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A NEW SPECIES OF THE GENUS *EURYTOMA* (HYMENOPTERA, CHALCIDOIDEA, EURYTOMIDAE) FROM THE SEEDS OF HONEY LOCUST *GLEDITSIA TRIACANTHOS* (CAESALPINIACEAE) IN UKRAINE

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A New Species of the Genus *Eurytoma* (Hymenoptera, Chalcidoidea, Eurytomidae) from the Seeds of Honey Locust *Gleditsia triacanthos* (Caesalpinaceae) in Ukraine. Zerova, M. D., Fursov, V. N. — *Eurytoma gleditsiae* sp. n. reared from the seeds of *Gleditsia triacanthos* L. (Caesalpinaceae) in Kyiv, Ukraine, is described. The new species apparently parasitize *Megabruchidius dorsalis* (Farhaeus) (Coleoptera, Bruchidae).

Key words: *Eurytoma*, *Gleditsia*, Eurytomidae, new species, Ukraine.

Новый вид *Eurytoma* (Hymenoptera, Chalcidoidea, Eurytomidae), выведенный из семян *Gleditsia triacanthos* (Caesalpinaceae) в Украине. Зерова М. Д., Фурсов В. Н. — Описана *Eurytoma gleditsiae* sp. n. из семени гледичии, *Gleditsia triacanthos* L. (Caesalpinaceae), с погибшей куколкой жука *Megabruchidius dorsalis* (Farhaeus) (Coleoptera, Bruchidae) из окрестностей Киева, Украина.

Ключевые слова: *Eurytoma*, *Gleditsia*, Eurytomidae, новый вид, Украина.

Introduction

Material was collected in the environs of Kyiv, Ukraine in December, 2014. About 200 seed pods of *Gleditsia triacanthos* L. (Caesalpinaceae) were collected and opened at the laboratory to check the content of the seeds. It was found that among 850 seeds of *G. triacanthos* one seed contained a specimen of a dead adult of unknown species of chalcid wasp belonging to the genus *Eurytoma* Illiger of the family Eurytomidae. An adult *Eurytoma* was found in a seed of *G. triacanthos* with a large cavity (the size being more than half of seed), which was eaten by the larva of a beetle. A dead, dry yellow pupa of *Megabruchidius dorsalis* (Farhaeus) (Coleoptera, Bruchidae) was revealed near the dead adult of *Eurytoma* inside the same cavity. A heavy infestation of *G. triacanthos* with bean beetle *M. dorsalis* was discovered recently in Kyiv, Ukraine (Fursov, Nazarenko, 2015). The beetle *M. dorsalis* was previously only recorded from the Eastern region of Ukraine (Martynov, Nikulina, 2014).

Eurytoma gleditsiae Zerova et Fursov, sp. n.

Material. Holotype ♀: Kyiv, Darnytsa, 50°26'56" N, 30°36'52.7" E, 10.12.2014, collected from inside a cavity of a seed of *Gleditsia triacanthos* L. with a dead pupa of *Megabruchidius dorsalis* (Farhaeus) (V. N. Fursov), paratype: 1 ♀: idem, from seed of *G. triacanthos* L. infested with *M. dorsalis*, seeds collected 12.01.2015, emerged 19.03.2015 (V. N. Fursov), in the collection of the Schmalhausen Institute of Zoology, Kyiv.

Description. Female. Body length 4.0 mm. Body slightly elongated, with abdomen not flattened laterally, black. Antenna entirely black. All coxae black; all femora black but with dark-yellow knees; all tibiae black with yellow tips; all tarsi, except for brownish last segments, dark-yellow; ovipositor apically light brown; wings hyalescent, venation gray.

Head dorsally much wider than the prothorax, 1.83 times as wide as long; POL/OOL ratio = 3.0.

Head frontally 1.24 times as wide as high; with enlarged edge of gena, so far, frontally, head shape subquadrate; gena relatively long, 1.25 times as long as length of longitudinal diameter of eye. Postgenal keel high and sharp; sculpture of face uniformly pitted, except in places on edges of clypeus with 2–3 lateral keels (on each side) visible on background of pitted sculpture. Clypeus with smooth external side. Frontal cavity narrow, at edges from antennal bases with small semi-circular, not high vertical scales, and finely fringed on its highest place.



Fig. 1–4. *Eurytoma gleditsiae*: 1 — adult, lateral view; 2 — head, frontal view; 3 — fore wing; 4 — seed of *Gleditsia triacanthos* with a body of *Eurytoma gleditsiae* and dead pupa of *Megabruchidius dorsalis*.

Pubescence of face uniform and scarce. Antenna attached to middle of face, with long scape, reaching middle ocellus level; pedicel half as long as 1st funicular segment; anellus small, transversal; all five funicular segments slightly elongated, 1st funicular segment slightly longer than all others being of same length; funicular pubescence short and scarce.

Mesosoma elongated, very weakly expanded (in lateral view), without mesosternal keel; prothorax massive, twice as wide as long (in dorsal view); prothorax as long as mesothorax, and as scutellum. Sculpture of dorsal surface of mesothorax largely pitted, on scutum, these pits visibly larger than on prothorax and mesothorax; pubescence on whole dorsal surface of thorax absent.

Side of mesothorax in frontal $\frac{1}{4}$ part with unclear small-pitted sculpture, separated from other part of mesothorax by a longitudinal line of large pits, and remaining part of mesothorax with little sculpture; side of metathorax with larger sculpture; prepectus with separate but not deep pits. Propodeum in its central part with clear, deep middle furrow, sides with robust sculpture.

Both fore and mid coxae with very small cellular sculpture of surface, hind coxa with more clear punctures, larger in its posterior part and separated by a longitudinal line of densely located setae. Posterior external edge of hind coxa with line of relatively long hairs (about 10); these hairs 0.2 times as long as width of coxa. Mid coxa without clearly visible hook-like plates.

Fore wing with very short scarce hairs; speculum closed and not very densely pubescent; costal cell densely pubescent, basal cell almost nearly without pubescence, but with 2 longitudinal lines of short hairs. Ratio of marginal, postmarginal and radial vein = 1.35 : 1.35 : 1.

Metasoma: petiole of abdomen very short, abdomen 1.11 times as long as mesosoma; surface of abdominal tergites almost without sculpture, only sides of 3rd to 5th tergites with scarcely noticeable sculpture and points far spaced from each other; 6th tergite with very sparse pubescence, epipygium with some short hairs; 1st to 3rd abdominal tergites short, 4th tergite 2.0 times as long as tergites 1–3 together; 6th tergite short, slightly longer than epipygium; ovipositor slightly extended from abdomen tip.

Comparative notes. In the key to species of *Eurytoma* (Zerova, 2010), a new species runs to *Eurytoma curculionum* Mayr, differing by its longer postmarginal vein, which is equal in length to that of the marginal vein (in *E. curculionum* shorter than the marginal vein), the absence of a notch on the extended part of clypeus, the 6th abdominal tergite with a shorter length and with a flattened sculpture (in *E. curculionum* 5th to 6th tergite with small pits but densely punctuated), longer abdomen, and the black color of the antennae and legs (in *E. curculionum* scape yellow, funicle brown, but femora and tibiae partly yellow).

Biology. The larva of *Eurytoma gleditsiae* sp. n. is believed to be a larval or pupal parasitoid of the beetle *M. dorsalis* and facultatively phytophagous, completing its development inside seeds of *G. triacanthos*. Some cases of dual feeding among chalcid wasps is well known (Puzanova-Malysheva, 1936), including Eurytomidae (Zerova, Seregina, 1994). The development of *Eurytoma* was completed inside the seed of *G. triacanthos* because collected adult of *Eurytoma* was with some remnants of uncleaned exuvium skin, especially on the antennae. The possible trophical connection of the larva of *Eurytoma* with the larva of *M. dorsalis* can be confirmed by the easily visible specific damage to the dead pupa of the beetle inside the seed of *G. triacanthos*.

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References

- Fursov, V. N., Nazarenko, V. Yu. 2015. Invasive species *Megabruchidius dorsalis* (Farhaeus) (Coleoptera, Chrysomelidae, Bruchinae), a new record in the fauna of Ukraine. *Vestnik zoologii*, **49** (2), 286.
- Martynov, V. V., Nikulina, T. V. 2014. The first finding of invasive species *Megabruchidius dorsalis* in the fauna of Ukraine. *Vestnik zoologii*, **48** (3), 286.
- Puzanova-Malysheva, E. W. 1936. *Syntomaspis eurytomae* nov. sp., eine Chalcid emit gemischter Ernährung im Larvenstadium. *Zeitschrift für Angewandte Entomologie*, **22** (4), 415–421.
- Zerova, M. D., Seregina, L. Ya. 1994. *The seed-eating Chalcidoidea of Palaearctics*. Naukova dumka, Kyiv, 1–238 [In Russian].
- Zerova, M. D. 2010. Palaearctic species of the genus *Eurytoma* (Hymenoptera, Chalcidoidea, Eurytomidae): morphological and biological peculiarities, trophical associations and key to determination. *Vestnik zoologii*, suppl. 24, 1–203 [In Russian].

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