

Notes on the genus *Mannerheimia* Mäklin, 1880 (Coleoptera, Staphylinidae) in Finland

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Clayhills, T. 2022. Notes on the genus *Mannerheimia* Mäklin, 1880 (Coleoptera, Staphylinidae) in Finland [Huomioita lyhytsiipissuvusta *Mannerheimia* Mäklin, 1880 Suomessa]. *Sahlbergia* 28(1): 20–22. Helsinki, Finland, ISSN 2342-7582.

Suomesta tunnetaan *Mannerheimia*-suvusta vain kaksi lajia. Molemmilla on hyvin pohjoispainotteiset levinneisyysalueet. Yleisempi laji *M. arctica* (Erichson, 1840) tunnetaan luonnontieteellisistä maakunnista Kn, Ks, KiL, SoL, EnL, InL. Ylälättäen lajista on myös yksi havainto Uudenmaan maakunnasta. Selvästi harvinaisempi laji *M. brevipennis* (Motschusky, 1860) tunnetaan vain maakunnista Ks ja InL. *Mannerheimia arctica* on Pohjoismaissa yleensä kytketty tunturikoivikko- ja pajukkovyöhykkeiden kenttäkerrokseen ja usein vesistöjen läheisyyteen. Lajin *M. brevipennis* elinympäristöstä löytyy vain vähän tietoja. Löytöpaikkoina mainitaan mäntyjen ja joskus kuusten tyvet, joissa laji talvehtii. Kesällä 1989 löysin useita yksilöitä elokuun alussa tunturikoivikkorinteistä ja yhden yksilön puron varresta Utsjoen Kevon alueelta. Laji näyttää siis elävän hyvin saman oloisissa ympäristöissä kuin yleisempi sukulaisensa. Kesällä 2021 Enontekiön Lapista, Toskalharjin alueelta löytyi lyhytsiipinen, lentokyvytön *M. arctica*-yksilö. Tällaisia ei aikaisemmin tunneta.

Two species of the genus *Mannerheimia* are known from Finland, both with a pronounced northern distribution. *Mannerheimia arctica* lives mostly in the subarctic birch forest and willow zones in the fell layer, often close to water bodies. Little is known about the habitat demands of *M. brevipennis* in our area, but it is known to hibernate in the basal bark layers of Scotts pines and occasionally on spruce. During the summer 1989 I found several specimens of *M. brevipennis* from Li: Utsjoki, Kevo area in the beginning of August from a birch forest on a small slope by sieving litter. One specimen was also found from the shore line of a small brook in a birch forest. I got the impression that it lives in similar habitats as *M. arctica*, but as far as I know, they do not occur together. During the summer of 2021 I managed to find one short-winged and flightless specimen of *M. arctica* from Le:Enontekiö, Kilpisjärvi, Bumbovarri fell. Such specimens have never been found before.

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Fig. 1. *Mannerheimia arctica* from Li: Utsjoki .



Fig. 2. *Mannerheimia arctica* abdomen with tomentose spots. Photos Veikko Rinne, University of Turku.

Twenty-four species of *Mannerheimia* Mäklin, 1880 are known today (Shavrin 2021), two of which occur in Finland. Both Finnish species, *M. brevipennis* (Motschusky, 1860) and *M. arctica* (Erichson, 1840), are very similar at least in Finland and are easily misidentified. The main difference is the form of the antennae. Antennomeres 4–10 are more elongate in *M. arctica* and clearly more transverse in *M. brevipennis*. Also, the shape of the pronotum can usually be used to separate the species, keeping in mind that also *M. brevipennis* can occasionally have slightly concave laterobasal margins on the pronotum, see Shavrin (2021).

Finnish specimens of both species are typically reddish brown and very flat. The elytra and abdomen are clearly broadened posteriorly (Figure 1). Both species have clear tomentose spots on tergite V and are considered to be good flyers with long wings (Figure 2). *M. arctica* is relatively widespread in northern Finland from Kn and Ks in the south to Lkoc, Lkor, Le and Li in the north. There is an unexpected but correct record from N: Nurmijärvi in southern Finland (Rassi *et al.* 2015).

According to Shavrin (2021), specimens of both species from the eastern taiga zone have mostly been found in the birch forest zone and willow stands close to lake or brook shorelines among fell layer debris or mosses in leaf litter. *Mannerheimia arctica* lives in mixed forests among weeds and mosses often close to water bodies (Shavrin 2021). According to Shavrin the habitat demands are still not very well known.



Fig. 3. Bumbovarri flower meadow with *Dryas octopetala* and *Pseudorchis straminea*. Photo T. Clayhills.

My specimens were found from birch forests: one by sieving litter from the shoreline of river Yläpulmanki (30th June) and two more specimens by sieving litter collected under a willow stand by a small ditch close to river Tana (26th July). Four additional specimens were sieved from slope shelves of Njallavarri in Utsjoki (27th August).

Very little is known about the habitat demands of *M. brevipennis* in northern countries. It has mostly been collected late in the autumn from the basal bark layers of big Scots pine trees, occasionally also from spruce. These are likely overwintering rather than breeding sites.

While collecting beetles from Li:Utsjoki during the summer of 1989, I found some *Mannerheimia* specimens. They were determined quite recently with the help of Shavrin (2021) as belonging to *M. brevipennis*. Most of them were sieved from leaf litter collected from mostly Blueberry (*Vaccinium myrtillus* L.) stands in a small birch forest slope in the Kevo area, two specimens on the 4th of August and four more from the same place on the 10th of August. One more specimen was sieved from a

mossy shoreline of the small brook Rassijoki (8th August) in Kevo area. It looks like both *Mannerheimia* species prefer very similar habitats in northern Finland. They seem to be active during the same time of the summer as well but as far as I can tell they do not live together.

During the summer 2021 I visited with a couple of friends the so called back fells of Le:Enontekiö, Kilpisjärvi in the north-western corner of Finland. We arrived on the 2nd and stayed till the 9th of July. The spring was very late and large snow patches still covered many fell slopes. The lower parts and the south facing slopes were bare and especially the calcareous areas started to flower very nicely. The beetle fauna was very scarce when netting the willows and fell layer vegetation. One of the aims were to put pit fall traps in the small flower meadow patches in the calcareous areas of the Bumbovarri fell, in Toskalharji area, well above the tree line (Figure 3).

The catch was unexpectedly poor. One small, odd looking staphylinid caused problems. Being a male, it was determined as *Mannerheimia* sp. In Shavrin's (2021) new key it runs to



Fig. 4. *Mannerheimia arctica* from Bumbovarri. Photo Veikko Rinne, University of Turku.



Fig. 5. *Mannerheimia arctica* abdomen without tomentose spots. Photo Veikko Rinne, University of Turku.

the couplet 2 with the species *M. asiatica* Kastschev, 1999 and *M. pleshanovi* Shavrin, 2021. Neither of these fit the unusual Bumbovarri specimen with short flight wings (Figure 4) and no tomentose spots on tergum V (Figure 5). The specimen was sent to Shavrin for determination and he confirmed that the specimen belongs to *M. arctica*. He also confirmed that this is the first specimen found that lacks flight capability. While using his key for determining *Mannerheimia* specimens like this should be taken into account.

Looking at Shavrin's pictures of *Mannerheimia* male genitals, especially *M. brevipennis*, one gets the impression that there are more species involved. A perfect test group for the bar coders of today.

Acknowledgements

Alexey Shavrin is greatly acknowledged for the help with determining odd specimens and for gifts of comparison material of *M. arctica* and *M. brevipennis* from different regions. Jaakko Mattila kindly put the museum material of the genus from MZH (Finnish Museum of Natural History) at my disposal and Petri Martikainen did likewise for his personal collection.

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