

CHECKLIST OF PERACARIDA OF PAKISTAN A- MARINE AND B- TERRESTRIAL ISOPODA MARINE TANAIIDACEA

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Abstract

The investigation of records show that 93 species of marine and terrestrial peracaridean order Isopoda have been reported from Pakistan. Of these only three are of terrestrial habitat, two are reported from Sindh and one from Baluchistan. The terrestrial isopods reported by Siddiqui and Suleman (1977) from northern areas. Out of total 11 isopod orders the Pakistani species belong to 6 suborders. Another peracaridean order, Tanaidacea which is marine, also being dealt here, although not fully investigated. Only four species have been reported in two suborders and three families.

Introduction

Isopods are the most diverse in form and the most species rich (10,215 spp) in crustaceans of the super order Peracaridea (Isopoda, Amphipoda, Tanaidacea their kins). Isopods are common inhabitants of nearly all environments, including the gill chamber of crustaceans or buccal cavity of fish. They are unusual among the Crustacea for their ubiquity. The familiar sow bugs and pill bugs are members of this group, along with their marine relatives (gribbles, slatters, etc). These animals range in length from 0.5 to 500mm (*Bathynomus giganteus*). Phylogenetic analysis and the fossil record, limited though it is, suggest that the group dates to at least the Carboniferous period of Paleozoic, approximately 300 million years ago.

The order Isopoda is generally divided into 11 suborders (Asellota, Calabozoida, Cymothoida, Limnoriidea, Microcerberidea, Oniscidea, Phoratosipoda, Phreatoicidea, Sphaeromatidea, Tainisopidea and Valvifera). Of these, except the Oniscidea are terrestrial and semi aquatic, remaining orders are aquatic.

Kensley (2001) has given 268 species of Isopoda from the Indian Ocean region which includes Pakistan, India, Myanmar, Arabian Sea, Bay of Bengal, Sri Lanka, Maldives Islands, Lakshadweep Islands, Gulf of Myanmar and Andaman Sea.

The Isopod fauna of much of the Pakistan coast and inland area is imperfectly known, however reports over the last few years have slowly added to some knowledge of the area. Some reports like Siddiqui and Suleman (1977) are incomplete, they only mentioned of the group Isopoda from Northern areas. The scheme of classification was followed by Kensley and Schotte (1998). From Pakistan so far nearly 92 species have been reported. The sources are arranged in alphabetical order and given in parentheses and the number of species is given against various suborders in the following manner: Asellota: 4 (Kazmi, 2001; Kazmi and Yousuf, 2002; Ghani, 2003); Cymothoida: 57 (Chopra, 1923; Ghani, 1995, 1996; Ghani and Tirmizi, 1993; Javed and Yasmeen, 1992, Kazmi, 1994, 1996; Kazmi and Bourdon, 1997; Kazmi and Markham, 1999, Kazmi and Tirmizi, 1994, Kazmi *et al*, 2002; Markham, 1980; Markham and Kazmi, 1998; Negoescu, 1980; Qazi, 1959, Schotte, 1995; Shireen, 2000, 2001; Shireen and Ghani, 2000; Yasmeen and Javed, 2000). Sphaeromatidea: 18 (Anwarullah, 1971; Barkati and Tirmizi, 1990; Bruce, 1986; Bruce and Javed, 1987; Ghani and Ali, 1998, 2001; Ghani and Shireen, 1995, 2000; Javed, 1990; Javed and Ahmed, 1987, 1988 a,b; Javed and Yasmeen, 1989, 1990, 1992, 1995, 1999; Javed and Yousuf, 1995 a,b, 1996, 1997; Yasmeen, 2004, 2005; Yasmeen and Javed, 2001; Yasmeen, 2004, 2005; Yasmeen and Javed, 2001; Yousuf and Javed, 2002); Microcerberidea: 1 (Kazmi and Naushaba, 2001); Oniscidea: 3 (Kazmi and Yousuf, 2000; Kazmi *et al*, 2002, Schotte, 1993; Siddiqui and Suleman, 1977); Limnoriidea: 2 (Javed and Yasmeen, 1994)

The other Peracaridean Order Tanaidacea is being dealt with the Order Isopoda for the reason that a very small number has been reported from here, though several specimens are still awaiting identification, deposited in the Marine Reference Collection and Resource Centre, University of Karachi. This is again mainly a marine group found along coasts as well as in deep ocean down to 8200m. Most stay on the bottom and hide in the mud, among plants, colonial animals, debris or empty gastropod shells, although a few can be planktonic. occurs only temporarily in non-marine habitats. Of the approximately 500 known species of Tanaidacea the largest is *Herpotanas kirkegaardi* Wolff which attains length of 2.5cm. The classification adopted here is that given by Heard *et al*. (2002). Little is known about endemism or distributional patterns of Pakistani genera and species.

From Pakistan 4 species have been reported. These are: Tanaidomorpha: 1 (Kazmi and Siddiqui, 1992); Apseudomorpha: 3 (Bacescu, 1978, 1980; Kazmi and Siddiqui, 2001).

This list is a part of a comprehensive illustrated list of marine fauna of Pakistan compiled by the first author. The new record from Pakistan are marked by an asterisk(*). The authorities to the higher taxa are not included in "References".

A- Marine and Terrestrial isopoda

Phylum ARTHROPODA
Sub Phylum CRUSTACEA
Class MALACOSTRACA
Subclass EUMALACOSTRACA
Superorder PERACARIDA
Order ISOPODA

Suborder ASELLOTA

Family SANTIIDAE

Genus *Halacarsantia* Wolff, 1989.

1. *Halacarsantia* sp. Kazmi, et al 2002. Distribution: In Pakistan: Sindh: Karachi

Family JOEROPSIDAE

Genus *Joeropsis* Koehler, 1985.

2. *Joeropsis karachiensis* Kazmi and Yousuf, (2002). Distribution: In Pakistan: Sindh: Sandspit
3. *Joeropsis curvicornis* (Nicolet, 1849). Distribution: In Pakistan :Sindh
Outside Pakistan: Patagonia, Sri Lanka, South Africa, Main Island, Chile, Magellan Straits, Kerulen Island
Genus *Carpas* Richardson, 1902
4. *Carpas algicola* Miller, 1941. Hawaii, Caribbean, Gulf of Mexico, India, Aldabra, Red Sea, Mauritius.

Suborder CYMOTHOIDA

Family PARANTHURIDAE

Genus *Paranthura* Bate and Westwood, 1868.

5. *Paranthura latipes* Barnard, 1955. Distribution: In Pakistan: Sindh: Bulleji
Outside Pakistan: South Africa

Family ANTHURIDAE

Genus *Caenanthura* Kensley, 1978.

6. *Caenanthura indica* Negoescu, 1980. Distribution: In Pakistan: Baluchistan: Ras Juddy
Outside Pakistan: Djibouti, Gulf of Oman, Iran
Genus *Cyathura* Norman & Stebbing, 1886.
7. *Cyathura francispori* Negoescu, 1981. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Suez Canal.

Family BOPYRIDAE

Genus *Argeiopsis* Kensley, 1974

8. *Argeiopsis kensleyi* Boyko and Kazmi, 2005. Distribution: In Pakistan: Sindh: Pacha
Genus *Allathelges* Kazmi and Markham, 1999.
9. *Allathelges pakistanesis* Kazmi and Markham, 1999. Distribution: In Pakistan: Sindh: Manora
Genus *Parathelges* Bonnier, 1990.
10. *Parathelges neotenuicaudis* Shyamasundari, Hanumantha Rao, Jalajakumari and Mary, 1993. Distribution: In Pakistan: Sindh: Pacha

Outside Pakistan: India

Genus *Parabopyrella* Markham, 1985.

11. **Parabopyrella indica* (Chopra, 1923).
First name different from current name, *Bopyrella*. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: India, Malaysia, S.China, Madagascar, Hong Kong, Australia
12. **Parabopyrella nierstraszi* (Chopra, 1930).
First name different from current name, *Bopyrella*. Distribution: In Pakistan: Sindh: Somar Goth
Outside Pakistan: India
13. *Parabopyrella saronae* (Bourdon and Bruce, 1979).
First name different from current name, *Bopyrella*. Distribution: In Pakistan: Sindh: Paradise Point,
Baluchistan: Sonari.
Outside Pakistan: Kenya
14. *Parabopyrella mortenseni* Nierstrasz and Brandis, 1929. India.
First name different from current name, *Bopyrella*. In Pakistan: Sindh
Outside Pakistan: Venezuela

Genus *Probopyrus* Giard and Bonnier, 1888.

15. **Probopyrus prashadi* (Chopra, 1923).
First name different from current name, *Palaegyge*. Distribution: In Pakistan: Sindh: Karachi.
Outside Pakistan: India
16. *Probopyrus pica* (Chopra, 1923). Distribution: In Pakistan: Sindh: Karachi.
Outside Pakistan: India

Genus *Dactlokepon* Stebbing, 1910.

17. *Dactylokepon* sp. Kazmi *et al*, 2002. Distribution: In Pakistan: Sindh: Karachi Fish Harbour

Genus *Parapenaeon* Richardson, 1904.

18. *Parapenaeon japonica* (Thielemann, 1910).
First name different from current name, *Epipeneon*. Distribution: In Pakistan: Baluchistan, Sindh: Karachi.
Outside Pakistan: Hong Kong, Japan, Madagascar, Indonesia, Philippine, Myanmar
19. *Epipeneon qadrii* Qazi, 1959. Distribution: In Pakistan: Sindh: Karachi

Genus *Aporobopyrina* Shiino, 1934.

20. *Aporobopyrina lamellata* Shiino, 1934. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Japan, Madagascar, Thailand

Genus *Aporobopyrus* Nobili, 1906.

21. *Aporobopyrus ryukyuensis* Shiino, 1939. Distribution: In Pakistan: Sindh: Karachi: Manora
Outside Pakistan: Japan.
22. **Aporobopyrus megacephalon* (Nierstrasz and Brandis, 1929).
First name different from current name *Pleurocryptosa*. Distribution: In Pakistan: Sindh
Outside Pakistan: Thailand and Hong Kong

Genus **Probopyriscus* Markham, 1980.

23. *Probopyriscus* sp. Kazmi *et al*, 2002. Distribution: In Pakistan: Baluchistan, Sindh: Karachi.
Genus *Asymmetrione* Codreanu, Codreanu and Pike, 1965.
24. *Asymmetrione* sp. Kazmi, *et al*, 2002. Distribution: In Pakistan: Sindh: Ibrahim Hydari
Genus *Progebiophilus* Codreanu and Codreanu, 1963.

25. *Progebiophilus assisi* Kazmi and Bourdon, 1997. Distribution: In Pakistan: Sindh: Pacha
Genus *Upogebiophilus* Nobili, 1906.

26. *Upogebiophilus* sp. Ghani, 1995. Distribution: In Pakistan: Sindh: Karachi

Family CIROLANIDAE

Genus *Atarbolana* Bruce and Javed, 1987.

27. *Atrabolana exoconta* Bruce and Javed, 1987. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: India

28. *Atarbolana concinna* Yasmeen, 2004.
Not outside Pakistan.

29. *Atarbolana dasycolus* Yasmeen, 2004.
Not outside Pakistan.
Genus *Cirolana* leach, 1818.

30. *Cirolana (Anopsilana) hirsute* (Yasmeen ,2005).
First name different from current name, *Anopsilana*
Distribution: Pakistan Sandspit, Karachi. 24°50'N, 66°57'E

Cirolana(Anopsilana) pentaspinula (Yasmeen,2008). Distribution: In Pakistan: Sindh: Karachi
Not outside Pakistan

31. *Cirolana brucei* Javed and Yasmeen, 1995. Distribution: In Pakistan: Sindh: Manora

32. *Cirolana bovina* Barnard,1940. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: S. Africa, India, Oman

33. *Cirolana manorae* Bruce and Javed, 1987. Distribution: In Pakistan: Sindh: Manora
Genus *Neocirolana* Hale, 1925.

34. *Neocirolana arabica* Javed and Yasmeen, 1990. Distribution: In Pakistan: Sindh: Karachi
Genus *Natatolana* Bruce,1981.

35. *Natatolana insignis* Hobbins and Jones, 1993. Distribution: In Pakistan: Sindh
Outside Pakistan: N. Arabian Sea ,Red Sea; Gulf of Oman; India; Thailand.

36. *Natatolana albicaudata* (Stebbing, 1900). Distribution: In Pakistan:Sindh
Outside Pakistan: Papua New Guinea

Genus *Excirolana* Richardson, 1912.

37. *Excirolana orientalis* (Dana, 1853). Distribution: In Pakistan: Sindh
Outside Pakistan: Pan tropical

Family CORALLANIDAE

Genus *Argathona* Stebbing, 1905.

38. *Argathona muraenae* Bal and Joshi, 1959. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: India

Genus *Lanocira* Hansen, 1980.

39. *Lancoria gardineri* Stebbing, 1904. Non *Lanocira gardineri*.—Javed & Yasmeen 1992: 12, figs 2, 3 (misidentification, probably undescribed species; *Lancoria wowine* Yasmeen and Javed, 2000cf Bruce & Sidabalok, 2011). Distribution: In Pakistan: Sindh: Manora
Outside Pakistan: Maldive Is, Philippines, Sri Lanka, Seychelles, India, S. Africa, Maldives, South Africa, Philippines, India, Sri Lanka, Hong Kong, Persian Gulf, Mozambique, Madagascar, Eniwetok Atoll and Kenya, Western Australia, and both the southern and northern Great Barrier Reef.

40. *Lancoria kroyeri* Hansen, 1980. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Brazil

Family CYMOTHOIDAE

Genus *Anilocra* Leach, 1818.

41. *Anilocra dimidiata* Bleeker, 1857. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Australia, Indonesia, New Guinea, Philippines, Vietnam, Sri Lanka, India, Java, S. Africa

42. *Anilocra cavicauda* Richardson, 1910. Distribution: In Pakistan: Sindh
Outside Pakistan: Philippines, Australia

Genus *Catoessa* Schioedte and Meinert, 1884.

43. *Catoessa ambassae* Bruce, 1990. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: New South Wales

Genus *Cymothoa* Fabricius, 1783.

44. *Cymothoa eremita* (Brunnich, 1783). Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: India, Sri Lanka, Red Sea, Zanzibar

Genus *Elthusa* Schioedte and Meinert, 1884.

45. *Elthusa raynaudii* (H. Milne Edwards, 1840). Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: S. Africa, Chile, Japan, Australia, Uruguay, St. Paul Is, Amsterdam Is, South Wales coast

Genus *Joryma* Bowman and Tareen, 1983.

46. *Joryma engraulidis* (Barnard, 1936).
First name different from current name, *Agarna*. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: India

47. *Joryma sawayah* Bowman and Tareen, 1983. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Kuwait, Persian Gulf

Genus *Mothocya* Hope, 1851

48. *Mothocya karobran* Bruce, 1986. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: New South Wales, Queensland

49. *Mothocya renardi* (Bleeker, 1857). First name different from current name, *Irona*. Distribution: In Pakistan: Sindh
Outside Pakistan: Indo-Pacific

50. *Mothocya melanostica* (Schioedt and Meinert, 1884).
First name different from current name, *Irona*. Distribution: In Pakistan: Sindh
Outside Pakistan:

Genus *Nerocila* Leach, 1818.

51. *Nerocila barramundae* Bruce, 1987.
Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Karumba, Queensland
52. *Nerocila depressa* H.Milne Edwards, 1840. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: N. India, Hong Kong
53. *Nerocila kisra* Bowman and Tareen, 1983. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Kuwait, Arabian - Persian Gulf
54. *Nerocila phaioleura* Bleeker, 1857. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Bay of Bengal, S. Africa, W. Australia, Hong Kong, East coast of the Malay Peninsula, Thailand
55. *Nerocila orbignyi* (Guerin – Meneville, 1832). Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Western Australia, Mediterranean, Tropical and Southern Atlantic, South Africa, New Zealand, India
56. *Nerocila serra* Schiodote and Meinert, 1881. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Australia, Indonesia, India, Thailand, Sri Lanka, St. Lucia, South Africa, Delagoa Bay, Mozambique
57. *Nerocila sigani* Bowman and Tareen, 1983. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Gujarat, Arabian Gulf, Red Sea, Andaman Sea, Madagascar, S. Africa, Sri Lanka, Bay of Bengal, Taiwan

Genus *Norileca* Bruce, 1990.
58. *Norileca borealis* Javed and Yasmeen, 1999. Distribution: In Pakistan: Sindh: Karachi
59. *Noriecla indica* (H. Milne Edwards, 1840). Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Australia, Sumatra, Indonesia, Philippines, New Guinea, Off Mozambique
60. *Nerocila triangulata* (Richardson, 1910).

First name different from current name, *Lironeca*. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Philippines Island, Queensland

Family GNATHIDAE

Genus *Gnathia* Leach, 1814.

61. *Gnathia arabica* Schotte, 1995. Distribution: In Pakistan: Arabian Sea

Genus *Paragnathia* Omer-Cooper, 1916.

62. **Pragnathia* sp.

Sub Order SPHAEROMATIDEA

Family SPHAEROMATIDAE

Genus *Afrocerceis* Müller, 1995

63. *Afrocerceis kenyensis* Muller, 1995. Distribution: In Pakistan: Sindh
Outside Pakistan: Kenya

Genus *Cerceis* H. Milne – Edwards, 1840.

64. *Cerceis biformina* Javed4 and Yousuf, 1996. Distribution: In Pakistan: Sindh: Bulleji

65. *Cerceis manori* Nooruddin, 1960. Distribution: In Pakistan: Sindh: Manora Island
Genus *Dynamenella* Hansen, 1905.
66. *Dynamenella bullejiensis* Javed and Ahmed, 1998. Distribution: In Pakistan: Sindh: Bulleji
67. *Dynamenella granulata* Javed and Ahmed, 1988a. Distribution: In Pakistan: Sindh: Bulleji
Genus *Paracerceis* Hansen, 1905.
68. *Paracerceis sculpta* (Holmes, 1904). Distribution: In Pakistan: Sindh: Port Bin Qasim
Outside Pakistan: California, Brazil, Mexico, Egypt, all coasts of Europe, and Mediterranean, Townsville and Queensland
Genus *Paradella* Harrison and Holdich, 1982.
69. *Paradella diana* (Menzies, 1962). Distribution: In Pakistan: Sindh: Bulleji
Outside Pakistan: U.S.A, Australia, Queensland, Hong Kong, Egypt, Mediterranean
Genus *Paraimene* Javed and Ahmed, 1988.
70. *Paraimene tuberculata* Javed and Ahmed, 1988. Distribution: In Pakistan: Sindh: Cape Monze
Genus *Sphaeromopsis* Holdich and Jones, 1973.
71. *Sphaeromopsis minutus* Javed and Yousuf, 1995. Distribution: In Pakistan: Sindh: Manora
72. *Sphaeromopsis petita* Javed and Yousuf, 1997.(=? *Cassidinidea*) Distribution: In Pakistan: Sindh: Pacha
73. *Sphaeromopsis serriguberna* Holdich and Harrison, 1981b. Distribution: In Pakistan: Sindh: Bulleji
Outside Pakistan: Queensland
Genus *Dynoides* Barnard, 1914.
74. *Dynoides amblysinus* (Pillai, 1954).
First name different from current name , *Clanella amblysina*. Distribution: In Pakistan: Sindh: Bulleji
Outside Pakistan: Queensland, Hong Kong, China Sea, Cape Comorian
Genus *Cymodoce* Leach, 1814
75. *Cymodoce spinula* Yousuf and Javed, 2001. Distribution: In Pakistan: Sindh: Bulleji
76. *Cymodoce bicarinata* Stebbing, 1904. Sri Lanka, Maldive, Luckshwadeep, Zanzibar
Genus *Paracilicæa* Stebbing, 1910.
77. *Paracilicæa keijii* Javed, 1990. Distribution: In Pakistan: Sindh: Bulleji
Outside Pakistan: Australia, E. Africa
Genus *Sphaeroma* Latreille, 1802.
78. *Sphaeroma terebrans* Bate, 1886. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: India, Queensland, Australia, U.S.A, Mexico, Sri Lanka, S. Africa, Mozambique
79. *Sphaeroma triste* Heller, 1865. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Nicobar Is, Malay Peninsula
80. *Sphaeroma walkeri* Stebbing, 1905. Distribution: In Pakistan: Sindh: Bulleji, Paradise Point

Outside Pakistan: Mediterranean, Suez, Spain, India, Morocco, Oman, Mozambique, Mexico, New South Wales

Suborder LIMNORIIDEA

Family LIMNORIIDAE

Genus *Limnoria* Leach, 1813.

81. *Limnoria lignarum* Rathke, 1799. Distribution: In Pakistan: Sindh
Outside Pakistan: Norway, Central America, Suez
82. *Limnoria bombayensis* Pillai, 1961. Distribution: In Pakistan: Sindh
Outside Pakistan: India

Suborder MICROCERBERIDEA

Family MICROCERBERIDAE

Genus *Coxicerberus* Waagele Voelz and McArthur, 1995.

83. *Coxicerberus* sp. Kazmi and Naushaba, 2001. Distribution: In Pakistan: Sindh: Sandspit

Suborder ONISCIDEA

Infraorder DIPLOCHETA

Family LIGIIDAE

Genus *Ligia* Fabricius, 1798.

84. *Ligia exotica* Roux, 1828. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Atlantic and Indo –Pacific

Superfamily ARMADILLOIDEA

Family EUBELIDAE

Genus *Periscyphis* Gerstaecker, 1873.

85. *Periscyphis vittatus* Omer-Cooper, 1926. Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Africa, Oman, Saudi Arabia, U.A.E, Yemen

Family TRACHELIPODIDAE

Genus *Hemilepistus* Budde – Lund, 1879.

86. *Hemilepistus klugii* (Brandt, 1833). Distribution: In Pakistan: Baluchistan: Quetta and Coastal area
Outside Pakistan: Caucasus, Iran

Section CRINOCHEETA

Family DETONIDAE

Genus *Armadilloniscus* Uljanin, 1875

87. *Armadilloniscus mekranensis* Kazmi, 2004. Distribution: In Pakistan: Balochistan; Makran

Family OLIBRINIDAE

Genus *Olibrinus* Budd-Lund, 1913.

88. *Olibrinus ormaranensis* Kazmi, 2004. Distribution: In Pakistan: Baluchistan: Ormara

Suborder VALVIFERA**Family IDOTEIDEA****Sub Family IDOTENINAE**

Genus *Synidotea* Harger, 1878.

89. *Synidotea fecunda* Javed and Yasmeen, 1994. Distribution: In Pakistan: Sindh: Manora
90. *Synidotea indica* Javed and Yasmeen, 1992. Distribution: In Pakistan: Sindh: Manora
Outside Pakistan: India
91. *Synidotea variegata* Collinge, 1917. In Pakistan: Sindh
Outside Pakistan: Madagascar, Gulf of Mannar, Chilka Lake, Travancore, Suez canal, Mozambique
92. *Synidotea hirtipes* (Milne-Edwards, 1840). In Pakistan: Sindh
Outside Pakistan: South Africa, Red Sea

B- Marine Tanaidacea**Order TANAIDACEA****Suborder TANAIDOMORPHA****Superfamily PARATANOIDEA****Family LEPTOCHELIDAE**

Genus *Leptochelia* Lang, 1949.

1. *Leptochelia* sp. Kazmi and Siddiqui, 1992. Distribution: In Pakistan: Sindh: Manora

Suborder APSEUDOMORPHA**Family KALLIAPSEUDIDAE**

Genus *Pakistanapseudes* Bacescu, 1978.

2. *Pakistanapseudes leptochelatus* Bacescu, 1978. Distribution: In Pakistan: Northern Arabian Sea
Outside Pakistan: Gulf of Oman

Genus *Cristapseudes* Bacescu, 1980.

3. *Cristapseudes omercooperi* (Larward, 1954). Distribution: In Pakistan: Sindh: Karachi
Outside Pakistan: Eastern Mediterranean, Gulf of Aden.

Family PAGURAPSEUDIDAE**Subfamily PAGURAPSEUDINAE**

Genus *Pagurapseudes* Sars, 1882.

4. *Pagurapseudes setulosa* Kazmi and Siddiqui, 2001. Distribution: In Pakistan: Sindh : Bulleji

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