

Female terminalia. Similar to those in *Dyscrasis*. Oviscape short, sparsely microtrichose.

Included species and distribution (Appendix 3, Fig. 135)

Neodyscrasis steyskali (Hernández-Ortiz, 1988: 8), comb. n. (Mexico: Chiapas, D.F., Durango, México, Morelos, Michoacán; Guatemala; Honduras; Venezuela) (see Kameneva, 2004, as *Pseudodyscrasis steyskali*, for distribution).

Discussion

The new genus is the sister-group of *Dyscrasis*. Both genera share numerous synapomorphic and symplesiomorphic characters (see diagnosis above). However, *Dyscrasis* possesses certain autapomorphies that strongly differentiate it from all Myennidini. Despite the monophyly of the *Dyscrasis* + *Neodyscrasis* lineage, *N. steyskali* and *P. scutellaris* share only a few symplesiomorphies, are very different in their appearance and diagnostic characters and do not form a monophyletic group. We therefore consider them to belong in different genera.

3. PHYLOGENETIC ANALYSIS OF THE MYENNIDINI

The list of characters used in the analysis appears in Appendix 2, and the character matrix is in Table 1. Trees were calculated using both the HENNIG86 and PAUP 4.0 programs.

One analysis with HENNIG86 in which no weight was assigned to all the characters was run. With the i.e.* (implicit enumeration) option HENNIG86 generated 156 cladograms (length 70, consistency index 57, retention index 81). Some examples of these trees are shown in Fig. 120. Two constant lineages appear on all the trees: the first includes all species of *Callopistromyia*, *Oedopa*, *Stictoedopa*, *Paroedopa*, and *Stictomyia*, while the second includes *Pseudotephritis* (except *P. corticalis*) and all species of *Myennis*, *Arborotites*, *Pseudotephritina*, *Dyscrasis*, *Pseudodyscrasis* and *Neodyscrasis*. The position of *Pseudotephritis corticalis* varies from tree to tree. It appears as the sister group either to the second of the above lineages (Fig. 120, trees 1, 2, 5, 7) or to the first (Fig. 120, trees 4, 6, 8), or in some cases in an unresolved trichotomy with both main lineages (Fig. 120, tree 3). The positions of many other terminal taxa also differ within the two main branches, but the following monophyletic groups are at least supported by all the analyses: *Oedopa capito* + *O. ascriptiva*, *Stictomyia longicornis* + *S. punctata*, *Ulidiotites dakotana* + *Namibotites argentata*, *Pseudotephritis* (except *P. corticalis*), *Myennis*, *Pseudotephritina* and *Dyscrasis* + *Pseudodyscrasis* + *Neodyscrasis* (henceforth “*Dyscrasis* group”). All the analyses show the following sister-group relationships: *Pseudotephritina* with the *Dyscrasis* group; *Myennis* with *Pseudotephritina* + *Dyscrasis* group; and *Arborotites* with *Myennis* + *Pseudotephritina* + *Dyscrasis* group.

A Nelson consensus tree was obtained from 156 i.e.* trees (Fig. 121). When analyzed in HENNIG86, it has length 76, consistency index 0.52, retention index 0.77; the same tree, if rooted and analyzed in PAUP, has length 75, consistency index 0.5333 and retention index 0.7941 (the numbers are truncated to two decimals in HENNIG86 and to four in PAUP). These differences are due to unresolved basal polytomy including the outgroup in the HENNIG86 tree, which was corrected before importing it into PAUP. The monophyletic lineages found in the analysis with the implicit enumeration option, are also present in the PAUP tree.

To resolve some of the polytomies and inconsistencies apparently due to incomplete morphological data and/or numerous homoplasies, successive weighting techniques were applied with use of both HENNIG86 and PAUP.

When applying implicit enumeration combined with the successive weighting technique in

Table 1
Matrix of character distribution in the Myennidini

	0000000001 1234567890	1111111112 1234567890	2222222223 1234567890	33 12
Outgroup	000000000?	000??0000	0??000??0	??
<i>Arborotites stuckenbergi</i>	0000000101	0000001000	1001001001	20
<i>Pseudotephritis vau</i>	0000000001	0001000000	0001001012	20
<i>Pseudotephritis approximata</i>	0000000001	0001100000	0001001011	20
<i>Pseudotephritis millepunctata</i>	0000000001	0000100000	0001001011	20
<i>Pseudotephritis corticalis</i>	0000000001	0000010000	0—1001000	21
<i>Callopistromyia annulipes</i>	0000000002	000-010100	1—1011000	21
<i>Callopistromyia strigula</i>	0000000002	000-010100	0—1011000	2?
<i>Oedopa capito</i>	0210000002	10100-0100	1—1111000	11
<i>Oedopa ascriptiva</i>	0210000002	10100-0100	1—1111000	1?
<i>Oedopa elegans</i>	?010000002	??100-0100	?—1???0?	??
<i>Stictoedopa ruizi</i>	1010000002	?010000001	1—1???0?	??
<i>Paroedopa punctigera</i>	1110000002	10100-0000	1—1?11000	1?
<i>Stictomyia longicornis</i>	1112000002	1010—0000	1—101110?	1?
<i>Stictomyia punctata</i>	1111000002	1010-10000	1—1011100	12
<i>Ulidiotites dakotana</i>	0010000000	101—0001	0—001100?	11
<i>Namibotites argentata</i>	0000000000	001—0101	1—0001000	00
<i>Myennis sibirica</i>	0000000110	0101001000	0100001001	21
<i>Myennis tricolor</i>	0000000110	0200101000	0100001001	21
<i>Myennis octopunctata</i>	0000000110	0200001000	0100001001	21
<i>Myennis mandschurica</i>	0000000110	0200101000	0100001002	21
<i>Pseudotephritina cribellum</i>	0000001111	0001100010	0101001001	21
<i>Pseudotephritina inaequalis</i>	0000001110	0001100010	0100001001	21
<i>Pseudodyscrasis scutellaris</i>	0000101010	0000101000	0011001001	22
<i>Neodyscrasis steyskali</i>	0000111010	0000101000	1010001000	22
<i>Dyscrasis hendeli</i>	0000211010	0000101000	1010001000	22

HENNIG86, nine shortest trees (length 329, consistency index 0.79, retention index 0.91) were found in the second cycle, and further cycles did not change it. A Nelson consensus tree was obtained from these trees (Fig. 122). When analyzed in HENNIG86, it also has length 329, consistency index 0.79, retention index 0.91; the tree with the same topology, when rooted and analyzed in PAUP, has length 70, consistency index 0.5714 and retention index 0.8235. The principal differences from the “unweighted” consensus tree are that *Paroedopa* is the sister-taxon of *Stictomyia*, and *Oedopa*, excluding *O. elegans*, is the sister-taxon of *Paroedopa* + *Stictomyia*; *Stictoedopa* is the sister-group of *Ulidiotites* + *Namibotites*; and the polytomy in *Pseudotephritis* (except *P. corticalis*) is resolved, whereas in *Myennis*, there is unresolved polytomy among three terminal taxa.

In the analysis with PAUP, characters 8 (the intra-alar area in female with cluster of setulae in addition to weak seta), 26 (the abdominal pleura setulose) and 27 (the metaphallic plate present) were assumed irreversible. A heuristic search (Hsearch) followed by contree and reweight index = ci commands after 3 repetitions produced an identical consensus tree (length 69, consistency index 0.5797, retention index 0.8294) (Fig. 123). In this tree, *Namibotites* has a more basal position on the *Callopistromyia*–*Oedopa* branch, manifesting its numerous differences from the *Oedopa* + *Stictoedopa* + *Paroedopa* + *Stictomyia* cluster, and also from

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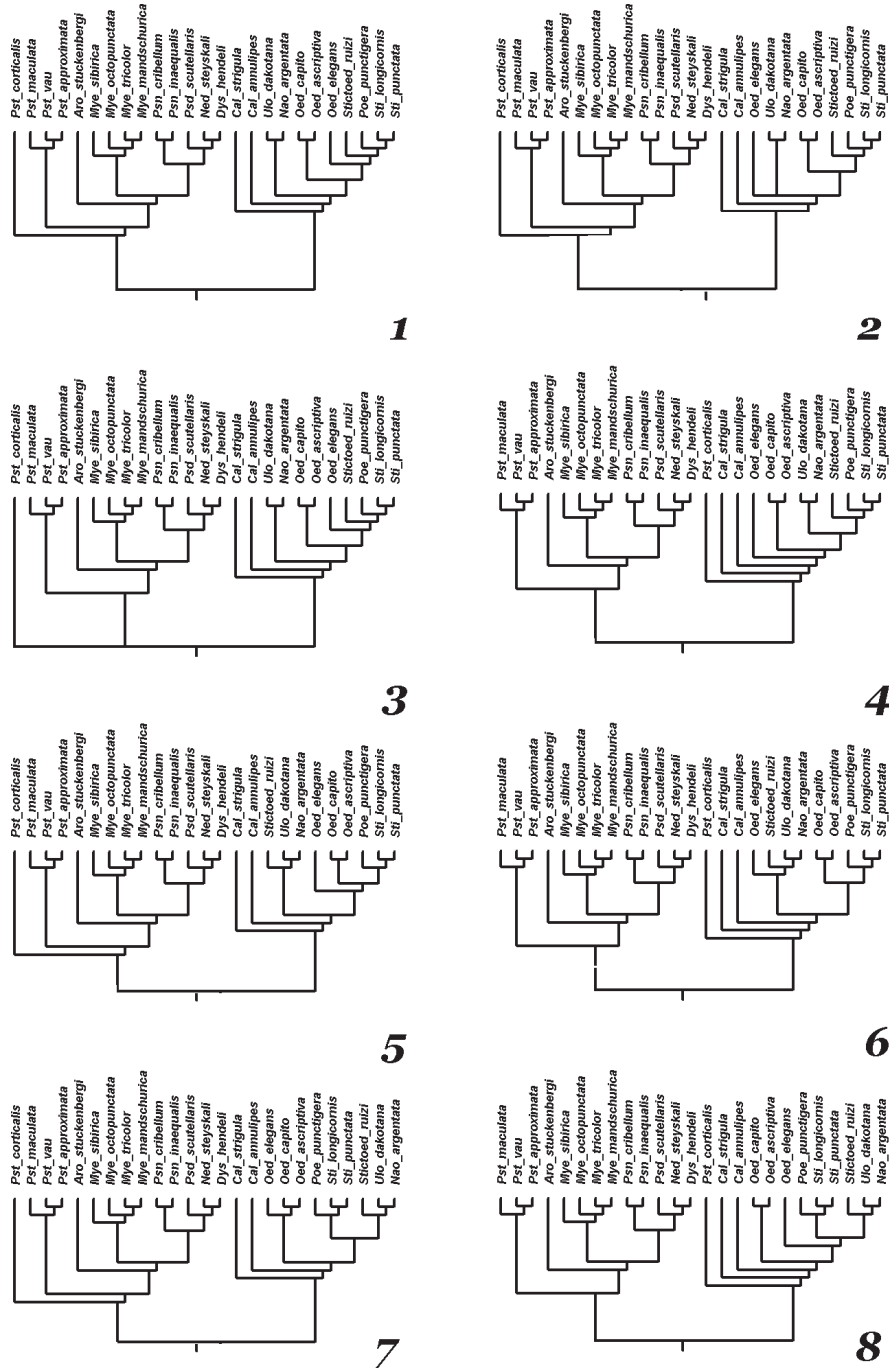


Fig. 120. Possible phylogenetic relationships in the tribe Myennidini. Eight of 156 equally parsimonious trees resulting from HENNIG86 analysis with implicit enumeration (i.e.*) option.

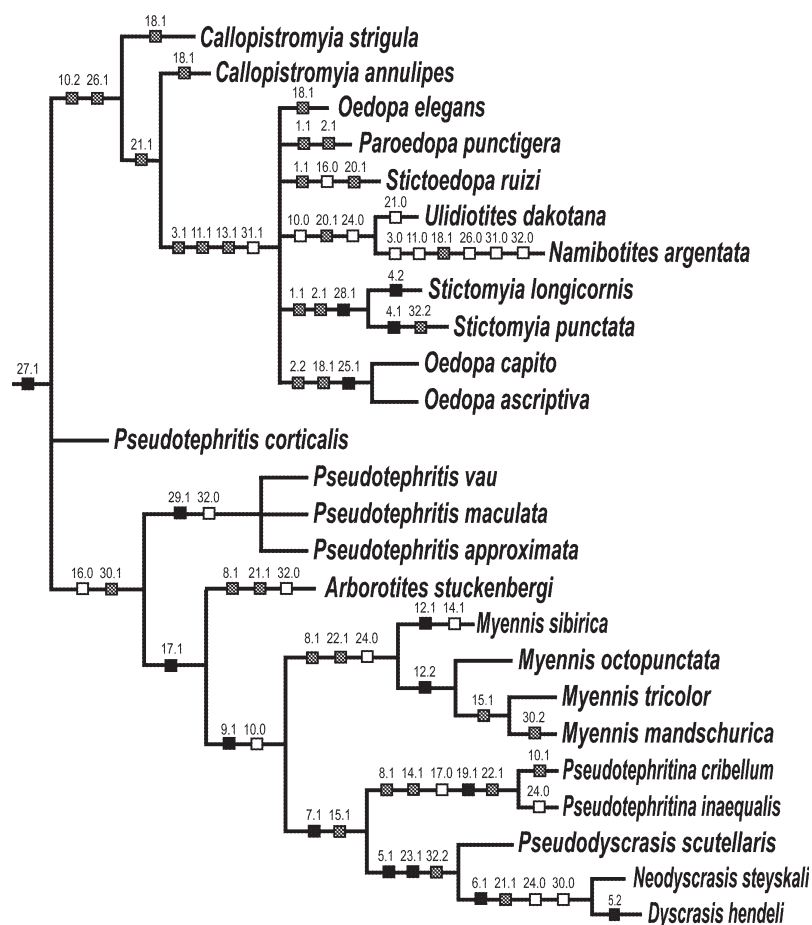


Fig. 121. Possible phylogenetic relationships in the tribe Myennidini. Nelson consensus tree of 156 equally parsimonious trees resulting from HENNIG86 analysis with i.e.* option and all the characters unweighted ("unweighted HENNIG86 analysis"). Character state changes represented by black bars are unique; those by gray bar are homoplasious; those by white bars are reversals.

Ulidiotites, which looks superficially similar. The *Dyscrasis* group also has a more basal position, and *Pseudotephritina* appears as part of the *Myennis* cluster, with *Myennis sibirica* as its sister-group.

In all three analyses, several more or less consistent clades were observed. The first major clade, which consists of *Callopistromyia*, *Oedopa*, *Paroedopa*, *Stictoedopa*, *Stictomyia*, *Ulidiotites* and *Namibotites* (the *Callopistromyia*–*Oedopa* clade), is supported by at least two synapomorphies (#10.2 and #26.1) in all the analyses, and additional synapomorphies in the two weighted analyses (#18.1 in the HENNIG86 analysis or #16.1, #32.1 in the PAUP analysis). Of these synapomorphies, only the setulose abdominal pleura (#26.1) is unambiguous, although there is reversal in *Namibotites* (but see discussion below); the polarity of most of the other characters is not well substantiated. Another possible synapomorphy of this clade is the presence of three or more subequal, thickened apicoventral setae of the midtibia (#11.1); this character was not examined in

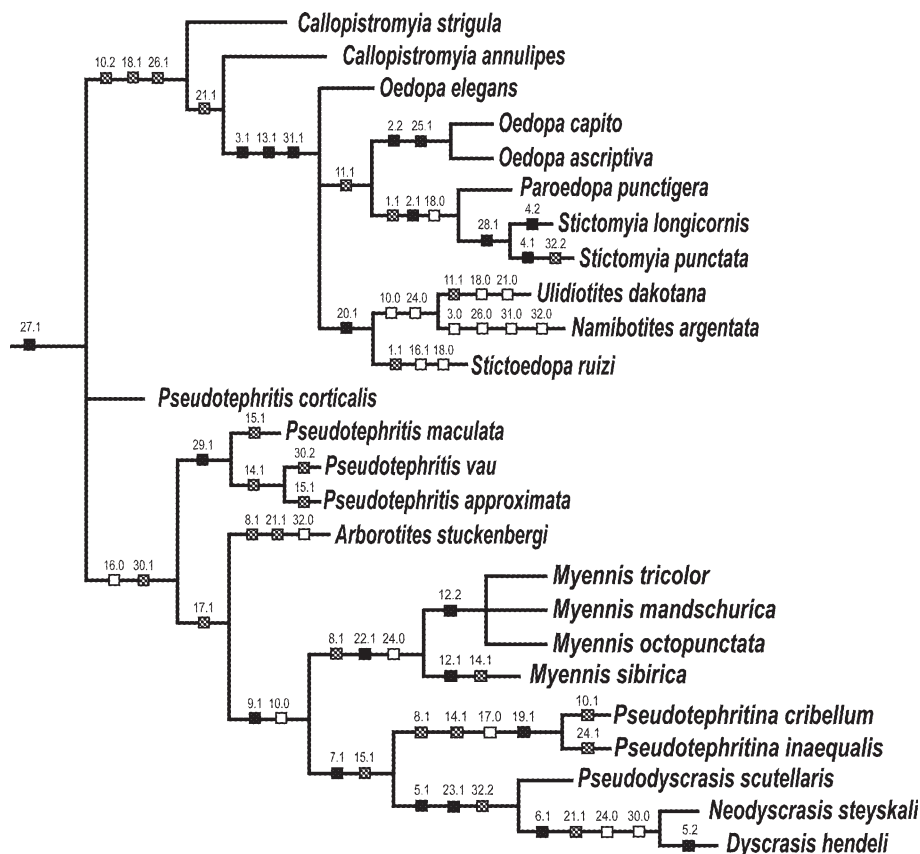


Fig. 122. Possible phylogenetic relationships in the tribe Myennidini. Nelson consensus tree of 9 shortest trees resulting from HENNIG86 analysis with ie* option and successive weighting technique ("weighted HENNIG86 analysis"). Character state changes represented by black bars are unique; those by gray bar are homoplasious; those by white bars are reversals.

Stictoedopa ruizi and *Oedopa elegans*, and the plesiomorphic condition occurs in *Namibotites*; consequently all the analyses show the apomorphic state dispersed among several taxa as a homoplastic character, but this may be due to incomplete morphological data.

Both species of *Callopistromyia* are placed at the base of the *Callopistromyia* – *Oedopa* clade; they differ from other taxa of the clade in having the plesiomorphic condition of the setulosity of vein R_1 ; indeed, both species have extensively developed speckled body and wing patterns, which are believed to constitute the ground plan of the tribe and are more or less reduced in the other taxa of this clade. No synapomorphies for both *Callopistromyia* species have been found, and the genus is possibly paraphyletic.

The *Oedopa* clade (*Oedopa*, *Paroedopa*, *Stictoedopa*, *Stictomyia*, *Ulidiotites* and *Namibotites*) is recognized as monophyletic in all three analyses based on three synapomorphies: high gena (#3.1, except in *Namibotites*); bare vein R_1 (#13.1); and finely setulose phallus (#31.1, bare (#31.0) in *Namibotites*). Within this clade, monophyly is supported for *Stictomyia* based on two synapomorphies (#4.1 (only if treated as ordered) and #28.1), and for *Oedopa* (except *O. elegans*) based on at least one (#2.2 and possibly #25.1).

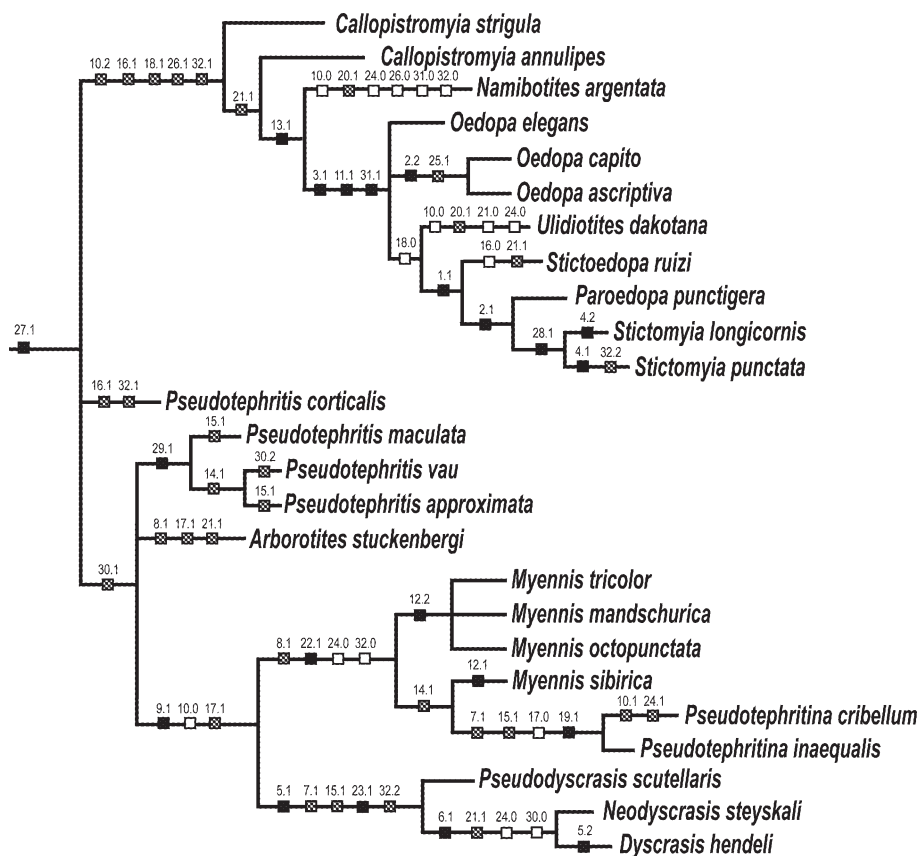


Fig. 123. Possible phylogenetic relationships in the tribe Myennidini. Tree resulting from PAUP analysis with heuristic search option combined with consensus and reweight from consistency index ("weighted PAUP analysis"). Characters 8, 26 and 27 are irreversible. Character state changes represented by black bars are unique; those by gray bar are homoplasious; those by white bars are reversals.

The *Paroedopa* + *Stictomyia* cluster is supported as monophyletic in both weighted cladograms by the presence of a round black spot between the antennae (#2.1). *Stictoedopa* is supported as the sister-group of *Paroedopa* + *Stictomyia* in the weighted cladogram that resulted from the PAUP analysis (Fig. 123) by head shape (short, but high and wide, #1.1). The distribution of these taxa also supports their possible relationship: they all occur in drier and more southern areas than the related genera *Callopistromyia* and *Oedopa*. However, morphological data on *Stictoedopa*, *Paroedopa* and *Oedopa elegans* remain incomplete, and further study may change the topology of this cluster.

The relationships of *Ulidiotites* and *Namibotites* require special mention. The type species of both genera are superficially very similar in having uniformly silver-gray microtrichose bodies, yellow legs without dark rings, and hyaline wings with vein R_1 bare and vein M anteriorly bent. Some of these characters (#10.0, 20.1, and #24.0) appear as synapomorphies on cladograms calculated with HENNIG86 (Figs. 121, 122). The placement of *Namibotites* within the *Oedopa* clade requires further assumptions of reversal in most of the important synapomorphies (#3.0,

#11.0, #26.0). Furthermore, *Namibotites* occurs in South Africa and may be most closely related to some Palearctic groups, either *Myennis* or *Pseudotephritis*, rather than to the *Oedopa* cluster, which is restricted to the New World. We therefore reject the hypothesis of close relationships between *Namibotites* and *Ulidiotites* (and with the *Oedopa* cluster at all) and consider its relationship to any major cluster within the Myennidini unproven.

The second major clade, supported by all three analyses, consists of *Pseudotephritis* (except *P. corticalis*), *Arborotites*, *Myennis*, *Pseudotephritina*, and the *Dyscrasis* group. However, its monophyly is poorly supported by only two weak synapomorphies: the presence of more than 2 prenisetae (#30.1) is subject to reversal or homoplasy, and the absence of hyaline marks in the brown area bordering crossvein R-M (#16.0) is a character of uncertain polarity (not shown on the cladogram).

Pseudotephritis (exclusive of *P. corticalis*) is supported as a monophyletic group in all three analyses by one synapomorphy (#29.1). The sister-group relationship of *P. approximata* with *P. millepunctata* is supported by the shape of the apical band (#15.1) on some unweighted cladograms from the HENNIG86 analysis; whereas *P. vau* appears as the sister-group of *P. approximata* on the weighted cladograms because of the long medial spot in cell r_1 (#14.1). The characters supporting each of these hypotheses vary in all three species and are of dubious value, thus we consider the relationships among *P. millepunctata*, *P. approximata* and *P. vau* unresolved (Fig. 121).

Arborotites, *Myennis*, *Pseudotephritina* and the *Dyscrasis* group form a monophyletic cluster in the two HENNIG86 analyses (Figs 121, 122), supported by the approximated crossveins (#17.1); this character varies in some species of Myennidini, and the monophyly of this clade should be therefore considered dubious. In the analysis with PAUP, *Arborotites* has a more basal position, forming an unresolved polytomy with *Pseudotephritis* and the *Myennis* + *Pseudotephritina* + *Dyscrasis* cluster (Fig. 123).

The *Dyscrasis* group is well supported as monophyletic in all three analyses by at least three synapomorphies (#5.1, #23.1, and #32.2). Of these synapomorphies, additional dorsocentral setae (#5.1) and the basal position of the second crossband on the wing (23.1) do not occur in other Myennidini. The presence of additional supra-alar setae (#6.1) supports the monophyly of the *Neodyscrasis* + *Dyscrasis* cluster. *Pseudodyscrasis* is its sister group in all the analyses. However, the position of the *Dyscrasis* group on the cladogram of the tribe varies considerably in different analyses.

In both HENNIG86 analyses (Figs 121, 122), the *Dyscrasis* group forms a cluster with *Pseudotephritina* supported by the presence of a velvety-black spot at the base of the intra-alar seta (#7.1).

In the weighted PAUP analysis with the “irreversible” option applied to certain characters, the *Dyscrasis* group appears as the sister group of *Myennis* + *Pseudotephritina*. The monophyly of this cluster is based on three weak synapomorphies: the absence of microtrichia on the scutellum (#9.1), absence or strong reduction of dark tibial rings (#10.0), and short distance between crossveins R-M and DM-Cu (#17.1). A shiny scutellum occurs in many lineages of Ulidiidae and higher Tephritoidea, thus independent reduction of microtrichia in both the *Myennis* + *Pseudotephritina* and *Dyscrasis* groups is not unlikely. Reduction of the dark rings on the tibiae also occurred in the *Oedopa* cluster (*Ulidiotites*), whereas the distance between crossveins considerably varies within the tribe.

Another monophyletic group of genera that share a single apomorphy (#8.1) includes

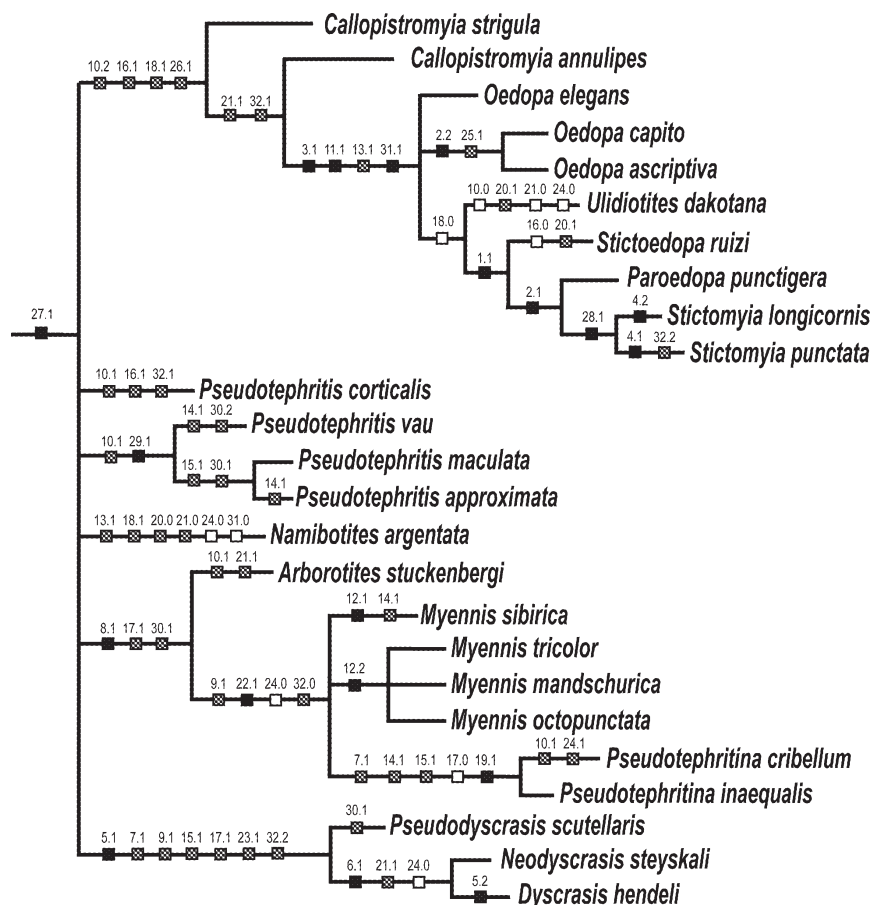


Fig. 124. Possible phylogenetic relationships in the tribe Myennidini. Tree manually modified from the “weighted PAUP analysis” tree with regards to objections to certain results of parsimony analysis. Characters 8, 26 and 27 are irreversible. Character state changes represented by black bars are unique; those by gray bar are homoplasious; those by white bars are reversals.

Myennis, *Pseudotephritina* and, possibly, *Arborotites* (henceforth, the “*Myennis* group”); the latter appears as a separate clade with character #8.1 as the result of homoplasy. The South African *Arborotites* retains characters that are symplesiomorphies with *Pseudotephritis* and *Callopiostromyia* (speckled body coloration, microtrichose scutellum, tibiae with dark rings), whereas *Myennis* and *Pseudotephritina* share a partially shiny scutellum (#9.1), more distal position of the second crossband of the wing (#22.1), and a speckled body pattern reduced and replaced with round spots at bases of setulae or completely reduced on certain abdominal tergites (#24.0) (Fig. 124).

All the analyses, however, show the *Myennis* group as non-monophyletic, with the *Dyscrasis* group arising within it. These computer-generated hypotheses are based on highly homoplastic characters (see above) and require the further assumption that character state #8.1 appears

independently in *Arborotites* and *Myennis* + *Pseudotephritina* and disappears in the *Dyscrasis* group as reversal. This character, however, does not occur elsewhere in the Ulidiidae, and the latter hypothesis, in our opinion, is less probable than the parallel loss of dark coloration and scutellar microtrichia in the *Myennis* group and the *Dyscrasis* group. We consider them as separately evolved from a common, *Pseudotephritis*-like ancestor. In this case the basal branching of the Myennidini cladogram must be polytomic (Fig. 124).

All the analyses support the monophyly of *Pseudotephritina* (#19.1) and of the cluster *Myennis octopunctata* + *M. mandschurica* + *M. tricolor* (#12.2), but the relationships of these taxa and *M. sibirica* are not well understood. *M. octopunctata*, *M. mandschurica*, *M. tricolor* and *M. sibirica* share a broadly darkened base of the costal cell (#12.1/12.2), which is a possible synapomorphy for *Myennis*, whereas *Pseudotephritina* and *M. sibirica* have a long medial spot beginning in cell r_1 (#14.1). However, the polarity of the latter character is unclear. We consider the relationships among these three clades unresolved (Fig. 124).

The position of *Pseudotephritis corticalis* within the Myennidini requires special mention, because in the unweighted trees from the HENNIG86 analysis it appears as the sister taxon either of the cluster of *Pseudotephritis* + *Myennis* group + *Dyscrasis* group or of the *Oedopa* cluster (Fig. 120). All of the consensus trees, both unweighted and weighted, leave it in an unresolved polytomy with these two clusters (Figs. 121–123). Indeed, it shares the speckled body pattern and single large midtibial seta (plesiomorphy or unclear polarity) with other *Pseudotephritis*, *Arborotites*, and *Callopistromyia*; it has a head shape and maculose wing pattern similar to *Callopistromyia* (polarity unclear), but its tibial pattern is like that in other *Pseudotephritis* (polarity unclear). If the maculose wing pattern is an apomorphy, then *P. corticalis* is the sister-group of the *Oedopa* cluster. If it is a plesiomorphic state, then *P. corticalis* must occupy a very basal position in the cladogram of the tribe. The distribution range (deciduous forest latitude zone and mountain areas south of it), which is unique in the Myennidini and rare in the Ulidiidae and higher Tephritoidea, may indirectly support such a basal position. Until new evidence is available, we consider this taxon in the basal unresolved polytomy with five other clusters (Fig. 124).

The last cladogram (Fig. 124) was modified manually, mainly from the cladogram obtained with PAUP, with regard to certain objections to the results of parsimony analysis (see above) based upon the existing character set, which did not allow resolution of inconsistencies caused by homoplasies and incomplete morphological data. The main features of such an “intuitive” tree is that *Namibotites* is excluded from the *Oedopa* cluster and the *Dyscrasis* group is excluded from the *Myennis* lineage. Both are placed in unresolved basal polytomy. The tree (length 76; consistency index 0.5263; retention index 0.7895) is longer and less consistent than the consensus trees that resulted from the weighted PAUP and HENNIG86 analyses, but it is almost as short and consistent as the consensus tree from the unweighted HENNIG86 analysis, showing rather high probability of the “intuitively” hypothesized relationships.

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APPENDIX 1

Myennidini material examined for this study (taxa arranged alphabetically)¹

Arborotites stuckenbergi: South African Republic: “Sarnia (Natal)”, 15.i.1912, ♀ (Janse) (with label: “Stuckenbergia Steyskal / ectopa Steyskal”) (HNHM).

Callopistromyia annulipes: Non-type material: Canada: Alberta: Champion, dead poplar bark, 14.ix.1961, 3 ♂, 8 ♀ (FIS) (CNC); British Columbia: Robson, 5.vi.1952, 2.ix.1952, 12.ix.1952, 3 ♀ (Foxlee) (CNC); USA: Alabama: Florence, Pollo study trap, ♀, 25.vii.1946 (USNM); Arizona: White Mts., 25.vii.1944, ♀ (Parker and Lot) (USNM); Connecticut: Hamden, 14.iv.1939, ♀ (Farland) (USNM); Georgia: Glassy Mt. / Rabun Co. 12.v.1953, ♀ (Seago) (USNM); Idaho: Goodling, 25.vii.1944, 2 ♂, 5 ♀; Payette, 27.vii.1944, ♂, ♀ (Peach) (USNM); Illinois: Champain, 1.vi.1953, ♀ (J.F.McAlpine) (CNC); Chicago, ♀ (USNM); Iowa: Ames, State Nursery, Malaise trap, 20.vi.1972, ♂, ♀ (Pinger) (USNM); Indiana: Lafayette, on tree trunk, 5.vi–25.ix.1915, ♂, 3 ♀ (Aldrich) (USNM); Louisiana: Melville, 11.v.1929, ♀ (Schott) (USNM); Maine: Monmouth, 24.vi.1957, ♀ (USNM); Bar Harbor, 16.vii.1958, ♀ (Vockeroth) (CNC); Maryland: Talbot County, McDaniel (Wades Point), Malaise trap in salt marsh with flowering *Baccharis*, 19–21.ix.1986, 1 ♀ (Steiner) (USNM); Massachusetts: Beverly, 18.9.1870, ♂, 3 ♀ (USNM); Michigan: Traverce City, 16.vi.1943, 3 ♀; Bear Lake, 25.vi.1943, 2 ♀; Nottawa, 27.viii.1932, 29.viii.1934, 2 ♂; East Lansing, 19.viii.1942, 2 ♂, ♀ (Sabrosky) (USNM); Mississippi: Lafayette Co., v–vi.1960, 2 ♂, 5 ♀ (Hull) (CNC); Missouri: Columbia, Malaise trap, 4 pm–7 am, 7.vi.1967, ♀ (Parker) (USNM); Nebraska: Lincoln, reared from *Ailantus* bark, 12.vii.1962, ♂, 3 ♀ (Hanson) (USNM); North Carolina: “N.C.”, ♀; Tryon 22.vii.1941, 2 ♂, ♀ (Melander) (USNM); Ohio: “Ohio” ♀; Athens, 1.ix.1931, ♀ (USNM); Oxford, 05.1945, 2 ♂, 3 ♀ (USNM); Tennessee: Great Smoky Mts. National Park, Greenbrier Cove, 2000', 18.v.1957, 3 ♀ (Vockeroth); Utah: Salt Lake City, 1928, 15 ♂, 8 ♀ (Cowie); Ogden, 3.iv.1943, ♂ (Knowlton and S. L. Wood) (USNM); Washington: Walla Walla, 2.v.1940, ♀ (Lanchester); Yakima Co., 11.vii.1944, ♀ (USNM); West Virginia: Hardy County, Lost River State Park, 3.ix.1978, 8 ♂, 18 ♀ (Steyskal) (USNM); Wisconsin: Madison, 2.vii.1951, ♀ (Snyder) (USNM); about 60 other specimens from various localities in New Jersey, New York, Pennsylvania, Virginia, D.C. and Maryland.

Callopistromyia strigula: Type material: Syntype ♂: [USA]: “Georgia. Poppig” [green label], “2800”, “Pterocalla strigula Loew 1873 ♂ Dr. Enderlein det.”, “Typus” [red label of “Enderlein’s” type], “Zool. Mus. Berlin” (ZMHB). Non-type material: Canada: Saskatchewan: Regina, 2.vii.1905, ♀ (Willing) (USNM); USA: Illinois: Urbana / Ill., 8.viii.1902, ♂, ♀ (Webster) (USNM); Iowa: Ames, State Nursery, Malaise trap, 25.vi.1972, ♂, 3 ♀ (Pinger) (USNM); Kansas: Lawrence, 900 ft., May, ♀ (Tucker); idem, 16.v.1897, 3 ♂, 3 ♀ (USNM); Maryland: Mtg. Co., C and O Canal near Plummrs Island, on fallen branch of *Platanus*, 31.viii.1989, ♂ (Norrbom and Steiner) (USNM); Michigan: Lapeer Co., Deerfield twp. 5.ix.1943, ♂, ♀, 11.viii.1946, ♂; Wayne Co., Grosse Ile. 31.v.1948, ♂, 26.ix.1958, ♀ (Steyskal) (USNM); Minnesota: Rush City, 7.ix.1952, ♀ (Sabrosky) (USNM); Nebraska: Lincoln, April ♂, ♀ (USNM); Pennsylvania: Pinsleny, 24.vii.1907, ♀ (USNM); South Dakota: Brookings, ♂ (Aldrich) (USNM); Minnesota: Rush City, 7.ix.1952, ♀ (Sabrosky) (USNM);

¹Labels of primary types are cited verbatim, with slash separating lines and back-slash separating label downside inscriptions.

Utah: Farmington, vi–vii.1944, 2 ♀ (Bohart) (USNM); Colorado: “Colo.”, coll. Coquillett, ♀ (USNM).

Dyscrasis hendeli: Type material: Holotype ♂: “Dallas Tex. / III 29.07”, “FCBishopp / collector”, “Dyscrasis / hendeli / n. sp.”, “Type / No. 43575 / U.S.N.M.”, allotype ♀, labels as in the holotype; 14 of 17 paratypes mentioned in original description: Dallas, Texas, 17.iii.1908, ♀, idem, 20.iii.1908, ♂, ♀, idem, 29.iii.1908, 2 ♂, idem, 30.v.08, ♀ (Bishopp); Uvalde, Tex. in trap, 16.xi.1915, ♂ (Bishopp No. 5672); Matamoros, Mexico, in traps, 12.ix.1931, ♂, 3 ♀ (Stephens); “Mercedes, Texas, in trap”, 26.viii.1931, ♂ (Heard); “San Benito, Tex. on office window, 26.v.1930, ♂ (Greer); “Tex.”, ♀ (USNM). Non-type material: USA: Arizona: Baboquivari Mts., 23.ix.1923, ♂, ♀ (Bryant) (SIZK); Cave Creek, 6.x.1951, ♂ (Sturtevant); Nogales, 31.vii.1944, 2 ♀ (Sturtevant) (USNM); Mexico: Morelos: Cañon de Lobos, 17–22.iii.1960, 2 ♀ (Benschoter) (SIZK); “Morelos”, 11.1964, ♂, ♀ (Maltbyr) (USNM).

Myennis mandschurica: Type material: Paratype ♂: [China]: “Mandschurei, Charbin / 7.VII.1953, W. Alin”, “Myennis mandschurica m. P.T. det. M. Hering 1955”, “Paratypus” (DEI). Non-type material: Russia: Primorskiy kray: Tigrovaya, Suchan district, 2.vii.1927, ♀ (Stackelberg) (ZISP).

Myennis sibirica: Type material: Syntype ♀: [Far East Russia: Khabarovskiy Kray: Raddevka] “sibirica” [Portschinsky’s handwriting] (ZISP). Non-type material: Russia: Khabarovskiy Kray: Malyy Khingan, Dichun River, 1.vii.1980, 2 ♀ (Shatalkin); Pashkovo, bleeding willow, 1.vii.1980, ♀ (Ozerov); Primorskiy Kray, 40 km SE of Ussuriysk [Kamenushka], ♂ (Ozerov) (ZMUM).

Myennis tricolor: Type material: Syntypes 5 ♂, 3 ♀: [Turkmenistan]: “Sary Yasy / III.87”, “Reitter 1894 / Turkmenien”, 1 ♂ and 1 ♀ with red labels “Type” and 4 ♂ and 2 ♀ with yellow labels “Paratype” (NHMW). Non-type material: Uzbekistan: Samarqand, 27.viii.1938, 8.vi.1939, 3 ♀ (collector unknown) (SIZK); Buhara, 10.vi.1928, ♀ (Zimin) (HNHM); Daynau [= Denow], [ex] turanga [*Populus euphratica*], 13.iv.1973–13.v.1973, 2 ♂ [Krivosheina(?)] (HNHM); Tajikistan: “Stalinabad” [= Dushanbe], 23.VIII.1942, ♀ (Gussakovski) (ZISP).

Neodyscrasis steyskali: Non-type material: Mexico: “Iguala, Finca Tlatocan” [Guerrero], 07.1987, ♀ (Figuera) (USNM); Guatemala: “Guatemala”, 6.iv.1931, ♂ (Axl Pirá); Guatemala City, 29.v, 4, 10, 13.vi.1931, 2 ♂, 4 ♀ (Bates) (USNM); Venezuela: Distrito Federal, 14 km N Colonia Tovar, 1750 m, 21–25.i.1983, ♂, ♀ (Flint) (USNM); idem, ♂ (SIZK).

Oedopa ascriptiva: Type material: Syntypes: ♂: “S. Colorado 879 –I”, “coll. Hendel”, “Oedopa / det. Hendel \ ascriptiva / TYPE”; ♀: “Morrison / Colorado”, “coll. Hendel”, “Oedopa / det. Hendel \ ascriptiva H.” (NHMW). Non-type material: “Col.”, ♀; “TDA Cockerel / Co. Col”; ♀; “Colorado, Rio Grande Co. 8000', South Fork, 20.vi.1982, ♀ (Wirth) (USNM); Echo L, 600', Mt. Evans, Colo. 17.vii.1961, ♂ (Mason) (CNC).

Oedopa capito: Type material: Syntypes: 4 ♂, 1 ♀: “Neb.”, “capito” and “capito m.” [Loew’s handwriting on 2 specimens], “Coll. Loew”, “Type 13260” (red label) (MCZ; CNC). Non-type material: Canada: Alberta: Lethbridge, 3.vii.1923, ♂ (Gray) (CNC); California: Palm Springs, on *Chilopsis*, 3.v.1955, ♂ (Mason) (CNC). USA: Mississippi: Lafayette Co. ♂, ♀ (Hull) (CNC); Nevada: Clark 36°05.2' N, 114°58.8' W, 10–11.v.2001, ♀ (D. and W.N. Mathis) (USNM).

Oedopa sp. near *ascriptiva*: Canada: British Columbia: Osoyoos, 20.vii.1966, ♂ (Lazorko) (SIZK); Oliver, 10 ♂, 1 ♀ (MacDougall and Kelton) (CNC); Alberta: Lethbridge, 3.vii.1923, ♂ (Gray) (CNC); Saskatchewan: Redfield, 10.vi.1978, ♂ (Lazorko) (SIZK). USA: Utah:

Strawberry Valley, Wasatch Co. dry river bed and bank, 9.vii.1961, ♀ (Chilcott); Colorado: Great Sand Dunes Nat. Mon. 7600', 24.vii.1968, ♂ (Becker) (CNC); New Mexico: Highrolls, 11.vi.1902, ♂ ("capito Lw. det. Cresson") (HNHM).

Paroedopa punctigera: Type material: Syntypes: ♀: "Catal Spgs / 29.4 Ar", "Coll. Hubbard / and Schwarz"; "Type / No 4471 / U.S.N.M." less than red papermore than "Paroedopa / punctigera Coq."; ♀: "Ckll. 1457 / StaFe July" [not marked as a type] (USNM). Non-type: USA: Arizona: Upper Sabina Cyn., Tucson, Santa Catalina Mts., 1, 24.v. 1971, 3 ♂, 2 ♀; Redington pass, 5 mi. E Tucson, 18.x.1970, ♂; Cochise, Strong-hold, 12.iii.1971, ♂ (Foote) (CMP); Cochise Co., Huachuca Mts., 5354 Ash C[an]y[o]n. Rd., 0.5 mi W of H[igh]w[a]y 92 / E, 5100 ft, at UV light, 3.vi.1992, ♀ (McFarland), S[outh]W[est] Res[earch] Sta[tion], 5 mi SW Portal, 5400 ft, 06.1967, ♂ (USNM); New Mexico: Alamogordo, 10.iv–1.v.1902, 2 ♂, 1 ♀ (NHMW); idem, 19.iv.1902, ♂; idem, 26.iv.1902, ♀ (Cresson det.) (HNHM); Las Vegas, "9.8", ♀ (H. S. Barber) (Cresson det.) (NHMW); idem, 6.v.1902, ♀; Carlsbad, 3.v.1905, ♂ ([?]e) (USNM); Texas: Big Bend N.P., Chihuahuan desert nr. Nugent Mt., 6.vi.1967, ♂ (dissected) (Blanchard) (SIZK).

Pseudodyscrasis scutellaris: Non-type material: Mexico: Tlaxcala: Calpulalpan, "Collectado en Maguay", 25.v.1967, ♀ (Martell); México: Chapingo, 26.viii.1962, ♂ (Pacheco) (USNM).

Pseudotephritina cribellum: Type material: Syntype ♂ of *S. cribellum*: [USA]: "Neb." [printed], "cribellum / m." [Loew's handwriting on green paper bar], "Loew/Coll.", "Type / 13259" (MCZ); holotype ♀ of *S. cribrum*: "cribrum / m." [Loew's handwriting on green paper bar], "Loew/Coll.", "Type / 13258" (MCZ). Non-type material (only labels for new records are listed): Iowa: Ames State Nursery, Ames, 25–30.vi. 2, 13.vii.1972, Malaise trap, ♂, 4 ♀ (Pinger) (USNM); Michigan, Monroe, 29.vii.1958, ♀; idem, 20.ix.1958, ♀ (Steyskal) (HNHM); Ohio: 7 mi E Kent, Ohio, 24.vi.1963, ♀ (Suman) (USNM); South Dakota: Yankton, 30.vi.1960, ♂, 3 ♀ (Edman); Big Stone Cy., 14.vi.1932 (Aldrich) (USNM); Wyoming: Devils Tower Nation. Monument, 19.viii.1969, 2 ♂ (B. Foote) (CMP).

Pseudotephritina inaequalis: Type material: Holotype ♀: "De Beque Colo. / July 29 1922", "ERKalmbach / collector", "*Pseudotephritis (Pseudotephritina) / inaequalis / type / JRMalloch det.*", "Type / No. 43457 / U.S.N.M." [red paper label] (USNM). Non-type material: Canada: Alberta: Lethbridge and Medicine Hat, 25.viii.1922, 4.vii.1927, 10.vii.1937, 6 ♂, 4 ♀ (Gray; Seamans; Bryant) (CNC; USNM); USA: Utah: Emery Co., Wild Horse Creek 1.5 mi W Wild Horse Butte, swept from leaves of cottonwood (*Populus*), 26–27, 31.vii.1982, 2 ♀ (Menke) (USNM); over 50 specimens from most localities listed by Steyskal (1962) were reexamined.

Pseudotephritis approximata: Non-type material: USA: District Columbia: Washington, 16.viii.1913, ♀ (USNM); Indiana: La Fayette, 27.vi.1916, ♀ (Aldrich) (USNM); Iowa: Ames, State Nursery, Malaise trap, 28, 30.vi.1972, 2 ♂, ♀ (Pinger) (USNM); Kansas: Lawrence, 1.06, 2 ♀, 13.vi.1900, ♂ (Kahl) (CMP); Maryland: Colesville, 17.vi.1975, ♂, 4.vii.1976, ♀ (Wirth) (USNM); Mississippi: Oxford, 05.1945, 3 ♀ (USNM); Missouri: Columbia, Malaise trap, 7 am–4 pm, 9.vii.1961, ♀ (Parker) (USNM); Nebraska: Otoe Co., Dunbar, 19.vii.1969, ♀ (Wirth) (USNM); New York: Fleetwood, "28–30 July", ♀ (Bromley coll.) (USNM); Oklahoma: Sequoyah Co., Tenkiller Lake, 3 mi W Blackgum, 11–14.vii.1979, ♂ (Davis) (USNM); Pennsylvania: "24 Jul.", 7 ♂, 4 ♀; Pittsburgh, Shealy Park, 29.vii.1908, 3 ♀; Hershey, "4-7-90", ♀ (Yackley) (CMP); Virginia: Falls Church, 30.vii.1960, ♂, ♀ (Wirth) (USNM); West Virginia: Hardy Co., Lost River State Park, 11.vii.1974, 2 ♂, 2 ♀ (Steyskal) (USNM); about 15 more specimens from various localities in Virginia, Maryland and Pennsylvania.

Pseudotephritis corticalis: Type material: Syntypes *Stictocephala corticalis* Loew: ♂: “7653” [black ink; paper bar w/ 2 red lines], “29.” [printed on blue paper], “corticalis / Fitch [?] Mspt.” [Loew’s h/w; second word not understood], “Loew/Coll”, “Type / 15082 [red square]”; ♀: “corticalis” [Osten Sacken’s [?] h/w], “Loew/Coll”; “Type / 15082 [red square]” (MCZ); Syntype *Myennis trypetoptera* Hennig: ♀: “vic. Luga NW Russia / Tolmatschevo 10.VI.1937 / Stackelberg”, “Micropraep. Fluegel”, “Typus” (DEI). Non-type material: Canada: Alberta: McMurray, 14, 17.vii. 1953, 4 ♂, ♀ (W. J. Brown) (CNC); British Columbia, Chilcotin, 18.vi.1920, ♂ (Buckell); Vernon, 8.vi.1936, ♂, ♀ (Leech) (CNC); Manitoba: Whitewater Lake, 4 mi N Whitewater, 22.vi.1958, ♂ (Hurley) (CNC); Ontario: Gibson Lake, 6 mi E Go Home Bay, 6.v.1959, ♂ (Chilcott) (CNC); Quebec: Beechgrove, 45°39’N, 76°08’W, 16.v.1962, 20.v.1970, 2 ♀ (Vockeroth) (CNC); Saskatchewan: Prince Albert, 31.v.1948, ♂ (Vockeroth) (CNC); USA: Ohio: “W[ater]loo. T[o]wn[shi]p”, Athens Co., 16.xi.1937, sex? (Stehr); Utah: Roosevelt, 19.vii.1950, ♀ (Harmston); about 60 specimens from most localities listed by Steyskal (1962) (USNM); Russia: East Siberia: Amur Oblast: Zeya, 17.vi.1977, ♂ (Belov) (ZMUM); Klimoutsi, 40 km W of Svobodnyy, 3.viii.1958, ♂, ♀ (G. Zinoviyev) (HNHM); Primorsky Kray: Vinogradovka, 30.v.1929, ♀ (Kiritschenko) (ZISP); Yakovlevka, Spassk Distr., 6.viii.1926, ♂ (Dyakonov and Filipyev) (HNHM); Ternei, 17.v.1936, 2 ♀ (Grunin) (ZMUM); Mongolia: Central Aimak: Nucht in Bogdo ul, 12 km SE of Centre 1650 m, 3.vi.1967, ♀ (Dr. Z. Kaszab exped.) (HNHM).

Pseudotephritis metzi: Holotype ♀: “Cold Spring / Harbor L.I.”, “Type 7718” [red paper], “HOLOTYPE / No. metzi” (MCZ) [red paper].

Pseudotephritis millepunctata: Type material: Holotype ♀: “St. Siza, Sutschan, Ussuri-Gebiet”, 15.vi.1927 (Stackelberg) (ZISP). Non-type material: China: “Han-tao-he-tzu, Manchukuo”, 20.viii.1936, ♂ (Weymarn) (CMP); Heilongjiang: “Gaolinszy”, 2–8.vii.1939, ♀ (Alin) (DEI). Russia: East Siberia: Chita oblast: Undurga River, 9.vii.1977, ♂ (Kovalev) (ZMUM); Far East Russia: Amur Oblast, 40 km W of Svobodnyy, 3.v.1958, ♀ (G. Zinoviyev) (ZISP); Pashkovo, on bleeding willow, 16.vii.1980, ♀ (Ozerov) (ZMUM); Khabarovsk Kray: Jewish Autonomous Oblast: Malyy Khingan Range, Dichun River, 15–16.vii.1979, 2 ♂ (Shatalkin) (ZMUM); Primorsky Kray: Kamenushka 30 km SE of Ussuriysk, 21.viii.1980, 2 ♀ (Ozerov) (ZMUM).

Pseudotephritis vau: Non-type material: Canada: Alberta; British Columbia; Northwest Territories: Norman Wells, 16.viii.1969, ♀ (Shewell) (CNC); Nova Scotia: Smiley Brook, nr. Brooklyn Hants, 18.vii.1968, ♂ (Ferguson) (USNM); Ontario, Quebec, USA: Alabama: Kushla, 18–31.x.1916, 3 ♂, ♀ (Sturtevant); Connecticut: Redding, 5.vi.1932, ♀ (Melander); Shelton, 10.viii.1932, ♀; New Haven, 9.v.1916, ♂ (Plumb); Milford, 9.viii.1924, ♀ (Kaston); Georgia: Atlanta, 21.vii.1947, ♀ (Fattig); Florida: Florida Caverns Sta. Park, Jackson Co., 26.v.1973, 2 ♀ (Wirth); Gainesville, 4.x.1981, ♀ (Gross) (USNM); Iowa: Ames, 15.v.1970, 6 ♀ (Pinger); Kansas: Oswego, Labette Co., 9.viii.1966, 2 ♀ (Hevel); Louisiana: Buras, 3 ♂, 2 ♀ (Heatrlick); Maine: Cherryfield, 28.vii.1929, ♀; Massachusetts: Springfield, 13.6.1901, ♂; Woods Hole, 6.vi–19.vii.1923, 7 ♂, 2 ♀ (Sturtevant); Oklahoma: Sequoyah Co., Tenkiller Lake, 3 mi W Blackgum, 6–9.vii.1979, ♂, ♀ (Davis); Oregon: Benton Co., McDonald Forest, Oak Creek, 30.vi.1971, ♂ (Steyskal); Pennsylvania: Philadelphia, 6.05, 2 ♂ (HNHM); West Virginia: Kanawha Co., S Charleston, ex white oak, 4.vi.1982, ♀ (Adler); altogether about 50 ♂, 90 ♀, also from localities cited by Steyskal (1962) and Canadian provinces listed above.

Stictomyia longicornis Bigot: Non-type material: USA: Arizona: Slobe, 24.iv.1938, ♂, 2 ♀

(F.H. Parker) (SIZK); 2 mi E of Yarnell, Yavapai Co. 27.vi.1966, 2 ♂, 2 ♀ (Westcott); Catalina Mts. 8.v.1944, ♂, 2 ♀ (Frost, Jr.) (USNM); New Mexico: Alamogordo, 6.vi.1902, ♂ (Cresson det.) (NHMW); idem, 10.v.1902, ♀ (USNM); Texas: S. Antonio, on *Opuntia*, 31.05, ♂, ♀ (Morgan) (SIZK); Mexico: Ciudad Victoria, 09.1965, ♂, 6 ♀ (Krauss) (USNM); “Mexico, 1883”, 6 ♂, 3 ♀, “445”, “*Opuntia*”, ♂, “Mexico”, 3 ♂, “Mexico, Sta. Fe, 1871”, ♀ (Bilimek) (NHMW); locality not given: ♀ (NHMW).

Stictomyia punctata Coquillett: Type material: Holotype ♀: “Foot of / Little Mtn / Mesilla / Valley”, “on red / cactus flower / Apr. 10. / (Ckll.) | Ckll. 5357”, “Stictomyia / punctata / Coq.”, “Type / No. 4472 / U.S.N.M.” (USNM). Non-type material: USA: Idaho: 5 mi NE Malta, 7.ix.1962, ♀ (Barr); Arizona: Tucson, “Nichol. | subplot /656”, 27.vi.1930, ♀; idem, Pima Co. 4.vi.1952, ♂, ♀ (Casier, Gertsch, Schrammel); idem, 5 ml NE Tucson, Pima Co., “Biol. Note 7113”, 4.iv.1971, ♀ (Foote); Santa Rita Range Res. Pima Co., 4.vi.1957, swept from mesquite, 2 ♂, 3 ♀ (Butler); S[outh]W[est] Res[earch] Sta[tion], 5 mi SW Portal, 5400 ft, 06.1967, ♂ (USNM); New Mexico: Alamogordo, 5.vi.1902 (USNM).

Ulidiotites dakotana Steyskal: Type material: Holotype ♂: South Dakota: “Martin, S.D. / July 6–1924”, “H.”; “Holotype / Ulidiotites / dakotana / Steyskal” [red paper, Steyskal’s handwriting] (USNM). Paratypes: South Dakota: 3 ♂: “Martin, S.D. / July 6–1924 | H.”, “Paratype / Ulidiotites / dakotana / Steyskal [red paper, Steyskal’s handwriting] (USNM). Non-type material: USA: Wyoming: D. Johnston Pl. Station, Glenrock, “341”, 31.v.1974 (Lavigne) (new record); Nevada: Humboldt Co., 10 mi N of Winnemucca, 23.vi.1971, 21 ♂, 10 ♀ (Oman) (new record); Utah: Coral Pink Sand Dunes, Kane Co. 3.vii.1966, 14 ♂, 4 ♀ (Allen) (new record); Kansas: Medora, Sand Hills, 29.vii.1936 (Oman) (all USNM) (new record); Mississippi: Lafayette Co. ♀ (Hull) (CNC) (new record).

APPENDIX 2

List of characters used in the cladistic analysis

The character distributions among the genera are shown in Table 1.

Head

1. Shape: 0) almost as high as long and at most 1.5 times as wide as long; 1) 1.8–2.2 times higher and wider than long.
2. Face between antennae: 0) without a spot; 1) with a velvety-black spot; 2) with a transverse bar. Unordered.
3. Gena: 0) less than half as high as eye; 1) more than half as high as eye.
4. First flagellomere in lateral view: 0) short oval or round; 1) 3–3.5 times as long as wide; 2) more than 4 times as long as wide.

Thorax

5. Dorsocentral setae: 0) two or one postsutural; 1) more than 2 postsuturals; 2) more than 2 postsuturals and 1 presutural setae. *Pseudodyscrasis scutellaris*, *Neodyscrasis steyskali* and *Dyscrasis hendeli* differ from other Myennidini in having additional setae, including more than 2 dorsocentrals, which is an apomorphic state, compared to the chaetotaxy of other Myennidini; *D. hendeli*, moreover, has presutural dorsocentrals.
6. Supra-alar setae: 0) one; 1) two.
7. Postalar area: 0) without velvety black spot; 1) with velvety black spot.

A similar spot occurs in *Pseudotephritina*, *Dyscrasis*, *Neodyscrasis* and *Pseudodyscrasis*, but is absent in other Myennidini.

8. Intra-alar area (in female): 0) with single strong intra-alar seta; 1) with cluster of setulae in addition to weak intra-alar seta.
9. Scutellum: 0) completely microtrichose; 1) largely shiny or at least with 2 large shiny spots.

Legs

10. Midtibial pattern: 0) uniformly yellow; 1) with black ring on apical half and completely darkened basal half; 2) with 2–3 dark rings and yellow ring or wider area in basal third.
11. Thickened apicoventral setae of midtibia: 0) one of the setae is twice or more as long as others; 1) three or more setae subequal, the shortest 0.6–0.7 times as long as the longest.

Wing

12. Basal two thirds of costal cell: 0) with a hyaline spot crossing cell and separating basal brown spot from apex; 1) with hyaline incision at anterior margin; 2) completely brown. Ordered.
13. Vein R_1 : 0) apically setulose; 1) bare.
14. Medial spot in cell r_1 : 0) not extending posterior to vein R_{4+5} ; 1) extending posterior to vein R_{4+5} .
15. Apical spot on vein R_{4+5} : 0) separated from spot at apex of cell r_{2+3} ; 1) fused with spot at apex of cell r_{2+3} .
16. Brown area bordering crossvein R-M: 0) without hyaline marks; 1) with hyaline spots on each side.
17. Distance between crossveins R-M and DM-Cu: 0) as long as R-M; 1) shorter than R-M.
18. Crossvein DM-Cu: 0) straight; 1) sinuous.
19. Stump vein of M in discal cell: 0) absent; 1) present.
20. Vein M: 0) not bent anteriorly; 1) conspicuously bent, ending before wing apex.
21. Extension of cell bcu: 0) as long as or shorter than vein A_1+Cu_2 ; 1) longer than A_1+Cu_2 .
22. Second crossband (from costal cell through middle or base of discomedial cell): 0) ending on medial portion of vein A_1 ; 1) ending apical to apex of A_1+Cu_2 .
23. Crossband extending from costal cell to A_1+Cu_2 : 0) crossing middle of cell dm; 1) crossing base of dm.

Abdomen

24. Abdominal tergite 3: 0) uniformly microtrichose; 1) with darker spots at seta bases.
25. Female sternite 4: 0) subquadrate; 1) elongate oval.
26. Setulae on pleural membrane of abdomen: 0) absent; 1) present.
27. Metaphallic plate: 0) absent; 1) present.
28. Metaphallic plate: 0) apically pointed; 1) truncated or incised.
29. Metaphallic plate length: 0) moderate or short; 1) long and narrow.
30. Number of prensisetae: 0) two; 1) three; 2) four to five.
31. Phallus: 0) bare; 1) finely trichose; 2) long spinulose, at least on apical third. Ordered.
32. Neck of spermatheca (normally inverted inside spermatheca): 0) absent; 1) short; 2) long.

APPENDIX 3
Distribution Maps

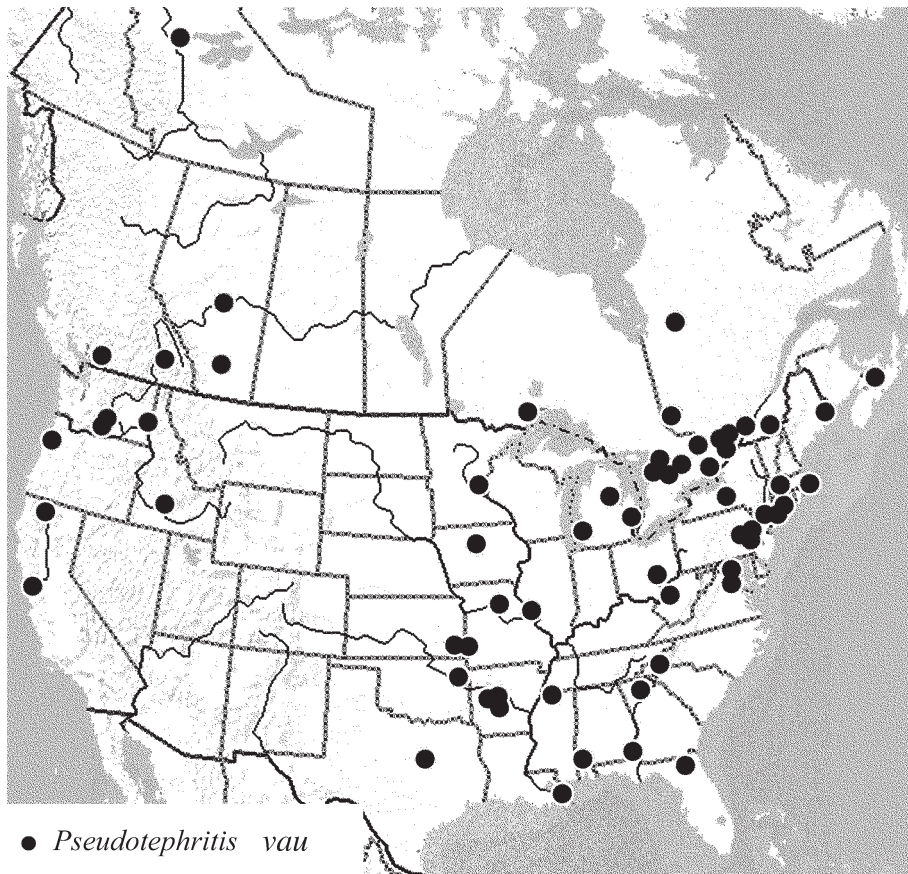


Fig. 125. Distribution map of *Pseudotephritis vau*.

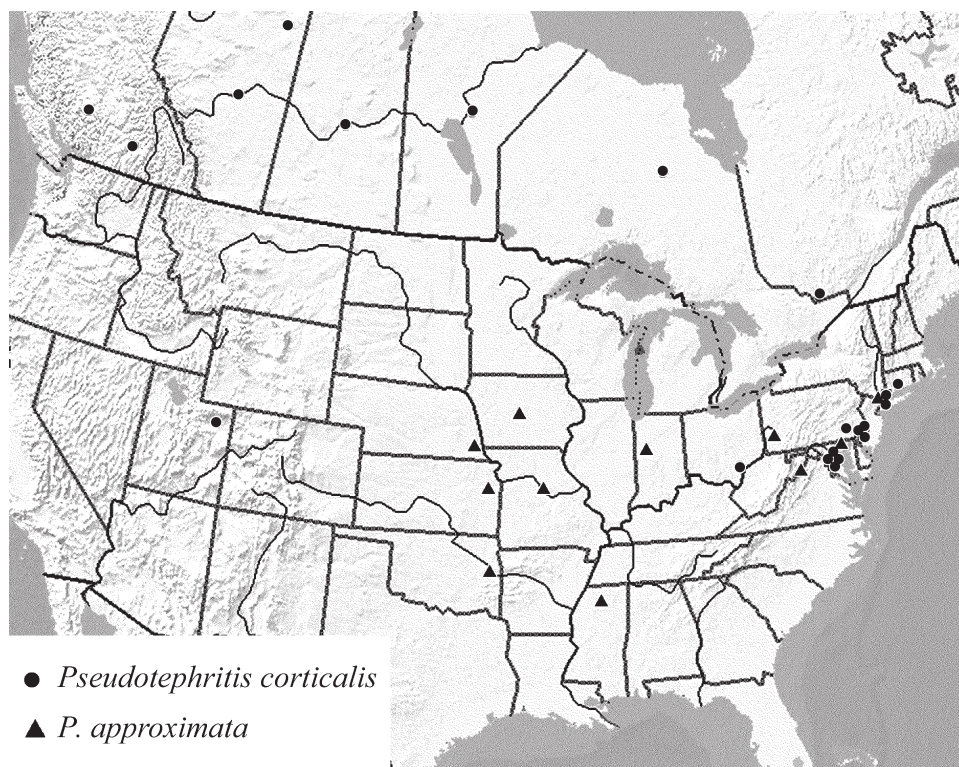


Fig. 126. Distribution map of *Pseudotephritis corticalis* and *P. approximata* in the Nearctic Region.

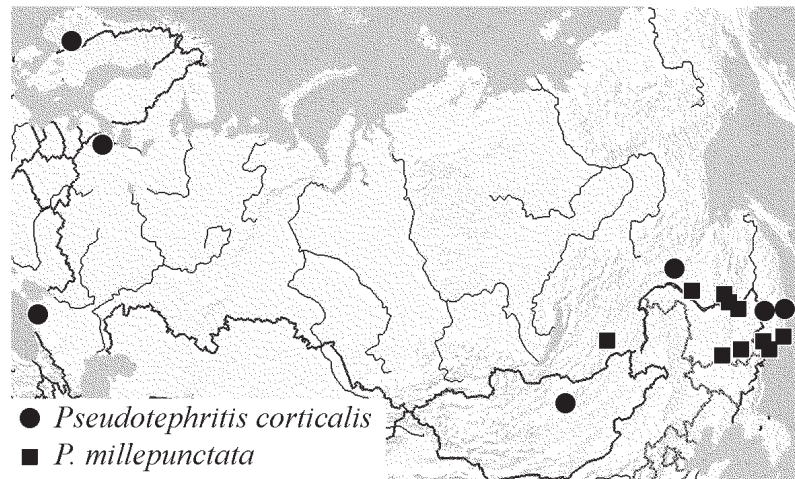


Fig. 127. Distribution map of *Pseudotephritis corticalis* and *P. millepunctata* in the Palearctic Region.

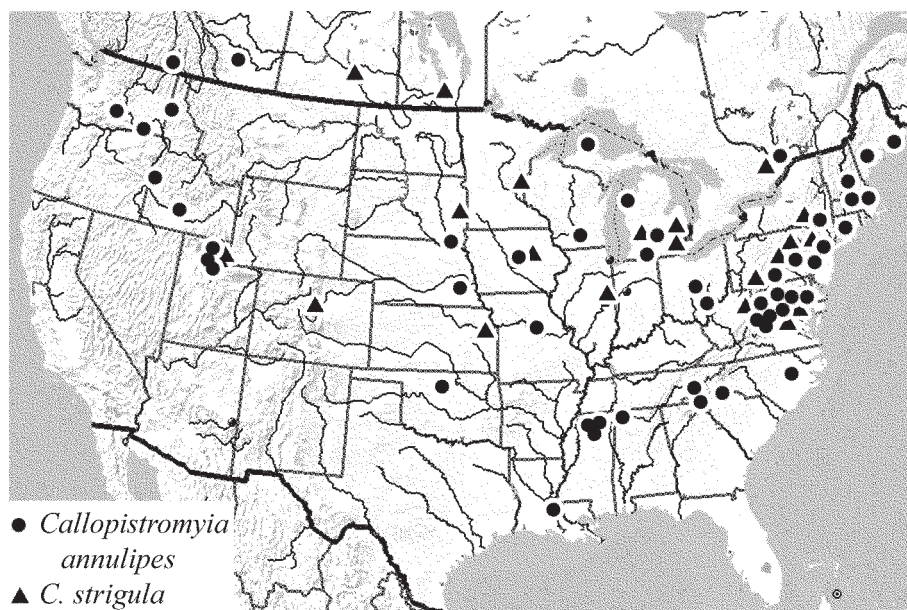


Fig. 128. Distribution map of *Callopistromyia*.

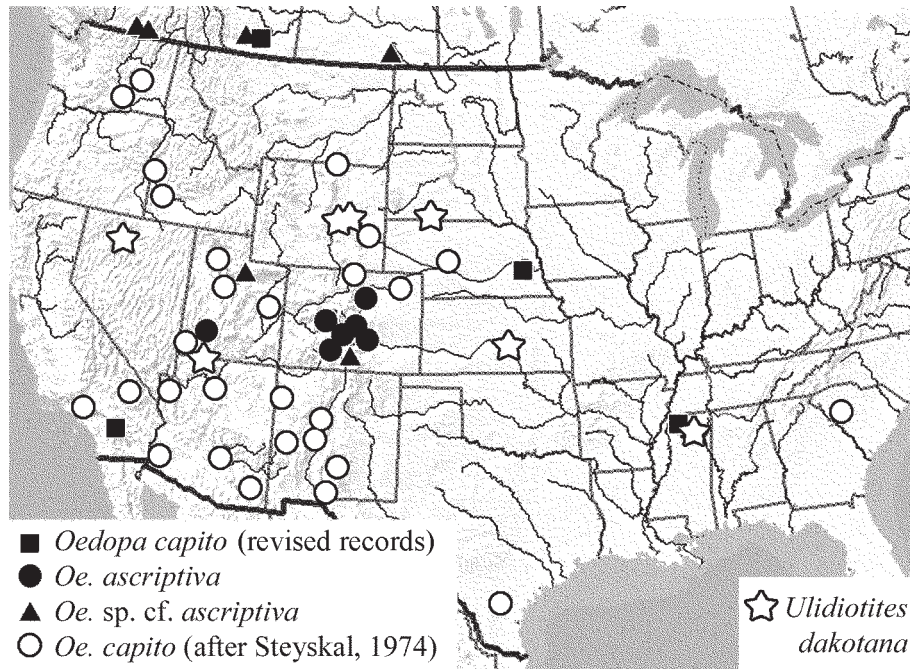


Fig. 129. Distribution map of *Oedopa* and *Ulidiotites*.

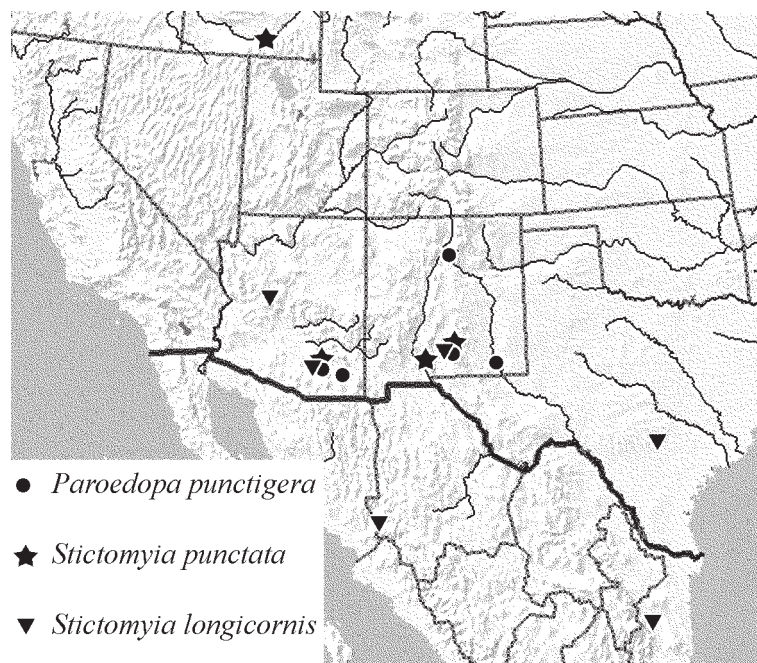


Fig. 130. Distribution map of *Paroedopa* and *Stictomyia*.

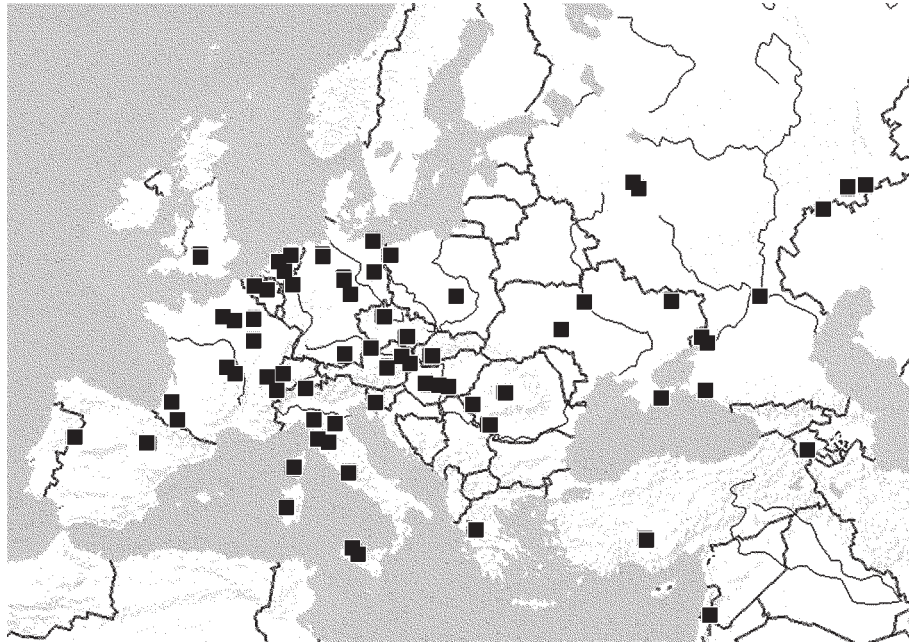


Fig. 131. Distribution map of *Myennis octopunctata* in the Western Palearctic Region.

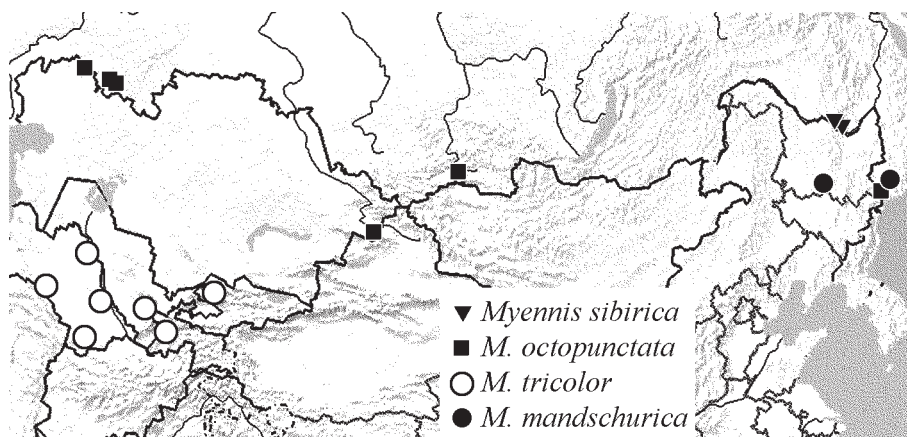


Fig. 132. Distribution map of *Myennis* in the Eastern Palearctic Region.



Fig. 133. Distribution map of *Stictoedopa*.

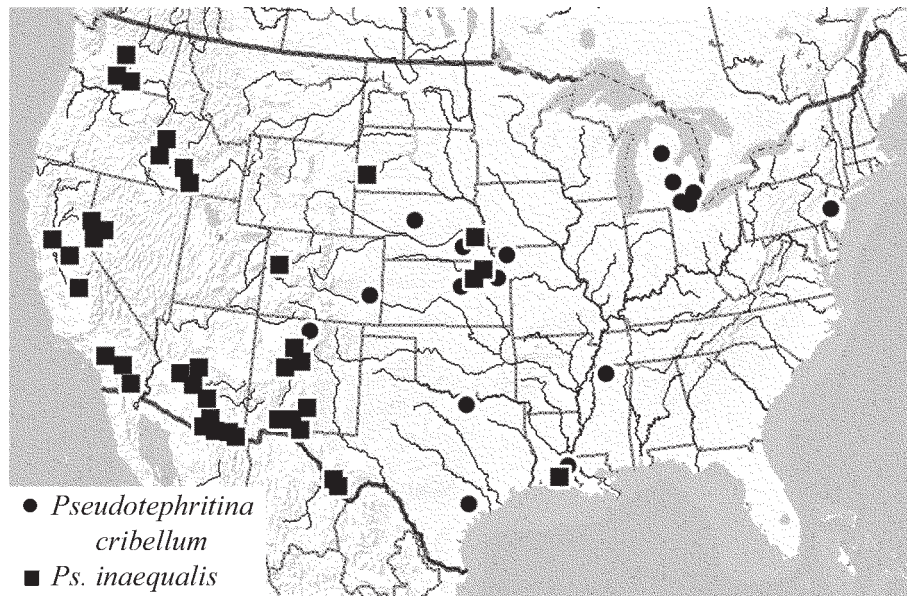


Fig. 134. Distribution map of *Pseudotephritina*.

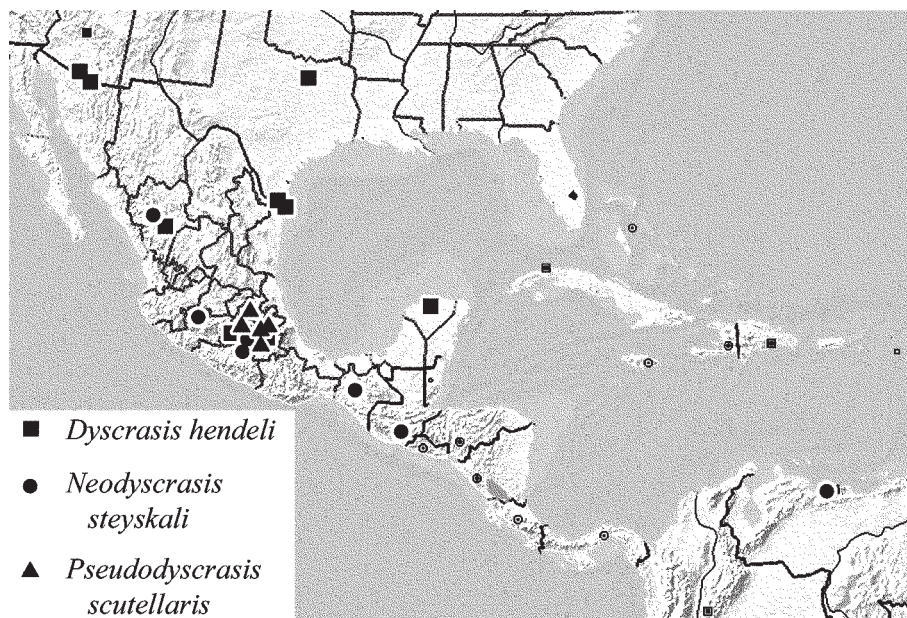


Fig. 135. Distribution map of *Dyscrasis*, *Neodyscrasis*, n. gen. and *Pseudodyscrasis*.