

Status of *Systata* Loew (Diptera: Ulidiidae: Otitinae)

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Статус *Systata* Loew (Diptera: Ulidiidae: Otitinae). О. П. Каменева. — Переописано *Tephritis rivularis* F. з Центральної Європи, типовий вид роду *Systata* Loew. Встановлено, що вид дуже близький до групи видів *Otites formosa*, до якої належить також типовий вид роду *Otites* Latreille. *Systata* — молодший суб'єктивний синонім *Otites*.

Статус *Systata* Loew (Diptera: Ulidiidae: Otitinae). Е. П. Каменева. — Переописан *Tephritis rivularis* F. из Центральной Европы, типовой вид рода *Systata* Loew. Установлено, что вид очень близок к группе видов *Otites formosa*, к которой принадлежит также типовой вид рода *Otites* Latreille. *Systata* — младший субъективный синоним *Otites*.

The genus *Otites* Latreille is widespread throughout Holarctic. Species assigned to it are rather similar in the shape of head and antennae, and have male terminalia and female spermathecae of various shape, forming several groups of species those partially correspond to previously established genera *Heramyia* R.-D., *Myoris* R.-D., *Pteropécilia* Loew, and *Carmocoris* Loew, and are commonly lumped to form somewhat heterogeneous genus *Otites* s. l. By far, *Dorycera* Loew and *Tetanops* Becker, the two other genera closely related to *Otites* are usually considered as separate genera based mostly upon the non-genitalic characters (e. g., Hennig, 1939). Though this heterogeneity and the strong similarity of some species assigned to *Otites* with the species of *Dorycera* and *Tetanops* already was noted by Hennig, no attempts to provide more comprehensive analysis were ever done. The phylogenetic systematic of this group, and the problem of separation of the genera will be discussed in the forthcoming paper (Kameneva, *in preparation*). Recently, it has been found, that the species assigned to *Pteropécilia* and *Dorycera*, form a large monophyletic cluster together with the *O. formosa* group, that corresponds to *Otites* Latreille, 1804, as it includes its type species.

Loew (1868 a) established the genus *Systata* for the single species *Tephritis rivularis* Fabricius, 1805. As he stated in the original diagnosis, *Systata* is "Ganz wie bei *Ortalis*, nur die beiden Queradern nicht in gewöhnlicher Entfernung, sondern ganz auffallend genähert." Later he (1868 b) added another species, *Systata obliqua* Loew from Greece to that genus. The third species ever assigned to this genus is *Systata angustata* Hendel, 1911, from Peru.

By far, our knowledge *Systata* was based upon these old records and the materials known to Loew, Hendel and Hennig. Nevertheless, no attempt to clarify phylogenetic relationships of *Systata* species was ever done, neither its external characters were re-evaluated, nor genitalic characters ever examined.

To solve this problem, a series of *Systata rivularis* (F.) was examined, and the genitalia of both sexes were dissected; this species was found to share same genitalic characters with the species of the *O. formosa* group (Kameneva, *in press*), and the two were supposed to be closely related. For this reason, the name *Systata* is considered as a junior subjective synonym of *Otites*.

***Otites* Latreille**

Otites Latreille, 1804: 196. Type-species: *Otites elegans* Latreille.

Systata Loew, 1868 a: 5. Type-species: *Tephritis rivularis* Fabricius, 1805: 321. Syn. n.

The reason to retain *Systata* as the separate genus was that its type species differs from other species assigned to *Otites* in (1) only one pair of supraalar bristles and (2) crossveins r-m and dm-cu approximated. Both characters often occurring in other genera are thus neither unique nor valuable to be apomorphies of a genus level. The character (1) is known for at least 10 species of 3 separate lineages of *Melieria* R.-D. (Kameneva, *in press*), and the character (2) has been found in 3 species of *Myennis* R.-D., two of *Herina* R.-D., and two of *Melieria*. So far close relationships of the type-species of *Systata* to the species-group that contains the type-species of *Otites*, both genus names are to be considered as synonyms.

The other two species, *Systata obliqua* Loew and *S. angustata* Hendel are of uncertain generic position. They were not available for study and their placement is pending. At least, first species might belong either *Otites* or *Herina*, and the second elsewhere.

***Otites rivularis* (Fabricius, 1805), comb. n.**

Fabricius, 1805: 321 (*Tephritis*); Meigen, 1826: 278 (*Ortalis*); Schiner, 1860: 77 (*Ortalis*); Loew, 1868 b: 5; Becker, 1905: 96; Séguay, 1934: 58; Hennig, 1939: 71; Richter, 1970: 130; Soós, 1980: 92; 1984: 57 (*Systata*).

Type data. *Tephritis rivularis* Fabricius: SYNTYPES: number and sex unknown: "*rivularis*", (ZMUC) (destroyed). Fabricius originally described this species as follows:

"22. T. atra fronte rubra, alis albis: fasciis duabus rubris *rivularis*.
Habitat in Austria Dom. Megerle. Media. Frons cum antennis rufa, orbita oculorum nivea. Thorax niger lineis tribus dorsalibus albidis. Asbdomen et pedes atra, immaculata. Alae albae: macula baseos, fasciis duabus obliquis ad costam fere coeuntibus arcuque apicis nigris."

Dr V. Michelsen kindly re-examined the specimens deposited in the Museum Copenhagen and has supplied us with the following comments:

"Fabricius described *Tephritis rivularis* on the basis of material that he got from Austria collected by Megerle. Accordingly, the type material cannot be in the Sehestedt & Lund collection, but should be in Fabricius' own collection ('the Kiel collection'). All that is left here is a pin with a Fabricius label '*rivularis*'. In conclusion, the type material of *rivularis* has been destroyed by dermestids."

Examined non-type material. AUSTRIA: "Austria // Alte Sammlung", "*rivularis* det. Egger", ♀ (NHMW); "12.5.[18]67", "Coll. Berg[enstamm]: *rivularis* det. Bergenst.", ♂, "Wien, Mauer // veranda, 25.5.[18]59", "coll. Fulmek", ♀ (IZK — exchanged from NHMW); NORWAY (?): "Norwegen", ♂ (NHMW).

Other material data. SLOVAKIA: "Humenné" (not examined, quotation after Martinek, 1986); AUSTRIA: "Wien, Waldegg", ROMANIA: "Mehadia, Orszova, Kazan", number and sex unknown (DEI); ITALY (?): "Sizilien" (NHMW) (not examined, quotation after Hennig, 1939).

Redescription. Head (Fig. 1). Frons reddish, matte, with moderately long hairs and tomentose bands along eye margins. Ocellar triangle and vertical plates black, bare, shining. Facial as broad as 1st flagellomere, with narrow tomentose stripe along eye margin. Face yellow, shining, carina strait in profile, antennal groove shining black to brown at bottom. Clypeus yellow. Antenna and palpus wholly yellow, arista short, reddish in basal half, neither expanded, nor whitish setulose. Occiput black to reddish-brown medially, narrowly tomentose at eye margin, shining in the rest.

Thorax (Fig. 2). Shining black. Mesonotum with two tomentose vittae along dorsocentral row and a short antero-medial vitta. Scutellum black, non-tomentose, bare, with 2 pairs of bristles. Pleura shining. All setae and bristles black. 2–3 dorsocentral bristles in posterior portion of row, and sometimes 1–2 shorter bristles in front of them; no presutural dc. Prescutellar acrostichal bristles well-developed, anterior supraalar bristle strongly reduced, indistinct.

Legs black.

Wing (Fig. 3) hyaline with three dark-brown crossbands and brown wing base. Postero-dorsal extension of cell cup short, not extending beyond transverse section of vein *bm-cu* vein level.

Calypters and halteres yellow.

Abdomen: both terga and sterna smooth, shining black.

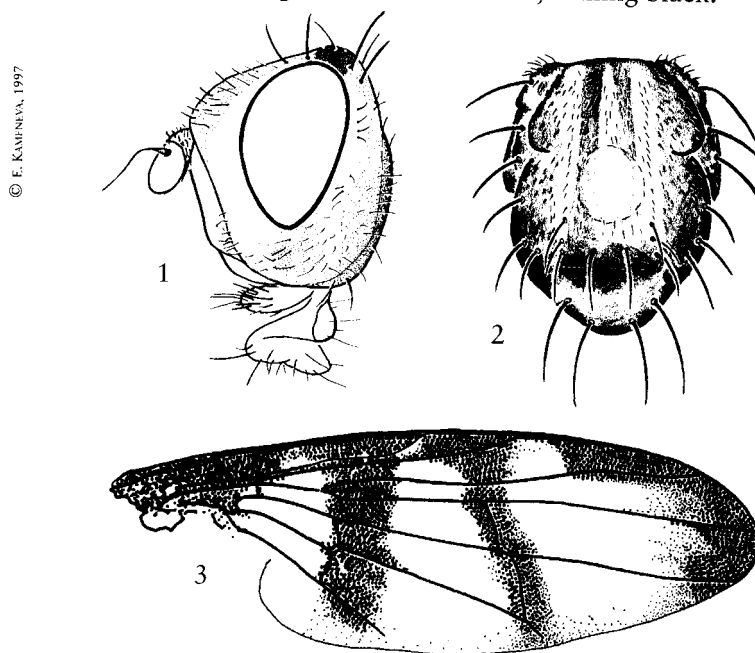
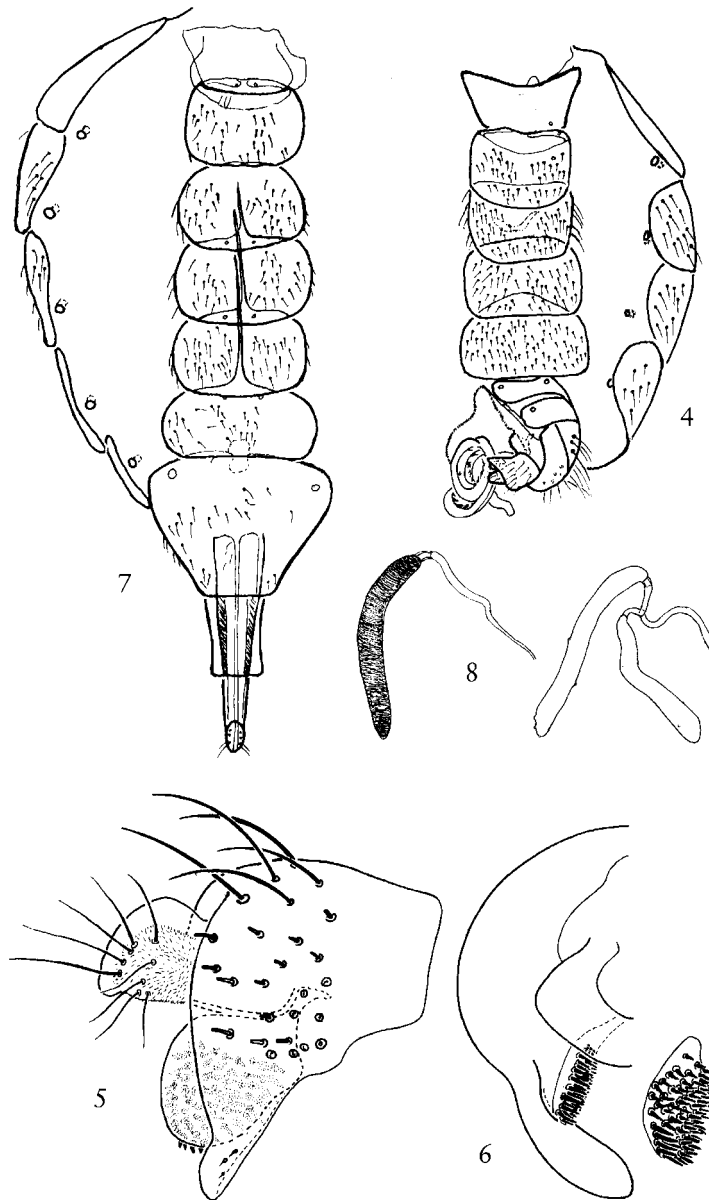


Fig. 1–3. *Otites rivularis*: 1 — head, lateral view, 2 — mesonotum, dorsal view, 3 — wing. (1 — голова, вигляд збоку, 2 — середньоспинка, згори, 3 — крило).



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Fig. 4–8. *Otites rivularis*, male (4–6) and female (7–8). 4, 7 — abdomen, ventral view; 5, 6 — epandrium (5 — right lateral view, 6 — posterior view); 8 — spermathecae. (самець (4–6) та самиця (7–8). 4, 7 — черевце, вентрально; 5, 6 — епандрій (5 — з правого боку, 6 — ззаду); 8 — сперматеки).

Male genitalia (Figs 4–6). Hypandrium not examined; phallus large, heavily spinulose; epandrium (Fig. 5, 6) rather short, surstyli fused to it, short, directed medio-ventrally, subepandrial sclerite (= “decasternum” of authors) broadly plate-like, densely covered with numerous prenisetae.

Female terminalia (Figs 7, 8). Tergosternum 7 broad, not constricted at its base by tergosternum 6 (Fig. 7); 6th spiracular stigma of lateral position, not dorsal; eversible membrane covered by tiny microtrichia, without scales; taeniae bare; aculeus with long setulose tergum and sternum 8; cercal joint of aculeus consolidated, short, slightly sharpened apically, with 3 pairs of long setae and 3–4 pairs of short lateral setulae; 3 elongate sausage-like spermathecae, two of which have a common duct with branches 4–5 times shorter than the spermathecae (Fig. 8).

Measurements: Wing length: 3.5–6.0 mm. Body length: ♂ — 3.5–5.0 mm, ♀ — 5.5–6.0 mm.

Comparison. In the key to species (Hennig, 1939) this species runs to couplet 6— (*grata* Loew) or 11— (*kowarzi* Loew), due to varying number of dc. Differing from both with pleura and abdomen shining black and from all known species of *Otites* by having r-m and dm-cu veins strongly approximated. Resembling species *O. formosa* group in head and body coloration and tomentosity, but differing as follows: (1) occiput mostly black (reddish yellow basally in *O. bacescui*); (2) mesonotal scutum shining black with 3 gray tomentose vittae (gray tomentose with 4 shining vittae in *O. formosa*); (3) scutellum shining black (gray tomentose at least dorsally in *O. formosa*); (4) abdominal terga shining black (gray tomentose at least antero-medially).

Distribution. Austria, western Romania. Records from Norway and Italy are referred to single, never rediscovered and possibly mislabeled specimens. No specimens of this species from Russia or Ukraine were found in the collection of Zoological Institute, Saint-Petersburg, and the reference to the North and South of the European Territory of the USSR (Richter, 1970) is obviously an error.

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References

- Becker Th. 1905. Ortalidae. — Becker Th., Bezzi M., Kertész K. & Stein P., Eds. Katalog der paläarktischen Dipteren. Vol. 4. Budapest : 92–107.
 Fabricius J. C. 1805. Systema anthiatorum secundum ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus. Brunswigae, Carol. Reichard: 372+30.
 Hennig W. 1939. 46/47. Otitidae (46. Pterocallidae and 47. Otitidae) — Lindner E., Ed. Die Fliegen der paläarktischen Region. Stuttgart: E. Schweizerbart'sche Verl. 5(Lfg. 126–128): 1–79.

- Latreille P. A. 1805. Histoire naturelle, générale et particulière, des Crustacés et des Insectes. — Paris. 14: 1—432.
- Loew H. 1868a. Die europäischen Ortalidae — *Zeitschrift für die Gesamten Naturwissenschaften* 32(7): 1–11.
- Loew H. 1868b. Nachtrag zu der Übersicht der europäischen Ortaliden — *Ibid.* 32(7): 191–192.
- Martinek V. 1986. Cel'ad': Otitidae — Cepelák J., Red., Diptera Slovenska. II (Cyclorrhapha). — Bratislava, Veda: 194–197.
- Meigen J. W. 1826. Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Hamm, Schulz. Buchhand. Verl. 5: 412 + XII.
- (Richter, V. A.) Рихтер В.А. 1970. 60. Сем. Otitidae — Определитель насекомых европейской части СССР в пяти томах. V. Двукрылые, блохи. II часть. — Ленинград, Наука: 123–130.
- Schiner J. R. 1860. Fauna Austriaca. Die Fliegen (Diptera). — Wien, Druck und Verl. Carl Gerold's Sohn. 2(2): 73–184.
- Soós Á. 1980. 49. család: Otitidae — Foltoslegyek — *Magyarország Állatvilága. Fauna Hungariae*. — Budapest, Akadémiai Kiadó. 15(Diptera II, 2): 67–93.
- Soós Á. 1984. Family Otitidae. — Catalogue of Palaearctic Diptera. Volume 9. Micropezidae—Agromyzidae. Budapest, Akadémiai Kiadó: 45–59.