



DESCRIPTION OF *NATATOLANA NEGLECTA* (HANSEN, 1890)
(PERACARIDA, ISOPODA) FROM SPANISH WATERS

BY

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ABSTRACT

Natanolana neglecta (Hansen, 1890) is described based on specimens collected from Galicia, northwestern Spain (northeastern Atlantic) and compared with material from Spanish collections and from the type locality (Naples, Mediterranean Sea). The species has rarely been recorded from the European Atlantic as there are only a few records, but the population appears to be common in the Ría de Arousa. New data on morphology and photos of live specimens are provided for the first time.

RESUMEN

Natanolana neglecta (Hansen, 1890) se describe a partir de ejemplares recolectados en Galicia, en el noroeste de España (Atlántico noreste) y se compara con ejemplares de otras colecciones españolas y de la localidad tipo (Nápoles, Mediterráneo). La especie es rara en las aguas europeas del Atlántico, ya que se dispone de muy pocos registros pero la población parece común en la Ría de Arousa. Se proporcionan por primera vez nuevos datos sobre su morfología y se fotografían ejemplares vivos.

INTRODUCTION

The cirrolanid isopod *Natanolana neglecta* (Hansen, 1890) is a Mediterranean species originally described from Naples (Italy) and Nice (France) (Hansen, 1890). It has a widespread distribution in this sea, including East and Levantine basins and the Adriatic Sea (e.g., Picard, 1965; Geldiay & Kocatas, 1972; Bruce, 1986; Müller, 1989; Zavodnik & Kovacic, 2000; Kirkim et al., 2006; Castelló, 2012). Its distribution reaches the adjacent Atlantic coast of Africa and France (Norman, 1904; Monod, 1930). The northern limit of its distribution is Brittany (see record

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in Keable & Bruce, 1997), although it is a very infrequent species along the French Atlantic coast (Sorbe, pers. comm.). Keable & Bruce (1997) redescribed the North Atlantic and Mediterranean species of *Natatolana*, including *N. negelecta*, and Keable (2006) revised the genus.

The recent record of the species in Galicia (NW Spain) (Lourido et al., 2008) prompted a sampling campaign to confirm its presence and describe the Spanish specimens. A population was discovered at the mouth of the Ría de Arousa, from where only the congeneric species *N. borealis* has been cited (Lilljeborg et al., 1851; Mora Bermúdez, 1980). The only available specimen collected by Mora Bermúdez (1980) that the authors have examined belongs to *N. negelecta*; thus, misidentifications between these two species have occurred at least in this case. *N. borealis* has been collected at greater depths than *N. negelecta* around the Iberian Peninsula (e.g., Cartes & Abelló, 1992; Abelló et al., 2002; Sánchez et al., 2008; Frutos & Sorbe, 2013).

Live specimens are observed and photographed for the first time. New morphological data (colour, chromatophore distribution, setation) are described and morphological comparisons with specimens from the type locality (Naples) and other areas of Spain are made.

MATERIAL AND METHODS

The sampling campaign was focused on one of the greater Galician Rías (NW Spain); the Ría de Arousa. Sedimentary cores were extracted and sieved (0.25 mm) by scuba diving. A total of 34 specimens (21 ♂♂, 11 ♀♀, 2 juveniles) were collected from February to October 2012 at seven locations. Specimens are deposited in the Museo Nacional de Ciencias Naturales (MNCN), Madrid (Spain) (catalogue numbers MNCN 20.04/9510 and MNCN 20.04/9511).

All specimens were examined, measured and some dissected in order to get an accurate comparison of morphologic features. Mouthparts and appendages were carefully dissected and figures were drawn using a camera lucida.

Abbreviations used: TL, total length; PS, plumose setae/setae; RS, robust seta/setae; CPS, circumplumose seta/setae; SS, slender seta/setae.

RESULTS

Family CIROLANIDAE Dana, 1852

Genus *Natatolana* Bruce, 1981

Natatolana negelecta (Hansen, 1890) (figs. 1-5)

Cirolana negelecta Hansen, 1890: 327, plate 1 fig. 3-3^a, plate 2 fig. 1-1b. Dolfus, 1903: 7 (part). Hansen, 1905: 345. Monod, 1924: 429; 1930: 144.

Natatolana neglecta. Bruce, 1981: 958; 1986: 222. Brusca et al., 1995: 82. Keable & Bruce, 1997: 695, figs. 16-18; Lourido et al., 2008: 156; Sánchez Moyano & García Asencio, 2011: 131.
Cirolana hirtipes. Heller, 1866: 742. Stalio, 1877: 1375. Stossich, 1880: 224 (misidentification, not *N. hirtipes* (Milne Edwards, 1840)).
Cirolana borealis. Mora Bermúdez, 1980: 187, 188.

Material examined.— Bajo A Tartaruga, 42°32'34''N 08°57'18''W, 32 m, sand muddy sediment, 16 February 2012, 1 ♂; 6 May 2012, 1 ♂, 1 ♀; 16 June 2012, 5 ♂♂, 1 ♀ (1 ♂, 12.5 mm long and 1 ♀, 10.5 mm long, completely dissected and mounted); 3 August 2012, 1 ♂ (15 mm long, completely dissected and mounted); 12 August 2012, 2 ♂♂, 2 ♀♀; mussel farming park, 42°33'13''N 08°57'48''W 40 m, mud sediment, 13 March 2012, 2 juveniles; Bajo A Xarda, 42°32'34''N 08°57'04''W, 36 m, muddy and gravel sediment, 16 July 2012, 1 ♂; Bajo O Rodal, 42°31'55''N 08°58'31''W, 27 m, fine sand and gravel sediment, 21 August 2012, 2 ♀♀; 7 September 2012, 6 ♂♂ 3 ♀♀ (1 ♀, 11 mm long, completely dissected and mounted); Alejandro wreck, 42°31'33''N 08°58'35''W, 37 m, muddy sediment, 23 August 2012, 1 ♂; Bajo A Tritonia, 42°30'24''N 08°56'26''W, 30 m, fine sand sediment, 25 August 2012, 1 ♂; Bajo O Sobreiro, 42°30'47''N 08°58'40''W, 36 m, muddy and gravel sediment, 3 August 2012, 2 ♂♂ 2 ♀♀. Specimens were photographed and later preserved in 70% ethanol.

Additional material.— Ría de Aldán, July-August 1997 (Lourido et al., 2008): Station 19, 42°18'45''N 08°49'45''W, 19 m, medium sand sediment, 1 ♀; Station 23, 42°18'15''N 08°50'15''W, 22 m, muddy sand sediment, 3 ♂♂ (1 ♂, 11 mm long, completely dissected and mounted) 2 ♀♀; Station 28, 42°17'45''N 08°49'45''W, 17 m, muddy sediment, 2 ♀♀; Station 31, 42°17'15''N 08°49'45''W, 17 m, muddy sediment, 1 ♂ 2 ♀♀ (1 ♀, 9 mm long, completely dissected and mounted).

Huelva: specimens mixed with other taxa, only two specimens of *N. neglecta* (Sánchez-Moyano & García-Asencio, 2011): Station H100B, 37°05'58''N 06°55'80''W, 20 m, coarse sand sediment, summer 2002 (1 ♀ 14 mm long, dissected and mounted); Station H050B, 37°07'16''N 007°17'77''W, 20 m, coarse sand sediment, summer 2002 (1 ♂, 14 mm long, dissected and mounted).

Ibiza: Museo Nacional de Ciencias Naturales (MNCN). Fauna III campaign, Station 260A, benthic trawling 39°11'24''-39°12'33''N 01°21'30''-01°23'36''E, 452-460 m, 10 July 1994, 1 ♀ (MNCN Catalogue number 20.04/8959) 13 mm long, completely dissected and mounted.

Gulf of Naples, 40°49'00''N 14°19'77''E, 9 m, March 2009, 1 ♀ 15 mm long, completely dissected and mounted; Gulf of Salerno, 40°30'14''N 14°50'80''E, 17 m, muddy and sand bottom with shell debris, November 1981, 2 ♂♂ (12.5 and 11.5 mm long, completely dissected and mounted) and 2 ♀♀ (1 ♀, 7.5 mm long, completely dissected and mounted).

Description.— TL ranges from 9.5 to 15.5 mm (mean: 12.5 mm); maximum width (5th pereonite) 2.5 to 5 mm (mean: 4.2 mm). Alive specimens are white translucent with orange chromatophores on cephalon, pereon, coxal plates, pleon and telson; number of chromatophores increases from pereonite 1 backwards, being more abundant in the middle and posterior margin of each segment. Some chromatophores are also present on appendages (fig. 1). No variation was observed between males and females. Eyes red brown.

Male (Bajo A Tartaruga, 3 August 2012). TL 15 mm, width 4.7 mm. Lateral margins slightly convex, widest at pereonite 5 (figs. 1 and 2A). Antennae when extended against the body reaching to pereonite 3 (fig. 2B). Pleon narrower than pereon, lateral margins straight. All pleonites visible, pleonite 1 narrowest, partly overlapped by pereonite 7 (figs. 1B and 2). Pleonites 2, 3 posteriorly acute, pleonite 4 rounded (fig. 2C).

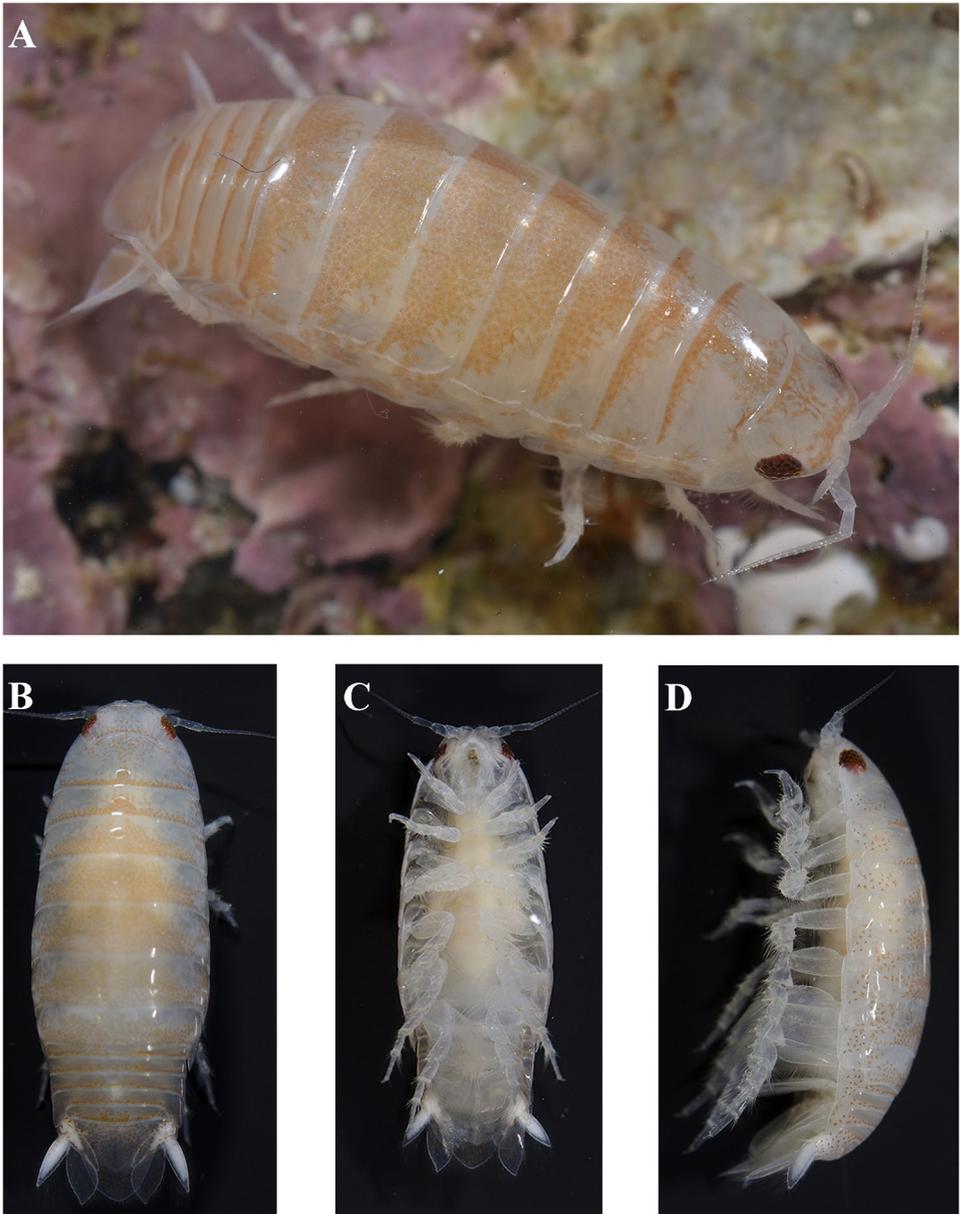


Fig. 1. *Natatolana neglecta* (Hansen, 1890) live specimens from Bajo A Tartaruga (MNCN 20.04/9510). A, Male TL 15 mm, at the sampling area; B-D, male 12.5 mm in dorsal, ventral and lateral view, respectively. This figure is published in colour in the online edition of this journal, which can be accessed via <http://booksandjournals.brillonline.com/content/journals/15685403>.

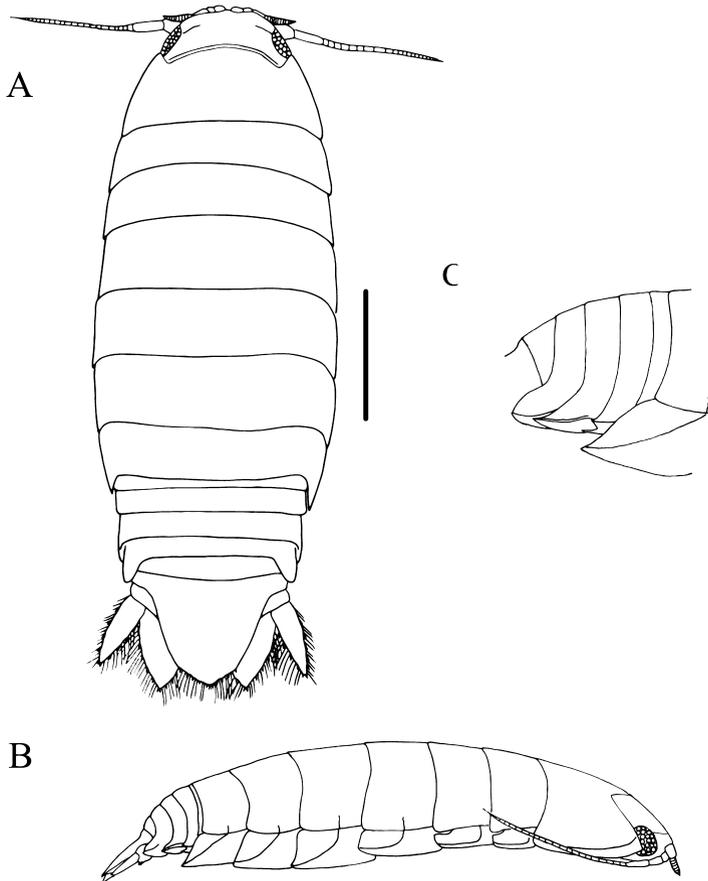


Fig. 2. *Natatolana neglecta* (Hansen, 1890) male (MNCN 20.04/9510). A, Dorsal view; B, lateral view; C, pleonites lateral view. Scale bar = 3 mm.

Cephalon (fig. 2A, B) laterally covered by pereonite 1, with incomplete interocular furrow, and entire submarginal furrow. Eyes ovate, partially covered by pereonite 1, with visible facets (6 and 8 ocelli in horizontal and vertical diameter respectively). Antennule (fig. 3A) peduncle article 3 as long as combined lengths of articles 1 and 2. Article 2 with 2 SS and 1 large pappose seta reaching half of article 3. Article 3 short; subequal to article 1, with 2 PS and 3 SS. Flagellum 12-articulate, shorter than peduncle. First article longest. All articles with three to five long SS. Antennae (fig. 3B) length 3.4 mm, 0.23-times as long as body, extending up to one quarter of pereonite 3. Peduncle article 2 shorter than article 3; article 3, 1.4-times as long as wide; article 4 with 3 SS at posterodistal angle, 3 SS anteromedially, 1 penicillate and 2 SS at anterodistal angle; article 5 with 2 pappose setae at posterodistal angle, 1 penicillate and 3 SS at anterodistal angle.

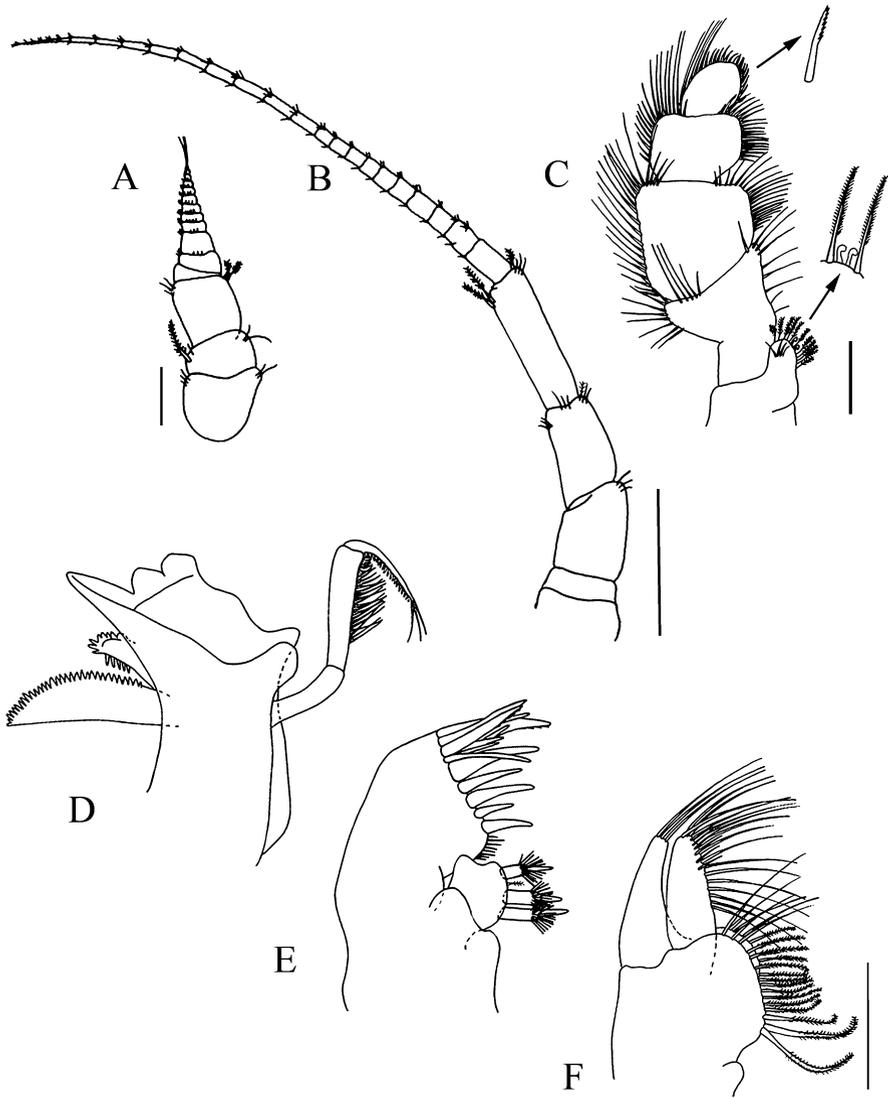


Fig. 3. *Natatolana neglecta* (Hansen, 1890), male (MNCN 20.04/9511). A, antennula; B, antenna; C, maxilliped; D, mandible; E, maxillule; F, maxilla. Scale bars = 0.5 mm.

Flagellum 21-articulate, each article with anterodistal cluster of 2-4 short simple setae. Frontal lamina 3.8-times as long as basal width, reaching more than half of antennule peduncles. Lateral margins straight, anterior margins rounded. Mandible (fig. 3D) spine row with 16 (left) and 19 (right) RS, molar process with 30 (left) and 34 (right) acute spines along anterior margin. Palp article 2 twice the length of article 3, with dense row of simple setae on three-quarters of its length. Article 3 with simple setae and 3 long SS on apex. Maxillule (fig. 3E), medial lobe with 3 RS

and 1 small pappose setae; lateral lobe with 8 small SS and 13 RS, several with notched surface on apex. Maxilla (fig. 3F), lateral lobe with 3 SS, medial lobe with 6 SS and 15 PS. Middle lobe with 19 SS, 13 of them longer. Maxilliped (fig. 3C), endite with 2 coupling hooks, 11 PS and 4 SS. Palp articles 2-5 with both margins setose. Article 5 distal margin with 5 serrate setae on the apex.

Pereon (figs. 1 and 2). Pereonites $1 > 2 = 3 < 4 = 5 > 6 > 7$; pereonites 2 and 3 shortest, pereonite 1 longest. Pereonite 1 with distinct suture along lateral margin, anterolateral margins straight forming acute anterior angles. Pereonites 4-7 with a medial furrow on lateral margins. Coxal plates all with entire oblique suture. Posterior margins of coxae 2-3 posteriorly rounded, subtruncate; 4-7 broad and acute, extended progressively backwards. Pereopod 1 (fig. 4A): basis 2.3-times as long as wide, anterior margin with 8 long SS, a row of 8 SS close to the anterodistal angle, posterodistal angle with 10 long SS; ischium, 0.5-times as long as basis, distal half of posterior margin with 13 long simple setae, anterior and posterior faces with a row of 6 SS, posterior margin with 13 SS, mesiodistal angle with one RS; merus, 0.8-times as long as ischium, anterodistal angle extending one third of propodus, with a continuous row of long SS, distally with one large RS, posterior margin irregular, with 17 RS and 7 SS, anterior and posterior faces with two rows of 6 long simple setae; carpus posterior margin with 1 acute RS and 3 SS, posterior face with 5 SS and 5 SS on proximal margin; propodus about 2.7-times as long as wide, as long as ischium, palm with four RS and eight SS, distally with one large dentate RS and 5 SS opposing dactylus, anterior distal angle with 10 SS; dactylus about 0.5-times as long as propodus, with long accessory seta and low blunt secondary unguis. Pereopod 2 (fig. 4B): similar to pereopod 1; ischium with 8 SS on distal half of posterior margin and 3 RS at posterodistal angle; merus anterodistal angle extending to distal margin of carpus, with 3 RS at apex and two clusters of 4 and 3 RS further back and 4 SS, posterior margin with 13 RS disposed in two clusters, 7 distal and 6 proximal, and 3 RS; carpus posterior margin with 9 RS; propodus posterior margin without RS, distally with one large dentate RS opposing dactylus similar to that one of pereopod 1. Pereopod 3 (fig. 4C): similar to pereopod 2, ischium anterodistal angle with one large RS surpassing the three-quarters of merus, posterodistal angle with 10 RS; merus anterodistal angle with 3 RS at apex and two clusters of 4 and 2 RS further back followed by a cluster of 4 long SS, posterior margin with 13 RS, 2 RS and 5 SS backwards, anterior and posterior faces with two rows of 5 long SS on distal margin; carpus with 9 RS on posterior margin; propodus posterodistal angle with one large dentate RS opposing dactylus similar to those observed on pereopods 1 and 2. Pereopod 4 (fig. 5A): intermediate in form between pereopods 1-3 and 5-7. Slender setae appear on posterior margin of basis, both ischium and merus posterodistal projections are reduced in length compared to pereopods 1 to 3.

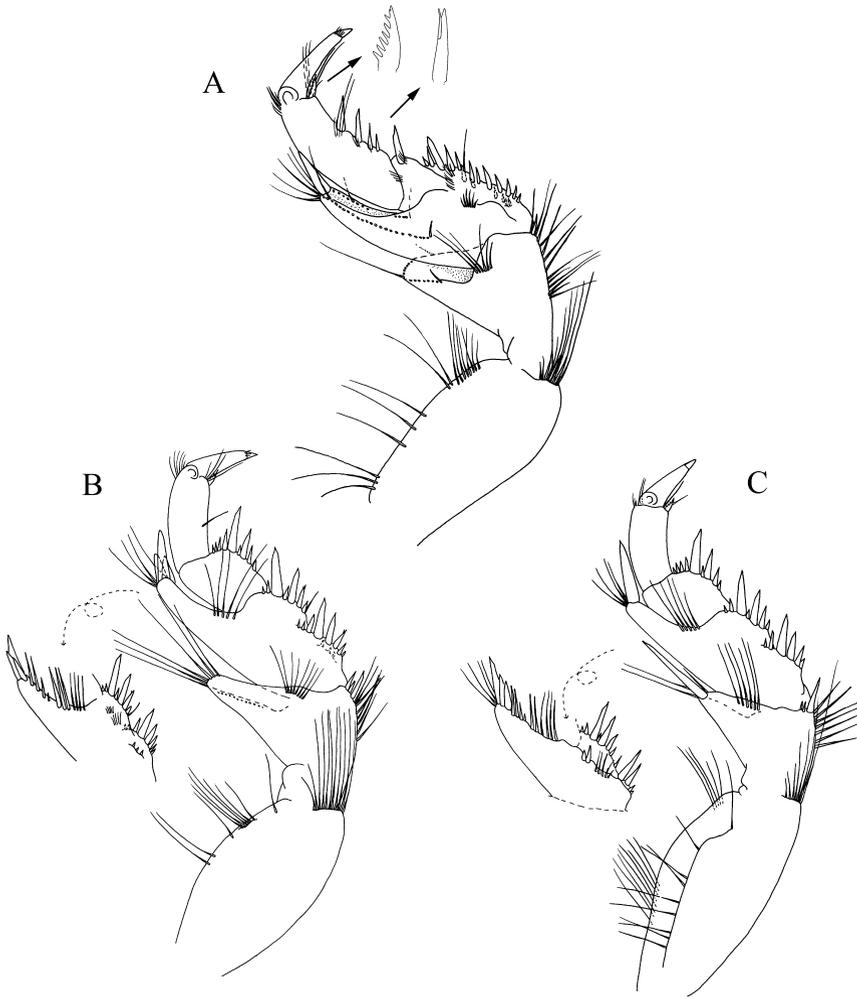


Fig. 4. *Natatolana neglecta* (Hansen, 1890), male (MNCN 20.04/9511). Anterior face of left pereopods 1-3. A, pereopod 1 with detailed robust setae on propodus; B, pereopod 2 with the posterior face of merus; C, pereopod 3 with the posterior face of merus. Scale bar = 0.5 mm.

Ischium anterodistal angle with one large RS, posterodistal angle with 9 RS, and 3 submarginal RS; merus anterodistal angle with 4 RS, posterodistal angle with 12 RS, posterior margin with 2 RS, 5 RS submarginally; carpus with 4 RS on posterior margin, 3 RS submarginally, 6 RS on anterodistal angle, 11 RS on posterodistal angle, distal margin of posterior face with 7 PS; propodus with two clusters of 3 and 2 RS on posterior margin, posterodistal angle with 2 RS. Pereopods 5-7 (fig. 5B-D): basis becomes gradually wider; the number of setae on posterior margin decreases so that they are absent on pereopod 7. The number and length of setae on medial carina and anterior margin gradually increase. Ischium and merus

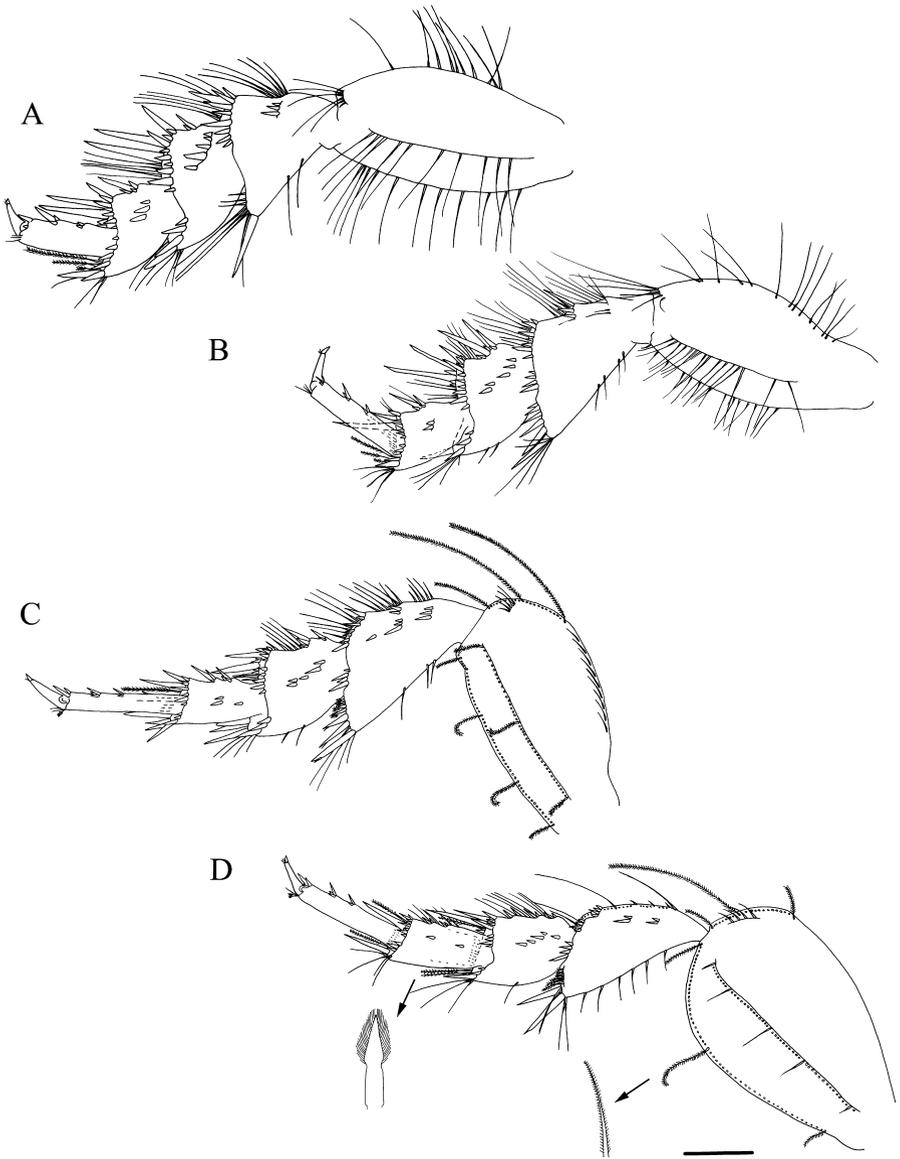


Fig. 5. *Natatolana neglecta* (Hansen, 1890), male (MNCN 20.04/9511). Anterior face of left pereopods 4-7. A, pereopod 4; B, pereopod 5; C, pereopod 6; D, pereopod 7 with the detail of plumose setae from basis and carpus. Scale bar = 0.5 mm.

reduce the anterodistal projection and increase in size; the number and length of RS on posterior margin decrease from pereopod 4 to 7 and are replaced by long slender setae. Carpus and propodus become narrower and longer, increasing the number and length of SS. PS first appear on carpus of pereopod 5 and progressively

extend to all articles in pereopod 7. Pereopod 7 (fig. 5D): basis 2-times as long as wide, distal half of posterior margin convex, with long PS extending up to distal margin of ischium, proximal half straight without setae, medial carina with SS, anterior margin weakly convex, covered with long PS; ischium, posterior margin with three widely spaced simple setae at proximal half and long SS present almost the entire length, posterodistal angle with two clusters of 4 RS, distal margin with 4 RS, anterodistal angle with 2 long RS, 3 SS and 6 PS, anterior margin with 6 simple setae. Four RS submarginally; merus posterior margin with 6 RS and some long SS, posterodistal angle with 7 RS, anterior margin with 1 SS, anterodistal angle with 3 RS, distal margin with 4 RS and 21 PS (5 long, 16 short) on anterior and posterior faces respectively. 5 RS submarginally; carpus, posterior margin with two clusters of two RS and six SS, posterodistal angle with 6 RS, anterodistal angle with 4 RS and 4 SS. In both postero- and anterodistal angles one of the RS is longer than the rest, extending to half propodus, 3 RS and 21 PS (5 long, 16 short) on distal margin from anterior and posterior faces, respectively, anterior margin with no setae, 2 RS submarginally; propodus, posterior margin with two clusters of 2 and 3 RS, posterodistal angle with 3 RS, anterodistal angle with 1 SS and 2 PS.

Pleon (figs. 1 and 2): all pleonites visible dorsally. Pleonite 1 narrowest, with anterior dorsal portion partly overlapped by pereonite 7, less visible in dorsal and lateral view. Pleonites 2-5 subequal in width. One strongly developed furrow on lateral margins of pleonites 2 and 4, two furrows on pleonite 3. Epimera of pleonites 2-4 produced posteriorly. Pleonite 4 epimera forming a broad acute point. Pleotelson (fig. 6A) broad, subtriangular, 0.81-times as long as width. Posterolateral margins straight, markedly angled to the straight anterolateral margins. Posterior margin with long PS and 12 RS, 6 on each margin. Uropods (fig. 6B): peduncle ventrolateral angle with 3 RS and 1 long PS. Exopod 0.8-times the length of the endopod, 3.2-times as long as wide. Apex acute, with 2 RS. Lateral margin with 5 RS, medial margin with 4 RS. Both margins slightly convex with short PS on distal three-quarters. Endopod lanceolate, 2.7-times as long as width. Apex subacute, with 2 RS. Lateral margin weakly convex, with 5 RS and long PS on distal two-thirds. Medial margin convex, with 5 RS and numerous PS along entire length. Pleopod 1 (fig. 6C) peduncle with 5 coupling hooks and 4 PS on medial margin, 1 short SS on lateral margin. Endopod width less than exopod, medial margin straight, short simple setae along three-quarters of total length, PS on distal and lateral margins. Exopod medial margin weakly concave, with PS on distal one-third only, numerous PS entirely covering distal and outer lateral margins. Pleopod 2 (fig. 6D) peduncle with 4 coupling hooks and 5 PS on medial margin, 4 small SS on lateral margin. Endopod margins straight, with PS on distal margin and distal two-thirds of lateral margin. Exopod with PS on distal half only. Appendix masculina narrow, of relatively constant width, arising

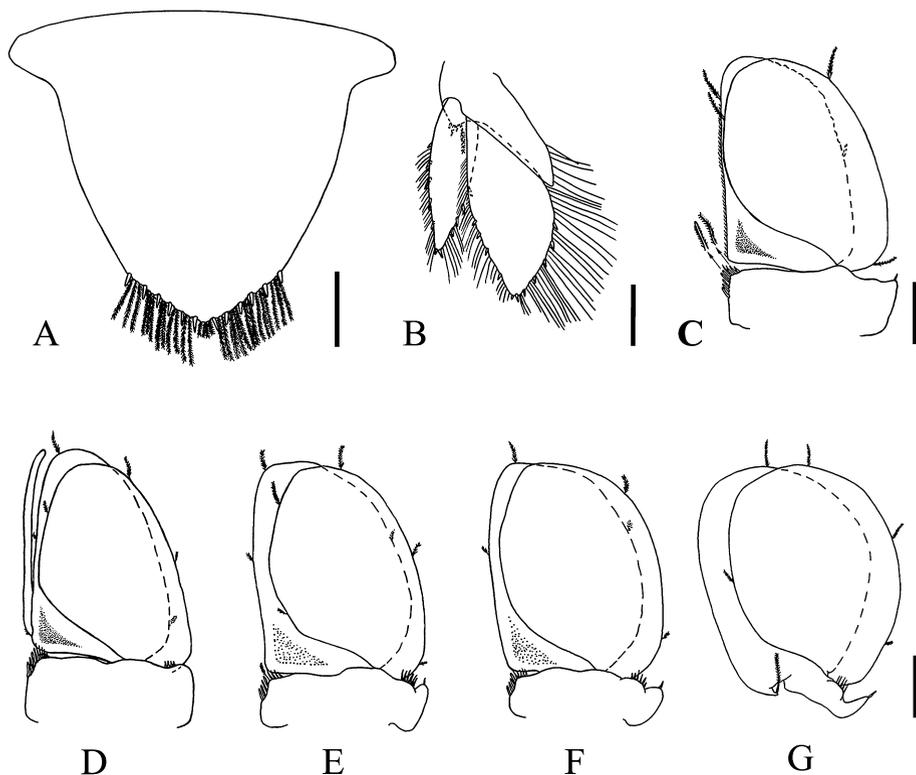


Fig. 6. *Natatolana neglecta* (Hansen, 1890), male (MNCN 20.04/9511). A, telson; B, uropod; posterior face of left pleopods: C, pleopod 1; D, pleopod 2; E, pleopod 3; F, pleopod 4; G, pleopod 5. Scale bar = 0.5 mm.

sub-basally, running parallel along entire length and tapering evenly to rounded apex, extending beyond tip of endopod; 1.06-times length of endopod. Pleopod 3-4 (fig. 6E, F): peduncle with 4 coupling hooks, 1 PS and 4 SS on medial margin. One SS and a cluster of 6 SS on lateral margin. Pleopod 5 (fig. 6G): peduncle with 1 long PS on proxomedial lobe and 5 SS on the lateral lobe. Endopod and exopod margins weakly convex. Penes absent, vasa deferentia opening flush to surface of sternite 7.

Morphological variation.— Female: similar morphology to male except for the sexual characters.

Table I shows the morphological variations found in the specimens examined from the four localities. There are some differences in the pereopods setation. Specimens from Huelva and Ibiza are narrower and show shorter antennae than the Galician specimens. These have also the longest appendix masculina extending beyond the tip of the endopod.

TABLE I

Comparative of morphological features of the specimens of *Natatolana neglecta* (Hansen, 1890) examined

Character	Specimen collection				
	Arousa (n = 4)	Aldán (n = 2)	Huelva (n = 2)	Ibiza (n = 1)	Naples (n = 4)
Total length (mm)	9.5-15.5	6-11.5	13-14	13.5	4-15
Antennae, n° articles flagellum	17-21	18-19	15-17	16	18-23
Antennula, n° articles flagellum	11-12	9	10	11	10-12
Maxilliped, n° coupling hooks	2-3	2-3	2	2	3
P1 merus, RS posterior margin	9-17	10-12	9-12	11	12-14
P2 merus, RS posterior margin	11-15	10	8	10	12
P2 carpus, RS posterior margin	9-10	7-10	5	7	8-9
P3 merus, RS posterior margin	10-13	9-10	9-10	10	10-11
P5 merus, RS posterior margin	2-6	3-4	4	4	4-5
P5 merus, RS posterodistal angle	10-16	11-15	8	13	13-16
P5 propodus, RS posterior margin	3,2	1,2-1,3	2,1	2,2	3,3,2
P6 ischium, RS anterodistal angle	3	4	5	2	4-7
P6 ischium, PS anterodistal angle	3-4	2-4	0	5	0
P6 merus, RS posterior margin	3-4	3	2	3	4-5
P6 merus, RS posterodistal angle	8-11	9-10	8	9	8-12
P6 propodus, RS posterior margin	3,2,2-2,3	2,3-1,2,2	3,2,0	3,2,0	2,1,3,2-1,3,3
P7 ischium, RS posterodistal angle	3-4	4	2	2	4
P7 ischium, PS anterodistal angle	2-6	5	2	2	3
P7 ischium, RS submarginally	4-5	2	2	2-3	6-9
P7 merus, RS posterior margin	3-6	2-3	1-2	1	3
P7 merus, RS posterodistal angle	6-10	7-9	7	7	10-11
P7 merus, PS distal margin	15-21	16-19	14	12	10-11
P7 merus, RS submarginally	5	3	2	2	4
P7 carpus, RS posterior margin	3,2	2	1	2	2,2-1,3,2
P7 carpus, PS distal margin	13-21	17-19	13	11	12-19
P7 propodus, RS posterior margin	2,2,3-2,3	1,2	2,0,0	2,0,0	1,3,3
Pleotelson, RS	10-12	12-14	10	14	10-12
Uropod, exopod PS lateral margin	5-6	5	5	5	5
Uropod, exopod RS medial margin	3-4	4	4	3	3
Uropod, endopod RS lateral margin	5	5	5	5	4
Uropod, endopod RS medial margin	4-6	4-5	4	4	4
Appendix masculina, endopod length	1.06	1.02	0.6	–	0.8

P1-P7, pereopod 1-7; PS, plumose seta; RS, robust seta.

DISCUSSION

As noted by Keable (2006), the study of *Natatolana* species is hampered by difficulties in identification and inadequate descriptions. *N. neglecta* is a widespread Mediterranean species with few records along the Atlantic coast of

Europe. The scarcity of Atlantic records might be due to misidentifications, just as has happened with the Mora Bermúdez (1980) specimen.

The examined specimens provide new morphological data on the species. Natural colour was never mentioned in the available descriptions because the individuals were preserved. Many of the *Natatolana* species show a colour “white, cream, etc. in alcohol”; the red/brown colour is only registered for two Australian species, *Natatolana rusteni* Keable, 2006 and *Natatolana flexura* Keable, 2006 (Keable, 2006). All the specimens of *N. neglecta* examined show one serrate robust seta on the posterodistal angle of propodus on pereopods 1-3 (fig. 4A). The presence of this robust serrate seta distinguishes *N. neglecta* from the rest of European species of *Natatolana*. The posterior margin of merus on pereopod 7 bears 3-6 robust setae; carpus and propodus of pereopods 4-7 bear several plumose setae.

Similarly to other members of the genus *Natatolana neglecta* is a carnivorous scavenger, attacking both living and dead animals and, therefore, playing an ecologically important role in the marine environments (Bruce, 2003). We have observed in a sampling container the cannibalism behaviour of this species, being known to harm commercial fishing operations (Mizzan, 1995). As reported in the closer Ría de Aldán (Lourido et al., 2008), some specimens were collected under mussels rafts so the species could probably be favoured by aquaculture.

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