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Redescription of *Melita planaterga* Kunkel
1910 from Bermuda islands with revision of
genera *Melita* Leach and *Abludomelita* n. gen.
(Contribution to the Knowledge of the
Amphipoda 119).

Abstract

Melita planaterga Kunkel 1910 from Castle Harbour on Bermuda islands is redescribed and figured. Revision of genus *Melita* Leach is provided and new genus *Abludomelita* is described with type-species *Melita gladiosa* Bate 1862.

Melita grandimana Chevreux 1908 from Cape Verde islands is removed to the genus *Dulichieilla* Stout. *Crangonyx shimizui* Ueno 1940 from Japan is removed to the genus *Melita* based on shape of body and mouthparts. Diagnosis of genera *Dulichieilla* and *Melita* are given.

Introduction

During our study of *Amphipoda* from Bermuda islands, *Melita planaterga* Kunkel 1910 was established in material from Castle Harbour (Walsingham). As this species was only partially known and described, detailed redescription of this species is made.

The analyse of taxonomic characters of all members of genus *Melita* (s. auct.) showed the existence of two groups of species belonging to two different genera, and new genus *Abludomelita* is described.

Acknowledgments: I am thankful to Prof. Dr. Boris Sket from the University of Ljubljana (Yugoslavia) and to Dr. H. G. Andres from Zoological Museum of University of Hamburg (Germany) for the material used in this study.

Problem of genera *Melita*, *Megamoera* and *Abludomelita*

Genus *Melita* was established by Leach (1814) for the species *Cancer palmatus* Montagu 1804. Later, many other species of this genus were discovered and described over the World.

Bate described (1862) a new genus *Megamoera* for several new species (*serrata*, *semiserrata*, *alderi*) including in it also already known species: *dentata* (Kroyer), *longimanus* (Leach), *othonis* (M. Edw.), *brevicaudata* Bate, *longicauda* Brandt, *kroyeri* (Bell), *aspera* (Dana), *suluensis* (Dana), *albida* (Dana), *peruviensis* (Dana) and *indica* (Dana). Many of these species were later removed to other genera. In this genus were included by Bate the species with short and with long inner ramus of uropod 3. Short time later (1863), Bate and Westwood excluded from genus *Megamoera* all species with short inner ramus of uropod 3, and based of that fact, genus *Megamoera* was later synonymized with other genera (*Melita*, *Ceradocus* etc.).

Barnard, J. L. selected (1969) *Gammarus dentatus* Kroyer 1842 as a type-species of genus *Megamoera*, although already Boeck (1876) removed this species to genus *Melita*.

Stebbing (1906) removed genus *Megamoera* to genus *Ceradocus* Costa as synonym; later, other authors considered genus *Megamoera* as synonym of genus *Melita*.

Stout described (1912) a new genus *Dulichhiella* for the new species *D. spinosa*, and a new genus *Caliniphargus* (1913) for the new species *C. sulcus*, both from Laguna Beach in California. Both genera were later removed to the genus *Melita* as synonyms (Shoemaker 1941, Barnard, J. 1969).

G. Karaman and Barnard, J. revived again (1979) a genus *Dulichhiella* Stout 1913 as a valid genus with a type species *Dulichhiella spinosa* Stout 1913.

The analyse of all known species of genus *Melita* sensu auct.) showed the existence of two groups of species, considered now as a distinct different genera:

First group consisting of species without dorsal oblique row of setae on inner lobe of maxilla 2 and prevalently with 1-segmented outer ramus of uropod 3 (genus *Melita* Leach 1814 with a type species *Cancer palmatus* Montagu 1804);

Second group is consisting of species with dorsal oblique row of setae on inner lobe of maxilla 2 and prevalently with 2-segmented outer ramus of uropod 3 (new genus *Abludomelita*, with type-species *Melita gladiosa* Bate 1862).

Based on species in hand and data from literature, we tried to divide all known *Melita* species (sensu auct.) to one or to other genus. Some of these species were too poorly described, that it was not possible to establish to which of these genera they belong (*diadema* Stuxberg 1887, *insatiabilis* Müller 1865, *tristaensis* Barnard, K. H. 1965, etc.).

The value of presence or absence of dorsal oblique row of setae on inner lobe of maxilla 2 is proved also in genus *Ceradocus* Costa, which differs from genus *Maera* Leach prevalently by this character.

On the other hand, uni- or bisegmented outer ramus of uropod 3 is in *Melita* group of genera one relative character, because there are the species with very small second segment of outer ramus (*M. machaera* Barnard, K. 1955; *M. palida* Sars 1879) as well as the species with long second segment of outer ramus (*aculenta*, *gladiosa*) and the species without second segment of outer ramus (*palmata*).

The type-species of genus *Megamoera*, *M. dentata* (Kroyer 1842) is without dorsal oblique row of setae on inner lobe of maxilla 2, and for this reason the genus *Megamoera* must be considered as a synonym of genus *Melita* Leach, although his uropod 3 is with 2-segmented outer ramus.

Melita latimerus Bousfield 1971 was removed by G. Karaman and Barnard, J. L. (1979) to the new genus *Nainaloo*, n. gen.

Melita grandimana Chevreux 1908 from Cape Verde Islands don't belong to genus *Melita*, and we removed it to the genus *Dulichchiella* Stout, based on shape of maxilla 1, gnathopods, etc.

Ueno described (1940) a new species *Crangonyx shimizui*, n. sp. from Aikawa-mura, Sado Island, Japan. Based on shape of uropod 3, accessory flagellum, shape of mouthparts, gnathopods and telson, this species we removed to the genus *Melita* as a valid species.

Taxonomic part

Genus DULICHIELLA Stout 1912

Syn.: *Dulichchiella* Stout 1912:140; G. Karaman and Barnard, J. L. 1979:152.

Melita (part.) Stebbing 1906:421; Barnard, J. L. 1962:105; Barnard, J. L. 1969:245.

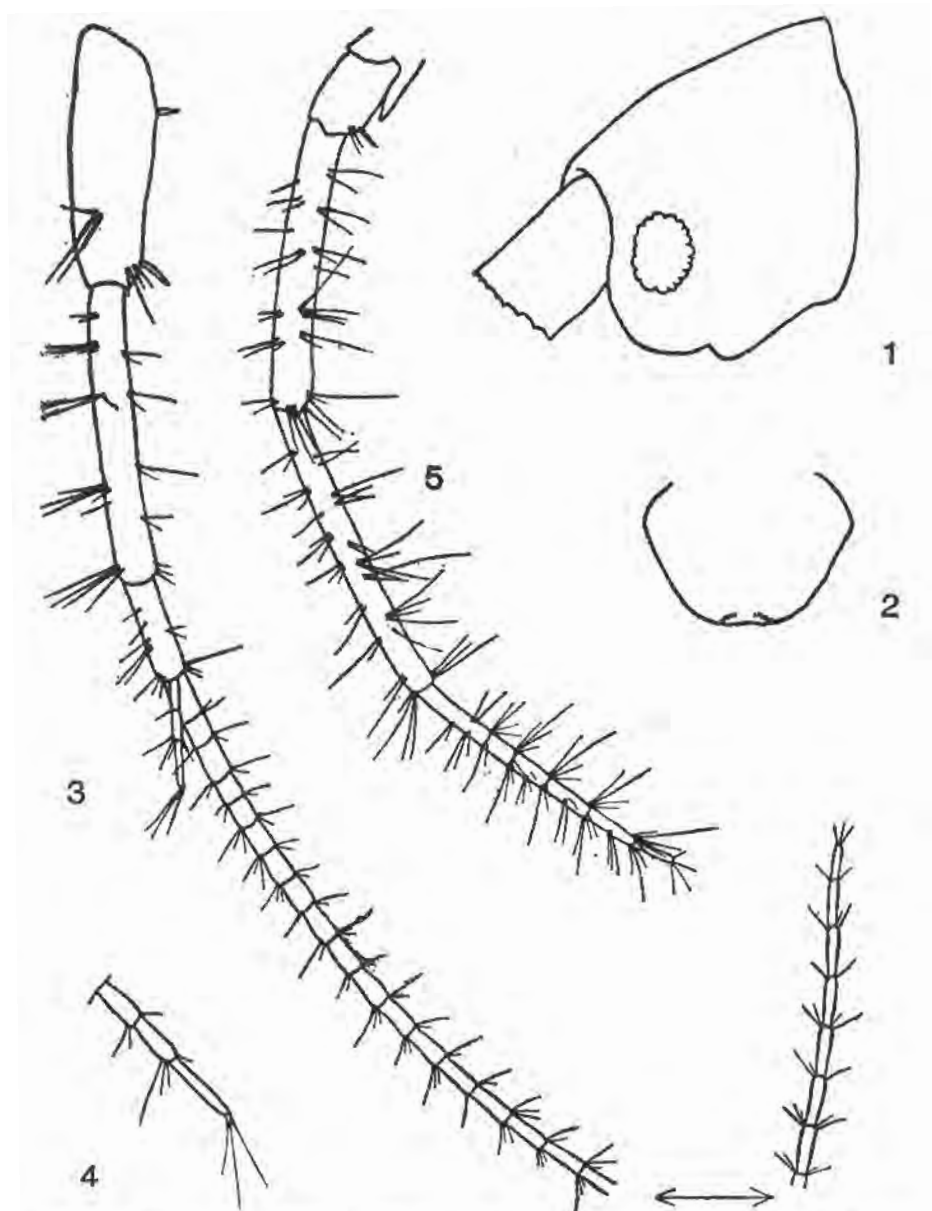


Fig. 1. *Melita planaterga* Kunkel, Castle Harbour, Bermuda, male 8 mm: 1 = head; 2 = labrum; 3 = antenna 1; 4 = accessory flagelium; 5 = antenna 2

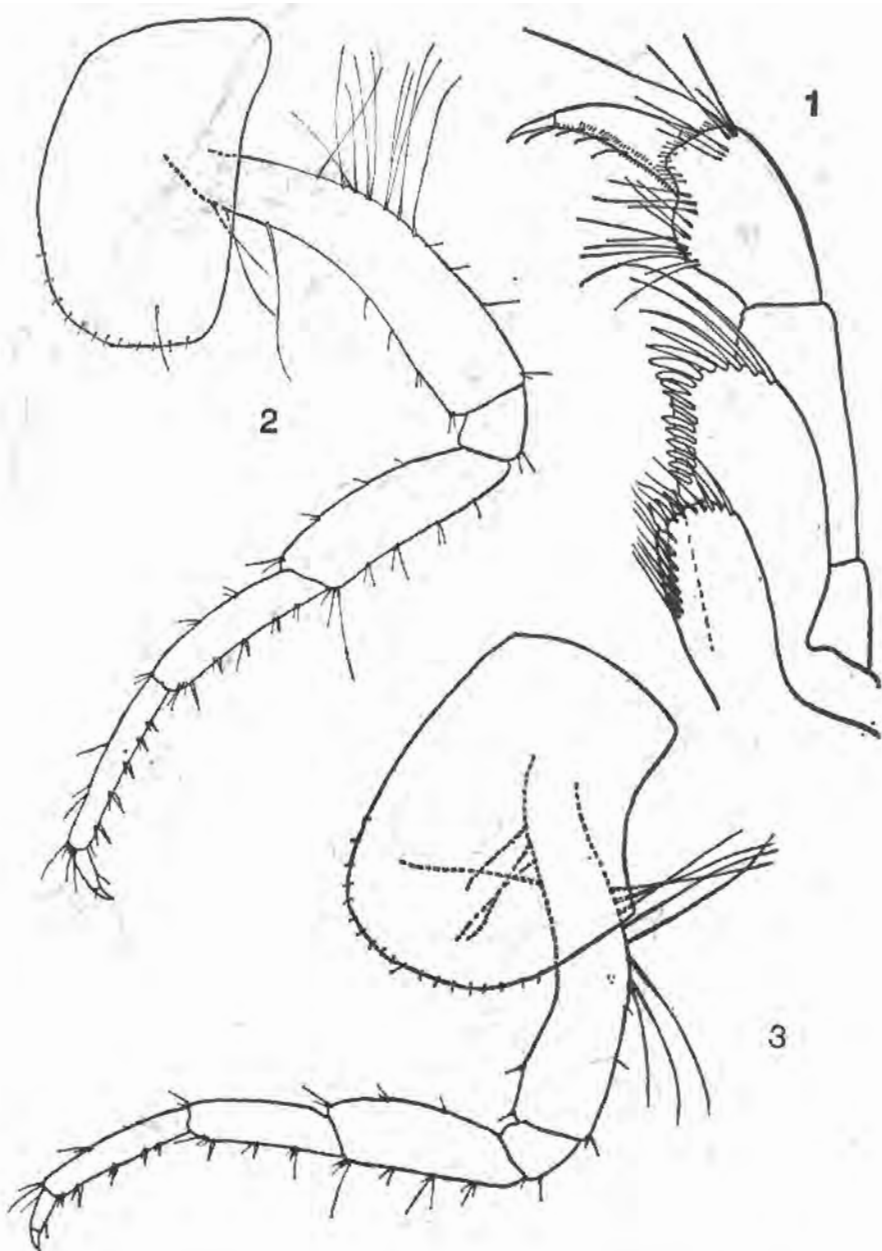


Fig. II. *Melita planaterga* Kunkel, Castle Harbour, Bermuda, male 8 mm :
1 = maxilliped; 2 = pereopod 3; 3 = pereopod 4.

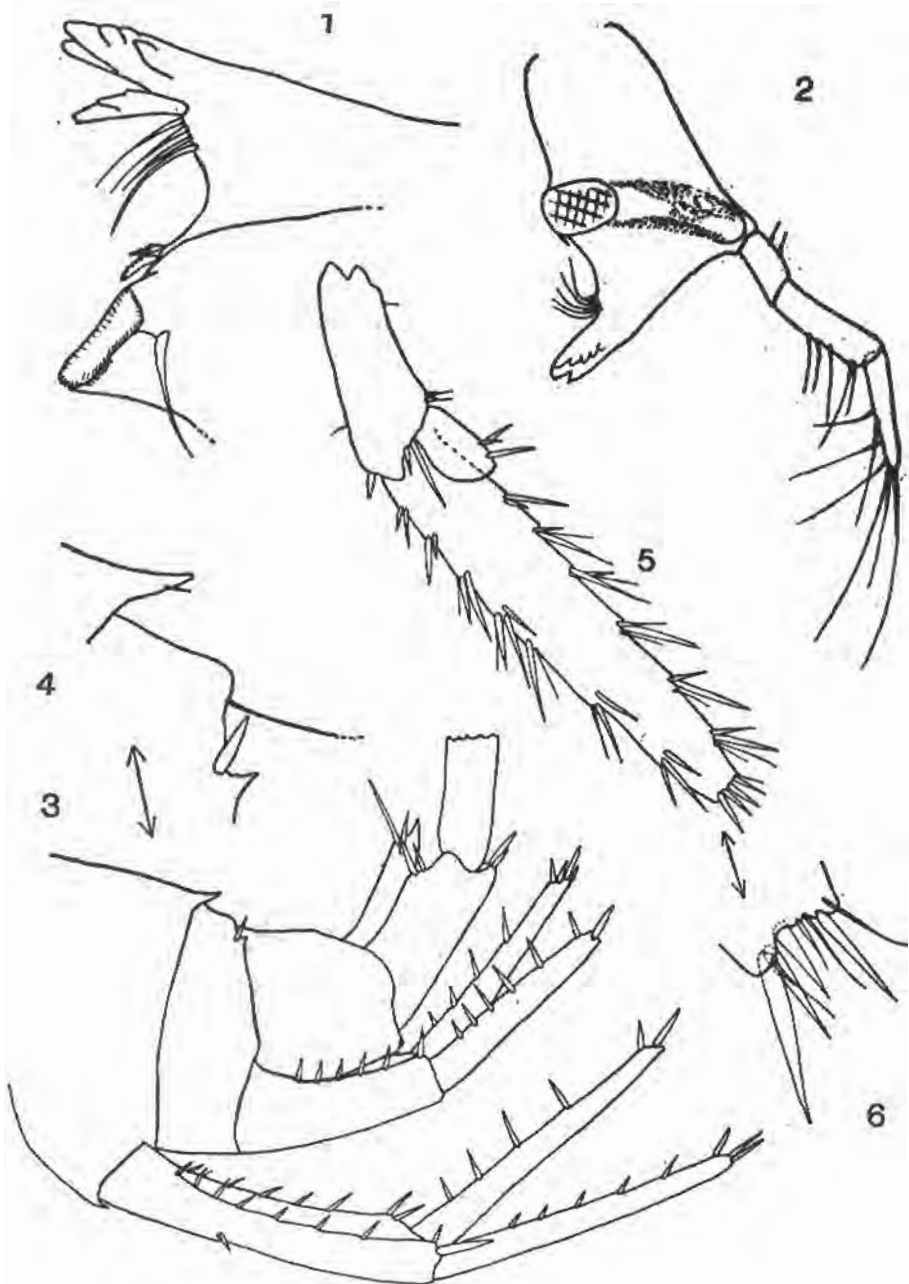


Fig. III. *Melita planaterra* Kunkel, Castle Harbour, Bermuda, male 8 mm : 1-2 = mandible; 3-4 = urosome with uropods 1-2; 5-6 = uropod 3.

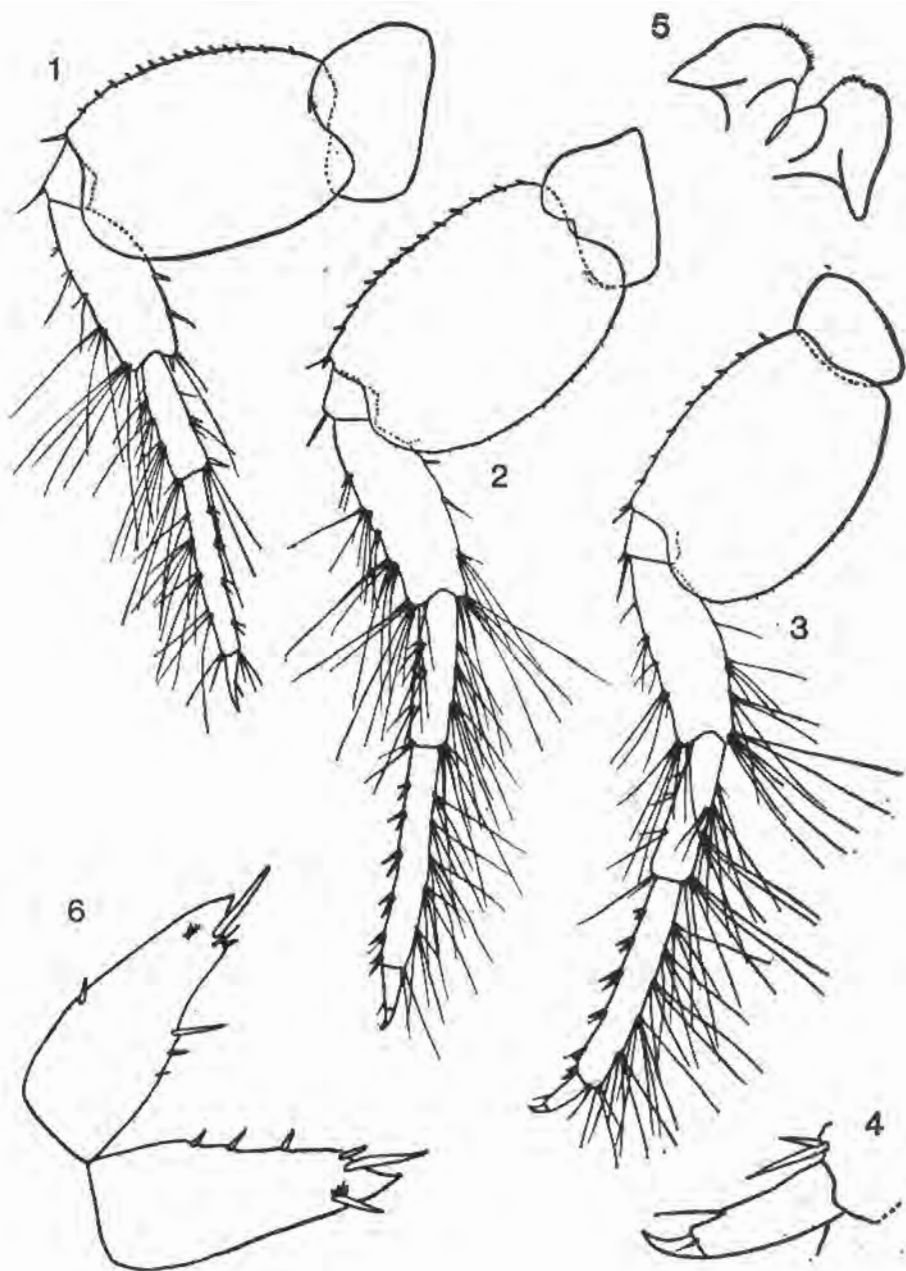


Fig. IV. *Melita planaterga* Kunkel, Castle Harbour, Bermuda, male 8 mm : 1 = pereopod 5; 2 = pereopod 6; 3-4 = pereopod 7; 5 = labium; 6 = telson.

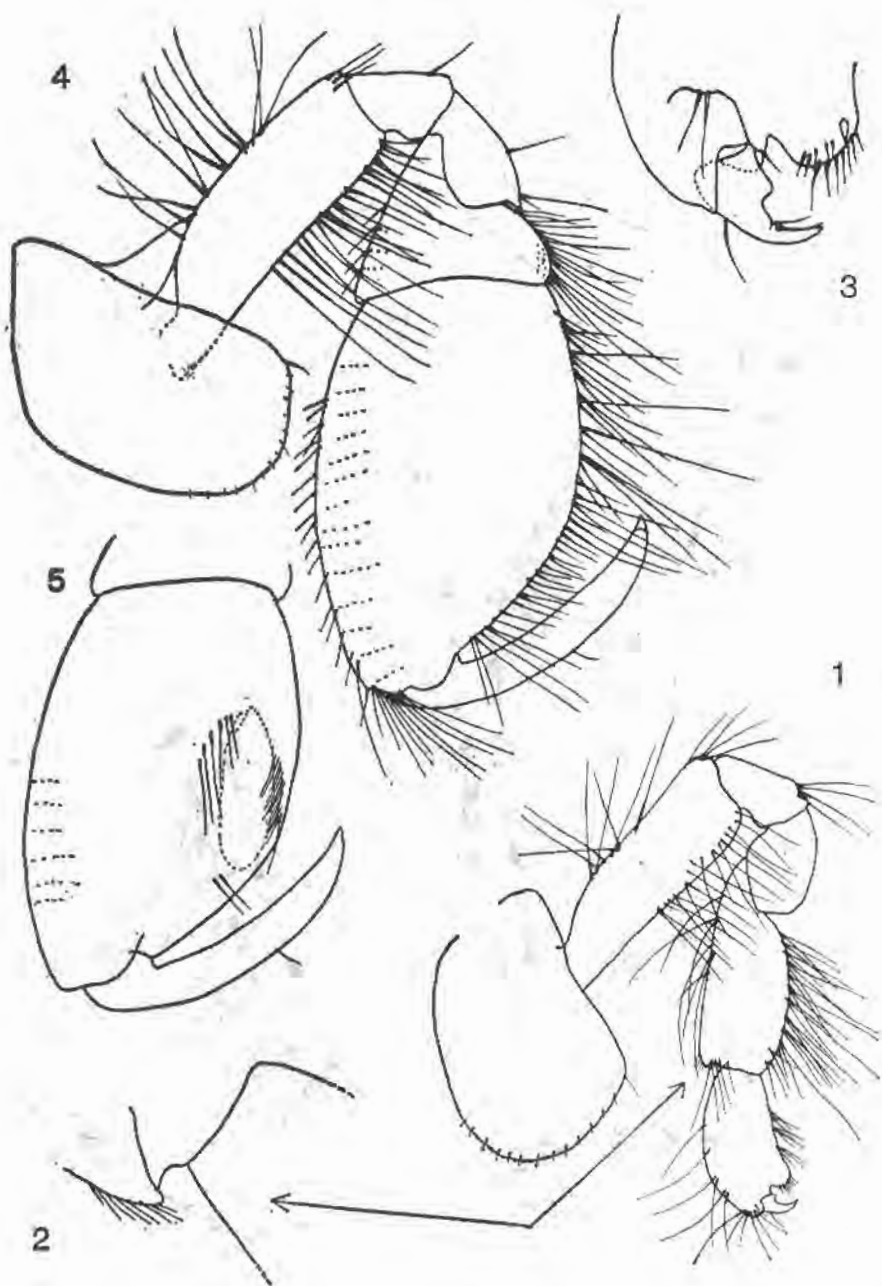


Fig. V. *Mellita planaterga* Kunkel, Castle Harbour, Bermuda, male 8 mm: 1-3 = gnathopod 1; 4 = gnathopod 2, outer face; 5 = gnathopod 2, inner face.

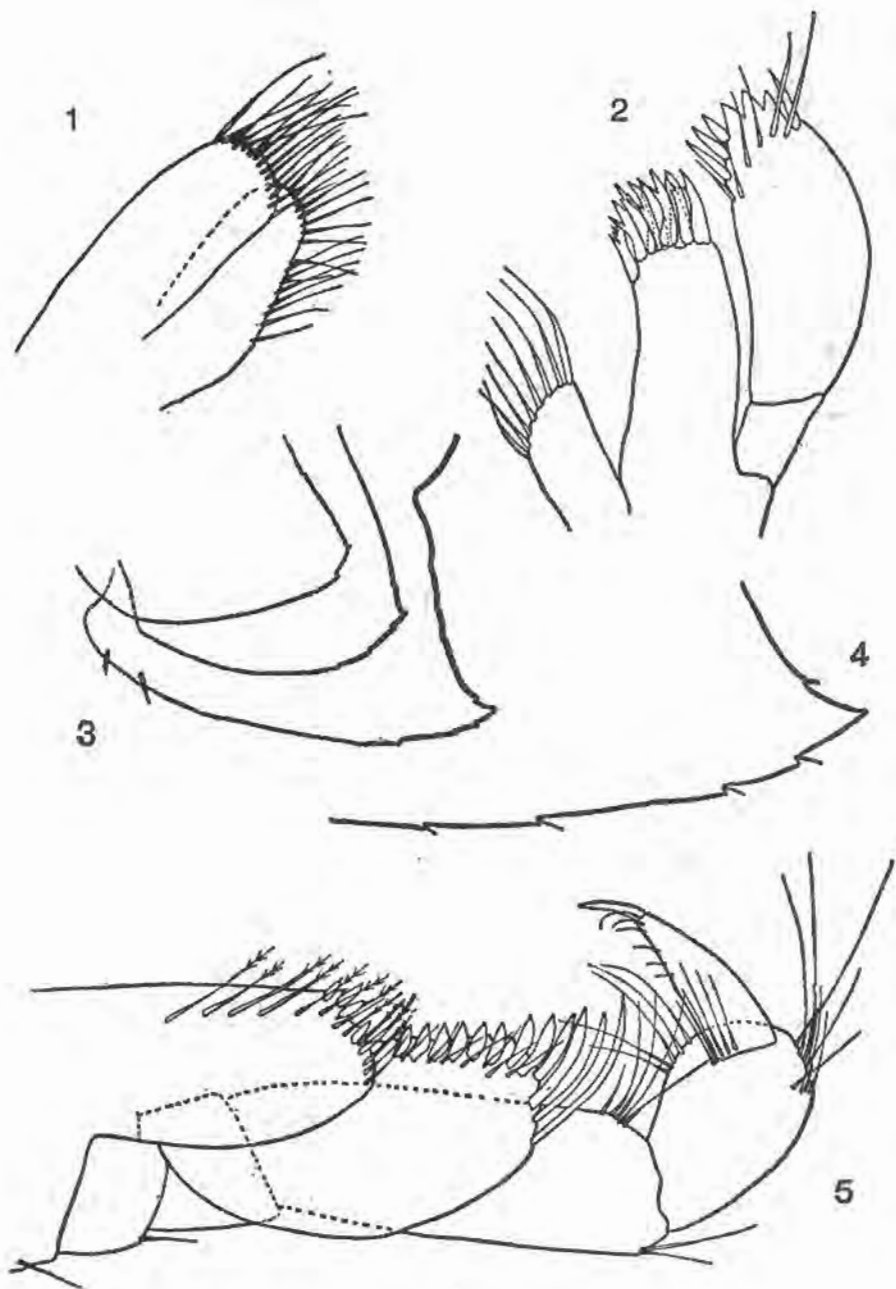


Fig. VI. *Melita planaterga* Kunkel, Castle Harbour, Bermuda, male 8 mm: 1 = maxilla 2; 2 = maxilla 1; 3 = epimeral plates 1-3; 4 = epimeral plate 3; 5 = maxilliped of *Abludomelita gladiosa* (Bate), male 7.2 mm from Napoli.

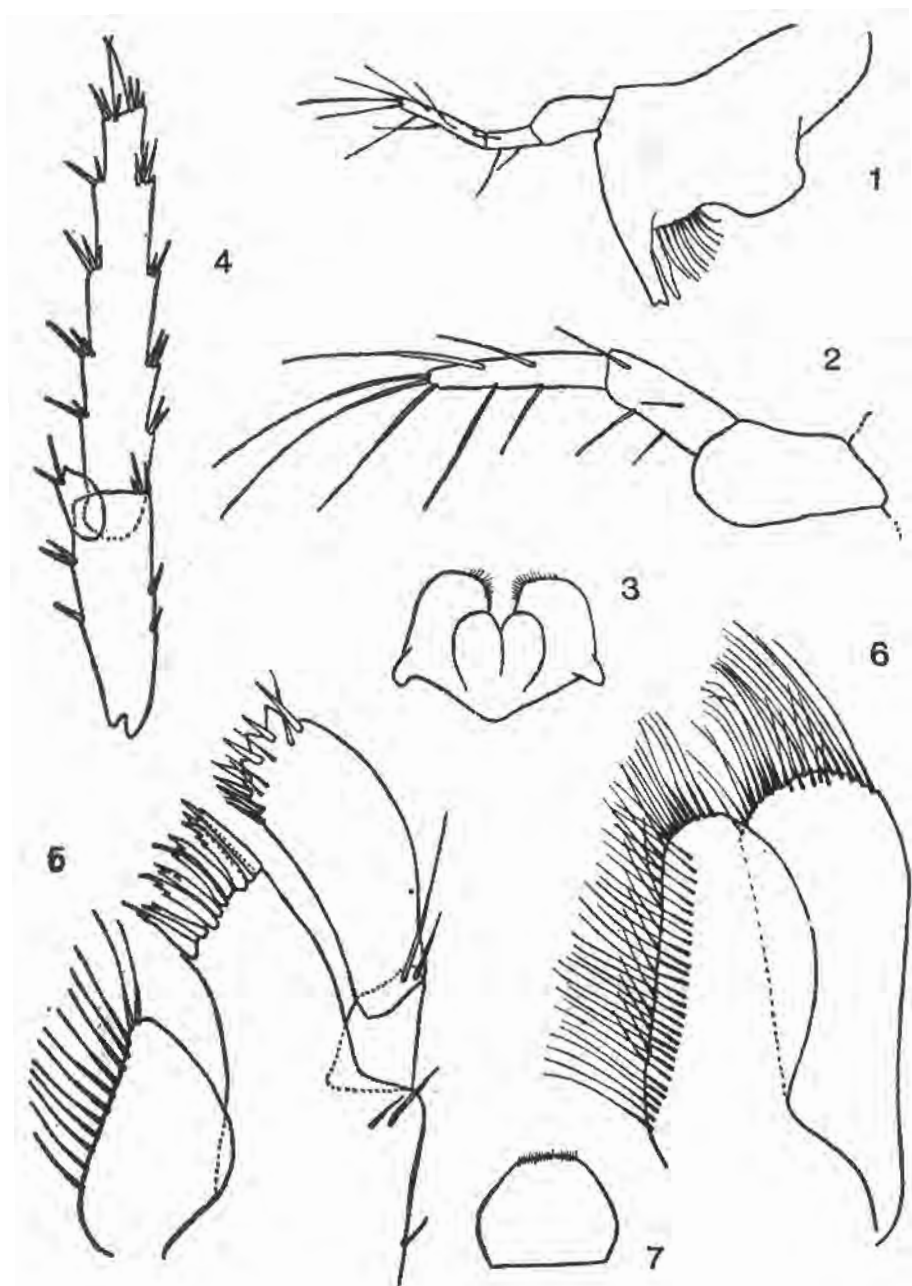


Fig. VII. *Abludomelita gladiosa* (Bate), Napoii, male 7.2 mm: 1 = mandible; 2 = mandibular palp; 3 = labium; 4 = uropod 3; 5 = maxilla 1; 6 = maxilla 2; 7 = labrum.

Type species: *Dulichiesta spinosa* Stout 1912. (by monotypy).

Diagnosis: Rostrum absent, urosomites free, coxae moderate. Antennae 1-2 normal, accessory flagellum present. Labrum entire or emarginate, labium with inner lobes. Maxilla 1: inner lobe conical, with 1-2 strong distal plumose setae only, outer lobe spinose, palp 2-segmented. Inner lobe of maxilla 2 with oblique row or dorsal setae. Maxilliped normal, palp 4-segmented. Mandible with well developed triturative molar, incisor toothed palp 3-segmented. Gnathopods 1-2 subchelate, but left and right gnathopod 2 unequal to each other in size and shape, larger gnathopod 2 with produced distolateral corner of segment 6 and strong dactyl. Pleopods and pereopods normal. Uropods 1-2 biramous, normal. Uropod 3 long, inner ramus short, outer ramus 2-segmented. Telson incised nearly to the basis. Sexual dimorphism present (gnathopods), coxal gills normal, ovoid.

Taxons: *anisochir* (Kroyer 1845), *appendiculata* (Say 1818), *australis* (Haswell 1879), *cotesi* (Giles 1890), *exilii* (F. Müller 1864), *fresneli* (Audouin 1826), *grandimana* (Chevreux 1908), *pilosus* (Dana 1852), *setipes* (Dana 1852), *spinosa* Stout 1912, *validus* (Dana 1852).

Remarks: Probably some of these species are synonyms to each other, but descriptions of many of them are too poor to establish their exact taxonomic status.

Genus *Dulichiesta* Stout differs from genera *Abludomelita* and *Melita* by conical inner lobe of maxilla 1 provided with only 1-2 distal strong plumose setae and by shape of gnathopod 2.

DULICHIELLA GRANDIMANA (Chevreux 1908), new status

Syn.: *Melita grandimana* Chevreux 1908:6, fig. 3-4; Schellenberg 1926:363; Chevreux 1935: 115, pl. 12, fig. 7; Barnard, J. L. 1958:61; Barnard, J. L. 1962:108.

Loc. typ.: »Mouillage« SW of Santa Luzia island (Cape Verde Islands, Atlantic), depth 17 m.

Localities cited: loc. typ. (Chevreux 1908, 1935), St. Vincent (Cape Verd) (Schellenberg 1926).

Genus ABLUDOMELITA n. gen.

Syn.: *Melita* (part.) Chevreux et Fage 1925:227; Barnard, J. L. 1969:245.

Type species: *Melita gladiosa* Bate 1862.

Diagnosis: Rostrum absent, urosomites free, coxae moderate, coxa 5 shorter than coxa 4. Antennae 1-2 normal, accessory flagellum present. Labrum entire or emarginate, labium with inner

lobes. Maxilla 1: inner lobe triangular, with several distolateral setae, palp 2-segmented. Inner lobe of maxilla 2 with dorsal oblique row of setae. Maxilliped well developed, palp 4-segmented. Mandible with incisor toothed, molar triturative; palp 3-segmented, segments of various length. (fig. VI, 5; VII).

Gnathopods 1-2 subchelate, gnathopod 1 smaller than gnathopod 2, segment 6 of gnathopod 2 with distoposterior corner unproduced, dactyl normal. Pleopods and uropods 1-2 normal, biramous. Uropod 3 long, inner ramus short, outer ramus 2-segmented, second segment shorter than first one. Telson incised nearly to the basis. Coxal gills normal, oostegites narrow.

Taxons: *abyssorum* (Stephensen 1944), *aculeata* (Chevreux 1911), *amoena* (Hansen 1888), *awa* (Barnard, J. L. 1972), *californica* (Alderman 1936), *denticulata* (Nagata 1965), *desdichada* (Barnard, J. L. 1962), *festiva* (Chilton 1885), *formosa* (Murdoch 1885), *gladiosa* (Bate 1862), *inaequistylis* (Dana 1852), *japonica* (Nagata 1965), *kodaikensis* (Barnard, J. L. 1964), *lignophila* (Barnard, J. L. 1962), *maera* (Barnard, K. H. 1955), *matilda* (Barnard, J. L. 1972), *mucronata* (Griffiths 1975), *oba* (Barnard, J. L. 1972), *obtusata* (Montagu 1813), *reidi* (Hamond 1965), *richardi* (Chevreux 1900), *rylovae* (Bulycheva 1955), *sexstachya* (Gamo 1977), *simovae* (Bulycheva 1952), *valida* (Shoemaker 1955).

Remarks. Genus *Abludomelita* differs from genus *Melita* by presence of dorsal oblique row of setae on inner lobe of maxilla 2 and usually by 2-segmented outer ramus of uropod 3.

Genus *Dulichella* differs from genus *Abludomelita* by shape of gnathopod 2 and by inner lobe of maxilla 1.

Inner lobe of maxilla 2 in type-species of genus *Abludomelita*, *M. gladiosa*, is provided with dorsal oblique row of setae. As the pilosity of maxilla 2 is not described in some species of this genus, we removed some species to this genus based on the shape of outer ramus of uropod 3 only.

Dana described (1852) a new species *Gammarus (Maera) validus* n. sp. considered later as a member of genus *Melita* (Stebbing 1906, etc.). Shoemaker described (1955) a new species *Melita valida*, n. sp. The later species, *M. valida* Shoemaker is not nom. preocc. but valid name, *A. valida*, because G. Karaman and Barnard, J. (1979) removed *Melita valida* (Dana 1852) to genus *Dulichella*.

ABLUDOMELITA GLADIOSA (Bate 1862)

fig. VI, 5; VII, 1-7.

Syn.: *Melita gladiosa* Bate 1862:185, pl. 33, fig. 6; Bate et Westwood 1863:346, fig.; Grube 1864:74; Heller 1867:

36; Stebbing 1876:77, pl. 4, fig. 2, 2a-d; Bonnier 1887:320; Chevreux 1887:307; Barrois 1888:47; Norman 1889:134; Robertson 1892:212; Chevreux et Bouvier 1893:131; Chevreux 1900:79; Stebbing 1906:428; Chevreux 1911:213; Chevreux et Fage 1925:233, fig. 244; Chevreux 1925:304; Legueux 1927:38; Stephensen 1929:146, fig. 35; Fage 1933:215; Cecchini et Parenzan 1935:194, fig. 30; Reid 1944:27, fig. 27d-f; Spooner 1950:252; Ledoyer 1968:198; G. Karaman 1979:61.

Loc. typ.: Boulogne.

Remarks. In the Adriatic Sea this species was found on muddy and sandy bottom, sometimes accompanied by *M. hergensis*.

Genus MELITA Leach 1814

Syn.: *Melita* Leach 1814:403; Leach 1814a:432.

Melita (part.) Dana 1853:962; Sars 1895:507; Stebbing 1906:421; Chevreux et Fage 1925:227; Stephensen 1944:36; Barnard, J. L. 1962:105; Barnard, J. L. 1969:245; Hurley 1973:214.

Boscia Leach 1814 (nomen nudum).

Caliniphargus Stout 1913:640.

Type-species: *Cancer palmatus* Montagu 1804 (by monotypy).

Diagnosis: Rostrum absent, urosomites free, coxae normal, coxa 5 shorter than coxa 4. Antennae 1-2 normal, accessory flagellum present. Eyes absent or present. Labrum entire or emarginate, labium with inner lobes. Maxilla 1: inner lobe triangular, with a row of distomarginal setae, palp 2-segmented. Inner lobe of maxilla 2 without dorsal oblique row of setae. Mandible normal, with incisor toothed, molar triturative; palp 3-segmented, segments of various length. Maxilliped normal, palp 4-segmented.

Gnathopods 1-2 subchelate, gnathopod 1 smaller than gnathopod 2, segment 6 of gnathopod 2 unproduced distally. Pleopods and pereopods normal. Uropods 1-2 normal, biramous. Uropod 3 long, with short inner ramus, outer ramus consisting of one segment only. Telson incised nearly to the basis. Coxal gills normal. Oostegites narrow. Sexual dimorphism present (gnathopods, coxae).

Taxons: *bulia* G. Karaman 1978, *cerelicula* Croker 1971, *coroninii* Heller 1866, *dentata* (Kroyer 1842), *gayi*, Nicolet 1849, *hergensis* Reid 1939, *kauerti* Barnard, J. L. 1972, *koreana* Stephensen 1944, *laevidorsum* Stephensen 1944, *lagunae* Oliveira 1953, *longicauda* (Brandt 1851), *mangrovi* Oliveira 1953, *nitida* Smith 1873, *nitidula* Ruffo 1958, *oregonensis* Barnard, J. L. 1954, *orgasmos* Barnard, K. H. 1940, *pahuwai* Barnard, J. L. 1970, *palida* Sars 1873,

palmata (Montagu 1804), *pellucida* Sars 1895, *quadrspinosa* Vosseler 1889, *shimizui* (Ueno 1940), *solada* Barnard, J. L. 1961, *sulca* (Stout 1913), *tuberculata* Nagata 1965, *valesi* Karaman, S. 1955, *zeylanica* Stebbing 1904.

Remarks: *Melita diadema* Stuxberg 1887 from Kara Sea (Novaja Zemlja) is nomen nudum.

Species incertae sedis: *Melita insatiabilis* Müller 1865, *Melita diadema* Stuxberg 1887, *Melita tristanensis* Barnard, K. H. 1965.

The pilosity of maxilla 2 in many *Melita* species is unknown and belonging of these species to the genus *Melita* is based on the shape of uropod 3 only.

MELITA PALMATA (Montagu 1804)

Syn.: *Cancer palmatus* Montagu 1804:69, pl. 6, fig. 4.

Gammarus palmatus M. Edwards 1838:311; Liljeborg 1855:453; Bate 1856:58; White 1857:184; Bate 1857:144; Bruzelius 1859:56.

Gammarus inaequimanus Bate 1857:145; White 1857:185.

Gammarus Dugesii M. Edwards 1830:368; M. Edwards 1837: pl. 60, fig. 3; M. Edwards 1840:54; Zaddach 1844:6.

Astacus palmatus Pennant 1812:35.

Melita palmata Leach 1814:403; Leach 1814a:432; Leach 1815:358; Rathke 1843:93; Frey et Leuckart 1847:162; Costa 1857:192, pl. 2, fig. 4; Bate 1862:182, pl. 33, fig. 2; Bate et Westwood 1863:337, fig.; Heller 1867:36; Boeck 1871:211; Boeck 1876:387, pl. 24, fig. 4; Meinert 1877:129; Zaddach 1879:32, pl. 4; Hoek 1882:55; Guerne 1886:44; Barrois 1887:16; Bonnier 1887:322; Chevreux 1887:307; Chevreux 1888:33; Chevreux 1888a:7; Hoek 1889:222; Norman 1889:132; Della Valle 1893:713, pl. 1, fig. 6, pl. 23, fig. 24-40; Meinert 1893:169; Chevreux et Bouvier 1893:130; Sovinsky 1894:318; Sars 1895:508, pl. 179; Walker 1895:308; Sovinsky 1897:40; Sovinsky 1898:486; Walker 1898:169; Chevreux 1900:78; Sokolovski 1900:157; Meek 1901:58; Walker 1901:305; Graeffe 1902:23; Kalichevsky 1906:11, Stebbing 1906:425; Norman 1909:317; Chevreux 1911:213; Chilton 1911:564; Tattersal 1913:12; Bjorck 1915:25; Tesch 1916:341; Chevreux 1925:304; Chev-

reux et Fage 1925:230, fig. 241; Legueux 1927:38; Stephensen 1927:112; Derjugin 1928:280; Stephensen 1928:297, fig. 67, 1-7; Stephensen 1929: 145, fig. 35; Carvalho 1931:3; Wailes 1931:40; Miloslavskaja 1931:67, fig. 29; Stammer 1932:591; Oldevig 1933:188; Wailes 1933:10; Schellenberg 1934:131; Chevreux 1935:115; Cecchini et Parenzan 1935:193; fig. 29; Alexander et al., 1935:55; Ruffo 1936:24; Crawford 1937:648; Moore 1937:123; Nicol 1938:15; Ruffo 1938:133; Stephensen 1940:307; Ruffo 1941: 115; Bassindale 1941:169; Schellenberg 1942:47, fig. 29, 30; Reid 1944:26, fig. 55c-h; Giordani-Soika 1950: 181; Legrand 1951:375; Gurjanova 1951:747, fig. 516; Caspers 1951:76; Newell 1954:339; Williams 1954:79; Barnard, J. L. 1958:62; Oldevig 1959:90; Barnard, J. L. 1962:110; Den Hartog 1964:451; Kanneva-Abadziewa 1964:78; Hamond 1967:129; Ledoyer 1968:198; Barnard, J. L. 1969:245; Morduchai-Boltovskoi 1969:457, pl. 5, fig. 4; Jazdzewski 1970: 453; Jazdzewski 1971:40, fig. (map); Geldiay et al., 1971:373; G. Karaman 1972:99; Stock 1972:203; Hurley 1973:214; Rasmussen 1973:185; G. Karaman 1979:63.

Loc. typ.: Devon (South England).

Remarks: *Melita hergensis* Reid is sometimes confused with this species because of great similarity between both species.

MELITA DENTATA (Kroyer 1842)

Syn.: *Gammarus dentatus* Kroyer 1842:159; M. Sars 1858: 145; Bruzelius 1859:61; Goes 1866:530, fig. 29; Packard 1867:297; Jarzynsky 1885:169; Della Valle 1893:766; Barnard, J. L. 1969:245.

Megamoera dentata Bate 1862:225, pl. 39, fig. 4.

Melita dentata Boeck 1871:211; Boeck 1876:389, pl. 23, fig. 10; Hoek 1882:55; Smith 1883:222; Smith 1883a:229; Schneider 1884:113; Sars 1886:60; Stuxberg 1887:68; Hansen 1888:145; Norman 1889:135; Vosseler 1889:157; Schneider 1891:109; Meinert 1893:170; Norman 1895:490; Sars 1895:513, pl. 181, fig. 1; Scott 1896:160; Walker 1898:282; Chevreux 1900:80; Ortmann 1901:153; Holmes 1905:504, fig.; Rathbun 1905:68; Scott 1906:163; Stebbing 1906: 427; Brüggén 1907:16; fig. 4; Brüggén 1909:37; Norman 1909:317; Pearse 1912:371, fig. 3; Stephensen 1913:195; Stephensen 1914:67; Derjugin 1915:451; Bjorck 1915:26; Bjorck 1916:7; Oldevig 1917:35;

Kunkel 1918:101, fig. 23; Schellenberg 1925:208; Shoemaker 1926:9; Schneider 1926:49; Derzavin 1927:1; Stephensen 1927:113; Derzavin 1928:280; Stephensen 1928:296, fig. 66; Stephensen 1929:145, fig. 35; Shoemaker 1930:116; Uschakov 1931:88; Wailes 1931:41; Oldevig 1933:191; Gurjanova 1933:86; Stephensen 1933:43; Bulytcheva 1934:61; Chen 1935:115; Dons 1935:108; Gurjanova 1935:77; Schellenberg 1935:28; Stephensen 1940:54; Stephensen 1940a:307; Schellenberg 1942:50, fig. 32; Stephensen 1944:105; Stephensen 1944a:21; Gurjanova 1951:749, fig. 518; Dunbar 1954:764; Shoemaker 1955:49; Barnard, J. L. 1958:61; Oldevig 1959:89; Barnard, J. L. 1962:110; Barnard, J. L. 1966:63; Lagardere 1968:180; Barnard, J. L. 1969:126; Bousfield 1973:65, pl. 9, fig. 1.

Melita leonisi Murdoch 1885:521; Murdoch 1885a:148, pl. 2, fig. 2, 2b; Stebbing 1906:741.

Gammarus subtener Stimpson 1864:157; Della Valle 1893:768; Stebbing 1906:742.

Gammarus purpuratus Stimpson 1853:55.

Loc. typ.: Greenland.

Material examined: Hamburg Museum Coll.: K 21490. Trondhjemsfjord; K 21569- E. Spitzbergen; K 21570- E. Spitzbergen.

Distribution: Arctic, Atlantic, Pacific, Japan Sea.

MELITA SHIMIZUI (Ueno 1940), new status

Syn.: *Crangonyx shimizui* Ueno 1940:74, fig. 49-60; Barnard, J. L. 1958:47.

Loc. typ.: Aikawa-mura, Kantosyn, Japan.

Localities cited: loc. typ.; Sensuion (Kantosyn) (Ueno 1940).

MELITA PLANATERGA Kunkel 1910
fig. I-V, VI, 1-4

Syn.: *Melita planaterga* Kunkel 1910:35, fig. 12; Barnard, J. L. 1962:107 (in key).

Description: Male 8 mm: Body smooth except urosome: urosomite 1 with dorsomedian short tooth (fig. III, 3, 4), urosomite 2 with one dorsolateral tooth on each side, accompanied by one strong spine (fig. III, 3, 4).

Rostrum absent, lateral cephalic lobes subrounded, with ventroanterior sinus present, short (fig. I, 1). Eyes ovoid, small, shorter than the diameter of peduncle of antenna 1.

Antenna 1 long, peduncular segment 1 with 2 ventral spines (fig. I, 3), peduncular segment 2 longer than segment 1, ped. segment 3 short; main flagellum multiarticulate, accessory flagellum 4-articulate (fig. I, 3, 4). Setae on antenna 1 are slightly longer than the diameter of segments themselves.

Antenna 2 shorter than antenna 1, slender, moderately setose, setae straight, transverse, much longer than the diameter of segments themselves (fig. I, 5), Antennal gland cone straight, not reaching tip of ped. segment 3 (fig. I, 5). Flagellum of antenna 2 consisting of 6+ segments (distal tip of flagellum is missing).

Labrum broader than long, emarginate distally (fig. I, 2), inner lobes of labium well developed (fig. IV, 5). Maxilla 1: inner lobe with 8 plumose setae, outer lobe with cca 10 spines bearing 1-5 lateral teeth each (fig. VI, 2). Palp 2-segmented, with dilated distal segment provided with several distal spines (right palp) or setae (left palp).

Maxilla 2 with both lobes longer than broad, bearing numerous distal setae, inner lobe without dorsal oblique row of setae (fig. VI, 1). Maxilliped: inner lobe exceeding tip of first palpar segment, bearing 4 distal spines and a row of distal and lateral setae (fig. II, 1); outer lobe not reaching tip of second palpar segment, provided with a row of spines along inferior margin; palp 4-segmented, palpar segment 3 slightly dilated (fig. II, 1), with distal process, segment 4 with nail shorter than the remaining part of segment.

Mandible with incisor toothed, molar triturative with longitudinal keel (fig. III, 1-2); palp 3-segmented, first segment short (fig. III, 2), bearing 2 setae; second segment with 5 setae, segment 3 as long as segment 2, non falciform, bearing 7 long setae.

Coxae 1-4 moderate, longer than broad, with subrounded distal margin bearing very short setae (fig. II, 2-3; IV, 1-3; V, 1, 4). Coxa 1 hardly dilated distally (fig. V, 1), coxa 4 with short disto-posterior lobe (fig. II, 3), coxa 5 remarkably shorter than coxa 4 (fig. IV, 1).

Gnathopod 1: segment 2 with numerous long setae along anterior and posterior margin (fig. V, 1), segments 3-4 short; segment 5 elongated, linear, twice longer than broad, with numerous groups of setae along posterior margin and with short distoanterior tooth (fig. V, 1, 2), segment 6 longer than broad, with 3 groups of setae along posterior margin, and with distoanterior lobe produced forward (fig. V, 3), palm lobed, convex, with deep incision near the basis of dactyl and with one corner spine; dactyl short, shorter than the diameter of segment 6, bearing one strong tooth at inferior margin (fig. V, 3). Outer margin of dactyl with one seta.

Gnathopod 2 remarkably larger than gnathopod 1: segment 2 with numerous long setae along anterior and posterior margin, segment 3 short (fig. V, 4); segment 4 short, with distoposterior tooth; segment 5 short, triangular, non lobed, with numerous setae along anterior and posterior margins; segment 6 ovoid, longer than broad, tapering distally, bearing numerous fine long setae along inferior surface and margins (fig. V, 5); palm undefined, smooth, without tubercles, removed on the inferior face of segment 6, forming one shallow smooth hole (fig. V, 5). Dactyl strong and stout, thick, exceeding half of segment 6, with undistinct obtuse nail, and bearing one short seta at outer margin.

Pereopods 3-4 like to each other (fig. II, 2, 3): segment 2 recurved, with long setae along posterior margin; segment 3 short, segments 4-6 linear, segment 4 with short setae along posterior margin; segments 5-6 along posterior margin with short spines intermixed with short setae, dactyl short.

Pereopods 5-7 moderate, pereopod 5 poorly shorter than pereopods 6-7. Segment 2 of pereopods 5-7 ovoid, longer than broad, with distinct distoposterior lobe and with spinose anterior margin (fig. IV, 1-3); posterior margin of segment 2 almost smooth, with very short single setae; segments 3-6 linear, bearing numerous bunches of very long setae intermixed with several spines; dactyl short, with one seta at inferior margin, nail shorter than the remaining part of dactyl, smooth (fig. IV, 4).

Pleopods normal, with 2 retinacula each. Epimeral plates 1-3 with poorly serrate ventral and posterior margins, epimeral plates 1-2 slightly pointed, epimeral plate 3 produced and sharply pointed (fig. VI, 3, 4); plate 3 with 2 ventral spines, plates 1-2 smooth.

Uropods 1-2 long, biramous, with numerous spines along lateral and dorsal margins of peduncles and on dorsal margin and tip of rami (fig. III, 3). Peduncle of uropod 1 with one ventrofacial spine and with one short distal spine (fig. III, 3), rami subequal.

Uropod 2 with inner ramus hardly longer than outer one.

Uropod 3 remarkably exceeding tip of uropod 1: peduncle shorter than outer ramus, inner ramus short, scale-like (fig. III, 5), outer ramus unisegmented, bearing bunches of spines along both margins and tip (fig. III, 5, 6).

Telson short, incised to the basis, longer than broad (fig. IV, 6), each lobe pointed distally, bearing a row of short spines along inferior margin and with 1-3 subdistal spines. A pair of very short sensitive plumose setae occurs in the upper part of each lobe.

Material examined: Bermuda Islands, Castle Harbon (Walsingham), Dec. 12, 1978, one spec (leg. Iliffe, T.).

Loc. typ.: Bermuda Islands.

Localities cited: Bermuda islands (Flatts Viliage) (Kunkel 1910), brackish pond.

Remarks: Kunkel described (1910) a new species *Melita planaterga* from Bermuda islands giving description and figures of some parts of body. Based on these description, our specimen agree mainly with these described by Kunkel except some details: Kunkel mentioned 2-segmented accessory flagellum (4-segmented in our specimen), segment 2 of gnathopods 1-2 with smaller number of setae in Kunkel specimens; article 2 of pereopods 5-7 finely serrate in Kunkel's specimens, almost smooth in our specimen. Mandible palp segments 2-3 slightly unequal in Kunkel specimens, subequal in our specimen.

But, as Kunkel didn't present any figure of segment 2 of pereopods 5-7, of mandibular palp, dactyls of gnathopod 1, uropod 3 etc, based on description of Kunkel it was not possible establish more important differences among Kunkel's specimens and our single specimen. For this reason, we considered our specimen as member of *Melita planaterga*.

K. H. Barnard described other similar species, *Melita orgasmos*, n. sp. from South Africa (1940). As his description was very short and without any figure, Griffiths redescribed this species based on new material from South Africa (1974), mentioned that segment 6 of gnathopod 2 is longer than broad, palm transverse, shorter than hind margin, defined by a rounded lobe, otherwise smooth, dactyl normal.

Sivaprakasam (1966) redescribed again *M. orgasmos* from India, mentioning that his specimens differs from Barnard's description of *M. orgasmos* by segment 4 of pereopods 5-7 remarkably wider than segment 5 (not remarkably wider than segment 5 in Barnard's description).

Ruffo mentioned *M. orgasmos* (1953) from West Africa giving only partially redescription of that species accompanied by several figures. Gnathopod in his specimens is similar to that of *M. planaterga* (stout dactyl, oblique palm), but his urosomite 2 is provided with 2 lateral teeth on each side, as well as the armature of telson is different.

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Re z i m e

OPIS VRSTE MELITA PLANATERGA KUNKEL 1910 SA BERMUDA OTOČJA SA REVIZIJOM RODOVA MELITA LEACH I ABLUDOMELITA, N. GEN. (119. Prilog poznavanju Amphipoda).

Vrsta *Amphipoda Melita planaterga* Kunkel 1910 detaljno je opisana i nacrtana na osnovu materijala dobijenog iz Castle Harbour na otočju Bermuda.

Melita grandimana Chevreux 1908 poznata sa Zelenortskih otoka u Atlantiku ne pripada rodu *Melita* već je uvrštena u rod *Dulichella* Stout.

Vrsta *Crangonyx shimizui* Ueno 1940 poznata iz Japana (Aikawa-mura) ne pripada rodu *Crangonyx*, već je analizom karaktera ove vrste dokazano da pripada rodu *Melita*, kao dobra vrsta.

Izvršena je revizija roda *Melita* i sve vrste ovog roda su izdvojene u dvije grupe odnosno zasebna roda:

— grupa vrsta sa redom leđnih dlaka na unutrašnjem lobusu druge maksile i sa pretežno dvočlanom vanjskom granom trećeg uropoda je stavljena u novi rod *Abludomelita*. Tip roda je *Melita gladiosa* Bate 1862.

— grupa vrsta bez reda leđnih dlaka na unutrašnjem lobusu druge maksile i pretežno sa jednočlanom vanjskom granom trećeg uropoda je ostavljena u rodu *Melita* Leach, sa tipom roda *Melita palmata* (Montagu 1804).

U radu je data detaljna sinonimika vrsta *Melita palmata*, *M. dentata*, *Abludomelita gladiosa*, *Dulichella grandimana*, *Melita shimizui* i *Melita planaterga*, kao i dijagnoze rodova *Melita*, *Dulichella* i novog roda *Abludomelita*.