Travaux du Muséum National d'Histoire Naturelle «Grigore Antipa»	Vol. LI	pp. 43–70	© Novembre 2008

A REVISION OF THE FAMILY PARAPSEUDIDAE, WITH DESCRIPTION OF A NEW TRIBE AND THREE GENERA. THE DIAGNOSES AND THE KEY OF THE SUPERSPECIFIC TAXA (CRUSTACEA: TANAIDACEA: APSEUDOMORPHA)

MODEST GUȚU

Abstract. As a result of the revision of the family Parapseudidae taxa, several systematic changes were made, materialized in: (1) trasferring of the genus *Trichapseudes* Barnard, 1920 in family Metapseudidae (aspect approached in another paper, Guțu, 2008), (2) synonymyzation of the genus *Longipedis* Larsen & Shimomura, 2007 with *Saltipedis* Guțu, 1995, (3) reclassfying of several species in three new genera (*Magniaculeus*, *Ramosiseta* and *Unguispinosus*), (4) transferring of the species *Apseudes babelmandebensis* Băcescu, 1978 from family Apseudidae to family Parapseudidae, (5) grouping of genera in two tribes (Parapseudini Guțu, 1981 and Pakistanapseudini nov.), (6) elaboration of new diagnoses at the superspecific taxa level, and (7) elaboration of an identification key of the two tribes and 22 genera. By the concentration of all systematic data at the superspecific level in a unitary paper it is easier the identification of parapseudid genera and the removing of some possible confusions.

Résumé. Suite à la révision des taxons de la famille Parapseudidae on a fait plusieurs changements systématiques, concrétisés en: (1) le transfert du genre *Trichapseudes* Barnard, 1920 dans la famille Metapseudidae (aspect traité dans un autre travail, Guțu 2008), (2) synonymisation du genre *Longipedis* Larsen & Shimomura, 2007 avec *Saltipedis* Guțu, 1995, (3) nouvelle classification de plusieurs espèces dans trois nouveaux genres (*Magniaculeus, Ramosiseta* et *Unguispinosus*), (4) le transfert de l'espèce *Apseudes babelmandebensis* Băcescu, 1978 de la famille Apseudidae dans la famille Parapseudidae, (5) le groupement des genres en deux tribus (Parapseudini, Guțu, 1981 et Pakistanapseudini, nov.), (6) l'élaboration de nouvelles diagnoses au niveau des taxons supraspécifiques et (7) l'élaboration d'une clé d'identification des deux tribus et de 22 genres. En concentrant, dans ce travail, toutes les données de systématique au niveau supraspécifique on rend plus aisée l'identification des genres de Parapseudides et on essaye d'éliminer certaines possibles confusions.

Key words: Parapseudidae, Parapseudini, Pakistanapseudini nov., *Magniaculeus* n. g., *Ramosiseta* n. g., *Unguispinosus* n. g., diagnoses and key of superspecific parapseudid taxa.

Systematics studies of the last years pointed out both the weak knowledge on the world tanaidological inventory and the existence of an unexpected diversity, especially at the level of the shallow water species and genera, many of them belonging to family Parapseudidae. Verifying data from literature (spread in numerous papers where the species description and genera diagnoses of the mentioned family are presented) I established that many of them cannot be included even in the most recent diagnosis of the family (Guțu & Sieg, 1999), which is not longer opportune, although they are well classified. At the same time, because there is no unitary paper on the parapseudid systematics (as in any family, as a matter of fact) which can include both the unmistakable diagnosis of the discussed family and of all genera, it is very difficult, if not impossible to establish whether a species belongs to a genus or another in some certain cases. This because some diagnoses were made basing only on females (often similar to several genera) or on males

(which can have dimorphic features difficult to be associated with those of the females), or simply because the authors did not pay much attention to some less significant features.

Taking into consideration the above ideas (as well as the other aspects which I do not comment), I considered useful to make a synthesis of all known systematic data in a single paper. In this respect, I made new diagnoses as well an identification key of the superspecific taxa. On this occasion, I reached the conclusion that genus *Trichapseudes* described by Barnard (1920) belongs to the family Metapseudidae (aspect approached in another paper, Guțu, 2008), and *Longipedis* Larsen & Shimomura, 2006 is synonym with *Saltipedis* Guțu, 1995. Also, several species were classified in three new genera, and another one (*Apseudes babelmandebensis* Băcescu, 1978) was transferred from the family Apseudidae in the family Parapseudidae. In addition, I classified parapseudid genera in two tribes, Parapseudini Guțu, 1981 and Pakistanapseudini nov.

Although I have done my best in making some precise diagnoses and a superspecific identification key easy to understand (even to less experienced ones), I don't know if I have always found the simplest and surest identification way. That is why, for helping those who are interested in, in each genus, I mentioned the references where they can find descriptions and systematic data (including the synonymisations) on the species of the respective genus, as well as the necessary figures for a better understanding of the commented morphological features.

I do not contest that, at least some of the taxa which are to be discovered, have „intermediary" morphological features, which will generate new confusions and doubts. When I assert this, I take into consideration the large morphological diversity, characteristic to the shallow water species, amplified by the diversity generated by the salinity variations from bays and lagoons, the preferred environment of many parapseudids.

Remarks on the terminology. Although now the counting of pereopods is made from 1 to 6, I used the counting from II to VII, according to the old terminology (Băcescu, 1978; Lang, 1966; Menzies, 1953; Miller, 1940; Shiino, 1952, etc.), used by me in all papers. Therefore, the references to pereopod II (or III … VII) correspond to "pereopod 1" (or 2 … 6), according to the recent acceptation.

Some specifications for those less experienced in using diagnoses. As it is known, less experienced persons skip the fact that the common morphological features of an upper taxon (family or tribe, as in this paper) are not included in the diagnoses of genera. That is why, I took myself the liberty to mention that it is necessary a step by step identification for avoiding the errors, beginning with the checking of the features included in the diagnosis of the highest rank taxon. Consulting only the diagnosis of a single genus of the tribe Parapseudini, for example, it can be reached the conclusion that the species of the respective genus do not have exopodite on the cheliped or pereopod II (which is not true), its presence being mentioned only in the tribe diagnosis (a morphological feature common to all genera).

Family Parapseudidae Guțu, 1981

Type-genus: *Parapseudes* G. O. Sars, 1882.

Diagnosis. Body dorsoventrally flattened, without spiniform processes at the level of carapace; only occasionally some pereonites can have a small anterolateral acute process. Pleon with five free pleonites and pleotelson. Antennule with thin flagella, excepting outer flagellum which can be more or less thicker in some males.

Antenna thin or, in some males, much thicker proximally; squama present, well developed. Mandible and maxilla with three and two-articulated palp, respectively. Cheliped obvious dimorphic (larger and stronger in males) or not (slender in both sexes). Pereopod II fossorial or of swimming-type (with carpus and propodus broad, provided with many long simple setae), larger than at least the following two pereopods; coxa without a well developed spiniform prolongation. Pereopod V with dactylus shorter than the longest adjacent spines or setae. Pleopods well developed, biramous, in five pairs or, exceptionally, in four pairs or absent. Uropod biramous; exopodite with at least five articles; endopodite long.

Remarks on the diagnosis. From the features mentioned in the diagnosis, the following combination is the most important for the correct identification of the parapseudids: (1) the absence of the well developed spiniform coxa from the level of the pereopod II, (2) pereopod II size, greater than that of the pereopods III and IV, at least, and (3) small length of the pereopod V dactylus (smaller than some distal spine of propodus).

Taxonomical remarks. As it is well known, in family Parapseudidae there is a large diversity of the morphological features, the dimorphic ones from the antennule, antenna and cheliped level, giving the impression that they are unitarily combined, superficially observed, within two "groups" of genera, suggesting the presence of two well defined phyletic lines. But, in fact, each "group" includes an aleatory mixture of features which partially can be find in the other "group". That is why it is impossible to establish the hypothesis of the presence of a coherent morpho-phyletical link from this point of view (at least in the present knowledge state). Also, because some males are still unknown (without them the correct identification of some parapseudids are, sometimes, impossible), some confused or contradictory data from literature, and the insufficient knowledge of the faunal inventory. On my opinion, the only division criterion of the parapseudid genera in distinct "groups", valuable both for males and females, is the length/width ratio of the pleonites. Basing on this morphological feature (which seems to be, at least partially, according to the antennule, antenna and cheliped dimorphism) I classified the 22 parapseudid genera (out of which 3 new, described in this paper) in two "groups", with a tribe rank, as it results further on. So, the mentioned dimorphic features have a major importance in some genera identification only in some cases.

Some ecological remarks. From the known data it results that less than 10% of parapseudids originate in waters deeper than 60-70 m. It is about *Pakistanapseudes bassi*, *Remexudes toompani* and *Saltipedis nugoris* (collected from depths of 60-293, 9.9-630 and, respectively, 22-207 m, cf. Blazewicz-Paszkowicz & Bamber, 2007), about *Saltipedis fragilis*, comb. nov. (199-202 m, cf. Larsen & Shimomura, 2006), about *Leptolicoa thokozele* (634-760 m, cf. Bamber & Sheader, 2003) and *Platylicoa setosa* (100-180 m, cf. Guțu, 2006).

From the families of apseudomorph tanaidaceans with numerous species, the parapseudids (as the kalliapseudids, as a matter of fact) have the most numerous taxa distributed in bays or lagoons (more or less closed, with brackish waters or large variations of salinity, according to the volume of the fresh waters, of the abundance of the precipitations, etc.) but also in littoral lakes, as some species of genera *Ctenapseudes* Bamber, 1997, *Discapseudes* Băcescu & Guțu, 1975, *Halmyrapseudes* Băcescu & Guțu, 1975, *Longiflagrum* Guțu, 1995, etc. The fact that many parapseudids live in identical physical-chemical conditions as those of the kalliapseudids explains, on my opinion, the resemblances (convergent, I think)

present between some taxa belonging to the two families (as it results from the brief comments on genera *Discapseudes* and *Thaicungella*).

A special place has *Pseudohamyrapseudes aquadulcis* Larsen & Hansknecht, 2004, the only parapseudid recorded in fresh waters, as yet (from a freshwater spring in the Northern Territory, Australia), it being the second taxon of the order Tanaidacea found in fresh waters, after that one reported by Stephensen (1936), *Sinelobus stanfordi* (Richardson, 1901), from Kurile Islands, about which we know that it is a hyper-euryhaline species (Gardiner, 1975).

To the above mentions, it has to be added the two parapseudid species (*Podictenius iliffei* Guțu, 2006 and *Swireapseudes birdi* Guțu & Iliffe, 2008), known from the submarine or anchyaline caves (the later as they were redefined, cf. Stock et al., 1986) from Bahamas Archipelago, where they penetrated probably accidentally.

A special particularity of the parapseudid is the high density of some populations. My assertion bases both on personal observations made during collecting sessions and on those from literature. The most representative example is the species *Discapseudes surinamensis*, for which Băcescu & Guțu (1975: 101) specify (according to the information given by Dr. A. L. Spaans) a density of 14,203 specimens/m^2.

As it was mentioned in another paper (Guțu, 1996 a), a less occurred feature in the species of other families is the exaggerated fragility of the appendages, particularity confirmed by Bamber (1998) and Bamber et al. (2003), and which I consider to be in a close connection with life conditions.

Bibliography: Guțu, 1981, 1996 a, b, 2006; Guțu & Sieg, 1999.

Tribe Parapseudini Guțu, 1981

Type-genus: Parapseudes G. O. Sars, 1882.

Diagnosis. Pleonites wide and very short (all together being shorter than the carapace length); first pleonite only occasionally without a dorsotransversal row of small setae. Antennule flagella thin; exceptionally, at least some males have the inner flagellum much longer than the outer one; also, males, in very rare cases, with outer flagellum a little thicker and numerous aesthetascs than the same in females. Antenna thin, excepting some males. Cheliped only exceptionally undimorphic; exopodite present; females cheliped slender, with long and narrow carpus; males cheliped, having distinct features for each genus, usually with carpus and propodus much wider than the same in females. Pereopod II, swimming-type or fossorial, with exopodite. Pleopods biramous, in five or, exceptionally, in four pairs (with narrow, ovate or very wide rami).

Remarks. The main morphological features of this tribe consist in the configuration of pleonites (short and broad) and the presence of chelipedal dimorphism (excepting the genus *Remexudes*, as results from Balzewicz-Paszkowycz & Bamber, 2007). In a few cases the outer flagellum of antennule and the antenna are thicker in males, or the first two peduncular articles of antennule are shorter in females.

Composition (15 genera with around of 58 species): *Ascumnella* Guțu & Heard, 2002, *Brachylicoa* Guțu, 2006, *Ctenapseudes* Bamber, 1996, *Discapseudes* Băcescu & Guțu, 1975, *Gutuapseudes* Edgar, 1997, *Halmyrapseudes* Băcescu & Guțu, 1974, *Longiflagrum* Guțu, 1995, *Parapseudes* G. O. Sars, 1882, *Platylicoa* Guțu, 2006, *Podictenius* Guțu, 2006, *Pseudoapseudes* Guțu, 1981,

Pseudohalmyrapseudes Larsen & Hansknecht, 2004, *Remexudes* Balzewicz-Paszkowycz & Bamber, 2007, *Saltipedis* Guțu, 1995 and *Magniaculeus* n. g.

Remarks on the composition. From the above list was be eliminated the genera *Trichapseudes* (described by Barnard, 1920, and reclassified, as I mentioned, in the family Metapseudidae, cf. Guțu, 2008) and *Longipedis* Larsen & Shimomura, 2006, which I consider to be synoymous with *Saltipedis* Guțu, 1995 (the spiniform coxa of pereopod II invoked in the diagnosis of genus being in reality an insignifiant prominence, as result from Larsen & Shimomura, 2006: fig. 5 B). At the same time I described a new genus, *Magniaculeus*, for three species classified initially in the genus *Saltipedis*.

Other aspect which I need to mention reffers to the species *Apseudes babelmandebensis* Băcescu, 1978, transferred in this tribe and classified (at least temporary) in the genus *Brachylicoa*.

Genus *Ascumnella* Guțu & Heard, 2002

Type-species: *Ascumnella caymanensis* Guțu & Heard, 2002.

Diagnosis. First pleonite without a dorsotransversal row of small setae. Antennule with relatively short flagella. Antenna with second article shorter than the fourth or fifth ones. Mandible palp with short and thick articles. Labium palp ovate ended in three spines. Exopodite of cheliped and pereopod II present, but with special configuration, having the last article globulous, without (plumose) setae. Females cheliped slender with long carpus. Males cheliped with short and wide carpus, and very large propodus. Pereopod II fossorial; merus without a distotergal strong spine. Pereopod VII basis swollen and large (much greater than the same of perepod II) with long plumose setae on both margins (anterior and posterior). Pleopods biramous, with narrow rami. Uropod exopodite short (five-articulated); endopodite very long.

Remarks. Although the study of the exopodite of the cheliped and pereopod II (Guțu & Heard, 2002: fig. 3 A-E) asks for a high attention (very difficult to be observed), it is the only way to a correct identification of the genus.

Composition (1 species): *Ascumnella caymanensis* Guțu & Heard, 2002.

Geographical distribution. Caribbean Sea (Grand Cayman Island).

Bibliography: Guțu & Heard, 2002.

Genus *Brachylicoa* Guțu, 2006

Type-species: *Saltipedis muelleri* Guțu, 1998.

Diagnosis. Carapace with some spines on the ventral margin. The length of the first three pereonites (measured together) at most equal with carapace width; each of the last three pereonites, about as broad as previous ones, shorter than wide. Antennule with very long and about equal flagella; first peduncular article with two-three spines on the inner margin and some setae. Antenna with multiarticulated flagellum; first peduncular article with a great inner spiniform prolongation extended anteriorly; second article longer than each of following three articles. Mandible palp with numerous setae on the first article. Inner margin of labium palp with a great expansion. Maxilliped basis with an obvious spine in the distoinner corner. Pereopod II fossorial. Pereopod VII basis long, slightly swollen, with long plumose setae on both margins. Pleopods with ovate unequal and narrow rami;

protopodite long, with at most some plumose setae. Uropod endopodite about two times longer than the pleon.

Remarks. The genus cannot be confounded by the presence of the spines on the ventral margin of the carapace, of those from the inner margin of the first article of the antennule and of the distoinner spine from the maxilliped basis (Guțu, 2006: figs 539-541, 551; 2007: figs 14 A, B, 15 A, 16 A-C, 17 A).

Composition (4 species): *Brachylicoa estasiatica* Guțu, 2007, *B. indonesiana* Guțu, 2006, *B. muelleri* (Guțu, 1998), and (?) *B. babelmandebensis* (Băcescu, 1978), comb. nov.

Remarks on the composition. There is no doubt that the species *B. babelmandebensis*, comb. nov., briefly described by Băcescu (1978) belongs to the tribe Parapseudini. However, its inclusion in the genus *Brachylicoa* is doubtful. The major morphological features which made me to classify it in this genus are: (1) the body general aspect, (2) the length of the antennule flagella, (3) the presence of a pointed dentiform prolongation (rostrally directed) at the level of the first article of the antenna peduncle, (4) the configuration of pereopod II (fossorial) and of (5) the cheliped merus (characterized by a rounded distosternal extension provided with many simple setae) and (6) the aspect of the pleopods (with unequal oval rami).

Geographical distribution. Indian Ocean and Southern Pacific.

Bibliography: Băcescu, 1978; Guțu, 1998 b, 2006, 2007.

Genus *Ctenapseudes* Bamber, Ariyananda & Silva, 1996

Type-species: *Ctenapseudes extravaganza* Bamber, Ariyananda & Silva, 1996.

Diagnosis. The length of first three pereonites (measured together) as long as following two ones. First pleonite with a dorsotransversal row of small setae. Antennule inner flagellum longer or not than the outer one. First article of antenna with a great inner spiniform prolongation, extended forward; second article longer than each of following two ones, but approximately equal with the fifth article. Mandible palp with numerous setae on each article. Labium palp (terminal lobe) ovate, with two long setiform spines in top. Maxilliped palp with some long setae on the distoinner corner of the first article. Females cheliped slender, with numerous setae on carpus; males cheliped much larger than the females ones, with a great basis, and a long and broad carpus and propodus. Pereopod II swimming-type, with numerous long setae on both sides of carpus and propodus, and on the sternal margins of ischium and merus. Pereopods V-VII basis great and inflated, the last one having many setae on the anterior and posterior margins. Pleopods with ovate, unequal and wide rami; protopodite short with many setae on both margins. Uropod endopodite only a little longer than the pleon length.

Remarks. From the description of the type-species it results that the females have the antennule outer flagellum (or "main flagellum", according to Bamber et al., 1996: 134 and fig. 1 C) longer than the inner one. This morphological feature is in contradiction with those mentioned by Barnard (1935: 315) and personally remarked in the species *Apseudes sapensis* Chilton, 1924 classified (Guțu & Angsupanich, 2004 b: 76) in the genus *Ctenapseudes.* As it results from another paper, the males of *Apseudes chilkensis* Chilton, 1924 (which belong to the same genus, in my opinion) also have the inner flagellum longer than the outer one, the females having about equal flagella (Vengayil et al., 1988: 2 a, g). The mentioned contradiction is represented by the fact that the males have the inner flagellum much longer then the outer one and not the females, whose flagella are approximately

equal. Till the clarifying of this aspect, a single conclusion is certain: at least some males of the genus *Ctenapseudes* have the outer flagellum much shorter than the inner one, a unique case in the suborder Apseudomorpha and, implicity, among parapseudids.

Although the genus *Ctenapseudes* has numerous common features with *Discapseudes*, it dinstinguishes from the last one by four features which cannot be confounded: (1) the absence of the small setae row on the pleotelson sides, (2) the presence of the pointed spiniform prolongation at the level of the first article of antenna, and (3) the absence of the long inner setae on the fifth article of the same appendage (Bamber et al., 1996: fig. 1 B; Barnard, 1935: fig. 20 d; Chilton, 1926: fig. 1 b), and (4) the presence of two long thin spines in the top of the terminal lobe (palp) of the labium (Bamber et al., 1996: fig. 2 C). It distinguishes the other genera belonging to the tribe Parapseudini by the feature combination mentioned in the diagnosis.

Composition (3 species): *Ctenapseudes chilkensis* (Chilton, 1924), comb. nov., *C. extravaganza* Bamber, Ariyananda & Silva, 1996 and *C. sapensis* (Chilton, 1926).

Remarks on the composition. The contradictory data from literature do not allow me to establish precisely if all three species are valid. Although Sieg (1983: 47) synonymyzed the two species described by Chilton (1924, 1926) I think that they are valid. As a mater of fact, in this respect Barnard's conclusion (1935) pleads. Considering the geographical distribution of the species *C. chilkensis* and *C. extravaganza* it is possible that the second species to be synonym with the first one.

Geographical distribution. Only in brackish waters (littoral lakes or estuaries) from the East of India (Gulf of Bengal), Sri Lanka and West of Thailanda.

Bibliography: Bamber et al., 1996; Barnard, 1935; Chilton, 1924, 1926; Guțu & Angsupanich, 2004 b; Sieg, 1983; Vengayil et al., 1988.

Genus *Discapseude*s Băcescu & Guțu, 1975

Type-species: *Discapseudes surinamensis* Băcescu & Guțu, 1975.

Diagnosis. First pleonite with a dorsotransversal row of small setae. Pleotelson round (discoidal) or elongate, with a row of very short plumose setae on sides. Antennule inner flagellum much shorter than the outer one; males with first two peduncular articles longer than the same of females. Antenna with second article a little longer than the following two ones (measured together) but shorter than the fifth one, the latest having numerous long plumose setae on the inner margin. Mandible palp with numerous plumose setae on each article. Labium palp ovate, ended in two very small denticles. Maxilliped palp with some long setae on the distoinner corner of the first article. Females cheliped slender, with numerous long setae on carpus; males cheliped with long and very broad carpus (having, also, numerous setae), and a great propodus. Pereopod II swimming-type, with very wide and short carpus, having long setae on both margins of carpus and propodus; dactylus (together with its very small claw) short, about as long as any propodal spines. Pereopod V dactylus very short and thick at base, surrounded by many propodal setae; claw small, acute, with numerous short hairs on the sternal margin. Pereopod VII basis inflated, greater than the same of pereopod II, with long plumose setae on the anterior and posterior margins. Pleopods protopodite thick, with numerous setae on both margins; rami ovate, unequal and very broad. Uropod endopodite only a little longer than the pleon.

Remarks. *Discapseudes* distinguishes the other parapseudids genera by the presence of the row of very small plumose setae on the pleotelson sides (Guțu, 2006:

fig. 504; Guțu & Heard, 2002: fig. 5 A), but also by the great length and the presence of the long plumose setae on the inner margin of the antenna fifth article. By the configuration of the antenna peduncle (including its setulation), the species of *Discapseudes* (Băcescu & Guțu, 1975: figs 1 B, 3 C; Guțu, 2006: fig. 503; Guțu & Ramos, 1995: fig. 1 E) resemble with some kalliapseudids of genera *Kalliapseudes* Stebbing, 1910, *Cristapseudes* Băcescu, 1980, etc. (Drumm, 2007: figs 1 C, 5 C, D; Guțu, 2006: figs 171, 189, 240; Lang, 1956: plate 34, fig. 5).

Composition (6 species): *Discapseudes belizensis* Guțu & Heard, 2002, *D. colombiensis* Guțu & Ramos, 1995, *D. holthuisi* Băcescu & Guțu, 1975, *D. makiei* Bamber, 1997, *D. mexicanus* Guțu, 2006 and *D. surinamensis* Băcescu & Guțu, 1975.

Geographical distribution. South China and Caribbean Seas, Gulf of Mexico and Colombian Pacific coast.

Bibliography: Băcescu & Guțu, 1975; Bamber, 1997; Escobar-Briones et al., 1999; Guțu, 2006; Guțu & Heard, 2002; Guțu & Ramos, 1995; Suarez-Morales et al., 2004.

Genus *Gutuapseudes* Edgar, 1997

Type-species: *Gutuapseudes manda* Edgar, 1997.

Diagnosis. Pleonites with very long lateral plumose setae. Antennule with inner flagellum only a little shorter than the outer one. Antenna with second article longer than each of following three ones; squama with very long setae, as long as first five antennal articles. Mandible with many long setae on the first palp article. Last two articles of maxilliped palp also with very long and fine setae. Females cheliped with long setae on carpus; males cheliped with short and very broad carpus, and large propodus. Pereopod II configuration intermediate, between fossorial and swimming-type; merus only a little longer than the carpus or propodus, each of them having many long simple setae; the joint between carpus and propodus is at the level of distosternal corner of carpus, not terminally as in other genera. Pereopod VII basis long, slightly swollen, with long plumose setae on both margins. Pleopods protopodite thin, with some lateral setae; rami ovate, unequal, endopodite being longer than exopodite. Uropod with long rami; exopodite and endopodite with more of 10, and 35 articles, respectively.

Remarks. *Gutuapseudes* is the only parapseudid genus with very long lateral plumose setae at the pleonite level, as well as with the simple ones on the last two articles of the maxilliped palp (Edgar, 1997: fig. 1; Guțu & Angsupanich, 2004 b: fig. 1 A), etc. A hard to see particularity of this genus is the shape of the distal extremity of the pereopod II carpus, and, implicitly, of carpus-propodus joint. Usually, in apseudomorphs, the imaginary longitudinal axis of the propodus continues that of the carpus, forming a straight line, by the extension of the mentioned pereopd. In the genus *Gutuapseudes* (by the insertion place of the propodus, in the sternodistal "corner" of the carpus), the two imaginary longitudinal axes are like a broken line, as it can be deduced from Edgar's (1997: fig. 6 P1) and Guțu & Angsupanich's (2004 b: fig. 1 E) figures.

Composition (2 species): *Gutuapseudes denticulatus* Guțu & Angsupanich, 2004 and *G. manda* Edgar, 1997.

Geographical distribution. Southern Pacific (East of Thailanda and North of Australia).

Bibliography: Edgar, 1997; Guțu & Angsupanich, 2004 b.

Genus *Halmyrapseudes* Băcescu & Guțu, 1974

Type-species: *Halmyrapseudes cubanensis* Băcescu & Guțu, 1974.

Diagnosis. Each pleonite with a dorsotransversal row of small setae. Antennule with two-articulated inner flagellum; outer flagellum long. Antenna with fifth article longer than the second or fourth ones. Males antennule and antenna with the peduncle longer than the same of females. Mandible palp with many setae on last two articles. Labium palp ovate, ended in two long spines. Maxilliped basis with very long setae on distal margin; second palp article with a long distoexternal spine. Females cheliped slender. Males cheliped with relatively small basis; carpus large with sternal digitiform or dentiform prolongations; propodus also large, with fixed finger and dactylus slender and long; subadult male with propodus relatively similar to the same of female. Pereopod II swimming-type; carpus, shorter than wide, with numerous long setae. Pereopod VII with many long plumose setae on both margins of basis, merus and carpus. Pleopods protopodite short; both rami broad. Uropod exopodite four or five articulated, with relatively short endopodite (no longer than the pleon).

Remarks. By the presence of the dorsotransversal row of small setae on all five pleonites, *Halmyrapseudes* (Băcescu & Guțu, 1974: figs 1 A, 2 A, G) resembles mostly with the genus *Pseudohalmyrapseudes* (Larsen & Hansknecht, 2004: fig. 1 A; Shiino, 1965: fig. 8 A, B), the main difference between them being the number of the articles of the antennule inner flagellum (only two in the first genus, cf. Băcescu & Guțu, 1974: figs 1 C, D, 4 C, D) and of the absence of the digitiform or dentiform prolongations on the cheliped carpus of the males (in the second one, cf. Larsen & Hansknecht, 2004: fig. 2 C, and Shiino, 1965: fig. 13 C, D).

Composition (7 species): *Halmyrapseudes bahamensis* Băcescu & Guțu, 1974, *H. cooperi* (Brown, 1954), *H. cubanensis* Băcescu & Guțu, 1974, *H. digitalis* (Brown, 1956), *H. spaanci* Băcescu & Guțu, 1975, *H. thaumastocheles* (Monod, 1935) and *H. killaiyensis* (Balasubrahmanyan, 1959).

Remarks on the composition. The similarities between *H. killaiyensis* and *H. srilankensis* Băcescu, 1981 (especially at the level of the males cheliped carpus, as it results from Balasubrahmanian, 1959: fig. 6, and Bamber et al., 2002: figs 2 B, 3 E), combined with their distribution (within the same geographical area) suggest me that second species is synonym with the first one.

Although the descriptions of the species *Apseudes cooperi* and *A. digitalis* include some mistakes and contradictions between the text and figures (Brown, 1954, 1956) I have chosen their classification in the genus *Halmyrapseudes* (to the genus *Pseudohalmyrapseudes* detriment). I took into consideration the number of the articles of the antennule inner flagellum, of only two (although the author mentions three articles in *A. digitalis*, probably also counting the common articles of the two flagella). Also, the cheliped carpus of the male in *A. digitalis* is illustrated with a small rounded prominence (essential feature in defining the genus *Halmyrapseudes*), and the fixed finger of the propodus is much shorter than the dactylus (Brown, 1956: fig. 5).

Geographical distribution. Caribbean Sea, Atlantic and Indian Oceans.

Bibliography: Băcescu, 1981; Băcescu & Guțu, 1974, 1975; Balasubrahmanyan, 1959; Bamber et al., 2002; Brown, 1954, 1956; Larsen & Hansknecht, 2004; Monod, 1935; Sieg, 1983; Sieg et al., 1982.

Genus *Longiflagrum* Guțu, 1995

Type-species: *Apseudes caeruleus* Boesch, 1973.

Diagnosis. First pleonite with a dorsotransversal row of small setae. Antennule with long and approximately equal flagella. Antenna with the first article having an inner forward dentiform acute prolongation; second article longest, with very long setae on the inner margin; third and fourth articles very short; fifth article at most equal with the second one. Mandible palp with many long setae on all articles. Maxilliped with some long setae on the distal margin of the first palp article; second article of palp with some fine setae in distoexternal corner. Females cheliped thin. Males cheliped with very large carpus; fixed finger of propodus shorter than the dactylus. Pereopod II swimming-type, with short and broad carpus, provided with numerous setae on both margins. Pereopods VI and VII basis short and thick, obvious swollen, with numerous plumose setae on both margins. Pleopods with short and thick protopodite and very broad rami. Uropod exopodite with at least ten articles; endopodite can have more of 30 articles.

Remarks. The main feature by which *Longiflagrum* differs from the other parapseudid genera consists in the presence of long setae on the inner margin of the antenna second article (Angsupanich, 2004: fig. 2 D; Boesch, 1973: figs 1 C, 4 C).

Composition (4 species): *Longiflagrum caeruleus* (Boesch, 1973), *L. estuarius* (Boesch, 1973), *L. koyonense* Angsupanich, 2004 and *L. nasutus* (Nunomura, 2005).

Geographical distribution. Pacific Ocean (in shallow waters from the mouth of some rivers or some estuaries of Southern Japan, Gulf of Thailand and Eastern Australia).

Bibliography: Angsupanich, 2004; Boesch, 1973; Guțu, 1995; Larsen & Shimomura, 2006; Nunomura, 2005; Sieg, 1983.

Genus *Parapseudes* G. O. Sars, 1882

Type-species: *Rhoea latifrons* Grube, 1864.

Diagnosis. Carapace large (by comparison with the length of pereon). First pleonite with a dorsotransversal row of small setae, sometimes hard visible. Antennule relatively short; first two peduncular articles thick; outer flagellum, only a little longer than the inner one, with at most ten articles. Antenna with short five-articulated peduncle; second article, approximately equal with the fourth or fifth, but a little longer than the third one. Mandible palp with a few setae on the first two articles. Maxilliped basis with some denticles in the distoexternal angle; second palp article with some fine setae in distoexternal corner. Females cheliped thin. Males cheliped with broad basis; carpus short and wide; propodus large. Pereopod II fossorial; basis frequently with one-two proximotergal setiform spines. Pereopod V with a vestigial dactylus, very hard visible. Pereopod VII basis inflated, with numerous plumose setae on both margins. Pleopods in four pairs; rami narrow. Uropod exopodite at most eight-articulated.

Remarks. Although G. O. Sars (1882) established that one of the features of the genus *Parapseudes* is the presence of four pairs of pleopods, often this assertion was not respected. Either the authors who described new species were not attentive and did not observed the pleopod absence on the last pleonite or they omitted to mention their number, or the respective species had really five pairs and, in conclusion, they do not belong to this genus. In the diagnosis of the genus, Guțu (1998 a) mentioned another undoubtful feature. It is about the pereopod V dactylus,

extremely small, discovered by him in three species (Guțu, 1998 a: fig. 5 A, D, E; 1998 b: fig. 6 D, E; 2001: fig. 1 B) and *rediscovered* by Larsen & Shimomura (2008: 9 and fig. 3 G) in another species. Thus, the genus *Parapseudes* distinguishes the other parapseudids both by the number of the pleopods and by the mentioned vestigial dactylus.

Composition (aparently 11 species): *Parapseudes algicola* (Shiino, 1952), *P. arenamans* Larsen & Shimomura, 2008, *P. francispori* (Băcescu, 1980), *P. goodei* Richardson, 1902, *P. inermis* (Brum, 1973), *P. latifrons* (Grube, 1864), *P. neglectus* Miller, 1940, *P. pedispinus* (Boone, 1923), *P. similis* Vanhöffen, 1914, *P. spongicola* Brown, 1958 and *P. trispinosus* Guțu, 1998.

Remarks on the composition. Lang (1966) synonymized the species *P. algicola, P. goodei, P. neglectus, P. pedispinus, P. similis* and *P. spongicola* with *P. latifrons* considering that it is about interspecific variations, opinion disapproved by Băcescu (1977) and Guțu (1998 a), because of the very different geographical areas from where the respective species were described. In addition, Guțu (1998 a) pointed out some differences present in the descriptions from literature (regarding the anteroproximal spines on the pereopod II basis), without reaching an acceptable conclusion. Under these circumstances, the specific composition of the genus is doubtful further on, as Larsen & Shimomura (2008) remarked, too.

From the above list the species *P. grubei* (Sars), mentioned by Băcescu (1977), was removed, on my opinion, being about *lapsus calami*, in reality he referring to *P. latifrons*.

Geographical distribution. In all marine areas.

Bibliography: Băcescu, 1977, 1980; Boone, 1923; Brown, 1958; Brum, 1973, 1974; Grube, 1864; Guțu, 1998 a, b, c, 2001; Lang, 1966; Larsen & Shimomura, 2008; Makkaveeva, 1968, 1971; Miller, 1940; Richardson, 1902, 1905; G. O. Sars, 1882; Shiino, 1952; Sieg, 1983; Vanhöffen, 1914.

Genus *Platylicoa* Guțu, 2006

Type-species: *Pakistanapseudes pectinis* Bamber, 1998.

Diagnosis. Pereonites 3-6 with anterolateral corners acute. First pleonite with a dorsotransversal row of small setae. Pleotelson relatively long. Antennule flagella unknown. Antenna with second article about as long as following three articles, measured together; males antenna a little thicker than the same of females, having many long aesthetascs on the flagellum. Mandible palp with numerous long setae on the first article. Labium palp with a great inner, rounded, expansion. Maxilliped basis with a stout spine on distoinner corner; second palp article with some long setae on distoexternal corner. Females cheliped slender and long. Males cheliped dimorphic. Pereopod II of swimming-type; dactylus with many small sternal spines. Pereopod VII basis inflated, with long plumose setae on both margins. Pleopods protopodite narrow, with some plumose setae; branches ovate and long, with relatively short plumose setae.

Remarks. Although Bamber (1998: 187 and fig. 13 B) mentioned that the male cheliped of *Pakistanapseudes pectinis* (designated type-species of the genus *Platylicoa*) is fine and long as that one of the female, Bamber & Sheader (2005: 298 and fig. 12 a) asserted that the male cheliped is „less slender than that of females", characteristic feature of the species of the tribe Parapseudini. Unfortunately I cannot do several comments on this aspect, the male of the second species of the genus, *P.*

setosa, being not known. Also, the configuration of the antennule flagella is not known, both described species having them broken.

Platylicoa distinguishes the other genera of the tribe Parapseudini by the configuration of the pereonites 3-6, whose anterolateral margins are pointed, not rounded (Bamber, 1998: fig. 11 A; Guțu, 2006: fig. 526). By the presence of the distoinner spine at the maxilliped basis level (Bamber, 1998: fig. 12 F), *Platylicoa* resembles only the genus *Brachylicoa*, the last one having 2-3 spines on the inner margin of the first article of the antennule peduncle (Guțu, 2006: figs 539-541, 551), among other different features.

Composition (2 species): *Platylicoa pectinis* (Bamber, 1998) and *P. setosa* Guțu, 2006.

Geographical distribution. South China and Coral Seas.

Bibliography: Bamber, 1998; Bamber & Sheader, 2005; Guțu, 2006.

Genus *Podictenius* Guțu, 2006

Type-species: *Podictenius tomiliffei* Guțu, 2006.

Diagnosis. Antennule with about equal flagella. Antenna with second article a little longer than the fifth one; third and fourth articles small, each of them being shorter than the fifth one. Mandible with only some setae on each article of palp. Labium palp ovate, with three spines in top. Maxilliped with some setae on the distoexternal corner of second palp article. Females cheliped slender. Males cheliped with broad and relatively short carpus, and large propodus. Chelipedal exopodite, at least in some species, with several small denticles and one-two short setae (or fine spine) on the outer margin of the first and second article, respectively. Pereopod II fossorial; basis with some spine (long or not) on the anterior and posterior margins. Pereopod V basis swollen and large, greater than the same of pereopod II. Pereopod VI and VII also with inflated basis, the last one having long plumose setae at least on the posterior margin. Pleopods protopodite long, with a few plumose setae; both rami long and narrow, with parallel sides. Uropod exopodite slightly shorter than the pleon; endopodite longer than half of body length.

Remarks. By the spines on the pereopod II basis (Guțu, 2006: figs 571, 585, 586) the genus *Podictenius* resembles some species of *Parapseudes*, which can also have one-three spines on the anterior margin (Guțu, 1998 a: figs 1 A, 4 A; Lang, 1966: fig. 7 a). The difference between the two genera is represented by the number of the pleopods (of only four pairs) and the extremely small size of the pereopod V dactylus in *Parapseudes* (Guțu, 1998 a: figs 1 B, 5 A, D, E; 1998 b: fig. 6 D, E; 2001: fig. 1 B).

Composition (3 species): *Podictenius espinosus* (Moore, 1901), *P. estafricanus* Guțu, 2006 and *P. tomiliffei* Guțu, 2006.

Remarks. I think it is an error the report of the species *P. espinosus* in the Red Sea by Makkaveeva (1971: 90). It might be possible to be about another species of the same genus (probably new).

Geographical distribution. Northern Atlantic and Western Indian Ocean.

Bibliography: Guțu, 2006; Makkaveeva, 1971; Moore, 1901; Richardson, 1905; Sieg, 1983.

Genus *Pseudoapseudes* Guțu, 1981

Type-species: *Apseudes pernix* Menzies, 1953.

Diagnosis. First pleonite with a dorsotransversal row of small setae. Antennule with inner flagellum, shorter than the outer one, with about four articles. Antenna with second, fourth and fifth articles about equal, longer than the third one. Mandible palp with a few setae on the first and second articles. Maxilliped basis with a distoexternal forward prolongation provided with some denticles; second palp article with one long distoexternal seta. Males cheliped with relatively long and narrow carpus, having an obvious proximosternal prominence. Pereopod II fossorial. Pleopods protopodite well developed; rami long, ovate. Uropod exopodite only a little longer than the pleotelson length.

Remarks. The most obvious morphological feature by which *Pseudoapseudes* distinguishes the other parapseudids is the aspect of the maxilliped basis, characterized by a distoexternal denticulated prolongation, combined with the presence of a single distoexternal seta on the second article of the palp (Menzies, 1953: figs 4 A, 6 E). The similar maxilliped basis have only some species of the genus *Parapseudes*, but these have at least three or four distoexternal setae on the second palp article (Guțu, 1998 a: fig. 3 C; Lang, 1966: fig. 5 C; Larsen & Shimomura, 2008: fig. 2 H; Menzies, 1953: fig. 8 H). I do not know whether the cheliped is dimorphic or not, the type-species of the genus, *P. pernix*, being briefly described, only after the male (the female being unknown). Also, in his description Menzies doesn't mention anything on chelipedal exopod (present in another species of the genus, *P. cedroensis*, cf. Menzies, 1953: fig. 6 B).

Composition (2 species): *Pseudoapseudes cedroensis* (Menzies, 1953) and *P. pernix* (Menzies, 1953).

Remarks. Although Makkaveeva (1971: 91) reports the species *Apseudes* conf. *pernix* in the Red Sea, I cannot confirm if the respective species belongs to the genus *Pseudoapseudes*.

Geographical distribution. Northeastern Pacific Ocean.

Bibliography: Guțu, 1981; Makkaveeva, 1971; Menzies, 1953; Sieg, 1983.

Genus *Pseudohalmyrapseudes* Larsen & Hansknecht, 2004

Type-species: *Pseudohalmyrapseudes aquadulcis* Larsen & Hansknecht, 2004.

Diagnosis (modified after Larsen & Hansknecht, 2004). Each pleonite with a dorsotransversal row of small setae. Antennule with unequal flagella; inner flagellum with more of four articles; males with first two peduncular articles longer than the same in females. Antenna with proximal article broad, having a large inner prolongation; second article short, about equal with fourth or fifth, but a little longer than the third one. Mandible palp with a few setae on the first article. Maxilliped basis with some distoinner long setae; palp with a long distoinner seta on the first article and a spiniform seta in the distoexternal corner of the second article. Cheliped carpus in both sexes with smooth sternal margin; males with carpus wider than the same in female, and larger propodus, the later having a short fixed finger and a long dactylus. Pereopod II swimming-type; merus, carpus and propodus with many simple setae on sides. Pereopod VII basis relatively cylindrical, with many long plumose setae on both margins; merus and carpus with long plumose and simple setae on the tergal and sternal margins, respectively. Pleopods well developed, with

relatively narrow protopodite; endopodite much larger than exopodite. Uropod with short exopodite; endopodite a little longer than the pleon length.

Remarks. By the presence of the dorsotransversal row of setae on each pleonite, the genus *Pseudohalmyrapseudes* resembles *Halmyrapseudes* (Băcescu & Guțu, 1974: figs 1 A, 4 A; Larsen & Hansknecht, 2004: fig. 1 A; Shiino, 1965: figs 8 A, B, 12 A, B), distinguishing from the last one by the higher and inconstant number of the articles of the antennule inner flagellum (at least four, comparatively with two) and the absence of the sternal expansion from the cheliped carpus, in males (Băcescu & Guțu, 1974: figs 1 C, D, 3 B, 6 B; Larsen & Hansknecht, 2004: figs 1 B, C, 2 C; Shiino, 1965: figs 9 A, 13 A, C, D).

Composition (2 species): *Pseudohalmyrapseudes aquadulcis* Larsen & Hansknecht, 2004 and *P. mussauensis* (Shiino, 1965).

Remarks on the composition. Although the species *Apseudes cooperi* and *A. digitalis* (summary and confusedly described by Brown, 1954, 1956) could belong to this genus, I classified them in the genus *Halmyrapseudes* basing on the uncertain arguments (see remarks from the last mentioned genus).

Geographical distribution. Western Indian and Southern Pacific Oceans.

Bibliography: Băcescu & Guțu, 1974, 1975; Bamber et al., 2002; Brown, 1954, 1956; Larsen & Hansknecht, 2004; Shiino, 1965; Sieg, 1983.

Genus *Remexudes* Blazewicz-Paszkowycz & Bamber, 2007

Type-species: *Remexudes toompani* Blazewicz-Paszkowycz & Bamber, 2007.

Diagnosis (modified after Blazewicz-Paszkowycz & Bamber, 2007). First pleonite with a dorsotransversal row of small setae. Antennule with first two peduncular articles very thick; flagella unequal, multiarticulated. Antenna with second article approximately equal with the fifth one. Mandible palp with many long setae on the first article. Labium palp ovate, ended in three spines. Maxilliped basis with a well developed dentiform process in the distoexternal corner, extended forward; many long setae are present on the inner and distoexternal margins of the second palp article. Cheliped undimorphic, relatively slender in both sexes; merus with a well developed distosternal prominence, having numerous long simple setae. Pereopod II swimming-type; basis with a distotransversal row of setae; propodus, longer than carpus or merus. Pereopod III and IV also swimming-type, relatively similar but smaller than pereopod II. Pereopods V-VII basis swollen; carpus only a little longer than merus or propodus; last pereopod with numerous plumose setae at least on the posterior margin. Pleopods protopodite short, with some setae on sides; rami narrow and long, with parallel margins. Uropod exopodite a little shorter than the pleotelson length.

Remarks. *Remexudes* is the only genus of the tribe Parapseudini whose chelipeds are not dimorphic (Blazewicz-Paszkowycz & Bamber, 2007: 25), characteristic feature of the second parapseudids tribe, Pakistanapseudini. By the aspect of the maxilliped basis (with a pointed dentiform prolongation) *Remexudes* (Blazewicz-Paszkowycz & Bamber, 2007: fig. 11 I) resembles *Magniaculeus* n. g. (Bamber, 2005: figs 6 I, 8 D; Blazewicz-Paszkowycz & Bamber, 2007: fig. 14 I). The two genera distinguished by the presence of the chelipedal dimorphism and the great outer prolongation of the first article of the maxilliped palp in the type-species of the new genus (Bamber, 2005: figs 6 I, D, 7 A, B, 9 A, B).

Composition (1 species): *Remexudex toompani* Blazewicz-Paszkowycz & Bamber, 2007.

Geographical distribution. Eastern Australia.
Bibliography: Blazewicz-Paszkowycz & Bamber, 2007.

Genus *Saltipedis* Guțu, 1995

Type-species: *Apseudes paulensis* Brum, 1971.
Diagnosis. First pleonite with a dorsotransversal row of small setae. Antennule flagella thin in both sexes. Antenna with second article approximately equal or slightly shorter than the fourth or fifth one. Mandible with some setae on each palp article. Labium palp ovate, ended in three fine spines. Maxilliped basis with rounded distoexternal corner; second palp article with some fine setae on distoexternal corner. Females cheliped slender, with long carpus and narrow propodus. Males cheliped with a short and broad carpus, and a large propodus. Pereopod II fossorial or swimming-type; propodus shorter than merus. Pereopods V-VII with swollen basis (much greater than pereopod II basis); carpus evidently longer than merus; pereopod VII basis with numerous plumose setae at least on posterior margin. Pleopods protopodite thin, with some plumose setae on both margins; rami narrow and very long, with parallel sides. Uropod exopodite with about ten articles; endopodite can have more of 45 articles.
Remarks. As I mentioned, I consider the genus *Longipedis* Larsen & Shimomura, 2006 a synonym of *Saltipedis*. At the same time I transfered some species, classified initially in *Saltipedis*, in a new genus, *Magniaculeus* (described follows).
The genus *Saltipedis* resembles *Podictenius* by some morphological features (the second characterized by the presence of some spines on both margins of the pereopod II basis), but also *Pseudoapseudes, Remexudes* and *Magniaculeus* n. g., the last three genera having the distoexternal corner of the maxilliped basis extended with a denticulated or pointed prolongation (Bamber, 2005: figs 6 I, 8 D; Blazewicz-Paszkowycz & Bamber, 2007: figs 11 I, 14 I; Menzies, 1953: figs 4 A, 6 E).
Composition (7 species): *Saltipedis achondroplasia* Bamber, Bird & Angsupanich, 2003, *S. bacescui* Guțu, 1998, *S. fragilis* (Larsen & Shimomura, 2006), comb. nov., *S. navassensis* Hansknecht, Heard & Martin, 2001, *S. paulensis* (Brum, 1971), *S. robustispinosus* Guțu, 1996 and *S. tetracanthus* Guțu & Angsupanich, 2004.
Remarks on the composition. As it results from Guțu (1996 a, 1998 c), the Sieg's species *Apseudes indet.* (Sieg, 1986: 22, figs 8-10) is a synonym of *S. paulensis*.
Geographical distribution. In all marine areas.
Bibliography: Bamber et al., 2003; Brum, 1971; Guțu, 1995, 1996 a, 1998 b, c, 2006; Guțu & Angsupanich, 2004 b; Hansknecht et al., 2001; Larsen & Shimomura, 2006; Sieg, 1983, 1986.

Genus ***Magniaculeus*** n. g.

Type-species: *Saltipedis forex* Bamber, 2005.
Diagnosis. First pleonite with a dorsotransversal row of small setae. Antennule inner flagellum shorter than the outer one. Antenna with first article extended innerly; second article approximately equal or slightly shorter than the fourth or fifth one; males, at least in some cases, with antenna a little thicker than the same in females. Mandible with some setae on each palp article. Labium palp ovate,

ended in three fine spines. Maxilliped basis with distoexternal corner forward extended into a great dentiform prolongation; also, the outer side of the first palp article prolonged into a long and acute process; second palp article with some fine setae on the distoexternal corner. Females cheliped slender. Males cheliped, with long and broad carpus; propodus large. Pereopod II fossorial or swimming-type; basis with some plumose setae on anterior margin; propodus longer than carpus but at most as long as merus. Pereopods V-VII with swollen basis (much greater than pereopod II basis); pereopod VII with numerous plumose setae on posterior margin at least. Pleopods rami narrow, with parallel sides. Uropod exopodite with about ten articles; endopodite long, having more of 35 articles.

Etymology. From the Latin *magnus*, „great", „large" and *aculeus*, „top", alluding to the size and the configuration of the outer corner of the second palp article of maxilliped.

Gender, masculine.

Remarks. *Magniaculeus* n. g. is the only parapseudid genus which have both the basis and the first article of the maxilliped palp with outer pointed prolongation (Bamber, 2005: figs 6 I, 8 I; Blazewicz-Paszkowycz & Bamber, 2007: figs 14 I). By the pointed distoexternal prolongation (dentiform), foreward directed, *Magniaculeus* n. g. resembles only the genus *Remexudes*. The main differences between the two mentioned genera are the lack of the pointed outer prolongation from the level of the first article of the maxilliped palp and of the cheliped dimorphism in *Remexudes* (as I have already mentioned; see remarks regarding the genus *Remexudes*).

Composition (3 species): *Magniaculeus forex* (Bamber, 2005), comb. nov., *M. incognitus* (Bamber, 2005), comb. nov., and *M. nugoris* (Blazewicz-Paszkowycz & Bamber, 2007), comb. nov.

Geographical distribution. Australian waters.

Bibliography: Bamber, 2005; Blazewicz-Paszkowycz & Bamber, 2007.

Tribe **Pakistanapseudini** nov.

Type-genus: Pakistanapseudes Băcescu, 1978.

Diagnosis. Carapace short, in many cases as long as longest pereonite (fourth or fifth). Pleon narrow; each pleonite at most a little wider than long; pleonites, measured together, longer than the carapace; first pleonite without a dorsotransversal row of small setae. Antennule outer flagellum and antenna dimorphous, much thicker in males. Chelipeds slender, with narrow basis and a very long carpus and propodus; exceptionally, some males have a little thicker carpus and a much larger propodus than the same in females; exopodite present or, occasionally, absent. Pereopod II, swimming-type or, more or less, fossorial; dactylus with some acute denticles on the sternal margin; exopodite present or, in very rare cases, absent. Pleopods in five pairs, with broad or elongate (ovate) rami; exceptionally, females without pleopods. Uropod exopodite only occasionally with more of ten articles; endopodite long, sometimes with at least 50 articles.

Remarks. Some features by which the tribe Pakistanapseudini differs from the tribe Parapseudini consist in: (1) the greater length of the pleonites (measured together, longer than the carapace), (2) the presence of an obvious dimorphism at the level of antennule outer flagellum and (3) of the antenna (both much thicker in males), and (4) the absence of an evident dimorphism at the level of entire cheliped (or, at least, on the level of cheliped basis, merus and carpus).

The special situations mentioned in the diagnosis refer to the genera *Leptolicoa* (whose pereopod II is devoid of the exopodite and the females do not have pleopods), *Ramosiseta* n. g. (which has not chelipedal exopodite), and *Swireapseudes* and *Unguispinosus* n. g. (whose chelipeds are dimorphic, especially at the level of propodus, greater in males).

Composition (7 genera, with 16 species): *Biropalostoma* Guțu & Angsupanich, 2004, *Leptolicoa* Guțu, 2006, *Pakistanapseudes* Băcescu, 1978, *Swireapseudes* Bamber, 1997, *Thaicungella* Guțu & Angsupanich, 2004, *Ramosiseta* n. g. and *Unguispinosus* n. g.

Genus *Biropalostoma* Guțu & Angsupanich, 2004

Type-species: *Biropalostoma spiniferum* Guțu & Angsupanich, 2004.

Diagnosis. Carapace short; fourth or fifth pereonites longest. Antennule proximal article with long and fine setae, and some thick, spine-like setae, on the inner margin; flagella long; males antennule unknown. Antenna with obvious curved dentiform apophyses on the distoinner corner of the second article. Mandible with special features: first two articles of palp orientated dorsally, towards the base of mandible body (not ventrally, at the pars incisiva); second palp article with or without a row of comb-like spines on the inner margin (which agree to outer margin if the palp is orientated ventrally); mandible body with or without a bludgeon-like expansion or other prominent spiniform formation on the anterolateral margin. Labium palp with a great inner rounded extension. Cheliped slender, with very long and narrow carpus and propodus, and without a signifiant dimorphism; exopodite present. Pereopod II swimming-type, with numerous long simple setae on both margins of merus, carpus and propodus; exopodite present. Pereopods V-VII basis more or less swollen, without plumose setae on anterior or posterior margins. Pleopods protopodite thick, with plumose setae on sides; branches great and wide; endopodite much larger than exopodite. Uropod exopodite with more of ten articles or not.

Remarks. *Biropalostoma* is the only genus whose mandible has a special configuration. Its orientation towards the mandible base of the first two articles of the palp (and not towards pars incisiva, as in the other apseudomorphs) causes the position change of the outer margin, which therefore becomes the inner margin (close to the mandible body), as it results from the figures of all known species (Bamber & Sheader, 2003: fig. 3 D; Guțu & Angsupanich, 2004 a: fig. 1 E; Shiino, 1963: fig. 13 H, I). At the level of the „contact" area (between the mandible body and the second article of its palp) a different morphological structure (with small spines) formed in the species of the genus *Biropalostoma*, either at the level of the mandible body or of the palp, feature occurred in other parapseudids and apseudomorphs.

Composition (3 species): *Biropalostoma goofi* (Bamber & Sheader, 2003), *B. spiniferum* Guțu & Angsupanich, 2004 and *B. tenuicorporeum* (Shiino, 1963).

Geographical distribution. Andaman and South China Seas (Coast of Vietnam and Northwest of Borneo Island, Malaysia).

Bibliography: Băcescu, 1978; Bamber & Sheader, 2003; Guțu, 2006; Guțu & Angsupanich, 2004 a; Shiino, 1963: Sieg, 1983.

Genus *Leptolicoa* Guțu, 2006

Type-species: *Pakistanapseudes thokozele* Bamber & Sheader, 2003.

Diagnosis. Carapace short, only a little longer than the longest pereonite (fifth). Pereonites 4-6 about equal, rectangular, narrow and long. Each pleonite longer than wide. Pleotelson thin, as long as carapace. Mandible palp with second article very long, without setae. Maxilliped with one strong seta on the distoexternal corner of second palp article. Cheliped slender and similar in both sexes; exopodite present. Pereopod II without exopodite. Pereopods V and VI with long and slightly swollen basis; dactylus of all pereopods slender and long, with distinct and simple claw. Pleopods absent in females; males with five pairs, characterized by a great protopodite and two ovate, relatively narrow and approximately equal branches. Uropod unknown.

Remarks. *Leptolicoa* is the only genus of the tribe Pakistanapseudini (and of the family Parapseudidae) whose pereopod II is devoid of exopodite and the females do not have pleopods (Bamber & Sheader, 2003: 181).

Composition (1 species): *Leptolicoa thokozele* (Bamber & Sheader, 2003).

Geographical distribution. Southwestern Atlantic Ocean (coast of Brazilia).

Bibliography: Bamber & Sheader, 2003; Guțu, 2006.

Genus *Pakistanapseudes* Băcescu, 1978

Type-species: *Pakistanapseudes leptodactylus* Băcescu, 1978.

Diagnosis. Pereonites 4-6 rectangular, longer than wide or not. Antenna with first five articles short. Cheliped slender, undimorphic; exopodite present. Pereopod II swimming-type or, more or less, fossorial, with exopodite. Dactylus of pereopods III and IV with or without a sternodistal prolongation and claw; dactylus of pereopods V, VI and VII without a sternodistal prolongation; the joint between dactylus and claw distinct or not; if claw is undefined the dactylus is long. Pleopods biramous, in five pairs; protopodite well developed, with some plumose setae on sides; exopodite and endopodite ovate, the latter being much larger than the first one. Uropod exopodite at most ten-articulated; endopodite long.

Remarks. I mentioned as type-species of the genus *P. leptodactylus,* although Băcescu (1978) did not make any comment in this respect. My choice took into consideration its detailed description and Sieg's remark (1983: 102).

Composition (7 species): *P. australianus* Guțu, 2006, *P. bassi* Blazewicz-Paszkowycz & Bamber, 2007, *P. brasiliensis* Guțu, 1996, *P. leptochelatus* Băcescu, 1978, *P. shiinoi* Băcescu, 1978, *P. perulpa* Blazewicz-Paszkowycz & Bamber, 2007 and *P. ridculli* Bamber, 2005.

Remarks on the composition. In his comments, Băcescu (1978: 200) mentioned the species *P. tenuichelatus* instead of *P. leptochelatus*. According to Sieg's opinion (1983: 103) I consider this mistake to be "*lapsus calami"*.

Some remarks on the morphological features. After the analysis of all features of the genus *Pakistanapseudes* species, I remaked some differences which underline some morphological incongruities. The most significant differences, which might be criteria for the reclassification of some species (when the faunal inventory will be better known) are:

- the length of the pereonites 4, 5 and 6, much greater than their width, in *P. bassi*, *P. brasiliensis*, *P. leptochelatus* and *P. shiinoi* (similar to that of the species of the genera *Biropalostoma*, *Leptolicoa*, and *Thaicungella*) or equal, at the most, in *P.*

australianus, *P. perulpa* and *P. ridculli* (as in genera *Ramosiseta* n. g., *Swireapseudes* and *Unguispinosus* n. g.);

- the presence of a sternodistal prolongation (parallel with the claw) of the pereopod II and IV dactylus, in *P. ridculli* (but not in pereopods VI and VII, as the species of the genus *Swireapseudes* have) or its absence, in the other species of the genus (but also of the other genera of the tribe Pakistanapseudini);

- the presence of the distinct joint between the dactylus and claw in all pereopods, in the species *P. australianus*, *P. bassi* and *P. brasiliensis* (as in genera *Biropalostoma* and *Thaicungella*), and its absence in some pereopods in *P. perulpa* and *P. ridculli* (as in genera *Ramosiseta* and *Remexudes*). Unfortunately this last feature could not be verified in all species of the tribe.

From the above mentioned cases, I comment a single example. If it is proved that the male of *P. ridculli* (now unknown) has a dimorphic cheliped, the species have to be reclassified in the genus *Swireapseudes* (by correlation with the configuration of the pereopods III and IV dactylus, even if pereopods VI and VII are different).

Pakistanapseudes distinguishes the other six genera of the tribe by: (1) normal mandible (contrasting with that of the genus *Biropalostoma*), (2) the presence of the chelipedal exopodite (absent in *Remexudes*), (3) the presence of the pereopod II exopodite (absent in *Leptolicoa*), (4) the absence of the distal setae on the dactylus of the pereopods II-IV (morphological feature occurred in *Thaicungella*), (5) the absence of the distosternal prolongation of the dactylus of the pereopods VI and VII (as *Swireapseudes* has), (6) the absence of the spine crown around the claw of the pereopod V dactylus (present in *Unguispinosus* n. g.).

Geographical distribution. Indian and Southern Pacific Oceans.

Bibliography: Băcescu, 1978; Bamber, 1998, 2000, 2005; Bamber & Sheader, 2003, 2005; Blazewicz-Paszkowycz & Bamber, 2007; Guțu, 1996 a, 2006; Sieg, 1983.

Genus *Swireapseudes* Bamber, 1997

Type-species: *Swireapseudes toloensis* Bamber, 1997.

Diagnosis. Pereonites 3-6 no longer than wide. Pleonites with some lateral setae. Antennule with long flagella; outer flagellum of male slightly thicker than the same of female. Antenna very long, only a little shorter than antennule; squama longer than the second article. Cheliped dimorphic, with exopodite; males propodus greater and much stronger than the same of females. Pereopod II fossorial, with exopodite; dactylus long (with some sternal denticles), ended in a small claw and a sternodistal prolongation. Dactylus of pereopods III, IV, VI and VII with claw and a sternodistal prolongation (relatively similar to the same of pereopod II), having the aspect of a very small chela; basis of the last pereopod long and thin, without plumose setae on its margins. Pleopods in five pairs; protopodite well developed, with a few plumose setae; endopodite long, ovate, much greater than exopodite. Uropod exopodite short, at most with seven or eight articles.

Remarks. The recent description of the species *Swireapseudes birdi* Guțu & Iliffe, 2008 allowed me to validate the genus *Swireapseudes*, synonymized by Bamber & Sheader (2003) with *Pakistanapseudes*, a synonymisation queried by Guțu (2006: 259). The main morphological features by which *Swireapseudes* distinguishes the other genera of the tribe Pakistanapseudini are: (1) the presence, besides the claw, of the sternodistal prolongation of the pereopods III, IV and VI, VII dactylus, and (2) the dimorphism of males cheliped (Guțu & Iliffe, 2008: figs 2 C, 3 A, B, D-F, 4 C). A single species of the tribe Pakistanapseudini has the

mentioned prolongations, but only at the level of the dactylus of pereopods II, III and IV, not on the last two pereopods. It is about *Pakistanapseudes ridculli* (cf. Bamber, 2005: fig. 11 F 2, 3, 5), whose male is unknown and, therefore, I do not know if it has a dimorphic cheliped or not. By the dimorphism of the chelipeds the species of *Swireapseudes* resembles *Unguispinosus hodgsoni* (Bamber, 2000), comb. nov. (Bamber, 2000: fig. 3 A; Bamber & Sheader, 2003: fig. 11).

Composition (2 species): *Swireapseudes birdi* Guțu & Iliffe, 2008 and *S. toloensis* Bamber, 1997.

Geographical distribution. South China Sea and Northwestern Atlantic Ocean (Eleuthera Island, Bahamas).

Bibliography: Bamber, 1997; Bamber & Sheader, 2003; Guțu, 2006; Guțu & Iliffe, 2008.

Genus *Thaicungella* Guțu & Angsupanich, 2004

Type-species: *Thaicungella lideeiensis* Guțu & Angsupanich, 2004.

Diagnosis. Carapace short. Pleotelson longer than wide. Mandible palp with a few setae; second article twice as first one. Labium palp (having two spines in top) with a great inner rounded expansion. Cheliped undimorphic, slender in both sexes; exopodite present. Pereopod II fossorial, with exopodite; dactylus with a very small claw and some (three-four) sternodistal short setae. Pereopods III and IV also with some (four) distosternal short setae on dactylus (similar to the same of pereopod II) and a small claw. Pereopods V-VII with long and swollen basis. Pleopods in five pairs; protopodite thin, with two-three plumose setae on each side; endopodite ovate, narrow, greater than exopodite. Uropod with short exopodite; endopodite longer than the half of body length.

Remarks. By the distosternal setae of dactylus of pereopods II, III and IV (Guțu & Angsupanich, 2004 a: fig. 6 A, B), the genus *Thaicungella* is unique among parapseudids but it is very similar to kalliapseudid genera *Acutihumerus* Guțu, 2006 and *Bacescapseudes* Guțu, 1981 (Guțu, 2006: figs 299, 300, 311, 312), classified in the subfamily Hemikalliapseudinae Guțu, 1972.

Composition (1 species): *Thaicungella lideeiensis* Guțu & Angsupanich, 2004.

Geographical distribution. Andaman Sea (Thai waters).

Bibliography: Guțu & Angsupanich, 2004 a.

Genus ***Ramosiseta*** n. g.

Type-species: *Pakistanapseudes turkoroa* Balzewicz-Paszkowycz & Bamber, 2007.

Diagnosis (male, female unknown). Each pleonite and pleotelson about as long as last pereonite, only a little wider than long. Antennule with first two peduncular articles short and very thick; outer flagellum very thick at base. Antenna multiarticulated, swollen proximally. Cheliped with relatively narrow carpus and great propodus; exopodite absent. Pereopod II fossorial, with exopodite; sternal margin of merus, carpus and propodus with robust spines and special setae, short and thick at base, ended in some digitiform prolongations. Pereopod III dactylus very long (longer than the carpus and propodus, measured together, or a little shorter than the basis length). Pleopods protopodite, great and thick, with some lateral setae; rami ovate, relatively short; endopodite very broad. Uropod exopodite a little longer than pleotelson; endopodite unknown.

Etymology. From the Latin *ramosus*, „ramified", „branchy" and *saeta*, „seta", „hair", with reffering to the aspect of some setae at the level of pereopod II.

Gender, feminine.

Remarks. By the very great thickness and small length of the first two peduncular articles of antennule, the absence of chelipedal exopodite, the configuration of some setae of pereopod II (thick and with digitiform prolongations), and the great length of pereopod III dactylus (Balzewicz-Paszkowycz & Bamber, 2007: figs 4 C, 5 A-D), the new genus is unique among parapseudids. More informations on the genus will be known only after the discovery of females.

Composition (1 species): *Ramosiseta turkoroa* (Balzewicz-Paszkowycz & Bamber, 2007), comb. nov.

Geographical distribution. Southern Pacific Ocean (Eastern Australian waters).

Bibliography: Blazewicz-Paszkowycz & Bamber, 2007.

Genus ***Unguispinosus*** n. g.

Type-species: *Pakistanapseudes hodgsoni* Bamber, 2000.

Diagnosis. Pereonites a little wider than long. Pleonites, measured together, as long as last three pereonites. Antennule outer flagellum of males only slightly thicker than the same of females. Cheliped with exopodite; males cheliped dimorphic, especially at the level of propodus (which is greater and much stronger than the same of females). Pereopod II fossorial, with exopodite; dactylus long, with some sternal denticles; claw small. Pereopods III, IV, VI and VII relatively similar, with thin and long basis; dactylus, also thin and long, ended in a long acute claw. Pereopod V dactylus, shorter than the adjacent setae; claw with some small spines around. Pleopods in five pairs; protopodite well developed, thick, with a few plumose setae; rami ovate, endopodite being a little longer than exopodite. Uropod exopodite short, at most eight- articulated; endopodite shorter than the half of body length.

Etymology. From the Latin *unguis*, „nail", „claw" and *spinosus*, „with spines", alluding to the configutaion of pereopod V claw.

Gender, masculine.

Remarks. The genus *Unguispinosus* n. g. is unique within the tribe Pakistanapseudini, by the configuration of pereopod V claw (with small spines all around, cf. Bamber, 2000: fig. 3 G), but by the dimorphism of the male cheliped, especially at the level of propodus (Bamber, 2000: 44 and fig. 3 A; Bamber & Sheader, 2003: fig. 11), it resembles only the genus *Swireapseudes* (Guțu & Iliffe, 2008: figs 2 C, 4 C).

Composition (1 species): *Unguispinosus hodgsoni* (Bamber, 2000), comb. nov.

Geographical distribution. South China Sea.

Bibliography: Bamber, 2000; Bamber & Sheader, 2003; Guțu, 2006 (: 259).

Key of the parapseudid superspecific taxa

1 - Pleonites much shorter than wide (length of all pleonites smaller than carapace breadth); first pleonite only exceptionally without a dorsotransversal row of small setae ..... Tribe **Parapseudini** Guțu,1981 ..... **2**

- Pleonites not much shorter than wide (length of all pleonites greater than carapace breadth); first pleonite without a dorsotransversal row of small setae.....Tribe **Pakistanapseudini** nov..... **16**

2 - All pleonites with a dorsotransversal row of small setae **3**
- At most first pleonite with a dorsotransversal row of small setae..... **4**

3 - Inner flagellum of antennule two-articulated (excluding common article of both flagella); male with large sternal prolongation on the cheliped carpus .... *Halmyrapseudes* Băcescu & Guțu, 1974
- Inner flagellum of antennule multiarticulated (excluding common article of both flagella); male with smooth sternal margin of cheliped carpus .... *Pseudohalmyrapseudes* Larsen & Hansknecht, 2004

4 - Pleopods in four pairs ..... *Parapseudes* G. O. Sars, 1882
- Pleopods in five pairs **5**

5 - Exopodite of cheliped and pereopod II without plumose setae on the last article ..... *Ascumnella* Guțu & Heard, 2002
- Exopodite of cheliped and pereopod II with long plumose setae on the last article **6**

6 - Pleotelson round (discoidal) or, in rare cases, elongate, with a row of very small setae on its sides; fifth article of antenna longer than previous four (measured together), having numerous long setae on inner margin .... *Discapseudes* Băcescu & Guțu, 1975
- Pleotelson elongate without a row of very small setae on its sides (at most with some dorsal or lateral setae); fifth article of antenna much shorter than previous four (measured together), having at most some setae on inner margin **7**

7 - Antenna with long setae on the inner margin of second article .... *Longiflagrum* Guțu, 1995
- Antenna without setae on the inner margin of second article **8**

8 - Pereopod II with strong spines on the anterior margin of basis .... *Podictenius* Guțu, 2006
- Pereopod II without stong spines on the anterior margin of basis (at most with some setae) **9**

9 - Pleonites with very long lateral plumose setae ..... *Gutuapseudes* Edgar, 1997
- Pleonites without very long lateral plumose setae **10**

10 - Antennule with two-three spines on the inner margin of first article .... *Brachylicoa* Guțu, 2006
- Antennule without spines on the inner margin of first article **11**

11 - Maxilliped basis with an obvious spine in the distoinner corner .... *Platylicoa* Guțu, 2006
- Maxilliped basis without a spine in the distoinner corner **12**

12 - Pereopod II ischium with a distal row of many long setae; last two articles of mandible palp with numerous setae, some of them very long .... *Ctenapseudes* Bamber, Ariyananda & Silva, 1996
- Pereopod II ischium with at most 3-4 relatively short setae; last two articles of mandible palp with a few unequal setae **13**

13 - Distoexternal margin of maxilliped basis rounded, having at most some small denticles ..... *Saltipedis* Guțu, 1995
- Distoexternal margin of maxilliped basis with an obvious rostral prolongation (acute or denticulated) **14**

14 - Distoexternal prolongation of maxilliped basis with some denticles .... *Pseudoapseudes* Guțu, 1981
- Distoexternal prolongation of maxilliped basis acute (with smooth margins) **15**

15 - Basis of pereopods II and III with a distotransversal row of setae; mandible palp with many long setae on the first article .... *Remexudes* Blazewicz-Paskowycz & Bamber, 2007
- Basis of pereopods II and III without a distotransversal row of setae; mandible palp with only some setae on the first article ..... ***Magniaculeus*** n. g.

16 - Cheliped without exopodite; at least pereopod II propodus with thick sternal setae, ramified distally into some digitiform extensions, and some spines; pereopod III dactylus much longer than the same of other pereopods .... ***Ramosiseta*** **n. g.**
- Cheliped with exopodite; pereopod II propodus with only fine setae and some spines; pereopod III dactylus not longer than the same of other pereopods **17**

17 - Pereopod II without exopodite (females without pleopods) .... *Leptolicoa* Guțu, 2006
- Pereopod II with exopodite (females with pleopods) **18**

18 - Mandible with a great bludgeon-like protuberance (provided with spines) on outer margin, or with some spines (comb-like) on inner margin of second palp article (in the contact area between mandible body and palp) .... *Biropalostoma* Guțu & Angsupanich, 2004
- Mandible without a bludgeon-like protuberance (provided with spines) on outer margin, or some spines (comb-like) on inner margin of second palp article (in the contact area between mandible body and palp) **19**

19 - Dactylus of pereopods II, III and IV with some small distosternal setae; claw joint distinct ..... *Thaicungella* Guțu & Angsupanich, 2004
- Dactylus of pereopods II, III and IV without some distosternal setae; claw joint distinct or not **20**

20 - Claw of pereopod V dactylus with small spines, around, near its distinct joint; males cheliped dimorphic ..... ***Unguispinosus*** n. g.
- Claw of pereopod V dactylus smooth, with or without a distinct joint; males cheliped dimorphic or not **21**

21 - Dactylus of pereopods III, IV and VI, VII with an obvious sternodistal prolongation, as long as claw; males cheliped dimorphic .... *Swireapseudes* Bamber, 1997
- At least dactylus of pereopods VI and VII without a sternodistal prolongation; joint of claw distinct or not; males cheliped undimorphic .... *Pakistanapseudes* Băcescu, 1978

ACKNOWLEDGEMENTS

I express my thanks to Mrs. Mihaela Achim-Barcan ("Grigore Antipa" National Museum of Natural History from Bucharest), who translated the paper, and to anonymous referees for their comments on manuscript.

REVIZIA FAMILIEI PARAPSEUDIDAE, CU DESCRIEREA UNUI TRIB ȘI TREI GENURI NOI. DIAGNOZELE ȘI CHEIA TAXONILOR SUPRASPECIFICI (CRUSTACEA: TANAIDACEA: APSEUDOMORPHA)

REZUMAT

Ca urmare a revizuirii taxonilor din familia Parapseudidae au fost efectuate mai multe schimbări sistematice, concretizate în: (1) transferarea genului *Trichapseudes* Barnard, 1920 în familia Metapseudidae (aspect tratat într-o altă lucrare, Guțu, 2008), (2) sinonimizarea genului *Longipedis* Larsen & Shimomura, 2007 cu *Saltipedis* Guțu, 1995, (3) reclasificarea mai multor specii în trei genuri noi (*Magniaculeus, Ramosiseta* și *Unguispinosus*), (4) transferarea speciei *Apseudes babelmandebensis* Băcecu, 1978 din familia Apseudidae în familia Parapseudidae, (5) ordonarea genurilor în două triburi (Parapseudini Guțu, 1981 și Pakistanapseudini nov.), (6) elaborarea de noi diagnoze la nivelul taxonilor supraspecifici și (7) întocmirea unei chei de identificare a celor 2 triburi și 22 de genuri. Prin concentrarea într-o singură lucrare a tuturor datelor de sistematică la nivel supraspecific este ușurată identificarea genurilor de parapseudide și sunt eliminate unele posibile confuzii.

LITERATURE CITED

ANGSUPANICH, S., 2004 – A new species of *Longiflagrum* (Tanaidacea, Parapseudidae) from Songkhla Lagoon, Thailand. Crustaceana, 77 (7): 849-860.

BĂCESCU, M., 1977 – *Heterotanais longidactylus* n. sp. and *Synapseudes mediterraneus* n. sp., Tanaidacea new for the Eastern Mediterranean fauna. Revue Roumaine de Biologie, Série Biologie Animale, 22 (2): 119-125.

BĂCESCU, M., 1978 – Contribution to the knowledge of *Monokonophora* (Crustacea: Tanaidacea) from the NW of the Indian Ocean. Memoriile Secției Științifice, Seria IV, Edit. Academiei Republicii Socialiste România, 1: 197-220.

BĂCESCU, M., 1980 – *Anuropoda francipori*, genre nouveau et espèce nouvelle de Monokonophora (Crustacea, Tanaidacea) des eaux de la Méditerranée levantine. Travaux du Muséum d'Histoire Naturelle "Grigore Antipa", 22: 381-384.

BĂCESCU, M., 1981 – Two new Apseudoidea Leach, 1814 (Crustacea, Tanaidacea) from the northern medio-littoral waters of Sri Lanka. Travaux du Muséum d'Histoire Naturelle "Grigore Antipa", 23: 73-80.

BĂCESCU, M., M. GUȚU, 1974 – *Halmyrapseudes cubanensis* n. g., n. sp. and *H. bahamensis* n. sp. brackishwater species of Tanaidacea (Crustacea). Travaux du Muséum d'Histoire Naturelle "Grigore Antipa", 15: 91-101.

BĂCESCU, M., M. GUȚU, 1975 – A new genus (*Discapseudes* n. g.) and three new species of Apseudidae (Crustacea, Tanaidacea) from the Northeastern Coast of South America. Zoologische Mededelingen, Rijksmuseum van Natuurlijke Historie, Leiden, 49 (11): 95-113.

BALASUBRAHMANYAN, K., 1959 – Apseudidae (Isopoda-Crustacea) from the Vellar Estuary and Inshore waters off Porto Novo. Proceedings of the first all-India Congress of Zoology, Calcutta, Part 2: 279-285.

BAMBER, R. N., 1997 – Peracarid crustaceans from Cape d'Aguilar and Hong Kong, II. Tanaidacea: Apseudomorpha. Pp. 87-102. *In*: B. Morton (ed.), The Marine Flora and Fauna of Hong Kong and Southern China Sea IV. Proccedings of the Eighth International Marine Biological Workshop: The Marine Flora and Fauna of Hong Kong and Southern China, Hong Kong, 2-20 April 1995, Hong Kong Univ. Press.

BAMBER, R. N., 1998 – Tanaidaceans (Crustacea, Peracarida) from the Southeast of the South China Sea. Asian Marine Biology, 15: 169-197.

BAMBER, R. N., 2000 – Additions to the apseudomorph tanaidaceans (Crustacea: Peracarida) of Hong Kong. Pp. 37-52. *In*: B. Morton (ed.), The Marine Flora and Fauna of Hong Kong

and Southern China Sea V. Proccedings of the Tenth International Marine Biological Workshop: The Marine Flora and Fauna of Hong Kong and Southern China, Hong Kong, 6-26 April 1998, Hong Kong Univ. Press.

BAMBER, R. N., 2005 – The Tanaidaceans (Arthropoda: Crustacea: Peracarida: Tanaidacea) of Esperance, Western Australia, Australia. Pp. 613-727, *In*: F. E. Wells, G. A. Kendrick, (eds), The Marine Flora and Fauna of Esperance, Western Australia, Western Australian Museum, Perth.

BAMBER, R. N., M. SHEADER, 2003 – A reinterpretation of the taxonomy and zoogeography of *Pakistanapseudes* and *Swireapseudes* (Crustacea: Tanaidacea): Hong Kong taxa in the world context. Pp. 167-194. *In*: B. Morton (ed), Perspectives on Marine Environment Change in Hong Kong and Southern China, 1977-2001. Proccedings of an International Workshop Reunion Conference, Hong Kong 21-26 October 2001, Hong Kong Univ. Press.

BAMBER, R. N., M. SHEADER, 2005 – Apseudomorph Tanaidacea (Crustacea: Malacostraca: Peracarida) from the shallow waters off Sabah, Malaysia. Systematics and Biodiversity, 2 (3): 281-303.

BAMBER, R. N., T. ARIYANANDA, E. I. L. SILVA, 1996 – A new genus and species of apseudomorph tanaidacean from Sri Lanka. Asian Marine Biology, 13: 133-140.

BAMBER, R. N., T. ARIYANANDA, E. I. L. SILVA, 2002 – The male of *Halmyrapseudes srilankensis* (Băcescu, 1981) comb. nov. and an analysis of the genus *Halmyrapseudes* Băcescu and Guțu, 1974 (Peracarida, Tanaidacea). Journal of Crustacean Biology, 22 (2): 287-297.

BAMBER, R. N., G. J. BIRD, S. ANGSUPANICH, 2003 (2001) – Tanaidaceans (Crustacea: Peracarida) from Thailand: new records and new species. Asian Marine Biology, 18: 35-69.

BARNARD, K. H., 1920 – Contribution to the Crustacean Fauna of South Africa. Annals of the South African Museum, 17 (5): 319-332.

BARNARD, K. H., 1935 – Report on some Amphipoda, Isopoda, and Tanaidacea in the Collections of the Indian Museum. Records of the Indian Museum, 37 (3): 279-319.

BLAZEWICZ-PASKOWYCZ, M., R. N. BAMBER, 2007 – Parapseudid tanaidaceans (Crustacea: Tanaidacea: Apseudomorpha) from Eastern Australia. Zootaxa, 1401: 1-32.

BOESCH, D. F., 1973 – Three New Tanaids (Crustacea, Tanaidacea) from Southern Queensland. Pacific Science, 27 (2): 168-188.

BOONE, P. L., 1923 – New marine tanaid and isopoda Crustacea from California. Proccedings of the Biological Society of Washington, 36: 147-156.

BROWN, A. C., 1954 – An addition to the South African Tanaidacea. Annals and Magazine of Natural History, Serie 12, 7: 939-942.

BROWN, A. C., 1956 – Addition to the genus *Apseudes* (Crustacea: Tanaidacea) from South Africa. Annals and Magazine of Natural History, Serie 12, 9: 705-709.

BROWN, A. C., 1958 – Report on the tanaidacean crustacea of Langebaan Lagoon and Saldanha Bay, on the West Coast of South Africa. Annals and Magazine of Natural History, Serie 13, 1 (7): 453-458.

BRUM, I. N. S., 1971 – *Apseudes paulensis* nova specie de Tanaidacea do Litoral Brasiliero (Crustacea). Arquivos do Museu Nacional, Rio de Janeiro, 54: 9-14

BRUM, I. N. S., 1973 – Contribuição ad conhecimento da fauna do Arquipélago de Abrolhos, Bahia, Brasil. No. 4. Crustacea-Tanaidacea. Boletim do Museu de História Natural, U.F.M.G., Belo Horizonte, Zoologia, 18: 1-14.

BRUM, I. N. S., 1974 – Contribuição ad conhecimento da fauna do Arquipélago de Abrolhos, Bahia, Brasil. No. 5. Crustacea-Tanaidacea. Boletim do Museu de História Natural, U.F.M.G., Belo Horizonte, Zoologia, 20: 1-10.

CHILTON, C., 1924 – Fauna of Chilka lake. Tanaidacea and Isopoda. Memoirs of Indian Museum, 5: 714-782.

CHILTON, C., 1926 – Zoological results of a tur in the Far East. The Tanaidacea and Isopoda of Tale Sap. Records of the Indian Museum, 28 (3): 173-185.

DRUMM, D. T., 2007 – Two new species of Tanaidacea of the genus *Kalliapseudes* Stebbing, 1910 (Crustacea: Apseudomorpha: Kalliapseudidae) from Australia. Zootaxa, 1441: 1-19.

EDGAR, G. J., 1997 – A new genus and three new species of apseudomorph tanaidacean (Crustacea) from the Darwin Region. Pp. 279-299. *In*: J. R. Hanley, G. Caswell, D. Megirian, H. K. Larson (eds), Proccedings of the Sixth International Marine Biological Workshop. The

marine flora and fauna of Darwin Harbour, Northern Territory, Australia. Museums and Art Galleries of the NorthernTerritory and the Australian Marine Sciences Association: Darwin, Australia.

ESCOBAR-BRIONES, E., F. ALVAREZ, G. SAIGADO-MALDONADO, 1999 – *Discapseudes holthuisi* (Crustacea: Tanaidacea) as an Intermediate Host of *Caballerorhynchus lamothei* (Acanthocephala: Cavisomidae). The Journal of Parasitology, 85 (1): 134-137.

GARDINER, L. F., 1975 – A fresh- and brackish-water tanaidacean, *Tanais stanfordi* Richardson, 1901, from a hypersaline lake in the Galapagos Archipelago, with a report on West Indian specimens. Crustaceana, 29 (2): 127-140.

GRUBE, A. E., 1864 – Crustacea. Pp. 68-77. *In*: Die Insel Lussin und Ihre Meeresfauna. Nach Einem Sechswöchentlichen Aufenthalte. Ferdinand Hirt, Breslau.

GUȚU, M., 1981 – A new contribution to the systematics and phylogeny of the suborder Monokonophora (Crustacea, Tanaidacea). Travaux du Muséum d'Histoire Naturelle "Grigore Antipa", 23: 81-108.

GUȚU, M., 1995 – A new subfamily and three new genera of Apseudomorpha (Crustacea, Tanaidacea). Travaux du Muséum d'Histoire Naturelle "Grigore Antipa", 35: 17-28.

GUȚU, M., 1996 a – Tanaidaceans (Crustacea, Peracarida) from Brazil, with description of new taxa and systematical remarks on some families. Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 36: 23-133.

GUȚU, M., 1996 b – The synoptic table and key to superspecific taxa of Recent Apseudomorpha (Crustacea, Tanaidacea). Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 36: 135-146.

GUȚU, M., 1998 a – New data on genus *Parapseudes* G. O. Sars, 1882 (Crustacea, Tanaidacea) and the description of the species *P. trispinosus* n. sp. from Indonesia. Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 40: 165-177.

GUȚU, M., 1998 b – Description of three new species of Tanaidacea (Crustacea) from the Tanzanian Coasts. Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 40: 79-209.

GUȚU, M., 1998 c – Tanaidacea. Pp. 549-557. *In*: P. S. Young (ed.), Catalogue of Crustacea of Brazil. Museu National, Rio de Janeiro, Série Livros, 6.

GUȚU, M., 2001 – New changes in the systematics of the suborder Apseudomorpha (Crustacea: Tanaidacea). Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 43: 65-71.

GUȚU, M., 2006 – New Apseudomorph taxa (Crustacea, Tanaidacea) of the World Ocean. Curtea Veche, Bucharest, 318 pp.

GUȚU, M., 2007 – Contribution to the knowledge of the Indo-West-Pacific Apseudomorpha (Crustacea: Tanaidacea). Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 50: 47-86.

GUȚU, M., 2008 – On the systematic position of the genera *Trichapseudes* Barnard and *Hoplomachus* Guțu, and the description of a new metapseudid subfamily (Crustacea: Tanaidacea: Apseudomorpha). Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 51: 00-00.

GUȚU, M., ANGSUPANICH, S., 2004 a – Description of two new genera and species of Tanaidacea (Crustacea) from shallow waters of the Andaman Sea, Thailand. Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 46: 29-44.

GUȚU, M., S. ANGSUPANICH, 2004 b – Two new parapseudid species and some first records of Tanaidacea (Crustacea: Peracarida) from Thailand. Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 47: 75-87.

GUȚU, M., R. W. HEARD, 2002 – A new genus and four new species of parapseudid and sphyrapid apseudomorphans (Crustacea: Tanaidacea), from the Caribbean Sea and Gulf of Mexico. Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 44: 69-92.

GUȚU, M., T. M. ILIFFE, 2008 – A new species and the first description of the male belonging to the genus *Swireapseudes* Bamber from the submarine caves of the Eleuthera Island (Crustacea: Tanaidacea: Apseudomorpha). Travaux du Muséum National d'Histoire Naturelle "Grigore Antipa", 51: 7-16.

GUȚU, M., G. E. RAMOS, 1995 – Tanaidaceans (Crustacea, Peracarida) from the waters of Colombian Pacific, with the description of two new species. Travaux du Muséum d'Histoire Naturelle "Grigore Antipa", 35: 29-48.

GUȚU, M., J. SIEG, 1999 – Order Tanaidacés (Tanaidacea Hansen, 1895). Pp. 353-389. *In*: P. Grassé (ed.), Traité de Zoologie, Crustacés Péracarides, VII (III A), Mémoires de l'Institut océanographique, Monaco, 19.

HANSKNECHT, T., R. W. HEARD, J. W. MARTIN, 2001 – *Saltipedis navassensis*, a new species of apseudomorph tanaidacean (Crustacea: Peracarida: Parapseudidae) from the tropical north-western Atlantic. Zootaxa, 18: 1-11.

LANG, K., 1956 – Tanaidacea aus Brasilien, gesammelt von Professor Dr. A Remane and Dr. S. Gerlach. Kieler Meeresforschungen, 12: 249-260.

LANG, K., 1966 – Taxonomische und phylogenetische Untersuchungen uber die Tanaidaceea. 2. Die Gattung *Parapseudes* G. O. Sars. Arkiv för Zoologi, 18 (24): 549-566.

LARSEN, K., T. HANSKNECHT, 2004 – A new genus and species of freshwater tanaidacean, *Pseudohalmyrapseudes aquadulcis* (Apseudomorpha: Parapseudidae), from Northern Territory, Australia. Journal of Crustacean Biology, 24 (4): 567-575.

LARSEN, K., M. SHIMOMURA, 2006 – Tanaidacea (Crustacea: Peracarida) from Japan. I. Apseudomorpha from the East China Sea, Seto Inland Sea, and Nansei Islands. Zootaxa, 1341: 29-48.

LARSEN, K., M. SHIMOMURA, 2008 – Tanaidacea (Crustacea: Peracarida) from Japan. IV. Shallow-water species from Akajima with notes on the recolonization potential of tanaids. Zootaxa, 1678: 1-24.

MAKKAVEEVA, E. B., 1968 – Vidovoi sostav i raspredelenie tanaidovyh i ravnonoghih rakov v pribrejnom raione o. Kuba. Pp. 99-104. *In*: Anonimus, Issledovanija Centralino Amerikanschih Morei. (in Russian)

MAKKAVEEVA, E. B., 1971 – Kacestvenyi sostav i kolicestvennoie tanaidovyh rakov v Krasnom More. Pp. 88-108. *In*: V. A. Vodianitkii (ed.), Bentos selifa Krasnogo Moria, Kiev. (in Russian)

MENZIES, R. J., 1953 – The apseudid chelifera of the eastern tropical and north temperate Pacific Ocean. Bulletin of the Museum of Comparative Zoology, Harvard College, 107 (9): 443-496.

MILLER, M. A., 1940 – The Isopod Crustacea of the Hawaiian Islands (Chelifera and Valvifera). Occasional Papers of Bernice P. Bishop Museum, Honolulu, 15 (26): 295-321.

MONOD, T., 1935 – Crustacés. Pp. 449-466. *In*: T. Monod, F. Angel, L. Germain, G. Petit (eds), Contribution à l'étude faunistique de la Réserve Naturelle de Manampesta (Madagascar). Annales des Sciences Naturelles, Série 10, 18: 449-466.

MOORE, H. F., 1901 – Report on Porto Rican Isopoda. Bulletin of the United State Fish Commission, 2: 161-176.

NUNOMURA, N., 2005 – A new species of the genus *Apseudes* (Tanaidacea: Apseudidae) Okinawa, Southern Japan. Contributions from the Toyama Science Museum, 313: 25-31.

RICHARDSON, H., 1902 – The marine and terrestrial isopods of the Bermuda, with description of new genus and species. Transactions of the Connecticut Academy of Sciences, 11: 277-310.

RICHARDSON, H., 1905 – A monograph on the Isopods of North America. Bulletin of the Unites States National Museum, 54: 1-54.

SARS, G. O., 1882 – Revision af Gruppen Isopoda Chelifera med charakteristik af nye herhen horende arter og Slaegter. Archiv for Mathematik og Naturvidenskab, Kristiania, 7: 1-54.

SHIINO, S. M., 1952 – A new genus and two new species of the Order Tanaidacea found at Seto. Publications of the Seto Marine Laboratory, 2 (2); 53-68.

SHIINO, S. M., 1963 – Tanaidacea collected by "Naga" Expedition in the Bay of Nha-Trang, South Viet-Nam. Report of the Faculty of Fisheries, Prefectural University of Mie, 4 (3): 437-507.

SHIINO, S. M., 1965 – Tanaidacea from the Bismark Archipelago. Dansk Naturhistorik Forening, Videnskabelige Meddelelser, 128 (17): 177-203.

SIEG, J., 1983 – Tanaidacea. Pp. 1-552. *In*: H.-E. Gruner, L. B. Holthuis (eds.), Crustaceorum Catalogus, Pars 6, Hague.

SIEG, J., 1986 – Crustacea Tanaidacea of the Antarctic and Subantarctic. 1. On Material Collected at Tierra del Fuego, Isla de los Estados, and the West Coast of the Antarctic Peninsula. Pp. 1-180. *In*: L. S. Kornicker (ed), Biology of the Antarctis Seas, XVIII. Antarctic Research Series, 45.

SIEG, J., R. W. HEARD, J. T. OGLE, 1982 – Tanaidacea (Crustacea: Peracarida) of the Gulf of Mexico. II. The occurence of *Halmyrapseudes bahamensis* Băcescu and Guțu, 1974

(Apseudidae) in the eastern gulf with redescription and ecological notes. Gulf Research Reports, 7 (2): 105-113.
STEPHENSEN, K., 1936 – A tanaid (Tanais stanfordi Richardson) found in fresh water in the Kurile Islands, with taxonomic remarks on the genus Tanais sensu lat. (Tanais Audouin et Milne-Edwards 1829, and Anatanais Nordenstam 1930). Annotationes Zoologicae Japonenses, 15 (3): 361-373.
STOCK, J. H., T. M. ILIFFE, D. WILLIAMS, 1986 – The concept „anchialine" reconsidered. Stygologia, 2: 90-92.
SUAREZ-MORALES, E., R. W. HEARD, S. GARCIA-MADRIGAL, J. J. OLIVA-RIVERA, E. ESCOBAR-BRIONES, 2004 – Catalogo de los Tanaidaceos (Crustacea: Peracarida) del Caribe Mexicano. Conacyt, Semarnat and Ecosur, Mexico, pp. 1-121.
VANHÖFFEN, E., 1914 – Die Isopoden der Deutschen Südpolar Expedition 1901-1903. Deutschen Südpolar Expedition, Berlin, 15: 447-598.
VENGAYIL, D. T., U. K. GOPALAN, M. KRISHNANKUTTY, 1988 – Development of *Apseudes chilkensis* Chilton (Tanaidacea, Crustacea), a forage organism in estuares. Mahasagar, 21 (2): 95-103.

Received: March 17, 2008
Accepted: April 28, 2008

Muzeul Național de Istorie Naturală „Grigore Antipa"
Șos. Kiseleff 1, 011341 București 2, România
e-mail: mgutu@antipa.ro