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NEURIGONA DOBROGICA N.SP. (DIPTERA: DOLICHOPODIDAE) AND SOME OTHER SPECIES RECORDED FOR THE FIRST TIME IN ROMANIA (XI) FROM ITS SOUTHERN HALF

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On décrit une nouvelle espèce, *Neurigona dobrogica* n.sp., tandis que les espèces *Hydrophorus litoreus* Fallén, *Asyndetus varus* Loew et *Ludovicius impar* Rondani sont signalées pour la première fois en Roumanie.

The material proceeds from the collectings made by the specialists of the "Grigore Antipa" Natural History Museum Bucharest in Southern Dobrogea (a region from South-Eastern Romania) during the years 1992–1995, to which are added older materials from the collections of the same museum (1982, 1984) collected in the South-West and the center of the Romanian Plain (Fig. 1). Among the presented species, *Ludovicius impar* Rond. is a Palearctic rarity and belongs to a genus recorded for the first time in Romania.

Neurigona dobrogica n. sp.

(Fig. 2, A-H, 3, A-G)

Material. Holotype: M, 13.V.1995 village Furnica, commune Dumbrăveni, Constanța county, leg. C. Pârvu – on a *Gleditschia* trunk.

Paratypes: 6 MM, the same data as the holotype. *Allotype:* F, the same datas as the precedent types.

Diagnosis: M. Species resembling to *N. verrichterae* Nogrobov, 1988, from which it is different by: a crown of black bristles to the 2nd articles of antennae (to both sexes), the absence of bristles on the tibia no. 1, the presence in surplus of some bristles on the femur no. 2, bicolor humeral calus. Body length: M = 4.9 mm, (F = 5 mm).

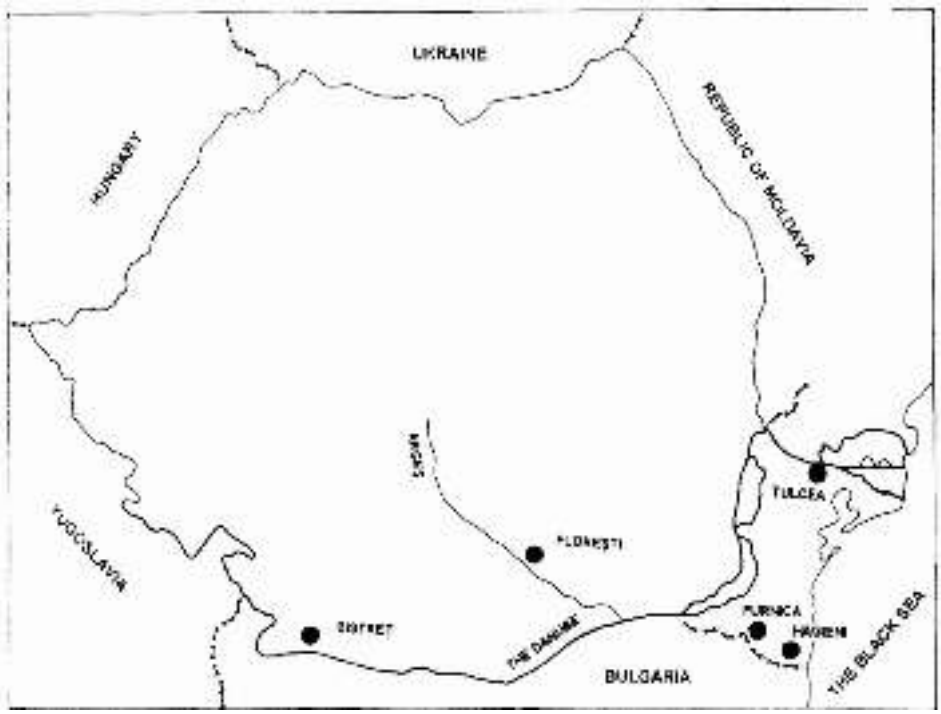

Fig. 1 – Map of Romania with the collecting localities (black point).

Description:

Head. Frons covered with dense powder, white-silvery. In the ocellum zone there are 2 brown interocellar bristles, slightly shorter than the arista; the orbital and the postvertical, also brown, have about half the length and the thickness of the interocellars. The face has the breadth of an ocellum and the same powder as the frons. The antennae (Fig. 2, A) are orange – a_2 has a crown of brown-black bristles having the same colour as the arista. The apical half of a_3 is brown. The breadth of the face, the length and the height of a_3 and the length of the arista have the following proportions: 0.6; 1.1; 1.5; 0.5. The palps are white yellowish, with whitish hairs, the proboscis slightly darker, with white hairs. The upper and lower postoculars – whitish.

Thorax. The ground colour – including that of the scutellum and postscutellum, is metallic-green. Mesonotum (including the pleura) – covered with a thick grey powder. The lower part of humeral lobs is yellowish. Chetotaxy of mesonotum: 6 pairs of d.c. whose length is increasing to those of the posterior part of mesonotum; biserial a.c., their length is 1/2 of

that of the dorsocentral ones situated in the center of the mesonotum. There are also 1 humeral, 1 posthumeral, 1 sutural – between the last one and d.c., in the anterior part of the mesonotum – 1 postsutural, 2 strong notopleurals, 2 supraalars, 1 postalar, 2 strong scutelars (having on their flanks each 1 scutelar very weak); 1 yellow propleural. Halteres yellow.

Wings transparent, without spoots, with a brown tint; the nervures are a weakly brown. The proportions of the 3rd and 4th segments of the costal nervure are 2.6 (2.7)–0.5. The length of the basal segment and that of the apical segment of the nervure m_{1+2}: 12.4–13.3. The terminal segment of the nervure m_{3+4} and the length tp (posterior transversale) have the ratio 3.5–1.3. (Fig. 2, B).

Legs, yellowish (including coxas and trochanters) – the last article slightly brown-orange.

Leg. I. (Fig. 2, E). Coxa – yellow, on the dorsal side it present in its basal portion more yellowish hairs and in the distal one, black hairs between which 2–3 strong bristles. Femur and tibia yellowish, without bristles, the tarsis – beginning with the apex of the 3rd one – are slight brownish; tarsis 4 and 5 feebly dilated (expanded), the claws brown-reddish one of them oriented towards the base of the leg (Fig. 2, H). The pilosity of the tarsus 5 is loose, only some hairs – yellowish, shorter than the diameter of the article. The proportions of the femur, tibia and tarsi length: 5.5; 6.3; 4.2; 2.4; 0.9; 0.6; 0.5.

Leg II yellowish, coxa has on the outer side black bristles and hairs (holotype). One of the paratypes (no. 5) has on the coxa 2 yellowish apicl bristles.

The femur, slightly dilated (expanded) in the basal zone and narrawed towards the apex; on the ventral side, in the expanded section it presents 3–4 hairs, some of them brown, other ones yellow, of about the same length as the thickness of the femur (Fig. 2, F, 3, B). The tibia has 4 a.d. and 1 p.d. (in its apical fifth); basitarsus has 1 a.d., 4 p.d., 2 d., the 2nd tarsal article has 2 a.d., the other tarsi have not evident bristle, the 5th article is slightly brownish. The proportions of femur, tibia and tarsi are: 6; 8.3; 6.2; 2.5; 1.5; 1; 0.6.

Leg III yellowish, the coxa has a black bristle, strong in its apicodorsal section, the femur without bristles, the tibia has 3–5 p.d., 1 weak a.d., the basitarsus has 3 a.d., 3 a.d., the next tarsus: 5–6 a.d. and 5–6 p.d. in pairs, the other articles without remarkable bristles (Fig. 2, G).

Abdomen yellow with brown spots on the II, III, IV segments (Fig. 2, D) the segment V is black like the genital capsule. The pilosity of the tergites is black, the tergite I has a marginal crown of black bristles, as long as the breadth of the abdomen; the sternites have a yellowish pilosity. The genital

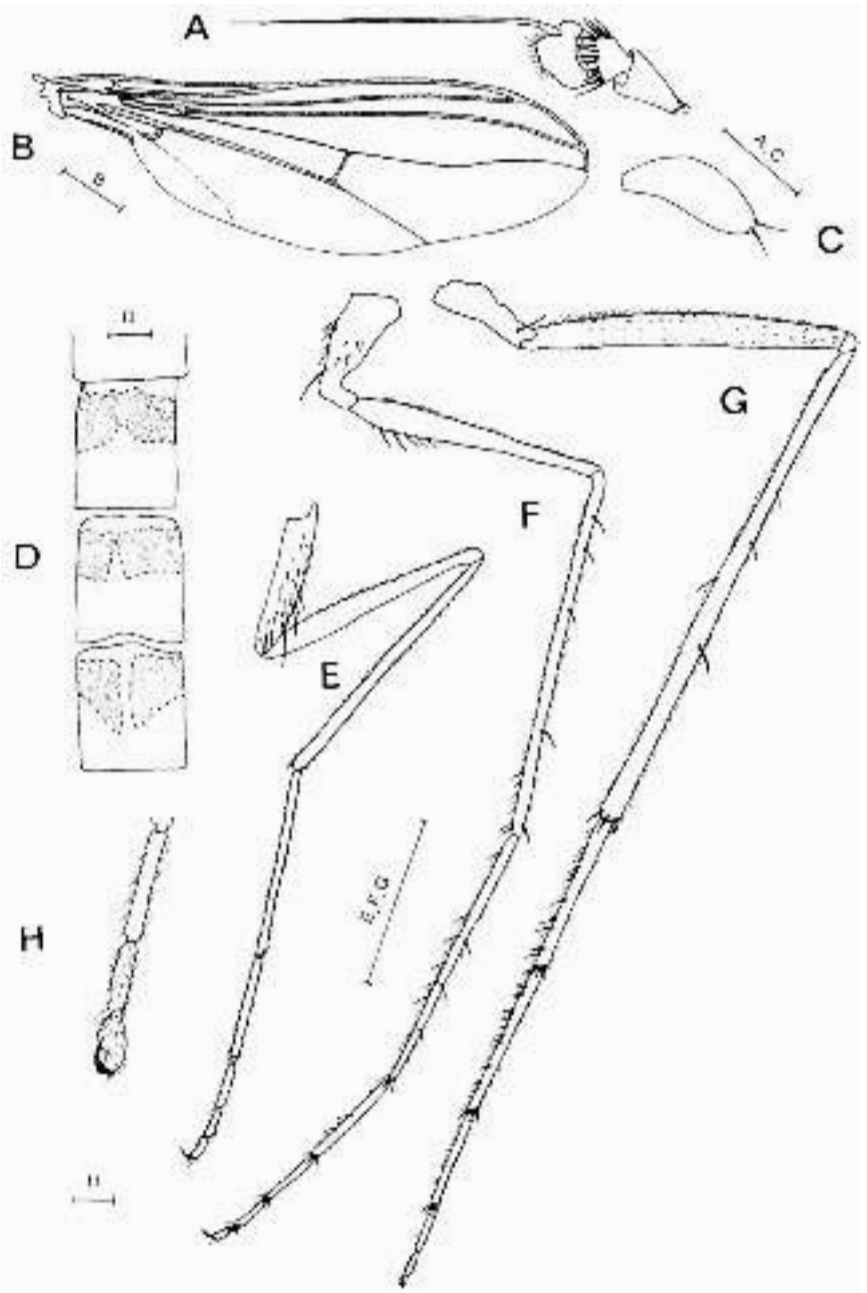

Fig. 2 – *Neurigona dobrogica* n.sp., M. A – antenna, B – wing, C – palpus, D – abdomen dorsal view, E – front leg, F – mid leg, G – hind leg, H – detail of the last 3 articles of for leg. Scale: A, C, D = 0.2 mm, E, F, G = 1 mm, H = 0.1 mm.

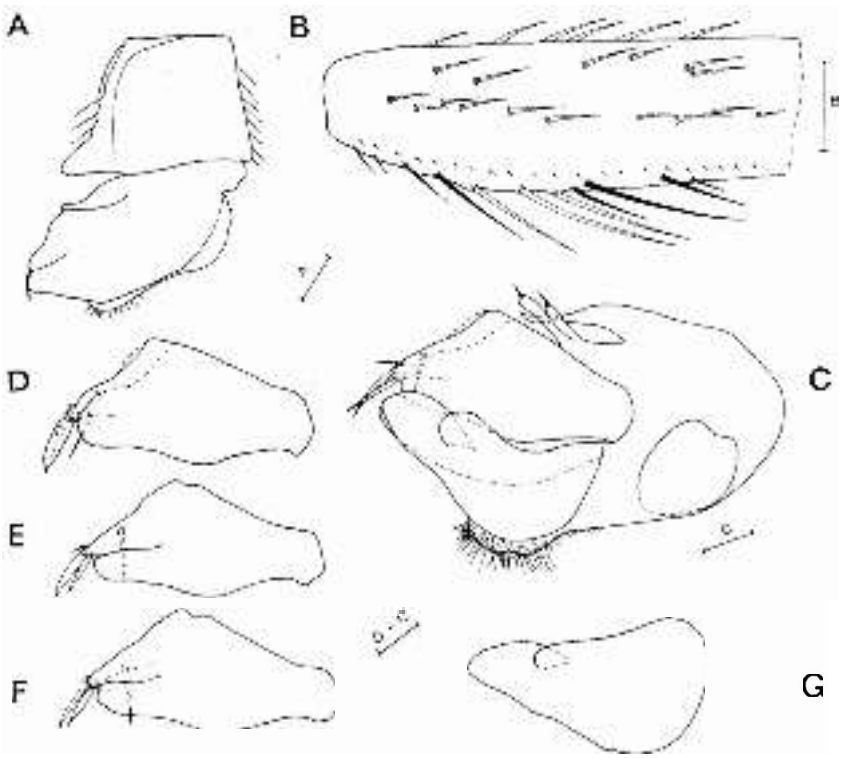

Fig. 3 – *Neurigona dobrogica* n.sp., M. A – abdominal apex (lateral view), B – basal half of the mid leg, C – genital capsule in lateral view, D, E, F – three aspects of the upper gonopod (lateral view), G – inferior gonopod (lateral view). Scale: A = 0.2 mm, B, D–G = 0.1 mm.

capsule (Fig. 3, C) is resembling that one of *N. verrichterae* but is diferent by the form of the gonopods, the number and the aspect of the foliaceans formations from the apex of one of them (Fig. 3, D-G).

Female. Tha face has a dense white-greyish powder; its breadth at the level of the transversal suture is smaller than the height of the 3rd article of the antenna (a_3). The ratio of the face breadth and the heigth of the a_3 is 1: 1.2. The article nr. 2 of the antenna (a_2) has a crown of brown-black, strong marginal bristles. The abdomen is black, with great brown spots on the tergites II–IV.

In table no. 1 we present the compared chetotaxy and biometry of the legs of the males of the new species (holotype and one paratype) and from *N. verrichterae.*

Table 1

LEGS	N. VERRICHTERAE	N. SP. HOLOTYPE	N. SP. PARATYPE
FEMUR II	Without bristles	4–5 long bristles	idem
TIBIA I	1 a.d.	Without bristles	idem
TIBIA II	3 a.d., 2 p.d., 2 v	4 a.d., 1 p.d.	idem
TIBIA III	3 a.d., 5–6 p.d., 5–6 a.v.	1 a.d., 3–5 p.d.	idem
LENGTH-TIB./ TARS:			
P. I	**7.3:5.4:2.4:1.1:0.9:0.7**	**6.3:4.2:2.4:0.9:0.6:0.5**	**6.4:5.2:2.6:1.1:0.6:0.5**
P II	**10.2:7.4:2.9:1.7:1:0.8**	**8.3:6.2:2.5:1.5:1:0.6**	**8.3:6.6:2.9:1.6:1:0.5**
P III	**14.2:4.2:4.1:2.3:1.9:0.8**	**11.8:3.7:3.9:2.3:1.2:1.2**	**11.8:3.7:3.9:2.3:1.2:1.2**

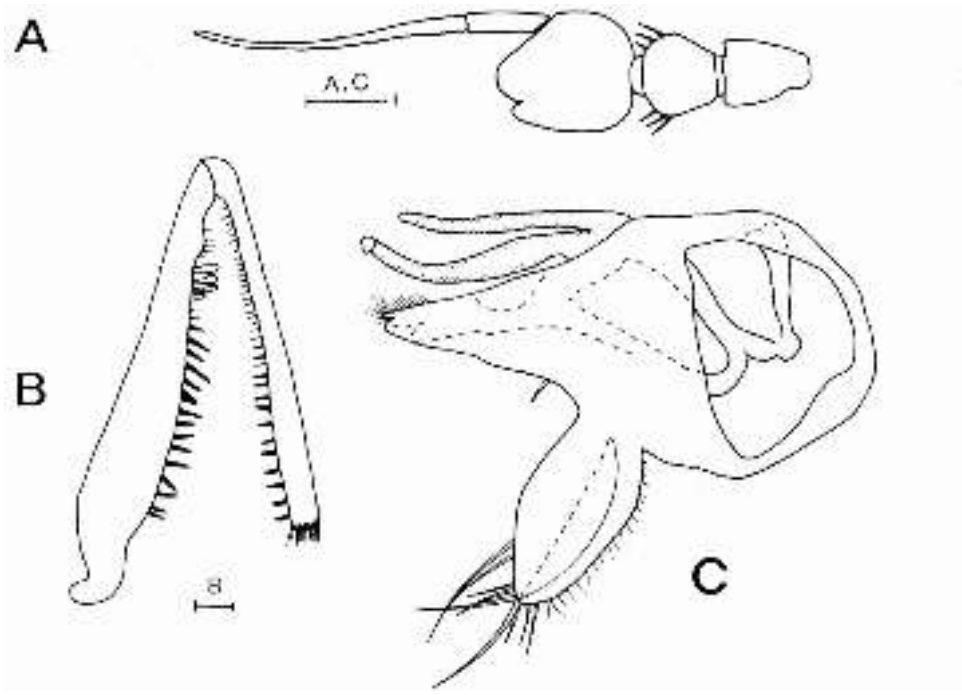

Fig. 4 – *Hydrophorus litoreus* Fallén, M. A – antenna., B – front leg, C – genital capsule (lateral view). Scale line: 0.1 mm.

Hydrophorus litoreus Fallén, 1823. Material: 6 MM, Tulcea (conty with the same name), 28.VII.1984 leg. dr. Eleonora Erhan. For certifying the identification we figured the antenna, the leg I and the genital capsule of M (Fig. 4, A–C).

Distribution: Sweden, Finland, Denmark, England, Ireland, Belgium, France, Czechia, Slovakhia, Austria, Hungary, Holland, Germany, Poland, Estonia, Russia (Murmansk, Karelia, Ural, Tumen, Yakutia, Buryat), Belarus, Ukraina.

Species recorded for the first time in Romania.

Asyndetus varus loew, 1869. *Material* entirely collected by the author: 1 M, Bistreț (Dolj County), 2.VI.1982, 1 M, 1 F, 14.V.1990, Florești commune Stoenești (Giurgiu) on the denudate beach, with sand and gravel on the lower course of the Argeș river, from the same place where the other specimens were collected on other years: 1 M, 10.VIII.1993, 53 MM, 2 FF, 11. VI.1995.

The analysis of the literature and of the material made abovious some discordant facts, aspects of variability of the longitudinal alar nervure no. 4 and gaps of the description, which we grouped together in the table no. 2 as follows:

1. – *The characteristic ornamentation of the tibia III of the male (Fig. 5: B) remains the most sure element for the identification of the species.*

2. – *The accurate placement of the hind transversal nervure* is that one proposed by Parent (1938) and figured on the base of our material (Fig. 5, C).

3. – The degree (the angle) of arching of the 4th longitudinal nervure has 2 alternatives, the most frequent that one described by Loew 1869 and figured by us in Fig. 5, C, while the variant with different interruptions proposed by Parent (op. cit., fig. 784) and figured by us for the specimens from 11.VI.1995 appears seldom (Fig. 5, d-r).

4. – *The shape of the body* may vary from the more lithe aspect, with a thin abdomen, to the more robust one, with a rounded abdomen.

5. – *The body colour* may be metallic green with blue or copper-coloured reflections.

6. – *The transparence and colour of the wing:* specimens with hayline wings, other ones with smoky wings or with a slight brown tint.

7. – *The gonopodes colour:* there are 2 types, one with dark brown gonopodes, the other with translucent gonopod of a durty yellow (see the genital capsule in Fig. 6, C).

8. – *Completion of the description:* the presence on the 4th abdominal sternite of 2 *thick, robust, black bristles (not yet remarked by any author)* (Fig. 6, A) – to them seem to correspond 2 lateral alveoles present at the absominal apex F (Fig. 6, B), mechanism which could serve to the fixing of the female during the mating.

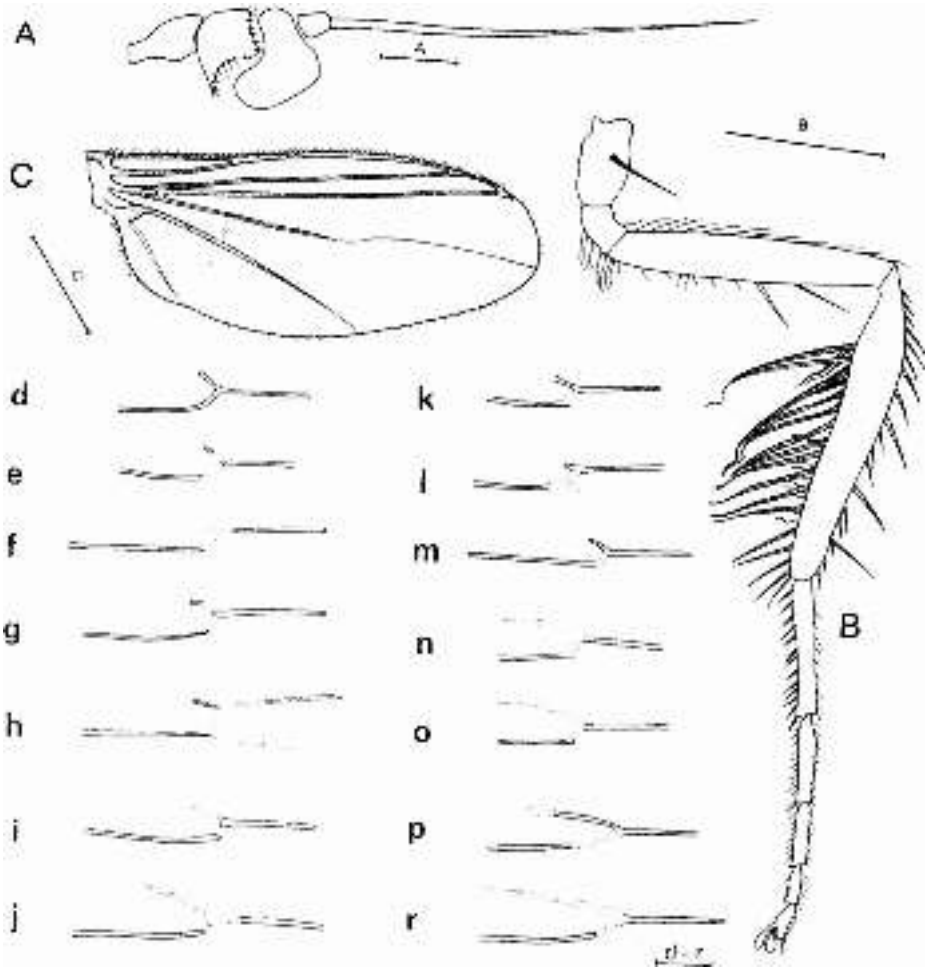

Fig. 5 – *Asyndetus varus* Loew, M; F. A – antenna. B – hind leg. C – wing. d–j = zone with interruptions of the 4th longitudinal nervure (left wings). k– r = the same zone (right wings of the same specimens). Scale: A. d– r = 0.1 mm. B. C = 0.5 mm.

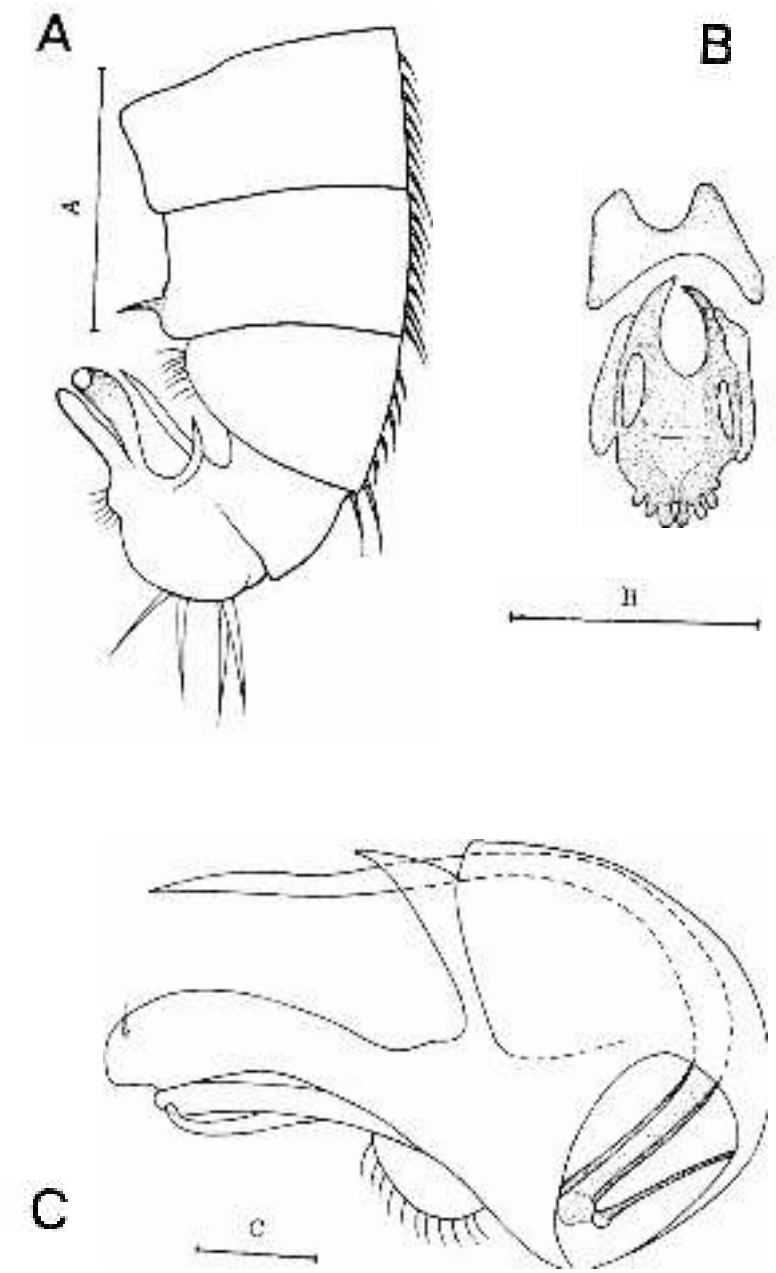

Fig. 6 – *Asyndetus varus* Loew, M, F; A – male abdominal apex (lateral view). Scale: A, B = 0.5 mm, C = 0.1 mm.

Table 2

Explanations concerning the identification, the variability and completion of the description on *Asyndetus varus* Loew

NR.	MORPHOLOGICAL ELEMENTS	LOEW, 1869	BECKER, 1918 (III)	PARENT, 1938	NEGROBOV, 1973	MATERIAL	REMARKS
1	Position of transversal posterior nervure	"...very near of the wing's root" (diagnosis)	"opposite to the confluence with the first longitudinal" (keys, pag. 77)	"...before the confluence with the first longitudinal" (pag. 560)	"...opposite to the confluence with the first longitudinal nervure" (pag. 164)	Before the confluence with the first longitudinal nervure	Correct dates: Parent and material
2	Position of the "small transversal nervure" (Loew)	"...very near of the wing's root" (description)					We do not know to which transversal nervure is Loew refering to
3	Mode of bending and interrupting (or not) the 4th longitudinal	"...there is not a real and evident interruption, but there is an evident trend in this way" (description)		"...bent in right angle, the intermediary segment practically wiped" (pag. 560) (Fig. 784)	"strongly curved in the terminal segment" (keys, pag. 164) (Fig. 15, "according to Parent)	a - weak curving, uncertain interruption at both sexes, in all the material, excepting: b - of the lot of 11.VI.1995, with very variable curvings and interruptions (Fig. 5, C, d-r)	- the rule: point „a" from the material - the exception: point „b" from the material
4	Transparence and colour of the wing	"...dark, dark grey" (description)		"...hyaline wings" (pag. 560)		a - hyaline b - smoky or brownly	
5	Shape of the body					a - lithe specimens with narrow abdomen b - more reobust specimens	
6	Colour of the body	"...tanned green with a slight nuance of blue" (description)		"...metallic green meso-notum, flanks green-blue, metallic, white powder (pag. 559)		a - dark green b - green with coppercoloured reflection c - green with blue reflection	
7	Colour of the gonopods	Not mentioned, being "hidden" (description)		"...yellow (pag. 559)		a - brown-black, opaque b - yellowish, translucent	
8	Length of the body	11/1.2 lin.		2.25		between 2.5–2.9 mm	
9	One the 4th sternite of MM there are 2 short, very robust, black bristles					By all MM specimens	Elements not remarked in the literature

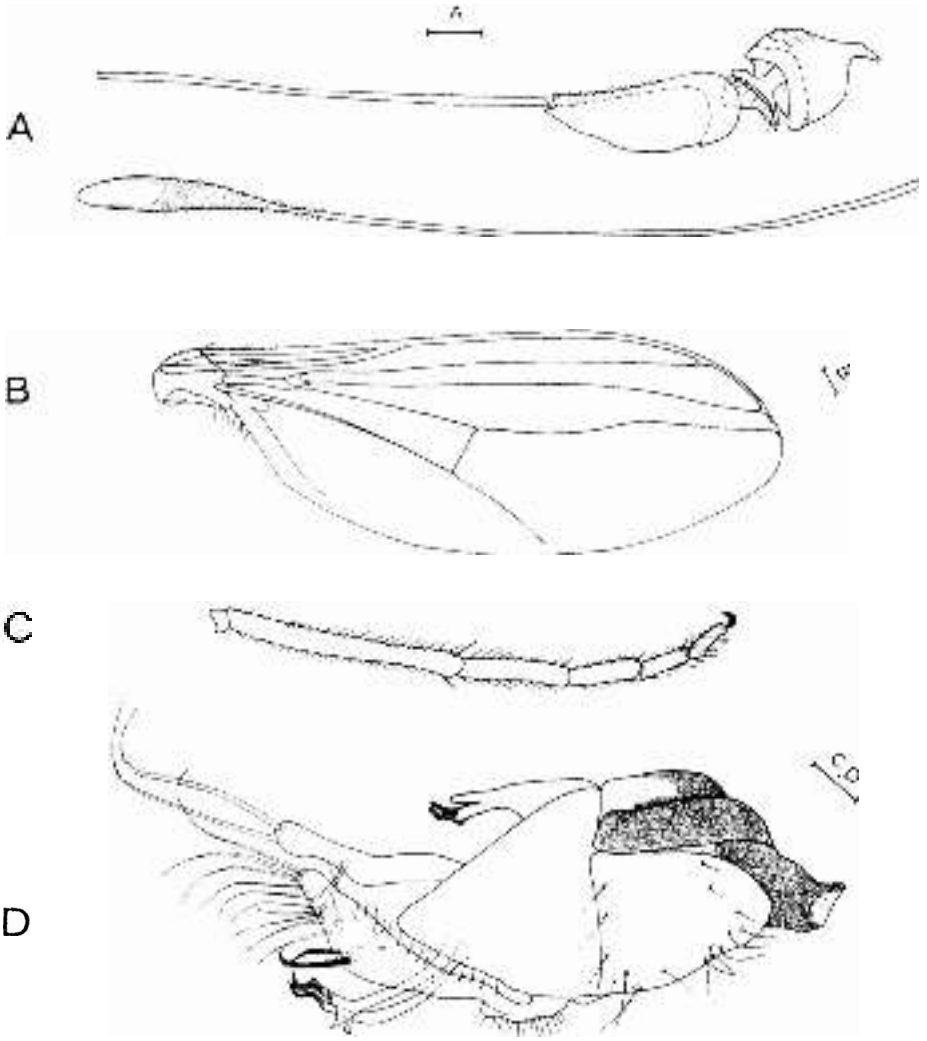

Fig. 7 – *Ludovicius impar* Rondani. M; A – antenna (2 fragments), B – wing, C – front tarsi, D – genital capsule (lateral view). Scalle: all = 0.1 mm.

Distribution: Hungary, Italy, Algeria, Azerbaidjan (Loew, 1869, WEber, 1980, Negrobov, 1973, 1991). By mistake it was mentioned in Austria and the French Alps confounding Austria with Hungary and doing an erroneous translation of the probability.

Species recorded for the first time in Romania.

Ludovicius impar Rondani, 1843. *Material:* 1 M, Hagieni (Constanța County), 9.VII.1992, leg. C. Pârvu.

In the natural reserve Hagieni from the South-Eastern extreme zone of Romania on a limestony soil, in a depression where the water of a lake with reed gathered, we collected only one male specimen (Fig. 7).

We figured also the wing and the hypopygium (Fig. 7, B, D) but also the tarsi of leg I (Fig. 7, C) precisely for showing that it is simple and therefore it is clearly different of that of the species *L. eucerus* Loew, figured in Parent, 1938, fig. 338.

Distribution: Italy, Hungary.

The species was not found again from the time of its description, in 1943 and even if in the Southern Paleartctic it could be less rare, the fact that in Belgium, Holland, Germany, Czechia, Poland there are working for a long time specialists of the Dolichopodidae family and however nobody found it again, it seems that *in Europe it remains a rarity.*

Genus and species recorded for the first time in Romania.

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NEURIGONA DOBROGICA N.SP. (DIPTERA: DOLICHOPODIDAE) ŞI ALTE CÂTEVA SPECII LA PRIMA SEMNALARE ÎN ROMÂNIA (XI) DIN JUMĂTATEA SUDICĂ

REZUMAT

Pe baza unui material din colecțiile Muzeului de Istorie Naturală „Grigore Antipa" din București se descrie o specie nouă pentru știință *Neurigona dobrogica* n. sp., asemănătoare cu specia *N. verrichterae* Negrobov 1988 descrisă din Caucaz, nord-estul Mării Negre și se semnalează alte 3 specii pentru prima dată în România: *Hydrophorus litorcus* Fallén, *Asyndetus varus* Loew și *Ludovicius impar* Rondani. Pentru *A. varus* sunt detaliate aspecte de variabilitate și se completează descrierea inițială a speciei; *Ludovicius impar* aparține unui gen nesemnalat încă în România, și este o raritate, ea nemaifiind găsită de acum 153 de ani.

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