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Rearing of *Platystoma rufipes* Meigen, 1826 (Diptera: Platystomatidae) from the Stem of *Crambe* infested by a Weevil (Coleoptera: Curculionidae)

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Korneyev, V. A. & Volovnik, S. V. & Popov, G. V. Rearing of *Platystoma rufipes* Meigen, 1826 (Diptera: Platystomatidae) from the Stem of *Crambe* infested by a Weevil (Coleoptera: Curculionidae). Abstract. The signal fly *Platystoma rufipes* is reared from the stems of *Crambe* together with a lixine weevil. This is the second record of platystomatid larvae feeding inside the stems of plants.

Key words: Diptera, Platystomatidae, *Platystoma*, puparium, Curculionidae, Lixini, *Crambe*, Ukraine.

Корнєєв, В. О., Воловник, С. В. і Попов, Г. В. Виведення *Platystoma rufipes* Meigen, 1826 (Diptera: Platystomatidae) зі стебла *Crambe,* вираженого довгоносиком (Coleoptera: Curculionidae). Резюме. Муху-сигнальницю *Platystoma rufipes* виведено зі стебел катрану *Crambe* разом із довгоносиком-ліксиною. Це друге повідомлення про живлення та розвиток личинок сигнальниць в стеблах рослин.

Ключові слова: Diptera, Platystomatidae, *Platystoma*, пупарій, Curculionidae, Lixini, *Crambe*, Україна.

Корнеев, В. О., Воловник, С. В. и Попов, Г. В. Выведение *Platystoma rufipes* Meigen, 1826 (Diptera: Platystomatidae) из стебля *Crambe,* пораженного долгоносиком (Coleoptera: Curculionidae). Резюме. Муха-сигнальщица *Platystoma rufipes* виведена из стеблей катрана *Crambe* вместе с долгоносиком-ликсиной. Это второе сообщение о питании и развитии личинок сигнальщиц в стеблях растений.

Ключевые слова: Diptera, Platystomatidae, *Platystoma*, пупарий, Curculionidae, Lixini, *Crambe*, Украина.

Introduction

The signal flies (Platystomatidae) are the second large family in the superfamily Tephritoidea, which encounters at least 1200 described species of 120 genera widespread mainly in the palaeotropics and, to the lesser degree, in the Palaearctic Region and the New World (McAlpine, 2001). Nevertheless, almost nothing is known about larval biology of these flies. Ferrar (1987) summarized all existing data, which show that larvae live in most cases in rotting stems, roots or bulbs of grasses or, rarely, under the bark of trees, in mushrooms or in the soil; some genera are more specialized: *Rivellia* spp. feed in the root nodules on Fabaceae plants, and *Scholastes* larvae feed in rotting coconuts. The plants inhabited by platystomatids, are often damaged by the beetle larvae or caterpillars. Maggots are believed to feed on decomposed plant tissues, mycelium or dead insect larvae.

Platystoma is a genus occurring only in the Palaearctic Region (Korneyev, 2001 a, b), with 32 taxa of species group (species and subspecies) known from Europe and 7 species recorded from Ukraine (Korneyev, 2010). Puparia of *P. euphorbiinum* Enderlein, 1930 were collected in rotting roots of the candelabra tree (*Euphorbia canariensis* L., 1753) in Canary Islands (Hennig, 1945), whereas *P. lugubre* (Robineau-Desvoidy 1830) were found in soil under a fallen tree or in association with corpses (Hennig, 1945, 1952).

While studying weevils in Southern Ukraine, a specimen of *P. rufipes* was reared from the stems of *Crambe pontica* Stev. ex Rupr., 1869 (Brassicaceae) (Fig. 1).

Platystoma rufipes Meigen, 1826 (Fig. 2)

Material. Zaporizhya Region: Yakymivka Distr., Fedotova Kosa, 46.27ºN, 35.28ºE, puparium in lower part of stem of *Crambe pontica* (Brassicaceae) in a pupation chamber together with dead pupa of the weevil *Lixus* (*Eulixus*) *canescens* Steven, 1829, 1.07.2014, 1 ♂ (S. Volovnik leg.); Berdyansk, 46.67ºN, 36.80ºE, 7.08.1981, 1 ♂ (Verves leg.); Donetsk Region: Khomutovskiy Step, 47.28ºN, 38.19ºE, 3 ♂ (data and collector not

Fig. 1. *Crambe pontica* association, Fedotova Kosa locality of *Platystoma rufipes*.

given; Crimea: Kerch Peninsula, Opuk, 45.03ºN, 36.21ºE, sea shore, on stem of *Crambe maritima,* 1 ♂ (G. Popov leg.) (SIZK).

Platystoma rufipes has been already recorded from Ukraine (Odessa, Kharkiv), Russia (Astrakhan) and Turkey (Asia Minor, Bos-Tepe) (Hennig, 1945).

This is the first record showing that at least some species of *Platystoma* are associated with herbs infested by weevils or other insect borers.

As the ovipositor of female is usually hidden underneath tergites, the female can be recognized from the male by the abdominal tergite 5 0.7 times as long as tergite 4 (twice as long as tergite 4 in male).

The puparium is brown and smooth, in general fitting the description of *P. euphorbiinum* (see Hennig, 1945: 4–5, Abb. 2–5), with posterior spiracles on two cylindrical elevations (Fig. 3).

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Fig. 2. *Platystoma rufipes*, adult fly.

Fig. 3. *P. rufipes*, puparium.

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