

Some New Records of Conopidae from Czechoslovakia

(Diptera)

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During a revision of the family *Conopidae* in Czechoslovakia, I have found some species which were not previously known from our country. In two cases [*Leopoldius calceatus* (Rond.) and *Conops longiventris* Kröb.] the verified species were taken for the typical southern species, previously well known from Southern Europe only. For that reason I think, it is necessary to publish these finds earlier than the complete revision of the *Conopidae*, which is now already prepared for the press.

Only few authors have been interested in this family in Czechoslovakia and as a rule dealt only with faunistic data, which were published within the scope of elaboration of the whole group *Diptera*. The only paper dealing solely with the family *Conopidae* is a faunistic elaboration published by Čepelák (1959). Previously there existed only faunal lists of species. In Slovakia published by Thalhhammer (1899) and Brancsik (1910), in Moravia by Czižek (1906, 1907, 1908, 1909, 1910) and Landrock (1907, 1908) and in Bohemia by Kowarz (1894) and Vimmer (1913). The material which formed foundation for the preparation of these lists was preserved in Bohemia and Moravia only. In Bohemia it is Vimmer's collection, deposited in the Entomological Department of the National Museum in Prague. In Moravia there was a collection of Czižek and Landrock, which is now deposited in the Entomological Department of the Moravian Museum in Brno. I reviewed this collection in another paper (Chvála, 1961). I have at my disposal the material of these two old collections from Bohemia and Moravia, and plentiful material of the whole territory of Czechoslovakia, which has been collected during the last 20 years by many collectors.

According to the last paper by Čepelák (1959), 39 species of the family *Conopidae* were known from Czechoslovakia. At the present time I have found a further 7 species of this family in the new material. As it deals predominantly with little known species, or with species often mistaken for others, I introduce a short description and a distinctive diagnosis of each of them.

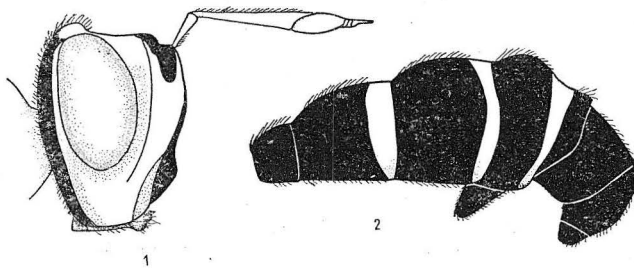
I am very much obliged to doc. dr. J. Mařan, the director of the Entomological Department of the National Museum in Prague, and to dr. J.

Stehlík, the director of the Entomological Department of the Moravian Museum in Brno, for enabling me to review the material of the museums in Prague and Brno.

Leopoldius calceatus (Rondani)

Brachyglossum calceatum Rondani 1857, Prodr., 2:221

Male: Face and front brownish yellow, face with gold lustre and with conspicuous, broad black facial keel. The black spot above antennae as in *Abrachyglossum capitatum* (Loew), but on the lower side it is extended up to the face. Vertex yellowish; occiput black, faintly black pubescent, with gold post-orbitals. Antennae black, 1st joint on the lower side and the whole 2nd joint with black hairs. Terminal style with thread-shaped last joint. Proboscis strong, shining dark brown or black, whole



Leopoldius calceatus (Rond.) ♀: 1 — head, lateral view; 2 — abdomen, lateral view.

hidden in the mouth cavity. Thorax black, humeri yellow, pleura with gold markings. Halteres yellowish, dark brownish at base. Coxae black, gold pollinose, femora also black, on both tips yellow. Tibiae yellow with short black hairs, tarsi black. Wings hyaline with intensive brown wide foremarginal band, which reaches as far as the vein R_{4+5} . Veins dark brown, yellowish at base and in the middle part. 1st abdominal segment black, 2nd—4th segments black with narrow gold pollinose distal margins, which spread on the last segments. Genitalia brown. Length: 9—11 mm.

Female: More darkly coloured, the lustre on thorax and coxae more silvery. Abdomen shining black, 2nd—4th segments with narrow, yellowish gold pollinose distal margins, the last segments entirely black. Separate tergites have long black hairs at their distal margins. From the dorsal view the 3rd and 4th segments are widest. Theca large and wide, black with fine black hairs. Genital segment black or shining blackish brown. Length: 9—11 mm.

By general appearance very similar to *Abrachyglossum capitatum* (Loew), but it differs in the intensive brown coloured foremarginal band on wings, in the short proboscis and in the darker coloured head and legs.

Dates: August. Duda (1940) captured this species in Central Silesia on 11. VI. and from 29. VIII.—3. IX.

Distribution: Previously known (Kröber 1925) from Southern Europe and North Africa only, it is now known from several localities in Central Europe. Duda (1940) captured this species in the years 1909—1911 (3 males and 2 females) in Central Silesia, in Poland (Niemcza near Wrocław). Trojanowa (1956) does not cite it from Poland. Very rare species, the only one new record from Moravia (Slatnice near Olomouc, 30. VIII. 1951, leg. J. Palásek) is the first record of the occurrence of this species in Czechoslovakia, and at the same time it confirms its distribution in Central Europe.

Leopoldius diadematus Rondani

Leopoldius diadematus Rondani 1845, Magas. de Zool., 4:6

Male: Face yellow with silvery lustre, the lower part of front yellow, the upper part with black stripe, which is increased up to the orbits. Vertical swelling yellow, upper occiput black, lower occiput yellowish. Antennae black, 1st and 2nd joints with short black hairs, basal joint on the lower side brownish. Terminal style short, the last joint greatly extended. Proboscis brownish yellow, short and strong, whole concealed in the mouth cavity. Thorax black, only humeri, scutellum and ventral pleurotergite yellow. Pleura with silvery stripe, mesonotum with short black pubescence. Postnotum black with trace of silvery colouration. Halteres yellow, brown at base. Legs yellow, tarsi with dense short black hairs. Middle and hind coxae black. Wings hyaline, veins black, yellowish brown at base. 1st abdominal segment black with narrow yellow distal margin. On 2nd and 3rd segments the black stripe in the middle part triangulately extended, on the other segments the middle triangle separated, so that black stripe is composed of three separate spots. Genitalia yellowish. Length: 12—14 mm.

Female: As the male but antennae on the lower side brownish and the front wing-margin is a little brownish. Abdomen slender and cylindrical, the black border is not present from the 5th tergite onward. Theca high but obviously narrow, its width is one third of 5th segment; yellow, faintly black hairy, on the inner side blackish grey. Genital segment yellow with dark tip. Length: 11—14 mm.

Similar to *Leopoldius coronatus* (Rond.), but differs in the black border on tergites which is composed of three independent spots and in wide yellow frontal stripe which occupies the whole lower half of front. Female differs in conspicuously narrow theca.

Dates: July—August (Séguy 1928).

Distribution: South-European species known from Spain, France, Italy, Greece, Austria and Hungary. The new occurrence in Czechoslovakia is the northerly edge of its area of distribution. In Czechoslovakia a very rare species, known from one locality from Southern Slovakia (Chřába, 25. VIII. 1958, leg. J. Ptáček) only.

Physocephala lacera (Meigen)

Conops lacera Meigen 1824, Syst. Besch., 4:130
? *Conops annulipes* Wiedemann 1824, in Meig., Syst. Besch., 4:135
? *Conops lacera* Macquart 1835, Suit. à Buffon, 2:28

Male: Head hemispheric, face and front ochreous yellow, without any markings. Facial keel only just visible, vertical swelling small, brownish. Occiput dark brownish. Antennae dark brown, 2nd joint often reddish at base, about 3—4 times length of 3rd egg-shaped joint. Terminal style very small, epiglottis-shaped, basal joint only very little prolonged, similar to *P. pusilla* (Meig.). Proboscis slender, twice length of head, black, only in the middle part brownish. Thorax brown, pleura with silvery stripe. Mesonotum with black markings, the lower half of scutellum and the whole postnotum black. Halteres yellowish, brown at base. Legs brown, the last tarsal segments and coxae dark brown or black. Hind femora with dark central spot. Wings with intensive brown band which reaches up to the front margin, but costal and subcostal cells are lighter. The band reaches in direction of the apex of the wing to the middle of cell R₂. Discal cell is coloured in the basal part only, and on the lower side this brown band touches the cubital cell. Abdomen in basal half obviously narrowed, the separate segments brown with black and silvery design. Length: 10—12 mm, according to Kröber (1925) even 7 mm.

Female: As the male, abdomen long and slender, 2nd and 3rd segments are of equal length. 5th and 6th segments conspicuously enlarged, 5th segment with wide brown theca, similar in form to *Leopoldius coronatus* (Rond.). 6th segment is the widest, separated segments brown or yellowish brown with black and silvery distal margins. 7th segment light brown, genitalia black. Length: 10—12 mm.

Rather similar to *P. pusilla* (Meig.), but differs in larger length, in generally more variegated colouration, which is in *P. pusilla* (Meig.) relatively unicolorous dark brownish. Female differs in the more wide and blunt theca.

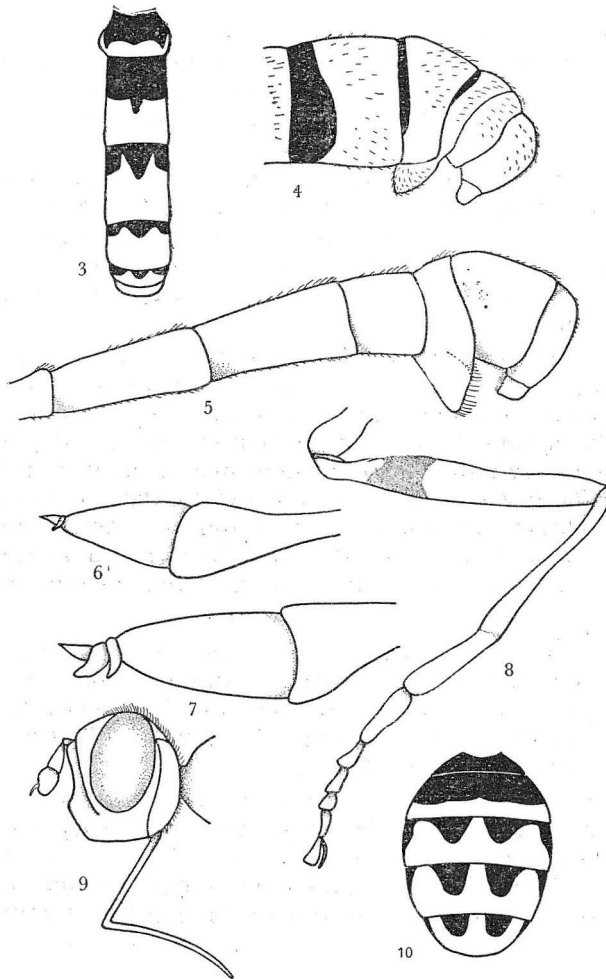
Dates: July.

Distribution: Central and Southern Europe, Asia Minor, Turkmenia, Syria and North Africa. Southern species, from Central Europe known previously only from Hungary and Austria. The first record from Czechoslovakia (Southern Slovakia—Štúrovo 20. VII. 1958, leg. J. Palásek) represents at the same time the northerly extremity of distribution of this species.

Physocephala truncata (Loew)

Conops truncata Loew 1847, Dipt. Beitr., III:21

Male: Face and front reddish yellow, front more yellowish. Two black stripes lead along the facial keel from the base of antennae, front with black half-moon shaped spot, close to the antennae. Oral margin black, occiput also black, faintly dark hairy. The whole antennae black, only 3rd joint brownish at base. 2nd joint short black pubescent. Terminal



3 — *Leopoldius diadematus* Rond. ♀: abdomen, dorsal view; 4 — *L. diadematus* Rond. ♀: abdomen, lateral view; 5 — *Physocephala lacera* (Meig.) ♀: abdomen, lateral view; 6 — *P. truncata* (Loew): antenna; 7 — *P. laticincta* (Brullé): antenna; 8 — *P. laticincta* (Brullé): leg; 9 — *Dalmannia dorsalis* (Fabr.): head, lateral view; 10 — *D. dorsalis* (Fabr.) ♂: abdomen, dorsal view.

style composed of two joints, the basal joint is narrow and small. Proboscis black. Mesonotum and scutellum black, short black pubescent. Humeri reddish brown with silvery lustre. Pleura blackish with silvery stripe, postnotum black, in the upper part silvery. Halteres yellowish. Legs reddish brown, tibiae yellow at base, tarsi darker. Coxae black. Wings with brown foremarginal band which does not reach to the end of

cell R₂. The small brown spot is also indicated at apex of the wing. Costal and subcostal cells light yellowish. 2nd abdominal tergite and basal half of 3rd tergite reddish, the other parts of abdomen black, silvery pollinose. 6th tergite brownish, 7th tergite and genitalia shining black. Length: 9,5—12 mm.

F e m a l e: Head and thorax as in the male, legs lighter, yellowish. The foremarginal band on wings light brown. Abdomen darker than in the male, 2nd tergite yellowish with black ring, 3rd tergite also yellowish at base, the others are black with silvery pollinose distal margins. 7th segment and genitalia black. Theca large, black, with long black hairs. Length: 11—13 mm.

Similar to *P. chrysorrhoea* (M e g.), but it differs in two black stripes along the facial keel, in small 1st joint of terminal style and in brown foremarginal band on wings which does not reach to the end of cell R₂. In *P. chrysorrhoea* (M e g.) the whole face is yellow, 1st joint of terminal style is conspicuously enlarged and the brown foremarginal band occupies the whole cell R₂. *P. truncata* (L o e w) differs also in its smaller length, often in more reddish colouration of front and face, and in longer and entirely black proboscis. It is also similar to *P. vittata* (F a b r.), but differs obviously in two black stripes on face and in silvery design on pleura.

D a t e s: July—August.

D i s t r i b u t i o n: Central and Southern Europe, the west parts of USSR, Asia Minor and North Africa. Uncommon species, in Czechoslovakia found in several localities in Slovakia: Královský Chlmec 7. VIII. 1948 (leg. Z. Bouček), Trenčín (leg. J. Čepelák), Chotín 13. VII. 1955, Gbelce 12. VIII. 1955 (leg. J. Palásek).

R e m a r k: Some authors (K r ö b e r 1925, S é g u y 1928) take this species for as synonymous with *P. chrysorrhoea* (M e g.). Later on, (K r ö b e r 1936) takes this species for a variety of *P. chrysorrhoea* (M e g.), T r o j a n o w a (1956) for an independent species which, in my opinion, is the more correct according to all the above mentioned distinctive marks.

***Physocephala laticincta* (B r u l l é)**

Conops laticincta B r u l l é 1832, Expéd. sc. de Morée, 3:312

M a l e: Face and front yellowish with expressive black markings. Front with black middle spot, the black stripe below antennae reaches as far as the end of facial keel, not parted at the end. The lower part of face, cheeks, vertex and occiput black. Vertex with long dark hairs. Antennae black, only the 3rd joint on the inner side sometimes brownish. Terminal style: 1st joint shortly extended, it reaches on the lower side to the middle of 2nd joint, which is enlarged and about the same length as the 3rd joint. Proboscis black, about twice length of head. Thorax black, only pleura brownish. The front margin of mesonotum with two silvery spots, scutellum nearly all greyish pollinose. Halteres yellowish orange, black at base. Legs brown, tarsi reddish brown, coxae black. Femora with black ring at base. Coxae and tibiae on the outside of first two pairs with

silvery lustre. The brown foremarginal band on wings reaches as far as the end of cell R_2 , subapically lighter, similar to *P. rufipes* (F a b r.). 1st abdominal segment black with silvery yellow distal margin, 2nd and the basally contracted part of 3rd segment brown, silvery or yellowish pollinose. The other tergites black with yellowish silvery distal margin, which, in the median part, is triangularly extended. 7th tergite and genitalia shining black. Length: 12—15 mm.

Female: All the marks as in the male, theca small and black. Length: 12—15 mm.

Very similar to *P. rufipes* (F a b r.), but it differs in the structure of separate joints of terminal style, in darker coloured antennae and in black rings on femora, which are absent in *P. rufipes* (F a b r.).

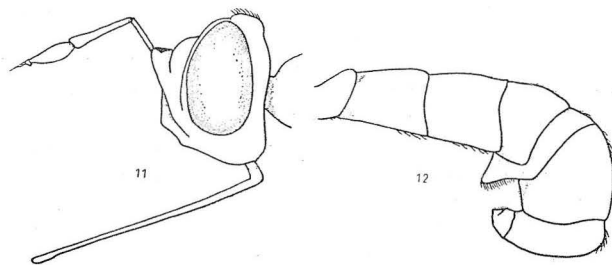
Dates: July.

Distribution: Southern species known from France, Spain, Greece, Austria, Hungary and North Africa. Now found on several localities in Bohemia and Moravia, which represents at the same time the northern extremity of distribution of this species: Bohemia — Koda near Srbsko (leg. J. Obenberger), Jindřichův Hradec 5. VII. 1955 (leg. B. Štícha). Moravia — Adamov-Křtiny 6. VII. 1931 (leg. ?).

***Conops longiventris* (Kröber)**

Conops longiventris Kröber 1915 (♂), Archiv für Naturgesch., 81:57

Male: Front and face lemon-coloured, frontal orbit silvery pollinose. Above the antennae a small black triangle. Vertical swelling yellowish, occiput dark brown. Antennae black, only 1st and 3rd joint on the lower side brownish. 1st joint short, sometimes wholly brownish, 2nd and 3rd joint about the same length. Terminal style obviously extended and pointed. Proboscis black, slender, nearly twice length of head. Thorax



Conops longiventris Kröber. ♀: 11 — head, lateral view;
12 — abdomen, lateral view.

black, humeri and pleura silvery pollinose. Mesonotum with only little visible silvery or yellowish longitudinal stripes, scutellum black, postnotum at the upper part silvery pollinose. Halteres yellow, little reddish. Legs light brown, coxae and apical half of tibiae dark brown. Tarsi black, pulvilli obviously yellow. Wings hyaline, only slightly brownish. Veins

black, brown at base. Abdomen slender, black with silvery markings. 2nd and 3rd segments about the same length, at the sides sometimes brownish. 2nd—4th tergites with silvery pollinose distal margin. 5th and 6th tergites all silvery pollinose. Genitalia black. Length: 7—9,5 mm.

Female: Head, thorax, legs and wings as in the male. Abdomen cylindrical, all shining black with silvery markings, 2nd and 3rd segments about the same length. The silvery markings reach as far as the middle of the 2nd tergite, on 3rd and 4th tergites they form only the distal margin. 5th and 6th tergites all silvery pollinose, 7th tergite and genitalia shining black. Theca large, shining black, on the inner side with long black hairs. Length: 7—8,5 mm.

In the general appearance very similar to *C. flavifrons* Meig., but differs in black humeri and scutellum, and in the completely black or greyish black colouration.

Dates: July.

Distribution: Very rare species, previously known only from one locality (Pula) in Yugoslavia. It has now been captured in several localities in Czechoslovakia (Southern Moravia and Southern Slovakia): Moravia — Bzenec 19. VII. 1940 (leg. O. Šusterka). Slovakia — Štúrovo VII. 1952, VII. 1953, Gbelce VII. 1953 (leg. M. Kocourek), Somotor 14. VII. 1959 (leg. J. Palásek).

Remark: This species was known only from Kröber's original description of the male. The female is described in this paper for the first time.

***Dalmannia dorsalis* (Fabricius)**

Stomoxys dorsalis Fabricius 1794, Entom. syst., 4:396

Myopa dorsata Latreille 1809, Gen. Crust. et Ins., 4:338

Myopa flavescens Meigen 1824, Syst. Besch., 4:152

Dalmannia flavescens Robineau-Desvoidy 1830, Myod., p. 250

Stachynia marginella Zetterstedt 1844, Dipt. Scand., 3:945

Male: Face and cheeks whitish yellow, front blackish brown, vertex with black hairs. Vertical swelling shining black, occiput black with grey hairs. Antennae black, 2nd and 3rd joints about the same length. Arista short, strong and pointed. Proboscis dark brown, first part is about the same length as the height of head. Palpi hardly visible. Thorax black, only humeri, markings at the base of wings and the top of scutellum yellow. Mesonotum and scutellum dusty greyish yellow hairy. Halteres yellowish. Legs whitish yellow, femora and hind tibiae with brown markings, tarsi and coxae black. Wings hyaline with slight brownish tinge, veins black, brown at base. Abdomen yellow with black markings, wholly greyish hairy. First two tergites black, 1st with narrow whitish yellow basal margin, 2nd with wide yellow distal margin. 3rd—5th tergites yellow with four black spots at the front margin; two middle spots are nearly hemispheric, the two lateral are triangulate and extended as far as the distal margin. Abdomen yellow on the lower side, the two basal sternites shining black. Genitalia shining brown with long brownish appendix. Length: 4—6 mm.

F e m a l e : Front lighter, on the lower part yellowish. Legs yellow, only middle and hind coxae black and tarsi brown. Otherwise as in the male. The black spots on tergites are enlarged and sometimes, at the front margin, joined together. Ovipositor strong, shining black with brown apex, on the lower side reaches only to the 4th segment. Length: 4—6 mm.

Very similar to *D. punctata* (F a b r.), but differing from it distinctly as follows: Front darker, legs brown (especially in the males), scutellum black with yellow top only, and abdominal tergites with a pair of black central spots instead of only one central spot as in *D. punctata* (F a b r.).

D a t e s : June. S é g u y (1928) records April.

D i s t r i b u t i o n : North, Central and Southern Europe, Siberia and North Africa. In Europe widely distributed, but little known and everywhere a rare species. From Czechoslovakia we have at our disposal the first record from Bohemia (Neratovice, leg. A. Vimmer).

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Nové nálezy očnatkovitých (Diptera, Conopidae) v Československu

Čeď *Conopidae* byla v Československu dosud jen málo studována, podle poslední práce Čepeláka (1959) je známo z území Československa celkem 39 zástupců této čeďi. Autor po prostudování materiálu uloženého ve sbírkách Národního musea v Praze a Moravského musea v Brně zjistil dalších 7 druhů, které jsou nové pro faunu Československa. Výskyt druhů *Leopoldius diadematus* (R o n d.), *Physocephala lacera* (M e i g.), *P. truncata* (L o e w), *P. laticincta* (B r u l l é) a *Dalmannia dorsalis* (F a b r.), bylo možno v Československu předpokládat vzhledem k jejich rozšíření v Evropě. Zajímavý je nález druhu *Leopoldius calceatus* (R o n d.) na Moravě; tento druh byl označován jako jihoevropský a nález Dudy (1940) z Polska zůstal současnými autory nepovšimnut. Překvapující je rovněž zjištění druhu *Conops longiventris* Kröb. na několika lokalitách jižní Moravy a jižního Slovenska. Doposud byl tento druh znám podle jediného samce popsaného Kröberem (1915) z Jugoslaviie (Pula); samice je v této práci popsána po prvé.

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Новые данные о фауне конопид (Diptera, Conopidae) Чехословакии

Фауна конопид Чехословакии изучена до сих пор относительно слабо. По последним данным Чепелáка (1959) для территории Чехословакии отмечено всего 39 представителей этого семейства. При изучении материалов из коллекции Национального музея в Праге и Моравского музея в Брно автор установил 7 дальнейших видов, новых ЧССР. Наличие видов *Leopoldius diadematus* (R o n d.), *Physocephala lacera* (M e i g.), *P. truncata* (L o e w), *P. laticincta* (B r u l l é) и *Dalmannia dorsalis* (F a b r.) в Чехословакии можно было ожидать с большой правдоподобностью, учитывая их распространение в Европе. Интересна находка вида *Leopoldius calceatus* (R o n d.) в Моравии; этот вид считался южноевропейским представителем и находка Дуды (1940) из Польши осталась незамеченной современными авторами. Поразительна также находка вида *Conops longiventris* Kröb. на нескольких местонахождениях в Южной Моравии и Южной Словакии. До сих пор этот вид был известен лишь по одному самцу, описанному Kröberом (1915) из Югославии. Самка описывается в данной работе впервые.

References

- Brancsik, K., 1910: Trencsénvármegyében talált Dipterák felsorolása 1908—1910. — *Evkönyve Soc. Hist. Nat. Trencsén*, **31—33**: 127—158.
- Czižek, K., 1906: Beiträge zu einer Dipterenfauna Mährens. — *Zeitschr. des mährischen Landesmuseums*, **6**: 182—234, Brünn.
- 1907: Neue Beiträge zur Dipterenfauna Mährens. — *Ibid.*, **7**: 157—177, Brünn.
- 1908: II. Nachtrag zu den „Beiträgen zu einer Dipterenfauna Mährens“. — *Ibid.*, **8**: 1—26, Brünn.
- 1909: Die Zweiflügler des Altvaters des Taltales. I. Platyppezidae, Pipunculidae, Syrphidae et Conopidae. — *Ibid.*, **9**: 151—175, Brünn.
- 1910: Beiträge zur Dipterenfauna Mährens (III. Nachtrag). — *Ibid.*, **10**: 1—26, Brünn.
- Čepelák, J., 1959: Příspěvek k poznání československých zástupců čeledi očnatkovitých (Diptera, Conopidae). — *Čas. čs. spol. ent.*, **56**: 19—25, Praha.
- Duda, O., 1940: Neue oder ungenügend bekannte Zweiflügler der paläarktischen Region aus meiner Sammlung. — *Folia zool. hydrobiol.*, **16**: 397—407, Riga.
- Chvála, M., 1961: Příspěvek k poznání očnatkovitých (Diptera, Conopidae) Slezska. 1. část: Revize moravskoslezských sběrů K. Czižka a K. Landrocka. — *Přírodověd. čas. slezský*, **22**: 121—126, Opava.
- Kanervo, E., 1928: Ueber die skandinavischen Dalmannia-Arten (Dipt. Conopidae). — *Notul. ent.*, **8**: 36—38, Helsingfors.
- Kowarz, F., 1894: Diptera, in: *Katalogus Insectorum faunae Bohemicae*, pp. 1—42, Prag.
- Kröber, O., 1915: Die palaearktischen Arten der Gattung Conops L. — *Archiv f. Naturgesch.*, **81** (Abt. A., 11 Heft): 35—60, Berlin.
- 1925: *Conopidae*, in Lindner: *Die Fliegen der palaearktischen Region*, **35**: 1—48, Stuttgart.
- 1930: Familie Conopidae (Blasenkopffliegen). — *Tierwelt Deutschl.*, **20**: 119—142, Jena.
- 1936: Katalog und Bestimmungstabellen palaearktischen Conopiden. — *Acta Ins. Mus. Zool. Univ. Athen*, **1**: 121—159.
- Landrock, K., 1907: Mährische Zweiflügler. — *Achter Bericht des Lehrerkлубs für Naturkunde über das Jahr 1906*, pp. 50—71, Brünn.
- 1908: Beitrag zur Dipterenfauna Mährens. — *Zeitschr. des mährischen Landesmuseums*, **8**: 161—180, Brünn.
- Séguy, E., 1928: Étude sur les Mouches Parasites, I. Conopides, Oestrides et Calliphorines de l'Europe occidentale. — *Encyc. Ent.*, **1**: 1—251, Paris.
- Smith, K. G. V., 1959: The Distribution and Habits of the British Conopidae (Dipt.). — *Trans. Soc. British Ent.*, **13**: 113—136, London.
- Stackelberg, A. A., 1958: List of Diptera of the Leningrad Region III. Acalyptata, part 1. — *Trudy zool. Inst. Akad. nauk SSSR*, **24**: 103—191.
- Thalhammer, J., 1899: *Diptera*, in: *Fauna Regni Hungariae*, pp. 1—76 (ed. sep.), Budapest.
- Trojanowa, R., 1956: *Klucze do oznaczania owadów Polski, XXVIII, Diptera-Conopidae*, **35**: 1—40, Warszawa.
- Vimmer, A., 1913: Seznam českého hmyzu dvoukřídleho (Catalogus Dipteriorum). — *Entomologické příručky* **8**: 1—99, Praha.

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