. 1: figs 1-8; pl. 2: figs 9-19, reproduced here as pl. 1: figs 1-19).
Type locality: "The organism was found in the spring of 1938, in the environs of Kharkov, in a shallow puddle on a sand soil" [Kharkiv, Ukraine] (Korshikov 1939: 360).

Registration (of name): http://phycobank.org/106033.
Registration (of lectotype): http://phycobank.org/106034.
Note: The types of Ukrainian phycologist Aleksandr Arkadievich Korshikov (1889–1945) have not been found and were probably destroyed during WWII; he died in Germany in the last year of the conflict. Demchenko (2010 a, b) noted what Korshikov (1939) discussed in detail possible generic relationships of *P. robusta*. In particular, he stressed that it strongly differs from all species of genus *Pteromonas* Seligo and has some features peculiar to *Thoracomonas* Korshikov. Besides the morphological characteristics (structure and texture of lorica, peculiarities of wing-shaped edge, presence of longitudinal carinate folds, and cell shape in cross-section), Korshikov mentioned differences in the way of gametes liberation: gametes of *P. robusta* freely emerge in the rest of *Pteromonas* species they liberate being enclosed by mucous enclosure. This observation suggests that there are very different compositions for cell envelopes of these species. The author concluded that the structure of this alga occupies an intermediate position between *Pteromonas* and *Thoracomonas*; but, considering the taxonomic value of such features as the general view of cell and lorica, Korshikov included it in the genus *Pteromonas*. Supporting this decision is the splitting of lorica in two equal halves for gamete liberation, suggesting that lorica has two halves. However, illustrations given by Korshikov (Fig. 12) are not convincing and do not correspond to the typical division of lorica halves in representatives of genera *Pteromonas* and *Phacotus* Perty; additionally, the author noted that he often observed a slight divergence of valves and liberation of gametes in the anterior parts of lorica.

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Demchenko, E.N. (2010b). New species of genus *Thorakomonas* Korschikov (Phacotaceae, Chlorophyta) from temporary water bodies of Kiev (Ukraine). *International Journal on Algae* 12(3): 221–229.

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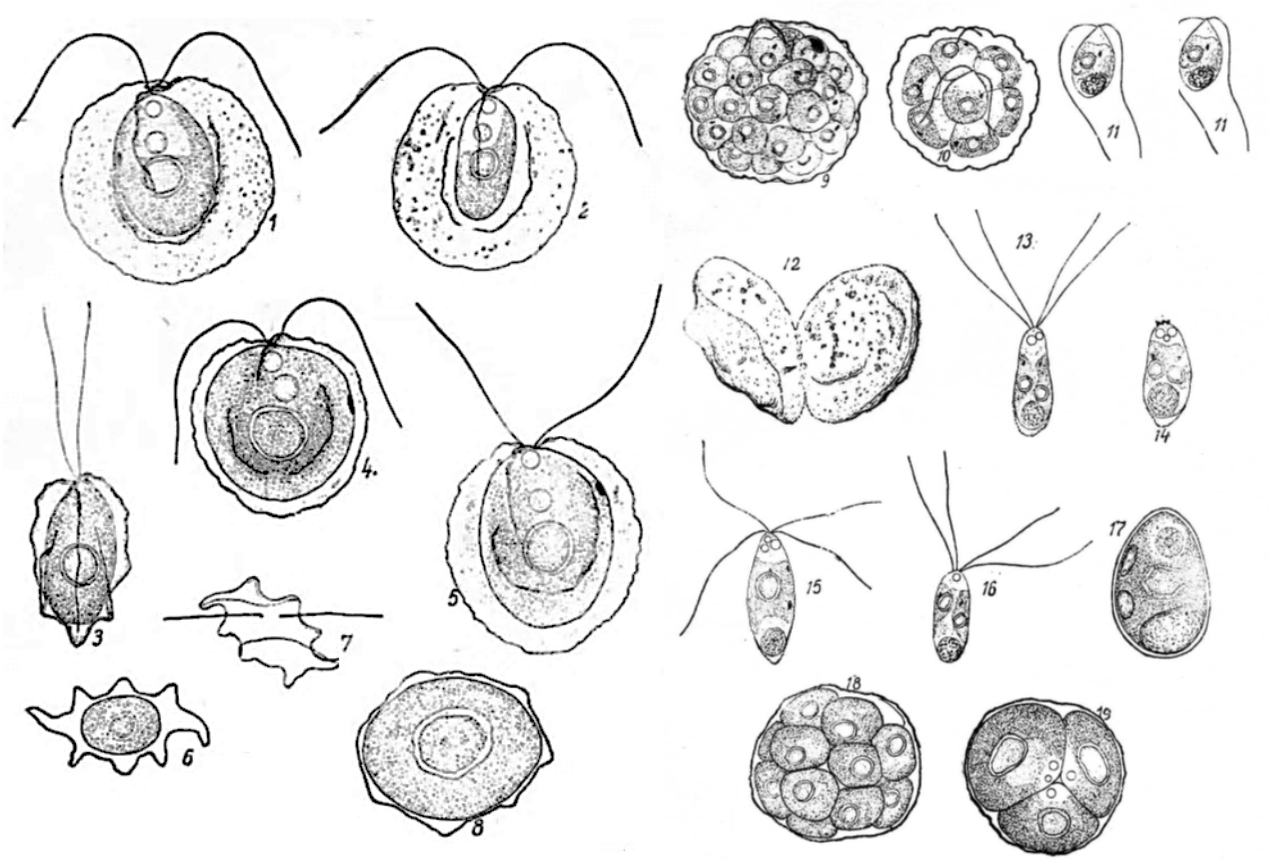

Figs 1–19. Morphological characteristics of vegetative and reproductive cells of *Thoracomonas robusta* (Korshikov) Demchenko ex Levanets & Guiry, *comb. nov*. (after Korshikov 1939). **Figs 1, 2, 4, 5.** Cells of different age in broad side view. **Fig. 3.** Cell from narrow side. **Fig. 6.** Cell in optical cross section. **Fig. 7.** Cell viewed from the pole. **Fig. 8.** Cross section of a mature cell with enlarged protoplast. **Figs. 9, 10.** Formation of gametes. **Fig. 11.** Gamete. **Fig. 12.** Empty cell wall after the escape of gametes. **Fig. 13, 16.** Planozygotes with chloroplasts still separated. **Fig. 14.** Planozygote just after the loss of flagella, with fused chloroplasts. **Fig. 15.** Planozygote with fused chloroplasts and one pyrenoid. The third stigma from the end is a mother cell stigma of one gamete. **Fig. 17.** Three-day old zygote with still preserved chloroplast and pyrenoid, and oil drops. **Figs. 18, 19.** Formation of akinetes (in Fig. 19 pulsating vacuoles were observed).