

Muscidae	678	<i>Rivellia</i>	579
Myrmecomysiinae	579	<i>Salticella</i>	531
<i>Neogeomyza</i>	638	Sapromyzidae	595
Neottiophilidae	604	Sarcophagidae	680
Neriidae	556	Sarcophagoidea	680
<i>Nothoasteia</i>	644	<i>Scelomyza</i>	638
Nothybidae	565	<i>Schizochroa</i>	640
Nothyboidea	562	<i>Schizostomia</i>	573
Odiniidae	611	<i>Sciochthis</i>	597
Oestridae	679	Sciomyzidae	592
Oestroidea	679	Sciomyzoidea	581
<i>Oestroparea</i>	659	Sepsidae	591
Opomyzidae	635	<i>Somatia</i>	573
<i>Ornithomyia</i>	533	<i>Stenomicro</i>	633
Ortalidiformes	575	Streblidae	682
Orthopyga	507	Strongylophthalmyiidae	571
<i>Orygma</i>	591	<i>Syringogaster</i>	568
Otitidae	577	Tachiniscidae	580
Otitoidea	573	Taeniapteridae	558
Palloppteridae	605	Tanypezidae	568
Palloppteroidea	601	Tanypezidiformes	569
Periscelidae	600	<i>Tapeigaster</i>	621
Phythalmiidae	577	<i>Tenuia</i>	638
Piophilidae	601	Tephritoidea	575
<i>Platyborborus</i>	651	<i>Teratomyza</i>	633
Platystomidae	578	Tetanoceroidea	581
<i>Psaeropterella</i>	579	Tethinidae	652
Pseudopomyzidae	630	<i>Texara</i>	568
Psilidae	573	Thyreophoridae	601
Pterocallinae	580	Trepidariidae	558
Pupipara	681	Trixoscelidae	624
Pyrgotidae	580	Trypetidae	580
Rhinotoridae	631	Tylidae	554
Rhopalomeridae	584	Ulidiinae	580
Richardiidae	579	<i>Waterhouseia</i>	633

A New Stem-inhabiting Gall Midge of *Poa pratensis*

(Diptera: Cecidomyiidae)

By

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(With 1 figure)

In April 1957 I was privileged to receive for identification material of a curious *Mayetiola*-like species of gall midge from cand. rer. nat. HANSJOACHIM SCHOBBER. While resembling other species of the genus *Mayetiola* both as regards the characters of the adults and the possession of a puparium, as well as living at the base of a grass, this midge is peculiar in that the males have a curious hook-shaped terminal sclerotisation of the penis-sheath.

Up to the present three species of *Mayetiola* sens. lat. have been described from *Poa* spp. (BARNES, 1946). The larvae of *M. (Chortomyia) poae* Bosc live in a swelling bearing numerous tight filaments resembling adventitious roots situated just above a node on the middle or upper part of the grass stem. The larvae of *M. (Caulomyia) radifica* Rübsaamen also live in a swelling bearing root-like filaments, but in this case the filaments are loose just as if the adventitious root-like filaments had grown out more from the stem. This gall is situated at the base of the grass stem. Both these galls are illustrated on Plate 28, Figs. 1 and 6 in RÜBSAAMEN & HEDICKE (1925—39). But besides these differences in appearance and position of the gall, RÜBSAAMEN (1895, p. 15) states that, whereas the larvae of *M. poae* have no breast-bone or sternal spatula, those of *M. radifica* have a hastiform one which he figures (Fig. 1, p. 14). The larvae of the third species, *M. joannisi* Kieffer, live in a slight swelling under the leaf sheaths at the base of the plant (KIEFFER, 1896). But there are no root-like outgrowths and the larvae possess a hastiform sternal spatula. The larvae of these three species are white in colour and form puparia in which they pupate.

There is a real need for detailed biological studies of these three species in order to obtain more information on the importance in diagnosis of the rather small differences noted above (the extent of development of the root-like outgrowths and their absence as well as the position on the stem). In this connection it is known that different generations of *M. destructor* live at different heights on the stems of cereals according to the flight periods of the ovipositing midges and that sometimes there are perceptible swellings at the site of the larvae and sometimes there are not, depending on the number of larvae present and also the reaction of the plant to their presence. Some of the Hessian Fly's host plants are also more prone to form swellings than others.

The larvae of Schober's midge form typical brown puparia. As far as I can ascertain from an examination of larval skins extracted from the puparia subsequent to pupation they do not possess a sternal spatula, thus resembling *M. poae*. They live several together under the leaf sheaths at the base of *Poa pratensis*. There are no filamentous outgrowths from the stem.

The adults of the three previously described species, as so often is the case in closely allied species of gall midges, are difficult to separate satisfactorily. The original descriptions are inadequate and the type material is difficult of access even if still in existence. An examination of specimens for *M. poae* and *M. joannisi* presented to the BARNES collection by Dr. E. MÖHN however does reveal differences in the size and shape of the lamellae of the male genitalia. But it must be mentioned here that a *Mayetiola* species from *Poa annua*, that has been previously recorded (in MELLANBY, 1956) as *M. joannisi*, shows just as big or even bigger differences in the proportions of the lamellae as exist between the specimens of *M. poae* and *M. joannisi* I re-

ceived from Dr. MÖHN. It is obvious that much more knowledge is required as to the range of variation between individual specimens. Extensive rearings would open the way to such a study. I have no specimens of *M. radifica* available for comparison, but Dr. MÖHN has very kindly examined specimens in the RÜBSAAMEN collection, but so far has not been able to find one with the hook-shaped terminal sclerotisation of the penis-sheath so characteristic of SCHÖBER's midge. Furthermore neither of us is aware of any *Mayetiola* species that possesses this prominent character.

Despite the fact that the hook-shaped terminal sclerotisation of the penis-sheath in SCHÖBER's midge separates it from typical *Mayetiola* species, such as *M. destructor*, *M. dactylidis* and *M. avenae*, as easily as does the very prolonged penis-sheath and proximal clasp segment of *Pemphigocecis ventricola* Rübsaamen, I refrain from creating a new genus for it pending a very necessary reassessment of the generic limitations of this group of gall midges. SCHÖBER's midge has so many other characters typical of the genus *Mayetiola* that it seems wiser to assign it now to this genus and describe it as *Mayetiola schoberi* sp. n. or SCHÖBER's *Mayetiola*.

***Mayetiola schoberi* sp. n.**

Male. Length about 3 mm. Antennae: 2 + 17—18, first and second flagellar segments almost fused; neck of 3rd flagellar segment about 3 times as long as wide and about half the length of the basal enlargement which is about twice as long as wide; neck of 10th flagellar segment about 4 times as long as wide and about $\frac{3}{4}$ the length of the basal enlargement which is about twice as long as wide; distal flagellar rounded terminally, variable in length. Palpi: 4 segments, the proximal almost quadrate, the second slightly elongate, the third longer and slightly narrower, the distal segment about the same width, slightly longer. Thorax dark brown. Wings: third vein reaching costa at apex of wing, fifth vein forked. Legs with short hairs and scales; claws moderately curved with weak basal tooth, empodium about as long as claws. Abdomen with dark scales and long hairs. Genitalia (Fig. 1): basal clasp segment moderately long, stout; distal clasp segment stout; dorsal lamella moderately long, deep V-shaped emargination, each lobe narrowly rounded, with setae; ventral lamella shorter, shallow U-shaped emargination, each lobe narrow, setose, with terminal seta; edge of penis-sheath sclerotised with distal extremity recurved upwards into a dark heavily sclerotised hooked point; harpes large, hairy, with digitiform appendages distally.

Cotypes: Cecid. 13109—11 and 13387—91 in the BARNES collection. Other specimens in E. MÖHN's collection and others returned to H. SCHÖBER.

Note. The number of flagellar antennal segments is variable in this group of gall midges and, in addition, frequently the terminal segment is much longer than the penultimate one. In such cases it represents two segments. Thus in the 8 cotypes, five individuals have 2 + 17, two have 2 + 15 + a big terminal segment that brings them into the 2 + 17 category, while one has 2 + 18 on one antenna and 2 + 16 + a big one on the

other. The palps are also variable, the third and fourth segments being sometimes fused or partially fused to each other. In one specimen the weak tooth on the claw appears to be bifid, reminiscent of a character of *Chortomyia* Kieffer, but also noted in *M. phalaris* (BARNES, 1927).

Female. Length 3—4 mm. Antennae: 2 + 16—18, first and second segments almost fused; the first seven or so flagellar segments cylindrical with a short neck about as long as wide, the neck on the next segment almost transverse, the terminal nine or so segments sessile without a neck, resembling *M. poae* in this disappearance of a neck towards the distal end of the antennae. Abdomen thickly clothed with dark scales and long hairs. Typical *Mayetiola* pocket-shaped ovipositor. Otherwise about as in male.

Cotypes: Cecid. 13112—14 and 13392—5 in the BARNES collection. Other specimens in E. MÖHN's collection and others returned to H. SCHÖBER.

Note. As in the males, the number of flagellar antennal segments is variable. Among the cotypes, one has 2 + 16 antennal segments, three have 2 + 17, one has 2 + 17 on one antenna and 2 + 15 + a big one on the other, one has 2 + 18, while the seventh has broken antennae.

Further material in the BARNES collection consists of pupal cases (Cecid. 13396—8), a puparium and pupal case (Cecid. 13399) and puparia and larval cast skins extracted from them (Cecid. 13400—2).

Host Plant: *Poa pratensis*.

Type Locality: Ratzeburg (near Lübeck), Germany.

Notes supplied by H. SCHÖBER on the biology of this midge are as follows: the puparia were found on 30 September 1955; the first midges emerged on 29 March the following year, the last appearing on 16 June; oviposition commenced a few hours after emergence and on an average 250—360 eggs were laid; and the eggs were laid on the dorsal surface of the leaves.

Further details concerning *M. schoberi* can be found in the thesis to be presented by HANSJOACHIM SCHÖBER to the University of Kiel for the degree of Dr. rer. nat. in July 1958.

I am indebted to Miss MARGARET K. ARNOLD for drawing the figure illustrating the male genitalia.

Summary

A new species of Cecidomyiidae belonging to the genus *Mayetiola* is described as *M. schoberi*. This species is characterised by the curious hook-shaped terminal sclerotisation of the penis-sheath. Its host plant is *Poa pratensis* and the type locality Ratzeburg (near Lübeck).

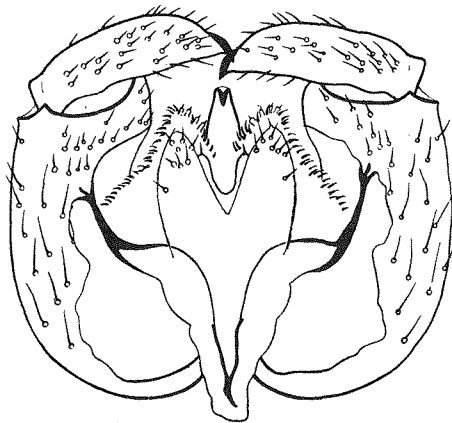


Fig. 1. Dorsal view of male genitalia of *Mayetiola schoberi* sp. n.

Zusammenfassung

Eine neue Cecidomyiden-Art, die zur Gattung *Mayetiola* gehört, wird als *M. schoberi* beschrieben. Diese Art ist charakterisiert durch die merkwürdige hakenförmige Sklerotisierung am Ende der Penis-Scheide. Wirtspflanze: *Poa pratensis*. Terra typica: Ratzeburg bei Lübeck.

Резюме

Новый вид Cecidomyidae из рода *Mayetiola* описывается как *M. schoberi*. Этот вид охарактеризован странной крючкообразной склеротизацией (Sclerotization) на конце оболочки пениса (penis-sheath). Растение-хозяин: *Poa pratensis*. Terra typica: Рацебург около Любека.

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Dates de publication des Diptères du Turkestan de Loew; cas particulier du genre *Apostrophus* Loew 1871

Contributions à l'Etude des Phasiinae cimicophages, XXII

Par

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L'article de H. LOEW intitulé: „Туркестанския Двукрылия“ et publié à Moscou, dans le Tome IX, Partie 1 des Известия императорскаго Общества Любителей Естествознания, Антропологии и Этнографии renferme les diagnoses latines sommaires de 56 „nov. sp.“, sans aucune diagnose générique.

Les descriptions détaillées, en allemand, de 55 de ces espèces (et des genres nouveaux créés pour certaines) se trouvent également dans les tomes II (49 espèces) et III (6 espèces) des „Beschreibungen europäischer Dipteren“ du même auteur¹⁾.

Le „Katalog der paläarktischen Dipteren“ aussi bien que le „Catalogus Dipteriorum“, donnent 1870 comme date des noms des Izvestiia et leur accordent la priorité sur les noms publiés en 1871 et 1873 respectivement dans les tomes II et III des „Beschreibungen ...“.

¹⁾ La 56^{ème} espèce, *Phora consanguinea*, semble n'avoir été publiée que dans l'article des Izvestiia. Les 6 nouvelles espèces du dit article qui figurent dans le tome III des „Beschreibungen ...“ sont: *Dinera pallicornis*, *Platystoma suavis*, *Empylocera abstersa*, *Ulidia melampodia*, *Anacampta robusta* et *Ceroxys obscuripes*.