

## AN OVERVIEW OF HARVESTMEN (ARACHNIDA: OPILIONES) IN CROATIA

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**Novak, T.: An overview of harvestmen (Arachnida: Opiliones) in Croatia. Nat. Croat., Vol. 13, No. 3, 231-296, 2004, Zagreb.**

Critical review of the literature on harvestmen from Croatia was made, and data from major collections of harvestmen in Croatia are listed to provide an overview of recent knowledge on the topic. Where needed comments and/or corrections have been added to avoid further confusion. Altogether, 64 valid species and one subspecies have been firmly identified in Croatia. Two further species are undoubtedly present although not yet recorded, bringing the total number of opilionid species to 66 plus one subspecies. Potentially, up to 9-11 further species inhabit the country, and the discovery of further new species cannot be excluded. Taxonomical revisions are required in some taxa. According to present knowledge, the harvestman fauna of Croatia is among the richest ones in the Balkans.

**Key words:** arachnids, bibliography, Opiliones, Croatia

**Novak, T.: Pregled faune kosaca (Arachnida: Opiliones) u Hrvatskoj. Nat. Croat., Vol. 13, No. 3., 231-296, 2004, Zagreb.**

Da bi se dobio pregled trenutnog poznavanja teme ovog rada, napravljen je kritički pregled literature o koscima u Hrvatskoj, te su navedeni podaci iz glavnih zbirki kosaca u Hrvatskoj. Da bi se izbjegle eventualne daljnje zbrke, dodani su i komentari i/ili ispravci. U Hrvatskoj je sigurno utvrđeno 64 važećih vrsta i jedna podvrsta. Još dvije vrste su sigurno prisutne u Hrvatskoj, iako nisu zabilježene, što ukupno iznosi 66 vrsta i 1 podvrsta kosaca. Potencijalno tu živi još 9-11 vrsta, a i ne treba isključiti ni otkrivanje novih. Kod nekih skupina potrebne su i taksonomske revizije. Prema sadašnjim spoznajama fauna kosaca Hrvatske je među najbogatijima na balkanskom području.

**Ključne riječi:** pau-njaci, bibliografija, Opiliones, Hrvatska

### INTRODUCTION

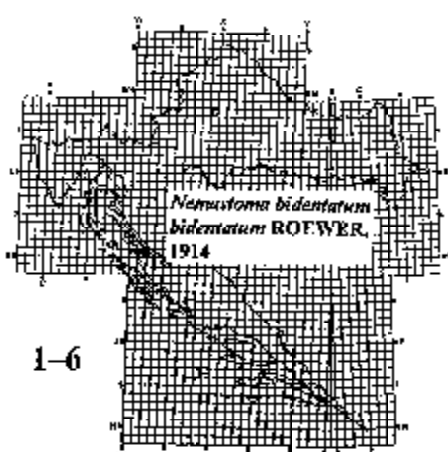
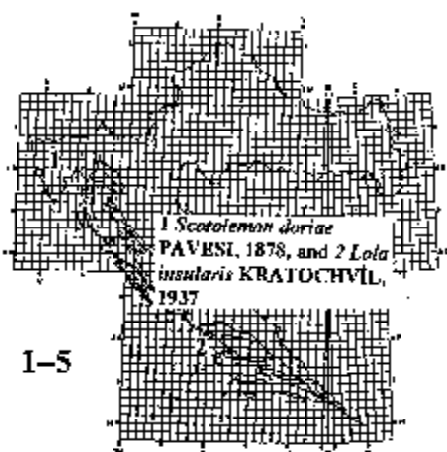
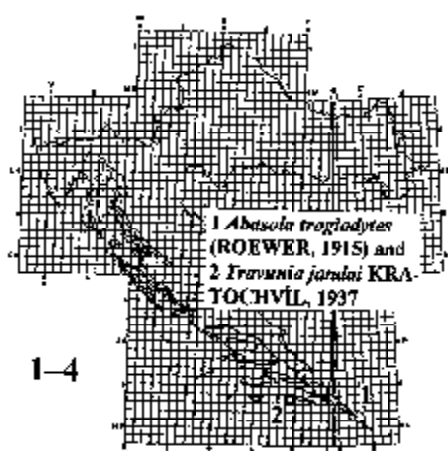
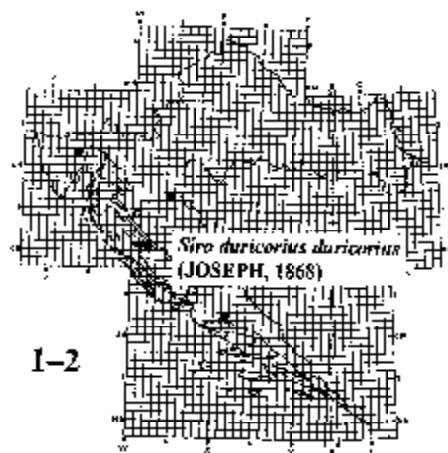
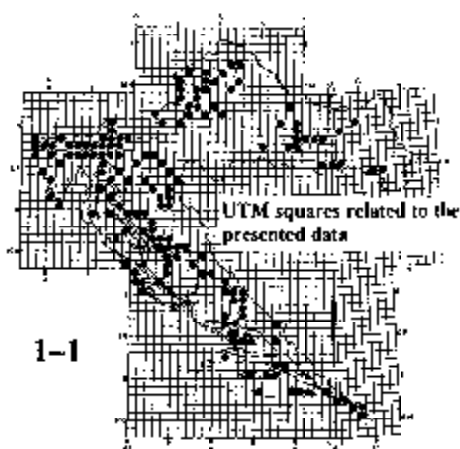
The first citations of opilionids in Croatia were provided by ROSSI (1846) and CARRARA (1846). Some other authors contributed a few citations each. The harvestman fauna of Croatia was first systematically studied by BABIĆ (1916). Subsequently, most knowledge was added by ROEWER (1911, 1912, 1914, 1915, 1917, 1923, 1940, 1950, 1951, 1956, 1957), HADÁI (1926/27, 1932, 1936, 1973a, b), KOLOSVÁRY (1929,

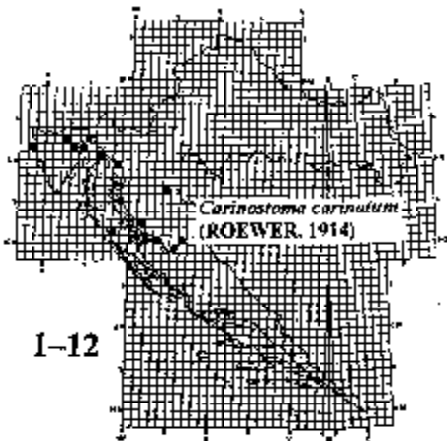
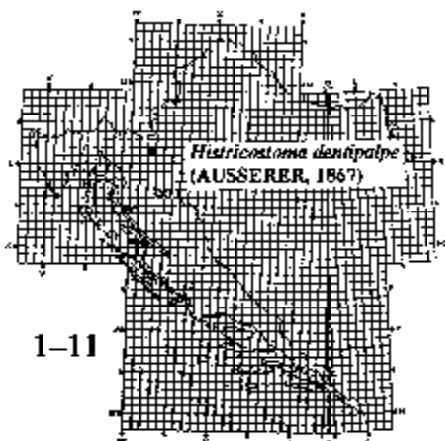
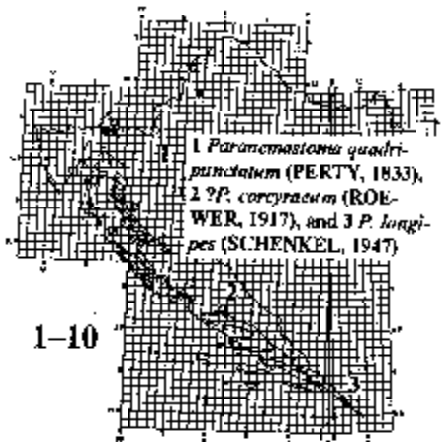
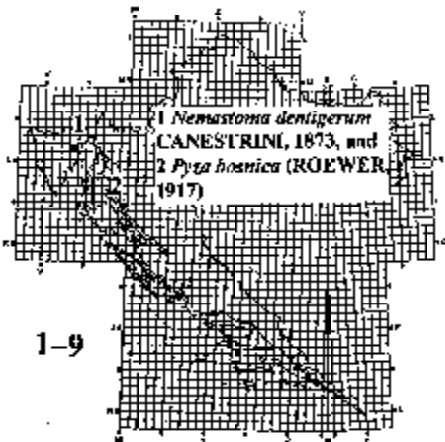
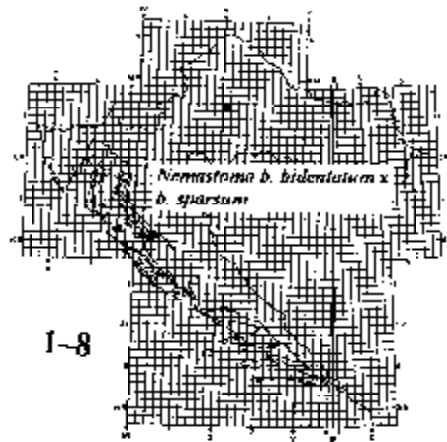
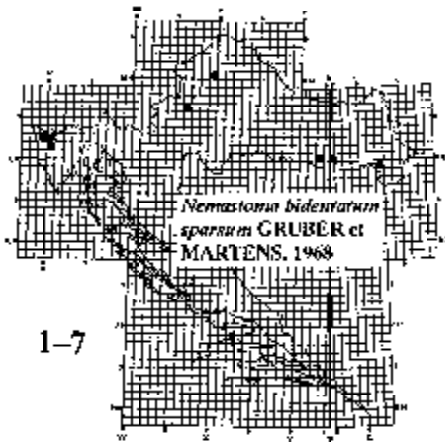
1938a, b, 1939) and KRATOCHVÍL (1937a, b, 1940, 1946, 1958a, b), among others. In this contribution the aim was to make a review of the harvestmen inhabiting Croatia, based on both bibliographic data and collection records. The published data were critically examined in terms of their taxonomic and biogeographic values, and data from some of the most important collections containing opilionids from Croatia were recorded. The 10 x 10 km<sup>2</sup> UTM code (Figs. 1–1 to 1–47), and where possible the altitude were added according to the atlas of Croatia (GRO[ELJ, 2002). The summit altitude of mountains is routinely given; the actual collecting localities may be situated at lower – sometimes markedly lower – altitudes.

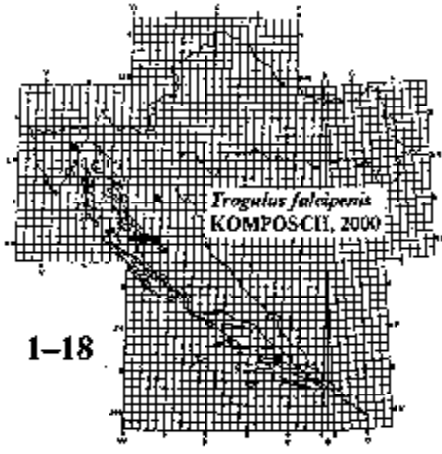
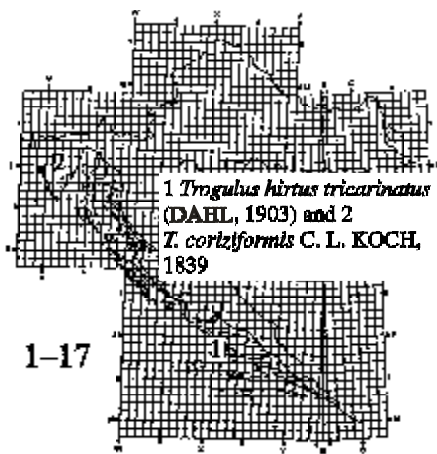
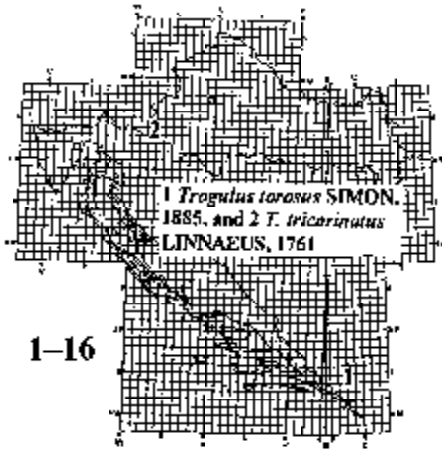
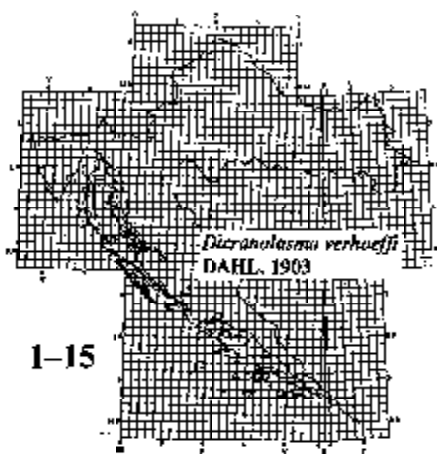
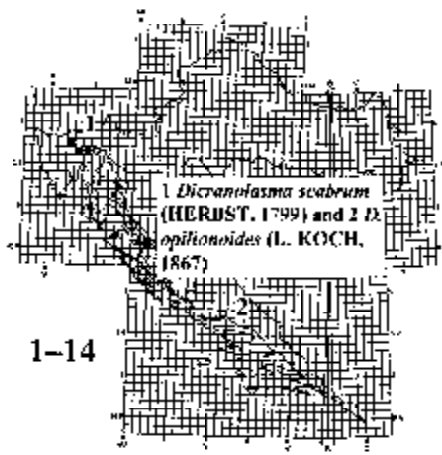
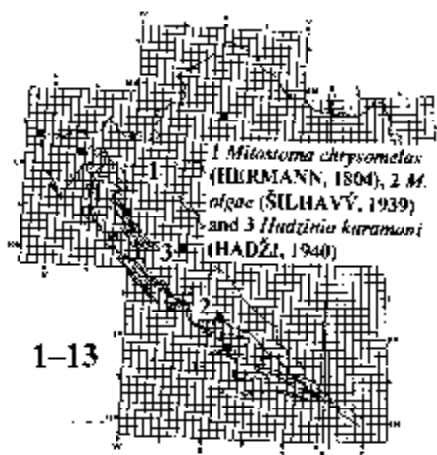
### Abbreviations and symbols used

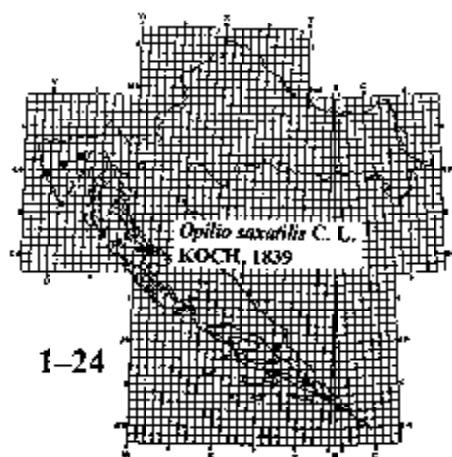
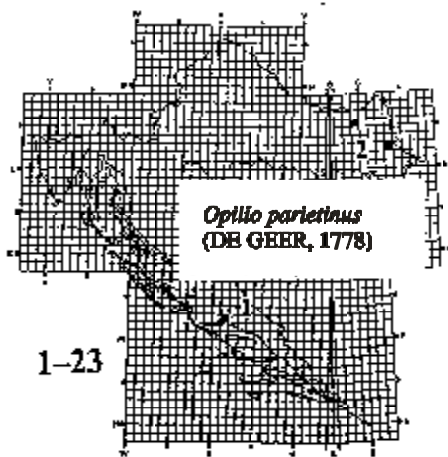
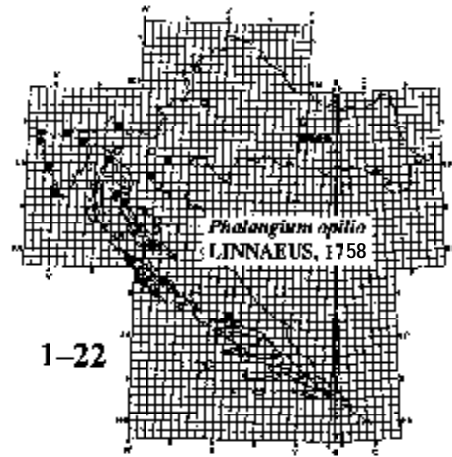
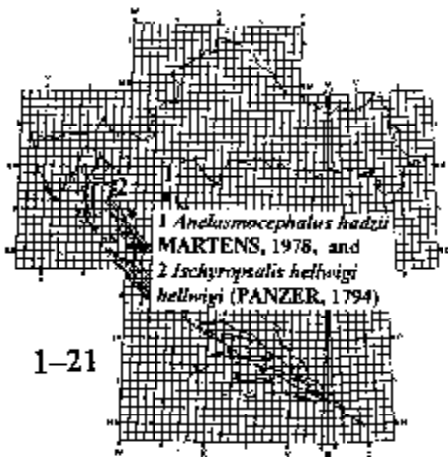
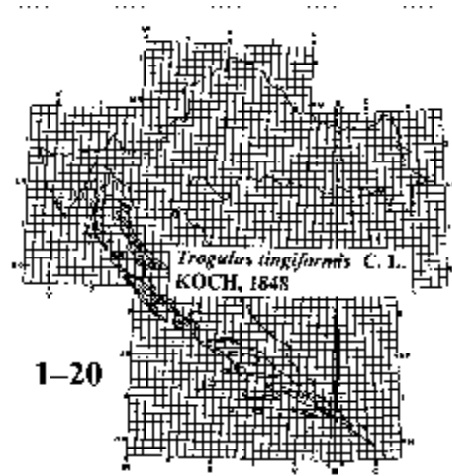
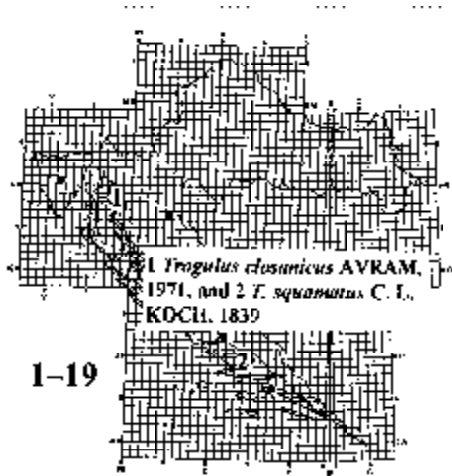
•	general record for Croatia or its region
<b>VL31</b>	UTM code
*	expected in Croatia
□ <i>italics</i>	wrong or doubtful citation or determination, or no record available
?	uncertain taxonomic status, synonymy possible
BIOS	Coll. BIOS, Slovene Museum of Natural History, Ljubljana
IBU	Coll. Institute of Biology University of Ljubljana
JH	(remains of) J. Had`i Coll.
JM	Coll. J. Martens, Mainz
KB	Coll. K. Babi}, Croatian Natural History Museum, HPM, Zagreb
KT	Coll. K. Thaler, Innsbruck
MCSNT	Coll. Museo Civico di Storia Naturale Trieste
NHMW	Coll. Naturhistorisches Museum, Wien
PANW	Coll. Instytut Zoologiczny, Polska Akademia Nauk, Warszawa
PMSL	Coll. Slovene Museum of Natural History, Ljubljana
R	Coll. C. F. Roewer
SMF	Coll. Senckenberg-Museum, Frankfurt/Main
TN	T. Novak determination
ZMB	Coll. Zoologisches Museum Berlin
ZMH	Coll. Zoologisches Staatsinstituts des Zoologischen Museum Hamburg

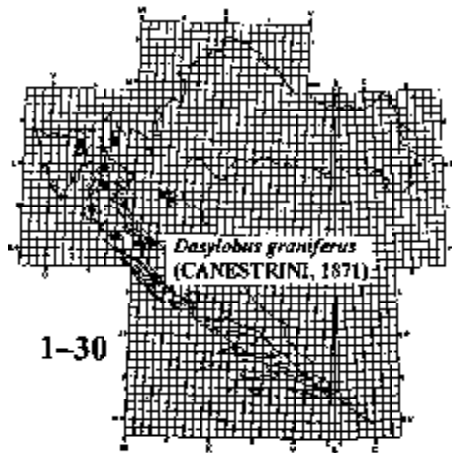
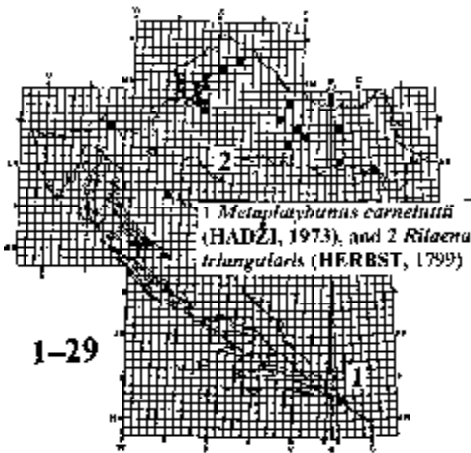
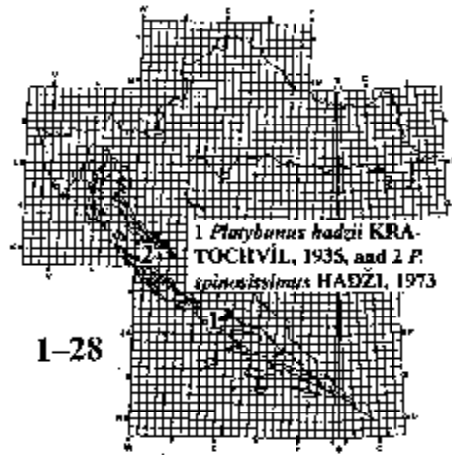
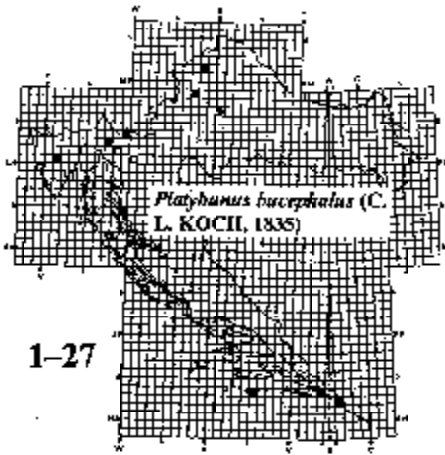
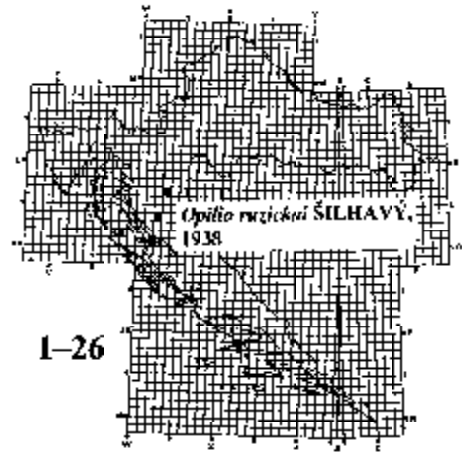
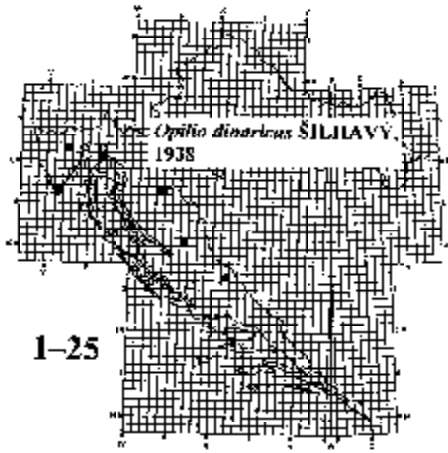
**Figs. 1–1 to 1–47:** The UTM grid of Croatia with marked 10x10 km squares recorded for harvestmen (blank circles – literature data, full circles – collection data) P

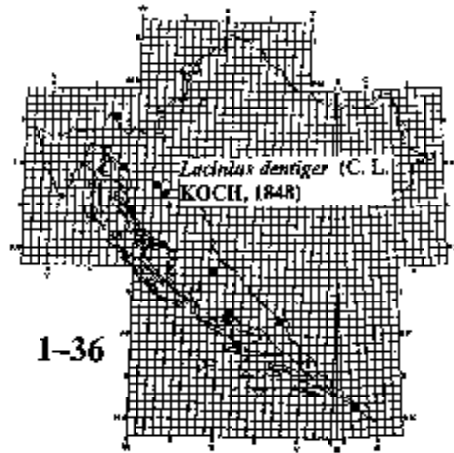
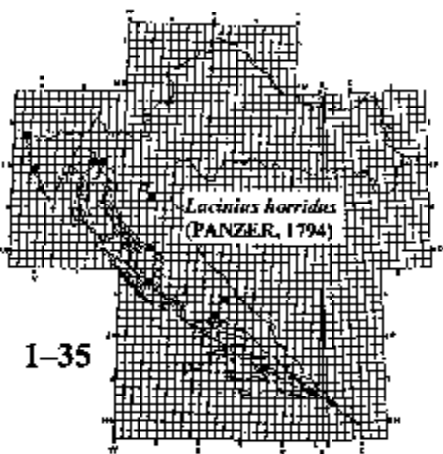
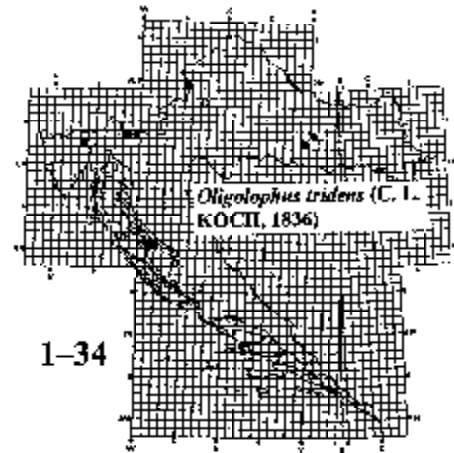
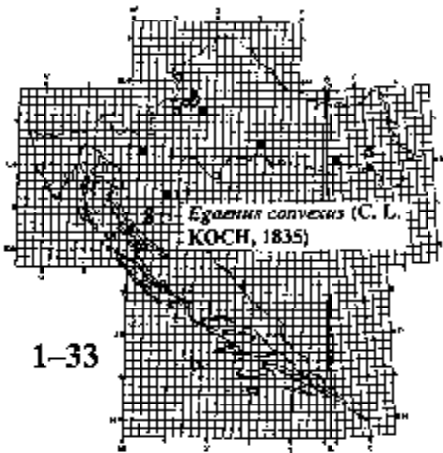
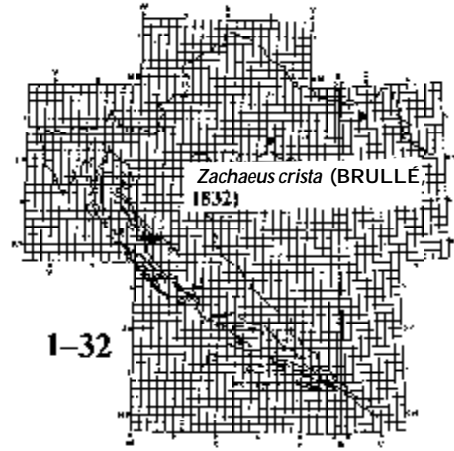
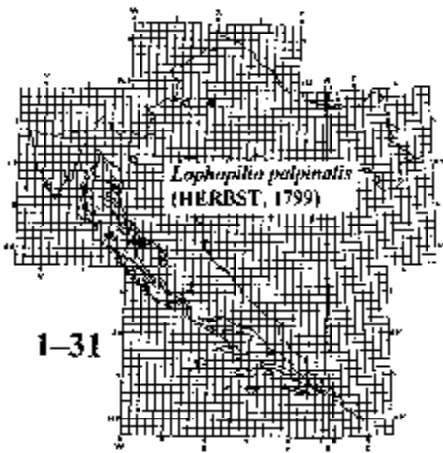




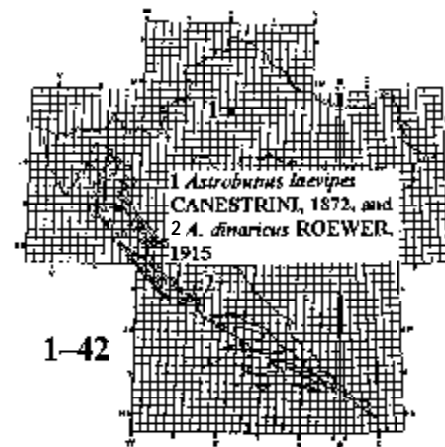
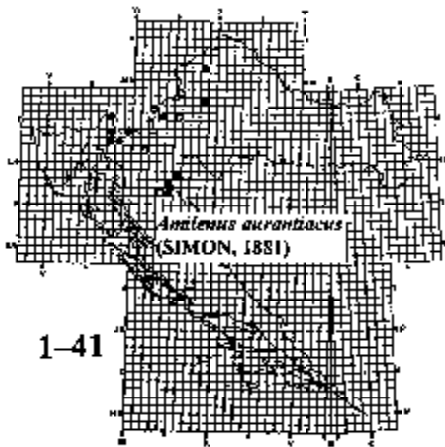
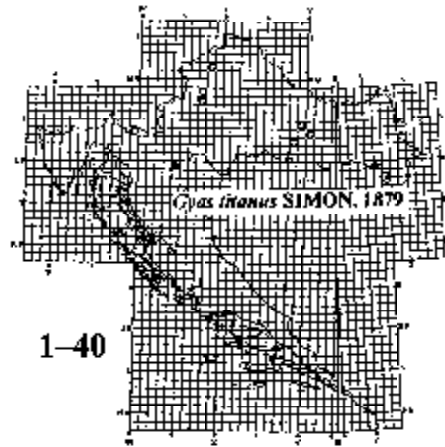
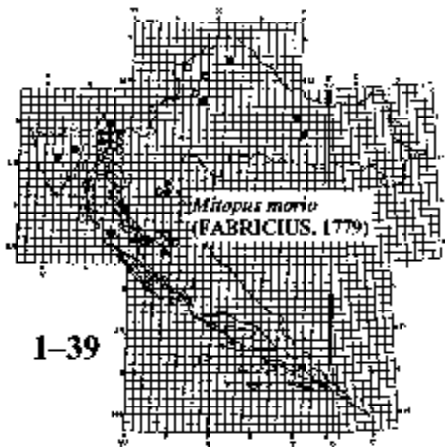
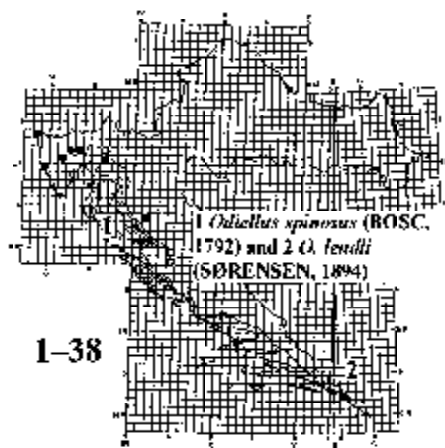
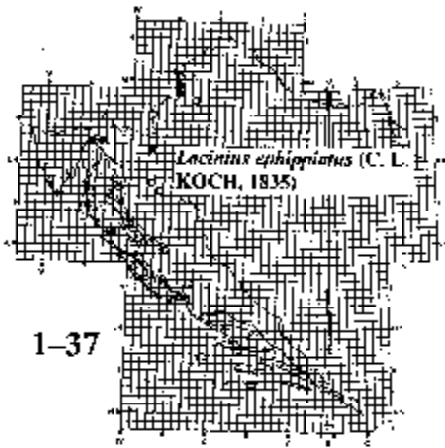


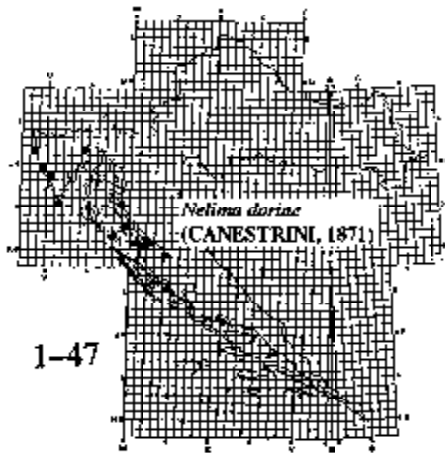
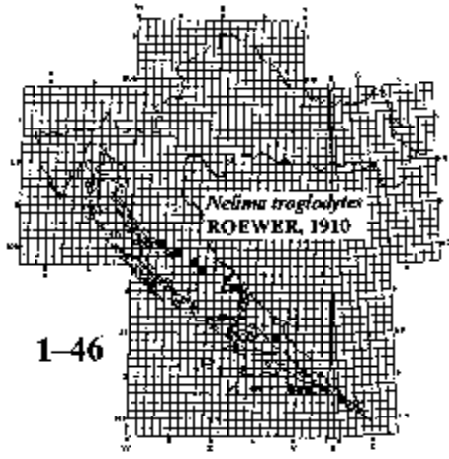
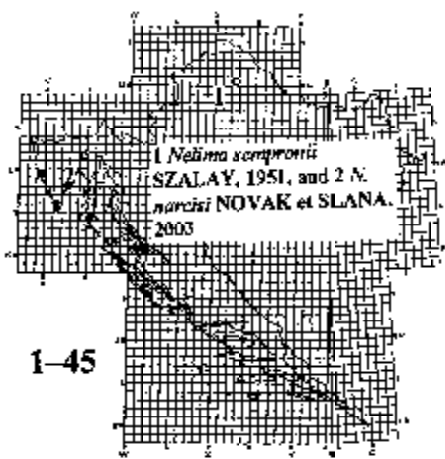
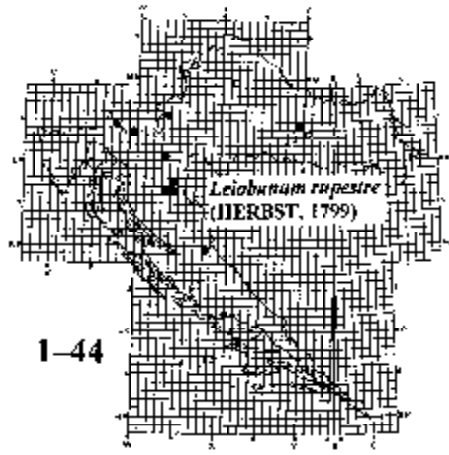
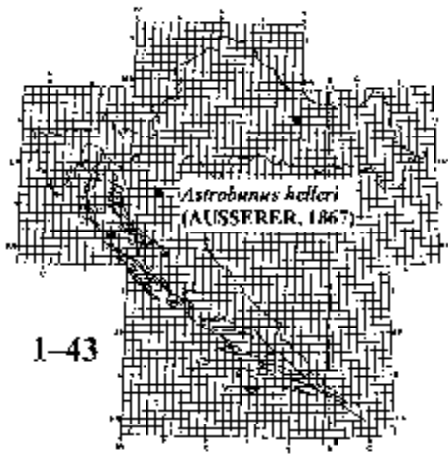


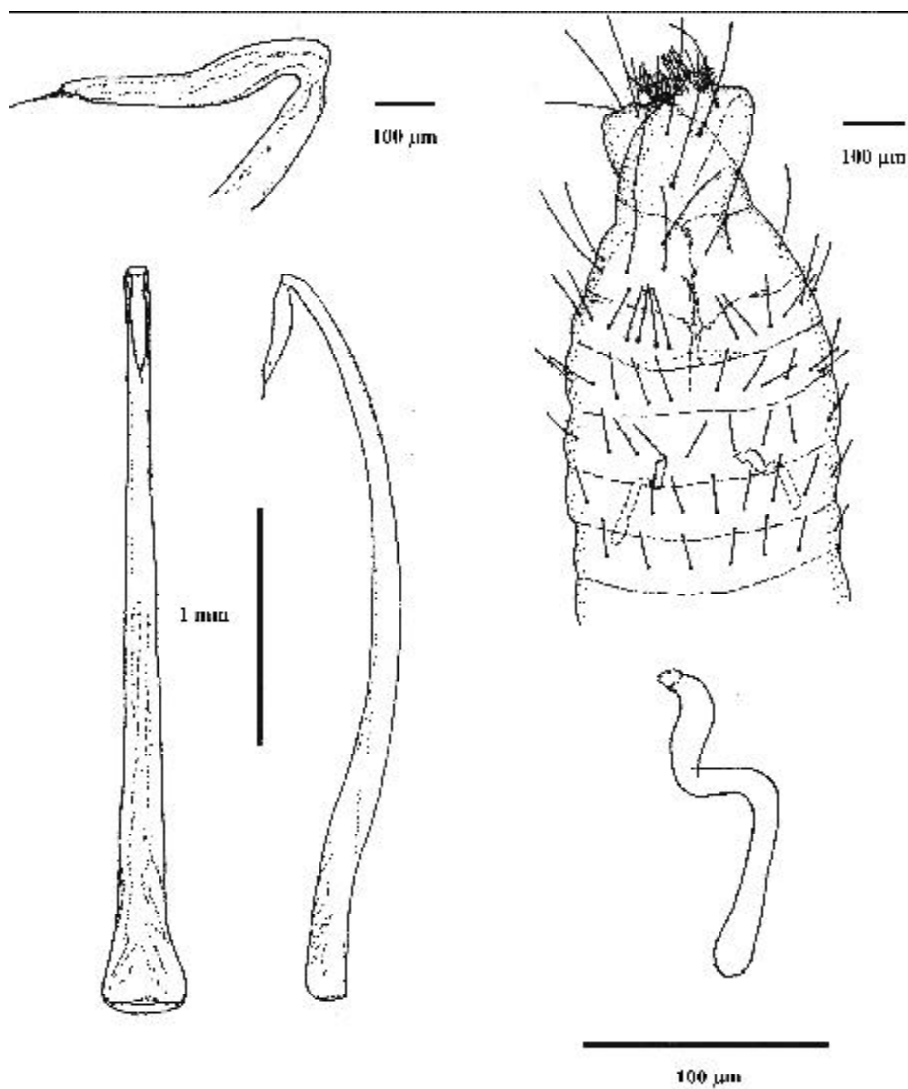












**Fig. 28a:** *Platybunus spinosissimus* Hadži, 1973, dorsal and lateral view of the penis, and the ovipositor tip and receptacula seminis (TN 842/2003).

## SYSTEMATIC PART

## CYPHOPHTHALMI

## Sironidae

*Siro duricorius duricorius* (Joseph, 1868); Fig. 1–2

- Croatia (KOLOSVÁRY, 1929, sub *S. duricorius*; KRATOCHVÍL, 1937b, sub *S. duricorius*; RAMBLA & JUBERTHIE, 1994, sub *S. duricorius*)
  - Dalmatia (HAD@I, 1973b, sub *S. duricorius*; RAMBLA & JUBERTHIE, 1994, sub *S. duricorius*)
1. **U-ka Mt., VL31**, 1380 m (MARTENS, 1978, sub *S. duricorius*)
  2. **Ze-jak Mt., WK04**, 1623 m (ROEWER, 1923, sub *S. duricorius*: ca 300 mm et ff – Mus. Berlin and Coll. ROEWER)
  3. **Plitvi-ka jezera lakes, WK46**, 677 m (JUBERTHIE, 1968: Plitvitze, Figs. 9 d, e)

## Collection records

1. **U-ka Mt., VL31**, 1380 m, 14.07.1974, MARTENS leg.: 19 ad. (JM 1274); **ibid.**, 950 m, pitfall traps, 11.9-6.10.1990, GASPARO leg.: 1 f (TN 101/2000)
2. E of **Milanovo jezero** lake, **WK46**, 677 m, Plitvi-ka jezera, 20.06.1895, STURANY leg., 06.02.1895: 21 mm, 5 ff, 1 juv. (NHMW 2986)
3. near **Dev-i}evac, WK46**, 680 m, Plitvi-ka jezera, forest, sieving, STURANY leg., 05.02.1895: 22 mm, 22 ff (NHMW 2985)

*Siro minutus* Kratochvíl, 1937; Fig. 1–3

1. **[krabuljica {pilja cave, BN31}**, Kuna Konavoska, 720 m, Konavli (KRATOCHVÍL, 1937b: grotte sans nom près de Mali Ora, loc. typ., 08.1936, KRATOCHVÍL & HOFFER leg.; KRATOCHVÍL, 1946: Pe}ina kod »Mali Ora«; HAD@I, 1973b: spelunca apud Mali oro in Konavli /= small cave near Mali oro in Konavli/, endem, eucaval; GUÉORGUIEV, 1977: Gruda, the southern Dinaric zone)

*Siro silhavyi* Kratochvíl, 1937; Fig. 1–3

1. **Vilina pe}ina cave, BN31**, Gruda, 80 m (KRATOCHVÍL, 1937b, sub *S. [ilhavýi*, loc. typ., [ILHAVÝ et HOFFER leg.; KRATOCHVÍL, 1946; HAD@I, 1973b, endem, eucaval; GUÉORGUIEV, 1977: the southern Dinaric zone)
2. **Pe}ina u Ba-evom dolu cave, BN31**, Gruda, 80 m (KRATOCHVÍL, 1946: 1936, [ILHAVÝ leg.)

*Siro teyrovskiyi* Kratochvíl, 1937; Fig. 1–3

- caves on the island of **Mljet** (KRATOCHVÍL, 1946; GUÉORGUIEV, 1977)
- 1. **Velika spilja** cave, **YH03**, 100 m, 1 km E of Blato, the island of Mljet (KRATOCHVÍL, 1937b, sub *S. Teyrovskiyi*, loc. typ., 12.07.1937, KRATOCHVÍL leg.; HAD@I, 1973b, sub *S. heyrovskiyi*, endem, eucaval)

#### Collection records

1. **Velika {pilja}** cave (= Velika spilja), 100 m, **YH03**, HAD@I det.: 1 ex. (TN 16/1986)

*Siro noctiphilus* Kratochvíl, 1940; Fig. 1–3

1. **Vranja-a** cave, **XJ32** 360 m, 1 km W of Kotlenice, Mt Mali Mosor (KRATOCHVÍL, 1940: loc. typ., 1939, KRATOCHVÍL leg.; KRATOCHVÍL, 1946, sub *S. noctiphilus*; HAD@I, 1973b: endem, cavernicol; GUÉORGUIEV, 1977: the middle Dinaric zone)

## LANIATORES

### Travuniidae

*Abasola troglodytes* (Roewer, 1915); Fig. 1–4

- **Dalmatia** (ABSOLON, 1916, central Dalmatia sub *Scotolemon anophthalmum*; HAD@I, 1973b, sub *Travunia anophthalma*, endem, eucaval; VANDEL, 1964: différentes grottes du sud de la Dalmatie, sub *T. anophthalma* GINET & DECOU, 1977: Côte Dalmate, sub *A. troglodytes* and *T. anophthalma*; RAMBLA & JUBERTHIE, 1994, sub *T. anophthalma*)
- 1. **\urovi} pe}ina** cave, **BN21**, 160 m, Mo-i}i near Cavtat (ABSOLON, 1914: Durovi} jama, loc. typ., sub »slep / = blind/ *Scotolemon*« (acc. to ROEWER'S determination: »*Scotolemon nova* spec.« in lit. 26.09.1913), 19.08.1913, ABSOLON leg.: 1 juv.; ROEWER, 1915: Durovic-Höhle, sub *Absolonia troglodytes*: 1 pull., ABSOLON leg., type in Morav. Mus. Brno, microscopic preparation; ABSOLON, 1916, sub *Scotolemon* n. sp.; ABSOLON, 1920, sub *T. anophthalma*, nom. nov. pro *Absolonia troglodytes*; ROEWER, 1923, sub *A. troglodytes*: 1 pull.; STRAND, 1928: *Abasola*, nom. nov. pro nom. praeocc. *Absolonia*; ABSOLON & KRATOCHVÍL, 1932a, b: Durovi} jama, sub *T. troglodytes*; ROEWER, 1935: Durovic-Höhle, sub *Abasola troglodytes*, type Mus. Frankfurt a. M., Nr. 210; WOLF, 1934-38, sub *Travunia*, *Absolonia* and *Abasola troglodytes*; KRATOCHVÍL, 1946, ABSOLON leg., 1913: not a male but a female?; JUBERTHIE, 1972: Durovic Jama: 1 ex.; GUÉORGUIEV, 1977: Cavtat)

*Travunia jandai* Kratochvíl, 1937; Fig. 1–4

1. **Spilja pri brdu Grabova glava** cave, **XH93**, Grabova glava (384 m), 3,5 km W of Ropa, the island of Mljet KRATOCHVÍL, 1937a: [pilja pri Grabovom glavi, loc.

typ., sub *Travunia* (?) *Jandai*, KRATOCHVÍL, 1946: Grabova glava, sub *T.* (?) *Jandai*; HAD@I, 1973b: jama pri hribu Grabova glava, endem, eucaval; GUÉORGUIEV, 1977, the southern Dinaric zone)

\*? *Travunia vjetrenicae* Had`i, 1932

- □ *Dalmatia* (RAMBLA & JUBERTHIE, 1994, sub *Dinaria vjetrenicae* Had`i)

Although it is possible that *T. vjetrenicae* also lives in Dalmatia, the citation has not been confirmed. In closely related nominal travuniid species living in the Balkans, only the penis of *T. vjetrenicae* has been adequately investigated and reported by HAD@I (1932, 1933), MARTENS (1976). There is also a need to investigate the genitalia in *Abasola troglodytes* (southern Dalmatia), *A. hofferi* [ilhavý, 1936 (Montenegro; [ILHAVÝ, 1936) and *A. borisi* Had`i, 1973a (Bosnia and Herzegovina; HAD@I, 1973a, b), and to prove this way also the formal validity of the genera *Travunia*, *Abasola* and *Dinaria*. These all live in the same karstic Cretaceous, mostly carbonate massifs, at a maximum distance of 60 km from each other, and the island species *T. jandai* also lives within this distance range. The final number of revised species will undoubtedly be lower.

### \*Cladonychiidae

\* *Holoscotolemon unicolor* Roewer, 1915

This species can be expected in Gorski Kotar.

### Phalangodidae

*Scotolemon doriae* Pavesi, 1878; Fig. 1–5

1. **Crveni otok, UK99**, Rovinj, 10 m (THALER, 1996: 8 mm, 7 ff, 18.10.1970, NHMW)
2. **Rovinj, UK99**, 10 m (MARTENS, 1978; THALER, 1996: a garden, 28.06.1968, THALER leg.: 1 m, 1 f, Coll. THALER; **ibid.**: *Pinetum*, 18.10.1970: 1 m; **ibid.**: S. Giovanni: 6 mm, 5 ff)

*Lola insularis* Kratochvíl, 1937; Fig. 1–5

1. **Spilja pri Smokovniku, XH17**, ca 2 km N of Hvar, the island of Hvar (KRATOCHVÍL, 1937a, loc. typ.; KRATOCHVÍL 1946; KRATOCHVÍL 1958a: Lesina, Hvar; HAD@I, 1973b: jama pri kraju Smokovnik, endem, eucaval; GUÉORGUIEV, 1977: the middle Dinaric zone)

Remark. The genitalia of this species have not been investigated.

### PALPATORES

#### Nemastomatidae

□ *Nemastoma triste* C. L. Koch, 1835

- *Croatia* (HAD@I, 1973b, sub *Nemastoma* (*Lugubrostoma*) *triste* (C. L. Koch, 1835))
- 1. *Zagreb, WL77* (ROEWER, 1917: Agram, sub *Nemastoma triste* C. L. Koch 1835)

*Nemastoma triste* has not been recorded in Croatia, and would not be expected there. *N. (Lugubrostoma) triste* (C. L. Koch, 1835) and *N. (L.) lugubre unicolor* Roewer, 1914, mentioned for Croatia (HADŽIĆ, 1973b), mostly comply with *N. bidentatum sparsum* and perhaps also partly with *N. dentigerum* while *N. (L.) bidentatum* Roewer, 1914 in HADŽIĆ'S works could be both *N. b. bidentatum* and *N. b. sparsum*.

\**Nemastoma lugubre* (Müller, 1776)

- □ Croatia (HADŽIĆ, 1973b, sub *N. (Lugubrostoma) lugubre* (Müller, 1776) and *N. (L.) l. unicolor* Roewer, 1914)
- 1. □ Zagreb WL77 (BABIĆ, 1916, sub *N. lugubre* 02.04.year?: 2 ff; ROEWER, 1951, sub *N. lugubre unicolor* Roewer, 1914: Agram: 1 m, 4 ff, 1 pullus – RII/2888/48)

*Nemastoma lugubre* has not been confirmed for Croatia; the citations refer to *N. bidentatum bidentatum* and *N. b. sparsum*. There is a slight chance that the species lives in the very northeastern part of Croatia.

*Nemastoma bidentatum bidentatum* Roewer, 1914; Fig. 1–6

- Croatia (ROEWER, 1917: Agram, sub *N. bidentatum*; ROEWER, 1923, sub *N. bidentatum* HADŽIĆ, 1973b, sub *N. (Lugubrostoma) bidentatum*)
- near Zagreb (KOLOŠVÁRY, 1929, sub *N. bidentatum*; MARTENS, 1978, VERHOEFF leg.)
- 1. **Dugo selo** near Zagreb, **WL97**, 110 m (MARTENS, 1978, MARTENS leg.) = *Fagetum*, 14.05.1968, MARTENS *et al.* leg.: cf. 1 m, 1 f (JM 837)

*Nemastoma bidentatum sparsum* Gruber et Martens, 1968; Fig. 1–7

1. **Slavonski Brod, BR00**, 90 m (ROEWER, 1917: Brod a. Save, sub *N. bidentatum*)
2. **@upanja, CQ19**, 80 m (GRUBER & MARTENS 1968: Figs. 12, 13: Slowenien in stead of Slawonien)

**Collection records**

1. the vicinity of **Buje, UL92**, 200 m, and **Višnada, VL02**, 250 m, 09.1963, STURANY leg., *Quercus-Carpinetum*: 3 mm, 2 ff (NHMW 4700), paratypes
2. **Karolja, VL01**, 290 m, 28.02.1990, POTOČNIK leg.: 1 m (TN 1307/1998)
3. ca 25 km **SW Zagreb, WL55**, 120 m, 10.09.1974, AUSOBSKY leg.: 3 mm, 1 f (JM 2062)
4. ca 15 km **SE Zagreb, WL66**, 15.10.1966, ca 130 m, sieving: 6 mm, 7 ff (NHMW 4698)
5. the vicinity of **Breznica, WM09**, 150 m, forest floor, SCHUSTER leg.: 1 m, 2 ff (NHMW 4699), paratypes
6. 15 km W **Slavonski Brod YL20**, 90 m, forest, 19.04.1968, MARTENS *et al.* leg.: 3 mm, 1 f (JM 836)
7. ca 5 km E **Slavonski Brod, BR10**, 90 m, pitfall traps, 15.09.–14.10.1966: 4 mm, 31 ff (NHMW 4697), paratypes
8. ca **15 km E @upanja, CQ29**, 80 m, pitfall traps, 15.09.–14.10.1966, GRUBER leg.: 5 mm, 1 f (NHMW 4695), paratypes; **ibid.**: pl. mm, ff (NHMW 4696), paratypes; **ibid.**, 15.10.1966: 2 mm, 5 ff (NHMW 4694), paratypes

**Dubious locality**

1. □ *Split, XJ11, XJ21* (ROEWER, 1951, sub *N. triste* 1 m, 1 f – RII/8656/117; MARTENS (1978) erroneously cited NHMW instead of SMF for this dubious locality – GRUBER, in lit.)

*Nemastoma bidentatum bidentatum* x *sparsum*; Fig. 1–8

1. @ **upanja, CO59**, 80 m (GRUBER & MARTENS, 1968: Übergangsform, and sub *N. b. sparsum*, Figs. 12, 13: Slowenien instead of Slawonien; MARTENS, 1978: Hybrid form, Fig. 146)

**Collection records**

1. **Prevlaka, XL06**, 110 m, T.V.: 3 mm, 2 ff (TN 826/2002); **ibid.**, P1 T.V., 10.1984: 1 m, 1 f (TN 280/2002); **ibid.**, P5 T.V., 10.1984: 2 mm, 2 ff (TN 278/2002); **ibid.**, P41, T.V., 10.1984: 4 mm, 6 ff (TN 236/2002); **ibid.**, P3, T.V. 15.08.1985: 1 f (TN 891/2002); **ibid.**, P 09, T.V.: 30.08.1985: 1 m (TN 609/2002); **ibid.**, T.V., 30.08.1985: 2 mm (TN 861/2002); **ibid.**, T.V. 3, 10.1985: 2 mm, 1 f (TN 896/2002); **ibid.**, P2 T.V., 07.04.1986: 1 f (TN 328/2002); **ibid.**, P4, T.V., kos leg.: 1 m (TN 843/2002)

*Nemastoma dentigerum* Canestrini, 1873; Fig. 1–9

1. **U-ka Mt., VL31**, 1380 m (MARTENS, 1978, MARTENS leg.)
2. **Orehovica, VL52**, 100 m, Rijeka (MARTENS, 1978: Orahovica, PAN Warszawa)

**Collection records**

1. **U-ka Mt., VL31** 1380 m, 14.07.1974, MARTENS leg.: 3 mm, 1 f (JM 1270); **ibid.**: 1 m, 1 f, 1 juv. (JM 1275); **ibid.**, 950 m, pitfall traps, 11.09–06.10.1990, GASPARO leg.: 1 m, 2 ff (TN 98/2000)

*Pyza bosnica* (Roewer, 1919); Fig. 1–9

- **Croatia** (□ *Zagreb, WL77* – ROEWER, 1951: Agram, sub *Nemastoma bosnicum* 2 mm – RII/2891/51; HAD@, 1973b, sub *N. (Lugubrostoma) bosnicum* Roewer, 1917; STAREGA, 1976; cf. GRUBER, 1979; KARAMAN, 1995a)

In this case, Zagreb must mean only the Museum, providing the specimens.

**Collection record**

1. **Veliki Zavi'an Mt., VK94**, 1677 m, 05.10.1995, VUKOVI] leg.: 1 m (TN 7/1996)

*Paranemastoma quadripunctatum* (Perty, 1833); Fig. 1–10

- **Croatia** (HAD@, 1973b, sub *Nemastoma (Lugubrostoma) moesiicum* (Roewer, 1917), endem, and sub *N. (Dromedostoma) strasseri* Roewer, 1951)
1. **Ple[ce, VL74**, 325 m (BABI], 1916: Ple{-e, sub *N. quadripunctatum*, 07.year?): 1 f = 17.07.1910 (rev. TN 735/1984)
  2. **[tirova-a, WK04**, 1102 m (BABI], 1916: Stirova-a, sub *N. quadripunctatum*, 07.1912): 1 f = 25.07.1912 (rev. TN 733/1984)
  3. **Krapina, WM61**, 290 m (BABI], 1916, sub *N. quadripunctatum*, 07.year?): 2 mm, 1 f = 29.07.1915 (rev. TN 736/1984)



**Collection records**

1. **Snje`nik** Mt., **VL63**, 1505 m, Gorski Kotar, 18.08.1964, *Pinetum mughi croati cum*: 1 juv. (TN 316/1983)
2. near **Smrekovac**, **VL73**, Gorski Kotar, 24.08.1963, *Fagetum croaticum abietinosum*: 1 f (TN 620/1983)
3. **Sljeme**, **WL78**, 1035 m, Medvednica Mt., 21.06.1917 BABI] det. sub *N. quadri-punctatum* f; 1 m (rev. TN 734/1984)

\**Paranemastoma bicuspidatum* C. L. Koch, 1835

This species is mentioned for the Balkan countries (ROEWER, 1923, sub *Nemastoma quadripunctatum bicuspidatum* – coll. ROEWER; Mus. Berlin) but it may extend from Slovenia solely into Hrvatsko Zagorje.

\**Paranemastoma silli* (Herman, 1871)

- □ *Croatia* (HAD@I, 1973b, sub *Nemastoma* (*N.*) *sillii* Herman, 1871)
- 1. □ *Zagreb*, *WL77* (ROEWER, 1951: Agram, sub *N. quadripunctatum silli* (Hermann 1871): 1 m, 1 f – RI/9530/146)

Zagreb has undoubtedly been mentioned only as the museum town; this Carpathian species has not been found in the collections studied. At least one record must be provided finally to confirm the presence of *P. silli* in Croatia (perhaps on Mt. Papuk).

\**Paranemastoma kochi* (Nowicki, 1870)

- □ *Croatia* (HAD@I, 1973b, sub *Nemastoma* (*N.*) *kochi* Nowicki, 1870)
- 1. □ *Raguza Novi Ka{tel*, *XJ12* (ROEWER, 1917, sub *N. quadripunctatum* var. *kochii* (Nowicki): *Ragusa*; ROEWER, 1923: *Ragusa*, sub *N. q. kochii* – coll. ROEWER)

This Carpathian species has not been found in the collections studied; see comments for *P. silli*. In Dalmatia, it could have been mistaken for *P. radewi*.

\**Paranemastoma radewi* (Roewer, 1926)

- □ *the island of Hvar* (ROEWER, 1951, sub *Nemastoma insulare* Insel Lesina, 2 mm, 1 f – type and paratype – RII/9511/127, Tab. III Fig. 25; KRATOCHVIL, 1958b, sub *N. insulare*; HAD@I, 1973b, sub *N. (Dromedostoma) insulare*, endem)

In comparison to the very variable *P. radewi*, *P. insulare* differs only slightly in dorsal spots (cf. ROEWER, 1951). Besides, the island of Hvar is a dubious locality (GRUBER, in lit.). *P. radewi* has been cited for mountain caves in the Balkans (KRATOCHVIL, 1946, sub *N. Radewi*) and can also be expected in the mountainous parts of southeastern Croatia. While in Slovenia and northern Croatia, *Nemastoma moesiicum* is undoubtedly synonymous with *P. quadripunctatum* (cf. NOVAK & GRUBER, 2000), KARAMAN (1995a) assumes that in the middle Balkans it can be conspecific with *P. radewi*, and in that case the valid name of this taxon.

\**Paranemastoma titaniacum* Roewer, 1914

- □ *Croatia* (HAD@I, 1973b, sub *Nemastoma (Dromedostoma) acrospinosum*, endem; KARAMAN, 1995a; MITOV, 2000)

- □ *Dalmatia*, locality unknown (ABSOLON, 1914, sub *N. titaniacum*)

This species has not been found in the collections studied, although it would be expected in southern Croatia. HAD@I (1973b) incorrectly cited Croatia, instead of Herzegovina, as the native range of *P. acrospinus* Roewer, 1951. Since KARAMAN (1995a) has established the synonymy of *P. acrospinus* with *P. titaniacum*, the error is of only academic interest.

□ *Paranemastoma corcyraeum* (Roewer, 1917); Fig. 1–10

- southern **Dalmatia** (HAD@I, 1973b, sub *Nemastoma (Dromedostoma) corcyraeum*)

*Paranemastoma longipes* (Schenkel, 1947); Fig. 1–10

1. **Cavtat, BN21**, 10 m (HAD@I, 1973a, sub *Nemastoma (N.) tenue* Had'i, 1973, VELKOVRH, SKET leg., 19.04.1964: 1 m; HAD@I, 1973b, Figs. 23a-e, endem) = : 1 m, 2 ff, 1 iuv. (TN 192/1985)

The status of many *Paranemastoma* species has not been satisfactorily cleared up. In the past, too many species have been described because authors neglected the great morphological variability. Among species cited for Croatia, *P. longipes* (SCHENKEL, 1947, sub *Nemastoma gigas longipes*) is closely related to *P. corcyraeum*, and both of these are very close to the first described *P. titaniacum*. A further revision of the species group, started by KARAMAN (1995a), is needed and synonyms would be expected.

*Histicostoma dentipalpe* (Ausserer, 1867); Fig. 1–11

- **Croatia** (ROEWER, 1951: Agram, sub *N. dentipalpe* Ausserer 1869: 1 m – RII/2890/50; HAD@I, 1973b, sub *Nemastoma (N.) dentipalpe* Ausserer, 1896)

  1. **[Stirova-a, WK04]**, 1102 m (BABI), 1916: Stirova-a, sub *N. dentipalpe*, 07.1912: 1 m) = 27.07.1912: 1 f (rev. TN 720/1984)
  2. **Crni vrh, WK36**, ca 800–1000 m, Vrhovine (RUCNER & RUCNER, 1971, sub *N. dentipalpe, Helleboro-Pinetum* Horv. 1958, 19.07.1961: 3 ex.)
  3. **Plitvi-ka jezera, WK46**, 677 m (MARTENS, 1978, WUNDERLICH leg.)

**Collection records**

1. **Veliki Zavi'an Mt., VK94**, 1677 m, 05.10.1995, VUKOVIJ leg.: 3 ff (TN 1/1996)
2. **Tounj, WL21**, 280 m, Rudnica river, left spring, drift, SIVEC leg. 07.1983: cf. 1 juv. (TN 618/2002)

*Carinostoma carinatum* (Roewer, 1914); Fig. 1–12

- **Dalmatia** (ROEWER, 1923, sub *Nemastoma carinatum* mm, ff – type – Coll. ROEWER; [ILHAVY, 1939, sub *N. carinatum*; HAD@I, 1973b, sub *Mitostoma (Carinostoma) carinatum*)

- **Istria** (ROEWER, 1923, sub *N. carinatum*: mm, ff – type – Coll. ROEWER; [ILHAVY, 1939, sub *N. carinatum*; HAD@I, 1973b, sub *M. (C.) carinatum*)
  1. **Rovinj**, **UK99**, 10 m (MARTENS, 1978, THALER leg.)
  2. **U-ka Mt.**, **VL31**, 1380 m (MARTENS, 1978, MARTENS leg.)
  3. **Opatija**, **VL42**, 10 m (ROEWER, 1917: Abbrazia, Volosca)
  4. **Rijeka**, **VL51**, 10 m (ROEWER, 1917: Fiume)
  5. **Split** **XJ11**, **XJ21**, 10 m (MARTENS, 1978, THALER leg.)

#### Collection records

1. **Novigrad**, **UL81**, 10 m, Istra, an old quarry, 27.02.1990, POTO^NIK leg.: 3 mm, 2 ff (TN 1289/1998)
2. **Njivice**, **VL06**, 10 m, the is land of Krk, 18.07.1980, DEELEMEN leg.: 3 ff (NHMW)
3. **Krmpote**, **VK89**, Novi Vinodolski, ca 600 m, 17. and 29.10.1980, DEELEMEN leg.: 2 ff (NHMW)
4. **Pe}ina kod Huma** cave, **VL22**, Hum, ] i}arija, 03.1967, HAD@I det. sub *Mitostoma carinatum*. 1 f (rev. TN 121/1983), microscopic preparation
5. **U-ka Mt.**, **VL31**, 600 m, 14.07.1974, MARTENS leg.: 3 ad. (JM 1277)
6. **Lovran**, **VL41**, 40 m, pitfall traps, 27.01.–25.04.1991., GASPARO leg.: 1 f (TN 440/2000)
7. **Gra-ac – Obrovac**, **WJ59**, 600–200 m, 27.10.1980, DEELEMEN leg.: 1m, 1 f (NHMW)
8. **Bru{ane**, **WK12**, Gospi}, 600 m, *Fagetum*, 16.10.1980, DEELEMEN leg.: 1 m (NHMW)
9. **Gra-ac**, **WK60**, 600 m, 27.10.1980, DEELEMEN leg.: 1 m, 1 f (Coll. DEELEMEN)
10. **Paklenica** Na tional Park, **WK30**, ca 450 m, 19.10.1980, DEELEMEN leg.: 1 m, 1 f (Coll. DEELEMEN)
11. **Plitvica**, Plitvi-ka jezera, **WK46**, 677 m, SCHUSTER leg. et don., 09.1963: 1 m (NHMW 3359)

\**Carinostoma ornatum* (Had`i, 1940)

- **Dalmatia** (HAD@I, 1973b, sub *Mitostoma (M.) ornatum*, endem)

This spe cies has not been found in the col lec tions stud ied, al though it would be ex- pected in southern Croatia.

*Mitostoma chrysomelas* (Hermann, 1804); Fig. 1–13

- **Croatia** (ROEWER, 1917, sub *N. chrysomelas*: Ungarn: Agram)
  1. **Rijeka**, **VL51**, 10 m (ROEWER, 1917, sub *Nemastoma chrysomelas*: Fiume)
  2. **Raguza**, **Novi Ka{tel**, **XJ12**, 10 m (ROEWER, 1917, sub *N. chrysomelas*: Ragusa)

#### Collection records

1. **Marija na Krasu**, **UL83**, 80 m, 27.02.1990, POTO^NIK leg.: 1 f (TN 1286/1998)

2. **Veliki Zavi`an, VK94**, 1677 m, 05.10.1995, VUKOVIJ leg.: 7 mm, 5 ff (TN 2/1996)
3. **U-ka Mt., VL31**, 950 m, pit fall traps, 11.09–06.10.1990, GASPARO leg.: 1 juv. (TN 99/2000)
4. **^edanj, VL93**, 240 m, Brod na Kupi, 12.04.1984, SIVEC leg.: 1 f (TN 1183/1998)
5. **Prevlaka, XL06**, 110 m, P41 T.V., 10.1984: cf. 1 juv. (TN 233/2002)

*Mitostoma olgae* ([ilhavý, 1939); Fig. 1–13

- **Dalmatia** (ROEWER, 1951; HAD@I, 1973b, sub *Mitostoma (M.) olgae*, endem, and sub *M. (M) o. olgae*)
  - the island of **Bra-** (HAD@I, 1973b, sub *M. (M) olgae kratochvili*)
1. **Jama za Mahrincom** cave, **XH49**, SE of Pu-i{a, 10 m, the island of Bra- (KRATOCHVÍL, 1946, sub *N. O. Kratochvíli*, under stones at the entrance, KRATOCHVÍL leg.)
  2. **Pu-i{a, XH49**, 10 m, the island of Bra- ([ILHAVÝ, 1939, sub *Nemastoma Olgae Kratochvíli*, Fig. 7: 15 mm et ff; ROEWER, 1951: Ile de Brac u. Pucisce 15 (m, f) **type** Mus. Brünn? (non vidi), sub *M. olgae kratochvili*, Tab. VIII Fig. 73; and: Ile de Brac: 3 mm, 1 f (KRATOCHVÍL ded. ex **type**) – **paratype** – RII/8196/ 106 /not a paratype!/) )

#### Collection record

1. **Sv. Ilija Mt., XH76**, 961 m, Orebi}, Pelje{ac peninsula, 05.1977, pit fall traps 3a, NEMENZ *et al.* leg.: Mte. Vipero (A. N. 1978, VIII.): 1 m (NHMW 6805)

According to the original descriptions ([ILHAVÝ, 1939: Fig. 5, sub *Nemastoma Olgae Olgae*, Fig. 6, sub *N. O. decorum* and Fig. 7, sub *N. O. Kratochvíli*) and Tab. VIII Fig. 73 in ROEWER (1951, sub *N. olgae kratochvili*), the colouring and spotting of individuals is markedly variable. The evidence for consistent differences between any constant character is lacking, therefore the subspecific status is not justified.

*Hadzinia karamani* (Had`i, 1940); Fig. 1–13

#### Collection records

1. **Donja Cerova-ka pe}ina** cave, **WK60**, Gra-ac, 620 m, 09.1964, SKET, VELKOVRH leg.: 1 m, 1 f, 1 juv. (TN 189/1983 sub *Buresiolla karamani*, rev. 2003); **ibid.**, 05.1970: 1 m (TN 678/1981); **ibid.**, 11.9.1989, GASPARO leg.: 1 juv. (TN 443/2000)

#### Dicranolasmatidae

*Dicranolasma scabrum* (Herbst, 1799); Fig. 1–14

- **Istria** (DAHL, 1903; HAD@I, 1973b)
1. **U-ka Mt., VL31**, ca 1000 m (DI CAPPORIACCO, 1949: Mte. Maggiore = 950 m, MÜLLER leg. 06.1930, DI CAPPORIACCO det. (Coll. MCSNT): 1 f; GRUBER, 1976, THALER leg. = ca 950 m, *Fagetum*, under stone blocks, 08.–09.09.1969, THALER leg., Coll. THALER Ju 69/4,5: 1 m, 5 ff, 3 juv.)

2. **Rijeka, VL51**, 10 m (GRUBER, 1976: Fiume, cemetery, VERHOEFF leg.; MARTENS, 1978) = 17.11.?year, Coll. ZMB, DAHL det.: 7 mm, 5 ff, 5 iuv.

#### Collection records

1. **Pejina kod Huma** cave, **VL22**, ]i}arija, HAD@I det. sub *Dicranolasma* sp. sub-imago f: 1 subad. (TN 667/1983)
2. **U-ka Mt., VL31**, 950 m, pitfall traps, 11.09–06.10.1990, GASPARO leg.: 2 mm, 1 f (TN 102/2000)
3. **Lovran, VL41**, 40 m, pit fall traps, 27.01–25.04.1991, GASPARO leg.: 2 mm, 2 ff, 1 juv. (TN 442/2000)
4. **Opatija, VL41**, 10 m, VERHOEFF leg.: Abbazia, 08.10.?year, Coll. ZMB, DAHL det.: 2 ff
5. **The castle Kastav, VL51**, Rijeka, 10 m, VERHOEFF leg.: Castua bei Fiume /ROEWER det. 1915, No. 2953: 4 Expl., Coll. ZMB/, GRUBER rev.: 1 m, 2 ff, 1 juv.)
6. **Rijeka, VL51**, 10 m, VERHOEFF leg.: Fiume, Coll. ZMB, DAHL det.: 1 m
7. **The Rje-ina gorge, VL51**, 10 m: Fiumara-Schlucht (ROEWER'S label; ROEWER det. 1915, No. 2950 sub *D. opilionoides* 1 m, Coll. ZMB; GRUBER rev.); **ibid.**, VERHOEFF leg.: Fiumara, 03.10.?year, un der lieves and lime stone stones (ROEWER'S label: Fiumara (Neapel); ROEWER det. 1915, No. 2894 sub *D. opilionoides* 2 Expl., Coll. ZMB; GRUBER rev.: 1 m, 1 f); **ibid.**, (ROEWER'S label: Neapel: Fiumara; ROEWER det. 1916, R I/1373 sub *D. opilionoides* 4 (incl. pull.), Coll. SMF; GRUBER rev.: 1 m, 1 f, 2 iuv.); **ibid.**, VERHOEFF leg.: Fiumara, 20.10.?year, Fiumaraschlucht bei Fiume, leaf for est un der stones, Coll. ZMB, DAHL det.: 2 mm, 1 iuv.)

Except for the TN series, all data according to GRUBER, in lit. The name of *D. scabrum* has often been used in citations of other species, especially that of *D. opilionoides* (GRUBER, in lit.).

#### *Dicranolasma opilionoides* (L. Koch, 1867); Fig. 1–14

- southern **Balkans** (GRUBER, 1965)
- **Dalmatia** (L. KOCH, 1867; ROEWER, 1923: south ern Dalmatia, Mus. Berlin et coll. ROEWER); HAD@I, 1973b, KARAMAN, 1990)

#### *Dicranolasma verhoeffi* Dahl, 1903; Fig. 1–15

- southern **Dalmatia** (DAHL, 1903; HAD@I, 1926/27, 1973b: endemic; GRUBER, 1976:204 – map K. 5; KARAMAN, 1990: endemic)
  - the islands of **Kor-ula, Mljet, Bra-** (KRATOCHVÍL, 1946; GRUBER, 1976)
1. **Gradac (pilja** cave, **XH65**, 420 m, Pupnat, Kor-ula – Blato, the island of Kor-ula (KRATOCHVÍL, 1946)
  2. **Paganettijeva pe}ina** cave, **XH75**, Kor-ula, the island of Kor-ula (KRATOCHVÍL, 1946)

3. **Tabaina {pilja** cave, **XH93**, 160 m, 2 km NW of Vela Luka, the island of Kor-  
-ula (KRATOCHVÍL, 1946: Velika Luka)
4. **Ka{tel Novi**, **XJ12**, 10 m (ROEWER, 1923: Kastelnuovo: 1 m, coll. ROEWER  
ROEWER, 1950: Kastelnuovo: 1 m – RI/12/1368)
5. **Ozdrin**, **XJ20**, 422 m, above Supetar, the island of Bra- (KRATOCHVÍL, 1946)
6. **[pilja na vrhu Bugara** cave, **YH03**, 300 m, ca 1,5 km W of Ropa, the island of  
Mljet (KRATOCHVÍL, 1946)
7. peninsula **Lapad**, **BN12**, 10 m, Dubrovnik (DAHL, 1903; ROEWER, 1923: **type**  
Mus. Berlin; MORITZ, 1971, VERHOEFF leg.: 4 mm + Penis, 5 ff, 3 Pulli, **para-**  
**lectotypes** – ZMB 11603; **ibid.**, VERHOEFF leg., 13.04.year?: 1 m + Penis, 1 f,  
**paralectotypes** – ZMB 11606)

#### Collection records

- **Croatia**, unknown locality, evergreen forest, litter, near the entrance of a cave,  
17.04.1976, DEELEMANN leg.: 1 f, 1 juv. (TN 1315/1998)

#### Uncertain citations

- □ *Dalmatia* (CARRARA, 1846, sub *Trogulus scaber* W.; GASPERINI, 1891, 1892: *D.*  
*scabrum* Herbst = *T. scaber* W.; HAD@I, 1973b) – CARRARA'S (THALER & GRUBER  
2003) and GASPERINI'S chresonymous data are hardly true (GRUBER, in lit.),  
HAD@I'S data are chresonymous, too.

### Trogulidae

*Trogulus torosus* Simon, 1885; Fig. 1–16

- southern **Dalmatia** (HAD@I, 1936, endem; /HAD@I, 1973b, forgot to cite the spe-  
cies/)
- 1. **\urovi} pe}ina**, **BN21**, 160 m, Mo-i}i near Cavtat (KRATOCHVÍL, 1946)
- 2. **[ipun {pilja**, **BN21**, 20 m, Cavtat (KRATOCHVÍL, 1946)
- 3. **[krabuljica {pilja** cave, **BN31**, near Kuna Konavoska, 720 m (KRATOCHVÍL,  
1946: Pe}ina kod »Mali Ora«)
- 4. **Vilina pe}ina**, **BN31**, near Gruda, 80 m (KRATOCHVÍL, 1946)

#### Incorrect citation

- □ *Dalmatia* (ROEWER, 1950: Dalmatien (Krivo{i}je): 1 m, 1 f – RI/12/1341) – the  
Krivo{i}je in Montenegro

*Trogulus* gr. *tricarinatus* Linnaeus, 1761; Fig. 1–16

1. **U-ka Mt.**, **VL31** 1380 m, Istra, 14.07.1974, MARTENS leg.: 1 f (JM 1272)
2. **Dugo selo** near Zagreb, **WL97**, 110 m, *Fagetum*, 14.05.1968, MARTENS *et al.* leg.:  
cf. 1 m (JM 838)

*Trogulus tricarinatus hirtus* (Dahl, 1903); Fig. 1–17

#### Collection records

1. **Kozarica – Blato**, **XH45**, the island of Mljet, 30.04.1987, TRAVNIK leg.: 1 f (TN  
1112/1998)

The taxon should be revised (KOMPOSCH in lit.).

*Trogulus falcipenis* Komposch, 2000; Fig. 1–18

1. the island of **Cres**, **VK56**, 44°58'N, 14°24'E, ca 200–300 m (KOMPOSCH, 2000: litter under old oaks, 29.10.1980, DEELEMEN leg.: 1 m – Coll. DEELEMEN)
2. above **Jablanac**, **VK95**, 44°43'N, 14°54'E, 400 m (KOMPOSCH, 2000: 18.10.1980, DEELEMEN leg.: 1 m – Coll. DEELEMEN)
3. **Imotski – Zagvozd**, **XJ71**, 43°26'N, 17°08'E (KOMPOSCH, 2000: *Pinetum nigri*, 22.10.1980, DEELEMEN leg.: 1 m – Coll. DEELEMEN)

#### Collection records

1. **U-ka Mt.**, **VL31**, 950 m, pit fall traps, 11.09.–06.10.1990, GASPARO leg.: 1 m, 1 juv. (TN 100/2000)
2. **Velika Paklenica**, **WK30**, 300 m, 05.04.1986, BIOS 2720, SLANA, [TANGELJ, SLANA – NOVAK, NOVAK leg., litter, sieve: 1 f (TN 41/1986; rev. 2002)
3. **Studenci**, **WK35**, 580 m, 04.04.1986, BIOS 2711, SLANA, [TANGELJ, SLANA – NOVAK, NOVAK leg., litter, sieve: 1 f (TN 42/1986; rev. 2002)
4. **Oskoru{no**, **XH86**, 300 m, Pelje{ac pen in sula, 24.10.1980, *Pinus pinea*, DEELEMEN leg.: Oskoru{nica: 1 m, 1 f (Coll. DEELEMEN)

*Trogulus* gr. *nepaeformis* (Scopoli, 1763)

- **Croatia**, locality unknown (BABI], 1916, sub *T. rostratus* (Latr.): 1 ex.)
  - near **Zagreb** (NEUFFER, 1980, sub *T. nepaeformis*: Fig. 34, (JM 839), penis-type III)
1. **U-ka Mt.**, **VL31**, 1380 m (MARTENS, 1978, sub *T. nepaeformis*, MARTENS leg.; NEUFFER, 1980, sub *T. nepaeformis*: Fig. 13, (JM 1271), penis-type II; **ibid.**, Fig. 36, (JM 1273), penis-type III)

#### Collection records

- the island of **Lo{inj**, ROGENHOFER leg.: Lussin, 1862, ROEWER det. sub *T. tricarinatus*, GRUBER rev. (1973): 1 m (NHMW 5858)
  - **Dalmatia**: 1 juv. (NHMW)
  - the island of **Cres**, 29.10.1980, DEELEMEN leg.: 2 ad. (Coll. DEELEMEN)
1. **Osor**, **VK54**, the island of Cres, *Orno-Quercetum ilicis*, 19.03.1964: 1 f (TN 624/1983)
  2. **Krmpote**, **VK89**, Novi Vinodolski, ca 600 m, 17. and 29.10.1980, DEELEMEN leg.: 1 m, 1 juv. (Coll. DEELEMEN)
  3. **Veliki Zavi`an**, **VK94**, 1677 m, 05.10.1995, VUKOVIJ leg.: 3 mm (TN 5/1996)
  4. above **Jablanac**, **VK95**, 400 m, 18.10.1980: 1 juv. (Coll. DEELEMEN)
  5. **Senj**, **VK98**, STURANY leg.: Zengg, 21.02.1895, ROEWER det. sub *T. tricarinatus*, GRUBER rev. (1973): 1 f (NHMW 5859)

6. **Sv. Petar u [umi, VL10**, 340 m, Pazin, 04.04.1994, GREGO leg.: 1 f (TN 445/2000)
7. **SE Cerovlje, VL12**, 280 m, NE Pazin, 19.07.1957 (61), STROUHAL leg., slope above the brook, *Genista*: 1 m, 1 juv. (NHMW 5857)
8. **U-ka Mt., VL31**, 1380 m, Istra, 14.07.1974, MARTENS leg.: 1 m, 2 ff (JM 1253), NEUFFER det. 28.05.1980; **ibid.**: 1 m (JM 1273)
9. **Lovran, VL41**, 40 m, pitfall traps, 27.01–25.04.1991, GASPARO leg.: 1 f (TN 441/2000)
10. **Njivice, VL60**, 10 m, the island of Krk, 27.10.1980, DEELEMEN leg.: 1 m (Coll. DEELEMEN)
11. **Omi{alj, VL60**, 10 m, the island of Krk, 09.1929, HAD@I leg. et det. sub *T. tricarinatus*: 1 m (TN 41/1983), microscopic preparation
12. **Velika Paklenica, WK30**, 300 m, 06.04.1986, BIOS 2708, SLANA, [TANGELJ, SLANA – NOVAK, NOVAK leg., un der stones: 1 f (TN 39/1986); **ibid.**, lit ter, sieve: 2 ff, cf. 4 juv. (TN 40/1986)
13. **Plitvice, WK46**, 04.–05.year?, WUNDERLICH leg.: 1 m, 2 ff (JM 1077); **ibid.**, 04.04.1986, BIOS 2703, SLANA, [TANGELJ, SLANA – NOVAK, NOVAK leg., sieve, under stones: 1 m, 1 subad. (TN 43/1986)
14. **Dugo selo** near Zagreb, **WL97**, 110 m, *Fagetum*, 14.05.1968, MARTENS *et al.* leg.: 1 m (JM 839)
15. 5 km E **Slavonski Brod, BR10** 90 m, pit fall traps, 15.09.–14.10.1966, plain, light wood (*Q. robur*, *Carpinus*, shrubs / *Crataegus*, *Rosa* etc./), GRUBER leg.: 1 f (NHMW 5860)

*Trogulus closanicus* Avram, 1971; Fig. 1–19

#### Collection record

- the island of **Lo{inj**: 1 m (NEUFFER, 1980, sub: corresponding to *T. closanicus* Fig. 61, (NHMW 5858), penis–type V)
- 1. **Sv. Petar u [umi, VL10**, 340 m, Pazin, 04.04.1994, GREGO leg.: 1 m, 1 f (TN 444/2000)
- 2. **Plitvice, WK46**, 677 m: 1 m (NEUFFER, 1980, sub corresponding to *T. closanicus* Fig. 63, (JM 1077), penis–type V)

#### □ *Trogulus setosissimus* Roewer, 1940

- □ *the island of Hvar* (ROEWER, 1940: Lesina, **type** – Coll. ROEWER Nr. 2148/22, 1 m, 1 f, Tab. II Figs. 22a-c; ROEWER, 1950: Lesina: 1 m, 1 f – **type** (m) and **paratype** (f) RII/2148/22; HAD@I, 1973b: endem)

Because of ROEWER'S notoriously misleading data, the presence of the species in Croatia should be confirmed by further findings.

*Trogulus squamatus* C. L. Koch, 1839; Fig. 1–19

- **Dalmatia** (KOCH, 1839; SIMON, 1879; DAHL, 1903: southern Dalmatia; ROEWER, 1923: loc. type unknown and not found)



## Collection record

1. **Sv. Ilija** Mt., **XH76**, 961 m, Orebi}, Pelje{ac peninsula, 05.1977, NEMENZ *et al.* leg.: Mte. Vipero (A. N. 1978, VIII.): 1 f (NHMW 6803); **ibid.**, 26.05.1977: 1 f (NHMW 6804)

*Trogulus tingiformis* C. L. Koch, 1848; Fig. 1–20

1. **Plitvice**, **WK46**, 677 m (MARTENS, 1978, KNUSE leg.) = 25.06.1965: 1 f (JM 422)

*Trogulus coriziformis* C. L. Koch, 1839; Fig. 1–17

1. **near Rovinj**, **UK99**, 10 m, (MARTENS, 1978) = **Limski zaljev**, **UK99**, 10 m, near Rovinj, N slope, 22.08.1968, HELVERSEN leg. and det.: 1 f (JM 968)

Uncertain and incorrect determinations of *Trogulus* spp.

- □ Croatia – Quarner, Dalmatia (ROEWER, 1950: 1 f – RI/12/1367; HAD@I, 1973b, sub *T. nepaeformis* )
  - □ Croatia (HAD@I, 1973b, sub *T. aquaticus* Si mon, 1879)
1. □ Osor – Garmozaj, VK54, the island of Cres, close to sea-level (RUCNER & RUCNER, 1971, sub *T. nepaeformis*, Orno-Quercetum ilicis H-i} (1956) 1958, 19.03.1964: 1 ex.)
  2. □ the surroundings of Malinska, VK69, close to sea-level (HAD@I, 1936, sub *T. tricarinatus*, under stones, 04.1927: 1 ex. /6,3 mm long/)
  3. □ near Omi{alj, VL06, close to sea-level (HAD@I, 1936, sub *T. tricarinatus*, 16.09.1929: 1 m /8,4 mm long/)
  4. □ Snje`nik, VL63, 1505 m (RUCNER & RUCNER, 1971, sub *T. nepaeformis* Pinetum mughi croaticum Horv. 1958, 18.08.1964: 1 ex.)
  5. □ Crni vrh, WK36, ca 800–1000 m, Vrhovine (RUCNER & RUCNER, 1971, sub *T. tricarinatus*, Helleboro-Pinetum Horv. 1958, 19.07.1961: 1 ex.)
  6. □ Vukovo selo, WL58 (RUCNER & RUCNER, 1971, sub *T. aquaticus*, Querco-Carpinetum croaticum Horv. 1937, 08.06.1962: 2 ex.)
  7. □ Ko`ino, XJ18 (MU^ALICA–MILANOVI], 1990, sub *T. tingiformis*: 23.08.–06. 09. 1987, pit fall traps, MU^ALICA leg.: 1 ex.)
  8. □ Split, XJ11, XJ21, near the marine institute, close to sea-level (HAD@I, 1973b, sub *T. aquaticus* 05.04.1938)

The genus *Trogulus* has been recognized to be taxonomically the most difficult of the European harvestmen (MARTENS, 1988); further revision is needed in the *nepaeformis*-, *tingiformis*- and *tricarinatus*-group.

*Anelasmacephalus hadzii* Martens, 1978; Fig. 1–21

- Croatia (ROEWER, 1923, sub *A. cambridgei*: pl. mm, ff; KOLOSVÁRY, 1929, sub *A. cambridgei* HAD@I, 1973b, sub *A. cambridgei*)

1. **Plitvi-ka jezera, WK46**, 677 m (MARTENS, 1978, STURANY leg. – NHMW)

#### Collection record

1. near **Dev-i}evac, WK46**, 680 m, Plitvi-ka jezera, forest, sieve, STURANY leg., Acqu. Nr., 05.02.1895: 1 m (NHMW)

#### Ischyropsalididae

*Ischyropsalis hellwigi hellwigi* (Panzer, 1794); Fig. 1–21

- **Croatia** (ROEWER, 1923, sub *I. hellwigi*; KOLOSVÁRY, 1929, sub *I. plicata*; Zagreb, WL77 – Zagreb is un doubt edly the mu seum town (ROEWER, 1923, sub *I. plicata*: 1 m, **cotype** – Coll. ROEWER; ROEWER, 1950: Agram, sub *I. plicata*: 1 m, **paratype** – RII/228/4, Tab. 3 Figs. 16a-d; HAD@I, 1954: 1 m; MARTENS, 1969: Agram; SMF/RII/228; MARTENS, 1978, SMF)
- **Dalmatia** (ROEWER, 1914, sub *I. hellwigi*)
  1. **Rijeka, VL51**, 10 m (HAD@I, 1973b, sub *I. hellwigi*)
  2. **Brod Moravice, VL93**, 580 m (MARTENS 1969: Moravika bei Rijeka, 09.08. 1957, BIELAWSKI leg.: 1 m; Zool. Inst. Warszawa; HAD@I, 1973b, sub *I. hellwigi*; MARTENS, 1978 (PANW))
  3. **Ozalj, WL35**, 160 m (BABI], 1916, sub *I. hellwigii*, 10.1912: 1 m)

#### Collection record

1. **Veliki Zavi`an Mt., VK94**, 1677 m, 05.10.1995, VUKOVI] leg.: 19 mm, 2 ff (TN 6/1996)

□ *Ischyropsalis muellneri* Hamann, 1898

#### Erroneous citation

1. *Mt. Sever* between Dubrovnik and Kotor (MARTENS, 1969, KRATOCHVÍL leg.: 2 mm – coll. [ILHAVÝ 03113; HAD@I, 1973b; MARTENS, 1978)

KRATOCHVÍL (1946) explicitly wrote that no *Ischyropsalis* was found in the caves of Bosnia, Herzegovina, Dalmatia or Montenegro. *I. muellneri* is en demic to the Julian Alps (NOVAK *et al.*, 1995; NOVAK & GRUBER, 2000); citations of its distribution in the Balkans (MARTENS, 1969, 1978; MARCELLINO 1982, RAMBLA & JUBERTHIE, 1994; OZIMEC, 2002) are erroneous. OZIMEC (2002) unwarrantedly recorded the species as troglophile.

#### Phalangiidae

*Phalangium opilio* Linnaeus, 1758; Fig. 1–22

Remark. All citations and TN-determinations before 2004, sub *Phalangium opilio* Linnaeus, 1761)

- **Croatia** (HAD@I, 1973b)
- **Dalmatia** (CARARRA, 1846, sub *Cerastoma cornutum*; GASPERINI, 1891, 1892, sub *C. cornutum*)

- **Gorski Kotar, Lika** (BABI], 1916: pl. mm, ff)
  1. **Bo`ava, VJ98**, 10 m, the island of Dugi otok (HAD@I, 1930: 03.06.1926, HAD@I leg.: 1 f)
  2. **Gerovo, VL74**, 584 m (BABI], 1916, 06.1905: pl. juv.)
  3. **Omi{alj, VL60**, 10 m (HAD@I, 1936, near power-station, 20.09.1926, D. HAD@I leg.: 1 m subad.)
  4. **Zlobin, VL71**, 772 m (BABI], 1916, 09.1915: pl. juv.)
  5. **Ple{ce, VL74**, 325 m (BABI]: Ple{e, 1916, 07.1903: pl. juv.)
  6. the island of **Dugi otok** vis à vis the island of Mrtovnjak, **WJ07** (HAD@I, 1930: 23.05.1925, HAD@I leg.: 2 juv.)
  7. **Dugopolje, WJ06**, 20 m, the island of Dugi otok (HAD@I, 1930: 20.05.1925, HAD@I leg.: 1 f; 24.05.1925: 1 f; 26.05.1925, leg. HIRTZ leg.: 1 m, 1 f; **ibid.**, vine-yards, 15.05.–10.08.1928, HAD@I leg.: a part of 6 mm, 8 ff)
  8. **Kru{evo, WJ15**, 120 m, the island of Dugi otok (HAD@I, 1930, vineyards, 15.05.–10.08.1928, HAD@I leg.: a part of 6 mm, 8 ff)
  9. **near the lake at Mir, WJ15**, 30 m, the island of Dugi otok (HAD@I, 1930: 23.05.1925, HAD@I leg.: 1 f); **ibid.** (HAD@I, 1930: Slano jezero, 25.05.1925, HAD@I leg.: 1 m)
  10. **Sali, WJ16**, 10 m, the island of Dugi otok (HAD@I, 1930: 19.05.1925, HAD@I leg.: 1 m, 1 f; 25.05.1925: 1 juv., 1 m juv.; 17.05.1927, JOVI] leg.: 1 juv.; 12. 09.1927: 1 f)
  11. the **vicinity of Sali, WJ16**, 10 m, the island of Dugi otok (HAD@I, 1930: 10.1926, HAD@I leg.: 1 f juv.; Figs. 1, 4)
  12. **[tirova-a, WK04**, 1102 m (BABI], 1916, 06.1912: Stirova-a, pl. juv.)
  13. **Pazari{te, WK14**, Gospi], 580 m (BABI], 1916: pl. mm, ff)
  14. **Jadovno, WK22**, 864 m (BABI], 1916: pl. mm, ff)
  15. **@lijeb, WK27**, 600 m, Doljani (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 14.09.1964: 3 ex.)
  16. **Topolu{a, WK27**, Doljani, ca 800–1000 m (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 17.09.1961: 3 ex.)
  17. **Bijeli vrh, WK36**, 1074 m, Vrhovine (RUCNER & RUCNER, 1971, *Fagetum croaticum abietosum* Horv. 1938, 12.05.1964: 1 ex., 15.09.: 1 ex.)
  18. **Orlov-i}, WK36**, ca 800 m, Vrhovine (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 18.07.1961: 2 ex.)
  19. **Crni vrh, WK36**, 850 m, Vrhovine (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 19.07.1961: 4 ex., 20.07.: 1 ex.)
  20. **Bori}a borik, WK36**, ca 800 – 1000 m, Donji Babin potok (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 14.09.1964: 2 ex.)
  21. **Crni vrh, WK36**, 850 m, Vrhovine (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 19.07.1961: 4 ex., 20.07.1961: 1 ex.)
  22. **Kriva Draga, WK36**, ca 850 m, Donji Babin potok (RUCNER & RUCNER, 1971, *Piceetum dolomiticum* Horv. 1958, 21.07.1961: 3 ex., 13.09.1961: 2 ex.)

23. **Ogulin, WL11**, 320 m (BABIJ, 1916, 08.1902: pl. juv.)
24. Zagreb, WL77 (BABIJ, 1916: pl. mm, ff)
25. **Strahin{-ica Mt., WM61**, Zagorje, 846 m (BABIJ, 1916: 847 m: pl. mm, ff)
26. **Split, XJ11, XJ21**, 10 m (BABIJ, 1916: pl. mm, ff); **ibid., Marjan** (KOLOSVÁRY, 1938b, 13.04.1938; KOLOSVÁRY, 1939)
27. **Solin, XJ12**, 10 m (KOLOSVÁRY, 1938b, 09.04.1938)
28. **Gospi}, WK23**, Jasikovac, 570 m (BABIJ, 1916: pl. juv.)
29. **Vo}in, XL95**, 215 m (BABIJ, 1916: pl. mm, ff)

#### Collection records

- the is land of **Dugi otok**, 1928, JOVIJ leg., HAD@I det.: 1 f (TN 620/1981); **ibid.**: 2 juv. (TN 621/1981)
  - the is land of **Hvar**, STURANY don.: Lesina, ROEWER det.: 1 m, 2 ff, 1 juv. (NHMW 3811)
1. **Karigador, UL82**, 10 m, Dajla, Umag, 19.09.1982, SLANA, NOVAK leg.: 2 mm 1 m subad., 3 ff, 1 juv. (TN 581/1982)
  2. **Savudrija, UL83**, 10 m, meadow and shrubs near lighthouse, 10.07.1990: 1 f (TN 828/2002); **ibid.**, meadow and shrubs, stubblefield near a sandy shore: 1 f (TN 839/2002)
  3. **Rovinj, UK99**, 10 m, PIFFL leg., 07.1955; coll. et det. NEMENZ: 1 m, 2 ff (NHMW 8340); **ibid.**, Pahun, 27.09.1966, BOLE leg., HAD@I det.: 1 m subad., 1 f, 2 juv. (TN 432/1983)
  4. **Bo`ava, VJ98**, 10 m, the island of Dugi otok, 30.06.1926, HAD@I det.: 1 f (TN 619/1981)
  5. **Pula, VK06**, 10 m, 25.8.1941: 1 m (TN 374/1983)
  6. **Lopar, VK76**, 10 m, the island of Rab, 06.1968, HAD@I det.: 7 mm, 8 ff (TN 669/1981); **ibid.**, 06.1968: 4 mm, 5 ff, 5 juv. (TN 97/1982); **ibid.**, 08.1970: 1 f (TN 703/1981); **ibid.**, 19.06.1980: 1 f (TN 837/2002)
  7. **Banjol, VK85**, 10 m, the is land of Rab, 06.1967: 1 m, 3 ff, 2 juv. (TN 104/1982)
  8. **Ugrini, VL13**, 120 m, Mlini, near the Reka river, 29.06.1990, HORVAT, SIVEC leg.: 1 f (TN 1143/1998)
  9. **^aglin, VL32**, Slavonski Brod, 90 m, 12.10.1986, SIVEC, HORVAT leg.: 1 f (TN 1109/1998)
  10. **Omi{alj, VL60, 10 m**, the island of Krk, 17.09.1929, HAD@I leg.: 5 juv. (TN 249/1982); **ibid.**, 31.10.1929, HAD@I det.: 1 juv. (TN 616/1981)
  11. **Sveta gora, VL74**, 580 m, 19.06.1917, BABIJ det. sub *O. alpinus* pulli; 4 juv. (rev. TN 746/1984)
  12. **Dugopolje, WJ06**, 20 m, the is land of Dugi otok, 26.05.1926, HAD@I det. sub *Ph. opilio* m: 1 juv. (TN 634/1981); **ibid.**, vine yards, JOVIJ leg., 08.1928, HAD@I det.: 1 m (TN 36/1983) microscopic preparation
  13. **Sali, WJ16**, 10 m, the is land of Dugi otok, 08.1928, near vine yards in Dugopolje, JOVIJ leg., HAD@I det.: 1 f (TN 14/1983), microscopic preparation; **ibid.**, HAD@I det.: 1 m (TN 19/1983), microscopic preparation

14. **Sv. Filip i Jakov, WJ36**, 10 m, STURANY leg.: San Filippo, 28.01.1891, ROEWER det.: 1 m, 2 ff (NHMW 3810)
15. **Stajnica, WK18**, Jezerane, 500 m, 08.1985: 1 f (TN 671/2002)
16. **Kamenica Skradni-ka, WL30**, 260 m, beside Rudnica brook, 05.1985: 1 f (TN 710/2002); **ibid.**, 07.1987: 2 subad. (TN 344/2002)
17. **Brane{ci, XL93**, 340 m, Psunj Mt., 03.05.1986, HORVAT, SIVEC leg.: 1 juv. (TN 1080/1998)
18. **Kamengrad, XL94**, 528 m, Papuk Mt., be side the Orljava river, 06.07.1989, HORVAT, KRY[TUFEK leg.: 2 juv. (TN 1241/1998)
19. **Djedovica, XL95**, 514 m, Novo Zve-evo, Papuk Mt., 06.07.1989, HORVAT, KRY[TUFEK leg.: 1 juv. (TN 1172/1998)
20. **Novo Zve-evo, XL96**, 460 m, 23.07.1916, BABI]: Zve-evo, det. sub *Opilio parietinus* = *Ph. parietinum*; 1 f (rev. TN 695/1984)

\**Metaphalangium cirtanum* (C. L. Koch, 1839)

- **Croatia** (HAD@I, 1973b, sub *Metaphalangium propinquum* (Lucas, 1847))
- **Dalmatia** (ROEWER, 1956, sub *M. propinquum*: 1 m, 1 f – RII/2153/96, and very probably this species sub *Paropilio spinipes*: 1 m – **type** RII/5415/201; HAD@I, 1973b, very probably this species sub *P. spinipes*: endem)

This species has not been found in the collections studied, but would be expected locally in Croatia. For the synonymy see STAREGA, 1984.

*Opilio parietinus* (De Geer, 1778); Fig. 1–23

- **Croatia** (HAD@I, 1973b)
- 1. **Krapina WM61**, 290 m (BABI), 1916, sub *O. parietinus* = *Phalangium parietinum*, 1919: 1 f (rev. TN 699/1984)
- 2. **Valpovo, BR35**, 90 m (BABI), 1916, sub *O. parietinus* = *Ph. parietinum*) 27. 08. 1905: 2 ff (rev. TN 698/1984)

#### Collection records

- the island of **Vis**, ROEWER det.: Lissa, together with specimens sub *O. saxatilis*, GRUBER rev.: 1 f (NHMW 3951, part.)
- the island of **Krk**, REITTER leg.: Veglia, STEINDACHER don. 04.1882–39, ROEWER det.: 1 m, 1 f (NHMW 3918)
- 1. **Valpovo, BR35**, 90 m, Kaptol, 27.08.1905, BABI] det. sub *Opilio parietinus* = *Ph. parietinum*; cf. 1 f (rev. TN 697/1984)

2. **Dobra voda, CR32**, 110 m, Vuka, Vukovar, 19.08.1930, HAD@I leg.: 1 f, 1 iuv. (TN 255/1982, rev. 2003)

*Opilio saxatilis* C. L. Koch, 1839; Fig. 1–24

- **Croatia** (HAD@I, 1973b)
  - the island of **Bra-** ([ILHAVÝ, 1938: KRATOCHVÍL leg.)
  - **Konavli**, 90 m (KRATOCHVÍL 1946: Konavljje, sub *O. saxatilis* C. L. Koch, 1934, KRATOCHVÍL leg.)
1. **at Palu lake, UK99**, S of Rovinj, 10 m (HAD@I, 1973a, sub *Metadasylobus bolei*, 27.09.1963, BOLE leg.: 1 m, 1 f; HAD@I, 1973b: Palu, loc. typ., sub *M. bolei*, endem)
  2. **Jasenak, WL00**, 600 m (LENDL, 1894: Jassenak, sub *Phalangium saxatile*, 10.1887; DADAY DE DEÉS, 1896: Jassenak, sub *Liobunum saxatile*)
  3. **Bazgova-a {pilja cave, XH29**, ca 4 km W of Nere`i{ja, the island of Bra- (KRATOCHVÍL, 1946: Nerezi{e)
  4. **Gruda, BN31**, 80 m, Konavli, ([ILHAVÝ, 1938, HOFFER, [ILHAVY leg., 1936; KRATOCHVÍL, 1946, sub *O. saxatilis* C. L. Koch, 1934, [ILHAVY leg.)

**Collection records**

- the island of **Vis** (Lissa), ROEWER det. sub *O. parietinus*, GRUBER rev.: 1 m, 1 f (NHMW 3951, part.); **ibid.**, GRUBER rev. 1974: 1 m, 1 f (NHMW 3933)
  - the island of **Hvar**, 29.05.1933, REITTER leg., GRUBER det.: 1 m (TN 597/ 1983)
1. **Rovinj, UK99**, 10 m, under stones, 07.1957, GRUBER leg.: 2 mm (NHMW 3944); **ibid.**, near the lake Pal, 27.09.1966, HAD@I det. sub *Eudasylobus* sp. n.: 1 m (rev.TN 33/1986), microscopicpreparation
  2. **Sv. Petar u [umi, VL10**, 340 m, Pazin, 01.05.1994, GREGO leg.: 1 juv. (TN 93/2000)
  3. **U-ka Mt., VL31** 1380 m, 14.07.1974, MARTENS leg.: 3 juv. (JM 1268)
  4. **Ora{ac, BN02**, 90 m, 12.06.1969, BAUER leg., GRUBER det. 1972: 2 ff (NHMW 3937)
  5. **Sv. Ilija Mt., XH76**, 961 m, Orebi}, Pelje{ac pen in sula, 05.1977, pit fall trap 3a, NEMENZ *et al.* leg.: Mte. Vipero (A. N. 1978, VIII.): 4 mm, 13 ff, 1 juv. (NHMW 6808); **ibid.**, pitfall trap 133: 2 ff (NHMW 6809); **ibid.**, *Pinetum*, floor: 1 juv. (NHMW 6810); **ibid.**, a burned bottle, Monkala, 26.05.: 1 m (NHMW 6811)
  6. **Biokovo Mt., XH79**, above Makarska, ca 1200 m, under stones, 23.09.1999, SLANA, NOVAK leg: 1 juv. (TN 242/1999)

*Opilio dinaricus* [ilhavý, 1938; Fig. 1–25

- **Croatia** (HAD@I, 1973b)
1. **Pula, VK16**, 25.08.1941 : 1 iuv. (TN 375/1983, rev. 2003)
  2. **Opatija, VL41**, 10 m (RAFALSKI, 1962: Abazya k. Fiume, 25.-26.02.1906, STOBIECKI leg.: 1 m, Coll. KULCZYNSKI, PAN; MARTENS, 1978)
  3. **Omi{alj, VL60**, 10 m, the island of Krk (MARTENS, 1978, PRETZMANN leg.)

4. **Bakar, VL61**, 10 m (BABI], 1916, sub *Phalangium parietinum*; 1 m, cf. 1 f (rev. TN 701/1984)
5. **Plitvi-ka jezera, WK46**, 677 m (RAFALSKI, 1962: Plitvizca, KULCZYNSKI det. sub *Phalangium* sp. n.: 1 m, 1 f, 5 *Opilio* sp. juv., Coll. KULCZYNSKI, PAN; MARTENS, 1978)

#### Collection records

1. **Cerovlje, VL21**, 280 m, Pazin, 22.05.1986: 1 juv. (TN 1184/1998)
2. **Omi{alj, VL60**, 10 m, the island of Krk, 17.09.1929, HAD@I det. sub *O. parietinus* 4 mm, 3 ff, 12 juv. (rev. TN 626/1981, corr. 1986); **ibid.**, 09.1972, PRETZMANN leg., GRUBER det.: 1 m (NHMW 3857)
3. **Bijeli vrh Mt., WK36**, 1074 m, Vrhovine, 18.07.1961, RUCNER leg., HAD@I det. sub *O. saxatilis*: 1 m (rev. TN 28/1983)
4. **Gra-ac, WK60**, 600 m, 12.09.1964, HAD@I det. sub *O. parietinus*: 2 ff (rev. TN 192/1983)
5. **Cetina, XJ16**, 390 m, 13.09.1987, HORVAT, SIVEC leg.: 1 m (TN 1225/1998)

*Opilio ruzickai* [ilhavý, 1938; Fig. 1–26

#### Collection record

1. **Gospji, WK23**, Jasikovac, 570 m, BABI] det. sub *Phalangium parietinum*; 1 f (rev. TN 693/1984, sub *Opilio* cf. *ruzickai*)
2. **Bijeli vrh Mt., WK36**, 1074 m, Vrhovine, 15.09.1961, RUCNER leg., HAD@I det. sub *Opilio* sp. nova: 1 m (rev. TN 27/1983), microscopic preparation

\**Opilio transversalis* Roewer, 1956

This species would be expected locally along the whole Adriatic coast and in the hinterland (cf. GRUBER, 1984).

#### Uncertain determinations of *Opilio* species

The written records of the *Opilio* species that appeared before the publication of [ILHAVÝ'S (1938) work must be treated with caution. Our revision of HAD@I'S sparse determinations in his collection revealed that HAD@I confused some *Opilio* species also after [ILHAVÝ'S publication. Therefore only citations based on relevant drawings and/or descriptions, and/or revised specimens can be taken into account (NOVAK & GRUBER, 2000).

1. □ *Omi{alj bay, VL60* (HAD@I, 1936, sub *O. parietinus* Pinetum, under stones, 09.1929: pl.) = 20.09.1929: 8 juv., and Phalangiidae gen. sp.: 1 juv. (TN 655/1981)
2. □ *Gospji, WK23* (BABI], 1916, sub *Phalangium parietinum*)
3. □ *Topolu{a, WK27*, Doljani, ca 800–1000 m (RUCNER & RUCNER, 1971, sub *Opilio parietinum*, *Helleboro-Pinetum* Horv. 1958, 18.09.1961: 1 ex.)
4. □ *Crni vrh, WK36*, Vrhovine (RUCNER & RUCNER, 1971, sub *Opilio parietinum*, *Helleboro-Pinetum* Horv. 1958, 19.07.1961: 3 ex., 20.07.1961: 1 ex.)

5. □*Orlov-i*}, WK36, Vrhovine (RUCNER & RUCNER, 1971, sub *Opilio parietinum*, *Helleboro-Pinetum* Horv. 1958, 18.07.1961: 2 ex.)
6. □*Jasenak*, WL00 (LENDL, 1894, sub *Ph. parietinum* Jassenak; DADAY DE DEÉS, 1896, sub *Liobunum parietinum*)
7. □*Zape*} – *Plemenita*{, WL03 (BABI], 1916, sub *Ph. parietinum*, pullus, 08.1912): 1 juv. (rev. TN 691/1984)
8. □*Galdovo*, XL03 (BABI], 1916, sub *Ph. parietinum*, 08.1905) : 2 juv. (rev. TN 696/1984)

*Platybunus bucephalus* (C. L. Koch, 1835); Fig. 1–27

- Northern **Croatia** (HAD@I, 1973b)
  - **Dalmatia** (ROSSI, 1846, sub *Platylophus Heegeri*, HEEGER leg., early spring /1846?/: 2 ex.; CARARRA, 1846, sub *P. Heegeri* DOLESCHAL, 1852, sub *Platylophus Heegeri* ROSSI; GASPERINI, 1891, 1892, sub *P. Heegeri*, ROEWER, 1911: pl. (Hofmus. Wien); ROEWER, 1912: Dalmatien, sub *P. pinetorum*: viele (m + f) – Hofmus. Wien) – (vidi), and sub *Platylophus Hugerii (dalmatinum)* Kollar = *Plat.* pull.: 2 – Hofmus. Wien, vidi type.; ROEWER, 1923, also sub *Platybunus* sp. = *Platylophus heegeri* Kollar: 2 juv.; HAD@I, 1973b: »/ex-/ Yugoslavia«)
1. a **pothole near Rovinjsko selo, UK99**, 140 m (DI CAPORIACCO, 1949: pozzo presso Villa di Rovigno, 09.11.1930, IVIANI leg.: 1 f)
  2. **Bitoraj Mt., VL81**, 1385 m (BABI], 1916: 06.1910) = 28.06.1910; 1 f (TN 740/1984)
  3. **Jasenak, WL00**, 600 m (LENDL, 1894: Jassenak, 10.1887, sub *Platybunus* sp.)
  4. **Medvednica Mt., WL78**, 800 m (BABI], 1916: Zagreba-ka gora): 1 f (TN 739/1984); 04.05.1917: 1 juv. (TN 738/1984, sub *Platybunus* sp.)
  5. **Supetar, XJ20**, 10 m, the island of Bra~ (KOLOSVÁRY, 1938b: 10.04.1938)
  6. **Dubrovnik, BN12**, 10 m (MARTENS, 1978, BUG leg.)

**Collection records**

1. **Veliki Zavi`an Mt., VK94**, 1677 m, 05.10.1995, VUKOVI] leg.: 17 mm, 13 ff, 8 juv. (TN 3/1996)
2. **Sv. Petar u [umi, VL10**, 340 m, Pazin, 04.04.1994, GREGO leg.: 2 juv. (TN 448/2000); **ibid.**, 01.05.1994: 1 juv. (TN 92/2000)
3. **Crni lug, VL72**, 730 m, Gorski Kotor, 14.7.1964, *Fagetum croaticum subalpinum*: 1 m (TN 321/1983)
4. **^edanj, VL93**, 240 m, Brod na Kupi, 13.04.1984: 1 juv. (TN 1129/1998)
5. **Pila, WM81**, 220 m, Stubi-ke Toplice, Krapina, 02.05.1986, HORVAT, SIVEC leg.: 1 juv. (TN 1179/1998)
6. **Sljeme, WL78**, 1035 m, Medvednica Mt., 21.06.1917, BABI] det.: 3 mm, 1 f (TN 737/1984); **ibid.**, 14.05.1986: 1 m, 1 f (TN 1230/1998)
7. **Zaklopatica, XH53**, 10 m, the is land of Lastovo, 30.11.1964: 2 juv. (TN 191/ 1983)
8. **Prevlaka, XL06**, 110 m, P 4, T-V; 15.08.1985: 1 iuv. (TN 617/2002)
9. a cave near the sea in **Slano, YH33**, 10 m, BUG leg., 08.1968: 1 m (JM 883)



10. Ro`at, **Rijeka Dubrova-ka, BN12**, 10 m, 24.12.1952, A 589, NIKOLIJ leg.: 2 juv. (TN 883/2003)

□ *Platybunus pinetorum* (C. L. Koch, 1839)

*P. pinetorum* has been recorded neither in Croatia nor in Slovenia; the citations (HAD@I, 1973b: whole /ex-/Yugoslavia) are most probably compatible with *P. bucephalus*

*Platybunus hadzii* Kratochvíl, 1935; Fig. 1–28

#### Collection record

1. **Blaca, XJ12**, Split, 10 m, 27.03.1959, GRUBER leg. et det.: 1 f (NHMW 8228)

*Platybunus spinosissimus* Had`i, 1973; Figs. 1–28, 1–28a

1. **above Paklenica, WK21**, 900 m, 08.06.1964, BOLE leg., HAD@I det.: 1 f (HAD@I, 1973a: 06.07.1965, BOLE leg.: pl. mm, ff; Figs. 68b, -) – the **allotype**, microscopic preparation; the **allotype** and the type locality are not depicted in HAD@I'S (1973a) work
2. **Paklenica, WK21**, 08.06.1965, BOLE leg., HAD@I det.: 1 m (HAD@I, 1973a 06.07.1965, BOLE leg.: pl. mm, ff; Figs. 68a, c, d-g; HAD@I, 1973b: loc. typ.: Vrtlina in the Velebit Mts.) – the **holotype**, microscopic preparation; the **holotype** and the type locality are not depicted in HAD@I'S (1973a) work

#### Collection record

1. **Paklenica, WK21**, 02.06.1965, BOLE leg., HAD@I det., GRUBER rev., 1985: 1 m (TN 844/2003), **paratype**
2. **Vrtlina** cave above Velika Paklenica, **WK21**, 900 m, 08.06.1964, BOLE leg., HAD@I det., GRUBER rev., 1985: 1 m, 1 f (TN 842/2003) – **paratypes; ibid.**, 06.06.1966, BOLE leg., HAD@I det.: 1 f (TN 843/2003) – **paratype**
3. **Manita pe}ina** cave, **WK30**, Velika Paklenica, 500 m, 23.11.1983: 1 juv. (TN 98/2002)

HAD@I'S drawings do not meet the real condition, therefore the penis and the receptacula – missing in his work – are presented here in Fig. 1–28a.

\**Platybunus strigosus* (L. Koch, 1867)

- **Dalmatia** (ROEWER, 1956: 1 f RII/528/53; HAD@I, 1973b, sub *Metaplatybunus strigosus* (C. L. Koch, 1867); STAREGA, 1981; KARAMAN, 1995a, sub *M. strigosus*)

This species has not been found in the collections studied, but would be expected in southern Croatia.

*Metaplatybunus carneluttii* (Had`i, 1973); Fig. 1–29

1. **Komolac, BN12** (HAD@I, 1973a: Rijeka–Komolac, sub *Platybunus kratochvili*, 21.03.1953: 1 f, 2 subad. – coll. IBU Ljubljana: A-535; HAD@I, 1973b: Komolac apud Dubrovnik, loc. typ., endem) = A – 535: 2 mm (rev. TN 577/1983)

*Rilaena triangularis* (Herbst, 1799); Fig. 1–29

- **Croatia** (ROEWER, 1923, sub *Platybunus triangularis*; HAD*@*I, 1973b, sub *P. triangularis*)
  - **Dalmatia** (ROEWER, 1912, sub *Phalangium appendiculatum* Kollar = *Platybunus corniger* Herm. 2 ff – Hofmus. Wien)
  - **Sava river-low land** between Zagreb and *@*upanja (MARTENS, 1978, GRUBER leg.)
1. **Plitvi-ka jezera, WK46**, 677 m (MARTENS, 1978)
  2. **Rabatinka pe}ina** cave, **WL21**, 280 m, Tounj (BABI], 1916, sub *P. corniger*, 06.1912: 1 m = 09.06.1912 (rev. TN 726/1984)
  3. **Tounj, WL21**, 280 m (BABI], 1916, sub *P. corniger*, 06.1912: 1 f = 22.6.1912 (rev. TN 683/1984)
  4. **Vukovo Selo, WL58**, 170 m (RUCNER & RUCNER, 1971, sub *P. triangularis* /det. Had`i/, *Quercus-Carpinetum croaticum* Horv. 1937, 20.04.1962: 7 ex., 08.06. 1962: 1 ex.)
  5. near **Rozga, WL59**, 160 m (RUCNER & RUCNER, 1971, sub *P. triangularis*, *Genista elatae-Quercetum* Horv. 1937, 24.04.1962: 4 ex., 07.06.1962: 1 ex.)
  6. **Podsused, WL67**, 130 m, Zagreb (BABI], 1916, sub *P. corniger*, 05.1896: 1 f = 25.05.1896 (rev. TN 686/1984)
  7. **Kralji-in Zdenac, WL77**, 529 m (BABI], 1916, sub *P. corniger*, 06.1897: 1 m)
  8. **Zagreb, WL77**, 120 m (BABI], 1916, sub *P. corniger* (Hermann), 05.1904: 2 ff); **ibid., Maksimir** (BABI], 1916, sub *P. corniger*, 04.1916: 1 m, 2 ff = 20.4.1916; 1 f (rev. TN 722/1984)
  9. **Obed, WL96**, 100 m (BABI], 1916: Obeda, sub *P. corniger*, 05.1912: 1 f = 25.05. 1912: 2 ff (rev. TN 684/1984)
  10. **Cesarsko brdo, WM05**, ca 500 m (RUCNER & RUCNER, 1971: Cesargradska gora, sub *P. triangularis*, *Quercus-Ostryetum carpiniifoliae* Horv. 1938, 25.04.1962: 1 ex.); **ibid., Fagetum croaticum montanum** Horv. 1938, 19.05.1962: 24 ex.; **ibid., Quercus-Carpinetum croaticum** Horv. 1937, 18.05.1962: 2 ex., 06.06.1962: 3 ex., 09. 07.1963: 1 ex.)
  11. **Jankovac, YL03**, 500 m, near Velika, 230 m (BABI], 1916, sub *P. corniger*, 07. 1916: 1 f; corr. 08.1916 (rev. TN 124/1984)

#### Collection records

1. **Sveta gora, VL74**, 580 m, 19.06.1917, BABI] det. sub *P. corniger* m f; 3 mm, 5 ff (rev. TN 682/1984)
2. **Plitvi-ka jezera, WK46**, 677 m, STURANY leg. don., 25.02.1895, ROEWER det. sub *P. triangularis*, GRUBER rev.: 1 f (NHMW 3992)
3. **Pro}ansko jezero** lake, Plitvi-ka jezera, **WK46**, 677 m, STURANY leg., 24.02.1895, ROEWER det. sub *Platybunus triangularis*, GRUBER rev.: 2 juv. (NHMW 4002); **ibid.**, ROEWER det. sub *P. triangularis*, GRUBER rev. 1961: 2 ff (NHMW 3994)
4. **Stubica** near Dev}i-evac, **WK46**, 680 m, Plitvi-ka jezera, STURANY leg. don., 12.02.1895, ROEWER det. sub *P. triangularis*, GRUBER rev.: 1 m, 2 ff (NHMW 3993)

5. **Kralji-in zdenac, WL77**, 529 m, 13.05.1917, BABI] det. sub *P. corniger*: 2 ff (rev. TN 685/1984)
6. **Kralji-in zdenac, WL77**, 14.06.1897: Kralji{-inzdenec, BABI] det. sub *P. corniger*: 1 m (rev. TN 728/1984)
7. **Zagreb, Cmrok, WL77**, 120 m, 06.05.1917, BABI] det. sub *P. corniger*: 1 f (rev. TN 725/1984)
8. **Pila, WL78**, 220 m, Stubi-ke Toplice, Medvednica Mt., 14.05.1986: 1 m, 1 f, 10 pulli (TN 1174/1998)
9. **Sljeme Mt., WL78**, 1032 m, Zagreb, Medvednica Mt., 14.05.1986: 1 m (TN 1231/1998)
10. **Zabok, WL79**, 180 m, 20.6.1917, BABI] det. sub *P. corniger*: f; 1 m (rev. TN 723/1984)
11. ca **15 km SE Zagreb, WL86**, 110 m, moist wood land, 15.10.1966, GRUBER leg.: 4 juv. (NHMW 4000)
12. **Trnava, WL87**, 120 m, Zagreb, Medvednica Mt., 14.05.1986: 1 m, 2 ff (TN 1238/1998)
13. **Laz, WL89**, ca 200 m, near the river Kačina, Medvednica Mt., Zagreb, 14.05.1986: 1 m (TN 1169/1998)
14. **Klanjec, WM05**, 170 m, 09.07.1963, *Quercus-Carpinetum croaticum*: 1 f (TN 592/1983)
15. **Ivan{-ica Mt., WM81**, 1061 m, 29.05.1917, BABI]: Ivan-ica, det. sub *P. corniger*: 1 m, 1 f (rev. TN 729/1984)
16. **Lobor, WM81**, 280 m, Ivan{-ica Mt., 02.05.1986: 6 pulli (TN 1197/1998)
17. **Manastir Pakra, XL75**, 160 m, Daruvar, 03.05.1986, HORVAT, SIVEC leg.: 1 f, 1 juv. (TN 1248/1998)
18. **Strmac, XL82**, 320 m, Psunj Mt., Nova Gradiška, 04.05.1985: 2 mm, 1 f (TN 1194/1998)
19. **Virovitica, XL87**, 120 m, 03.05.1986, HORVAT, SIVEC leg.: 1 juv. (TN 1228/1998)
20. **Kamengrad, XL94**, 528 m, Papuk Mt., Slavonska Počega, 03.05.1986: 1 f, 8 juv. (TN 1155/1998)
21. **Kalnik, XM01**, 643 m, Ljubec{-ica, 02.05.1986, SIVEC leg.: 1 juv. (TN 1148/1997)
22. **Slanje, XM22**, 180 m, Varađin, 02.05.1986: 1 f, 3 juv. (TN 1206/1998)
23. **Jankovac, YL03**, 500 m, Papuk Mt., Slavonska Počega, 04.05.1986: 1 m, 4 ff (TN 1229/1998)
24. 5 km E **Slavonski Brod, BR10**, 90 m, pitfall traps, 15.09.–14.10.1966, plain, relatively dry *Quercus-Carpinus* GRUBER leg.: ca 70 juv. (NHMW 3999)
25. **Slatinski Drenovac, BR14**, 180 m, Papuk Mt., Načice, 04.05.1986: 7 mm, 5 ff, 4 juv. (TN 1151/1998)
26. ca 15 km E **@upanja, CQ19**, 80 m, Sava river-lowland, flood-woodland, pitfall traps, 15.09.–14.10.1966, GRUBER leg.: 4 juv. (NHMW 3998)

*Dasylobus graniferus* (Canestrini, 1871); Fig. 1–30

- **Croatia** (HAD@I, 1973b, sub *Eudasylobus nicaeensis* (Thorell, 1876), and sub *Zacheus* (*Dentizacheus*) *rucnerianus* Had`i, 1973, endem, and sub *E. georginae* Had`i, 1936, endem)
- western **Croatia**, locality unknown (HAD@I, 1973a, sub *Z. (D.) rucnerianus*, D. RUCNER *et al.* leg.: pl. ex.)
- **Dalmatia**, BABI] det. sub *Phalangium opilio* juv.; 1 juv. (rev. TN 688/1984, sub *E. nicaeensis*)
- 1. **Rovinj, UK99**, 10 m (MARTENS 1978, sub *E. nicaeensis*, KRAUS leg.)
- 2. **Haludovo** near Malinska, **VK69**, 10 m, the island of Krk (HAD@I, 1936, sub *E. georginae*, Figs. 8-16, 16.04.1927, G. HAD@I leg.: 1 ex.; **ibid.**, 16. and 17.04.1927, fam. HAD@I leg.: pl.)
- 3. **Sv. Kri`**, Senj, **VK98**, 200 m (BABI], 1916, sub *Phalangium (Dasylobus) nicaeense* Thorell, 05.1912: 1 m); 1 m (rev. TN 680/1984, sub *E. nicaeensis*)
- 4. **U-ka Mt., VL31**, 1380 m (MARTENS, 1978, sub *E. nicaeensis*, MARTENS leg.) –14. 07.1974, MARTENS leg. et det. sub *E. nicaeensis*: 1 f (JM 1269); **ibid.**: 2 mm (JM 1276); **ibid.**, west ern slope, 700 m, 03.1967: 1 juv. (f) (TN 338/1981)
- 5. **Crni lug, VL72**, 730 m (HAD@I, 1973a, b, sub *E. rucnerianus*; loc. typ.; **ibid.**, under Smrekara, 1973a, sub *E. rucnerianus*, 14.06.1964, D. RUCNER leg.: 1 m)
- 6. **Mali Risnjak Mt., VL73**, 1448 m, Risnjak National Park (RUCNER & RUCNER, 1971, sub *Eudasylobus* sp. nov., and *Zacheus* sp. nov., *Fagetum croaticum subalpinum* Horv. 1938, 14.07.1964: 1 ex.)
- 7. **[tirova-a, WK04**, 1102 m (BABI], 1916: Stirova-a, sub *Ph. (D.) nicaeense*, 07. 1912: 1 m, 1 f); 1912: 1 m, 1 f (rev. TN 681/1984, sub *E. nicaeensis*)
- 8. **Bori}a borik , WK36**, ca 800–1000 m, Donji Babin potok (RUCNER & RUCNER, 1971, sub *Eudasylobus* sp. nov., *Piceetum dolomiticum* Horv. 1958, 24.06.1964: 1 ex.)
- 9. **Donji Babin potok, WK36**, 760 m (HAD@I, 1973a, sub *E. rucnerianus*, 26.06. 1960, RUCNER leg.: 1 m)
- 10. **Stubica** at Plitvice, **WK46**, 680 m (MARTENS 1978, sub *E. nicaeensis*, sec. GRUBER)
- 11. **Ogulin, WL11**, 320 m (MARTENS, 1978, sub *E. nicaeensis*)

## Collection records

1. the island of **Plavnik, VK67**, 10 m, under stones, *Quercetum ilecis*, 07.06.1980, CHRISTIAN leg., sub *E. nicaeensis*: 1 m (NHMW)
2. **Malinska, VK69**, 10 m, the is land of Krk, 16.04.1927, HAD@I det. sub *E. georginae* n. sp., **type** for male: 1 m (rev. TN 114/1983, sub *E. nicaeensis*), microscopic preparation/without penis/; **ibid.**, HAD@I det. sub *E. georginae* n. sp., **type** for fe male: 1 f (rev. TN 104/1983, sub *E. nicaeensis*), microscopic preparation; **ibid.**, HAD@I det. sub *E. georginae* n. sp. m, 2<sup>nd</sup> ex.: 1 m (rev. TN 115/ 1983, sub *E. nicaeensis*), microscopic preparation
3. **Ma}eha pe}ina, VL32**, 800 m, Lani{e, 25.05.1968: 1 f (TN 569/1983, sub *E. nicaeensis*), rev. 2003)

4. **Crni lug, VL72**, 730 m, Gorski Kotar, 19.03.1964, RUCNER leg., HAD@I det. sub *Dentizacheus rucneri* sp. n., **holotype** 1 m (rev. TN 116/1983, sub *E. nicaeensis*), microscopic preparation
5. **Boriĵa borik, WK36**, ca 800–1000 m, Donji Babin potok, 26.06.1962, RUCNER leg., HAD@I det. sub *E. rucneri* sp. n., **holotype**: 1 m (rev. TN 113/1983, sub *E. nicaeensis*), microscopic preparation

*Lophopilio palpinalis* (Herbst, 1799); Fig. 1–31

1. **Karin, WJ48**, 10 m (MU^ALICA–MILANOVIJ, 1990: 22.05.–05.06.1987, traps, MU^ALICA leg.: 1 ex.; **ibid.**, 19.06.–03.07.1987: 4 ex.)
2. **Gornje Ceranje, WJ49**, 200 m (MU^ALICA–MILANOVIJ, 1990: Ceranje Gornje, 25.05.–08.06.1987, traps, MU^ALICA leg.: 8 ex.; **ibid.**, 03.–17.08.1987: 3 ex.)
3. **Jasenak, WL00**, 600 m (LENDL, 1894, sub *Oligolophus palpinalis*, 11.1887); **ibid.** (DADAY DE DEÉS, 1896, sub *O. palpinalis*, ex collectione A. LENDL)
4. **Podsused, WL67**, 130 m, Zagreb (LENDL, 1894, sub *O. palpinalis*, 11.1887); **ibid.** (DADAY DE DEÉS, 1896, sub *O. palpinalis*, ex coll. A. LENDL)

**Collection record**

1. **Dugo selo** near Zagreb, **WL97**, 110 m, *Fagetum*, 14.05.1968, MARTENS *et al.* leg.: 6 juv. (JM 840)

*Zachaeus crista* (Brullé, 1832); Fig. 1–32

- **Croatia** (HAD@I, 1973b, sub *Zacheus* (*Z.*) *crista*)
  - **Dalmatia** (DOLESCHAL, 1852, sub *Zacheus mordax* and sub *Ischyropsalis redtenbacheri* – cf. THALER & GRUBER, 2003; GASPERINI, 1891, 1892, sub *Egaenus mordax* = *Zacheus mordax*, in: DOLESCHAL, 1852; ROEWER, 1914, sub *I. redtenbacheri*)
1. **Valpovo, BR35**, 90 m, 04.06.1905, BABI] det. sub *Metaphalangium propinquum* = *Phalangium propinquum*. 1 f (rev. TN 721/1984)

**Collection records**

- **Dalmatia**, ROEWER det.: 2 mm, 2 ff (NHMW 4133)
1. **Lipovljani, XL52**, 140 m, 13.–14.06.1969, BAUER leg.: 1 m, 4 ff, 1 juv. (NHMW 4140)

*Egaenus convexus* (C. L. Koch, 1835); Fig. 1–33

- **Croatia** (ROEWER, 1912: pl. mm, ff, juv., Mus. Wien and Budapest; HAD@I, 1973b)
1. **Gospi], WK23**, 570 m (BABI], 1916, sub *E. tibialis* C. Koch: 2 mm, 1 f) = 1901: 2 mm (rev. TN 713/1984)
  2. **Kvarte, WK24**, Peru{i}, 577 m (BABI], 1916, sub *E. tibialis*, 07.1903: 1 m) = 26.07.1903 (rev. TN 710/1984)
  3. **Plitvice, WK46**, 677 m (BABI], 1916, sub *E. tibialis*, 08.1902: 1 m) = 27.8.1902: 1 f (rev. TN 715/1984)

4. **Oki** castle, **WL56**, Samobor, 400 m (BABIJ, 1916, sub *E. tibialis*, 05.1905) = 21.05.1905: 1 f (rev. TN 712/1984)
5. **Zapre(i)**, **WL67**, 140 m, near the Lu`nica brook (BABIJ, 1916, sub *E. tibialis*, 06.1900: 1 f)
6. **Adolfovac Mt.**, **WL77**, 600 m, Zagreb (BABIJ, 1916, sub *E. tibialis*, 06.1905: 1 f; **ibid.** (BABIJ, 1916, sub *E. tibialis*, 05.1905: 1 f) = 30.05.1901: 1 f (rev. TN 716/1984)
7. **Zagreb**, **WL77**, 120 m (BABIJ, 1916, sub *E. tibialis*, 05.1903: 1 m, 1 f) = 1 m (rev. TN 709/1984); 10.5.1905: 1 f (rev. TN 711/1984)
8. **Cesarsko brdo**, **WM05**, ca 500 m (RUCNER & RUCNER, 1971: Cesargradska gora, *Quercus-Carpinetum croaticum* Horv. 1937, 06.06.1964, HAD@I det.: 3 ex.)
9. **Vinkovci**, **CR11**, 90 m (LENDL, 1894: Vinkovce (Slavonia), sub *E. maximus*: 1 m, 1 f; DADAY DE DEÉS, 1896: Vinkovce, sub *E. maximus* ROEWER, 1911, 1912: Slavonien (Vinkovce): 2 (m + f) – Mus. Budapest, vidi **type**)

#### Collection records

- the is land of **Krk**, REITTER leg.: Veglia, STEINDACHER don. 04.1882; (?KOELBEL det. sub »*Ischyropsalis hellwigii* C. Koch«...?) ROEWER rev.: 1 m, 2 juv. (NHMW 3838)
- 1. **Ogulin – Josipdol**, **WL11**, 330 m, MANN leg.: Josefsthal, 1866, ROEWER det.: 2 mm, 1 f (NHMW 3840)
- 2. **Medvednica Mt.**, **WL78**, 800 m, Zagreba-ka gora, Zagreb, 04.06.1905, BABIJ det. sub *E. tibialis*: 1 f (rev. TN 714/1984)
- 3. **Pro(}ansko jezero** lake, Plitvi-ka jezera, **WK46**, 677 m, STURANY leg., don., 23.02.1895, KOELBEL det. sub *Ischyropsalidae?*, ROEWER det.: 2 mm (NHMW 3841)
- 4. ca **15 km SE Zagreb**, **WL86**, 110 m, flood-woodland, sieve, 15.10.1966, GRUBER leg.: 5 juv. (NHMW 3846)
- 5. **Lipovljani**, **XL52**, 140 m, 13.–14.06.1969, BAUER leg.: 6 mm, 3 ff (NHMW 3850)
- 6. 5 km E **Slavonski Brod**, **BR10**, 90 m, pitfall traps, 15.09.–14.10.1966, plain, relatively dry *Quercus-Carpinus* GRUBER leg.: 44 juv. (NHMW 3847)
- 7. ca 15 km E@**upanja**, **CQ19**, 80 m, Sava river-lowland, flood-woodland, pitfall traps, 15.09.–14.10.1966, GRUBER leg., det.: 4 juv. (NHMW 3848)

HAD@I (1936) did not mention this species in relation to the island of Krk in this work, as was cited by MARTENS (1978).

#### Uncertain citation

1. □ **Cesarsko brdo**, **WM05**, ca 500 m (RUCNER & RUCNER, 1971: Cesargradska gora, *Quercus-Carpinetum croaticum* Horv. 1937, 18.05.1964: 1 ex.; MARTENS, 1978) – Note: very probably a melanistic specimen of *E. convexus*, as is familiar from the neighbouring region of Slovenia.

*Oligolophus tridens* (C. L. Koch, 1836); Fig. 1–34

- **Croatia** (HAD@I, 1973b, also sub *Odiellus gallicus* (Simon, 1879))

1. **Karin, WJ48**, 10 m (MU<sup>ALICA</sup>-MILANOVIJ, 1990: 08.–22.05.1987, traps, MU<sup>ALICA</sup> leg.: 1 ex.; **ibid.**, 17.–31.07.1987: 49 ex.)
2. **Gornje Ceranje, WJ49**, 200 m (MU<sup>ALICA</sup>-MILANOVIJ, 1990: Ceranje Gornje, sub *O. tridenst*: 25.05.–08.06.1987, traps, MU<sup>ALICA</sup> leg.: 2 ex.)
3. **Zagreb, WL77**, 120 m (ROEWER, 1957: 1 m – RII/479/9)

#### Collection records

1. **^aglin, VL32**, Slavonski Brod, 90 m, 12.10.1986, SIVEC, HORVAT leg.: 1 f (TN 1110/1998)
2. **^edanj, VL93**, 240 m, Brod na Kupi, 12.04.1984, SIVEC leg.: 1 m (TN 1182/1998); **ibid.**, 12.09.1987, HORVAT, SIVEC leg.: 7 mm, 3 ff (TN 1233/1998)
3. **Golik, VL93**, 230 m, Brod na Kupi, 12.09.1987, HORVAT, SIVEC leg.: 1 m, 2 ff (TN 1149/1998)
4. **Gornja Dobra, VL93**, 500 m, Delnice, 12.10.1984, SIVEC leg.: 1 f (TN 1189/1998)
5. **Pakrac, VL83**, 180 m, Psunj Mt., 05.10.1987, SIVEC, HORVAT leg.: 4 mm, 1 f (TN 1160/1998)
6. **Rozga, WL59**, 160 m, 20.03.1962, RUCNER leg., HAD<sup>®</sup> det. sub *Lacinius* aff. *gallicus* 1 f (rev. TN 114/1985), microscopic preparation
7. **Jankovac, YL03**, 500 m, Papuk Mt., 13.10.1986, SIVEC, HORVAT leg.: 3 mm, 5 ff (TN 1093/1998); **ibid.**, 06.07.1989, HORVAT leg.: 1 juv. (TN 1153/1998)
8. **Koprivna, XL92**, 280 m, De`evci, Psunj, 340 m, 20.10.1990, SIVEC, HORVAT leg.: 1 f (TN 1180/1998)

*Odiellus gallicus* is the synonym of *Odiellus troguloides* (Lucas, 1847), but it is improbable that this western European species lives in Croatia. Under *O. gallicus* HAD<sup>®</sup> (1973b) cited *Oligolophus tridens*.

#### *Lacinius horridus* (Panzer, 1794); Fig. 1–35

- **Dalmatia** (DOLESCHAL, 1852, sub *Acanholophus horridus*; GASPERINI, 1891, 1892: *Lacinius horridus* (= *A. horridus*); ROEWER, 1957: 8 ex. (mm, ff) –RI/ 10/1230)
  1. **Bakar, VL61**, 10 m (BABIJ, 1916, sub *A. hispidus*, 10.year?: 1 f)
  2. **Benkovac, WJ47**, 180 m (MU<sup>ALICA</sup>-MILANOVIJ, 1990: 08.–22.06.1987, pitfall traps, MU<sup>ALICA</sup> leg.: 1 ex.); **ibid.**, 03.–17.08.1987: 1 ex.)
  3. **Gornje Ceranje, WJ49**, 200 m (MU<sup>ALICA</sup>-MILANOVIJ, 1990: Ceranje Gornje, 25.05.–08.06.1987, pitfall traps, MU<sup>ALICA</sup> leg.: 2 ex.; **ibid.**, 20.07.–03.08.1987: 2 ex.; **ibid.**, 31.08.–14.09.1987: 15 ex.; **ibid.**, 14.–28.09.1987: 2 ex.)
  4. **Topoluža, WK27**, Doljani, ca 800–1000 m (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 17.09.1961: 2 ex., 18.09.1961: 2 ex.)
  5. **Bijeli vrh, WK36**, 1074 m, Vrhovine, *Fagetum croaticum abietosum* Horv. 1938, 12.10.1961: 3 ex.
  6. **Crni vrh, WK36**, 850 m, Vrhovine (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 19.07.1961: 4 ex.)



7. **Kriva Draga, WK36**, ca 850 m, Donji Babin potok (RUCNER & RUCNER, 1971, *Piceetum dolomiticum* Horv. 1958, 13.09.1961: 1 ex.)
8. **Orlov-i}, WK36**, ca 800 m, Vrhovine (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 18.07.1961: 4 ex.)
9. **Ko`ino, XJ18**, 70 m (MU<sup>ALICA</sup>-MILANOVI], 1990: 17.-31.05.1987, pitfall traps MU<sup>ALICA</sup> leg.: 1 ex.; **ibid.**, 26.07.-09.08.1987: 4 ex.; **ibid.**, 23.08.-06.09.1987: 15 ex.; **ibid.**, 19.06.-3.07.1987: 4 ex.; **ibid.**, 17.-31.07.1987: 1 ex.; **ibid.**, 14.-28.08.1987: 4 ex.; **ibid.**, 28.08.-11.09.1987: 18 ex.)
10. **Split, XJ11, XJ21**, 10 m (GASPERINI, 1891, 1892, sub *A. hispidus*; BABI], 1916, sub *A. hispidus*; 10.year?: 2 mm, 1 f, 3 juv.)

#### Collection records

- the island of **Rab**, 08.1980, STEINER leg. don.: Kallifront, Steineichenwald (A.N. 1981. XV.): 2 juv. (NHMW 9156)
1. **Rovinj, UK99**, 10 m, 09.1960, SKET leg.: 1 f (TN 109/1981)
  2. **Limski zaljev, UK99**, 10 m, 09.1972, PRETZMANN leg.: 2 mm, 1 f (NHMW 5392)
  3. **Umag, UL83**, 10 m, 08.08.1963, BILEK leg.? (Strad): 4 juv. (NHMW 5391)
  4. **Omi{alj, VL60** 10 m, the is land of Krk, PRETZMANN leg.: 2 mm (NHMW 5393)
  5. **Soline, VL70**, 10 m, the island of Krk, 22.08.1964, *Carpinetum orientalis croaticum* 1 f, 1 f juv. (TN 612/1983)
  6. **Biograd, WJ36**, 10 m, STURANY leg., 1891: Zara vecchia, ROEWER det.: 1 f, 2 juv. (NHMW 5401)
  7. **Velika Paklenica, WK30**, 200 m, 80-424, sub *L. h. bulgaricus*, GRUBER rev.: 1 f (NHMW)
  8. below **Dugi do, WK36**, ca 800 m, Vrhovine, 02.10.1961, RUCNER leg.: Dugi dol, HAD@I det.: 1 m, 1 f (TN 77/1983), microscopic preparation
  9. **Sv. Ilija Mt., XH76** 961 m, Orebi}, Pelje{ac pen in sula, 24.05.1977, NEMENTZ *et al.* leg.: Mte. Vipero (A.N. 1978, VIII.): 1 juv. (NHMW 6806); **ibid.**, *Pinetum*, floor: 2 juv. (NHMW 6807)
  10. **Derven, XJ24**, 443 m, 07.1979: 1 juv. (TN 78/1981)
  11. **Dubrovnik, BN12**, 10 m, macchia, SCHWEIGER leg., 23.-26.08.1957: 1 juv. (NHMW 9363)

HAD@I (1973b) erroneously identified *Lacinius labacensis* Had`i, 1971, /right: 1931/ as the synonym of *L. horridus*, instead of *L. dentiger*.

*Lacinius dentiger* (C. L. Koch, 1848); Fig. 1-36

1. near **Omi{alj, VL60**, 10 m, the island of Krk (HAD@I, 1936, sub *L. labacensis*, 12.09.1929: 1 subad.)
2. **Bakar, VL61**, 10 m (BABI], 1916, sub *Acantholophus dentiger*, 10.year?: 3 ff)



3. **Benkovac, WJ47**, 180 m (MU<sup>ALICA</sup>-MILANOVI], 1990: 08.-22.06.1987, pitfall traps, MU<sup>ALICA</sup> leg.: 1 ex.; **ibid.**, 21.08.-14.09.1987: 5 ex.)
4. **Karin, WJ48**, 10 m (MU<sup>ALICA</sup>-MILANOVI], 1990: 05.-19.06.1987, pitfall traps, MU<sup>ALICA</sup> leg.: 5 ex.)
5. **Gornje Ceranje, WJ49**, 200 m (MU<sup>ALICA</sup>-MILANOVI], 1990: Ceranje Gornje, 25.05.-08.06.1987, pitfall traps, MU<sup>ALICA</sup> leg.: 1 ex.; **ibid.**, 20.07.-03.08.1987: 1 ex.)
6. **Doljani, WK27**, Vrhovine (HAD<sup>i</sup>, 1973a, sub *L. chelodentatus* 16.09.1961, leg. D. RUCNER: pl. ex. /at least one m/; HAD<sup>i</sup>, 1973b, sub *L. chelodentatus* Had<sup>i</sup>, 1972, endem)
7. **Zagreb, WL77**, 120 m (BABI], 1916, sub *A. dentiger*: 1 f)
8. **Klanjec, WM05**, 170 m (BABI], 1916, sub *A. dentiger*: 1 juv.)
9. **Krapina, WM61**, 290 m (BABI], 1916, sub *A. dentiger*, 11.year?: 1 m, 1 f)
10. **Split XJ11, XJ21**, 10 m (GASPERINI, 1891, 1982, sub *A. annulipes*)

#### Collection records

1. **Veliki Zavi`an Mt., VK94**, 1677 m, 05.10.1995, VUKOVI] leg.: 1 juv. (TN 8/ 1996)
2. **abar, VL75**, 660 m, 12.10.1984, SIVEC leg.: 1 f (TN 1226/1998)
3. **Pa]ene, WJ97**, Knin, *Pinetum nigri*, 21.10.1980, DEELEMEN leg.: 1 f (Coll. DEELEMEN)
4. **Doljani, WK27**, Vrhovine, 18.09.1961, RUCNER leg., HAD<sup>i</sup> det. sub *L. chelodentatus*: 1 m (TN 82/1983, rev 2003), microscopic preparation; **ibid.**, HAD<sup>i</sup> det. sub *L. chelodentatus*: 1 f (TN 83/1983, rev. 2003), microscopic preparation
5. **Velika Paklenica, WK30**, 09.11.1997, SLANA, NOVAK leg.: 2 mm (TN 427/ 1998)
6. **Bijeli vrh Mt., WK36**, 1074 m, Vrhovine, 15.09.1961, RUCNER leg.: 1 m (TN 7/1983)
7. **Novi Vinodolski, VK89**, 16.07.1930, on walls near Kalvarija, HAD<sup>i</sup> leg. et det. sub *L. labacensis*: 3 juv. (rev. TN 137/1981)
8. **Meje – Marjan, XJ11**, Split, 0–178 m, 04.1933, under stones: 2 juv. (TN 288/ 1983, part.)
9. **Imotski – Zagvozd, XJ71**, Pas, *Pinetum nigri*, 22.10.1980, DEELEMEN leg.: 1 m (NHMW)
10. **Cavtat, BN21**, 07.–08.1936, under stones above the watering-place, HAD<sup>i</sup> leg., HAD<sup>i</sup> det. sub *Lacinius* sp. aff. *labacensis*: 1 juv. (TN 11/1983), microscopic preparation

*Lacinius ephippiatus* (C. L. Koch, 1835); Fig. 1–37

- **Croatia** (HAD<sup>i</sup>, 1973b)
  1. **Gornje Ceranje, WJ49**, 200 m (MU<sup>ALICA</sup>-MILANOVI], 1990: Ceranje Gornje, 25.05.-08.06.1987, pitfall traps, MU<sup>ALICA</sup> leg.: 4 ex.)

2. **Topoluža, WK27**, Doljani, ca 800–1000 m (RUCNER & RUCNER, 1971, *Helleboro-Pinetum* Horv. 1958, 18.09.1961: 9 ex.; HAD@I, 1973a: Doljani, sub *Odiellus rucneri*, oak and pine wood, RUCNER *et al.* leg.: pl. ex., Fig. 54)
3. **Bijeli vrh, WK36**, 1074 m, Vrhovine (RUCNER & RUCNER, 1971, sub *Odiellus* sp. nov., *Fagetum croaticum abietosum* Horv. 1938, 15.09.1961: 1 ex., 10.10.1961: 2 ex.; *ibid.*, 12.10.1961: 1 ex.; HAD@I, 1973a, Vrhovine, sub *O. rucneri*, oak and pine wood, RUCNER D. *et al.* leg.: pl. ex., Fig. 54; HAD@I, 1973b, endem)
4. **Boriža borik, WK36**, ca 800–1000 m, Donji Babin potok (RUCNER & RUCNER, 1971, sub *Odiellus* sp. nov., *Helleboro-Pinetum* Horv. 1958, 14.09.1961: 3 ex.)
5. **Kriva Draga, WK36**, ca 850 m, Donji Babin potok (RUCNER & RUCNER, 1971, sub *Odiellus* sp. nov., *Picetum dolomiticum* Horv. 1958, 13.09.1961: 2 ex.; HAD@I, 1973a, sub *O. rucneri*, oak and pine wood, RUCNER D. *et al.* leg.: pl. ex., Fig. 54)
6. **Orlov-i}, WK36**, ca 800 m, Vrhovine, ca 800–1000 m (RUCNER & RUCNER, 1971, sub *Odiellus* sp. nov., *Helleboro-Pinetum* Horv. 1958, 17.07.1961: 3 ex., 18.07. 1961: 2 ex.)
7. **Vukovo Selo, WL58**, 170 m (RUCNER & RUCNER, 1971, sub *Odiellus* sp. nov., *Quercu-Carpinetum croaticum* Horv. 1937, 22.07.1962: 2 ex.; HAD@I, 1973a, sub *O. rucneri*, RUCNER D. *et al.* leg.: pl. ex., Fig. 54; *ibid.*, sub *Lacinius* sp., 08.06. 1962: 2 ex.)
8. near **Rozga, WL59**, 160 m (RUCNER & RUCNER, 1971, sub *Odiellus* sp. nov., *Genisto elatae-Quercetum* Horv. 1937, 07.06.1962: 2 ex.; HAD@I, 1973a, sub *O. rucneri*, RUCNER *et al.* leg.: pl. ex., Fig. 54)
9. **Tu{kanac, Zagreb, WL77**, 120 m (BABIJ, 1916, sub *Acantholophus ephippiatus*, 07.year?: 1 f)
10. **Cesarsko brdo, WM05**, ca 500 m (RUCNER & RUCNER, 1971: Cesargradska gora, *Quercu-Carpinetum croaticum* Horv. 1937, 20.07.1962: 1 ex.)
11. **Klanjec, WM05**, 170 m (BABIJ, 1916, sub *A. ephippiatus*: 1 f)
12. **Ko`ino, XJ18**, 70 m (MU^ALICA–MILANOVIJ, 1990: 20.09.–04.10.1987, pitfall traps, MU^ALICA leg.: 6 ex.; 11.–25.09.1987: 3 ex.)

#### Collection records

1. **Mali Platak, VL62**, 1060 m, 20.08.1964, HAD@I det.: 1 f (TN 313/1983)
2. **Platak, VL62**, 1111 m, *Fagetum croaticum abietosum*, HAD@I det.: 1 m (TN 607/1983)
3. **Snje`nik Mt., VL62**, 1506 m, 18.8.1964, *Pinetum mughi croaticum*, HAD@I det.: 1 m, 1 f (TN 305/1983)
4. **Crni lug, VL72**, 730 m, Rebar Lazni, 18.09.1963: 1 f (TN 319/1983); *ibid.*, Irk, 17.07.1964, *Blechno Abietum*: 1 m (TN 311/1983)
5. **Mika{inovi}i, WL21**, 280 m, Tounj: 1 subad. m (TN 351/2002)
6. **Vukovo Selo, WL58**, 170 m, 21.7.1961, RUCNER leg., HAD@I det. sub *Odiellus rucneri*: 1 m, 1 f (rev. TN 118/1983), microscopic preparation
7. **Rozga, WL59**, 160 m, 20.03.1962, RUCNER leg., HAD@I det. sub *Lacinius* cf. *gallicus* m et nymphae: 1 m, 1 f (TN 91/1983, rev.2003), microscopic preparation

*Odiellus spinosus* (Bosc, 1792); Fig. 1–38

- **Croatia – Quarner** (HAD@I, 1936, sub *Papillophus crassus*, Figs. 1-7; HAD@I, 1973b, sub *P. crassus* Had`i, 1936, endem)
  - the island of **Krk** (MARTENS, 1978)
1. **Rovinj, UK99**, 10 m, Pahun, 27.09.1966, BOLE leg., HAD@I det. sub *P. crassus*: 1 m (TN 431/1983)
  2. **Rovinjsko selo, UK99**, 140 m (MARTENS, 1978: Rovinsko selo, v. HELVERSEN leg.)
  3. **U-ka Mt., VL31**, 1380 m (MARTENS, 1978, MARTENS leg.)
  4. in the **vicinity of Omi{alj, VL60**, 10 m, the island of Krk, near sea-level (HAD@I, 1936, sub *P. crassus*, Figs. 1-7, 12.09.1929: 2 mm, 1 f; KRAUS, 1959)
  5. **Bakar, VL61**, 10 m, near sea-level (BABI], 1916, sub *Acantholophus spinosus*, 10.year?: 1 m)
  6. **Karin, WJ48**, 10 m (MU^ALICA–MLANOVI], 1990: 28.08.–11.09.1987, pit fall traps, MU^ALICA leg.: 16 ex.; **ibid.**, 11.–25.09.1987: 75 ex.)
  7. **Gornje Ceranje, WJ49**, 200 m (MU^ALICA–MILANOVI], 1990: Ceranje Gor nje, 25.05.1987, pit fall traps, MU^ALICA leg.: 11.–25.05.1987: 6 ex.; **ibid.**, 08.–22.06.1987: 50 ex.; **ibid.**, 20.07.–03.08.1987: 7 ex.; **ibid.**, 31.08.–14.09.1987: 14 ex.; **ibid.**, 14.–28.09.1987: 100 ex.)
  8. **Ko`ino, XJ18**, 70 m (MU^ALICA–MILANOVI], 1990: 20.09.–04.10.1987, pitfall traps, MU^ALICA leg.: 3 ex.)

**Collection records**

1. **Rovinj, UK99**, 10 m, 24.09.1977: 2 mm, 14 ff (NHMW)
2. 3 km E of **Rovinjsko selo, UK99**, 140 m, 03.09.1967, HELVERSEN leg.: 1 m (JM 931)
3. **Umag, UL83**, the seashore, 08.08.1963: 1 juv. (NHMW)
4. **Sv. Petar u [umi, VL10**, 340 m, Pazin, 04.04.1994, GREGO leg.: 1 juv. (TN 447/2000)
5. **Mo{jeni-ka draga, VL21**, 10 m, BILEK leg. et don., 09.1971: 2 ff (NHMW)
6. **U-ka Mt., VL31** 1380 m, 14.07.1974, MARTENS leg.: 4 juv. (JM 1267)
7. **Omi{alj, VL60, 10 m**, the island of Krk, Figs. 1-7, 16.09.1929, HAD@I det. sub *P. crassus* g. n., sp. n. **type** for male: 1 m (rev. TN 123/1983), microscopic preparation; **ibid.**, HAD@I det. sub *O. aff. simplicipes*: 1 m (rev. TN 75/1981)
8. **O{tarijska vrata, WK13**, 928 m, the Velebit Mts., 03.07.1962 (A.N. 1979 LXXXIV.3: O{tarijsko sedlo): 1 juv. (NHMW)

*Odiellus lendli* (Sørensen, 1894); Fig. 1–38**Collection records**

1. **Rijeka Dubrova-ka, BN12**, 10 m, Dubrovnik, 12.09.1952, NIKOLI] leg., HAD@I det. sub *Lacinius horridus* 2 juv. (TN 680/1983)

*Mitopus morio* (Fabricius, 1779); Fig. 1–39

- **Croatia** (BABI], 1916, sub *Oligolophus moria* 1 m; HAD@I, 1973b, also sub *M. m. alpinus*)

- **Dalmatia** (ROEWER, 1912, sub *M. scaber*, pl. mm, ff – Hofmus. Wien); ROEWER 1923; HAD@I, 1973b: »/ex-/ Yugoslavia«
- **Medvednica** Mt., 800 m (BABI], 1916: Zagreba-ka gora, sub *O. alpinus* juv.); 2 juv. (rev. TN 743/1984)
- 1. **Suha ri-ina, VK78**, ca 50 m, the island of Krk, (MARCELLINO, 1974: Suha Ricina, isola di Veglia (Krk, YU), 26.10.1967, BRUNO leg. : 2 mm)
- 2. **Jezero, VL60**, 20 m, the island of Krk, (MARCELLINO, 1974: Yezero, 28.10. 1967, BRUNO leg.: 1 f)
- 3. **Zlobin, VL71**, 772 m (BABI], 1916, sub *O. palliatus*: 07. year?): 1 f = 17.07.1914 (rev. TN 675/1984)
- 4. **Bitoraj** Mt., **VL81**, 1385 m (BABI], 1916, sub *O. alpinus*: 06. year?: 1 ex.) = 28.06.1910: 1 juv. (rev. TN 748/1984)
- 5. **Lokve, VL82**, 723 m (BABI], 1916, sub *O. alpinus*: 06. and 07. year?: 3 ex.) = 26.06.1910; 2 juv. (rev. TN 744/1984); **ibid.**, 13.07.1903, juv.; 1 juv. (rev. TN 741/1984)
- 6. **Mrkvi{te, WK04**, [tirova-a, 1276 m (BABI], 1916: Stirova-a, sub *O. morio*: 07. year?: 1 f)
- 7. **[tirova-a, WK04**, 1102 m (BABI], 1916: Stirova-a, sub *O. palliatus*: 07. year?: 1 m, 6 ff) = 27.07.1912 (rev TN 678/1984); **ibid.**, BABI] det. sub *O. morio*; 1 f (rev. TN 754/1984)
- 8. **Vranjkova draga, WK05**, 1228 m (BABI], 1916: Franjkova draga, Kozjak, sub *O. alpinus*: 07. year?: 2 ex.) = 31.7.1912, juv.; 2 juv. (rev. TN 742/1984)
- 9. **Doci, WK13**, 800 m, 21.07.1911 (BABI], 1916, sub *O. palliatus*); 2 mm, 1 f (rev. TN 676/1984); (BABI], 1916: Rujina, Doci, the Velebit Mts., 1500 m, sub *O. palliatus*: 07. year?: 2 mm, 4 ff) = 29.07.1911; 3 ff (rev. TN 679/1984) – localities cited probably in accordance with a trip from the Rujina spring to Doci and from there to the summit of the Velebit Mts.
- 10. **Jadovno, WK13**, 864 m (BABI], 1916, sub *O. palliatus*: 08. year?: 1 f) (rev. TN 677/1984)
- 11. **Rujina** spring, **WK14**, 760 (BABI], 1916: Rujina, Doci, the Velebit Mts., 1500 m, sub *O. palliatus*: 07. year?: 2 mm, 4 ff) = 29.07.1911; 3 ff (rev. TN 679/1984) – localities cited probably in accordance with a voyage from the Rujina spring to Doci and from there to a summit of the Velebit Mts.
- 12. **Bijeli vrh** Mt., **WK36**, 1074 m, Vrhovine (RUCNER & RUCNER, 1971: *Fagetum croaticum abietosum* Horv. 1938, 12.10.1964: 1 ex.)
- 13. **Bori}a borik, WK36**, ca 800–1000 m, Donji Babin potok (RUCNER & RUCNER, 1971: *Helleboro-Pinetum* Horv. 1958, 14.09.1964: 1 ex.)
- 14. **Kriva Draga, WK36**, ca 850 m, Donji Babin potok (RUCNER & RUCNER, 1971: *Piceetum dolomiticum* Horv. 1958, 13.09.1961: 4 ex.)
- 15. **Sljeme, WL78**, 1035 m, the Medvednica Mts. (BABI], 1916, sub *O. moria*: 09. and 10. year?: 2 mm, 4 ff) = 10.09.1905: 1 f (rev. TN 752/1984); **ibid.**, 1907: 2 mm, 2 ff (rev. TN 755/1984); **ibid.**, 10.1916: 1 f (rev. TN 751/1984)

16. **Strahin{-ica** Mt., **WM61** 846 m (BABI], 1916, sub *O. morio*, rev. sub *M. morio*: 08. year?: 1 f) = 27.08.1914 (rev. TN 749/1984)
17. **Ivan{-ica** Mt., **WM80** 1061 m (BABI], 1916: Ivan-ica, sub *O. morio*: 07. year?: 1 m) = 26.07.1915; 1 f (rev. TN 753/1984)

#### Collection records

- **Croatia**, BABI] det. sub *O. morio*; 1 f (rev. TN 750/1984)
  - **Dalmatia** (ROSSI, 1846, sub *Opilio acanthopus*; CARRARA, 1846, sub *O. acanthopus*; GASPERINI, 1891, 1892, sub *Ph. acanthopus* = *O. acanthopus*)
1. **Veliki Zavi`an**, **VK94**, 1677 m, 05.10.1995, VUKOVI] leg.: 135 mm, 192 ff, 5 juv. (TN 4/1996)
  2. **Sv. Petar u [umi**, **VL10**, 340 m, Pazin, 04.04.1994, GREGO leg.: 1 f (TN 446/ 2000)
  3. **U-ka** Mt., **VL31** 1380 m, Istra, 14.07.1974, MARTENS leg.: 1 juv. (JM 1266)
  4. **Mali Platak**, **VL62**, 1060 m, 20.08.1964: 2 mm, 1 f (TN 314/1983)
  5. **Platak**, **VL62**, 1111 m, *Pagetum croaticum abietosum* : 3 mm, 2 ff (TN 606/1983)
  6. **Snje`nik** Mt., **VL63**, 1505 m, 18.08.1964, *Pinetum mughi croaticum*: 20 mm, 11 ff, 1 juv. (TN 306/1983); **ibid.**: 16 mm, 14 ff (TN 315/1983)
  7. **Crni lug**, **VL72**, Irk, 730 m, 17.07.1964, *Blechno-Abietum*: 5 mm, 4 ff, 8 juv. (TN 310/1983); **ibid.**, Rebar Lazni, 18.09.1963: 1 m, 2 ff (TN 317/1983)
  8. near **Smrekovac**, **VL73**, 14.07.1964, *Fagetum croaticum subalpinum* 17 juv. (TN 322/1983); **ibid.**: 1 m, 2 ff, 11 juv. (TN 610/1983)
  9. **Sveta gora**, **VL74**, 580 m, 19.6.1917, BABI] det. sub *O. alpinus* pulli; 9 juv. (rev. TN 745/1984)
  10. **Pakrac**, **VL83**, 180 m, Psunj Mt., 05.10.1987, SIVEC, HORVAT leg.: 1 f (TN 1159/1998)
  11. **Pro{ansko jezero** lake, Plitvi-ka jezera, **WK46**, 677 m, STURANY leg., 24.02.1895: 2 juv. (NHMW 4002)
  12. **Kameniti vrh** Mt., **WK47**, 934 m, Plitvice, 17.10.1965, BOLE, PRETNER leg.: 1 f (TN 177/1983)
  13. **Tnava**, **WL87**, Zagreb, Medvednica Mt., 14.05.1986: 1 juv. (TN 1240/1998)
  14. **Djedovica**, **XL95**, 514 m, Novo Zve-evo, Papuk Mt., 06.07.1989, HORVAT, KRY-[TUFEK leg.: 1 f (TN 1171/1998)
  15. **Svibovec**, **XM12**, 220 m, 10.08.1917, BABI]: Svibovac, det. sub *O. morio*; 1 f (rev. TN 756/1984)
  16. **Jankovac**, **YL03**, 500 m, Papuk Mt., 13.10.1986, SIVEC, HORVAT leg.: 1 f (TN 1092/1998)

»*Opilio acanthopus*« Rossi, 1846

In his de scription of *Opilio acanthopus*, Rossi (1846) wrote that this species is most closely related to the *O. serripes* that ROEWER (1923) later rec og nized as a syn onym of *Mitopus morio*. Accord ing to Rossi (ibid.), the most important difference between both spe cies was al leg edly the four-edged legs in *O. acanthopus*. Since this charac-

teristic has not been found within any phalangiid species, it was an obvious mistake. ROEWER (1923) wrote that the type of *O. acanthopus* could not be found and that the species could not be identified, but, according to the facts described, it seems that there is no remaining reason not to synonymize *O. acanthopus* with *M. moria*

*Gyas titanus* Simon, 1879; Fig. 1–40

- **Croatia** (HAD@I, 1973b, sub *G. annulatus*)
  - **Dalmatia** (ROEWER, 1957: 1 m, 1 f – RII/2807/52; GRUBER, 1965)
1. **Golik, VL93**, 230 m, Brod na Kupa (NOVAK *et al.*, 2000: 22.04.1987, HORVAT, SIVEC leg.: 1 juv. (TN 1175/1998))
  2. **Kiclove jame, VL93**, Skrad, 700 m (BABIJ, 1916, sub *G. annulatus*, 06.1914: 1 f; NOVAK *et al.*, 2000); **ibid**: Ritzlove jame (NOVAK *et al.*, 2000: 22.07.1914: 1 f (rev. TN 687/1984))
  3. **Slunj, WK49**, 260 m (MARTENS, 1978, DEELEMEN leg.) = **Gaovica pejina** cave, 06.07.1966, DEELEMEN leg.: 1 m (JM 1084)
  4. **Kralji-in zdenac, WL77**, 529 m, Zagreb (BABIJ, 1916, sub *G. annulatus*, 06.1915: 2 mm, 1 f; NOVAK *et al.*, 2000); **ibid**. (NOVAK *et al.*, 2000: 13.05.1917: 1 juv. (rev. TN 690/1984))
  5. **Sljeme, WL78**, 900 m (BABIJ, 1916, sub *G. annulatus*, 04.06.1903: 1 m, 1 f NOVAK *et al.*, 2000 (rev. TN 689/1984))
  6. **Lobor, WM81**, 280 m, Ivančica Mt. (NOVAK *et al.*, 2000: 02.05.1986, SIVEC leg.: 2 subad. (TN 1195/1998))
  7. **Strmac, XL82**, 320 m, Psunj Mt., Nova Gradiška (NOVAK *et al.*, 2000: 04.05.1985, SIVEC leg.: 1 subad. (TN 1193/1998))
  8. **Kamengrad, XL94**, 528 m, Papuk Mt., Slavenska Počega (NOVAK *et al.*, 2000: 3.05.1986, SIVEC leg.: 1 subad. (TN 1156/1998))
  9. small cave in **Jankovac, YL03**, 500 m, near Velika (BABIJ, 1916, sub *G. annulatus*, 21.07.1916: 19 mm; NOVAK *et al.*, 2000)

*Amilenus aurantiacus* (Simon, 1881); Fig. 1–41

- **Croatia** (HAD@I, 1973b, sub *Nelima aurantiaca*)
1. **Bijeli vrh** Mt., **WK36**, 1074 m, Vrhovine, (RUCNER & RUCNER, 1971, sub *N. aurantiaca*, *Fagetum croaticum abietosum* Horv. 1938, 20.04.1964: 1 ex., 29.05.1964: 6 ex., 15.09.1964: 5 ex., 10.10.1964: 4 ex.)
  2. **Boriša borik, WK36**, ca 800–1000 m, Donji Babin potok (RUCNER & RUCNER, 1971, sub *N. aurantiaca*, *Helleboro-Pinetum* Horv. 1958, 20.07.1964: 1 ex.)
  3. **Kriva Draga, WK36**, ca 850 m, Donji Babin potok (RUCNER & RUCNER, 1971, sub *N. aurantiaca*, *Piceetum dolomiticum* Horv. 1958, 21.07.1961: 1 ex., 13.09.1961: 2 ex., 11.05.1962: 1 ex.)
  4. **Medvedica** cave, **WL11**, Ogulin, 320 m (BABIJ, 1916: Medjedjica, sub *Liobunum* sp.? = *N. aurantiaca* 11.1911: 1 juv., Fig. 1; cf. PRETNER, 1973): 1 f juv. (rev. TN 672/1984)

5. **Ciganjka**, So{ice, **WL26** (BABI] , 1916, sub *Liobunum* sp.?, 23.04.1917); 1 m (rev. TN 671/1984)
6. **Ozalj**, **WL35**, 160 m (BABI] , 1916, sub. *Liobunum* sp.?, 10.1912: 1 juv.): 1 f juv. (rev. TN 670/1984)
7. **Vukovo Selo**, **WL58**, 170 m (RUCNER & RUCNER, 1971, HAD@I det. sub *N. aurantiaca*, *Quercu-Carpinetum croaticum* Horv. 1937, 08.06.1962: 4 ex.)

#### Collection records

1. **Crni lug**, **VL72**, Rebar Lazni, 730 m, 18.09.1963: 2 juv. (TN 318/1983)
2. **Risnjak Mt.**, **VL73** 1528 m, 05.1912, BABI] det. sub *L. rotundum?*: 1 m (rev. TN 732/1984)
3. near **Smrekovac**, **VL73**, 24.8.1963, *Fagetum croaticum abietinosum*, HAD@I det. sub *N. aurantiaca* 2 ff; 2 juv. (rev. TN 621/1983)
4. **^abar**, **VL75**, 660 m, 12.10.1984, HORVAT, SIVEC leg.: 1 juv. (TN 1227/1998); **ibid.**, 02.05.1990: 1 m (TN 1181/1998)
5. **Golubinjak cave**, **VL82**, Lokve, 800 m, 06.06.1912, BABI] det. sub *L. rotundum?*; 1 m, 1 f (rev. TN 731/1984)
6. **^edanj**, **VL93**, 240 m, Brod na Kupi, 13.04.1984: 1 m subad. (TN 1128/1998); **ibid.**, 12.09.1987, HORVAT, SIVEC leg.: juv. (TN 1232/1998)
7. **Golik**, **VL93**, 230 m, Brod na Kupi, 12.09.1987, HORVAT, SIVEC leg.: 4 juv. (TN 1148/1998)
8. **Pustinja pe}ina cave**, **VL93**, 800 m, Delnice, 14.05.1912, BABI] det. sub *Liobunum rotundum?*: 1 m (rev. TN 730/1984)
9. **Ledenja-a u ]udinoj uvali cave**, **WK46**, 800 m, Veliki Javornik, 18.10.1965, PRETNER leg.: 1 f juv. (TN 240/1985); **ibid.**, 29.10.1965, HAD@I det. sub *N. aurantiaca*; 1 m juv., 1 f juv. (rev. TN 656/1983); **ibid.**, 29.10.1965: 1 f juv. (TN 172/1983)
10. **Me|e|a jama cave**, **WK47**, 650 m, Kameniti vrh Mt., 934 m, Plitvice, 17.10.1965, BOLE, PRETNER leg., HAD@I det. sub *N. aurantiaca*; 2 mm subad., 4 ff subad. (rev. TN 633/1983)
11. **Pe}ina kod Gvozdjenika cave**, **WK58**, Rakovica, 21.10.1965, HAD@I det. sub *N. aurantiaca*; 1 f subad. (rev. TN 626/1983)
12. **Ozaljska pe}ina cave**, **WL35**, 17.06.1917; BABI] : Ozalj, {pilja, det. sub *Liobunum* sp.?: dead and moulded on walls: 16 juv. (rev. TN 674/1984)
13. **Trnava**, **WL87**, 120 m, Zagreb, Medvednica Mt., 14.05.1986: 1 f (TN 1239/1998)
14. **Lobor**, **WM81**, 280 m, Ivan{-ica Mt., 02.05.1986: 1 m, 1 f (TN 1196/1998)

*Astrobunus laevipes* Canestrini, 1872; Fig. 1–42

#### Collection record

1. **Prevlaka**, **XL06**, 110 m, P 09, T-V; 30.08.1985: 1 m (TN 610/2002)



*Astrobunus dinaricus* Roewer, 1915; Fig. 1–42

- **vicinity of Rijeka** (ROEWER, 1915: Umgebung von Fiume: 15 (m f), Coll. ROEWER; ROEWER, 1923: 15 mm, ff **type** – Coll. ROEWER); KOLOSVÁRY, 1929; ROEWER, 1957: Umgebung von Fiume: 15 ex. (mm, ff) – 1 m **type** and **paratypes** – RI/11/1178; RACK, 1971: 192. *Astrobus dinaricus* ROEWER 1915, 137; Jugoslavien, bei Fiume, 2 **paratypes** (12); Fiume; HAD@I, 1973b)
  1. **Omišalj, VL60**, 10 m (HAD@I, 1936: un der stones, 20.09.1926: 3 ex., HAD@I leg.)
  2. **Gruda, BN31**, 80 m ([ILHAVÝ, 1936; KRATOCHVÍL, 1946)

**Observation record**

1. **Tovarnele, VK74**, 10 m, the island of Pag, 09.1996: 1 ex., SLANA, NOVAK vide

*Astrobus helleri* (Ausserer, 1867); Fig. 1–43

- **Croatia** (ROEWER, 1912, sub *A. croaticus* Lendl – non vidi, Tab. 3 Fig. 16; ROEWER, 1923, sub *A. croaticus* Sørensen, 1904: 1 m **type** Mus. Budimpe{ta}, 2 mm, coll. ROEWER; KOLOSVÁRY, 1929, sub *A. croaticus* Sørensen; ROEWER, 1957, sub *A. croaticus* Sørensen, 1894: 1 m, 1 f – RI/11/1203, and sub *A. pavesii* (Canestrini, 1872): 1 m – RII/2801/11; HAD@I, 1973b, sub *A. croaticus* Sørensen, 1894, endem, and sub? *A. pavesii*)
  1. **Jasenak, WL00**, 600 m (SØRENSEN, 1894: Jassenak, sub *A. croaticus* loc. typ., LENDL leg., Tab. 1 Fig. 2)
  2. **Kriva Draga, WK36**, ca 850 m, Donji Babin potok (RUCNER & RUCNER, 1971, sub *A. croaticus*, *Piceetum dolomiticum* Horv. 1958, 13.09.1961: 1 ex.)

**Collection records**

2. **Krivi dol, WK36**, ca 850 m, Vrhovine, Donji Babin potok, 13.09.1961, RUCNER leg., HAD@I det. sub *A. croaticus* Roewer: 1 f (TN 74/1983), mi cro scopic prep a ration
3. **Lepoglava, XL95**, 170 m, Ravna gora Mt., 30.05.1917, BABI] det.: 1 f (TN 727/1984)

\**Leiobunum rotundum* (Latreille, 1798)**Uncertain citations**

- □ *Dalmatia*, leg.?, ROEWER det., GRUBER rev.: 1 f (NHMW 3525)
  1. □ *Gornje Ceranje*, WJ49, 200 m (MU^ALICA–MILANOVI], 1990: Ceranje Gornje, 31.08.–14.09.1987, pit fall traps, MU^ALICA leg.: 1 ex.; *ibid.*, 14.–28.09.1987: 2 ex.)
  2. □ *Ko`ina* XJ18 (MU^ALICA–MILANOVI], 1990: 23.08.–06.09.1987, pitfall traps, MU^ALICA leg.: 2 ex.)

*Leiobunum rotundum* does not appear in the Mediterranean region (MARTENS, 1978), not even in the north ern Adri atic region in Slovenia (NOVAK & GRUBER, 2000), but, al though not yet re corded, it de fin i tively in hab its the Mura-, Drava- and Sava river plains of north west ern Croatia. The pub lished data for Dalmatia should be re vised.



*Liobunum rupestre* (Herbst, 1799); Fig. 1–44

1. **Skrad, VL93**, ca 700 m (BABI], 1916, sub *Liobunum rupestre*, 05.1905: 1 m)
2. **Plitvice, WK46**, 677 m (BABI], 1916, sub *Liobunum rupestre*, 08.1902: 1 juv.) = 27.07.1902 (rev. TN 717/1984 sub *L. cf. rupestre*)
3. **Klanjec, WM05**, 170 m (BABI], 1916, sub *Liobunum rupestre*, 08.1916: 2 mm) = 1904: 1 f (rev. TN 719/1984); **ibid.**, 24.08.1916: 1 m (rev. TN 707/1984)
4. **Krapina WM61**, 290 m (BABI], 1916, sub *Liobunum rupestre*, 08.1914: 1 m)
5. **Vilinska jama** cave (= Vilina jama, Volina- Volinjska jama), **WM61?** (JURINAC, 1886: »one hour away from Krapina«, sub *Liobunum religiosum*, 11.08.1885: 1 m, 1 f)
6. **Maksimova pe}ina** cave, Jankovac, **YL03**, 657 m (BABI], 1916, sub *Liobunum rupestre*)
7. **Kri`evci, XL19**, 140 m (DADAY DE DEÉS, 1896: Körös, sub *Liobunum glabrum*, on the river banks)

## Collection records

- **Croatia, BABI]** det.: f; 1 m (rev. TN 702/1984)
1. **Sveta gora, VL74**, 580 m, 19.06.1917, BABI] det. sub *O. alpinus* pulli; 1 juv. (rev. TN 747/1984, sub *L. cf. rupestre*)
  2. **Skrad, VL93**, 700 m, 01.09.1915, BABI] det. sub *Liobunum rupestre* 1 m (rev. TN 706/1984)
  3. **Bijeli vrh, WK36**, 1074 m, Vrhovine, 15.09.1961, RUCNER leg., HAD@I det.: 1 m (TN 24/1983), microscopic preparation
  4. **Ledenja-a u ]udinoj uvali** cave, **WK46**, Veliki Javornik, 18.10.1965, PRETNER leg., HAD@I det. sub *Liobunum*: 2 mm (TN 655/1983)
  5. **Kameniti vrh Mt., WK47**, 934 m, Plitvice, 17.10.1965, BOLE leg., HAD@I det.: 3 mm, 1 ff (TN 176/1983); **ibid.**, 17.11.1965, HAD@I det. sub *Liobunum*: 1 m, 1 f (rev. TN 94/1983), microscopic preparation
  6. **Medve|ak Mt., WK47**, 889 m, Plitvice, 24.10.1965, HAD@I det. sub *Liobunum*: 2 mm (rev. TN 293/1983)
  7. **Pe}ina pri Tr`iju (=Pe}ina kod mlina), WJ80**, Tr`i} Tounjski, beside the Mre`nica river, 07.1983: 13 juv. (TN 341/2002)
  8. **Kamenica Skradni-ka, WL30**, 260 m, beside the Rudnica brook, 05.1985: 5 mm, 2 ff, 2 subad. ff (TN 711/2002)
  9. near **Vrilo Rudnice, WL30**, 260 m, Kamenica Skradni-ka, 07.1987: 1 juv. (TN 347/2002)
  10. **Ozaljska spilja** cave, **WL35**, 17.06.1917, BABI] : Ozalj, {pilja, det. sub *Liobunum* sp.?: 1 f juv. (rev. TN 673/1984)
  11. **Kamengrad, XL94**, 528 m, Papuk Mt., beside the Orjava river, 06.07.1989, HORVAT, KRY[TUFEK leg.: 1 f juv. (TN 1242/1998)

*Nelima sempronii* Szalay, 1951; Fig. 1–45

1. **Vara`din, XM02**, 170 m (MARTENS, 1969, sub *N. semproni*: Vara{din, town park, 11.09.1966, GRUBER leg.: 2 mm; MARTENS, 1978, GRUBER leg.) – (JM 895)

### Uncertain citation

1. **Benkovac, WJ47**, 180 m (MU<sup>^</sup>ALICA–MILANOVIJ, 1990, sub *N. semproni*, 03.–17.08.1987, pitfall traps, MU<sup>^</sup>ALICA leg.: 3 ex.)

*Nelima narcisi* Novak et Slana, 2003; Fig. 1–45

1. **Marija na Krasu, UL83**, 80 m (NOVAK & SLANA, 2003: 27.02.1990, POTO<sup>^</sup>NIK leg.: 9 juv (TN 1287/1998)), **paratypes**
2. **Lovran, VL41**, 40 m (NOVAK & SLANA, 2003: pitfall traps, 27.01–25.04.1991., GASPARO leg.: 6 juv. (TN 439/2000)), **paratypes**

### Collection records

1. **Limski zaljev, UK99**, 10 m, 27.02.1990, POTO<sup>^</sup>NIK leg.: 1 juv. (TN 1297/1998)
2. **Kamenjak** cape, **VK15**, 10 m, woods, 20.–30.07.1999, DEVETAK leg.: 1 subad. (TN 28/2003)
3. **Nerezine, VK54**, 10 m, the island of Lo{inj, 17.06.2002, DEVETAK leg.: 2 subad. (TN 29/2003)

*Nelima troglodytes* Roewer, 1910; Fig. 1–46

- **Dinaric karst** (VANDEL, 1964: /ex-Yugoslav/ karst; RAMBLA & JUBERTHIE, 1994: /ex-Yugoslav/ karst)
  - **Croatia** (HAD@I, 1973b, eucaval)
  - **Dalmatia**, more caves (ROEWER, 1957: 9 ex. (mm, ff) – RII/5049/62; KARAMAN, 1995a; MTOV, 2000)
  - the island of **Kor-ula** (ROEWER, 1957: 1 m – RII/2874/51)
1. **Bazgova-a {pilja** cave, **XH29**, ca 4 km W of Nere`i{a, 380 m, the is land of Bra- (KRATOCHVÍL, 1946: Nerezi{e)
  2. **^injandra (= Pe)ina u ^ijandru** cave, **XH29**, NW of Nere`i{a, 380 m, the is-land of Bra- (KRATOCHVÍL, 1946: Nerezi{e)
  3. **Dobra jama** cave, **XH29**, ca 2 km NW of Nere`i{a, 380 m, the island of Bra- (KRATOCHVÍL, 1946: Nerezi{e)
  4. **Filipovi} jama** cave, **XH29**, ca 3 km NW of Nere`i{a, 380 m, the is land of Bra- (KRATOCHVÍL, 1946: Nerezi{e)
  5. **Kopa-ina, XH29**, near Donji Humac, 330 m, the island of Bra- (KRATOCHVÍL, 1946)
  6. **Rupa u ^injadru** cave, **XH29**, NW of Nere`i{a, 380 m, the is land of Bra- (KRATOCHVÍL, 1946: Nerezi{e)
  7. **Vodena jama** cave, **XH29**, 200 m, ca 3 km S of Supetar, the island of Bra- (KRATOCHVÍL, 1946)
  8. **Jama iza Gra-i{a** cave, **XH39**, 400 m, ca 0,5 km S of Pra`nica, the island of Bra- (KRATOCHVÍL, 1946: Pra`nice)
  9. **[pilja pod vrhom** cave, **XH39**, ca 2 km S of Pra`nica, SW of Klinova glava (462 m), the island of Bra- (KRATOCHVÍL, 1946: Pra`nice)

10. **Jama za Mahrincom** cave, **XH49**, SE of Pu-i{a, 10 m, the island of Bra- (KRATOCHVÍL, 1946)
11. **[pilja kod samostana** cave, **XH49**, 200 m, above Murvica, ca 5 km E of Bol, the island of Bra- (KRATOCHVÍL, 1946)
12. **Tanki ratac** cave, **XH39**, 100 m, 2 km E of Skrip, the island of Bra- (KRATOCHVÍL, 1946: Skip)
13. **[pilja pri @abokiku** cave, **XH93**, 0,5 km N of Grabova glava (384 m), the island of Mljet (KRATOCHVÍL, 1946)
14. **Grzelova pe}ina** cave, **XJ15**, Maovice, SE slope of Mt. Lisina (1301 m) in the Svilaja Mts. (KRATOCHVÍL, 1946: Mt. Sovro)
15. **Milankova pe}ina** cave, **XJ15**, Maovice, ca 600 m, SE slope of Mt. Lisina (1301 m) in the Svilaja Mts. (KRATOCHVÍL, 1946: Mt. Sovro)
16. **Gospodska pe}ina** cave, **XJ16**, Vrlika, 200 m, near the N Cetina-stream (KRATOCHVÍL, 1946: Gosposka pe}ina; cf. PRETNER, 1973)
17. **Medi}a pe}ina** cave, **XJ16**, near the E Cetina-stream (KRATOCHVÍL, 1946)
18. **Vranku{a pe}ina** cave, **XJ16**, W slope of Kapnica (1539 m) in the Dinara Mts. (KRATOCHVÍL, 1946: Vilani)}
19. **Pe}ina kod Lokvi (= [pilja na vrhu brda)** cave, **XJ20**, SW of Supetar, the island of Bra- (KRATOCHVÍL, 1946)
20. **Mi{a Jovana pe}ina** cave, **XJ25**, Milankovi}evo selo near the Cetina river (KRATOCHVÍL, 1946)
21. **Pe}ina kod Milankovi}eva sela** cave, **XJ25**, 220 m, ca 2 km N of Dragovi}, Maljkovo (KRATOCHVÍL, 1946: Pe}ina kod Milkovi}eva)
22. **Velika pe}ina (= Kotlu{a)** cave, **XJ32**, 400 m, ca 50 m S of Kotlu{a, 4 km SW of Cetina (KRATOCHVÍL, 1946: Pe}ina pri Kotlu{i; cf. PRETNER, 1973)
23. **Vranja-a** cave, **XJ32**, 360 m, 1 km W of Kotlenice, Mt Mosor (GIROMETTA, 1914; HAD@I, 1932; KRATOCHVÍL, 1946)
24. **Kuli}a pe}ina** cave, **XJ33**, Lgu{ac (468 m), Gala, NW Sinjsko polje (KRATOCHVÍL, 1946)
25. **Pe}ina Stipanovi}** cave, **XJ34**, Rumin, 2 km W of Mt Kozoman (890 m) in the Dinara Mts. (KRATOCHVÍL, 1946: Stipani}eva pe}ina, Ru men; cf. PRETNER, 1973)
26. **Vodena pe}a** cave, **XJ35**, 400 m, 5 km NE of Rumin, the Dinara Mts. (KRATOCHVÍL, 1946: Vodena pe}ina)
27. **Pe}ina u Solunu** cave, **XJ71**, ^o-i}, N Imotski (KRATOCHVÍL, 1946)
28. **Movrica** cave, **YH03**, 240 m, 4 km N of Babino polje, the island of Mljet (KRATOCHVÍL, 1946)
29. **Osta{evica** cave, **YH03**, 300 m, ca 4,5 km N of Babino polje, the island of Mljet (KRATOCHVÍL, 1946)
30. **Velika {pilja** cave, **YH03**, 100 m, 1 km E of Blato, the island of Mljet (KRATOCHVÍL, 1946)
31. **\urovi} pe}ina** **BN21**, 160 m, Mo-i}i near Cavtat (KRATOCHVÍL, 1946)

32. [ipun {pilja, **BN21**, 20 m, Cavtat (KRATOCHVÍL, 1946)
33. Pe}ina u Ba-evom dolu, **BN31**, Gruda, 80 m (KRATOCHVÍL, 1946)
34. Jezerina pe}ina, **BN31**, near Kuna Konavoska, 720 m (KRATOCHVÍL, 1946)
35. [krabuljica {pilja cave, **BN31**, near Kuna Konavoska, 720 m (KRATOCHVÍL, 1946: Pe}ina kod »Mali Ora«)
36. Vilina pe}ina u Miloglavu, **BN31**, near Gruda, 80 m (KRATOCHVÍL, 1946)

#### Collection records

1. a cave near Panelim buk, **WJ59**, 200 m, Golubi}, Obrovac, 10.08.1988, TRILAR, ZIHERL leg.: 14 mm, 3 ff, 8 juv. (TN 9/1997)
2. Golubnja-a cave, **WJ78**, @egar, 540 m, PRETNER leg., 17.09.1964: 1 m, 3 ff (TN 130/1983)
3. Pe}ina kod mlina cave, **WJ87**, 400 m, Miljacka na Krki, 17.09.1964, PRETNER leg., HAD@I det.: 4 mm, 2 ff, 6 juv. (TN 128/1983)
4. Manita pe}ina cave, **WK30**, Velika Paklenica, 500 m, 19.05.1965: 2 juv. (TN 622/1983); *ibid.*, 11.09.1980, KREISSE leg. don. (A.N. 1980–IX: Manita pe-): 2 mm, 3 ff, 1 juv. (NHMW 8927); *ibid.*, 23.11.1983: 1 m, 1 f, 1 juv. (TN 97/2002)
5. Pe}ina Vilenja-a cave, **XH79**, 1150 m, Tu-epi, 01.09.1998, GASPARO leg.: 1 m, 1 juv. (TN 62/2000)
6. a cave between Kozarica – Blato, **XH93**, 100 m, the is land of Mljet, 29.05.1985: 1 m (TN 222/2002)
7. Gospodska pe}ina cave, **XJ16**, Vrlika, 200 m (cf. PRETNER, 1973), 15.09.1964, PRETNER leg., HAD@I det.: 4 mm, 1 f (TN 212/1983)
8. Pe}ina kod Dragovi}a cave, **XJ25**, Maljkovo, 15.09.1964, PRETNER leg.: 1 m, 9 ff, 5 subad. (TN 255/1983)
9. Osta{evica cave, **YH03**, 300 m, ca 4,5 km N of Babino polje, the is land of Mljet, 10.11.1963, PRETNER leg., HAD@I det.: 1 juv. (TN 685/1983)
10. Blatina (= Slatina), **YH13**, 40 m, near Sobra, the is land of Mljet, 02.05.1985: 1 m (TN 205/2002)
11. Izvor Omble (= source of the Ombla river), **BN12**, 10 m, Dubrovnik, 10.01.1953, A-516: 1 m, 1 f (TN 662/1983)

*Nelima doriae* (Canestrini, 1871); Fig. 1–47

- Croatia, Adriatic seashore (HAD@I, 1973a, sub *N. doriae dalmatina*, HAD@I leg.: pl.)
  - Istria (GRUBER, 1965)
1. Rovinj, **UK99**, 10 m (KOLOSVÁRY, 1938a, sub *N. Doriae Pinetum*, meadow near the railway station, 04. and 09.1937, GEBHARDT leg.: 2 ex.; KOLOSVÁRY, 1938b: Rovigno d'Istria, meadow near the railway station: 2 ex.; MARTENS, 1978, HELVERSEN leg., 02.09.1967: 4 mm, 4 ff)
  2. Pore-, **UL80**, 10 m (HAD@I, 1973b, sub *N. doriae dalmatina* loc. typ., endemite) = (TN 438/1983, rev. 2003) – Pore- was erroneously cited as the type locality in stead of Split. Since *N. doriae dalmatina* is the synonym of *N. doriae*, the error is of only academic interest.
  3. Split, **XJ11**, **XJ21**, 10 m (MARTENS, 1978, THALER leg.)

### Collection records

1. **Limski zaljev, UK99**, 10 m, 09.1972, PRETZMANN leg.: cf. *doriae*: 2 ff, 1 juv. (NHMW); **ibid.**: cf. *doriae*: 1 f (NHMW)
2. **Rovinj, UK99**, 10 m, 02.09.1967, HELVERSEN leg.: 4 mm, 5 ff (JM 898)
3. **Novigrad, UL81**, 10 m, old quarry, 27.02.1990, POTO^NIK leg.: 1 f, 2 juv. (TN 1288/1998)
4. **Bale, VK08**, 140 m, 27.02.1990, POTO^NIK leg.: 1 juv. (TN 1290/1998)
5. **Kamenjak, VK15**, 10 m, Premantura, 07.1988, VELKOVHR leg.: 1 m (TN 27/1995)
6. **Sv. Antun, VK92**, 20 m, Stara Novalja, the island of Pag, 08.11.1997, SLANA, NOVAK leg.: 1 m (TN 428/1998)
7. **Opatija, VL41**, 10 m, 18.month?1966, PANI] leg., *Juncetum* 3 mm, 2 ff (NHMW)
8. **Split, XJ11**, 10 m, Split, Meje – Marjan, 04.1933, under stones, HAD@I leg.: 1 f, 6 juv. (TN 287/1983, rev. 2003); **ibid.**, Meje, Easter 1931, HAD@I leg. et det.: *N. doriae* 1 m (rev. TN 845/2003); **ibid.**, Marjan, Easter 1931, gar dens near the sea, HAD@I leg. et det. sub *N. doriae dalmatina*; **type** for the female, microscopic preparation: 1 f (rev. TN 122/1985); **ibid.**, **type** for the male, microscopic preparation: 1 m (rev. TN 161/1985); **ibid.**, between stones, HAD@I leg. et det.: *N. doriae dalmatina*; microscopic preparation, the penis absent: 1 m (rev. TN 846/2003)

### Erroneous citation

□ *Nelima silvatica* (Simon, 1879)

- □ *Croatia* (HAD@I, 1973b)
- 1. □ *Rovinj, UK99* (KOLOSVÁRY, 1938a: Rovigno d'Istria, sub *N. silvatica*, *Pinetum*, stone walls behind the railway station, the bay near the hospital, *Pinetum* near the church, 04. and 09.1937, GEBHARDT leg.: 6 ex.)
- 2. □ *Ragusa Novi Kaftel, XJ12* (ROEWER, 1957: Ragusa, 1 f RII/2875/52)

*Nelima silvatica* is a western European species. In Slovenia, the hygrophilous *N. sempronii* has generally been considered under this name by HAD@I (NOVAK & GRUBER, 2000), but along the Croatian coast the citations most probably refer to the xerophilous *N. doriae*, or to *N. narcisi*.

### Incertae sedis

*Metaphalangium cirtanum* was claimed by BABI] (1916, sub *Phalangium propinquum* 06.1905) for *Valpovo, BR35*. Since this is a Mediterranean species (MARTENS, 1978), BABI] most probably found a spiny *Phalangium opilio* or maybe a *Zachaeus crista* specimen.

Under the names *Liobunum opilio* L. and *L. saxatile*, DADAY DE DEÉS (1896) cited as the source location: *Mostarje* (= a part of *Karlovac*), *WL43*. Both taxa depend either to *Phalangium opilio* or to an *Opilio* species.

Probably, LENDL (1894: Jassenak, sub *Phalangium dentatum* (?), 10.1887) and DADAY DE DEÉS (1896: Jassenak, sub *Liobunum dentatum*) mentioned *Lacinius dentiger* for *Jassenak*, WLOO.

Maybe KOLOSVÁRY (1938a: Rovigno d'Istria, sub *M. scaber*, staircase to Monte Molini; *Pinetum*; *Olea* grove, KOLOSVÁRY, GEBHARDT leg., 04. and 09.1937: 10 ex.) cited *Rovinj*, UK99 as the source location for *Mitopus morio*, but some other habitually similar species (e.g. *Metaphalangium cirtanum*) could have been claimed under this name.

*Nelima* sp. was noted in *Kriva Draga*, WK36, ca 850 m, Donji Babin potok (RUCNER & RUCNER, 1971, *Piceetum dolomiticum* Horv. 1958, 13.09.1961: 1 ex.), but the specimen most probably belonged to *A. aurantiacus* or to *L. rupestre*.

## DISCUSSION

Knowledge about the harvestmen in Croatia is incomplete because of three main reasons: unsystematic and unequal collection in the country, taxonomic difficulties in some taxa including erroneous determinations, and the erroneous and confusing locality citations of some authors.

The opilionids of Croatia have only exceptionally been systematically investigated. The first such review was made by BABIĆ (1916), collecting in the vicinity of Zagreb and on his journeys to the Gorski Kotar mountain region, Mt Velebit and adjacent regions. Subsequently, HADŽIĆ (1930, 1936) intensively investigated the opilionids of the islands of Krk and Kornati. MUHALIĆ-MILANOVIĆ (1990) collected a series of harvestmen on the Ravni Kotari region in the vicinity of Zadar by pitfall trapping. Other data refer mostly to material collected occasionally during trips. As a consequence, most source locations are concentrated in the coastal and in the Dinaric parts of Croatia, which are most attractive for tourist travel. In some regions, e.g. in the Banovina, Moslavina, Podravina (the Drava river lowland) and Slavonija (the Sava river lowland), none or only a few samples have been collected.

The second group of problems concerns the poor level of taxonomic knowledge about some taxa of the living in Croatia. Among these, three groups are most important. First, the validity of the peltonychiid species from the nominal genera *Travunia*, *Dinaria* and *Abasola* in the middle Balkans requires a thorough revision of the group based on their genital morphology. Many synonyms can be expected here. Second, the similar case of numerous nominal *Paranemastoma* species must be revised according to their genital morphology, a process started by KARAMAN (1995a), which will also undoubtedly reduce the number of species. The third major taxonomic problem is the revision of the *Trogulus* species, especially those from the groups *T. nepaiformis* and *T. tricarinatus*. Further errors involve inadequate determinations. Some recurring problems are caused by HADŽIĆ'S (1973a) insufficient and inconsistent descriptions of a few dozen opilionid species from the middle Balkans and Slovenia. More material is needed to revise the status of these nominal taxa.

The third group of problems comprises confusing and misleading locality citations. Some authors (e.g. ABSOLON) used to declare some Montenegrin and Herze-

govinian locales to be a part of southern Dalmatia. As for ROEWER, many critical papers have dealt with his errors and evasions regarding his citation of false localities, and garbled and false locality names (see references and comments in NOVAK & GRUBER, 2000). HADŽI (1973b) uncritically used these citations, thus compounding the zoogeographical confusion. Further errors were caused by the use of the names of museum-towns in place of the source localities. In this region, the name »Zagreb« is most frequently misused in this way. Besides, in the last hundred years, the names of some places have changed, and yet more mistakes occurred during printing.

Nevertheless, one can estimate that the majority of harvestman species in Croatia have been found, and that any incompleteness is mostly related to biogeographic distribution. As for the number of species, some further ones are expected for the fauna of Croatia in the mountainous regions bordering Montenegro, and Bosnia and Herzegovina. There is also a limited chance that some species inhabiting the Danube lowlands [e. g. *Nemastoma lugubre* (Müller, 1776)] and the Carpathian Mts. [e. g. *Paranemastoma silli* (Herman, 1871)] live locally in northern Croatia. More over, the eventual discovery of new species cannot be ruled out. In this respect, high mountains, and soil and hypogean habitats are the most promising. In comparison to neighbouring countries, the Croatian harvestman fauna, consisting of at least 64 valid species and one subspecies, and more potentially presents species, is richer than that of Slovenia (63 species and one subspecies; NOVAK & GRUBER, 2000; NOVAK & SLANA, 2003), Austria (61 species; KOMPOSCH & GRUBER, 2004), much richer than that of Hungary (33 species; KOMPOSCH, 2002), and potentially richer than that of Serbia and Montenegro (66 species; KARAMAN, 1995b). Concerning the surrounding countries, the fauna of Bosnia and Herzegovina have not been yet systematically reviewed, but it is nonetheless less rich than the Croatian. In the recent overviews of Albania, and Bulgaria (MITOV, 2000, 2003), lower species numbers are cited, too. At the moment, the Croatian fauna is among the richest in the central Balkans.

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### **Index of names cited (synonyms between parentheses)**

- Abasola* 243, 244, 284  
 –?borisi 244  
 – hofferi 244  
 – trog lo dytes 233, 243, 244  
*(Absolonia)* 243  
 (– troglodytes) 243  
*(Acantholophus)* 270, 272, 273  
 (– annulipes) 271  
 (– dentiger) 270, 271  
 (– ephippiatus) 272  
 (– hispidus) 269, 270  
 (– horridus) 269  
 (– spinosus) 273  
*(acanthopus, Opilio)* 275, 276  
*(acanthopus, Phalangium)* 275  
*(acrospinosum, Nemastoma (Dromedostoma))* 247  
*(acrospinosum, Paranemastoma)* 248  
*(alpinus, Mitopus morio)* 273  
*(alpinus, Oligolophus)* 258, 274, 275, 279  
*Amilenus* 276  
 – aurantiacus 239, 276  
*Anelasmacephalus* 255  
 – cambridgei 255  
 – hadzii 236, 255  
*annulatus, Gyas* 276  
*(annulipes, Acantholophus)* 271  
*(anophthalma, Travunia)* 243  
*(anophthalmum, Scotolemon)* 243  
*(appendiculatum, Phalangium)* 264  
*aquaticus, Trogulus* 255  
*Astrobonus* 277, 278  
 (– croaticus) 278  
 – dinaricus 239, 278  
 – helleri 240, 278  
 – laevipes 239, 277  
 (– pavesii) 278  
*(aurantiaca, Nelima)* 276  
*aurantiacus, Amilenus* 239, 276  
*bicuspidatum, Paranemastoma* 247  
*bidentatum, Nemastoma* 245  
*bidentatum, Nemastoma bidentatum* 233, 245  
*(bidentatum, Nemastoma (Lugubrostoma))* 245  
*(bolei, Metadasylobus)* 260  
 ?borisi, *Abasola* 244  
*bosnica, Pyza* 234, 246  
*(bosnicum, Nemastoma (Lugubrostoma))* 246  
*(bosnicum, Nemastoma)* 246  
*bucephalus, Platybunus* 237, 262, 263  
*(bulgaricus, Lacinius horridus)* 270  
*cambridgei, Anelasmacephalus* 255  
*carinatum, Carinostoma* 234, 248, 249  
*(carinatum, Mitostoma (Carinostoma))* 248, 249  
*Carinostoma* 248, 249  
 – carinatum 234, 248, 249  
 – ornatum 249  
*carneluttii, Metaplatybunus* 237, 263  
*(Cerastoma)* 256  
 (– cornutum) 256  
*(chelodentatus, Lacinius)* 271  
*chrysomelas, Mitostoma* 235, 249  
*(chrysomelas, Nemastoma)* 249  
*cirtanum, Metaphalangium* 259, 283, 284  
*closanicus, Trogulus* 236, 254  
*convexus, Egaenus* 238, 267, 268  
*(corcyraeum, Nemastoma (Dromedostoma))* 248  
 ?corcyraeum, *Paranemastoma* 234, 248  
*coriziformis, Trogulus* 235, 255  
*(corniger, Platybunus)* 264, 265  
*(cornutum, Cerastoma)* 256  
*(crassus, Papillophus)* 273  
*crista, Zachaeus* 238, 267, 283  
*(crista, Zacheus)* 267  
*(crista, Zacheus (Zacheus))* 267  
*(croaticus, Astrobonus)* 278  
 (– duricorius) 242  
*(dalmatina, Nelima doriae)* 282, 283  
*(dalmatinum, Platylophus Hugerii)* 262  
*Dasylobus, graniferus* 237, 266

- (*de co rum*, *Mitostoma olgae*) 250  
 (*de co rum*, *Nemastoma Olgae*) 250  
 (*dentiger*, *Acantholophus*) 270, 271  
*dentiger*, *Lacinius* 238, 270, 284  
*dentigerum*, *Nemastoma* 234, 245, 246  
*dentipalpe*, *Histicostoma* 234, 248  
 (*dentipalpe*, *Nemastoma (Nemastoma)*) 248  
 (*dentipalpe*, *Nemastoma*) 248  
*Dicranolasma* 250, 251, 252  
 – *scabrum* 235, 250, 251, 252  
 – *opilionoides* 235, 251  
 – *verhoeffi* 235, 251  
 (*Dinaria*) 244, 284  
 (– *vjetrenicae*) 244  
*dinaricus*, *Astrobonus* 239, 278  
*dinaricus*, *Opilio* 237, 260  
*doriae*, *Nelima* 240, 282, 283  
*doriae dalmatina*, *Nelima* 282, 283  
 (*Doriae*, *Nelima*) 282  
*doriae*, *Scotolemon* 233, 244  
*duricorius duricorius*, *Siro* 233, 242  
*duricorius*, *Siro* 242  
*Egaenus* 267, 268  
 – *convexus* 238, 267, 268  
 (– *maximus*) 268  
 (– *mordax*) 267  
 (– *tibialis*) 267, 268  
 (*ephippiatus*, *Acantholophus*) 272  
*ephippiatus*, *Lacinius* 239, 271  
 (*Eudasylobus*) 260, 266  
 (– *georginae*) 266  
 (– *nicaeensis*) 266, 267  
 (– *rucnerianus*) 266  
*falcipenis*, *Trogulus* 235, 53, 255  
 (*gallicus*, *Lacinius*) 269, 272  
 (*gallicus*, *Odiellus*) 268  
 (*georginae*, *Eudasylobus*) 266  
 (*gigas*, *Nemastoma longipes*) 248  
 (*glabrum*, *Liobunum*) 279  
*graniferus*, *Dasylobus* 237, 266  
*Gyas* 276  
 – *titanus* 239, 276  
 – *annulatus* 276  
*hadzii*, *Anelasmacephalus* 236, 255  
*hadzii*, *Platybunus* 237, 263  
*Hadzinia* 250  
 – *karamani* 235, 250  
 (*Heegeri*, *Platilophus*) 262  
 (*heegeri*, *Platylophus*) 262  
 (*Heegeri*, *Platylophus*) 262  
*helleri*, *Astrobonus* 240, 278  
*hellwigi hellwigi*, *Ischyropsalis* 236, 256  
*hellwigi*, *Ischyropsalis* 256  
 (*helwigi*, *Ischyropsalis*) 256  
 (*helwigii*, *Ischyropsalis*) 268  
 (*heyrovskiyi*, *Siro*) 243  
*hirtus*, *Trogulus tricarinatus* 235, 252  
 (*hispidus*, *Acantholophus*) 269, 270  
*Histicostoma* 248  
 – *dentipalpe* 234, 248  
*hofferi*, *Abasola* 244  
*Holoscotolemon* 244  
 – *unicolor* 244  
 (*horridus*, *Acantholophus*) 269  
*horridus*, *Lacinius* 238, 269, 270, 273  
 (*insulare*, *Nemastoma (Dromedostoma)*) 247  
 (*insulare*, *Nemastoma*) 247  
*insularis*, *Lola* 233, 244  
 (*Hugeri dalmatinum*, *Platylophus*) 262  
*Ischyropsalis* 256, 267, 268  
 – *hellwigi* 256  
 – – *hellwigi* 236, 256  
 (– *hellwigii*) 268  
 (– *helwigi*) 256  
 – *muellneri* 256  
 (– *plicata*) 256  
 (– *redtenbacheri*) 267  
*jandai*, *Travunia* 233, 243  
 (*Jandai*, *Travunia*) 243, 244  
*karamani*, *Hadzinia* 235, 250  
 (*karamani*, *Nemastoma*) 250  
 (*kochi*, *Nemastoma (Nemastoma)*) 247  
*kochi*, *Paranemastoma* 247

- (*kochii*, *Nemastoma* (*Nemastoma*) *quadripunctatum*) 247
- (*kochii*, *Nemastoma* (*Nemastoma*)) 247
- (*kochii*, *Nemastoma quadripunctatum*) 247
- (*kratochvili*, *Mitostoma* (*Mitostoma*) *olgae*)
- (*kratochvili*, *Mitostoma olgae*) 250
- (*Kratochvili*, *Nemastoma Olgae*) 250
- (*kratochvili*, *Platybunus*) 263
- (*labacensis*, *Lacinius*) 270, 271
- Lacinius* 269–273, 284
- (– *chelodentatus*) 271
- *dentiger* 238, 270, 284
- *ephippiatus* 239, 271
- (– *gallicus*) 269, 272
- *horridus* 238, 269, 270, 273
- (– *horridus bulgaricus*) 270
- (– *labacensis*) 270, 271
- laevipes*, *Astrobum* 239, 277
- Leiobunum* 277, 278
- *rotundum* 277, 278
- *rupestre* 240, 279, 284
- lendli*, *Odiellus* 239, 273
- (*Liobunum*) 277–279
- (– *glabrum*) 279
- (– *parietinum*) 262
- (– *rotundum*) 277, 278
- (– *saxatile*) 283
- Lola* 244
- *insularis* 233, 244
- longipes*, *Paranemastoma* 234, 248
- Lophopilio* 267
- *palpinalis* 238, 267
- lugubre*, *Nemastoma* 245, 285
- (*lugubre*, *Nemastoma* (*Lugubrostoma*)) 245
- (*maximus*, *Egaenus*) 268
- Metadasylobus* 260
- (– *bolei*) 260
- Metaphalangium* 259, 283, 284
- *cirtanum* 259, 283, 284
- (– *propinquum*) 259, 267, 283
- Metaplatybunus* 263
- (– *strigosus*) 263
- *carneluttii* 237, 263
- minutus*, *Siro* 233, 242
- Mitopus* 273–275, 284
- *morio* 239, 273–275, 284
- (– *morio alpinus*) 273
- (– *scaber*) 274, 284
- Mitostoma* 248–250
- *chrysomelas* 235, 249
- *olgae* 235, 250
- (– *olgae*) 250
- (– *olgae decorum*) 250
- (– *olgae kratochvili*) 250
- (*Mitostoma* (*Carinostoma*)) 248, 249
- (– *carinatum*) 248, 249
- (*Mitostoma* (*Mitostoma*)) 249
- (– *olgae*) 250
- (– *olgae kratochvili*) 250
- (– *olgae olgae*) 250
- (– *ornatum*) 249
- (*moesiicum*, *Nemastoma* (*Lugubrostoma*)) 246
- ?*moesiicum*, *Paranemastoma* 247
- (*mordax*, *Egaenus*) 267
- (*mordax*, *Zacheus*) 267
- (*morio*, *Oligolophus*) 273–275
- morio*, *Mitopus* 239, 273–275, 284
- muellneri*, *Ischyropsalis* 256
- narcisi*, *Nelima* 240, 280, 283
- Nelima* 276, 279, 280, 282–284
- (– *aurantiaca*) 276
- *doriae* 240, 282, 283
- (– *dalmatina*) 282, 283
- (– *Doriae*) 282
- *narcisi* 240, 280, 283
- (– *semproni*) 279, 280
- *sempronii* 240, 279, 283
- *troglo dytes* 240, 280
- Nemastoma* 244–250, 285
- *bidentatum* 245
- *bidentatum* 233, 245
- *bidentatum sparsum* 234, 245, 246
- (– *bosnicum*) 246
- (– *chrysomelas*) 249

- *dentigerum* 234, 245, 246
- (– *dentipalpe*) 248
- (– *gigas longipes*) 248
- (– *insulare*) 247
- (– *karamani*) 250
- *lugubre* 245, 285
- (– *lugubre unicolor*) 245
- (– *Olgae*) 250
- (– *Olgae decorum*) 250
- (– *Olgae Kratochvili*) 250
- (– *Olgae Olgae*) 250
- (– *quadripunctatum*) 246–248
- (– *quadripunctatum bicuspidatum*) 247
- (– *quadripunctatum sillii*) 247
- (– *quadripunctatum kochii*) 247
- (– *Radewi*) 247
- (– *titaniacum*) 248
- *triste* 244–246
- (*Nemastoma (Dromedostoma)*) 246–248
- (– *acrospinosum*) 247
- (– *corcyraeum*) 248
- (– *insulare*) 247
- (– *strasseri*) 246
- (*Nemastoma (Lugubrostoma)*) 44–46
- (– *bidentatum*) 245
- (– *bosnicum*) 246
- (– *lugubre*) 245
- (– *lugubre unicolor*) 245
- (– *moesiacum*) 246
- (– *triste*) 244, 245
- (– *unicolor lugubre*) 245
- (*Nemastoma (Nemastoma)*) 247, 248
- (– *dentipalpe*) 248
- (– *quadripunctatum kochii*) 247
- (– *tenuis*) 248
- (– *sillii*) 247
- (– *kochi*) 247
- (– *kochii*) 247
- nepaeformis*, *Trogulus* 253, 255, 284
- (*nicaeense*, *Phalangium (Dasylobus)*) 266
- (*nicaeensis*, *Eudasylobus*) 266, 267
- (*noctifilus*, *Siro*) 243
- noctiphilus*, *Siro* 233, 243
- Odiellus* 268, 269, 272, 173
- (– *gallicus*) 268
- *lendli* 239, 273
- (– *simplicipes*) 273
- (– *rucneri*) 272
- *spinosus* 239, 273
- *troguloides* 269
- olgae*, *Mitostoma* 235, 250
- (*olgae*, *Mitostoma (Mitostoma) olgae*) 250
- (*olgae*, *Mitostoma (Mitostoma)*) 250
- (*olgae*, *Mitostoma olgae*) 250
- (*Olgae*, *Nemastoma Olgae*) 250
- (*Olgae*, *Nemastoma*) 250
- Oligolophus* 67–69, 73
- (– *alpinus*) 258, 274, 275, 279
- (– *morio*) 273–275
- (– *palliatus*) 274
- (– *palpinalis*) 267
- *tridens* 238, 268, 269
- (– *tridenst*) 269
- (*ornatum*, *Mitostoma (Mitostoma)*) 249
- Opilio* 259–262, 275, 283
- (– *acanthopus*) 275, 276
- *dinaricus* 237, 260
- *parietinus* 236, 259–261
- *ruzickai* 237, 261
- *saxatilis* 236, 260, 261
- (– *serripes*) 275
- *transversalis* 261
- opilio*, *Phalangium* 236, 256, 266, 283
- opilionoides*, *Dicranolasma* 235, 251
- ornatum*, *Carinostoma* 249
- (*palliatus*, *Oligolophus*) 274
- palpinalis*, *Lophopilio* 238, 267
- (*palpinalis*, *Oligolophus*) 267
- (*Papillophus*) 273
- (– *crassus*) 273
- Paranemastoma* 246, 248, 284, 285
- (– *acrospinosum*) 248
- *bicuspidatum* 247
- *corcyraeum* 234, 248



- *kochi* 247
- *longipes* 234, 248
- *quadripunctatum* 234, 246, 247
- ? *moesiacum* 247
- *radewi* 247
- *silli* 247
- *titaniacum* 248
- (*parietinum*, *Liobunum*) 262
- (*parietinum*, *Phalangium*) 259–262
- parietinus*, *Opilio* 236, 259–261
- Paropilio* 259
- (– *spinipes*) 259
- (*pavesii*, *Astrobus*) 278
- Phalangium* 256, 259–261, 264, 266, 267, 283, 284
- (– *acanthopus*) 275
- (– *appendiculatum*) 264
- *opilio* 236, 256, 266, 283
- (– *parietinum*) 259–262
- (– *propinquum*) 267, 283
- (– *saxatile*) 260
- (*Phalangium* (*Dasylobus*)) 266
- (– *nicaeense*) 266
- pinetorum*, *Platybunus* 262, 263
- Platybunus* 262–264
- *bucephalus* 237, 262, 263
- (– *corniger*) 264, 265
- *hadzii* 237, 263
- (– *kratochvili*) 263
- *pinetorum* 262, 263
- *spinosissimus* 237, 241, 263
- *strigosus* 263
- (– *triangularis*) 264
- (*Platylophus*) 262
- (– *heegeri*) 262
- (– *Heegeri*) 262
- (– *Hugeri dalmatinum*) 262
- (– *strigosus*) 263
- (*plicata*, *Ischyropsalis*) 256
- (*propinquum*, *Metaphalangium*) 259, 267
- (*propinquum*, *Phalangium*) 267, 284
- Pyza* 246
- *bosnica* 234, 246
- (*quadripunctatum bicuspidatum*, *Nemastoma*) 247
- (*quadripunctatum*, *Nemastoma*) 246, 247
- quadripunctatum*, *Paranemastoma* 234, 246, 247
- (*Radewi*, *Nemastoma*) 247
- radewi*, *Paranemastoma* 247
- (*redtenbacheri*, *Ischyropsalis*) 267
- Rilaena* 264
- *triangularis* 237, 264
- (*rostratus*, *Trogulus*) 253
- rotundum*, *Leiobunum* 277, 278
- (*rotundum*, *Liobunum*) 277, 278
- (*rucneri*, *Odiellus*) 272
- (*rucnerianus*, *Eudasylobus*) 266
- (*rucnerianus*, *Zacheus* (*Dentizacheus*)) 266
- rupestre*, *Leiobunum* 240, 279, 284
- ruzickai*, *Opilio* 237, 261
- (*saxatile*, *Liobunum*) 283
- (*saxatile*, *Phalangium*) 260
- saxatilis*, *Opilio* 236, 260, 261
- (*scaber*, *Mitopus*) 274, 284
- (*scaber*, *Trogulus*) 252
- scabrum*, *Dicranolasma* 235, 250, 251, 252
- Scotolemon* 243, 244
- (– *anophthalmum*) 243
- *doriae* 233, 244
- (*semproni*, *Nelima*) 279, 280
- sempronii*, *Nelima* 240, 279, 283
- (*serripes*, *Opilio*) 275
- setosissimus*, *Trogulus* 254
- silhavyi*, *Siro* 233, 242
- (*sillii*, *Nemastoma* (*Nemastoma*)) 247
- (*sillii*, *Nemastoma quadripunctatum*) 247
- silli*, *Paranemastoma* 247
- (*simplicipes*, *Odiellus*) 273
- Siro* 242, 243
- *duricorius* 242
- – *duricorius* 233, 242
- (– *heyrovskyi*) 243
- *minutus* 233, 242

- (– *noctifilus*) 243  
 – *noctiphilus* 233, 243  
 – *silhavyi* 233, 242  
 (– [*ilhavyi*]) 242  
 – *teyrovskiyi* 233, 243  
*sparsum*, *Nemastoma bidentatum* 234, 245, 246  
*(spinipes, Paropilio)* 259  
*spinosissimus*, *Platybunus* 237, 241, 263  
*(spinosus, Acantholophus)* 273  
*spinosus*, *Odiellus* 239, 273  
*squamatus*, *Trogulus* 236, 254  
*(strasseri, Nemastoma (Dromedostoma))* 246  
*(strigosus, Metaplatybunus)* 263  
*(strigosus, Platylophus)* 263  
 ([*ilhavyi, Siro*]) 242  
*(tenue, Nemastoma (Nemastoma))* 248  
*teyrovskiyi, Siro* 233, 243  
*(tibialis, Egaenus)* 267, 268  
*tingiformis, Trogulus* 236, 255  
*(titaniacum, Nemastoma)* 248  
*titaniacum, Paranemastoma* 248  
*titanus, Gyas* 239, 276  
*torosus, Trogulus* 235, 252  
*transversalis, Opilio* 261  
*Travunia* 284  
 (– *anophthalma*) 243  
 – *jandai* 233, 243  
 (– *Jandai*) 243, 244  
 – *trogodytes* 243  
 –? *vjetrenicae* 244  
*(triangularis, Platybunus)* 264  
*triangularis, Rilaena* 237, 264  
*tricarinatus, Trogulus* 252–255, 284  
*tridens, Oligolophus* 238, 268, 269  
*(tridenst, Oligolophus)* 269  
*triste, Nemastoma* 244–246  
*(triste, Nemastoma (Lugubrostoma))* 244, 245  
*(trogodytes, Abasola)* 233, 243, 244  
*(trogodytes, Absolonia)* 243  
*trogodytes, Nelima* 240, 280  
*(trogodytes, Travunia)* 243  
*troguloides, Odiellus* 269  
*Trogulus* 252–255, 284  
 – *aquaticus* 255  
 – *closanicus* 236, 254  
 – *coriziformis* 235, 255  
 – *falcipenis* 235, 253, 255  
 (– *hirta, tricarinatus*) 252  
 – *hirtus, tricarinatus* 252  
 – *nepaeformis* 253, 255, 284  
 (– *rostratus*) 253  
 (– *scaber*) 252  
 – *setosissimus* 254  
 – *squamatus* 236, 254  
 – *tingiformis* 236, 255  
 – *torosus* 235, 252  
 – *tricarinatus* gr. 252–255, 284  
 (– *tricarinatus hirta*)  
 – *tricarinatus hirtus* 235, 252  
*unicolor, Holoscotolemon* 244  
*(unicolor, Nemastoma lugubre)* 245  
*(unicolor, Nemastoma (Lugubrostoma) lugubre)*  
 245  
*verhoeffi, Dicranolasma* 235, 251  
*(vjetrenicae, Dinarica)* 244  
*vjetrenicae, Travunia* 244  
*Zachaeus* 267  
 – *crista* 238, 267, 283  
*(Zacheus)* 267  
 (– *crista*) 267  
 (– *mordax*) 267  
*(Zacheus (Dentizacheus))*  
 (– *rucnerianus*) 266  
*(Zacheus (Zacheus))* 267  
 (– *crista*) 267