

Plant bugs on *Tanacetum vulgare* with *Megalocoleus tanaceti* (Fallén, 1807) new to Norway (Hemiptera, Heteroptera, Miridae)

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The plant bug *Megalocoleus tanaceti* (Fallén, 1807) (Hemiptera, Heteroptera, Miridae) is reported new to Norway. It has probably colonised the county Østfold from Sweden. Since the species is morphologically similar to two other Miridae living on the host plant *Tanacetum vulgare* L., a short identification key is presented to separate *M. tanaceti* from *M. molliculus* (Fallén, 1807) and *Oncotylus punctipes* Reuter, 1875. The Norwegian distribution of the three species is given.

Key words: Heteroptera, *Megalocoleus tanaceti*, *Tanacetum vulgare*, Norway.

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Introduction

The perennial plant *Tanacetum vulgare* L. has many insect visitors when it is flowering in July–September. Among them are several species of true bugs, especially from the families Miridae, Rhopalidae and Pentatomidae. Most of them are plant bugs (Miridae), and in southern Sweden, 21 species from this family regularly visit this plant. Most of them are using it only as a food plant, but the following three species belonging to the Phylini tribe are more closely associated with it and have *Tanacetum vulgare* as their breeding plant: *Megalocoleus molliculus* (Fallén, 1807), *Megalocoleus tanaceti* (Fallén, 1807) and

Oncotylus punctipes Reuter, 1875. The last two species are monophagous on *Tanacetum vulgare*, the first breeds mainly on *Achillea millefolium* L. and also on other Asteraceae including *Tanacetum vulgare*.

All three species are phytophagous and feeds on buds, leaves and flowers of their food plants. They overwinter as eggs inserted in the upper parts of the stems of their breeding plant. Adults of *O. punctipes* can be found from mid-June to early September, *M. molliculus* from late June to early September and *M. tanaceti* from early July to the end of September. (Kullenberg 1944, Wachmann *et al.* 2003, Skipper 2013).

M. molliculus and *O. punctipes* have since

long been recorded from Norway and we here report *M. tanacetii* as new to Norway.

Material and methods

A male and a female of *Megalocoleus tanacetii* were sweep-netted 10 August 2013 on the tip of Øra peninsula, Fredrikstad, Østfold, EIS 20 (N59.17877, E10.9679) (leg. *et coll.* J.R. Gustad). The habitat was strongly influenced by disposed soil and gravel, but rich in various flowers.

Another pair was taken by sweep-netting the next day, 11 August 2013, in Vistergrova, Sarpsborg, Østfold, EIS 20 (N59.29322, E9.53925) (leg. *et coll.* T.J. Olsen). The locality was a rather dry sand quarry, which contained plenty of its host plant, *Tanacetum vulgare*. The species seems to be established here, since one additional specimen was found 5 September 2015, and two specimens on 17 August 2016 (leg. *et coll.* T.J. Olsen).

An identification key to adults are given in Table 1.

Discussion

As can be seen from the distribution maps of *M. molliculus* and *O. punctipes* (Figures 4 and 5), the three species associated with *Tanacetum vulgare*



FIGURE 1. *Oncotylus punctipes* Reuter, 1875 on *Tanacetum vulgare* L. Photo: Liselotte Sjøe.



FIGURE 2. *Megalocoleus tanacetii* (Fallén, 1807). Photo: Karsten Sund, NHM, Oslo.



FIGURE 3. *Megalocoleus molliculus* (Fallén, 1807). Photo: Geir Drange.

TABLE 1. An identification key to adults. The three species mentioned in the introduction (*Megalocoleus molliculus* (Fallén, 1807), *Megalocoleus tanacetii* (Fallén, 1807) and *Oncotylus punctipes* Reuter, 1875) are often found together on the flowers of *Tanacetum vulgare*. They can be identified by the following key (be aware of specimens with abraded/absent hairs).

- 1. The black spines on hind tibiae arise from black spots. Bright green with dense black pubescence. Rostrum short, reaching the middle part of the midcoxae.....***Oncotylus punctipes*** Reuter, 1875 (Figure 1)
- The black spines on hind tibiae do not arise from black spots **2**
- 2. Upper side greenish-yellow (females) or orange (males) with slight grey mottling. Pubescence of long, black hairs. Rostrum not reaching beyond hind coxae ***Megalocoleus tanacetii*** (Fallén, 1807) (Figure 2)
- Upper side variably pale yellowish-green with diffuse darker mottling. Pubescence of fine, brown-light brown hairs. Rostrum reaching the middle of the abdomen ***Megalocoleus molliculus*** (Fallén, 1807) (Figure 3)

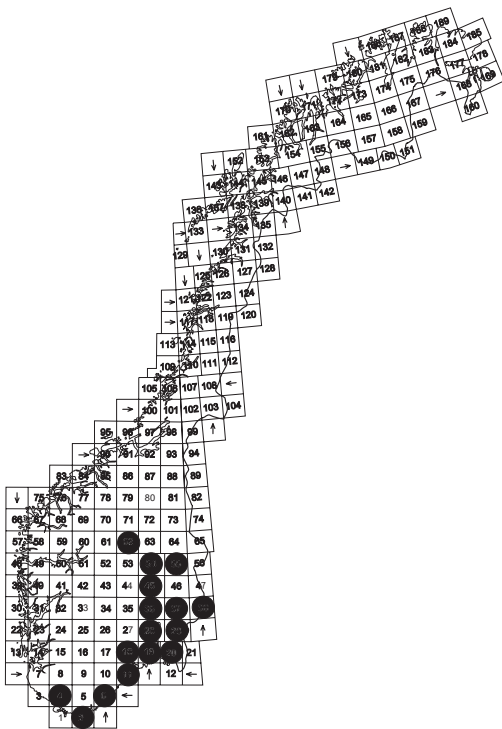


FIGURE 4. Distribution of *Megalocoleus molliculus* (Fallén, 1807) in Norway.

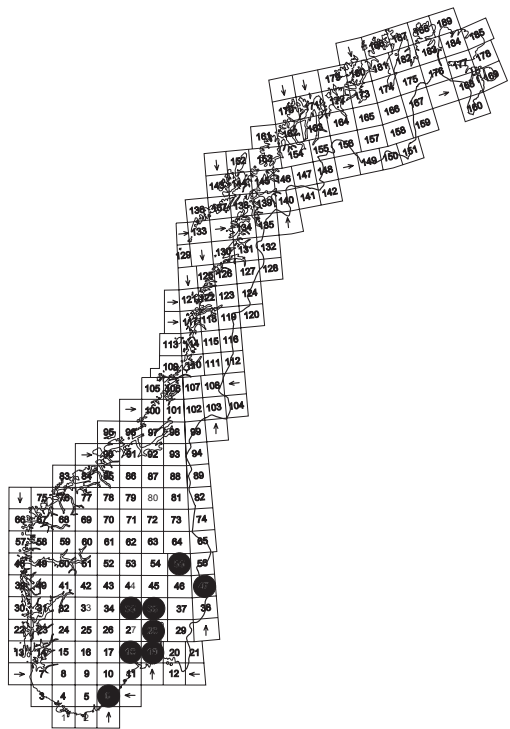


FIGURE 5. Distribution of *Oncotylus punctipes* Reuter, 1875 in Norway.

are recorded in Norway only from the SE part of the country, indicating that they have arrived from SW Sweden where the species are common. As the county of Østfold is one of the best investigated parts of Norway regarding Heteroptera, it can be assumed that *M. tanacetii* has arrived to the country rather recently.

On the other hand, the two other *Tanacetum*-associated species have been known from Norway for a long time. The first record of *Oncotylus punctipes* is from Drammen 5 September 1924

(Warloe 1927) and of *Megalocoleus molliculus* from Aker in Oslo 18. July 1845 (Siebke 1874). Although the main host plants are widely distributed in Norway, up to Finnmark, it is notable that these species still are recorded only from SE Norway. This cannot depend on underrecording as other parts of the country, for instance the Bergen-area, are well investigated. Climatic factors can hardly be limiting as these species are widely distributed in Sweden, where the two *Megalocoleus*-species are commonly

found northwards to the province of Norrbotten and *Oncotylus punctipes* to the province of Hälsingland (Coulianos & Ossiannilsson 1976).

The situation in Norway calls for further investigation and we recommend collectors and observers to search for these species on *Tanacetum vulgare* and *Achillea millefolium*.

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