

angular. Antennae, legs and body with a moderate number of short medium hairs.

Measurements. Length of body, 1.8 mm. Length of antennal segments, III, 0.37 mm.; IV, 0.166 mm.; V, 0.187 mm.; VI, 0.187 mm. Total length, 1.02 mm. Beak, III, 0.21 mm.; IV, 0.21 mm.; V, 0.07 mm. Total length, 1.82 mm. Length of hind tibia, 1.36 mm.; hind tarsus, 0.083 mm. and 0.21 mm.

EXPLANATION OF PLATES I AND II.

PLATE I.—A. *Essigella californica*, alate viviparous female; 1. wings; 2. cornicle; 3. head; 4. hind leg; 5. antenna; 6. rostrum.

B. *Essigella pini*, n. sp., alate viviparous female; 1. wings; 2. cornicle; 3. head; 4. hind leg; 5. rostrum; 6. antenna.

C. *Unilachnus parvus*, alate viviparous female; 1. wings; 2. cornicle; 3. rostrum; 4. antenna; 5. hind leg.

PLATE II.—D. *Eulachnus thunbergii*, n. sp., 1. wing of male; 2. antenna of male; 3. head of male; 4. head of oviparous female; 5. leg of oviparous female; 6. antenna of oviparous female; 7. rostrum of male; 8. cornicle.

E. *Eulachnus rileyi*, alate viviparous female; 1. wings; 2. cornicle; 3. rostrum; 4. head; 5. hind leg; 6. antenna.

F. *Lachnus juniperivora*, n. sp., alate viviparous female; 1. wings; 2. cornicle; 3. rostrum; 4. antenna; 5. hind leg.

On an Undescribed Species of *Medeterus* (Diptera, Dolichopodidae).

J. R. MALLOCH, Urbana, Illinois.

In the June number of Entomological News for 1918 (p. 216) Mr. W. Marchand described the larva and pupa of *Argyra albicans* Loew, at the same time making some pertinent comments on the paucity of our knowledge of the life-history of the members of this family, and a suggestion that the "cyclorrhaphous" form of opening in the evacuated cocoon might indicate evolutionary relationships. Unfortunately the latter contention cannot be maintained by an examination of the facts. The cyclorrhaphous exit is produced by orthorrhaphous insects through a turning movement of the body, causing a cutting off of the cap of the cocoon through the abrasion by the sharp cephalic thorns of the material composing the cocoon. In Cyclorrhapha the ecdysis is facilitated by the expansion of the ptilinum on the

head of the enclosed imago, which presses against the cephalic extremity of the puparium, causing a rupture to take place along lines, or pseudosutures, previously existent. As a matter of fact the similarity between the cap-like lid left on the empty cocoon of species in *Orthorrhapha* and that of the other suborder on the puparium, which is merely the larval skin, is more imaginary than real, as the cap in the latter consists of at least 2, and often 4, distinct pieces. The cocoon of *Orthorrhapha* and the puparium of *Cyclorrhapha* are not identical in character, the former having no physiological relation to the insect, and to show evolutionary relationships it is essential that the same physiological features be compared.

In this paper I describe a new species of the genus *Medeterus*. Unfortunately no larvae were preserved as the specimens were merely side-products of another experiment. I have already recorded the fact that the imagines of one species at least of this genus in North America are predaceous. The larvae have the same habit.

***Medeterus caerulescens* sp. n.**

♂ and ♀.—Metallic blue; frons, center of face, thorax and abdomen distinctly gray pruinulent. Antennae, palpi and proboscis black. Face deep blue, becoming violet-colored below antennae. Dorsum of thorax not distinctly vittate, the pruinescence most distinct in center anteriorly; pleura brighter blue than dorsum, especially below. Abdomen with a blue-green tinge; processes of hypopygium yellowish. Legs black, extreme apices of femora and bases of tibiae and basal half of midmetatarsus yellow. Wings clear, veins black, paler at bases. Post-ocular cilia white; bristle above fore coxa black; tegular cilia black. Halteres yellow.

♂.—Third antennal joint higher than long, with a slight indentation at insertion of arista, the latter very long, almost bare; face of equal width on its entire length; palpi with a few hairs. Dorsum of thorax with 2 rows of acrostichals on anterior half; scutellum with 2 strong apical and 2 weaker sub-basal bristles; propleural bristle short. Hypopygium long, reaching almost to base of venter, the processes slender. Fore tibia without bristles; mid tibia with the usual 2 bristles; basal joint of mid-tarsus nearly as long as joints 2 to 5 combined, the entire tarsus slightly longer than tibia; hind tibia rather thick, with weak hairs, which are most distinct on apical half of posterior surface, no

bristles present; basal joint of hind tarsus slightly over one-half as long as second, the latter about as long as joints 3 to 5 combined, the entire tarsus slightly longer than the tibia. Veins 3 and 4 convergent apically; outer cross-vein at about 1.5 its own length from apex of fifth vein.

♀.—Similar to the male in chaetotaxy; genitalia very slender. Length, 2.5 to 3 mm.

Type and *allotype*, White Heath, Illinois, April 19, 1918; larvae under bark of fallen cottonwood tree; imagines emerged April 26, 1918.

Closely resembles *maurus* Wheeler, but has black tegular cilia and differs in other respects.

The larva makes a cocoon similar to that of *Drapetis* but not so tough. The pupa is white, distinctly shining, with the cephalic thorns dark brown. The following notes indicate distinctions between this species and *Argyra albicans* Loew as described by Marchand.

The thoracic respiratory organs are more slender, the cephalic thorns are closely contiguous, with 2 long hairs at their bases above and 2 slight elevations ventrad of them, on each of which there is a long hair. The two protuberances referred to as converging bristles above the mouth-parts by Marchand are the apices of what I take to be the aristae, which are straight in *Medeterus*, the remainder of the antennae being clearly traceable to the bases of the cephalic tubercles. The wing-pads are longer in *Medeterus* than shown by Marchand, extending to base of third segment of abdomen; the position of the legs is similar in both species. The abdomen differs from that of *albicans* in having a series of long, sharply pointed, dense, appressed bristles on apices of segments 1 to 8 inclusive. In other respects the species are similar, except that *caerulescens* is only 3 mm. in length.

Imagines of *Medeterus* are nearly always found on the trunks of trees or on exposed vertical surfaces close to trees, while those of *Argyra* are found either on low vegetation or on bare sand close to streams. Both genera are common to Europe and North America.



Malloch, John Russell. 1919. "On an undescribed species of *Medeterus* (Diptera, Dolichopodidae)." *Entomological news, and proceedings of the Entomological Section of the Academy of Natural Sciences of Philadelphia* 30, 7–9.

View This Item Online: <https://www.biodiversitylibrary.org/item/20180>

Permalink: <https://www.biodiversitylibrary.org/partpdf/17699>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: NOT_IN_COPYRIGHT

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.