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New and poorly-known harvestmen (Opiliones) from Sardinia (Italy). Part I: *Lacinius horridus* (Panzer, 1794), new to Sardinia (Phalangiidae Oligolophinae)

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ABSTRACT The first occurrence of *Lacinius horridus* (Panzer, 1794) (Phalangiidae Oligolophinae) on Sardinia is decribed and the general biogeographical distribution of Opiliones in Italy is discussed.

KEY WORDS Opiliones; Sardinia; *Lacinius horridus*; biogeography.

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INTRODUCTION

Lacinius horridus (Panzer, 1794) (Phalangiidae Oligolophinae) is a well-known species found in nearly all areas of Southern, Central and Northern Europe (Martens, 1978; Blick & Komposch, 2004) with the exception of Spain (Prieto, 2008), the Netherlands (Wijnhoven, 2009) and Norway (Stol, 2007). In Italy *L. horridus* has been found on the mainland and also in Sicily (Stoch, 2003), but not undisputedly in Sardinia.

ABBREVIATIONS. S-Fri = sardinian specimen; G-Fri = german specimen; Fe = femur; Pt = patella; Ti = tibia; Mt = metatarsus; Ta = tarsus;

Lacinius horridus (Panzer, 1794) from Sardinia

EXAMINED MATERIAL. Coordinates in WGS84. Usini, Sassari, 31.04.2012, subadult female, 40°39'49" / 08°29'49", 78 m a.s.l., legit S. Canu (S-Fri 01-099 Rif 71/8). Usini, Sassari, 05.04 2012, subadult female, 40°39'46" / 08°32'41", 206 m a.s.l. legit S. Canu (S-Fri 02-010 Rif 81/2). Usini, Sassari, 29.04.2012, juvenile female, 40°39'44" / 08°32'44", 206 m a.s.l., legit S. Canu (coll. "Schönhofer"). Usini, Sassari, 04.06.2012, subadult female, 40°39'46" / 08°32'43", 206 m a.s.l., legit S. Canu (coll. "Schönhofer") (Fig. 1).

REMARKS. For this first reliable record of the thermophile *L. horridus* all specimens were collected by hand. The localities where *L. horridus* was found, can be described as typical "mediterran semi-natural dry open grasslands", mostly on calcareous substrates (Fig.1; Martens 1978:325; Komposch & Gruber, 2004: 516). Two of the specimens (Nr. Rif71/8, = Fri 01-099 and Nr. Rif 81/2, = Fri 02-010) were selected for further examination and have been retained as voucher specimens in collections of Department of Agriculture, Plant Pathology and Entomology Section, University of Sassari (Italy). In Table 1 (measurements) we have added 4 reference-specimens, 3 from Germany/Brandenburg (G) and 1 from Martens (1978, lit.).

Without any evidence other than the ominous citation in Costa (1885:11, but as *Acantholophus hor-*

Specimens-nrs.	body length/breadth(l/b)	leg II (Fe, Pt, Ti, Mt, Ta)	Fe I / Fe II / Fe III / Fe IV
S-Fri 01-099 Rif 71/8	2.8 / 2.0 l/b = 1.4	1.6 / 0.5 / 1.6 / 0.8 / 3.5 = 7.4	0.5 / 1.7 / 0.5 / 1.3
S-Fri 02-010 Rif 81/2	2.8 / 1.9 l/b = 1.5	1.4 / 0.5 / 1.2 / 0.7 / 2.2 = 6.0	0.4 / 1.4 / 0.4 / 1.2
G-Fri 03-030	2.0 / 1.5 l/b = 1.3	1.3 / 0.5 / 1.2 / 0.5 / 2.0 = 5.5	0.3 / 1.3 / 0.3 / 1.2
G-Fri 03-031	5.5 / 3.5 l/b = 1.6	4.5 / 1.0 / 3.7 / 1.9 / 5.8 = 16.9	1.5 / 4.5 / 1.4 / 2.9
G-Fri 03-053	6.0 / 4.6 l/b = 1.3	4.8 / 1.0 / 3.7 / 2.4 / 6.0 = 17.9	1.7 / 4.8 / 1.9 / 3.7
Martens (1978) ad. females	6.0 / 3.5 l/b = 1.7	5.2 / 1.5 / 4.1 / 3.1 / 7.3 = 21.2	- / 5.2 / -- / --

Table 1. Measurements of specimens in mm. G-Fri 03-030, Bad Belzig, 03.09.2010, juvenile female, 52°13'21" 12°34'57", 98 m a.s.l. G-Fri 03-031, Bad Belzig, 29.10.2012, subadult female, 52°13'25" 12°34'57", 98 msm. G-Fri 03-053, Bad Belzig, 21.08.2009, adult females, 52°13'22" 12°35'03", 98 msm.

ridus Bosc, not Panzer, 1794), Marcellino (e.g. 1973: Tab. 1. as "sistema sardo-corso", p. 7, 1975:163 and 1980: 337, Tab. 1) includes the species *Lacinius horridus* as known for Sardinia (contra Roewer, 1924, 1957 and Trossarelli, 1943; Stoch 2003). Consequently, this unverified statement by Marcellino (e.g. 1980:337: "Non ho trovato specifiche menzioni per la Sardegna, salvo l'unica citazione di Costa ...") was not followed by Chemini (1995) or Stoch (2003).

It is nonetheless worth mentioning that Sardinia plays an important role in the biogeographical distribution of Opiliones in Italy. Chemini (1996) already observed that Italy can be divided into five faunal territorial regions: northern, middle, and southern peninsula; Sicily and Sardinia. Furthermore (Chemini, 1996) there is a strong latitudinal effect (North-South-Island) that can be seen in the increasing number of Mediterranean species from 11% (Northern Italy) to 63% in Sardinia and the decreasing number of European species from 59% (Northern Italy) to 0% in Sardinia. A similar tendency can be observed in the increasing number of endemic species from the north (25%) to 41% in Sicily (Chemini, 1996).

In contrast, the so-called widespread species (Chemini, 1996, but not Marcellino, 1973: "geonemia europea"), which include *L. horridus*, *Mitopus morio* (Fabricius, 1799), *Trogulus nepaeformis* (Scopoli, 1763), *Phalangium opilio* Linnaeus, 1761 and *Odiellus spinosus* (Bosc, 1792) are also widespread in Italy and make up about 4-5% of all opilionid species in all regions of Italy.

Marcellino (1980: 325, Tab. 1) listed 29 species of Opiliones for Sardinia, of which 16 species were recognized as valid by Stoch (2003). Now with the new species *L. horridus* and the long "overseen" *Mitostoma sabbadinii* (Tedeschi et Sciaky, 1997, indicated with *) the number of Opiliones on Sardinia increases to 18.

Family SIRONIDAE

Parasiro minor Juberthie, 1958

Family TRAVUNIIDAE

Buemarinoa patrizii Roewer, 1956

Family PHALANGODIDAE

Ptychosoma vitellinum Soerensen, 1873
Scotolemon terricola Simon, 1872

Family NEMASTOMATIDAE

Histricostoma argenteolunulatum (Canestrini, 1875)
Mitostoma patrizii Roewer, 1953
Mitostoma sabbadinii Tedeschi et Scia, 1997 *

Family DICRANOLASMATIDAE

Dicranolasma soerenseni Thorell, 1876

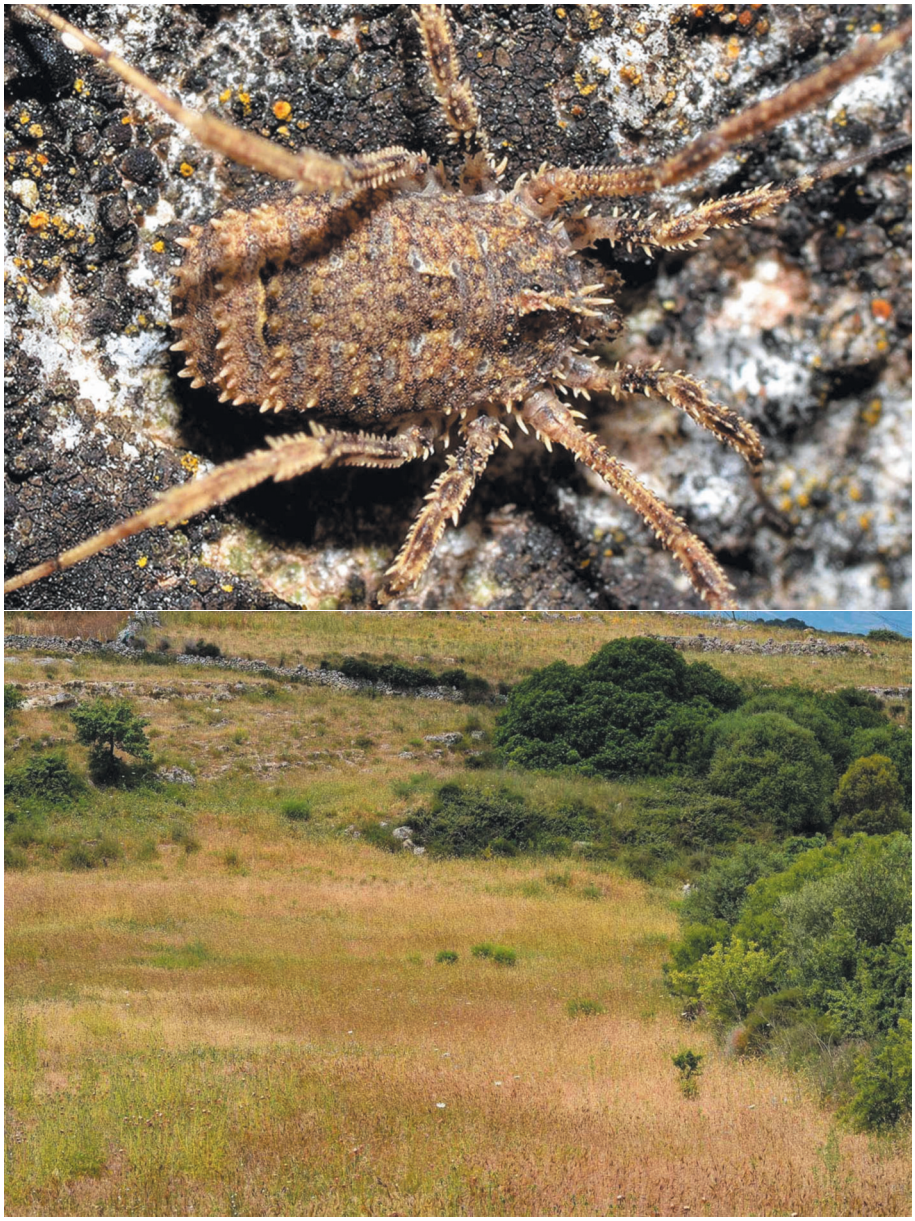

Figure 1. *Lacinius horridus* (coll. "Schönhofer", subadult female; Usini,: 04.06.2012) and its habitat (Photo S. Canu).

Family TROGULIDAE

Anelasmocephalus brignolii Martens et Chemini, 1988

Family ISCHYROPSALIDIDAE

Ischyropsalis adamii Canestrini, 1873

Family PHALANGIIDAE

Metaphalangium propinquum (Lucas, 1847)
Dasylobus argentatus argentatus (Canestrini, 1871)
Dasylobus gestroi (Thorell, 1876)
Phalangium opilio Linnaeus, 1758
Phalangium targionii (Canestrini, 1871)
Lacinius horridus (Panzer, 1794)

Family SCLEROSOMATIDAE

Metasclerosoma sardum (Thorell, 1876)
Nelima doriae (Canestrini, 1871)

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REFERENCES

Barnabé Blick T. & Komposch C., 2004. Checkliste der Weberknechte Mittel- und nord-europas (Checklist of the harvestmen of Central and Northern Europe). Arachnida: Opiliones. Version 27. http://www.arages.de/checklist/checklist04_opiliones.html

Chemini C., 1995. Arachnida, Scorpiones, Palpigradi, Solifugae, Opiliones, Fascicolo 21. In: Minelli, A., Ruffo, S. et La Posta, S. (Ed.). Checklist delle Specie della Fauna Italiana. Ministero deII'Ambiente e Comitato Scientifico per la Fauna d'Italia, pp. 1-8.

Chemini C., 1996. Biogeographic patterns in the opilionids of Italy. (Arachnida: Opiliones). Bollettino del MUseo Civico di Storia Naturale di Verona, 30: 531-538.

Costa A., 1885. Notizie ed osservazioni sulla Geo-Fauna sarda. Memoria Quinta. Risultamento delle ricerche fatte nel mese di maggio. Rendiconti della Reale Accademia delle Scienze Fisiche e Matematiche di Napoli, Vol. 1, Ser. 2 , 1-31.

Komposch C. & Gruber J., 2004. Weberknechte österreichs. Denisia 12 (Neue Serie), 14: 485-534.

Marcellino I., 1973. Opilioni (Arachnida) delle Isole Eolie ed Egadi. Lavori della Società Italiana di Biogeographia; Nuova Serie, 3: 329-339.

Marcellino I., 1975. Opilioni Italiani del genere *Lacinius* THORELL, 1876, (Arachnida, Opiliones, Phalangiidae). Fragmenta entomologica, 11: 149-168.

Marcellino I., 1980. Opilioni di Sardegna (Arachnida, Opiliones). Lavori della Società Italiana di Biogeografia, Nuova Serie, 8: 323-345.

Martens J., 1978. Die Tierwelt Deutschlands 64. Teil, Weberknechte, Opiliones. VEB Gustav Fischer Verlag, Jena, 464 pp.

Prieto C. E., 2008. Updating the checklist of the Iberian opiliofauna: corrections, suppressions and additions. Revista Ibérica de Aracnología, 16: 49-65.

Roewer F., 1924. Opilioniden von der Insel Rhodos, Italien und Sardinien sowie der Cyrenaica. Bollettino dei Musei di Zoologia e di Anatomia Comparata della Reale Università di Torino, 39: 1-7.

Roewer C.F., 1957. Über Oligolophinae, Caddoinae, Sclerosomatinae, Leiobuninae, Neopilioninae und Leptobuninae (Phalangiidae, Opiliones Palpatores). (Weitere Weberknechte XX). Senckenbergiana biologica, 38: 323-358.

Trossarelli F., 1943. Contributo allo studio degli Oplionidi Italiani. Bollettino della Società Entomologica Italiana, 5: 49-54.

Stoch F., 2003. In: Zuklat P., (Ed.), Checklist of the species of the Italian fauna. Italian Ministry of Environment - Direction for Nature Protection (online version 2.0). http://www.faunaitalia.it/checklist/introduction.html

Stol I., 2007. Checklist of Nordic Opiliones. Norwegian Journal of Entomology, 54: 23-26.

Wijnhoven H., 2009. De Nederlandse hooiwagens (Opiliones). Entomologische Tabellen, Nr. 23.