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**A REVISION OF THE GENUS DIAERETIELLA STARÝ
(HYMENOPTERA : APHIDIIDAE)**

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The problem of the genus *Diaeretus* Förster was solved by the author in the precedent paper on the generic classification of the Aphidiidae (1960, l. c.). The present account includes the revision of the genus *Diaeretiella* Starý. Annotated list of various species that were included in *Diaeretus* Förster by various authors is given in addition.

For the names of aphids the nomenclature used by Börner (1952, l. c.), wherever possible, has been followed. All the literary host records that seem to be doubtful or incorrect in the author's opinion are marked with a query and exclamation mark (?!).

Acknowledgements.

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Genus: *Diaeretiella* Starý

Diaeretiella Starý, 1960, Acta Soc. Ent. Čechosl. 57: 242—243.

Genotype: *Aphidius rapae* M'Intosh 1855.

This genus is related to *Diaeretellus* Starý and to *Lysiphlebus* Förster (partim). From *Diaeretellus* Starý it differs in having effaced part of fused intermedian and median vein in the fore wing. From *Lysiphlebus* Förster i. e. from the group of species that is characterized by the effaced 2nd interradiial vein in the fore wing it is distinguishable by areolated propodeum.

Description: Head transverse, as wide as or wider than thorax at tegulae. Antennae filiform, with variable number of segments (12—18). Eyes of middle size. Mandibles bidentate. Notaulices developed at the fore part of mesoscutum. Propodeum distinctly areolated. Fore wing: Pterostigma triangular. Metacarp longer than width of pterostigma. Radial vein developed, no longer than $2/3$ of its possible length. Otherwise venation effaced beyond basal cell towards the apex except 2nd cubital cell and indicated part of cubital vein. Hind wing with complete basal cell. Abdomen of female lanceolate. Ovipositor sheaths and ovipositor straight or slightly curved upwards, sparsely haired.

General distribution: Probably cosmopolitan.

Bionomics. Parasites of aphids. Pupation inside parasitized aphid. First instar larva with simple caudal appendix.

1. *D. rapae* (M'Intosh).

- Aphidius rapae* M'Intosh, 1855, Book of the Garden, 2, p. 194 (♀ descr.).
- Diaeretus rapae* (M'Intosh): Muesebeck and Walkley, 1951, in U. S. Dept. Agric. Monogr. 2: 97 (sine descr., Loc. U. S. A. — N. Y. to N. C., west to Oreg. and Calif., host). — Krombein, 1958, U. S. Dept. Agric. Monogr. 2, First Suppl., p. 19 (sine descr., Loc. U.S.A. — Kans., Ariz., Wash., Canada: South Canada). — Schlinger and Hall, 1960, Ann. Ent. Soc. Amer. 53: in 404—413 (sine descr., Loc. U. S. A. — Calif., bion., ecol., host).
- Diaeretiella rapae* (M'Intosh): Starý, 1960, Acta Soc. Ent. Českosl. 57: 243 (part. descr., as genotype of *Diaeretiella* Starý).
- Aphidius rapae* Curtis, 1855, in M'Intosh's Book of the Garden, 2, p. 194 (Note: According to the rules of zoological nomenclature M'Intosh must be kept as original author!). — Dalla Torre, 1898, Cat. Hym. 4: 10 (sine descr., Loc. England). — Szépligeti, 1904, in Wytsman Genera Insectorum 22: 186 (sine descr., Loc. England).
- Aphidius (Trionyx) rapae* (Curtis): Curtis, 1860, Farm Insects, p. 73. — Buckton, 1879, Mon. British Aphides 2: 153, pl. 46 (fig., Loc. England, host).
- Aphidius (Diaeretus) rapae* (Curtis): Fullaway, 1915, Rept. Hawaii Agric. Expt. Sta. 1914: in 43—50 (sine descr., Loc. Hawaii, host). — Strickland, 1916, Proc. B. C. Entom. Soc. Victoria 1916, Entom. Series № 9: in 84—88 (Loc. Canada, host).
- Diaeretus rapae* (Curtis): Gahan, 1910, Proc. Ent. Soc. Wash. 12: 80. — Gahan, 1911, Maryland Agr. Expt. Sta. Bull. 152: 191. — Treherne, 1916, 46th Rept. Entom. Soc. Ontario for 1915: in 178—193 (sine descr., Loc. Canada, host). — Britton, 1917, 16th Rept. State Entomologist of Conn. for 1916: in 98—104. — Mason, 1922, Florida Ent., Gainesville 5: in 53—59 (Loc. U. S. A. — Florida, host). — Wheeler, 1923, Ann. Ent. Soc. Amer. 16: in 1—29 (Loc. U. S. A., bion., host). — Spencer, 1926, Ann. Ent. Soc. Amer. 19: 119—157 (Loc. U. S. A., host). — Vukasović, 1928, Glas Srpske Kral. Akad. 131: in 45—72 (sine descr., Loc. Yugoslavia, host). — Gourlay, 1930, N. Z. J. Sci. Tech. 11: in 339—343 (sine descr., Loc. N. Zealand, host). — Gourlay, 1930, Bull. N. Z. Dept. Sci. Industr. Res. 22: in 13 pp. (sine descr., Loc. N. Zealand, host). — Quilis M. P., 1934, Eos Madrid 10: 6 (sine descr., Loc. Yugoslavia, host). — Petherbridge and Mellor, 1936, Ann. appl. Biol. 23: in 239—241 (sine descr., Loc. England, host). — Ripper, 1944, Nature 153, № 3885: in 448—452 (influence of nicotin dust, host). — Smith C. F., 1944, Ohio State Univ. Contr. Zoo. Ent. 6: 101—102 (♀ ♂ descr., figs., Loc. U. S. A. — Ohio, Utah, N. C., host). — Kloet and Hincks, 1945, Check List of Brit. insects (sine descr., Loc. England). — MacGillivray and Spicer, 1953, Canad. Ent. 85: 425 (sine descr., Loc. Canada — New Brunswick, host.). — Shands, Simpson, Roberts and Muesebeck, 1955, Proc. ent. Soc. Wash. 57: in 131—136 (Loc. U. S. A. — Maine, host). — Todd, 1957, N. Z. J. Sci. Tech. 38 (A): in 720—727 (sine descr., Loc., N. Zealand, effectiveness, host). — George, 1957, Bull. ent. Res. 48: in 619—629 (bion., host — specificity, Loc. England, host). — Sedlag, 1958,

- Nachrbl. Deutsch. Pflanzenschutzdienst 12: 73—77 (sine descr., Loc. Germany, host). — Sedlag, 1959, Neue Brehm-Bücherei, Hautflügler III: 54—56 (bion., figs., Loc. Germany, host). — Sedlag, 1959, Wiss. Zeitschr. Ernst Moritz Arndt Univ. Greifswald, Math. nat. Reihe Nr. 3/4, Jg. 7: 1—2 (Bion., ecol., Loc. Germany, host). — Sedlag, 1959, Trans. I. Int. Conf. Insect Pathology and Biol. Control Praha 1958: 367—372 (bion., Loc. Germany, host). — Luzhetskii, 1959, Tzisy Dokl. 4-ogo sjezda Vses. Entom. Obstsh. AN U. S. S. R. Leningrad, p. 82—83 (sine descr., Loc. U. S. S. R. — Uzbekistan). — Gibson and Carillos, 1959, Folleto Misc. 9, Secr. Agric. Canad., Mexico, p. 194 (sine descr., Loc. U. S. A. — Mich., Mex., host).
- Toxares rapae* (Curtis): Marshall, 1872, Catal. Brit. Hymen., p. 109.
- Diaeretus chenopodii* Förster: Kirchner, 1867, Catal. Hymen. Europae, p. 125. — **N. syn.**
- Trioxys piceus* Cresson, 1880, U. S. Dept. Agric. Ann. Rpt. for 1879, p. 260 (♀ ♂ descr., Loc. U. S. A.).
- Aphidius piceus* (Cresson): Melander and Yothers, 1915, 1917, Wash. State Coll. Agric. Expt. Sta., Pulman, Bull. 127 (1915): in 30—38, 136 (1917): in 35—42 (Loc. U. S. A., host).
- Aphidius (Diaeretus) piceus* (Cresson): Herrick and Hungate, 1911, Cornell Univ. Agric. Expt. Sta. Coll. Agric. Bull. 300: in 717—746 (bion., Loc. U. S. A. — N. Y., host).
- Lipolexis picea* (Cresson): Ashmead, 1888 (1889), Proc. U. S. Nat. Mus. 11: 671. — Dalla Torre, 1898, Cat. Hym. 4: 3 (sine descr., Loc. U. S. A. — Fda., Virg., Calif.). — Szépligeti, 1904, in Wytsman Genera insectorum 22: 190 (sine descr., Loc. U. S. A. — Virg., Fda., Calif.).
- Lipolexis chenopodiaphidis* Ashmead, 1888 (1889), Proc. U. S. Nat. Mus. 11: 671 (♀ ♂ descr., Loc. U. S. A.). — Dalla Torre, 1898, Cat. Hym. 4: 3 (sine descr., Loc. U. S. A. — Calif.). — Szépligeti, 1904, in Wytsman Genera insectorum 22: 190 (sine descr., Loc. U. S. A. — Calif.). — **N. syn.**
- Diaeretus chenopodiaphidis* (Ashmead): Timberlake, 1918, Proc. Hawaii Entom. Soc. 1917, Honolulu 3: in 399—404 (imm. in Hawaii, host). — Smith C. F., 1944, Ohio State Univ. Contr. Zoo. Ent. 6: 99—100 (♀ ♂ descr., figs., Loc. U. S. A. — Utah, Idaho, host). — Muesebeck and Walkley, 1951, in U. S. Dept. Agric. Monogr. 2: 97 (sine descr., Loc. U. S. A. — Idaho, Utah, Calif., host). — MacGillivray and Spicer, 1953, Canad. Ent. 85: 425 (sine descr., Loc. Canada — New Brunswick, host).
- Aphidius brassicae* Marshall, 1896, in André Spec. Hym. Europe d'Alg. 5: 597—598 (♀ ♂ descr., Loc. England, host). — Dalla Torre, 1898, Cat. Hym. 4: 6 (sine descr., Loc. England). — Marshall, 1899, Trans. ent. Soc. London 1899: 62—63 (♀ ♂ descr., Loc. England, host). — Szépligeti, 1904, in Wytsman Genera insectorum 22: 186 (sine descr., Loc. England). — Niezabitowski, 1909, Spraw. Kom. Fizyogr. Kraków 44: 54 (sine descr., Loc. Poland, bion., host). — Sacharov, 1914, Rep. Ent. Sta. Astrachan Soc. Fruit — gr., Astrachan (sine descr., Loc. U. S. S. R. — Ukraine, host). — Sacharov, 1915, Ent. Sta. Astrachan (sine descr., Loc. U. S. S. R. — Ukraine, host). — Meier, 1927, Rept. Bur. Appl. Ent. Leningrad 3: in 75—91 (sine descr., Loc. U. S. S. R. — Ukraine, host). — Ferrière and Voukassovitch, 1928, Bull. Soc. ent. Fr., Paris 1928: in 26—29 (sine descr., Loc. Yugoslavia, host). — Barnes, 1931, Ent. mon. Mag. 67: 55—57 (sine descr., Loc. England, host). — Newton, 1934, Rep. Rothamsted Expt. Sta. Harpenden 1933: in 52—53 (sine descr., Loc. England, host). — Bilanovskij, 1938, Trav. Mus. Zool. Acad. Sci. Ukr. Kiev № 21: in 167—169 (sine descr., Loc. U. S. S. R. — Ukraine, host). — Telenga, 1950, Nautsh, Trudy Inst. Ent. Fitop. AN Ukr. SSR, Kiev 2: 200 (sine descr., Loc. U. S. S. R. — Ukraine, host).
- Diaeretus californicus* Baker, 1909, Pomona Jl. Ent. 25 (♀ descr.).
- Diaeretus nipponensis* Viereck, 1911, Proc. U. S. Nat. Mus. 40: 182 (♀ ♂ descr., Loc. Japan, host). — Takahashi, 1925, Dept. Agric. Govt. Res. Inst., Formosa, Rept. 16, in 74 pp. (sine descr., Loc. Tchaj-wan, host). — **N. syn.**
- Diaeretus (Aphidius) obsoletus* Kurdjumov, 1913, Rev. Russe ent. St. Peterburg 13: 25—26 (♀ ♂ descr., fig., Loc. U. S. S. R. — Ukraine, host). — ? **N. syn.**
- Diaeretus obsoletus* Kurdjumov: Meier, 1927, Repts. Bur. Appl. Ent. Leningrad 3: in 75—91 (sine descr., Loc. U. S. S. R. — Ukraine, host).
- Diaeretus napus* Quilis M. P., 1931, Eos Madrid 7: 71 (♀ descr., Loc. Spain, host). — Quilis M. P., 1934, Eos Madrid 10: 6—7 (♂ descr., fig., Loc. Czechoslovakia, Yugoslavia, host). — Baudyš, 1941, Folia entomol. Brno 4: 60 (sine descr., Loc. Czechoslovakia, host). — **N. syn.**

Aphidius affinis Quilis M. P., 1931, Eos Madrid 7: 48—50 (♀♂ descr., figs., Loc. Spain, host). **N. syn.**

Diaeretus plesiorapae Blanchard, 1940, Rev. Chil. Hist. Nat. Santiago 44: 45—48 (♀♂ descr., figs., Loc. Argentina, host). — Silveira Guido and Conde Jahn, 1945, Rev. Fac. agron. Univ. Montevideo 1945: in 54 pp. (Loc. Uruguay, host). — Silveira Guido and Ruffinelli, 1958, Proc. 10th Int. Congr. Ent. Montreal 1956, 4: 916—918 (sine descr., Loc. U. S. A. — Fda., Argentina). **N. syn.**

Diaeretus aphidum Mukerji and Chatterjee, 1950, Proc. R. ent. Soc. London (B) 19: 4—6 (♀♂ descr., figs., Loc. Pakistan, Baluchistan, host). **N. syn.**

F e m a l e. — Head transverse, smooth, shiny, sparsely haired, wider than thorax at tegulae. Occiput margined. Temple as wide as transverse eye-diameter. Gena as wide as $1/5$ — $1/7$ of longitudinal eye-diameter. Clypeus transverse, oval, convex, margined frontally, smooth, shiny, with about 8—12 hairs, with deep tentorial pit on each side, separated by shallow groove from face. Relative distance between tentorial pit and eye-margin as $1/4$ — $1/6$ of relative distance between the pits. Eyes prolongately oval, of middle size, strongly convergent to the clypeus. Antennae mostly 14-segmented (rarely 13 or 15), filiform, as long as about head, thorax and tergite 1 together, situated at the level of eyes-centre. Flagellar segments 1 and 2 of equal length, 2,5 times as long as wide.

Thorax smooth, shiny, sparsely haired. Mesoscutum falling almost vertically to the prothorax without covering it when viewed from side. Notaulices distinct at the fore part, deep, crenulate, effaced on the disc. Propodeum areolated (Fig. 3); central small pentagonal areola of comparatively variable shape. Upper lateral areola with 3—6, lower areola with 2—3 hairs. Wing (Fig. 4) hyaline. Pterostigma prolongately triangular, about 4—5 times longer than wide. Metacarp much shorter than pterostigma, of about the same length as radial vein.

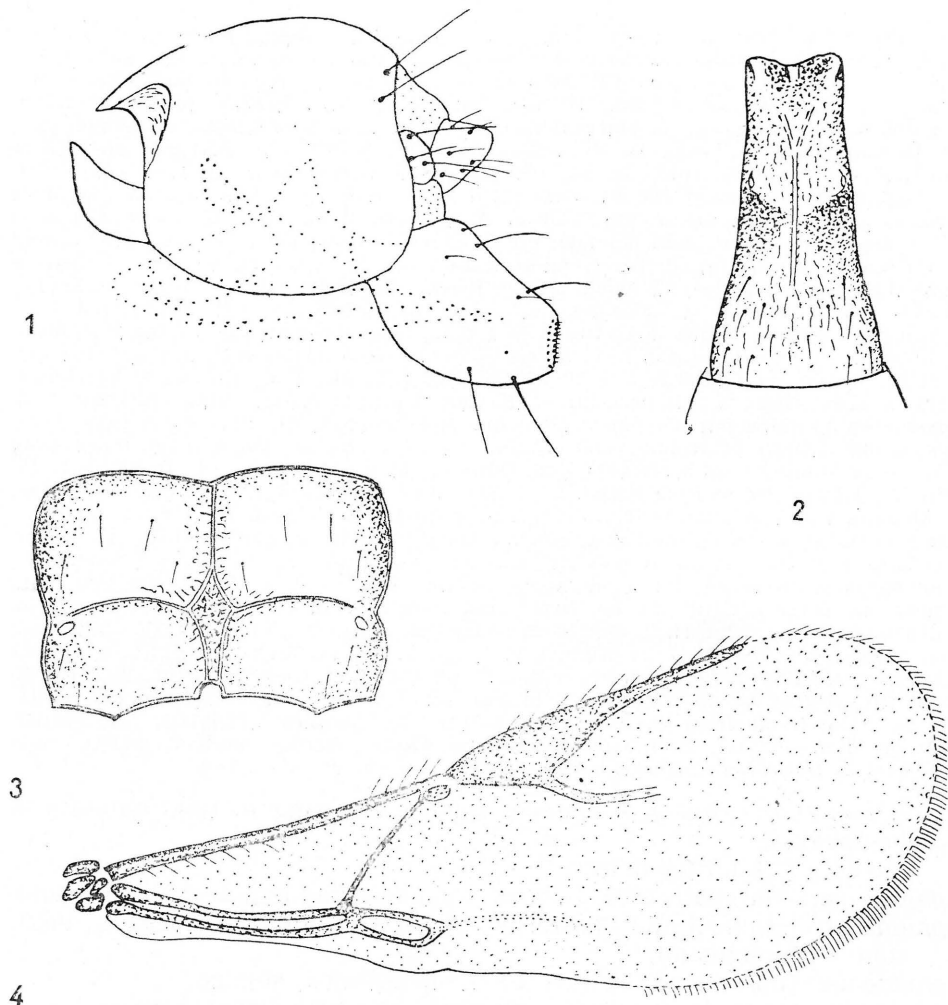
Abdomen lanceolate, longer than head and thorax combined. Tergite 1 (Fig. 2) of rather variable shape, usually about 3—3,5 times longer than wide at spiracles, slightly convex, slightly dilated towards the apex, with feeble longitudinal central carina, slightly longitudinally rugose — mostly smooth at the last fourth, with shallow lateral impressions beyond spiracular tubercles, sparsely haired. Spiracular tubercles poorly visible, situated somewhat before the half of the tergite. Genitalia figured (Fig. 1).

Coloration rather variable. Head black, face sometimes yellowish, clypeus and mouthparts yellowish to brown yellowish. Antennae brown black, with lighter ring between pedicel and flagellar segment 1, often scape, pedicel and base of flagellar segment 1 yellowish. Thorax black, prothorax sometimes yellowish to brown yellowish. Wing venation brown. Tegulae brown. Legs brown to dark brown, lower part of coxae, trochanters, base of tibiae and tarsi lighter. Abdomen brown black to brownish, tergite 1 yellowish to dark brown, base of tergite 2 and suture between tergites 2 and 3 of the same colour.

Length of body about 1,9—2,4 mm.

M a l e. — Antennae 16—18-segmented. Black, mouthparts and tergite 1 brown yellowish. Legs brown black. Otherwise coloration like as in the female. Tergite 1 nearly parallel-sided.

G e n e r a l d i s t r i b u t i o n : Probably cosmopolitan.



Diaeretiella rapae (M'Intosh), female. Fig. 1: Genitalia. Fig. 2: Tergite 1. Fig. 3: Propodeum. Fig. 4: Fore wing.

Material examined: Czechoslovakia: Bohemia. — Praha, Botanical garden of the Charles university, 5. VII. 1957 (bred from *Brevicoryne brassicae* on Brassicaceae), lgt. P. Starý. Ditto, 2. VII. 1959 (bred from *Brachycaudus rumexicolens* on Rumex acetosella), lgt. Holman. Ditto, 19. VII. 1960 (bred from *Myzodes persicae* on *Beta vulgaris*), lgt. P. Starý. Ditto, 19. VII. 1960 (bred from *Hayhurstia atriplicis* on *Chenopodium album*), lgt. F. Starý. Praha, Strahovská zahrada, VII. 1960 (bred from *Brevicoryne brassicae* on *Brassica oleracea* var. *botrytis*), lgt. P. Starý. Lochkov, 16. VII. 1959 (bred from ? *Brevicoryne brassicae*), lgt. K. Novák, Karlštejn, 29. V. 1954 (swept on barley field), lgt. P. Starý. Zadní Třebáň, 6. VII. 1959 (bred from *Myzodes persicae* on *Beta vulg.* field), lgt. P. Starý. Dobřichovice, 26. VII. 1960 (bred from *Hayhurstia atriplicis* on *Chenopodium* sp., in a drain), lgt. P. Starý. Ditto, 26. VII. 1960 bred from *Myzodes persicae* on *Solanum tuberosum*, field), lgt. P. Starý. Karlík, 26. VII. 1960 (bred from *Brevicoryne brassicae* on *Brassica napus*, field), lgt. P. Starý. Trněný Újezd, 26. VII. 1960 (bred from

Brevicoryne brassicae on Brassica oleracea var. gongylodes, field), lgt. P. Starý. Mořina, 26. VII. 1960 (bred from *Brevicoryne brassicae* on Brassica oleracea var. gongylodes, field), lgt. P. Starý. Doksy, 25. VII. 1959 (bred from *Brachycaudus* sp. on Rumex acetosella), lgt. Holman. Stěhelčevy, 17. VII. 1960 (bred from *Brevicoryne brassicae* on Brassica napus, field), lgt. P. Starý. Jičín, 1956 (bred from *Sitobium* sp. on Lolium sp.), lgt. Holman. Louny — env., 18. VI. 1957 (bred from *Brevicoryne brassicae* on Alliaria vulgaris), lgt. P. Starý. Ditto, 18. VI. 1957 (swept in bushes near the river Ohře), lgt. P. Starý. Raná near Louny, 17. VI. 1960 (bred from *Brevicoryne brassicae* on ? *Synapis arvensis*, potato field), lgt. P. Starý. Ditto, 17. VI. 1960 (bred from *Hayhurstia atriplicis* on Chenopodium album, field habitat), lgt. P. Starý. Vochov, Plzeň — env., 1956 (swept in red clover field), lgt. P. Starý. Adolfov, Ústí n/L. — env., 24. VI. 1957 (swept in a meadow with Petasites, in about 900 m above sea level), lgt. P. Starý. Prackovice, 25. VI. 1957 (swept in a meadow), lgt. P. Starý. Mažice, 12. VII. 1960 (bred from *Schizaphis scirpi* on Typha angustifolia in a pond near a wood), lgt. P. Starý. Moravia. — Rajhrad, 19. VI. 1960 (bred from *Brevicoryne brassicae* on Brassica napus, field), lgt. P. Starý. France: La Gardé, Var, 20. XI. 1955, lgt. J. Barbier (coll. Granger). Algiers: Mers. el Kéfir, Oran, 5. III. 1959, lgt. J. Barbier. Spain: Betera, Valencia (bred from *Aphidae* on Brassica napus), coll. Quilis. Burjasot, Valencia, II. 1930 (bred from *Aphis acanthi* on Cynara scolymus), coll. Quilis. Dánca, Valencia, 15. I. 1930 (bred from *Aphis acanthi* on Cynara scolymus), coll. Quilis, U.S.S.R.: Uzbekistan. — Tashkent, 9. IX. 1956 (bred from *Brevicoryne brassicae* on Brassica oleracea), lgt. Luzhetski. Tajikistan. — Kondara valley, southern slope of Gissar mountains, 6. X. 1956 (bred from *Myzaphis beibienkoi*), lgt. Ataeva. Stalinabad, kolkhoz Lenin, 21. VII. 1959, 29. X. 1959 (bred from *Brevicoryne brassicae*), lgt. Ataeva. Canada: Fredericton, N. B., 28. VIII. 1950 (bred from *Myzodes persicae*), lgt. P. B. Spicer. U.S.A.: Salt Lake, Utah, 18. III. 1913, coll. Timberlake. Peclley, Calif., 10. III. 1959 (bred from *Rhopalosiphum pseudobrassicae* on Malcomia maritima), lgt. H. R. Moffitt. Wheeler Ridge, Krn Co., Calif., 24. IV. 1958 (bred from *Brevicoryne brassicae* on Brassica sp.), lgt. Schlinger. Riverside, Calif., 6. I. 1958 (bred from *Myzodes persicae* on Vinca minor), lgt. J.-C. Hall. Glendale, Calif., 29. III. 1959 (bred from *Myzus* sp. on Pittosporum tobira), lgt. Schlinger. Murietta, Riverside, Calif., 10. XI. 1958 (bred from *Brevicoryne brassicae* on Brassica oleracea), lgt. Puttler. Whittier, Calif., 5. XII. 1912, coll. Timberlake. (Note: North American material was identified as *Diaeretus rapae* [M'Intosh] mostly by C. F. W. Muesebeck).

Habitat: This is a common species occurring in field habitats in Czechoslovakia.

Host: 1. Literary data:

Aphidae sp.: Marshall, 1896, 1899, on *Raphanus raphanistrum* L., England.

Aphidae sp.: Mukerji and Chatterjee, 1950, on Brassica oleracea L., Pakistan — Baluchistan.

Aphidae sp.: Gibson and Carillos, 1959, on Brassica, Mexico.

Aphidae sp.: Quilis M. P., 1934, on *Turritis glabra* L., Czechoslovakia.

Aphis sp.: Quilis M. P., 1934, on *Aethionema saxatile* (L.), Yugoslavia.

Aphis abbreviata Patch: MacGillivray and Spicer, 1953, on *Solanum tuberosum*, Canada — N. Brunswick. Shands, Simpson, Roberts and Muesebeck, 1955, U. S. A.-Maine.

Aphis acanthi Schrk.: Quilis M. P., 1931, on *Cynara scolymus*, Spain.

Aphis rumicis L.: MacGillivray and Spicer, 1953, on *Chenopodium album* L., Canada — New Brunswick.

Brachycolus noxius Mordv.: Kurdjumov, 1913, U. S. S. R. — Ukraine.

Brevicoryne brassicae (L.): Barnes, 1931, England. Bilanovski, 1938, U. S. S. R. — Ukraine. Blanchard, 1940, Argentine. Buckton, 1879, England. Ferrière and Voukassovitch, 1928, Yugoslavia. Fullaway, 1915, U. S. A.-Hawaii. George, 1957, England. Gourlay, 1930, N. Zealand. Gourlay, 1930, Europe, America, Australia, N. Zealand, S. Africa.

- Herrick and Hungate, 1911, U. S. A.-N. Y.. Marshall, 1896, 1899, on Brassica oleracea L., England. Melander and Yothers, 1915, 1917, U. S. A. Meier, 1927. U. S. S. R.-Ukraine. Muesebeck and Walkley, 1951, U. S. A. Newton, 1934, England. Niezabitowski, 1909, Poland. Petherbridge and Mellor, 1936, England. Ripper, 1944, England. Sacharov, 1914, 1915, U. S. S. R.-Ukraine. Schlinger and Hall, 1960, on Brassica sp., U. S. A.-Calif.. Sedlag, 1958, 1959, Germany. Silveira Guido and Ruffinelli, 1958, Argentina. Smith C. F., 1944, U. S. A.-Utah. Strickland, 1916, Canada. Telenga, 1950, U. S. S. R.-Ukraine. Timberlake, 1918, Hawaii. Todd, 1957, N. Zealand. Treherne, 1957, Canada. Vukasović, 1928, Yugoslavia.
- Callaphis betulaecolens* (Fitch): MacGillivray and Spicer, 1953, on Betula sp., Canada — New Brunswick.
- Euceraphis betulae* (Koch): MacGillivray and Spicer, 1953, on Betula sp., Canada — New Brunswick.
- Hayhurstia atriplicis* (L.): Quilis M. P., 1934, on Chenopodium album L., Czechoslovakia. Baudyš, 1941, ditto. Smith C. F., 1944, U. S. A. — Idaho, on Chenopodium album L. MacGillivray and Spicer, 1953, on Chenopodium album L., Canada — New Brunswick.
- Hyadaphis foeniculi* (Pass.): Marshall, 1896, 1899, on Foeniculum vulgare Mill., England.
- Lipaphis pseudobrassicae* (Davis): Britton, 1917, U. S. A.. Smith C. F., 1944, U. S. A.-Utah, Ohio. Muesebeck and Walkley, 1951, U. S. A.. Shands, Simpson, Roberts and Muesebeck, 1955, U. S. A.-Maine.
- Macrosiphon solanifolii* Ashmead: Spencer, 1926, England. Silveira Guido and Ruffinelli, 1958, Argentina.
- Myzodes persicae* (Sulz.): Fullaway, 1915, U. S. A.-Hawaii. MacGillivray and Spicer, 1953, on Solanum tuberosum L., Brassica napus L., Canada — New Brunswick. Mason, 1922, U. S. A.-Fda.. Muesebeck and Walkley, 1951, U. S. A.. Smith C. F., 1944, U. S. A.-Ohio. Schlinger and Hall, 1960, on Brassica oleracea var. capitata L., on Vinca minor L., U. S. A.-Calif.. Sedlag, 1959, Germany. Shands, Simpson, Roberts and Muesebeck, 1955, U. S. A.-Maine. Timberlake, 1918, U. S. A.-Hawaii. Wheeler, 1923, U. S. A.
- Pergandeida quilisi* Fresca: Quilis M. P., 1931, on Brassica napus L., Raphanus sativus L., Pisum sativum L., Spain.
- ?! *Pterochloroides persicae* Chol.: Mukerji and Chatterjee, 1950, on Prunus persica L., Pakistan-Baluchistan.
- Rhopalosiphum maidis* (Fitch): Mimeur, 1936, Morocco.
- Schizaphis graminum* (Rond).?: Kurdjumov, 1913, U. S. S. R.-Ukraine. — Blanchard, 1940, Argentine. Silveira Guido and Conde Jahn, 1945, Uruguay.

2. Original data.

- Aphidae* sp.: On Brassica napus L., Spain (see Quilis M. P., 1931).
- Aphis acanthi* Schrk.: On Cynara scolymus, Spain (see Quilis M. P., 1931).
- Brachycaudus rumexicolens* Patch: On Rumex acetosella L., Czechoslovakia.

- Brachycaudus* sp.: On *Rumex acetosella* L., Czechoslovakia.
- Brevicoryne brassicae* L.: On *Alliaria officinalis*, Czechoslovakia. On *Brassica* sp., U. S. A.-Calif. (see Schlinger and Hall, 1960). On Brassicaceae, Czechoslovakia. On *Brassica napus* L., Czechoslovakia. On *Brassica oleracea* L., Czechoslovakia. U. S. S. R.-Uzbekistan, Tajikistan. U. S. A. Calif.. On ? *Synapis arvensis* L., Czechoslovakia.
- Hayhurstia atriplicis* (L.): On *Chenopodium album* L., Czechoslovakia.
- Lipaphis pseudobrassicae* (Davis): On *Malcomia maritima*, U. S. A.-Calif. (see Schlinger and Hall, 1960).
- Myzaphis beibienkoi* Narzykulov: U. S. S. R.-Tajikistan.
- Myzodes persicae* (Sulz.): Canada-N. B., On *Vinco minor* L., U. S. A.-Calif. (see Schlinger and Hall, 1960). On *Beta vulgaris* L., Czechoslovakia. On *Solanum tuberosum* L., Czechoslovakia.
- Myzus* sp.: On *Pittosporum tobira*, U. S. A.-Calif. (see Schlinger and Hall, 1960).
- Schizaphis scirpi* (Kittel): On *Typha angustifolia* L., Czechoslovakia.
- Sitobium* sp.: On *Lolium* sp., Czechoslovakia.

Notes:

Identity of "*Diaeretus nipponensis* Viereck".

The author examined one strongly damaged male specimen from type-series labeled Y. Nawa, Gifu, Japan, Oct. 1902 (USNM coll.). Dr. C. F. W. Muesebeck was kind enough in studying the type and suggested the following in his letter of March 29, 1960: "I studied the type of *nipponensis* carefully today (Incidentally, it is in very good condition) and I am confident it is *Diaeretiella rapae*. It agrees perfectly with this species. Moreover, it is labeled as having been reared from the cabbage aphid."

Identity of "*Diaeretus aphidum* Mukerji and Chatterjee".

This species is satisfactorily described and figured but there are not important differences between it and *Diaeretiella rapae* (M'Intosh). The host-aphid species is also identical. It is necessary, therefore, to keep *Diaeretus aphidum* Muk. and Chat. as the new synonym of *Diaeretiella rapae* (M'Intosh). The original differential diagnosis relating *D. aphidum* to *D. oregmae* Gahan is incorrect as the latter species belongs without any doubt to the genus *Lipolexis* Förster (see Starý, 1960, l. c.).

Pterochloroides persicae Chol. on *Prunus persica* is given as the second host-aphid species of *Diaeretus aphidum* by Mukerji and Chatterjee. This record seems to be very doubtful in the author's opinion as there are other groups of *Aphidiidae* (but not *Diaeretiella*) that are parasitising the Lachnids, e. g. from the mentioned host-aphid species *Pauesia chlorata* (Teng) was reared in the Soviet Central Asia.

Identity of "*Diaeretus obsoletus* Kurdjumov".

Judging from the original comparatively detailed description and figures this species seems to be identical with *Diaeretiella rapae* (M'Intosh). As the host-aphid species quoted in *D. obsoletus* Kurdj. is unknown in *D.*

rapae from Europe the author keeps, therefore, the first species as a doubtful synonym of *D. rapae* (M'Intosh) for the present. The problem will be definitively solved when material reared from the original host-aphid in Ukraine is at hand as the types are most probably lost.

Identity of "*Diaeretus plesiorapae* Blanchard".

The original description is satisfactorily detailed and there is no doubt that the species is identical with *Diaeretiella rapae* (M'Intosh). One of the original host-records includes the cabbage aphid, too.

Identity of "*Diaeretus napus* Quilis M. P."

The type was examined by the author. It is deposited at "Estación de Fitopatología agrícola, Burjasot, Valencia" and labeled "Betera, Valencia, Hispania, Quilis, ♀ tipo, sobre pulgon Brassica napus, *Diaeretus napus*". Condition excellent.

The species is without any doubt identical with *Diaeretiella rapae* (M'Intosh). The original characters differentiating this species from *D. rapae* are in the rank of variability of the latter.

Identity of "*Aphidius affinis* Quilis M. P."

The type was revised by the author. It is deposited in "Estación de Fitopatología agrícola, Burjasot, Valencia" and labeled "Burjasot, 2—30, por. alcachofa, Tipo". Condition—poorly mounted. Female, antennae 13-segmented. Another specimen, probably paratype, labeled "Dánca, 15-1-30, pos. sul. alcachofa, *Aphidius affinis*". Condition good. Female, antennae 14-segmented.

The species is identical with *Diaeretiella rapae* (M'Intosh).

Identity of "*Lipolexis chenopodiaphidis* Ashmead".

This species is quoted in the Smith's revision (1944, l. c.) as being probably valid and distinguishable from *Diaeretiella rapae* only when a large series is at hand. The quoted characters are in the rank of variability of *D. rapae* (M'Intosh) in the author's opinion. According to the revision of the type that was kindly undertaken by Dr. C. F. W. Muesebeck the species is identical with *D. rapae* (M'Intosh). The species *Lipolexis chenopodiaphidis* Ashmead falls, therefore, as the synonym of *Diaeretiella rapae* (M'Intosh).

Fossils.

D. berdlandi (Quilis M. P.), n. comb.

Diaeretus berdlandi Quilis M. P., 1940, Eos Madrid 14: 54—55 (descr., Loc. France, oligocen period).

By the number of antennal segments (13—14), by the shape of tergite 1 (three times as long as wide) and by the wing venation this species is most probably a member of the genus *Diaeretiella* Starý. Unfortunately the sculpture of propodeum is not mentioned neither in the original description nor it is visible in the figure and from this reason the problem of the identity of *D. berdlandi* cannot be solved definitively for the time being.

Species of *Diaeretiella* Starý unknown to the author.

D. croatica (Quilis M. P.), n. comb.

Diaeretus croaticus Quilis M. P., 1934, Eos Madrid 10:9—10 (♀♂ descr., figs., Loc. Yugoslavia, host).

The author has not seen a species corresponding to the original description and figures as yet. The types are probably lost as they are not in the Quilis's collection at Valencia. It must be added, judging from the kind suggestions of the Spanish authorities, the quoted collection had been under poor conditions for a certain period.

General distribution: Palearctic region (Europe — Yugoslavia).

Host: *Aphis* sp. on *Aethionema saxatile* L.

Notes on other species included in "*Diaeretus* (Förster) auct." by various authors.

"*D. fuscicornis* (Ashmead)".

Lipolexis fuscicornis Ashmead, 1891, Canad. Ent. 23:7

The author examined a series from Nearctic region (det. C. F. W. Muesebeck). The species belongs to *Lysiphlebus* Förster (n. comb.) to the group of species that is characterized by the absence both of the inter-radial vein and the rest of median vein in the fore wing. It is necessary to note that such species were classified under *Diaeretus* Förster by Smith C. F. in his revision of the Nearctic *Aphidiinae*.

"*D. laticephalus* Telenga".

Aphidius (*Diaeretus*) *laticephalus* Telenga, 1953, Trudy Inst. Zool. Parazit. AN Uzbeckoj SSR 1:172—173.

The author examined a great number of specimens from the Soviet Central Asia (Tajikistan). The species belongs to *Lysiphlebus* Förster, to the same group of species as *L. fuscicornis* (Ashmead). (N. comb.).

"*D. oregmae* Gahan".

Diaeretus oregmae Gahan, 1932, Ann. Ent. Soc. Amer. 25:736

The author examined the types. This species belongs to the genus *Lipolexis* Förster (see Starý, 1960, l. c.).

"*D. porteri* Brèthes".

Diaeretus porteri Brèthes, 1910, Rev. Chil. Hist. Nat. 14:69, Pl. III.

This species belongs to the genus *Aphidius* Nees (see Millan l. c., p. 248).

"*D. salicaphis* (Fitch)".

Trioxys salicaphis Fitch, 1855 (1854), N. Y. State Agr. Soc. Trans. 14:841

Trioxys populaphis Fitch, 1855 (1854), N. Y. State Agric. Soc. Trans. 14:841

Lipolexis salicaphidis Ashmead, 1889 (1888). U. S. Natl. Mus. Proc. 11:671

The author examined a comparatively great number of specimens from Nearctic region (det. C. F. W. Muesebeck). The species belongs to the same group of *Lysiphlebus* — species (n. comb.) as *L. fuscicornis* (Ashmead).

"*D. fuscus* Quilis M. P."

† *Diaeretus fuscus* Quilis M. P., 1940, Eos Madrid 14.53—54

By the number of antennal segments (11) and by the shape of tergite 1 (triangular) this species belongs to *Lysiphlebus* Förster (n. comb.) to the same group as the recent *L. fuscicornis* (Ashm.).

Nomina nuda.

Diaeretus chenopodii Förster

Diaeretus chenopodii Förster: Kirchner, 1867, Cat. Hym. Europae, p. 125

The author examined the following material that was most probably originally indicated by Förster:

1. "Zool. Museum d. Humboldt-Universität, Berlin".

4 specimens, one male and one female in good condition, labeled "Aachen, 24. 160, *Diaeretus* Frst. *chenopodii*".

Judging from other types of *Braconidae* and *Aphidiidae* that are deposited in the same collection this material seems to be typical. It also corresponds to the short Förster's classification of the genus *Diaeretus*. All the specimens although being very light brownish in colour (or immature?) belong to *Diaeretiella rapae*.

2. "Naturhistorisches Museum, Wien".

Two specimens, labeled "1. *Triclistus* (Ephedrus Hal.) *chenopodii* Förster, 2. *Diaeretus chenopodii* Förster". Both specimens are in a poor condition but by the wing-venation it is easily to recognize that they are immature male specimens of *Ephedrus plagiator* (Nees).

According to the short original Förster's classification of *Diaeretus* I don't keep the quoted specimens to be typical.

The author failed in obtaining the original description of the quoted species. Judging from the fact that the same situation is in other Aphidiid species quoted in the Kirchner's catalogue it is most probable the description was never published. In this case it is necessary to keep *D. chenopodii* Förster as nomen nudum. On the other hand, if the description was published and is unknown to the author, it would be necessary to keep *D. chenopodii* Förster as the new synonym of *Diaeretiella rapae* (M'Intosh).

Diaeretus leucarpus Förster.

Diaeretus leucarpus Förster; Kirchner, 1867, Cat. Hym. Europae, p. 125

The problem of the identity of this species is similar as in the precedent species. The author examined one in a very poor condition being specimen deposited in the "Naturhistorisches Museum" in Vienna. It is labeled probably originally by Förster as "*Diaeretus leucarpus* Frst.". By the wing-venation and by sculpture of propodeum this specimen is *Monoctonus caricis* (Hal.).

Therefore, if *D. leucarpus* Förster is not nomen nudum it would be necessary to keep it as the synonym of *Monoctonus caricis* (Hal.).

Diaeretus ferruginipes Ashmead

Diaeretus ferruginipes Ashmead: Riley and Howard, 1890, Insect Life 3:61

Praon ferruginipes (Ashmead): Phillips, 1916, Jl. Agric. Res. Washington 7 (11):in 463—480.

According to the kind information of Dr. C. F. W. Muesebeck this name represents nomen nudum.

Summary.

1. A revision of the genus *Diaeretiella* Starý 1960 is given.
2. The species *D. rapae* (M'Intosh) is redescribed.
3. Following species fall as new synonyms to *D. rapae* (M'Intosh): *Diaeretus chenopodii* Förster (see notes), *Lipolexis chenopodiaphidis* Ashmead 1889 (1888), *Diaeretus nipponensis* Viereck 1911, ? *Diaeretus obsoletus* Kurdjumov 1913, *Diaeretus napus* Quilis M. P. 1931, *Aphidius affinis* Quilis M. P. 1931, *Diaeretus plesiorapae* Blanchard 1940, *Diaeretus aphidum* Mukerji and Chatterjee 1950.
4. Notes on various species included in *Diaeretus* (Förster) auct. are given.
5. *Diaeretus chenopodii* Förster (see notes), *Diaeretus leucarpus* Förster (see notes) and *Diaeretus ferruginipes* Ashmead (see notes) represent nomina nuda.

Резюме.

Проблема рода *Diaeretus* Förster была решена автором в предыдущей работе по родовой классификации семейства *Aphidiidae*. Предлагаемая работа представляет собой ревизию рода *Diaeretiella* Starý. Терминология жилкования крыльев по Starý 1958, названия тлей в большинстве по Börner (1952).

Род *Diaeretiella* Starý близок к *Diaeretellus* Starý и к группе видов рода *Lysiphlebus* Förster. От *Diaeretellus* Starý отличается жилкованием передних крыльев и от *Lysiphlebus* Förster т. е. от группы видов, которая характеризуется отсутствием второй интеррадиальной жилки, ячеистым промежуточным сегментом.

Описание: Голова поперечная. Затылок окаймленный. Среднеспинка с хорошо заметными нотаулицес в передней части. Промежуточный сегмент с ячейками. Переднее крыло: Птеростигма треугольная. Метакарп длиннее ширины птеростигмы. Радиальная жилка имеется, нег длиннее 2/3 возможной длины. В остальном жилки за базальной ячейкой в направлении к вершине крылья за исключением второй кубитальной ячейки и слабо заметной части кубитальной жилки отсутствуют. Заднее крыло с замкнутой базальной ячейкой. Брюшко самок ланцетовидное. Створки яйцеклада сравнительно короткие, слабо вверх изогнутые, в редких волосках. Распространение почти космополитное.

Дается переописание типа рода — *Diaeretiella rapae* (M'Intosh) по материалам из Чехословакии, Франции, Альжира, Испании, СССР (Узбекистан, Таджикистан), Канады, С. Ш. А. В его синонима включено несколько новых. Это следующие: *Diaeretus chenopodii* Förster in Kirchner 1867, *Lipolexis chenopodiaphidis* Ashmead 1889 (1888), *Diaeretus nipponensis* Viereck 1911, ? *Diaeretus obsoletus* Kurdjumov 1913, *Diaeretus napus* Quilis M. P. 1931, *Aphidius affinis* Quilis M. P. 1931, *Diaeretus plesiorapae* Blanchard 1940, *Diaeretus aphidum* Mukerji and Chatterjee 1950.

Приведен список тлей — хозяев по литературным и оригинальным данным. В заключении работы дается список видов разными авторами включенных в род *Diaeretus* (Förster) auct.

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