

A preliminary review of the *Otites formosa* species-group (Diptera, Ulidiidae, Otitinae)

Предварительный обзор группы видов *Otites formosa* (Diptera, Ulidiidae, Otitinae)

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KEY WORDS: Diptera, flies, picture-winged flies, Ulidiidae, Otitinae, taxonomy, fauna.

КЛЮЧЕВЫЕ СЛОВА: Diptera, мухи, мухи-лептокрылки, Ulidiidae, Otitinae, систематика, фауна.

SUMMARY: A large collection material (including primary types), data on lost and unavailable type material and type localities, and original descriptions of all nominal species close to *Musca formosa* Panzer, are analyzed. Genitalic structures of both sexes have been examined. The lectotype of *M. formosa* Panzer is designated. The group is shown to include four species: *Otites formosa* (Panzer), *O. jucunda* (Robineau-Desvoidy), *O. levigata* (Loew) and *O. bacescui* Gheorghiu. The following new synonymy is established: *Ortalis levigata* Loew, 1873 = *Otites bradescui* Gheorghiu, 1987, syn.n. The data on geographic distribution are revised. A key to species of the group is provided.

РЕЗЮМЕ: Проанализированы обширные материалы (включая типовые), сведения об утраченных и недоступных типовых материалах и данные о типовых местностях, первоописания всех номинальных видов близких к *Musca formosa* Panzer. Изучено строение гениталий обоих полов. Обозначен лектотип *M. formosa* Panzer. Показано, что в состав группы входят четыре вида: *Otites formosa* (Panzer), *O. jucunda* (Robineau-Desvoidy), *O. levigata* (Loew) и *O. bacescui* Gheorghiu. Установлена новая синонимия: *Ortalis levigata* Loew, 1873 = *Otites bradescui* Gheorghiu, 1987. Пересмотрены данные о распространении. Приведена таблица для определения видов группы.

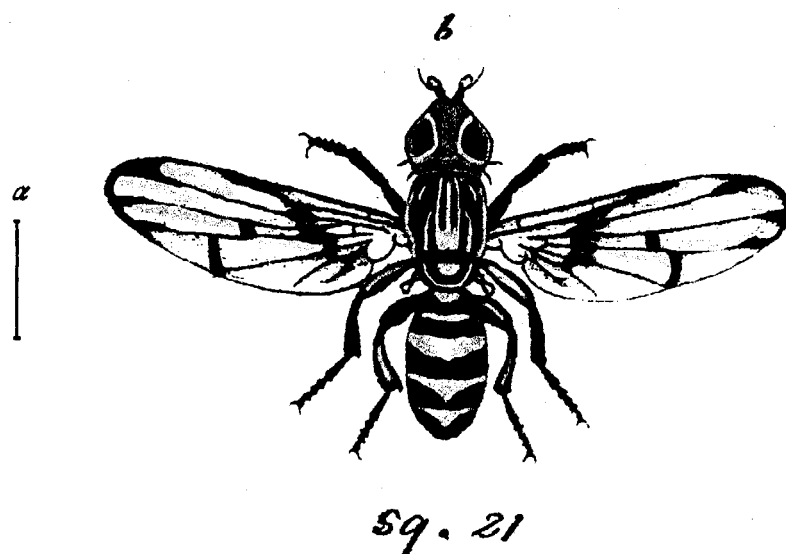
Otites formosa (Panzer) [1798] is a very common species of the picture-winged flies that occurs in meadows and steppes of Europe from Germany to the south-east of European Russia. Since 1798, ten additional nominal species similar to *formosa* have been described from Europe; the authors of the subsequent revisions [Hennig, 1939; Soós, 1980; 1984] considered most of them as those having doubtful status or as synonyms of *O. formosa*.

Recently, Gheorghiu [1987] examined male and female terminalia of the Roumanian flies and distinguished 3 different species belonging to the *formosa*-group, describing two of them as new. However, his work was not based upon a comprehensive consideration of identity of numerous older taxa assigned to this group. This is why the main task of the present paper was re-examination of all available data on both type and non-type material of the species related to *Otites formosa*. The vast material from the territory of former Soviet Union and from Central Europe covered by this study has allowed me to distinguish between 4 species, to replenish the data on their geographical distribution, and to check their synonymy.

The following acronyms are used for the institutions where the collections are located: ETHZ — Entomologische Sammlung, Eidgenössische Technische Hochschule, Zürich; MDDT — Muzeul "Delta Dunarii", Tulcea; MGAB — Muzeul de Istorie Naturala "Grigore Antipa", Bucureşti; MHNP — Muséum National d'Histoire Naturelle, Paris; MZF — Muzeo Zoologico "La Specola", Firenze; NHMW — Naturhistorisches Museum Wien; SIZK — Schmalhausen Institute of Zoology, Kiev; ZISP — Zoological Institute, St. Petersburg; ZMUC — Zoological Museum, University of Copenhagen; ZMUM — Zoological Museum of the Moscow State University.

Otites formosa group of species

DIAGNOSIS. Antennae: pedicel short, flagellomere 1 short oval, never tapered apically, arista narrow, brownish-black; mesonotum tomentose with 2-4 bare shining black stripes, mesonotal chaetotaxy normal, 2 sa, 2 dc; setae short; abdominal terga shining black with grey tomentose anterior bands; inner surstyli of various shape, brush-like, covered with 15-50 short prensisetae; sper-



Musca formosa Mihi.

J. St. fec.

Fig. 1. *Otites formosa*, facsimile reproduction from Panzer, [1798].

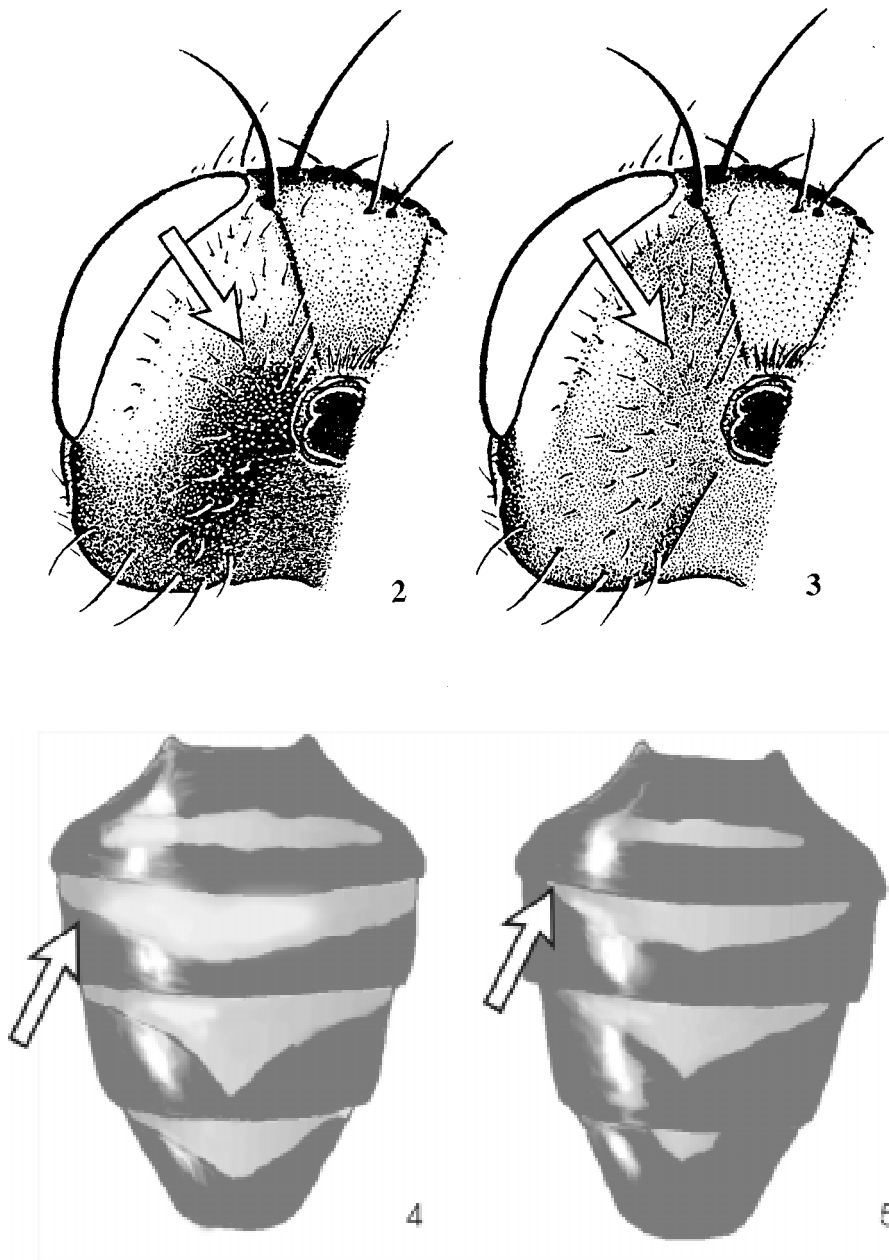
Рис. 1. *Otites formosa*, факсимильная репродукция, по Panzer, [1798].

mathecae short oval to very long sausage-like, but never spherical.

RELATIONSHIPS. Male terminalia characters indicate close relationships of the formosa group to *Otites maculipennis* Latreille (a poorly examined species, or a species complex, with dull, non-striate mesonotum), *O. lamed* Schrank, and species of the genera *Dorycera* Meigen and *Systata* Loew. Approximately one half of the *Dorycera* species have shining black mesonotal vittae, and the inner surstyli brush-like, with numerous short (never long claw-like) prensisetae. This peculiar character of surstyli may be considered as a synapomorphy of all the mentioned taxa. It clearly shows that *Otites* sensu Hennig [1939] is a paraphyletic formation which must be divided into 3 or 4 genera, but this task is out of scope of the present paper. The formosa group is apparently polyphyletic, but it is rather convenient for practical determination to treat it as a grouping of superficially similar species.

Key to species of the *Otites formosa* group

1. Occiput black, broadly grey tomentose. Pleura distinctly tomentose. Greyish tomentose bands of abdominal terga broad and easily visible in lateral aspect. Inner surstyli broad and short, only slightly extended posteriorly beyond epandrial margin, outer surstyli slightly excised basally; spermathecae oval, 4-5 times longer than wide. Germany, Czechia, Slovakia, Austria, Roumania, Bosnia, Albania, Greece, Moldova, Ukraine, south of European Russia, north-western Kazakhstan *formosa*
- Occiput yellow, only narrowly white tomentose along eye margin. Other characters varying 2
2. Tibiae yellow, femora yellow at least in apical half. Pleura distinctly grey tomentose. Medial black vittae of scutum reaching to scutellum. Greyish tomentose bands of abdominal terga broad and easily visible in lateral aspect. Inner surstylus like in *O. formosa*, broad and short, only slightly extended posteriorly beyond epandrial margin, outer surstylus not excised basally; spermathecae long sausage-like, more than 10-15 times longer than wide *jucunda*
- Legs black, if yellow (very rarely, in teneral specimens), then thorax with very sparse tomentosity, or surstyli elongate bilobate 3
3. Large species, WL = 7.5-11.5. Black scutal vittae of medial pair reaching to pre- or posterior margin of scutum. Proctiger with 2 distinct lateral lobes. Length of outer surstylus ca. 1/2 of the inner surstylus; the latter with dense brush of very numerous rather short prensisetae. Spermathecae very long, sausage-like. Slovakia (?), Albania, Serbia, Roumania *levigata*
- Smaller species, WL = 4.5-8.0. Medial pair of scutal black vittae always spreading posteriorly only to anterior dc. Proctiger simple. Outer lobe of surstylus long, 3/4 of the inner lobe; the latter with less dense and somewhat longer setae than in the preceding species. Spermathecae short oval. Slovakia, Austria, Hungary, Roumania 4
4. Mostly shining black flies with 4 faint tomentose strips on scutum; Surstyli not bilobate: inner surstyli broad and short, only slightly extended posteriorly beyond epandrial margin, outer surstyli slightly excised basally; spermathecae oval, 4-5 times longer than wide. Greece *formosa* (pro parte minor) (= *O. formosa ruficeps*: Hennig, 1939, pro parte)
- Scutum greyish tomentose with 4 shining black strips. Male surstyli bilobate and narrow *bacescui*



Figs. 2-5. *Otites formosa* (2, 4) and *O. bacescui* (3, 5), head, posterolateral aspect (2-3) and male abdomen (4-5).

Рис. 2-5. *Otites formosa* (2, 4) and *O. bacescui* (3, 5), голова, сзади слева (2-3) и брюшко самца (4-5).

Review of species

Otites formosa (Panzer, 1798)

Figs. 1, 2, 4, 6-9, 17.

Musca formosa Panzer, [1798]: 21.

Scatophaga ruficeps Fabricius, 1805: 209.

Dictya gangraenosa Fabricius, 1805: 329; Meigen, 1830: 378; Becker, 1905: (non *Musca gangraenosa* Panzer, [1798]), misidentification;

Musca formosa (Panzer): Fabricius, 1805: 329 (as syn. of *Musca gangraenosa* Panz., obviously misconception of *M. formosa*);

Ortalis ornata Meigen, 1826: 277;

Ortalis gangraenosa (Fabricius) Meigen, 1830: 378;

Ortalis gangraenosa (Fabricius): Schiner, 1860: 70; Becker, 1905: 96 (as a synonym of *Musca formosa* Panzer);

Ortalis ornata Meigen: Schiner, 1860: 70; Becker, 1902: 224 (as a synonym of *Musca formosa* Panzer);

Ortalis genualis Loew, 1868: 9; Becker, 1905: 96;

Otites formosa (Panzer): Hennig, 1939: 28; Soós, 1980: 74; 1984: 48; Martinek, 1986: 196;

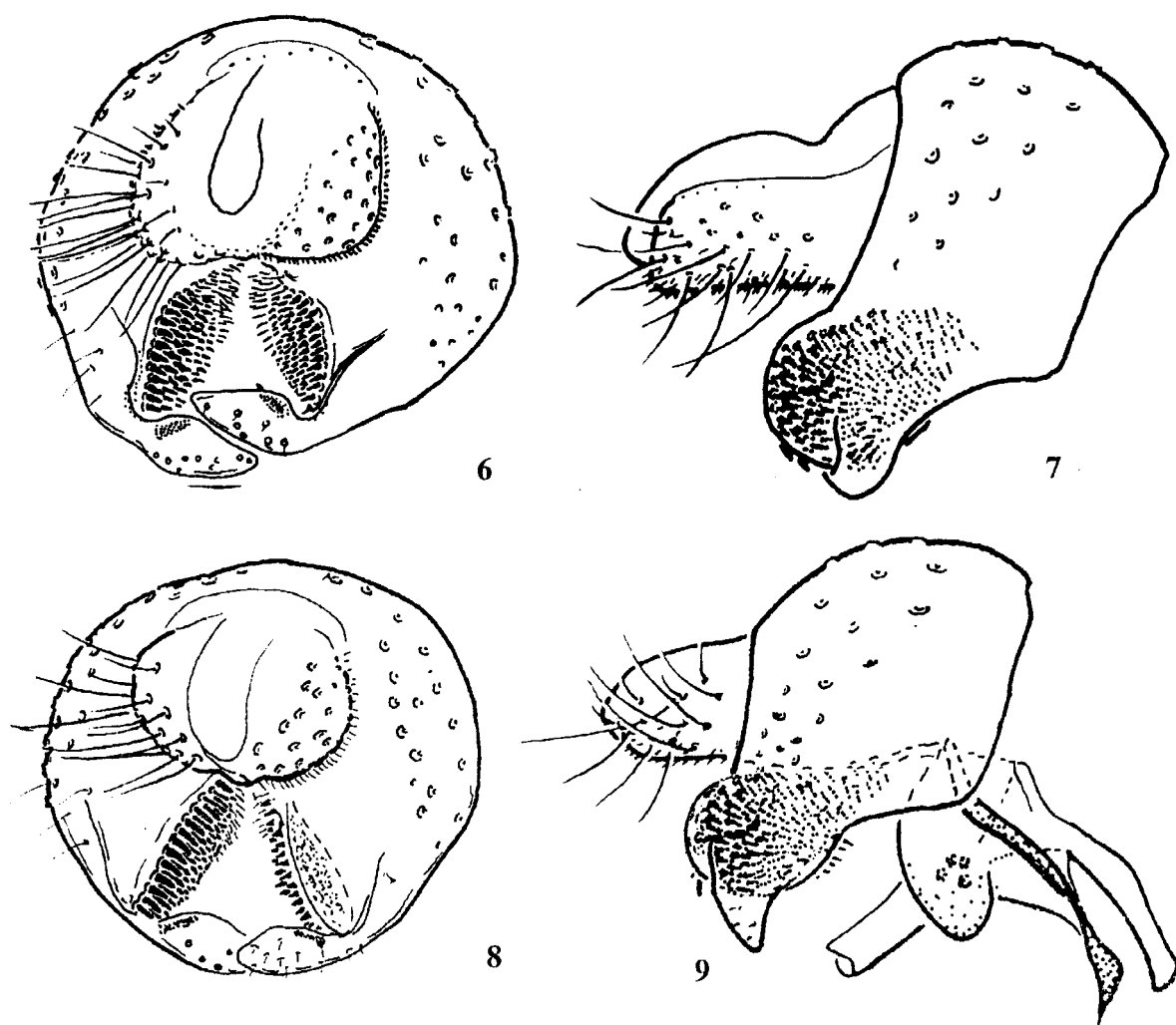
Ortalis formosa genualis (Loew): Hennig, 1939: 28; Soós, 1984: 48; Martinek, 1986: 196;

Otites formosa ruficeps: Hennig, 1939: 29 (pro parte)

Otites formosa var. *genualis* (Loew): Soós, 1980: 74;

Otites formosa f. *ruficeps*: Gheorghiu, 1987: 202.

TYPE DATA. *Musca formosa* Panzer: Syntypes: number and sex unknown. Type locality: "Austria". The type series is not located and probably lost. Panzer's description of *Musca formosa* appears to match our concept of this species which has the



Figs 6-9. *Otites formosa*: epandria of males from Greece (6, 7) and from Moldova (8, 9), posterior (6, 8) and right lateral aspect (7, 9).

Рис. 6-9. *Otites formosa*: эпандрии самцов из Греции (6, 7) и из Молдовы (8, 9), вид сзади (6, 8) и справа (7, 9).

abdominal terga broadly grey tomentose, a character described by Panzer [1798] ("Abdomen cylindricum cinereum, segmentorum marginibus nitidis atris. Pedes nigri"), and clearly illustrated in his work (Fig. 1). This illustration depicts a specimen which is a syntype, and the specimen illustrated by Panzer ([1798] fig. 21) is here designated as the lectotype.

Scatophaga ruficeps Fabricius: Syntypes: ♂: "S. ruficeps / e Austria Andersen", "Type", ♀: "Type" (ZMUC).

Fabricius originally described this species as follows: "S. cinereo thorace nigrolineato, abdomine fasciato, alis maculatis ruficeps.

Habitat in Austria. Mus. Dom. de Sehestedt.

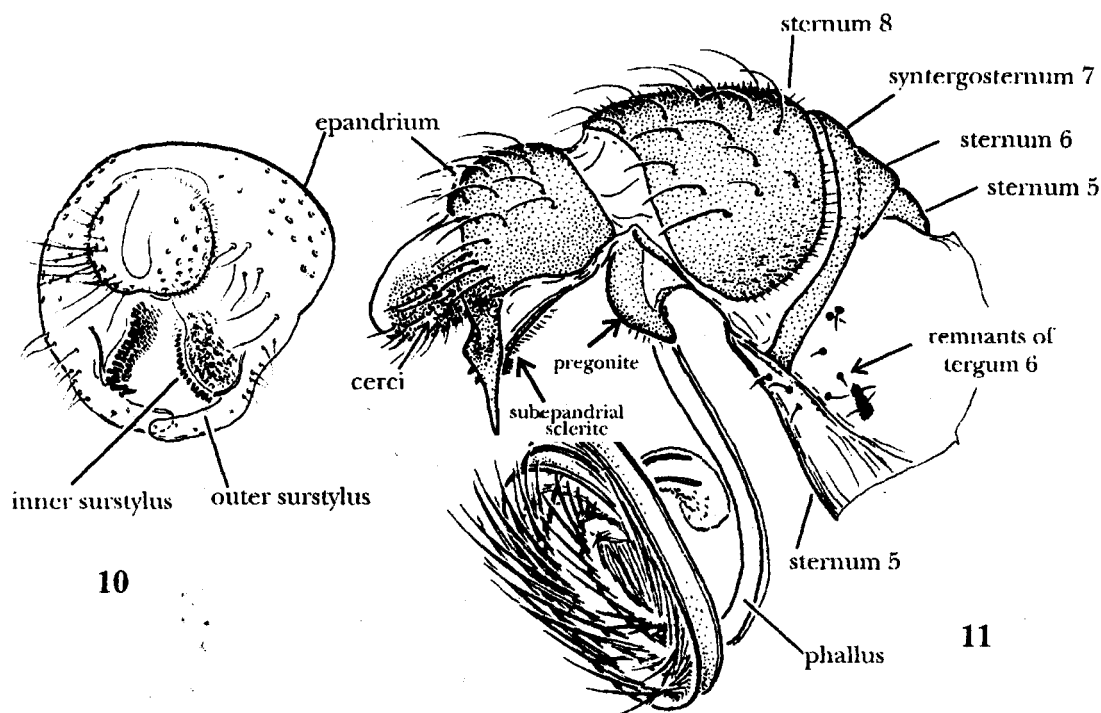
Paullo major S. Urticae. Caput cum antennis rufum: lateribus albis. Thorax cinereus, lineis quatuor atris: intermediis postice abbreviatis, postice bifidis. Abdomen cinereum, segmentorum marginibus atris. Pedes atri. Alae magnae, albae: maculis aliquot nigris"

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

"About *Scatophaga ruficeps*: The type series contains 1 male and 1 female, evidently paratypes, both in fair

condition. They stand in the Coll. Sehestedt & Lund of our museum. The two paratypes are clearly conspecific and belonging to a large species of *Otites* having the occiput dark and extensively covered with grey tomentum. Wing length: male, 8.9 mm; female, 9.4 mm. Scutum length: male, 3.4 mm; female, 3.6 mm. Total body lengths not measurable due to flexure of abdomen. The male is labelled "S. ruficeps / e Austria Andersen"; both bear a red "TYPE" label. "Andersen" must be the collector from which Sehestedt received the specimens. <...> Fabricius on several occasions visited Copenhagen to study the collections of Mr Sehestedt and Mr Tonder Lund, collections that subsequently were amalgamated and acquired by the Zoological Museum. It contains numerous Fabricius types."

The large size of specimens from Copenhagen shows that they certainly are the types of *S. ruficeps* (as indicated in the description), and neither are misidentified specimens, nor specimens later replaced original types, as I suspected first. The subsequent misconception of the species now recognised as *O. bacescui* Gheorghiu,



Figs. 10-11. *Otites jucunda*, epandrium, posterior aspect (10), and male postabdomen, right lateral view (11).
Рис. 10-11. *Otites jucunda*, эпандрий сзади (10) и постабдомен самца, справа (11).

O. formosa (Schiner, 1860) apparently must be referred to the phrase "Caput cum antennis rufum", applied to all the head. Obviously, Fabricius, who had very weak optical tools, did not check the occiput colour, and meant only reddish-yellow colour of frons and antennae, not of the whole head. Then, Fabricius did not compare *Scatophaga ruficeps* with *Musca formosa* Panzer (that he considered to be merely a synonym of *Musca gangraenosa* Panzer, that is actually a species that belongs to *Meliera* R.-D., apparently a synonym of *Meliera crassipennis* F.). Thus, there is not any reason to follow the literally understanding of original Fabrician description instead of evidence that the existing types are what *S. ruficeps* actually is. Therefore, *S. ruficeps* possess all the key characters of *O. formosa*, and undoubtedly is its junior synonym.

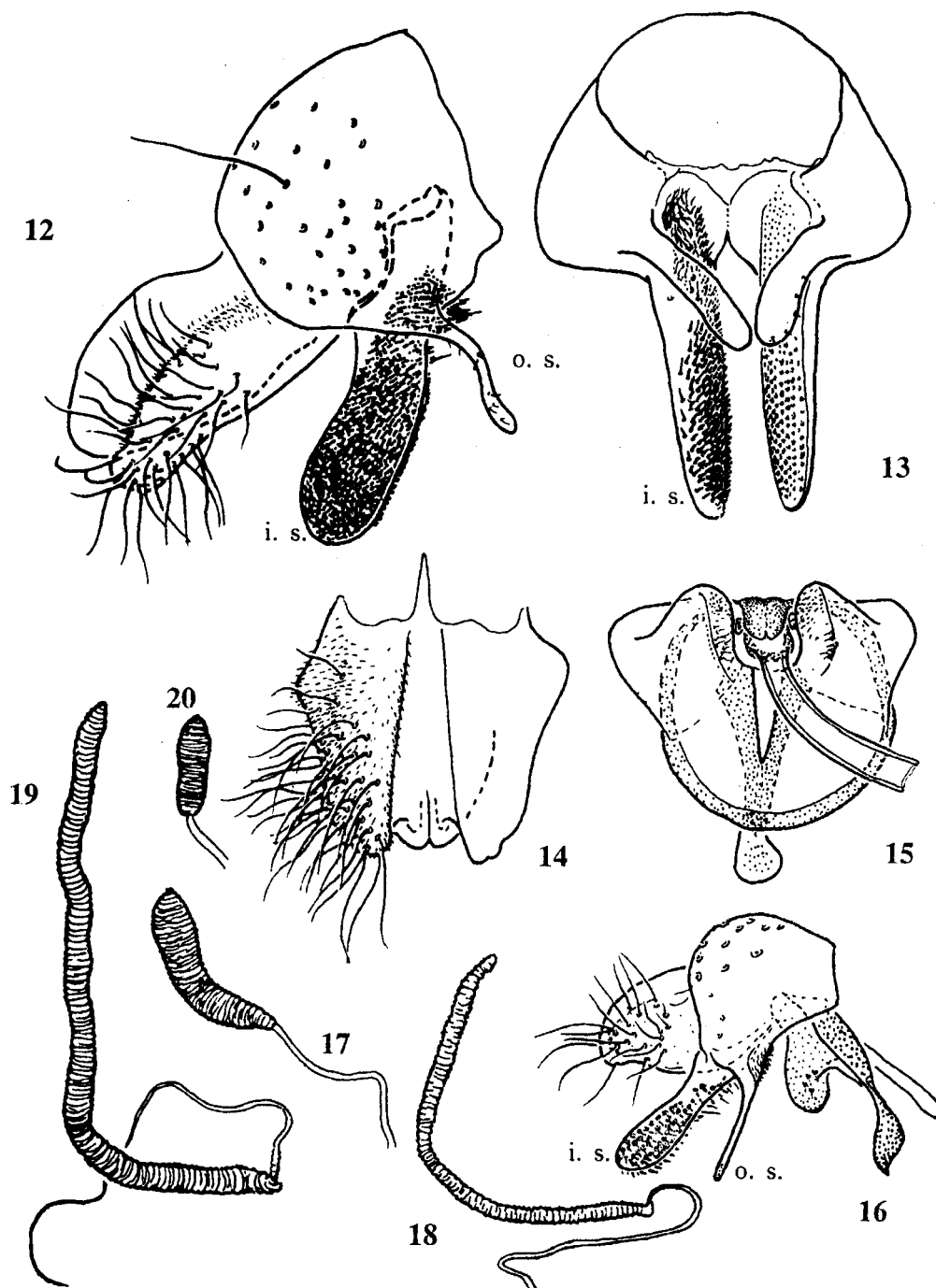
Dictya gangraenosa Fabricius (nec *Musca gangraenosa* Panzer, [1798]): Syntypes: number and sex unknown, not located. The type-locality designation "Habitat in Austria" (Fabricius, 1805: 329) belongs to *Musca gangraenosa* Panz., and apparently to proper Fabrician specimens, too. Fabricius applied this binomen to specimens of the *formosa* group species ("... cinereo thorace lineato, alis fascia puncto centrali arcuque apicis nigris") which he obviously misidentified as *Musca gangraenosa* Panzer, currently recognized as a synonym of *Musca crassipennis* Fabricius, 1794. A more precise identification of *D. gangraenosa* is impossible.

Ortalis ornata Meigen; Holotype: ♀, locality and data not given (MHNP). Specimen was redescribed by Becker [1902], who synonymized this species with *O. formosa*; Dr. L. Matile kindly re-examined the specimen, and supplied me with the following additional characters: occiput black, broadly grey tomentose. This proves that this species is indeed a synonym of *O. formosa*, and Becker's solution was justified.

MATERIAL EXAMINED.

NON-TYPE MATERIAL. Germany: Hamburg, "Coll. Egger", "*formosa* det. Egger", ♂ (NHMW); Austria: "Austria", "Coll.

Egger: *formosa* det. Egger", ♂; "*ruficeps* det. Schiner", ♀; "Wien", "*gangraenosa* det. Mik", 30.V.1877, ♂ (Mik); "*formosa* Alte Sammlung", 1861, ♂ (Rogenhoffer); Mödlieg, "Coll. Hendel", 15.VI.1886, ♂; Eachhogl, 5.VI.1890, ♀; Durindorf, 27.V.1912, 2 ♀♀ (Zerny); Burgerland, Moenglhof, 12.VI.1932, 2 ♂♂ (Zerny) (NHMW); Hungary: Monot, Pater Comitatus (Schlaifer) (NHMW); Albania: "Alban. Exped. Kula Ljums", 18-28.V.1918, ♂, 2 ♀♀ (NHMW); ROMANIA: "Tultscha", "*formosa* Alte Sammlung", 1865, ♂ (Mann) (NHMW); Moldova: Ungri prope Ataci, 26.V.1988, 2 ♀♀; Ivancea prope Orghel, 27.VI.1987, ♂; prope Cisinaiu, 20.VI.13.VII.1970, 2 ♀♀ (R. Kamenskaya); N of Benderi, 13.VI.1964, ♂, ♀ (D. Ussachov); Ceobruzi, 28.V.20.VI.1917, 30.V.19.VI.1918, 5 ♂♂, 5 ♀♀ [Paramonov]; prope Tigheci, 17-18.VI.1987, 17.VI.1988, ♂, 4 ♀♀; Borotani 12 km W of Budjak, 6.VI.1988, 7 ♂♂, 3 ♀♀; Ceceulia prope Cantemir, 18.VI.1987, 7.VI.1988, 8 ♂, 15 ♀♀ (Korneyev) (SIZK, ZMUM); Ukraine: Cherkassy Area: Uman', 18.V. <?>, ♂ [Paramonov]; Poltava Area: vicinity of Poltava, 1894, ♀ (V.N. Radzianko); Yares'ki, 10.VI.23.VII.1919, ♂, 2 ♀♀ [Yu. Wagner]; "Dar-Nadezhdy Konst. Distr.", 7, 13.VI.1919, ♂, ♀ (I. Fabri); Kirovograd Area: Chorniy Lis forest, 1.VI.1953, ♀ (Rogochaya); idem, 7 km S of Tsybulevo, 17.VI.1988 (S. Zrazhevski); Dnepropetrovsk Area: Sinelnikovo, 10.15.VI.1930, 2 ♂♂, 4 ♀ (Talitski); Odessa Area: "Prope Odessa, Kutshurgan", 25.V-20.VI.1919, 2 ♂♂, ♀, Valegotsulovo, Ananjev Distr., 29.V.1921, 2 ♀♀, 23.V.1925, 2 ♂♂, ♀; "Kochanovka, d. Balta", 14.VI.1924, ♂; Ananyev, 1-15.VI.1931, 23 ♂♂, 13 ♀♀ (Paramonov); Starokozache, 19.VI.1984, ♀ (Dolin); Kobil'nik Riv., prope Berezino, 3.VI.1991, ♀ (Korneyev); Kherson Area: Askania Nova, 14.VI.1927, ♂ (Sharlemanj & Shepel); Nikolaev Area: Nikolaev, 29.X.1927, ♀; Pervomaisk, Mighia, 29.VI.1985, 27.V.1991, 4 ♂♂, 5 ♀♀; 1-3 km N of Peski, left bank of Bug Lagoon, upstream of Nikolaev, 29.V.1991, 3 ♀♀ (Korneyev); Zaporizhzhia Area: Melitopol, Tambovka, forest, 7.VII.1978, ♂ (Priven); Lugansk Area: Provalje prope Lugansk, 14. VI. 1929, 4 ♂♂, 4 ♀♀ (Talitski); Crimea: Feodosia, 31.V.1904, ♀; Karagach, 20.V.1915♀ (Vuchetich); Yalta, 9.VI.1923♀; Kykensisiz, 10.VI.1923, ♀; Varnutka, 11.VI.1923, ♀; Karadagh, 30.VI.1925, ♀; Ustimovka, 21.VI.1933♀ (Paramonov); Alushta, 24-25.VI.1929♀ (E. Smirnov); Pionerskoe, 2.VI.1975, 2 ♂♂ (L. Zimina, Zhelokhovtsev);



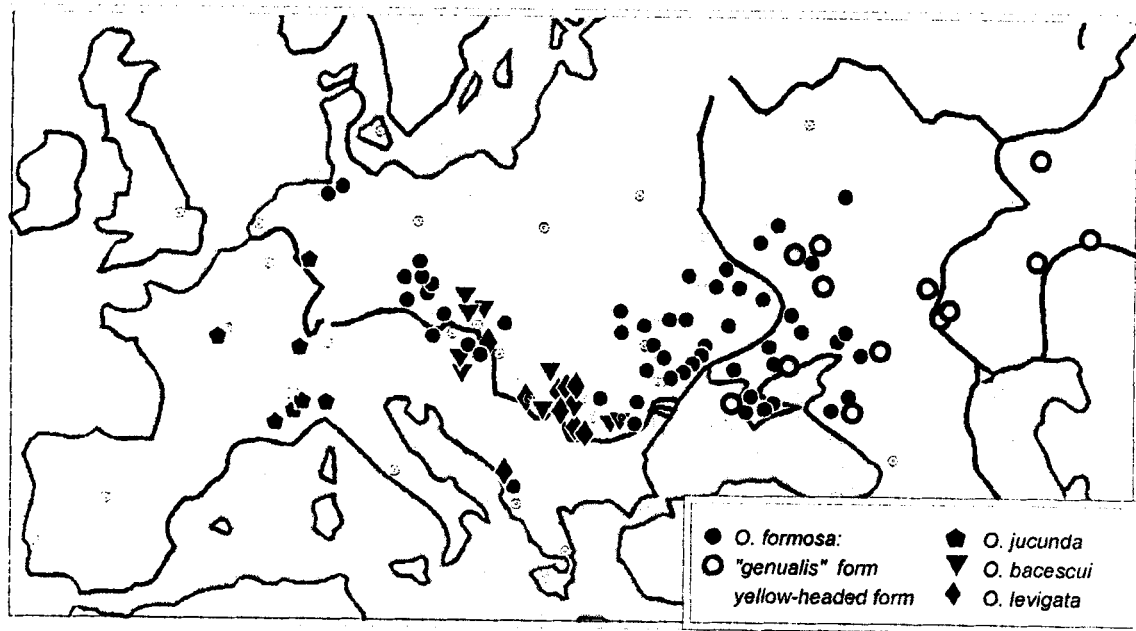
Figs. 12-20. *Otites laevigata* (12-15, 19), *O. bacescui* (16, 20), *O. formosa* (17), *O. jucunda* (18), epandrium: right lateral (12, 16) and anterior aspect (13), cerci, anterior view (14), hypandrium (15) and spermatheca (one of the three) (17-20). i.s. — inner surstylus, o.s. — outer surstylus.

Рис. 12-20. *Otites laevigata* (12-15, 19), *O. bacescui* (16, 20), *O. formosa* (17), *O. jucunda* (18), эпандрий: вид справа (12, 16) и спереди (13), церки, спереди (14), гипандрий (15) и сперматека (одна из трех) (17-20). i.s. — внутренний сурстиль, o.s. — наружный сурстиль.

Pereval, 16.VI.1982, ♂; (SIZK, ZMUM); Russia: Lipetsk Area: Galichya Gora, 13.VI.1964, ♀ (Antonova); Belgorod Area: Valuyskiy, ♂, ♀ (Velitchkovsky); Voronezh Area: Borisoglebsk, 15.20.VI.1955, ♂, ♀ (G. Viktorov); Rostov Area: Taganrog, 28.V.1921, ♀; Krasnodar Territory: Ubinsk, 9-10.VI.1956, ♂ (G. Viktorov) (SIZK, ZMUM).

The form with broad apical wing mark
(= *O. formosa genualis* auct.)

Ukraine: Nikolaev Area: "1-3 km N Peski village, left bank of Bug Lagoon upstream of Nikolaev, 29.V.1991, ♂, 19 ♀♀ (Korneyev); Zaporizhzhya Area: Berdyansk, VII.1954, ♀ <collector not given>; Lugansk Area: "Lugansk", 27.V, 5.23.VI.1929, ♂, 6 ♀♀;



Map. Distribution of the species of the *Otites formosa* group.
Карта. Распространение видов группы *Otites formosa*.

"Provalje prope Lugansk", 13.14.VI.1929, 5 ♂♂, 10 ♀♀ (Talitski) (SIZK); Crimea: prope Sebastopol, 29.V.1975, ♀ (L. Zimina) (ZMUM); Russia: Tatarstan: Kargaly, 5.VI.1985, ♀ (Ermolenko) (SIZK); Orenburg Area: Orenburg, ♂ (dissected), ♀ (Skornyakov); Belgorod Area: "Valuyki, R. m., 2 ♂♂, 4 ♀♀ (Velitchkovsky); Krasnodar Territory: Ulbinsk forestry, 9-10.VI.1956, ♀ (G. Viktorov); Volgograd Area: Kamyshev, 4.VI.1950, ♀ (Panfilov) (ZMUM); "Sarepta" "*Ortalis genualis* Lw." "Coll. Hendel", 1894, ♀ (Becker) (NHMW); Timguta, 3.17.VI.1952, ♂, ♀ (G. Viktorov) (ZMUM); Kazakhstan: prope Uralsk, Derkul: "Glubokaya", 9.VI.1950, ♂, "Gornaya" 23.V.1951, ♂, ♀ (Grunin) (ZISP).

The form with yellow subshining occiput

Otites formosa ruficeps: Hennig, 1939: 29 (pro parte)

Otites formosa f. *ruficeps*: Gheorghiu, 1987: 202.

France: Bouches-du-Rhône, St. Martin de Crau, 23.V.1993, ♂ (B. Merz) (ETHZ); Hungary (? Roumania): "S. Ungarn", 2 ♂♂ (dissected) (NHMW); Greece: "Graecia", "Coll. Hendel", 3 ♂♂, "Coll. Bgst", ♂ (one dissected) (NHMW); Moldova: "Ceobruici, Akkerman. prov., Bessarabian gouv.", 28.V.22.VI.1917, 2 ♂♂ (one dissected) [Paramonov] (SIZK).

REMARKS. Several specimens from southern areas of Europe have yellow occiput with narrowly tomentose postocular margin and broad shining black margins of abdomen, but tergal surstyli shape and spermathecal length typical for *O. formosa*. They can be distinguished from *O. bacescui* only by the genitalic characters.

Specimens with a large dark spot at the wing apex, described as *O. genualis*, clearly are conspecific with *O. formosa* from Western Europe, showing a gradually increasing amount of the "genualis" features from west to east. In Volga and Ural basin this form becomes dominant. In Ukraine both forms are widespread. In Central Europe, few specimens of the "genualis" form were recorded from Czechia and Slovakia [Martinek, 1986].

Otites jucunda (Robineau-Desvoidy, 1830)

Figs. 10-11, 18.

Otites elegans Latreille, 1805: 383 (as a synonym of *Musca formosa* Panzer), unavailable name.

Blainvillia jucunda Robineau-Desvoidy, 1830: 714.

Otites formosa: Macquart, 1835: 425.

Otites elegans: Macquart, 1835: 425; Becker, 1905: 96 (as a synonym of *Musca formosa* Panzer).

Otites jucunda (Robineau-Desvoidy) Macquart, 1835: 425.

Ortalis jucunda: Meigen, 1838: 348; Becker, 1905: 96.

Ortalis fastuosa Rondani, 1869: 30; Becker, 1905: 95.

Otites formosa var. *jucunda* Séguin, 1934: 57.

Otites formosa jucunda: Hennig, 1939: 30;

Otites formosa jucunda: Merz, 1996: 410;

MATERIAL EXAMINED. Non-type: FRANCE: "Rambouillet VI", "*Ortalis fastuosa* R. det. F. Hendel", "Coll. Hendel", ♂ (dissected, yellow occiput; legs dark yellow, fore femora brownish basally) (NHMW); "France — Hte. Savoie, Rossy/ Frangy", 17.VI.1990, ♂, ♀ (J. Steffen) (ETHZ); Germany (?): "107", "Coll. Winthem", ♀ (dissected); SWITZERLAND: Neuchâtel, Roche De l'Ermitage, Chêmaie, 2.VI.1991, ♂ (C. Dufour) (Museum Neuchâtel).

TYPE DATA. *Blainvillia jucunda* Robineau-Desvoidy: Syntypes: two specimens, sex unknown; lost. Type-locality: "Saint-Sauveur" (south-eastern France). The original description contains certain statements of its key character: "... pedes lutei...", that together with the mention of close fitness to *Otites formosa* allows to establish the identity of the only known species from France (and western Germany, Switzerland and Italy) which has yellow femora.

Otites elegans Latreille: Syntypes: number and sex unknown; probably lost. Type locality: "Saint-Germain" (France). According to Article 11(e) of the International Code of Zoological Nomenclature [1985], the name originally published as a junior synonym does not become available, if it was not considered as an available name before 1961. In the original and all subsequent papers this name was always used as a junior synonym and is thus an unavailable name. Therefore, *Blainvillia jucunda* is the senior available name of this species.

Ortalis fastuosa Rondani: Syntypes: three specimens, sex unknown; not located. Type locality: "Bis tantum Pedemontio lecta, una vice a Genéo <???" ("Only twice captured at Pedemonte, once in vicinity of Genoa") (north-western Italy). The key character is also mentioned in the original description: "... praecipue colore pedum rufo, non nigro..." Soós [1983: 257] redescribed a male from Rondani's collection with labels "1621".

"Bois Champeaux, 3.6.77" (MZP) which is not a syntype, and designated it as a neotype. This designation was made out of connection with revision and without any necessity for the nomenclature's stability. According to Article 75b [ICZN, 1985], this neotype designation is invalid.

REMARKS. Few specimens with yellow legs from France and bordering territories in Germany, Switzerland and Italy were available during this study. It is unclear if the leg color and the minute differences in the shape of surstyli really do not intergrade with *O. formosa* from Central and East Europe. A further clarification of the taxonomic status of *O. jucunda* is necessary.

Otites levigata (Loew, 1873)

Figs. 12-15, 19.

Ortalis levigata Loew, 1873a: 49.

Ortalis levigata: Loew, 1873b: 271; Becker, 1905: 96.

Otites levigata (Loew) Hennig, 1939: 33; Soós, 1980: 72; 1984: 48; Martinek, 1986: 197.

Otites bradescui Gheorghiu, 1987: 191, **syn.n.**

MATERIAL EXAMINED. TYPE: *Ortalis levigata* Loew: Holotype: ♂; ROUMANIA: [Caras-Severin:] "*Ortalis levigata* Loew", "Kasan 20. V. [18]71 Kowarz leg.", "Typus" (ZISP).

NON-TYPE MATERIAL. Roûmania (?): "Schiner 1869", ♀ (dissected), 1869 (Schiner); Roûmania: "Roumanie, Comana Vlasca", ♂ (Montandon), "*Ortalis formosa* Panz. det. L. Czerny" (NHMW) (dissected); Serbia: "Beograd, Kijevó", 3.V.1925, ♂ (Wagner) (SIZK) (dissected); Albania: "Alban. Exped., Kula Ljums", 25.V.1918, ♂ (NHMW) (dissected).

OTHER TYPES. *Otites bradescui* Gheorghiu: Holotype: ♂; ROUMANIA: Tulcea: Monastère Cocos, No 181526, 6.VI.1985 (Gheorghiu) (MGAB); Paratypes: 33 ♂♂, 19 ♀♀; ROUMANIA: Sibiu: Ocna-Sibiului, 21.VI.1967, ♀ (Weinberg); Caras-Severin: Baile-Herculane, 5.VI.1986, ♀ ("Allotype") (M. Bradescu), 18.V.1964, 2 ♀♀ (Savulescu), 23.29-31.V.1965, 2 ♂♂, ♀ (Weinberg), 2.VI.1965, ♂ (Popescu-Gorj), 19.26.V.1982, 25.V.1984, 3 ♂♂ (V. Bradescu), 31.V.1982, ♂ (Gheorghiu), 22.V.1983, ♀ (M. Bradescu); Mehedinți: Hinoia, 10.V.1978, ♂ (Popescu-Gorj); Ieselnita, 15-19.V.1969, 4 ♂♂, (Weinberg), 18.V.1969 ♂ (Iacob); Bucharest District: Bucharest, 23.VI.1974, ♀ (Weinberg), Bayneasa, 15.VI.1976, ♂ (Romanca), Caldarusani, 31.V.1957, 3 ♀♀ (Scobiola-Palade), 9.VI.1978, 2 ♂♂ (Sienkiewicz), Cernica, 10.V.1979, 2 ♂♂ (V. Bradescu), Clitila, 9.VI.1954, ♂ (Scobiola-Palade), Mogosoia, 26.V.1959, 2 ♂♂, 2 ♀♀ (Roșca; Scobiola-Palade), 27.V.1961, ♂ (Roșca), 15.VI.1962, ♀ (Scobiola-Palade), 1.V.1982, ♂ (Gheorghiu), Pantelimon, 11.VI.1961, ♀ (V. Bradescu), Pasarca, 24.V.1962, 2 ♂♂ (Popescu-Gorj), 10.VI.1976, ♀ (Serafim), Pustincul, 27.V.1967, ♀ (Roșca); Teleorman: Nanov, 13-14.V.1980, 2 ♂♂, ♀ (Parvu; Serafim); Giurgiu: Comana, 21.V.1966, 16. 1982, 3 ♂♂, ♀ (V. Bradescu), 2.VI.1980, ♀ (Vlad), 20.V.1982, ♂ (Parvu); Constanta: Agigea, 23.VI.1964, ♀ (Weinberg) (MGAB); Caras-Severin: Baile-Herculane, 22.V.1983, ♀ (M. Bradescu); Bucharest Distr.: Snagov, 23.VII.1979, ♂ (Scobiola-Palade) (MDDT).

REMARKS. Gheorghiu (loc. cit.) considered the presence of a stump (rudimentary) vein antero-apically of M – DM-Cu node to be the difference of *O. bradescui* from other species of this group. There is no stump veins on wings of the holotype of *Ortalis levigata*; the specimen labelled "Schiner 1869" (NHMW) has one wing with a short spur vein, and the other without any trace of the stump, demonstrating variability of this character and proving that *O. levigata* and *O. bradescui*, showing clearly the identity of their genitalic structures, are synonyms.

Otites bacescui Gheorghiu, 1987

Figs. 3, 5, 16, 20.

Ortalis ruficeps: Schiner, 1860: 71 (non *Scatophaga ruficeps* Fabricius; misidentification)

Otites formosa ruficeps: Hennig, 1939: 29; Soós, 1984: 48 (pro parte); Martinek, 1986: 196;

Otites formosa var. *ruficeps*: Soós, 1980: 74;

Otites bacescui Gheorghiu, 1987: 196.

TYPE DATA. *Otites bacescui* Gheorghiu: Holotype: ♂; Roûmania: Prahova: Tinosul, 6.VI.1985, No 181529, 6.VI.1985 (Gheorghiu) (MGAB); Paratypes: 13 ♂♂, 10 ♀♀; Roûmania: Prahova: Tinosul, 6.VI.1985, No 181529, 6.VI.1985 (Gheorghiu) (MGAB); Bucharest District: Mogosoia, 26.V.1959, ♂, ♀ (Roșca); Giurgiu: Calugareni, V.1983 (Parvu), No 181530 & 181531 (MGAB); Prahova: Tinosul, 6.VI.1985, ♂, ♀ (Gheorghiu) (MDDT).

NON-TYPE MATERIAL. Austria: "Austria, Coll. Egger", "*ruficeps* det. Schiner", ♂ (dissected); "Austria inf., Wien", "*ruficeps* det. Mik", 30.V.1877, ♂ (dissected), 30.V.1887, ♀ (dissected) (Mik); "Wien (Schiner) Mik", "*ruficeps* det. Mik", ♂ (Mik); "Austria, Alte Sammlung", "*ruficeps* det. Schiner", 2 ♂♂ (dissected), 2 ♀♀ (one dissected); "Austria inf., Dornbach", 24.V.14.VI.1885, ♂, ♀ (Handlirsch); "Austria inf., Ruschka", 7.VI.1904, ♀ (Kirling); "Spitz", V.1888, ♂ (Bergensstamm); "Kahlenberg", *ruficeps* det. Bergensstamm", 7.V.1869, 2 ♀♀ (dissected) (Bergensst.); "Kahlenbg", "*Ortalis ruficeps* F. det. L. Czerny", 3.VII.1905, ♂ (dissected), ♀ (Czerny); "Coll. Hendel", ♂, ♀; "Coll. Hendel", "*Ortalis ruficeps* F. Schiner VI. Jakobfalva", ♂; "Durindorf", 27.V.1912, 2 ♂♂ (dissected) (Zerny); "Burgerland, Moenghof, 12.VI.1932, 2 ♂♂ (one dissected) (Zerny); "cobenzl", "Coll. Becher", 22.VI.1881, ♂; Hungary: "Dombag", "Coll. Becher", ♂; Roûmania: "Miramare", "Coll. Bergensst.", "*ruficeps* det. Bergensst.", 1875, ♂ (dissected); "Bazias", "Coll. Hendel", 13.V.1912, 2 ♂♂ (one dissected), ♀ (Schiner); "Herculesbad" (= Caras-Severin: Baile-Herculane), "Coll. Hendel", 14.15.VI.1912, ♂ (dissected), ♀ (Schiner); "Europa Alte Sammlung", ♂ (NHMW).

REMARKS. As stated above, *Scatophaga ruficeps* certainly is a synonym of *Musca formosa* Panzer. The species from Danube basin which Schiner [1860] recognized as a good species and misapplied the name "*Ortalis ruficeps*" to, actually was an undescribed species, only recently described by Gheorghiu [1987] as *O. bacescui*.

This species is very similar superficially to the yellow-headed specimens of *Otites formosa*, occurring sympatrically in Roumania, Moldova and Greece. Males decidedly differ in the shape of surstyli. Males of the yellow-headed *O. formosa* have never been recorded in Austria: this allows one to make the conclusion that all the yellow-headed females from Austria also belong to *O. bacescui*. Spermathecae of Austrian female specimens of *O. bacescui* (Fig. 20) are conspicuously shorter than those illustrated by Gheorghiu [1987: Fig. 6 C]; I suspect that the spermathecae of *O. bacescui* and *O. formosa* were illustrated by Gheorghiu [1987: Fig. 6 C & 8 C] vice versa, and were confused because both are sympatric in Roumania. Thus, the specimens with the shortest spermathecae belong to *O. bacescui*, whereas the similar females with longer spermathecae from Roumania belong to *O. formosa*.

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References

- Becker Th. 1902. Die Meigen'schen Typen der sogen. Muscidae acalyptrae (Muscaria holometopa) // Zeitschrift für systematische Hymenopterologie und Dipterologie. Leipzig. Bd.2. S.209-256, 289-320, 337-355.
- Becker Th. 1905. Ortalidae // Becker Th., Bezzi M., Kertész K. & Stein P., Eds. / Katalog der paläarktischen Dipteren. Bd.4. Budapest. S.92-107.
- Fabricius J.C. 1805. Systema antliatorum secundum ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus. Brunswickae. 372 + 30 pp.
- Gheorghiu V. 1987. *Otites bacescui* n.sp. et *O. bradescui* n.sp. (Diptera, Otitidae) // Travaux du Muséum d'Histoire naturelle "Grigore Antipa". București. Vol.29. P.189-204.
- Hennig W. 1939. 46. /47. Oritidae // Lindner E., Ed. / Die Fliegen der paläarktischen region. Stuttgart: E. Schweizerbart'sche Verlagbuchhandlung. Bd.5(1), Lfg.126-128. S.1-79.
- International Trust for Zoological Nomenclature. 1985. International code of zoological nomenclature. 3rd Edition. London: International Trust for Zoological Nomenclature. xx + 338 pp.
- Loew H. 1868a. Die europäischen Ortalidae // Zeitschrift für die Gasamnten Naturwissenschaften. Bd.32. No.7. S.1-11.
- Loew H. 1868b. Nachtrag zu der Übersicht der europäischen Ortaliden // Zeitschrift für die Gasamnten Naturwissenschaften. Bd.32. No.7. S.191-192.
- Loew H. 1873. Diptera nova, in Pannonia inferiori et in confinibus Daciae regionibus a Ferd. Kowarzio capta // Berliner entomologische Zeitschrift. Bd.17. S.33-52.
- Macquart M. 1835. Histoire naturelle des Insectes. Diptères // Roret, Ed. / Collection des suites E. Buffon. Paris: Roret. Vol.2. IV + 703 pp.
- Martinek V. 1986. Cel'ad': Otitidae // Cepelak J., Red. / Diptera Slovenska. II (Cyclorrhapha). P.194-197.
- Meigen J.W. 1826. Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Hamm. Bd.5. 412 S. + XII.
- Merz B. 1996. Zur Faunistik der Pyrgotidae, Platystomatidae und Ulidiidae (=Otitidae) (Diptera, Tephritoidea) der Schweiz mit spezieller Berücksichtigung von *Otites* Latreille // Mitteilungen der Schweizerischen Entomologischen Gesellschaft. Bd.69. S.405-416.
- Panzer G.W.F. [1798]. Faunae Insectorum Germanicae Initiae oder Deutschlands Insekten. Fasc.59. S.1-24.
- Robineau-Desvoidy J.-B. 1830. Essai sur les Myodaires. [(Paris) Inst. de France, (Cl. des Sci. Math. et Phys., Roy de Sci.) Mém. présentés par divers Savants (2). Vol.2. P.1-813.
- Rondani C. 1869. Ortalidinae Italicae collectae, distinctae et ordinem dispositae. Dipterologiae Italicae Prodromus, Pars VII. Fasc. 3. Linea A. Ortaloidi. Dipter. Stirps XX. Ortalidinae Rndn // Bolletino della Societa Entomologica Italiana. Vol.1. P.5-37.
- Schiner J.R. 1860. Fauna Austriaca. Die Fliegen (Diptera) Teil II, H.2. S.73-184.
- Soós Á. 1980. 49. család: Otitidae — Foltoslegyek // Magyarorszag Állatvilaga. Fauna Hungariae. Budapest, Akadémiai Kiadó. Kötet 15, Diptera II, 2. Füzet. P.67-93.
- Soós Á. 1983. Untersuchungen des Typenmaterials der Rondanischen Sammlung. 2. Otitidae (Diptera) // Acta Zoologica Academiae Scientiarum Hungaricae. Bd.29. H.1-3. S.253-260.
- Soós Á. 1984. Family Otitidae. // Soós and Papp, eds. Catalogue of Palaearctic Diptera. Vol. 9. Micropezidae — Agromyzidae. Budapest, Akadémiai Kiadó. P.45-59.