

# WHAT IS “*LEPTOTHORAX NYLANDERI*” (HYMENOPTERA: FORMICIDAE) IN RUSSIAN AND FORMER SOVIET LITERATURE?

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**Abstract.**— It is shown that the name “*Leptothorax nylanderi*” as used by all earlier Russian authors, is a misidentification. The species distributed throughout East Europe and the Caucasus is really *L. crassispinus* Karawajew, 1926 (here revived from synonymy and **stat. nov.**, and senior synonym of *L. slavonicus* Seifert, 1995 **syn. nov.**). There is a narrow zone of overlap of *L. nylanderi* and *L. crassispinus* in East Germany and West Poland but the situation in the Balkans needs further clarification.



**Key words.**— Ants, Formicidae, *Leptothorax nylanderi*, taxonomy.

The ant *Leptothorax nylanderi* was described by Förster (1850) based on the male from north-west Germany (Aachen). Later, Mayr (1855) described workers and females and re-described the males of this species.

According to Mayr's description workers of *L. nylanderi* are characterised by: yellow or light reddish-yellow colour of the body, brownish head dorsum and entirely yellow antennae; the first gastral segment has a brownish band on its tergite and sternite, which reaches hind margin of the segment; other gastral segments have brownish bands only on the tergites, and “in other respects it is like *L. unifasciatus*” (Mayr, 1855: 175) (i.e. propodeal spines are not long and not curved down!). From the description of queens the most important feature is “metanotal spines are quite short” (loc. cit.).

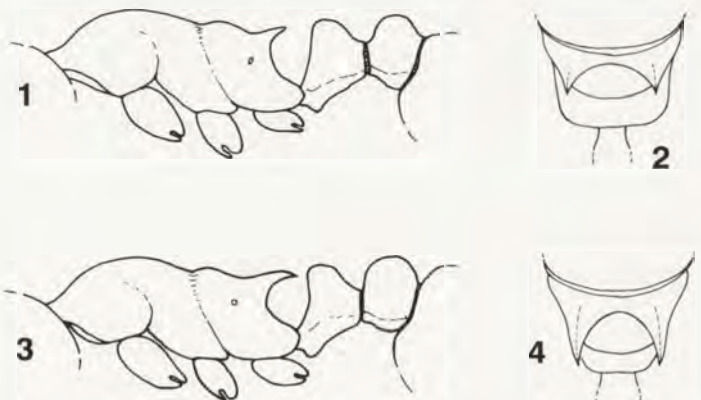
From the end of the last century up to recent time all West-European myrmecologists (Emery, 1916; Stitz, 1939; Kutter, 1977; Collingwood, 1979; Agosti and Collingwood, 1987; Seifert, 1995, 1996, etc.) treated *L. nylanderi* more or less according to Mayr's description, particularly pointing out that propodeal spines of the workers are relatively short, acute, not wide at the base and not curved down (Fig. 1), and propodeal spines of queens are also quite short (length of spine 2.5–3.0 times shorter than distance between their tips, Fig. 2).

However, all Russian and former Soviet ant taxonomists (Karawajew, 1926c, 1934; Arnoldi, Dlussky, 1978; Radchenko, 1994, 1995; Radchenko, Czechowski and Czechowska, 1999a) followed Ruzsky (1905) and treated as *L. nylanderi* a species whose workers have propodeal spines which are relatively long, wide at the base and curved downwards (Fig. 3). The propodeal spines of queens are also quite long (length of spine only 1.5–2.0 times shorter than distance

between their tips from above, Fig. 4). This is would appear to be a different species from *L. nylanderi*.

Karawajew (1926a: 51) described *L. nylanderi* var. *crassispina* from workers and queens collected in the vicinity of Kiev (Ukraine), based on comparison with figures of *L. nylanderi* from Emery (1916: 181). Karawajew described the workers of this new variety as having “propodeal spines wider than in typical form, gradually narrowed to the tips and slightly curved down”. However, later Karawajew (1934) with no additional comments synonymised var. *crassispina* with *L. nylanderi*. This synonymy was confirmed by Radchenko (1995).

Seifert (1995) was the first recent author to pay attention to the differences in shape of propodeal spines between the western and eastern populations of the species of “*L. nylanderi*”. He described the Eastern popu-



Figures 1–4. Details of structure of *Leptothorax nylanderi* (1 – worker, 2 – queen) and *L. crassispinus* (3 – worker, 4 – queen) (1, 3 – alitrunk and waist in profile; 2, 4 – propodeal spines from above).



Figure 5. Distribution of *L. nylanderi* and *L. crassispinus*.

lations as subspecies *slavonicus*, which he later considered to be a good species (Seifert, 1996). I have no doubt that *L. slavonicus* Seifert is the same species as specimens determined as *L. nylanderi* by earlier "Russian" authors (see above). Study of the lectotype and paralectotypes of *L. nylanderi* var. *crassispina* (located in Institute of Zoology, Kiev) clearly showed that *L. crassispinus* Karawajew can be considered as a good species, and that *L. slavonicus* Seifert is junior synonym of *L. crassispinus* (the formal new synonymy is made below).

*L. nylanderi* and *L. crassispinus* are allopatric: the former being distributed throughout West Europe and the latter throughout East Europe and Caucasus, with a rather narrow zone of overlap in eastern Germany and western Poland. The distribution of both in the former Yugoslavia, Greece and other Balkan states, needs further investigation (see also Seifert, 1995) (Fig. 5).

***Leptothorax crassispinus* Karawajew, 1926, stat. nov.**

*Leptothorax (Leptothorax) nylanderi* var. *crassispina* Karawajew, 1926a: 51, workers, queens, "vicinity of Kiev, Goloseev, No. 3057"; lectotype (worker) and paralectotypes (17 workers and 3 queens) (designated here) in Institute of zoology, Kiev; 1926b: 32.

Considered as junior synonym of *L. nylanderi* (Förster) by Karawajew, 1934: 137, Radchenko, 1994: 3; **revived from synonymy**.

*Leptothorax tuborum* var. *nylanderi*: Nasonov, 1889: 71.

*Leptothorax tuborum* subsp. *nylanderi*: Ruzsky, 1905: 597.

*Leptothorax nylanderi*: Ruzsky, 1902: 23; Karawajew, 1926c: 292; 1934: 137; Arnoldi, Dlussky, 1978: 541; Radchenko, 1994: 3; 1995: 153; Radchenko, Czechowski and Czechowska, 1999a: 139 (and literature, cited here), not Förster, 1850 and other West-European authors.

*Leptothorax nylanderi* m. *nylanderotuborum* Ruzsky, 1902: 23, workers, North Caucasus (types lost); 1905: 598, synonymy by Radchenko, 1994: 3.

*Leptothorax nylanderi* subsp. *slavonicus* Seifert, 1995: 4, workers, queens, eastern Germany, vicinity of Görlitz, **syn. nov.**

*Leptothorax slavonicus*: Seifert, 1996: 256.

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