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A new species of *Schizopera* SARS 1905 from groundwaters of Sicily, Italy

(Crustacea: Copepoda: Diosaccidae).[1)]

By

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With 12 figures and 1 map.

Abstract: Described is *Schizopera (S.) lagrecai* n. sp. from groundwaters (brackish well) of Sicily, Italy. Following APOSTOLOV's (1982) review of *Schizopera,* the new species belongs to the subgenus *Schizopera,* being close to *S. jugurtha* from marine interstitial of the Black Sea and Africa.

Recent stygobiological exploration of phreatic subterranean waters of Sicily (Italy) has yielded a large amount of stygobiont or eustygophil harpacticoid copepods.

Among this material a species of the genus *Schizopera* SARS 1905, sensu APOSTOLOV (1982), was encountered, which is described herein as *S. lagrecai* n. sp.

According to a recent review of the genus *Schizopera* by APOSTOLOV (1982), the new species fits quite well the diagnosis of the subgenus *Schizopera,* being close to *S. jugurtha* (BLANCHARD & RICHARD 1891), known from marine interstitial habitats of the Black Sea and Africa.

The discovery of the nominate species brings the total number of the species of *Schizopera* from Italy to three, the others being *S. subterranea* LANG 1948 and *S. lindae* APOSTOLOV & PESCE 1985, reported respectively from groundwater networks of Apulia and Basilicata, S-Italy (Map 1).

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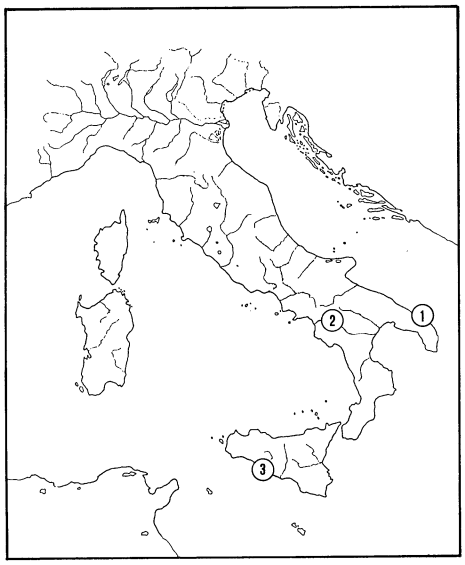
Schizopera (Schizopera) lagrecai n.sp.

Figs. 1–12, Map 1.

Holotype: ♀, dissected and mounted on coverlips in Faure's medium (Coll. PESCE at „Dipartimento di Scienze Ambientali", University of L'Aquila, Italy, S. 21/Sc. 1), Italy, Sicily, brackish water well n.S./21, along the Main Road n. 115 at Ribera, Agrigento, 17.V.1986, leg. L. D'AGRUMA.

[1)] Contribution to the knowledge of the underground water fauna in central and southern Italy: XXXII.



Map 1. Distribution of the subgenus *Schizopera* Sars in Italy. — 1) *subterranea;* 2) *lindae;* 3) *lagrecai* n. sp.

Paratypes: 4♂♂ (Coll. Pesce S. 21/Sc. 2–5), 1♂ (SMF 15096), 1♀ (SMF 15095), dissected and mounted as above, same data as holotype.

Etymology: The specific epithet, *lagrecai,* is in honor of Prof. M. La Greca, who promoted the faunistical research in Sicily.

Diagnosis: ♀: Body elongated, subcylindrical, about 4·5 times longer than wide; total length, excluding antennulae and furcal setae 410–425 μm.

Rostrum not well produced. Thoracic somites naked posteriorly; genital somite about as long as broad, „genital field" as in Fig. 7. Abdominal somites dorsally covered with rows of minute hair-like elements; anal somite armed (Fig. 11); anal operculum without spines or denticles.

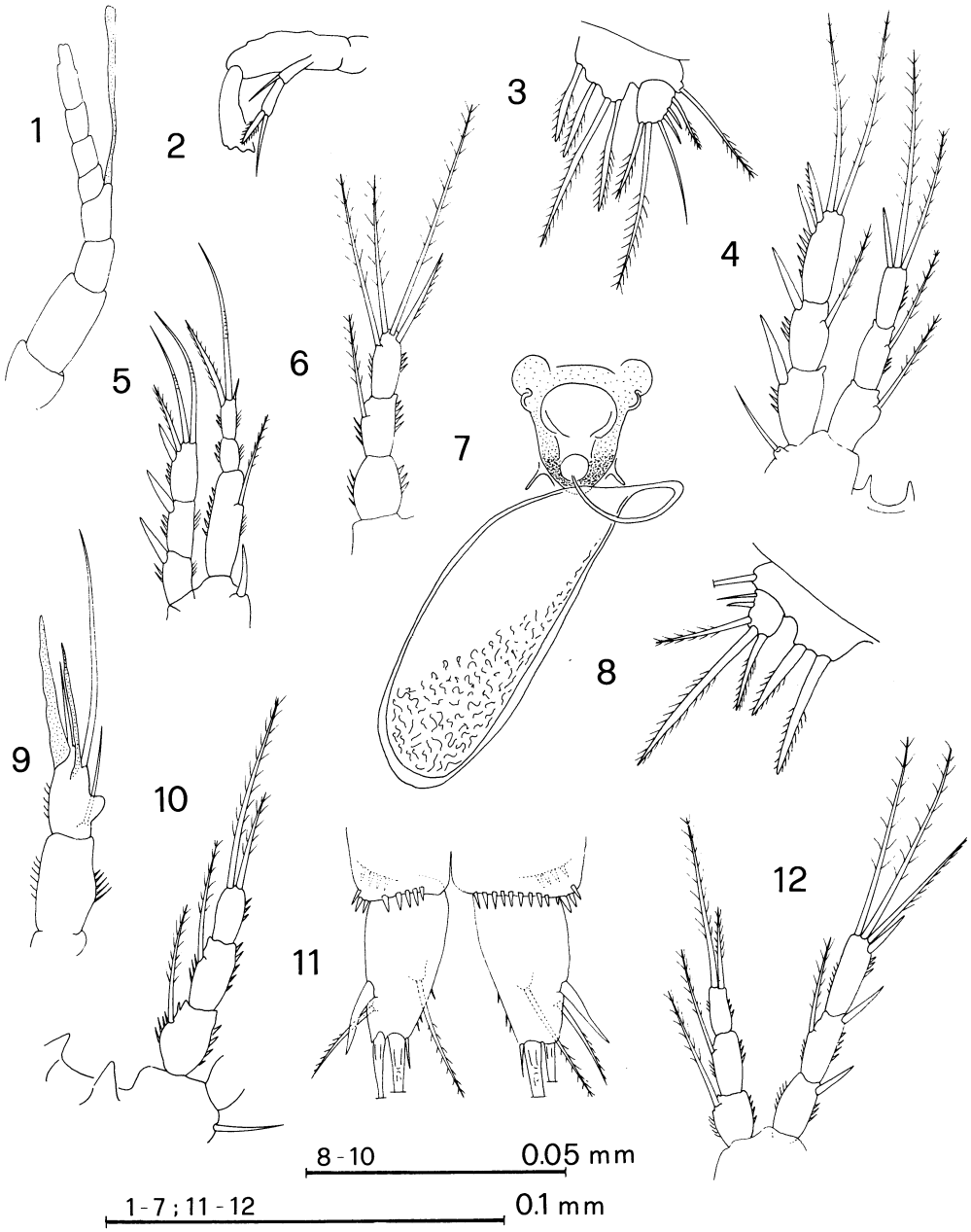
Antennula (Fig. 1) elongated, 8-segmented, second segment the longest; aesthete on fourth segment extending beyond the tip of the 8th segment.

Antenna (Fig. 2) with allobasis; exopod 2-segmented, the first segment bearing one slender seta, the second with one apical seta and one subapical spiniform seta.

Mouthparts without particular characteristics.

Legs 1–4 (Figs. 4–6, 12) with both exopod and endopod 3-segmented; connecting plates of legs 2–4 with two spiniform, elongated protrusions. First segment of the second endopod of leg 1 slightly longer than the first two segments of the exopod combined. Setal formula of legs 1–4 as follows:

	exopod	endopod
P_1	0 0 022	1 0 111
P_2	0 1 022	0 1 121
P_3	0 1 022	1 1 111
P_4	0 1 022	1 1 011



Figs. 1–12. *Schizopera (S.) lagrecai* n. sp. — 1-7) Holotype; 8–10) Paratype ♂ (Coll. Pesce S. 21/Sc. 2); 11–12) Paratype ♀ (Coll. Pesce S. 21/Sc. 3). — 1) Antennula; 2) antenna; 3) P_5; 4) P_3; 5) P_1; 6) P_2; 7) „genital field" and spermatophore; 8) P_5; 9) P_2, endopod; 10) P_4, endopod; 11) furcal rami, ventral view; 12) P_4.

Leg 5 (Fig. 3) reduced; basipodite not reaching the distal margin of the exopod, and armed with four spiniform setae of different length; exopod about as long as wide, and armed with six setae, two very short.

Furcal rami (Fig. 11) 2·10–2·15 times longer than wide, with some hair-like spinules on the inner margin; outer margin armed with a stout spine and a slender seta; dorsal seta sligthly shorter than each furcal ramus; apical inner seta very short, medial setae of different length, the inner the longest.

♂: Body length, excluding antennulae and furcal setae, 392–400 μm. Antennula haplocerate. Leg 1, inner edge of the basis chitinized. Endopod of leg 2 (Fig. 9), 2-segmented, distal segment armed with two long spinose processes, one inner and two subapical setae. Leg 3 with a long hyaline spine on the inner edge of the third exopod segment. Leg 4 see Fig. 10.

Furcal rami without particular characteristics as compared to those of the ♀.

Leg 5 (Fig. 8), basipodite not much produced, armed with two stout spines; exopod distinct, armed with five setae, the apical one the longest.

Distribution and ecology: *Schizopera lagrecai* n. sp. is at present known only from the type-locality, Ribera, Sicily. The new species lives in underground phreatic brackish waters (water level from the soil surface: 7·2 m; water depth 0·5 m; H_2O temperature 16·7 °C; pH 7·2; salinity 2·7‰; bottom sediment composed of thin organogenic sandstone) in association with other harpacticoid copepods, such as *Attheyella crassa* (Sars 1863) and *Nitocrella stammeri* Chappuis 1938, as well as with cyclopid copepods [*Eucyclops serrulatus* (Fischer 1851), *Thermocyclops oblongatus* (Sars 1927)], asellid isopods [*Proasellus coxalis* (Dollfus 1892)], water mites, gastropods and oligochaetes.

Affinities: Recently, Apostolov (1982) reviewed the systematic status of the genus *Schizopera*. In that review, two subgenera, viz. *Schizopera* s. str. (characterized by a 3-segmented endopod of leg 1 and absence of seta on the inner margin of the first segment of the exopod of legs 2–4) and *Neoschizopera* Apostolov 1982 (characters: a 2-segmented endopod of leg 1 and presence of a seta on the inner margin of the exopod of legs 2–4) were recognized within the nominate genus.

According to this revision, *S. lagrecai* n. sp. fits well the diagnosis of the subgenus *Schizopera*, being close to *S. jugurtha* (Blanchard & Richard 1891), owing to the presence of two setae on the distal segment of the endopod of leg 4 and to the construction and armature of leg 5, both in the ♂ and ♀.

From the above species, as well as from the others in the same subgenus, *lagrecai* differs by the armature of the endopod of legs 2 and 3, the presence of a long seta on the inner margin of the first segment of the P_4 endopod, the length of the furcal rami and the morphology on the „genital field" of the ♀.

Zusammenfassung.

Beschrieben wird *Schizopera (S.) lagrecai* n. sp. aus dem Grundwasser (brackiger Brunnen) Siziliens, Italien. Nach Apostolovs (1982) Revison ist *lagrecai* in die Untergattung *Schizopera* zu stellen; sie ist der Art *jugurtha* aus dem marinen Interstitial des Schwarzen Meeres und Afrikas am ähnlichsten.

References.

Apostolov, A. (1982): Genres et sous-genres nouveaux de la famille Diosaccidae Sars et Cylindropsyllidae Sars, Lang (Copopoda, Harpacticoidea). — Acta Zool. Bulg., **19:** 37–42; Sofia.

Apostolov, A. & Pesce, G. L. (1987): Un nouveau harpacticoide des eaux souterraines phréatiques de l'Italie: *Schizopera lindae* n. sp. (Crustacea: Copopoda: Diosaccidae). Contribution à la connaissance de la faune des eaux souterraines de l'Italie centreméridionale: XIX. — Crustaceana, **52** (3): 298-302; Leiden.

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