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FIRST DISCOVERY OF GENUS *ARCULFIA* J.L. BARNARD IN THE MEDITERRANEAN SEA, WITH REMARKS ON TWO OTHER MEMBERS OF FAMILY PARDALISCIDAE (CONTRIBUTION TO THE KNOWLEDGE OF THE AMPHIPODA 156)

PRVI NALAZ RODA *ARCULFIA* J. L. BARNARD U SREDOZEMNOM MORU, SA OSVRTOM NA DRUGA DVA ČLANA IZ OBITELJI PARDALISCIDAE (156. PRILOG POZNAVANJU AMPHIPODA)

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Three species of family *Paradaliscidae* are treated in this paper. The monotypic genus *Arculfia* J. L. Barnard 1961), known only from deep sea waters of Tasman Sea in SW. Pacific, is found for the first time in the Mediterranean Sea, and a new subspecies, *Arculfia trago mediterranea*, n. ssp., is described from NW. part of Mediterranean Sea (off France, Canyon de Planier, 200—360 m depth). New diagnosis of genus Arculfia is composed. Some new taxonomic data od *Paradaliscoides tenellus* Stebbing 1888 from Mediterranean Sea and some new localities of *Paradaliscella boeckii* (Malm 1871) from Tyrrhenian Sea are presented.

INTRODUCTION

The members of the family *Paradaliscidae* are living in the Mediterranean Sea on more than hundred meters depth, and for this reason they were discovered relatively much later than other species living in shallow sea water of this region.

First species of family *Pardaliscidae*, discovered in the Mediterranean Sea was *Nicippe tumida* Bruz. 1859, mentioned by Chevreux (1927) (43°2'57" N, 2°58'30" E, on 555 meters depth), and by Lo Bianco (1903) in Salerno Bay (1100 meters depth).

Ledoyer mentioned (1970) *Halice abyssi* Boeck 1871 and he described *Pardaliscoides stebbingi*, n. sp.; later (1973) he described *Pardisynopia walkeri*

n. sp., removed to genus *Halice* by G. Karaman and U. Schiecke (1973).

G. Karaman and U. Schiecke mentioned (1973) *Pardaliscella boeckii* (Malm, 1871), redescribing the species *Halice walkeri* and *H. abyssi.* G. Karaman (1974) revised the family *Pardaliscidae.* Ledoyer (1977) found *Pardaliscoides tenellus* Stebb. 1888 in western part of the Mediterranean Sea. Bellan-Santini (1983) described two species of genus *Pardalisca* from Mediterranean Sea, *P. mediterranea,* n. sp. and *P. brachydactyla,* n. sp.

During our recent study on the family *Pardaliscidae* from the Mediterranean Sea slightly differ from figures and desciption of *A. trago* J. L. Bar- (Italy) as well as on my own material, it was established the presence of genus *Arculfia* in the Mediterranean Sea. As the specimens from Mediterranean Sea slightly differ from figures and description of A. *trago* J. Barnard 1961 from Tasman Sea in Pacific, we elevated our specimens to the subspecific level, under the name *A. trago mediterranea,* n. ssp.

Acknowledgements: I am indebted to prof. Dr. Sandro Ruffo from the Museum of Natural History in Verona (Italy) for the loan of material used in this study.

TAXONOMIC PART

Genus ARCULFIA J. L. Barnard

Arculfia J. L. Barnard 1961: 77; J. L. Barnard 1969: 401; G. Karaman 1974: 9.

Type-species: *Arculfia trago* J. L. Barnard 1961 (orig. desingn.).

Diagnosis: Body normal, urosomites free. Head with rostrum, eyes absent. Antenna 1: peduncle stout, peduncular segments 1—3 progressively shorter, proximal part of main flagellum partially fused and inflated, accessory flagellum present. Antenna 2 normal, third peduncular segment short, segments 4—5 long.

Labrum entire (?), labium with present, but fused inner lobes. Mandible without molar, incisor poorly toothed; palp linear, 3-segmented. Maxilla 1: inner plate small, with one distal seta, outer plate with 7 spines and 1 circumplumose seta, palp 2-segmented, non dilated. Maxilla 2 with both plates narrow, inner plate with lateral setae also. Maxilliped: inner plate very small, outer plate with distal spines, palp 4-segmented, with nail.

Coxae moderate, coxa 4 unlobed. Gnathopods 1 and 2 narrow, with elongated unlobed segment 5. Gnathopod 1 simple, gnathopod 2 distinctly subchelate. Pereopods 3—4 normal. Pereopods 5—7 with dilated lobed segment 2. Uropods 1—2 lanceolate, biramous; peduncle of uropod 1 with ventrofacial spines. Uropod 3 foliaceous, biramous, rami almost equal. Telson long, deeply incised. Coxal gills occur on pereonites 2—7. Oostegyts narrow, setose, appear on pereonites 2—5.

Sexual dimorphism unknown.

Taxa: *Trago trago* J. L. Bar. 1961, *Trago mediterranea* n. ssp.

ARCULFIA TRAGO J. L. BARNARD

Arculfia trago trago J. L. Barnard 1961

Arculfia trago J. L. Barnard 1961: 77, fig. 47; J. L. Barnard 1969: 401; G. Karaman 1974: 9.

Loc. typ.: Tasman Sea (SW. Pacific) 42°10'S, 170°10'E, 610 m.

Distribution: Known only from type-locality (J. L. Barnard 1961).

Arculfia trago mediterranea n. ssp.

figs.: I—IV, V, 1—5

Halice abyssi Ledoyer 1977: 398.
nec *Halice abyssi* Boeck 1871: 72.

Material examined: Mediterranean Sea, NW. part, off France: F. V. P. Station 30, Canyon de Planier, depth 200—360 meters, May 2, 1975, 2 spec. (leg. H. Ledoyer) (one spec. without mouthparts) (Verona Museum Coll.).

Description: Ovigerous females 5.2 mm long: At first glance very similar to *Halice abyssi* except gnathopod 2. Body laterally compressed, smooth, except urosomite 1 bearing 2 small dorsoposterior marginal teeth (fig. V, 1, 2), urosomite 2 with one long dorsoposterior horizontal tooth (fig. V, 1), urosomite 3 smooth.

Head short, rostrum well developed (fig. I, 3), reaching half of first peduncular segment of antenna 1; lateral cephalic lobes subangular, short, without ventroanterior sinus (fig. I, 3), eyes absent.

Antenna 1 exceeding half of body, peduncular segment 1 inflated, longer than broad, peduncular segments 2—3 short, segment 3 shorter than 2 (fig. I, 1); main flagellum plurisegmented, proximal part of flagellum inflated and partially fused segments bearing long aesthetascs laterally (fig. I, 1) distal part of main flagellum slender, with distinct articles; accessory flagellum long, as long as peduncle, 2-segmented (fig. I, 1).

Antenna 2 longer than antenna 1, peduncular segment 3 short, segments 4—5 slender, but ped. segment 4 is slightly longer than 5 (fig. I, 2), flagellum is slightly longer than peduncular segments 4—5 composed, consisting of 21+ articles. Antennal gland cone short (fig. I, 2).

Labrum probably distally incised, but destroyed during dissection. Labium with present but fused inner lobes (fig. IV, 4), outer lobes entire, narrow, with short ventral parts.

Mandible broad, without molar, incisor of left and right mandible slightly asymmetric (fig. I, 4, 5); lacinia mobilis of left mandible dilated, with 4 teeth (fig. I, 4); lacinia mobilis of right mandible bifurcate (fig. I,5). Mandibular palp slender, linear, 3-segmented, not exceeding the length of mandible: first segment short, third segment shorter than first one, second segment long (fig. I, 4), segments 2—3 with long setae.

Maxilla 1: inner plate short, with distolateral tooth and bearing one long circumplumose seta (fig. V, 5), outer plate with 7 spines (2 slender smooth anterior and 5 stout smooth posterior spines) and one distolateral strong

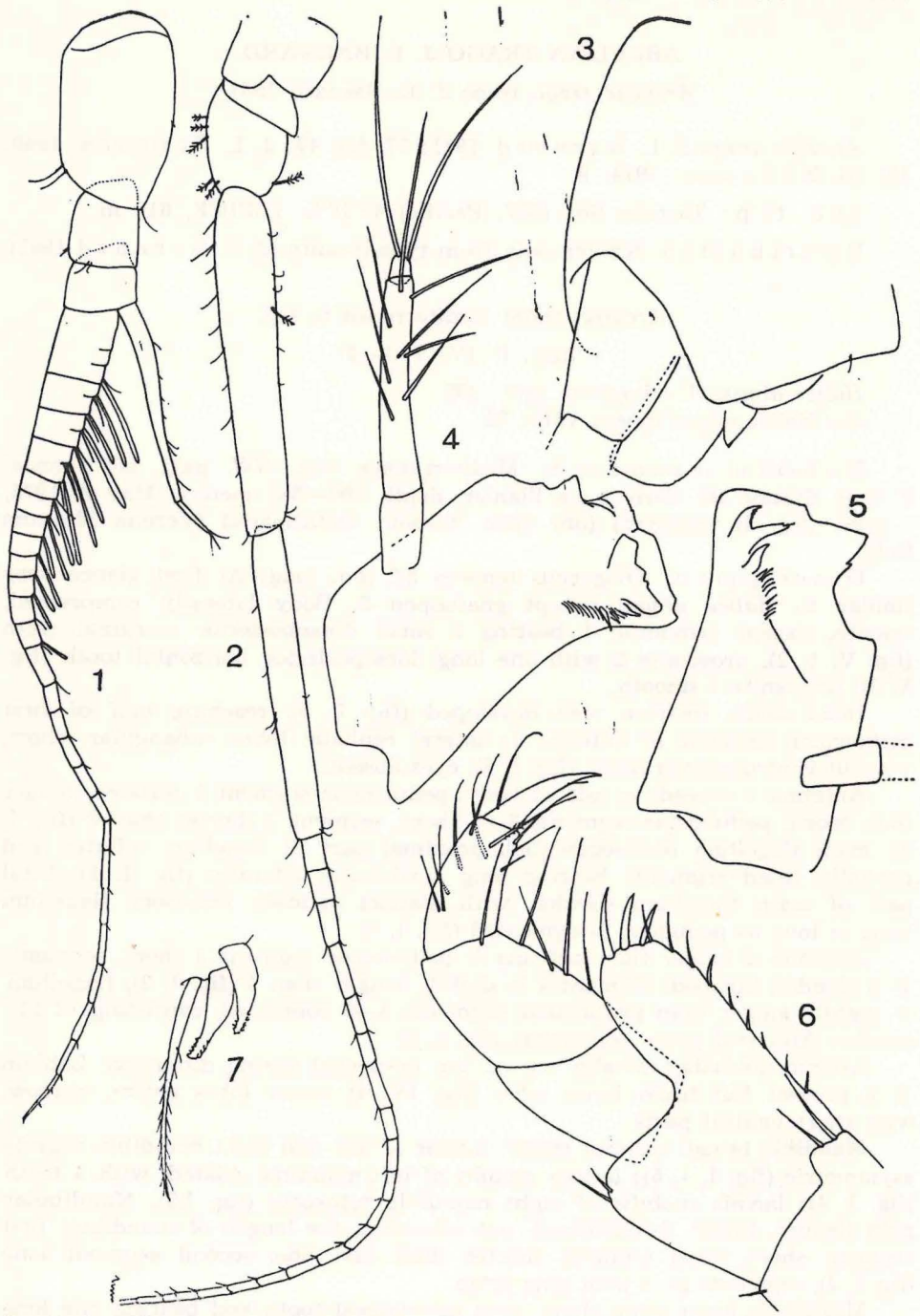

Fig. I. *Arculfia trago mediterranea*, n. ssp., st. F. V. P. 30, female 5.2 mm: 1 = antenna 1; 2= antenna 2; 3 = head; 4 = left mandible; 5 = right mandible; 6 = maxilliped.

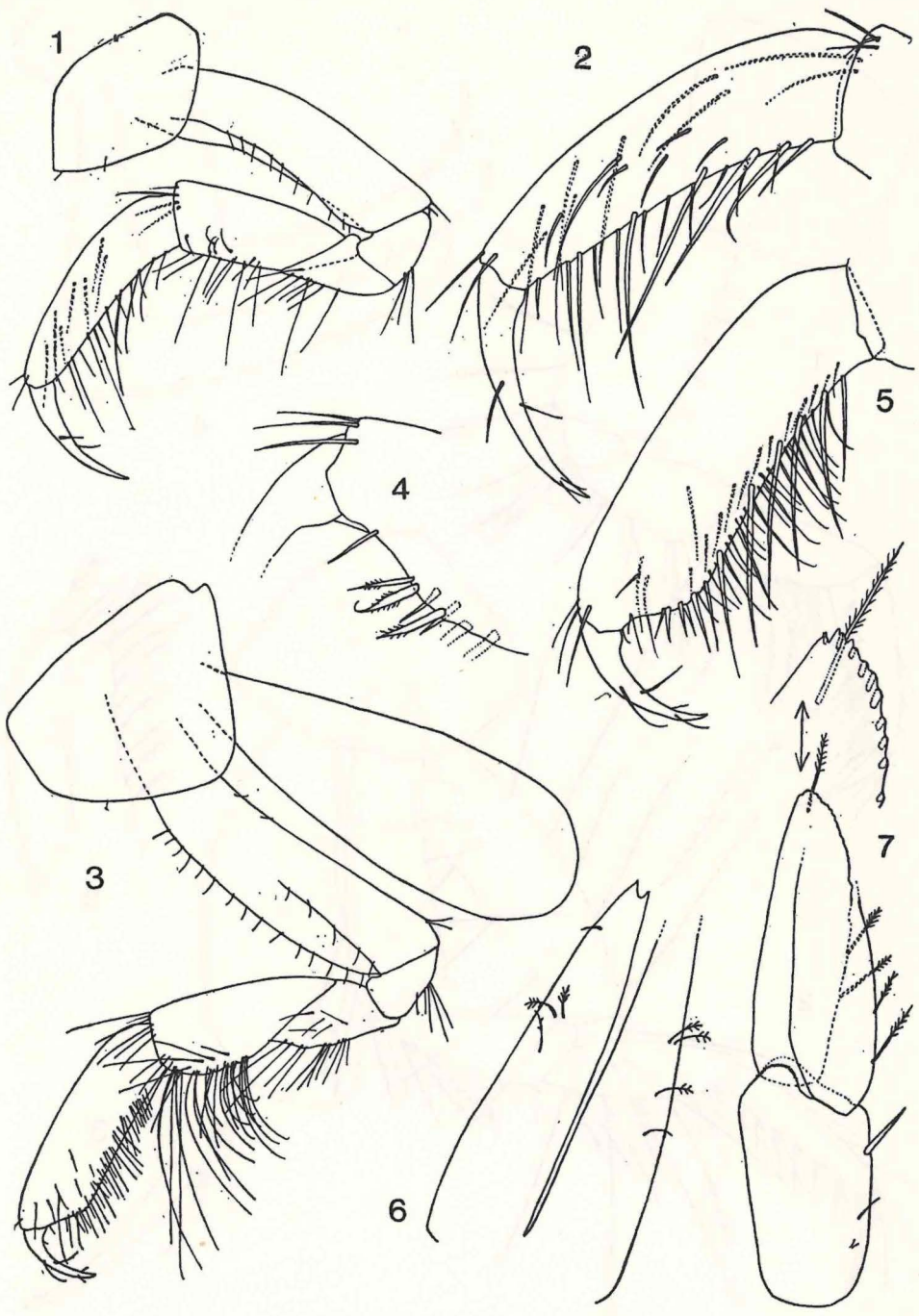

Fig. II. *Arculfia trago mediterranea*, n. ssp., st. F. V. P. 30, female 5.2 mm: 1—2 = gnathopod 1; 3—5 = gnathopod 2; 6 = telson; 7 = uropod 3.

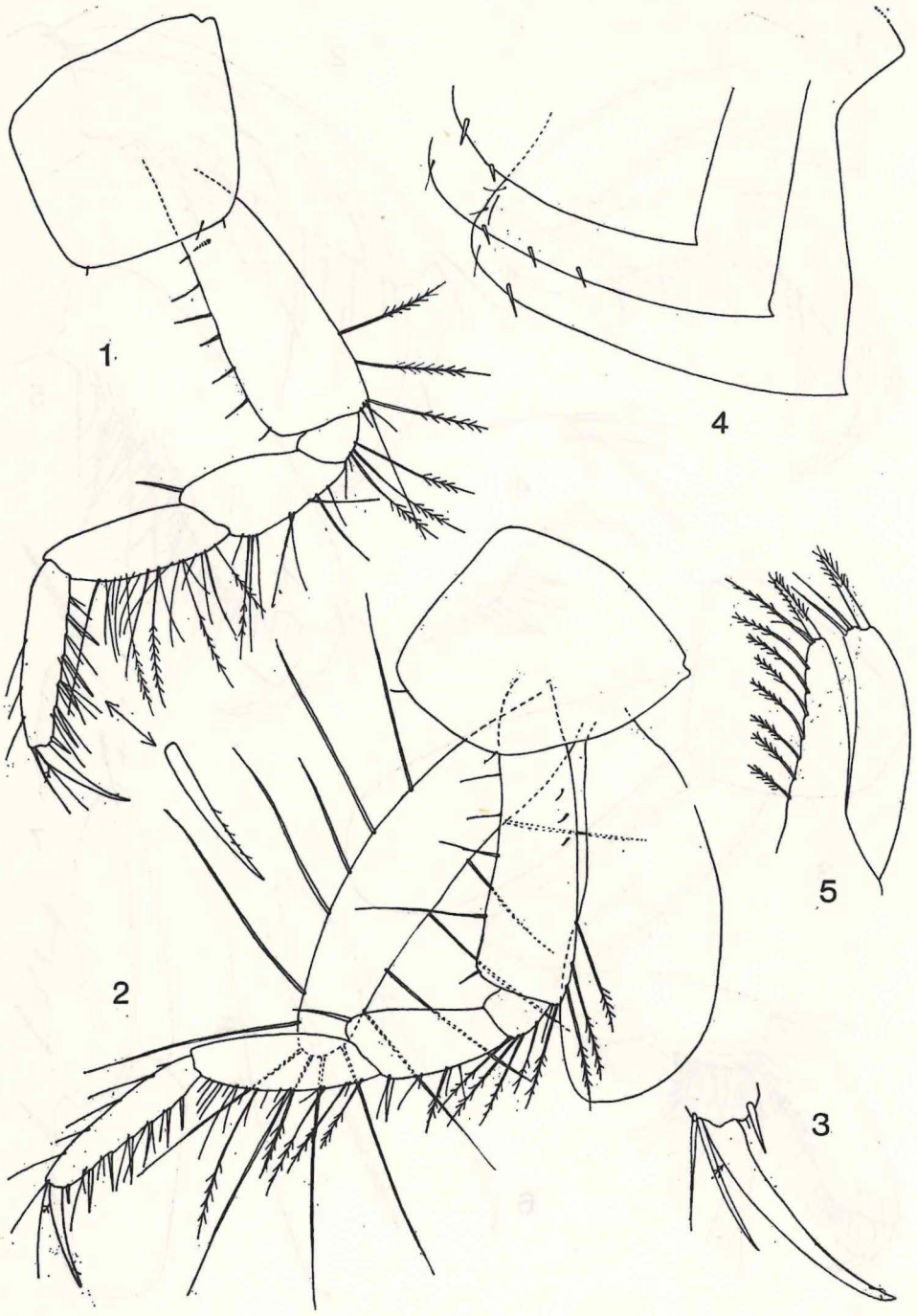

Fig. III. *Arculfia trago mediterranea*, n. ssp., st. F. V. P. 30, female 5.2 mm: 1 = pereopod 3; 2—3 = pereopod 4; 4 = epimeral plates 1—3; 5 = maxilla 2.

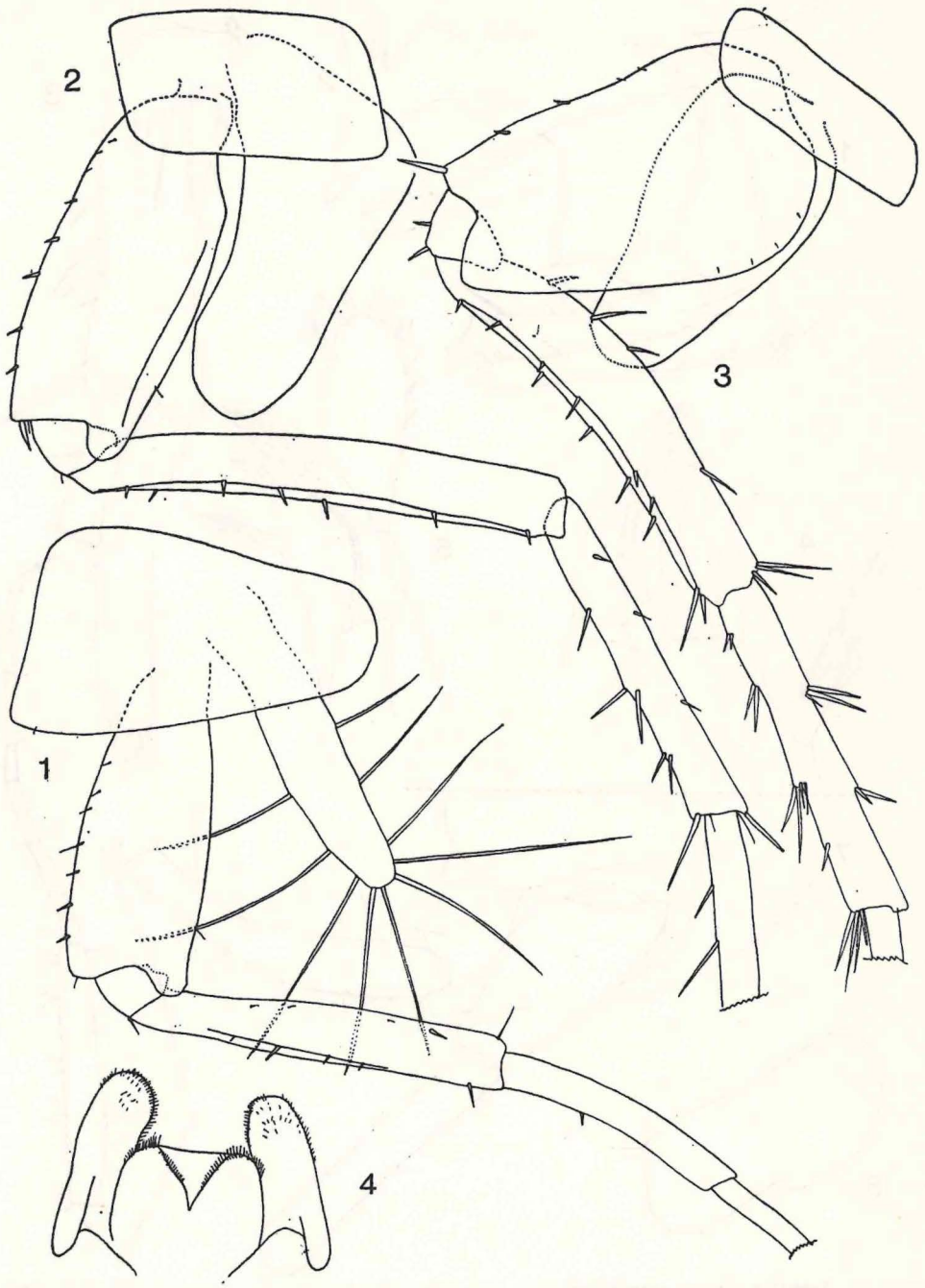

Fig. IV. *Arculfia trago mediterranea*, n. ssp., st. F. V. P. 30, female 5.2 mm: 1 = pereopod 5; 2 = pereopod 6; 3 = pereopod 7; 4 = labium.

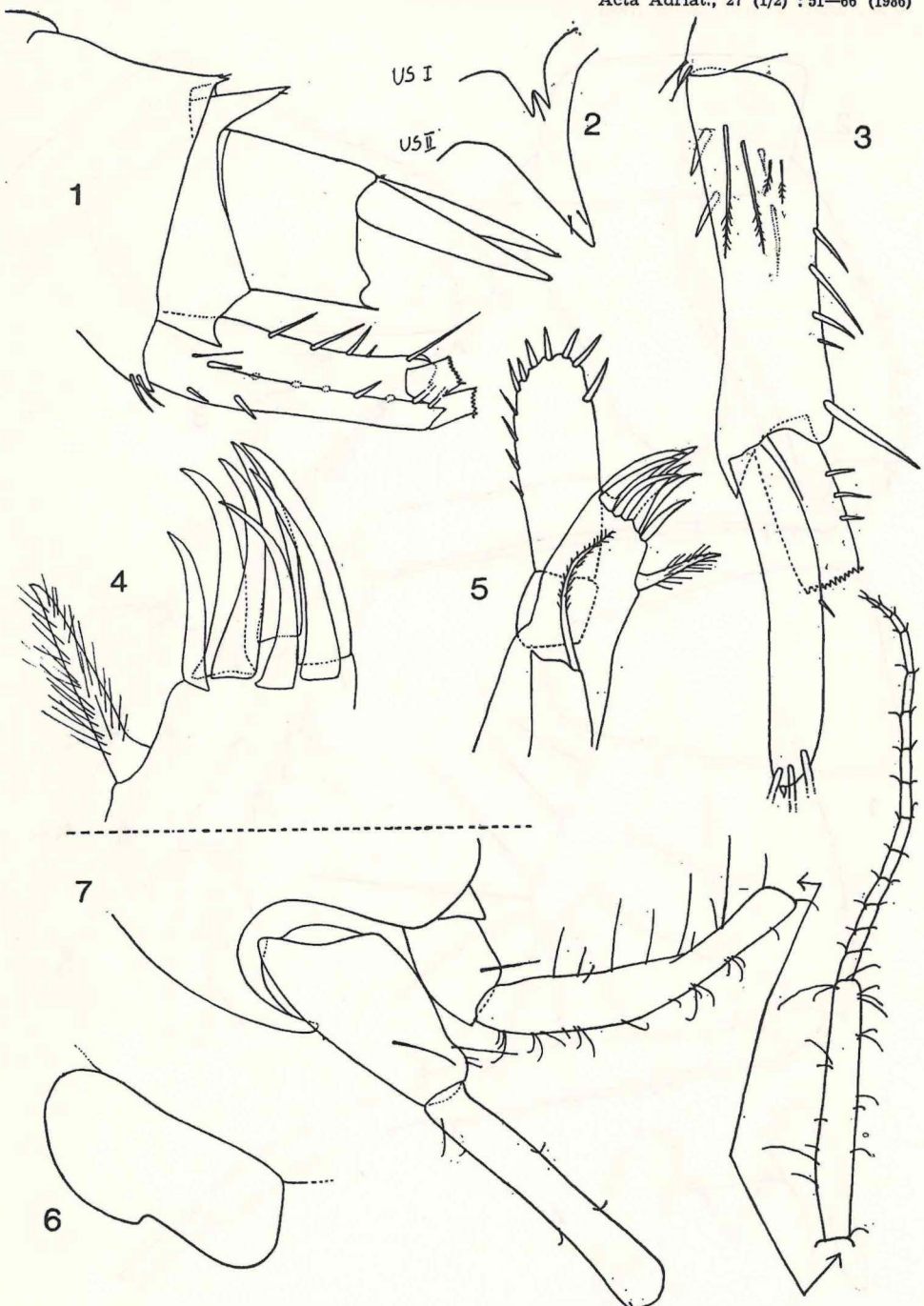

Fig. V. *Arculfia trago mediterranea,* n. ssp., st. F. V. P. 30, female 5.2 mm: 1—2 = urosomites; 3 = uropod 1; 4—5 = maxilla 1. *Pardaliscoides tenellus* Stebb., st. F. V. P. 37, female 6 mm: 6 = labrum; 7 = head with antennae.

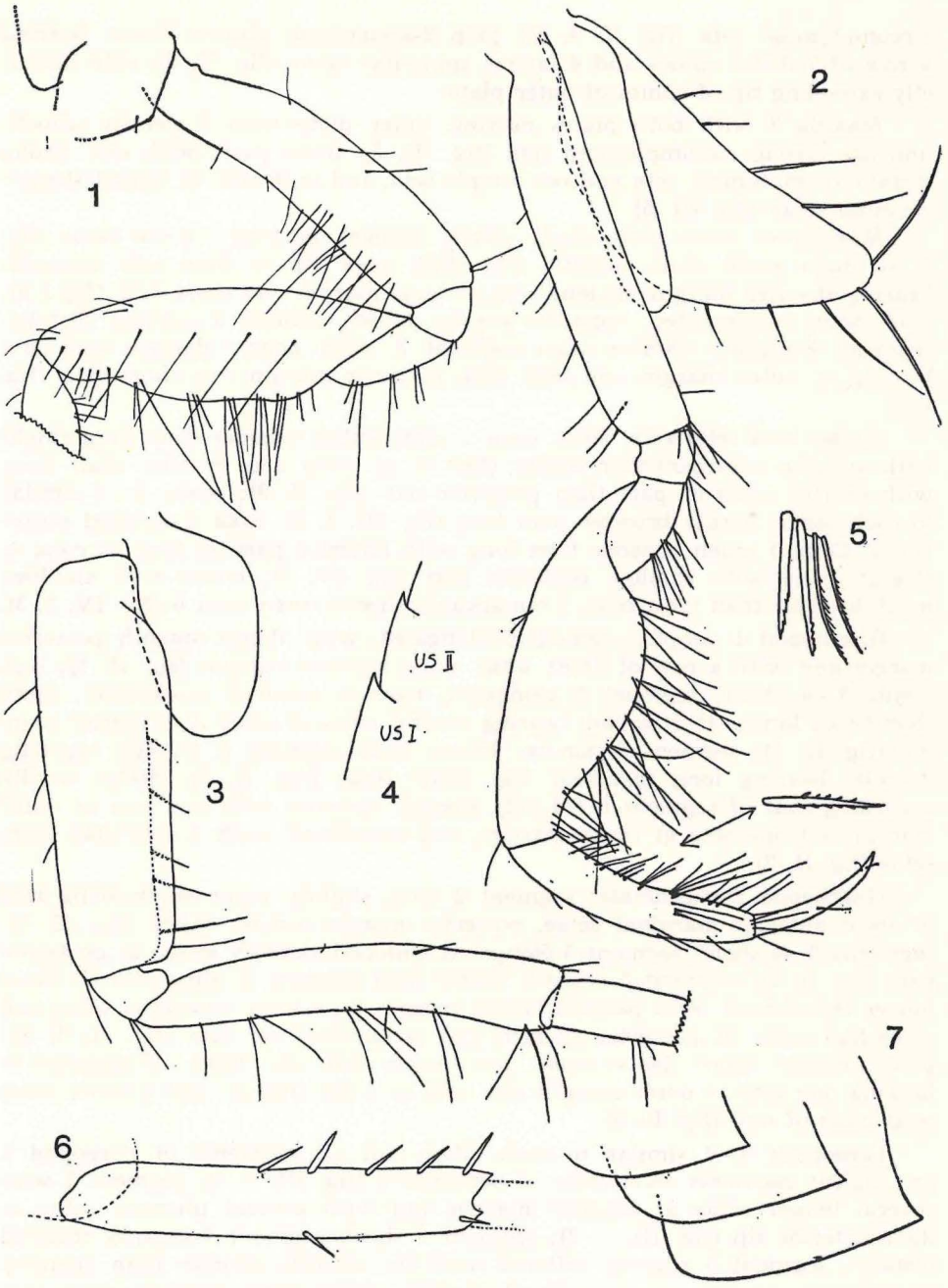

Fig. VI. *Pardaliscoides tenellus* Stebb., st. F. V. P. 37, female 6 mm: 1 = gnathopod 1; 2 = gnathopod 2; 3 = pereopod 6 (coxa not figured); 4 = urosomites 1—2, lateral projection; 5 = retinacula and setae on pleopod 3; 6 = peduncle of uropod 1; 7 = epimeral plates 1—3.

circumplumose seta (fig. V, 4, 5); palp 2-segmented, almost linear, bearing a row of 7 distal spines and 4 lateral spine-like setae (fig. V, 5), palp distinctly exceeding tip of spines of outer plate.

Maxilla 2 with both plates narrow, outer plate with 2 slender smooth and one strong circumplumose seta (fig. III, 5), inner plate with one strong distal circumplumose seta and one simple seta, and with row of lateral slender plumose setae (fig. III, 5).

Maxilliped: inner plate small, almost vestigal, bearing 2 distal setae (fig. I, 6); outer plate short, slightly exceeding inner tip of first palp segment, bearing at outer margin one long seta, at inner margin one short seta (fig. I, 6). palp stout, 4-segmented, segments poorly setose, segment 3 unlobed distally, segment 4 slightly shorter than segment 3, with poorly defined nail and bearing at outer margin one long seta, at inner margin one short seta (fig. I, 6).

Coxae 1—4 relatively short, coxa 1 remarkably broader than long (high) with angular ventroanterior corner (fig. II, 1); coxa 2 is broader than long, with shorter anterior part than posterior one (fig. II, 3); coxae 3—4 similar to each other, hardly broader than long (fig. III, 1, 2), coxa 4 unlobed posteriorly. Coxa 5 much broader then long with anterior part as long as coxa 4, straight, and with shallow posterior part (fig. IV, 1); coxae 6—7 shallow, much broader than long, coxa 7 remarkably shorter than coxa 6 (fig. IV, 2, 3).

Gnathopod 1 simple, segment 2 elongated, with almost smooth posterior margin and with a row of short setae along anterior margin (fig. II, 1); segments 3—4 short; segment 5 elongated, narrow, unlobed posteriorly, more than twice longer than broad, bearing several rows of setae at posterior margin (fig. II, 1); segment 6 narrow, longer than segment 5, slightly tapering distally, bearing long marginal and facial setae (fig. II, 2), dactyl hardly exceeding half of segment 6 (66:112), slender, smooth, with one seta at outer margin and one seta at inner margin; nail undefined, with 2 subdistal short setae (fig. II, 2).

Gnathopod 2 subchelate; segment 2 long, slightly recurved, bearing row of shrot anterior marginal setae, posterior margin almost naked (fig. II, 3); segments 3—4 short; segment 5 elongated, unlobed, densely setose at posterior part (fig. II, 3); segment 6 slightly longer than segment 5, almost three times longer than broad, with parallel lateral margins and with numerous setae and spine-like setae at posterior margin and posteroinferior face (fig. II, 4, 5); palm oblique, short, dactyl short, but longer than the width of segment 6, bearing one seta at outer margin, one seta at inner margin and 2 short setae near basis of nail (fig. II, 5).

Pereopods 3—4 similar to each other, but all segments of pereopod 4 are slightly narrower than these of pereopod 3 (fig. III, 1, 2); segment 2 with several longer setae at anterior margin and with several plumose setae at distoposterior tip (fig. III, 1, 2); segment 3 short, segment 4 slightly inflated distally; segment 5 slightly inflated medially, slightly shorter than segment 6; posterior margin of segments 2—5 with single long plumose setae and simple setae; posterior margin of segment 6 with numerous short spines and setae; dactyl hardly exceeding half of segment 6 (29:49 in pereopod 3, 28:49 in pereopod 4), naked (fig. III, 1, 2, 3).

Pereopods 5—7 long; segment 2 of pereopods 5—6 dilated but almost linear, with short spines along anterior margin and with naked posterior margin (fig. IV, 1, 2), provided with well developed narrow ventroposterior lobe; segment 3 short; segment 4 longer than segment 2, linear; segment 5 remarkably shorter than segment 4 (fig. IV, 1, 2), segments 6—7 missing.

Segment 2 of pereopod 7 proximally dilated much more than distally, with ventroposterior lobe and with naked posterior margin (fig. IV, 3), segment 4 longer than segment 2, segment 5 shorter than segment 4, segments 6—7 missing.

Pleopods with short stout peduncle bearing 2 retinacula and one strong plumose seta each (fig. I, 7). Epimeral plates 1—3 slightly pointed and with ventral spines (fig. III, 4).

Ventroposterior corner of urosomite 1 near basis of peduncle of uropod 1 with 2 setae (fig. V, 1). Uropod 1: peduncle with 2 ventrofacial spines, as well as with dorsoexternal and dorsointernal row of spines and with short distal tooth (fig. V, 1, 3); outer ramus slightly shorter than peduncle (fig. V, 3), inner ramus missing. Uropod 2 missing.

Uropod 3 hardly exceeding tip of uropod 1, with strong peduncle (fig. II, 7), outer ramus foliaceous, slightly longer than peduncle (7.4:5.9), with distolateral row of plumose setae (fig. II, 7), inner ramus partially missing.

Telson long, exceeding tip of peduncle of uropod 3, cleft nearly to the basis (fig. II, 6), each lobe notched distally (probably with spine in each notch); a pair of short plumose setae appears in upper half of each lobe.

Coxal gills occur on pereonites 2—7, simple (fig. II, 3; III, 2; IV, 2, 3). Oostegyts narrow, with long marginal setae, occur on pereonites 2—5 (fig. III, 2; IV, 1).

Males unknown.

Variability: During the dissection of the specimen, labrum was not localed with determination so it seems that it is with incised distal part (doubtful character). On the other hand, J. L. Barnard (1961) figured labrum of *A. trago trago* with entire margin; but on the other hand, on other Barnard's figure of mandible (fig. 47 E) appears the figure of labrum with incised distal part. As our other specimen was without mouthparts, it was not possible for us to establish the exact shape of labrum.

Remarks and Affinities: Our specimens in hands agree mainly with description and figures of *Arculfia trago* J. L. Barnard 1961, known from deep sea waters (610 meters) of Tasman Sea in SW. Pacific (shape of antennae, head, mandible, telson, maxilliped, maxilla 2, epimeral plates, etc.).

But, based on short decription and figures given by J. L. Barnard (1961), the specimens from the Mediterranean Sea differ from thes from Tasman Sea by remarkably shorter dactyl of pereopods 3—4 (dactyl reaching 3/4 of segment 6 in *A. trago trago),* by longer segment 6 of pereopods 3—4 (segment 6 is longer than segment 5 in our specimens, shorter than segment 5 in *A. trago trago);* by shorter and broader coxa 2 (narrower and longer in *A. trago trago);* peduncle of uropod 3 is longer regarding rami (peduncle is shorter in *A. trago trago*); labium in our specimens is with entire outer lobe (incised in *A. t. trago*); dactyl of gnathopod 2 exceeding the width of segment

6 (not exceeding the width in *A. t. trago*); segment 2 of pereopods 5—7 distinctly lobed ventroposteriorly (unlobed in *A. t. trago*); urosomite 1 with 2 dorsoposterior teeth (one tooth in *A. t. trago*).

As description and figures of *A. trago trago* are very scarce, and many figures are not described, it is not possible to establish other differences in detail. *A. t. trago* is also known only based on one entire and one damaged specimen from Tasman Sea, and many details of some body-parts are unknown. Based on established differences between our specimens from Mediterranean Sea and existing figures and descriptions of *A. trago trago* from Tasman Sea, we considered our specimens from Mediterranean Sea as a distinc new subspecies, *A. trago mediterranea*, n. ssp. But, still new finding of *A. trago trago* and its redescription in detail will show the exact relations between it and the populations from Mediterranean Sea (ssp. *mediterranea*). We cannot exclude the possibility that both populations represent only two populations of the same taxon, but based on our present knowledge, we can not consider completely identic the specimens from Mediterranean Sea with these from Tasman Sea.

Holotype: Female 5.2 mm. Holotype and paratype are deposited in Museum of Natural History in Verona, Italy.

PARDALISCELLA BOECKII (Malm 1871)

Pardalisca boeckii Malm. 1871: 547, pl. 5, fig. 2.

Pardaliscella boecki Sars 1895: 408, pl. 143, fig. 2; G. Karaman 1974: 28.

Pardaliscella boeckii G. Karaman and U. Schiecke 1973: 149, fig. I—III.

Material examined: Mediterranean Sea (Tyrrhenian Sea): Bay of Neapel, off Capri, 150 m, one spec., Nov. 14, 1974 (leg. U. Schiecke);

— Napoli Bay (Ischia, P. S. Pancrazio), 150 m, January 17, 1970, one spec. (leg. U. Schiecke);

— S. of Napoli: 40°36'04" N, 14°07'56" E, 840 m, June 9, 1975, one spec. (leg. P. Cate).

Remarks: The studied specimens from these localities agree completely with description and figures given by G. Karaman and U. Schiecke 1973 and G. Karaman 1974.

Second segment of uropod 3 sometimes undistinctly separated from the first segment, rami with one distal seta or spine.

Loc. typ.: Bohuslän (NE. Atlantic).

Distribution in the Mediterranean Sea: several localities in Tyrrhenian Sea (G. Karaman and U. Schiecke 1973; G. Karaman 1974).

PARDALISCOIDES TENELLUS Stebbing 1888

figs.: V, 6, 7; VI

Pardaliscoides tenellus Stebbing 1888: 1725; Stebbing 1897: 38, pl. 12; Stebbing 1906: 225; J. L. Barnard 1958: 110;, J. L. Barnard 1959: 39; G. Karaman 1974: 30.

Pardaliscoides tenellus Ledoyer 1977: 400, fig. 26.

Pardalisca abyssi (part.) Della Valle 1893: 692.

nec *Pardaliscoides tenellus* Stephensen 1931, 217, fig. 65, 66 (= ? *Princaxelia stephenseni* Dahl 1959).

Material examined: Mediterranean Sea, S. of Embiez Island (off France), depth 320—360 meters, one ovig. female of 6 mm partially already dissected.

Remarks and Affinities. This specimen figured and studied already by Ledoyer (1977) (fig. 26). I have not seen his slides of body parts dissected and figured by him; I prepared some figures based on rests in hands of this specimen, especially regarding the parts not figured or mentioned by Ledoyer or other authors (labrum, etc.).

Stebbing described *Pardaliscoides tenellus* from Southern Pacific (37°29'S, 83°7'E, on depth of 3246 meters). Later Stebbing (1897) redescribed again the same species more in detail from the same locality giving the new figures of it. Later, this species was never found nor redescribed, so many body-parts are still unknown.

Ledoyer (1977) mentioned and partially figured *P. tenellus* from NW. part of the Mediterranean Sea (S. of Embiez Island).

The comparison of existing figures and descriptions of this species from southern part of Pacific, given by Stebbing, and these of Mediterranean Sea given by Ledoyer and our present study, show the high similarity between specimens of both populations. But, Mediterranean specimens differ from these from Pacific by remarkably longer segment 6 of gnathopod 2; peduncular segment 3 of antenna 1 regarding the length of ped. article 2 seems to be shorter than that in figs of S. Pacific; segment 4 of pereopod 6 regarding the length of segment 2 segment 2 seems tot be slightly shorter than that in specimens from S. Pacific.

Our examination showed that in Mediterranean population labrum is much broader than long, asymmetrically incised distally (fig. V, 6). Epimeral plates 1—3 pointed, without ventral spines or setae (fig. VI, 7). Pleopods 1—3 each with peduncle bearing one group of 2 retinacula and 2 plumose setae (fig. VI, 5). Rostrum of head strong, not exceeding half of first peduncular segment of antenna 1 (fig. V,7); peduncular segment 2 is narrow but only slightly longer than segment 1 (fig. V, 7), segment 3 was missing. Antenna 2 with short third peduncular segment (fig. V, 7), peduncular segment 5 slightly shorter than 4, both poorly setose, flagellum slender, exceeding the length of last peduncular segment and consisting of 14 articles (fig. V, 7), antennal gland cone very short. Urosomite 1 and 2 each with small dorsomedian horizontal tooth (fig. VI, 4).

Peduncle of uropod 1 with row of dorsal marginal spines (fig. VI, 6). Gnathopod 1: segment 2 with long anterior setae; segment 5 inflated medially at posterior margin (fig. VI, 1), and with row of slender long facial setae.

Gnathopod 2: segment 2 with shorter anterior marginal setae (fig. VI, 2); segment 5 long and dilated medioposteriorly (fig. VI, 2); segment 6 narrow, slightly shorter than segment 5, bearing at posterior margin numerous setae and short serrate spines; dactyl slender, with one dorsal seta (fig. VI, 2), nail not distinctly separated.

Pereopod 6 with segment 2 unlobed, linear, with several innner facial setae, segment 4 hardly longer than segment 2 (fig. VI, 3).

Oostegyts narrow, setose, occur on pereonites 2—5. Coxal gills ovoid, normal (fig. VI, 2, 3).

Because of small differences between Pacific and Mediterranean specimens and by the absence of any comparative material for study, it was not possible to establish distinct differences between Pacific and Mediterranean populations, and we left both populations under the name of *Pardaliscoides tenellus* Stebb. 1888.

Loc. typ.: South Pacific (37°29'S, 38°7'W, 3246 m).

Localities cited: Loc. typ. (Stebbing 1888, 1897); Mediterranean Sea (S. of Embiez Island) (Ledoyer 1977; present work).

CONCLUSIONS

The family *Pardaliscidae* is now presented in the Mediterranean Sea by 9 species belonging to 6 genera: *Arculfia, Halice, Nicippe, Pardalisca, Pardaliscella* and *Pardaliscoides*. All members of family *Pardaliscidae* are living in deeper sea waters under 100 meters depth.

The finding of *Arculfia trago,* known from S. Pacific (Tasman Sea) in the Mediterranean Sea, support our opinion that often deep sea amphipods have very large distribution over the World (for example *Pardaliscoides tenellus* known also in S. Pacific and Mediterranean Sea). On the other hand, based on our study of various amphipods, we can tell that not exists one endemic *Amphipoda* fauna of the Adriatic Sea (except coastal subterranean species like *Neogammarus adriaticus* G. Karaman, *Bogidiella dalmatina, etc.)* because Adriatic Sea was always in connection with the Mediterranean Sea and it was not possible to develop one endemic fauna of Amphipods in Adriatic Sea.

As *Arculfia trago trago* and *A. trago mediterranea* are known on 2 specimens, partially damaged, each, it is necessary to study new material of both taxa to establish their variability and real taxonomic status and relationships.

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PRVI NALAZ RODA *ARCULFIA* J. L. BARNARD U SREDOZEMNOM MORU, SA OSVRTOM NA DRUGA DVA ČLANA IZ OBITELJI PARDALISCIDAE

(156. Prilog poznavanju amphipoda)

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KRATKI SADRŽAJ

Predstavnici obitelji *Pardaliscidae* su uglavnom stanovnici većih morskih dubina u Sredozemnom moru. Monotipski rod *Arculfia* J. L. Barnard 1961, poznat do sada samo iz Tasmanijskog mora u jugozapadnom dijelu Pacifika, nađen je sada prvi put u Sredozemnom moru južno od obale Francuske na dubini od 200—360 metara (podvodni kanjon Planier). Poplulacija iz Sredozemnog mora se nešto razlikuje od tipične vrste ovog roda, *Arculfia trago trago* J. L. Barnard 1961 iz južnog Pacifika, pa smo je opisali kao novu podvrstu, *Arculfia trago mediterranea,* n. ssp.

Podvrsta *mediterranea* se razlikuje od tipične podvrste *A. t. trago* po: znatno kraćem daktilusu trećeg i četvrtog pereopoda, po dužem šestom članku trećeg i četvrtog pereopoda, kraćoj i dužoj drugoj koksalnoj ploči; drška trećeg uropoda u odnosu na grane je znatno duža nego kod tipične povrste; labium ima cjelokrajne vanjske lobuse (lobusi su urezani kod tipične podvrste); daktilus drugog gnatopoda je duži od dijametra šestog članka gnatopoda (kod tipične podvrste nije duži); drugi članak petog, šestog i sedmog pereopoda ima dobro razvijen stražnji lobus (bez lobusa kod tipične povrste); prvi urozomalni članak tijela nosi 2 leđna zupca (kod tipične podvrste je samo jedan zubac).

Međutim, kako su i tipična podvrsta *A. t. trago,* kao i podvrsta *mediterranea,* poznate samo na osnovu po 2 dijelimično oštećena primjerka, to njihov varijabilitet i neke takosonomske odlike su ostale nepoznate, pa će biti neophodno proučiti taksonomski status i međusobni odnos populacija iz Sredozemnog mora i Pacifika, na osnovu novog, bogatijeg materijala koji se bude kasnije uspio sakupiti.

Vrsta *Pardaliscella boeckii* (Malm 1871) je prvi put citirana za Sredozemno more 1973 godine (G. Karaman i U. Schiecke). Sada se navodi još nekoliko novih lokaliteta ove vrste u Tirenskom moru.

Za vrstu *Pardaliscoides tenellus* Stebbing 1888, poznatu iz Pacifika i Sredozemnog mora, dati su neki novi podaci o pojedinim taksonomskim odlikama ove vrste koji su do sada bili slabo poznati ili nepoznati (labrum, retinakule, itd.). Nedostatak bogatijeg materijala ove vrste onemogućava određivanje detaljnijeg taksonomskog položaja mediteranske populacije u odnosu na tipičnu populaciju iz Pacifika.