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THREE NEW SPECIES OF *MIRIDAE* COLLECTED IN SICILY
(*Insecta*, *Heteroptera*)

RIASSUNTO

Tre nuove specie di Miridae raccolte in Sicilia — L'autore descrive e raffigura tre nuove specie della famiglia Miridae raccolte da lui stesso in Sicilia. La prima di queste, *Miris nebrodensis* n.sp. (Figg. 1-6, 15-21 e Tav. I), rinvenuta in alcune località montane della Sicilia settentrionale tra i 1.200 e i 1.500 m s.l.m. su *Acer campestre* L. e *Crataegus monogyna* Jacq., si distingue dalle congeneri *M. striatus* (L.), a diffusione euroanatolica, e *M. persicus* Reut., presente nella regione caucasica ed in Iran, per i seguenti caratteri diagnostici: colorazione rossa e nera, eunomia del pronoto come nelle Fig. 1-5, scutello interamente nero, cuneo con estremità nera. *Strongylocoris raimondoi* n.sp. (Figg. 22-25), raccolto in una radura del bosco di Ficuzza (PA) su *Elaeoselinum asclepium* Bert., appartiene al gruppo degli *Strongylocoris* interamente neri con riflessi metallici bluastri. Dalle altre specie dello stesso gruppo si distingue per le dimensioni ed i rapporti oltre che per la conformazione degli organi genitali, in particolare del paramero sinistro (Tab. II; Figg. 24 e 26a-b). *Campylomma vendicarina* n. sp. (Figg. 27-35), raccolta su *Juniperus oxycedrus* L. in due località costiere della Sicilia meridionale, tra le quali l'oasi naturalistica di Vendicari, è caratterizzata dalla colorazione generale molto scura, quasi nera, dai primi due articoli delle antenne neri, dalla forma della vescica fornita di un processo terminale dentato superiormente e da un rapporto fronte/occhio pari a 1.5 nel ♂ e 2.0 nella ♀.

SUMMARY

Three new species collected by the author in Sicily are described and illustrated. *Miris nebrodensis* n. sp. (Figs. 1-6, 15-21 and Plate I), living in the mountains of Northern Sicily on *Crataegus monogyna* Jacq., may be distinguished from the other *Miris* by the following characters: black and red coloration, patterns of pronotum as in Figs. 1-5, scutellum unicolorous black, cuneus with black

apex. *Strongylocoris raimondoi* n. sp. (Figs. 22-25) was collected in Central Sicily on *Elaeoselinum asclepium* Bert.; it belongs to the group of entirely black *Strongylocoris* and differs from the other species in the ocular index and in the shape of the left paramere (Tab. II; Figs. 24 and 26a-b). *Campylomma vendicarina* n. sp. (Figs. 27-35), found on *Juniperus oxycedrus* L. in Southern Sicily, is characterized by a very dark, almost black, general coloration, first and second antennal joints black, vesica with a serrate-lanceolate apical process (Figs. 32-33) and ocular index equal to 1.5 in ♂ and 2.0 in ♀.

Miris nebrodensis n. sp.
(Plate I, Figs. 1-21)

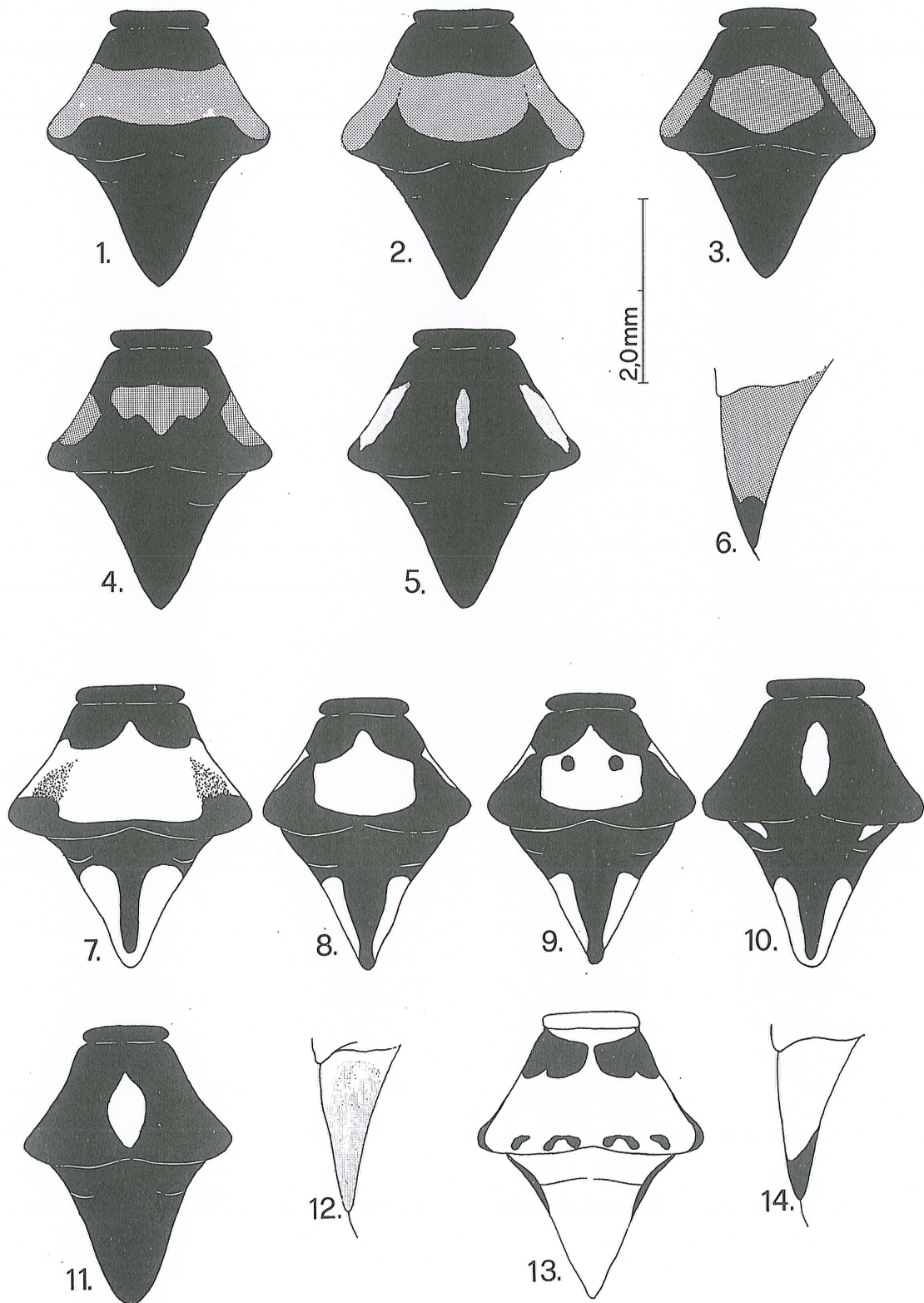
DIAGNOSIS: Very elongate, black and red macropterous specie (Plate I, a); cuneus with black apex; scutellum unicolorous black.

DESCRIPTION: Head black; vertex with two small clear spots beside the eyes. Antennae black; only third joint with narrow clear basal ring, more evident in ♀♀. Pronotum black with a central red band, generally interrupted and subdivided into three parts, according to the patterns shown in Figs. 1-5. Scutellum always completely black. Hemelytra red and black: clavus black, corium red except area between claval suture and cubitus, distal half of area between cubitus and radius, and paracuneus; embolium red, external margin black; cuneus red with black apex (Fig. 6). Veins red, membrane fuscous. Dorsal surface with scattered, erect, short, black hairs. Dorsum and venter black. Legs black, only vaguely reddish in the distal internal extremity of front femora and in the distal third of hind femora, but apex always black; spines of tibiae black.

Body about 2.40x in ♂, 2.52x in ♀, as long as broad at base of pronotum. Head 0.33x as broad as pronotum; in lateral view, 1.6x as high as long; ocular index 1.54 in ♂, 1.70 in ♀. Antennae only little shorter than length of the body (0.85x in ♂, 0.77x in ♀). Second antennal segment about 0.75x as long as basal width of pronotum. Pronotum 1.5x as wide as long; base shaped as a double arch centrally recessing. Rostrum hardly reaching middle coxae. Proportions between segments of hind tarsi: 12:12:15. Male genitalia as shown in Figs. 15-21; pygophore (Fig. 15) with a knoblike protuberance on left side over the genital chamber; vesica (Fig. 16) simple; left paramere (Fig. 17) with sensory lobe well developed, bearing a tuft of short hairs, apex (Figs. 18-19) shaped like the edge of a screwdriver. Measurements in Tab. I.

ETYMOLOGY: The new species was collected in two different mountain ranges of Northern Sicily: Madonie and Caronie; the two massifs together were formerly called «Nebrodi», hence the name *nebrodensis*.

MATERIAL: Holotype (♂): Sicily, Caronie, Mistretta (ME): Mascellino, 1.VI.88, m. 1.200, on *Crataegus monogyna* Jacq.. Paratypes: 1 ♀, same data



Figs. 1-6 — *Miris nebrodensis* n. sp.: 1-5: eunomy of pronotum; 6: cuneus. Figs. 7-12 — *Miris striatus* (L.); 7-11.: eunomy of pronotum; 12: cuneus. Figs. 13-14 — *Miris persicus* Reut.: 13: pronotum; 14: cuneus.

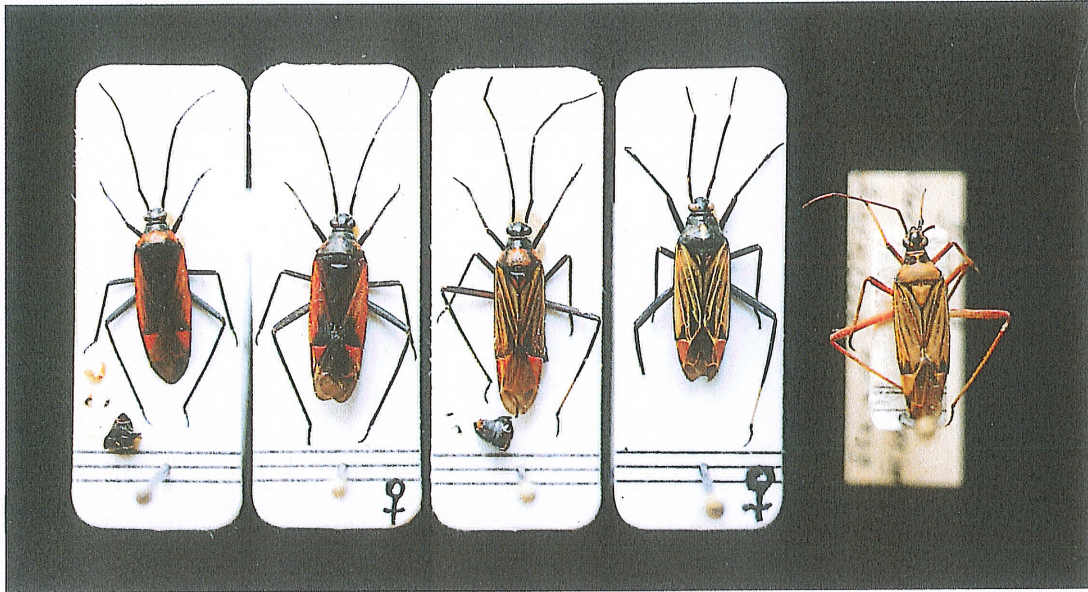
Table I
 Measurements (in mm) of *Miris nebrodensis* n. sp. Averages are shown in brackets.

	♂ ♂	♀ ♀
Length	9.47-9.87 (9.7)	9.73-10.3 (9.97)
Width head	1.32-1.38 (1.34)	1.35-1.38 (1.37)
Vertex/eye	1.50-1.57 (1.54)	1.58-1.82 (1.70)
Width pronotum	3.96-4.07 (4.04)	3.67-4.13 (3.95)
Length I art. ant.	1.22-1.29 (1.25)	1.12-1.19 (1.15)
Length II art.	3.00-3.29 (3.15)	2.90-3.16 (3.02)
Length III art.	2.03-2.16 (2.10)	1.97-2.16 (2.06)
Length IV art.	1.59-1.77 (1.59)	1.97-2.16 (2.06)
Length/Pronotum	2.39-2.42 (2.40)	2.42-2.65 (2.52)

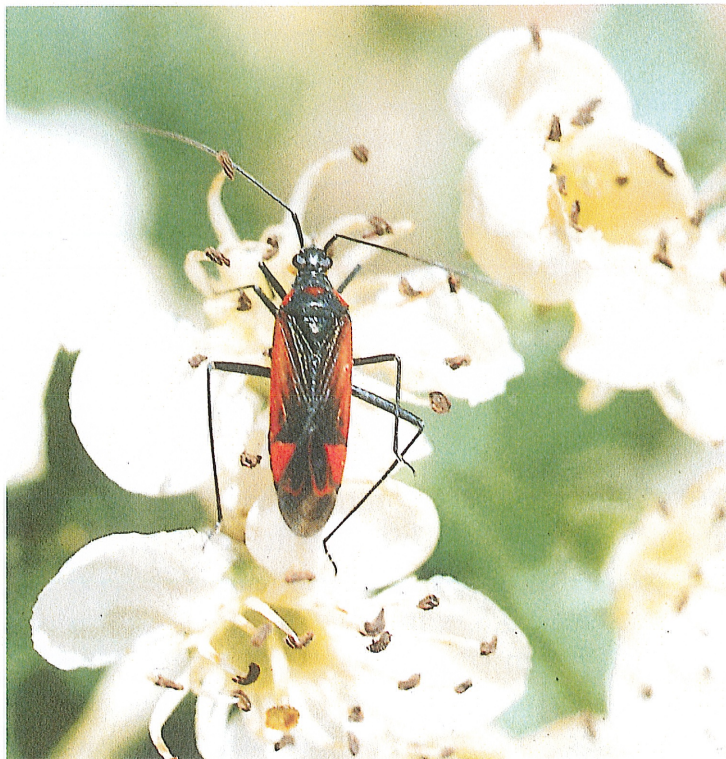
as holotype; 2 ♀ ♀, same locality, 21.VI.81; 3 ♂ ♂, 1 ♀, same locality, 21.VI.91; 1 ♂, Sicily, Caronie, Caronia: La Moglia, m. 1300, 21.VI.91, on *Crataegus monogyna* Jacq.; 1 ♂, 1 ♀, Sicily, Madonie, Petralia/Piano Battaglia road, m. 1500, 28.V.88, on *Acer campestre* L. Typical material in the collection of the author, except one paratype in the collection of R. Linnavuori.

BIOLOGY: With the exception of two teneral specimens collected on *Acer campestre* L., all the specimens were found on *Crataegus monogyna* Jacq. (Plate I, b), which is likely to be the plant where *Miris nebrodensis* plays its predatory activity.

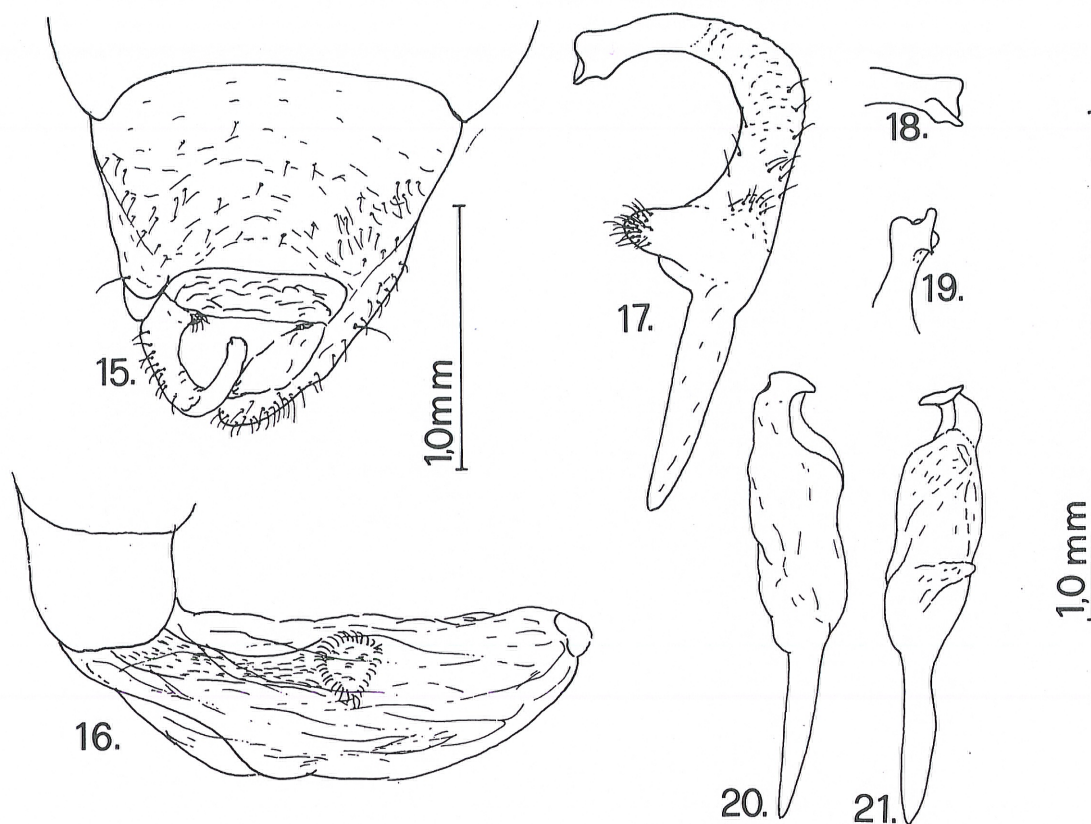
DISCUSSION: *Miris nebrodensis* n. sp. is easily distinguished by the other two palaeartic species of the genus (Plate I, a): *striatus* (L.), widely distributed in Europe and Western Asia, and *persicus* Reut., living in Iran and Caucasus. *Miris striatus* has a yellow or orange and black general coloration, pronotum with a different pattern of variations (Figs. 7-11), black collar, scutellum with two clear elongate spots along the lateral margins, only very rarely lacking in the darkest form (Fig. 11, but in that case there is only one clear spot in the middle of the pronotum, while in *nebrodensis* there are three also in the darkest forms), cuneus entirely yellow or largely orange but always without black apex. *Miris persicus* has yellow-brown general coloration, pronotum clear with reduced black markings as shown in Fig. 13, collar clear, scutellum clear with narrow black stripes along antero-lateral margins, cuneus clear with black apex.



a — Palaearctic species of the genus *Miris*. From left to right: *M. nebrodensis* n. sp. ♂ (Sicily); *M. nebrodensis* n. sp. ♀ (Sicily); *M. striatus* (L.) ♂, typical form (Central Italy: Abruzzo); *M. striatus* (L.) ♀, dark form (Greece: Peloponnesus); *M. persicus* Reut. ♀ (Caucasus).



b — ♂ of *M. nebrodensis* n. sp. on flowers of *Crataegus monogyna* Jacq.



Figs. 15-21 — *Miris nebrodensis* n. sp.: 15: pygophore; 16: vesica. 17-left paramere; 18-19: apex of left paramere in two different views; 20-21: left paramere.

***Strongylocoris raimondoi* n. sp.**

(Figs. 22-25)

DIAGNOSIS: Totally black species with bluish tinge. Length 3,5-3,9 mm in ♂, 3,2-3,6 in ♀; ocular index 2,4-2,6 in ♂, 3,0-3,3 in ♀. Right paramere as shown in Fig. 25.

DESCRIPTION: Shiny, general coloration black with bluish tinge; distal half of fourth antennal joint brown. Thick vestiture of dark, reclining hairs.

♂ elongate, parallel-sided 3x, ♀ ovate (Fig. 22) 2,7x, as long as broad at base of pronotum. Head 0,85x in ♂, 0,87x in ♀, as broad as pronotum; in frontal view head 1,56x in ♂, 1,41 in ♀, as broad as high; base of vertex incrassate. Antennae shorter in ♀; 2nd joint 0,8 in ♂, 0,55 in ♀, as long as diatone. Rostrum not reaching middle coxae. Pronotum 2.5x as wide as long in both sexes. Pronotum, scutellum and hemelytron, except membran, finely and densely punctate. Scutellum with a fine transverse corrugation. Proportions between segments of hind tarsi: 10:13:13. Male genitalia as shown in Figs. 23-25. Measurements in Tab. II.

Table II

Measurements (in mm) and ratios of *Strongylocoris raimondoi* n. sp. Averages are shown in brackets.

	♂ ♂		♀ ♀	
Length	3.55-3.90	(3.65)	3.29-3.65	(3.43)
Width head	1.00-1.08	(1.04)	1.12-1.19	(1.15)
Vertex/eye	2.40-2.64	(2.53)	3.00-3.38	(3.21)
Width pronotum	1.19-1.29	(1.21)	1.25-1.35	(1.31)
Length I art. ant.	0.19-0.21	(0.19)	0.16-0.18	(0.17)
Length II art.	0.82-0.87	(0.85)	0.63-0.66	(0.64)
Length III art.	0.55-0.61	(0.58)	0.45-0.50	(0.48)
Length IV art.	0.38-0.40	(0.39)	0.34-0.37	(0.36)
Length/Pronotum	2.8-3.2	(3.0)	2.5-3.0	(2.7)

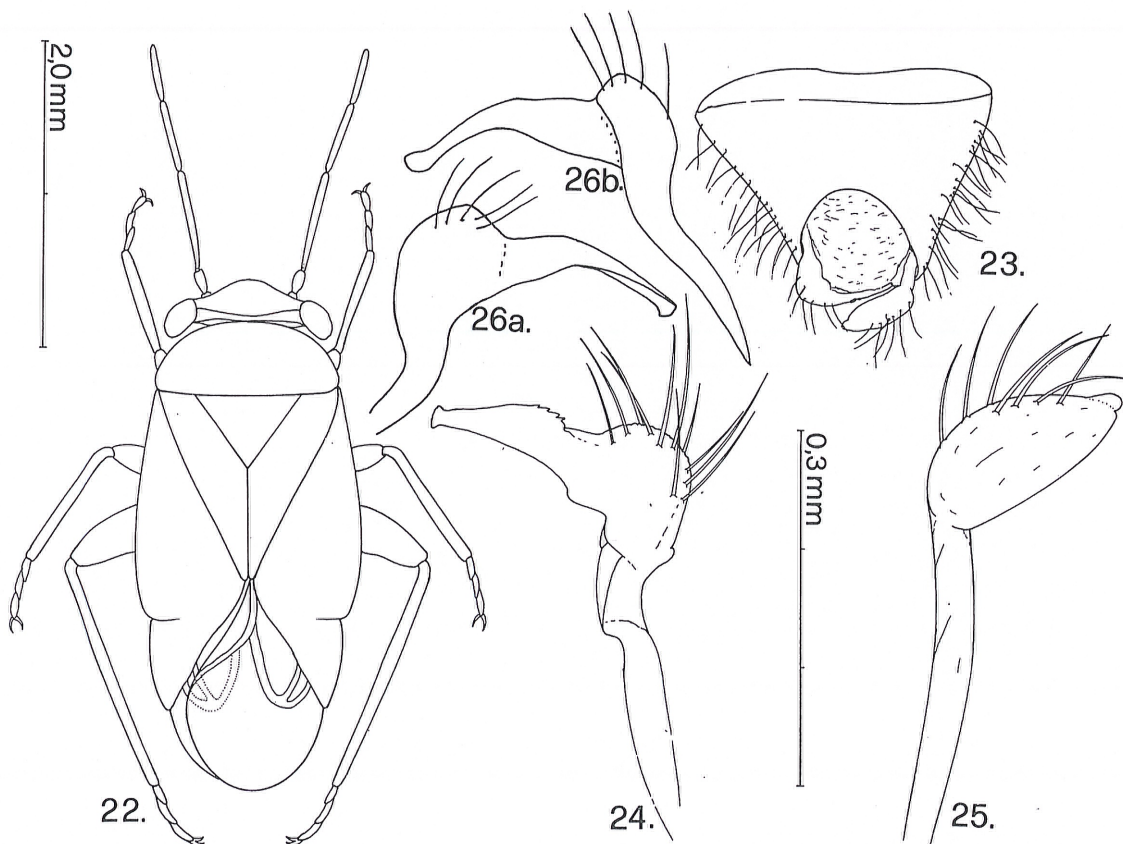


Fig. 22-25 — *Strongylocoris raimondoi* n. sp. - 22: dorsal habitus of ♀; 23: pygophore; 24: left paramere; 25: right paramere. Fig. 26a and 26b: *Strongylocoris enki* Linn., left paramere in two different positions (from LINNAVUORI 1984).

ETYMOLOGY: Named in honor of the botanist Francesco Maria Raimondo as a token of gratitude for his help.

MATERIAL EXAMINED: Holotype (♂), Sicily, PA, bosco Ficuzza, 29.VI.80, on *Elaeoselinum asclepium* Bert.; paratypes: 6 ♀♀, same data as holotype; 7 ♂♂, 31 ♀♀, same locality and plant, 9.VI.85; in the collection of the author.

DISCUSSION: In the following, comparative table some characteristics of the totally black species of *Strongylocoris* are shown together. As it can be noticed, *Strongylocoris raimondoi* n. sp. is immediately distinguished by size and ocular index from *S. niger* (H.S.), *S. coerulescens* Lindberg and *S. atrocoeruleus* (Fieber); these values are close to those of *S. enki* Linnavuori, from which the new species differs in the shape of the left paramere (see Figs. 24 and 26a-b).

Table III
Ocular index, length (in mm), and distribution of the totally black species of *Strongylocoris*

<i>Strongylocoris</i>	vertex/eye	length	Distribution
niger ♂	3,3-3,5	3,4-3,7	E-Europe-
niger ♀	4-4,6	3,4-3,9	Turkey-Syria
coerulescens ♂	1,70-1,75	4,0-4,2	Morocco
coerulescens ♀	2,3-2,4	3,2-3,4	
atrocoeruleus ♂	2,4-2,9	4,1-5,0	W-mediter.
atrocoeruleus ♀	3,8	3,5-4,2	
enki ♂	2,54-2,75	3,75-4,0	Iraq
enki ♀	3,0-3,5	3,25-3,50	
raimondoi ♂	2,40-3,38	3,29-3,65	Sicily
raimondoi ♀	3,00-3,38	3,29-3,65	

Campylomma vendicarina n. sp.

(Figs. 27-35)

DIAGNOSIS: Recognized among palaeartic species with black first and second antennal segments by the almost black general coloration, the shape of the vesica with a serrate-lanceolate apical process and the ocular index.

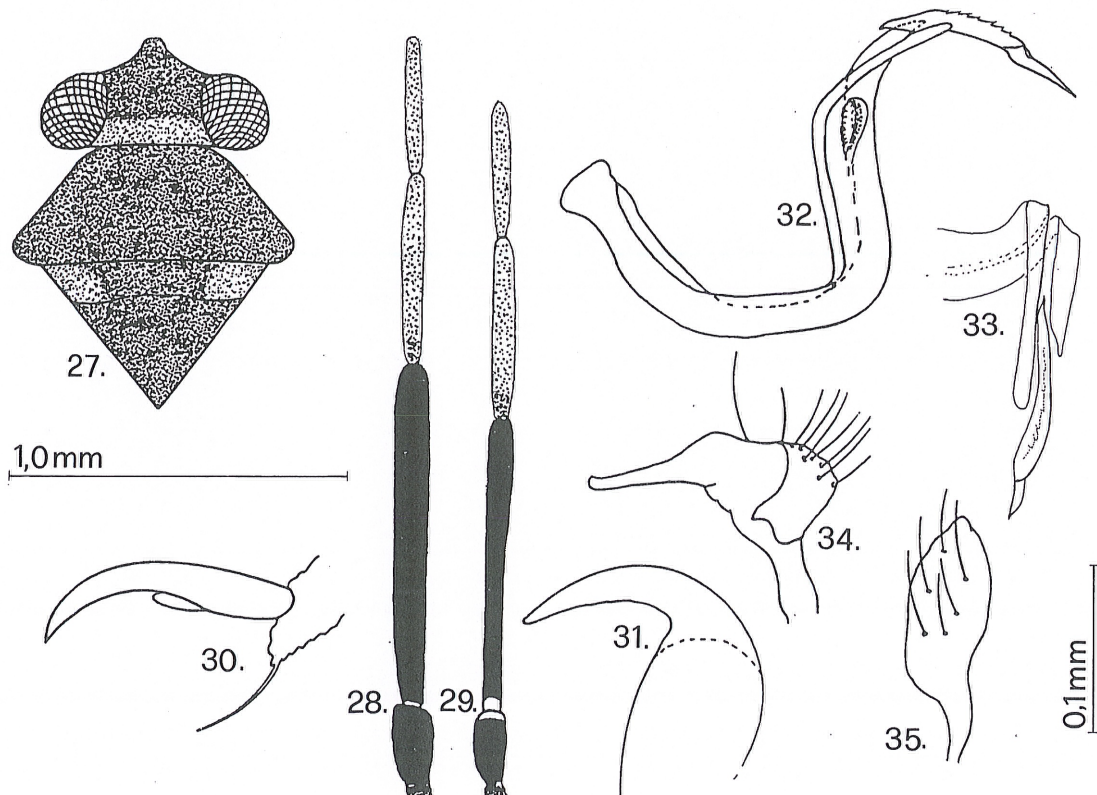
DESCRIPTION: General coloration very dark, almost black; posterior margin of vertex and distal ends of mesoscutum ochraceous (Fig. 27); first and second antennal segments black, third and fourth brownish, base of third dark

brown (Figs. 28-29); anterior and middle legs pale, hind legs dark brown; meso- and meta-femoral trichobothria arising from black spots; spines of femora and tibiae black and with black bases.

Dorsal surface smooth, shining; vestiture of dorsum with long, reclining black common setae and some appressed, flattened shining setae (these distributed on both sides of the claval suture).

Macropterous. Body elliptical, 2,80x as long as broad at base of pronotum in both sexes. Female similar to male except for slender second antennal segment and for the presence of a pale ring between apex of first antennal segment and base of second antennal segment. Head width across eyes 0.66 mm, length 0.24 mm, height 0.43 mm; vertex 1.50 in ♂, 2,0 in ♀ times wider than eye; rostrum reaching apex of mesocoxae; spines of tibiae twice longer than the width of the tibia; lengths of hind tarsi 0,09:0,19:0,19 mm; claws narrow and elongate, with very small pseudarolia; parempodia setiform and weakly curved (Fig. 30).

Vesica S-shaped (Figs. 32-33), apical blade proximally serrate and distal-



Figs. 27-35 — *Campylomma vendicarina* n. sp.: 27: pattern of light and dark brown coloration on head, pronotum and scutellum; 28: antenna of ♂, 29: antenna of ♀; 30: hind claw; 31: phallosome; 32: vesica; 33: apex of vesica in dorsal view; 34: left paramere; 35: right paramere.

ly lanceolate, secondary gonopore well developed; phalloteca C-shaped (Fig. 31); parameres as shown in Figs. 34-35. Measurements in Tab. IV.

Table IV
Measurements (in mm) of *Campylomma vendicarina* n. sp. Averages are shown in brackets.

	♂ ♂	♀ ♀
Length	2.51-2.61 (2.58)	2.45-2.70 (2.56)
Width head	0.66-0.67 (0.66)	0.62-0.65 (0.64)
Vertex/eye	1.50-1.56	2.0
Length II art.	0.61-0.62 (0.61)	0.53-0.58 (0.55)
Width pronotum	0.88-0.93 (0.90)	0.87-0.93 (0.90)
Length/Pronotum	2.78-2.90 (2.80)	2.71-2.89 (2.80)

ETYMOLOGY: Named for its occurrence in the nature reserve of Vendicari, on the SE coast of Sicily.

MATERIAL EXAMINED: Holotype (♂), Sicily, SR, Vendicari, 5.VI.88, on *Juniperus oxycedrus* L.; paratypes: 3 ♂ ♂, 13 ♀ ♀, same data as holotype; 11 ♀ ♀, Sicily, SR, S. Croce Camarina, 5.VI.88, on *Juniperus oxycedrus* L.; in the collection of the author, with the exception of two paratypes (1 ♂ and 1 ♀) in the collection of R. Linnavuori.

BIOLOGY: An interesting characteristics of *C. vendicarina* in that it is the first representative of this very large, cosmopolitan genus to be found on a species of *Juniperus*.

Acknowledgements. — I wish to express my gratitude to Rauno Linnavuori for his precious suggestions and opinions, as well as for the comparison material he provided me with.

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Nota presentata nella riunione scientifica del 30.XI.90

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