

Article

Inventory of freshwater arthropods in Pakistan

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Abstract

Inventory of free-living freshwater arthropods, with synonymical bibliography, occurring in the Pakistani fresh waters is drawn up, almost entirely from taxonomical literature checked until now. Six hundred and thirty two taxa have been recorded since 1892, of these 239 species and sub-species are of Crustacea, 368 species and sub-species are of Insecta, 25 species and sub-species are of Arachnida as well as few unidentified species. The present inventory is composed of the collated records from the publications of the library and internet. Totally 266 selected publications are arranged as resource references.

Keywords inventory; freshwater arthropods; Pakistan.

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1 Introduction

Our scientific knowledge about freshwater invertebrates, although substantial and useful for many groups, is far less than for the vertebrates. The invertebrates are often used as indicators of the state of streams, rivers, lakes and ponds. In spite of the facts that the diversity of invertebrate species far outnumbers that of the vertebrate animals particularly the Arthropoda, which contains almost 80% of all animal species, and our fresh water bodies are vast and diverse, our concerns stem from the realization that our knowledge of the diversity and variability of arthropod organisms and the ecosystems in which they occur is woefully incomplete.

2 Materials and Methods

Inventory of free-living inland arthropods, with synonymical bibliography, occurring in the Pakistani fresh waters is drawn up, almost entirely from taxonomical literature checked until now. The present inventory is composed of the collated records from the publications of the library and internet. Totally 266 selected publications are arranged as resource references.

3 Results

Six hundred and thirty two taxa have been recorded since 1892, of these 239 species and sub-species are of Crustacea, 368 species and sub-species are of Insecta, 25 species and sub-species are of Arachnida as well as few unidentified species (Table 1).

The presentation format of the tabulated list (Table 1) is as follows: Valid names are given in the first column, together with the indication of the family name; then secondly the first reporter is given with earlier name of species if now changed, thirdly the province(s) name, if from different provinces then all reporters are mentioned. For some species exact place (province name) could not be found, a mark of interrogation is given there.

A note on Pakistani freshwater ghost species is also given.

Table 1 An inventory of earlier recorded Pakistani species of freshwater free living Arthropoda (Anostraca, Conchostraca, Cladocera, Ostracoda, Copepoda, Peracarida, Arachnida and Insecta).

Species	First Reporters from various provinces of Pakistan	Province
Anostraca		
Thamnocephalidae		
<i>Branchinella (Branchinellites) maduraiensis</i>	Qadri and Baqai, 1956 as <i>Streptocephalus karachiensis</i> and <i>Branchinella karachiensis</i> fide Belk and Esparaza, 1995	Sindh
<i>Branchinella hardingi</i>	Qadri and Baqai, 1956 as <i>Streptocephalus hardingi</i>	Sindh
<i>Phallocryptus spinosa</i>	Brtek and Thiery, 1995 as <i>Branchinella spinosa</i>	?
Streptocephalidae		
<i>Branchipus schaefferi</i>	Gurney, 1906 Lync	Sindh
<i>Streptocephalus dichotomus</i>	Kazmi and Sultana, 2014	Baluchistan
<i>Streptocephalus lahorensis</i> nomen dubium fide Rogers and Padhye, 2015	Ghuri and Mahoon, 1980 Rogers and Padhye, 2014	Punjab
<i>Streptocephalus simplex</i>		
<i>Tanymastix stagnalis</i>	Gurney, 1906 as <i>Branchipus pisciformis</i> ; Kemp, 1911 as <i>Branchipus stagnalis</i>	Sindh
Chirocephalidae		
<i>Chirocephalus priscus</i>	Kemp, 1911	Punjab

Cladocera		
Daphniidae		
<i>Simocephalus mixtus</i>	Orlova-Bienkowskaja, 2001	?
<i>Simocephalus vetulus</i>	Arora, 1931; Jahangir <i>et al.</i> , 2004; Iqbal and Kazmi, 1980	Punjab, Sindh, Baluchistan
<i>Simocephalus exspinosus</i>	Iqbal and Kazmi, 1980	Baluchistan
<i>Daphnia similoides</i>	Brehm, 1914	Baluchistan
<i>Daphnia fusca</i>	Gurney, 1906; Arora, 1931	KP Punjab
<i>Daphnia galeata</i>	Naureen, 1998 unpublished thesis	Punjab
<i>Daphnia psittacea</i>	Arora, 1931	Punjab
<i>Daphnia rosea</i>	Chaudari <i>et al.</i> , 1986	Punjab
<i>Daphnia longispina</i>	Mahar <i>et al.</i> , 2008	Sindh
<i>Daphnia scholderi</i>	Ali, 1973; Iqbal and Kazmi, 1990	Punjab, KP., Baluchistan
<i>Daphnia hyalina</i>	Kilani and Mahoon, 1989 unpublished Biswas, 1971	Punjab
<i>Daphnia mendotae</i>	Kilani and Mahoon, 1989, unpublished	Punjab
<i>Daphnia laevis</i>	Kilani and Mahoon, 1989, unpublished	Punjab
<i>Daphnia magna</i>	Arora, 1931	Punjab
<i>Daphnia pulex</i>	Arora, 1931, Ghulam Dastagir, 2014 unpublished thesis as <i>Daphnia pulis</i>	Punjab, Baluchistan
<i>Daphnia longiremis</i>	Naureen, 1998 unpublished thesis	Punjab
<i>Daphnia lumholtzi</i>	Brehm, 1950; Mahar <i>et al.</i> , 2008; Iqbal and	Punjab; Sindh

	Kazmi, 1990	Baluchistan
<i>Daphnia straus</i>	Mahoon and Sabir, 1985	Punjab
<i>Daphnia similis</i>	Mahoon and Sultana, 1977	Punjab
<i>Ceriodaphnia reticulata</i>	Mahar <i>et al.</i> , 2008; Iqbal and Kazmi, 1990	Sindh; Bluchistan
<i>Ceriodaphnia quadrangulata</i>	Kilani and Mmahoon, 1985 unpublished	Punjab
<i>Ceriodaphnia richardi</i>	Kilani and Mmahoon, 1985 unpublished	Punjab
<i>Ceriodaphnia rotunda</i>	Mahoon and Sabir, 1985 as <i>Ceriodaphnia malcay</i>	Punjab
<i>Ceriodaphnia cornuta</i>	Jahangir <i>et al.</i> , 2000	Sindh Punjab
<i>Ceriodaphnia pulchella</i>	Baloch <i>et al.</i> , 2005 Iqbal and Kazmi, 1990	KP
<i>Ceriodaphnia acanthina</i>	Iqbal and Kazmi, 1990 Mahoon <i>et al.</i> , 1985	Baluchistan
<i>Ceriodaphnia megops</i>	Mahoon and sabir, 1985; Nawaz <i>et al.</i> , 1981	Punjab, KP
<i>Ceriodaphnia dubia</i>	Nawaz <i>et al.</i> , 1981, mahoon and sabir, 1985 as <i>ceriodaphnia meglaoops</i>	KP, Punjab
<i>Ceriodaphnia laticaudata</i>	Kilani and mahoon, 1989 unpublished	Punjab,
<i>Ceriodaphnia regaudi</i>	Arora, 1931, Nawaz <i>et al.</i> , 1981	Punjab, KP
<i>Ceriodaphnia setosa</i>	Mahar <i>et al.</i> , 2014	Sindh
<i>Scapholeberis aurita</i>	Mahoon and Sultana, 1977	Punjab
Sididae		
<i>Diaphanosoma brachyurum</i>	Iqbal and Kazmi, 1990; Jahangir <i>et al.</i> , 2000	Baluchistan; Sindh
<i>Diaphanosoma sarsi</i>	Mahar, <i>et al.</i> , 2014	Sindh
<i>Diaphanosoma excisum</i>	Iqbal and Kazmi, 1990	Baluchistan
<i>Diaphanosoma leuchtenbergianums</i>	Kailani and Mahoon, 1987	Punjab
<i>Sida crystallina</i>	?	Punjab
<i>Latonopsis occidentalis</i>	Mahoon <i>et al.</i> , 1985 not valid	Punjab
<i>Latonopsis fasciculata</i>	Mahoon and Sabir, 1985	Punjab
<i>Pseudosida herricki</i>	Mahoon and Sabir, 1985	Punjab
Macrothricidae		
<i>Macrothrix laticornis</i>	Arora, 1931; Baloch <i>et al.</i> , 2000	Punjab; Sindh
<i>Macrothrix borysthenica</i>	Kailni and Mahoon, 1989 unpublished	
<i>Macrothrix hirsuticornis</i>	Kailni and Mahoon, 1989 unpublished	Punjab
<i>Macrothrix montana</i>	Mahoon and Butt, 1985	Punjab
<i>Macrothrix rosea</i>	Korai <i>et al.</i> , 2008; Ghulam Dastagir, 2014 unpublished thesis	Sindh, baluchistan
<i>Wlassicsia kinistinensis</i>	Mahoon and Sultana, 1977	Punjab
<i>Lathonura ovalis nomen inq</i>	Mahoon, Ghauri and Butt, 1986	Punjab
Bosminidae		

<i>Bosminopsis deitersi</i>	Jahangir <i>et al.</i> , 2000	Sindh
<i>Bosmina longirostris</i>	Baloch <i>et al.</i> , 2005; Iqbal and Kazmi, 1980	Punjab, Baluchistan
<i>Bosmina coregoni</i>	Mahar <i>et al.</i> , 2010, Iqbal and Kazmi, 1980	Sindh, Baluchistan
Chydoridae		
<i>Alonacostata</i>	Mahoon and Sultana, 1977	Punjab
<i>Alona guttata</i>	Mahoon and Sultana, 1977; Mahar <i>et al.</i> , 2008	
<i>Alona intermedia</i>	Kailani and Mahoon, 1989 unpublished	Sindh, Punjab
<i>Alona longispina</i> = <i>Alonapulchella</i> - <i>complex</i>	Mahoon and Sultana, 1977	Punjab
<i>Alona quadrangularis</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Alonella excisa</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Alonella dentifera</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Alonella aureola</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Karualona karua</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Chydorus faviformis</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Chydorus gibbus</i>	Kailani and Mahoon, 1989 unpublished as <i>Alona karua</i>	Punjab
<i>Chydorus latus</i>		
<i>Chydorus eurynotus</i>	Korai <i>et al.</i> , 2008	Sindh
<i>Chydorus eurynotus brehmi</i>	Lashari <i>et al.</i> , 2014	Sindh
<i>Chydorus ovalis</i>	Korai <i>et al.</i> , 2008	Sindh
<i>Chydorus parvus</i>	Korai <i>et al.</i> , 2008	Sindh
<i>Chydorus sphaericus</i>	Kailani and Mahoon, 1989 unpublished, Jafri <i>et al.</i> , 1999; Iqbal and Kazmi, 1990	Punjab, Sindh, Baluchistan
<i>Chydorus barroisi</i>	Iqbal and Kazmi, 1990 Kailani and Mahoon, 1989 unpublished	Baluchistan Punjab
<i>Coronatella monacantha</i>	Kailani and Mahoon, 1989 unpublished as <i>Alona monacantha</i>	Punjab
<i>Kurzia angusticaudata</i>	Kailani and Mahoon, 1989 unpublished as <i>Kurzialatissima</i>	Punjab
<i>Leberis diaphanous</i>	Kailani and Mahoon, 1989 unpublished as <i>Alonella diaphana</i>	Punjab.
<i>Dunhevedia crassa</i>	Mahar <i>et al.</i> , 2008	Sindh
<i>Dunhevedia mullahensis</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Dunhevedia kingi</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Oxyurella tenuicaudis</i>	Arora, 1931	
<i>Oxyurella brooksi</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Pleuroxus aduncus</i>	Arora, 1931	Punjab
<i>Pleuroxus trigonellus</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Graptoleberis testudinaria</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Leydigia leydigi</i>	Kailani and Mahoon, 1989 unpublished as <i>Leydigia quadrangularis</i>	Punjab
<i>Leydigia sp</i>	Mishkatullah and Mahmood, 2014	Baluchistan
<i>Leydigia acanthocercoides</i>	Arora, 1931; Kailani and Mahoon, 1989 unpublished as <i>Pleuroxus hastatus</i>	Punjab
<i>Picripleuroxus laevis</i>	Kailani and Mahoon, 1989 unpublished	Punjab
<i>Picripleuroxus striatus</i>	Arora, 1931 Kailani and Mahoon, 1989 unpublished	Punjab
<i>Pseudochydorus globosus</i>	Nawaz <i>et al.</i> , 1981; Mahoon and butt, 1985 as <i>Chydorus globosus</i>	Punjab
<i>Ephemeroporus poppei</i>	Jafri <i>et al.</i> , 1999, Khan <i>et al.</i> , 2014 as <i>Chydorus poppei</i>	KP, Punjab Sindh
Moinidae		
<i>Moina macrocopa</i>	Arora, 1931	Punjab
<i>Moina brachiata</i>	Arora, 1931 ;	Punjab ,

	Baloch <i>et al.</i> , 2004	Sindh
<i>Moina rectirostris</i>	Mahoon and Sultana, 1977 Jahangir <i>et al.</i> , 2004	Punjab Sindh
<i>Moina micrura</i>	Iqbal and Kazmi, 1980; Naureen, 1998 unpublished thesis as <i>Moina irrasa</i>	Baluchistan, Punjab
<i>Moina affinis</i>	Nawaz <i>et al.</i> , 1981, Mahoon <i>et al.</i> 1985	Baluchistan. Punjab
<i>Moina elliptica (species inquirenda)</i>	Arora, 1931 as <i>Mediomoina elliptica</i>	Punjab
<i>Moina chankensis</i> record dubious fide Xian-Fen Xiang <i>et al.</i> , 2015	Mahar, 2008	Sindh
<i>Moina pubescens</i>	Kailani and Mahoon, 1989 unpublished	Punjab
Ilyocryptidae		
<i>Ilyocryptus spinifer</i>	Arora, 1931	Punjab
Conchostraca		
Cyzicidae		
<i>Eocyclus swatiensis</i> nomen nudum fide Rogers and Padhye, 2015	Chaudhry <i>et al.</i> , 1978	KP
<i>Eocyclus afzali</i> nomen nudum fide Rogers and Padhye, 2015	Bibi and Mahoon, 1985	Punjab
<i>Eocyclus bouvieri</i>	Qadri and Baqai, 1956 as <i>Streptocephalus maliricus</i>	Sindh
<i>Caenestheria propinqua</i>	Shakoori, 1968	Punjab
Notostraca		
Triopsidae		
<i>Triops cancriformis</i>	Shaheen and Mahoon, 1993	Punjab
Unidentified <i>Triops</i>	Vredenburg, 1905	Baluchistan
<i>Triops longicaudatus</i>	Siddiqi and Suleman, 1977 as <i>Apus longicaudatus</i>	KP
Laevicaudata		
Lynceidae		
<i>Lynceus baylyi</i>	Rogers and Olsen, 2016	?
<i>Lynceus brachyurus</i>	Gurney, 1906	Gilgit-Baltistan

Copepoda		
Centropagidae		
<i>Osphranticum labronectum</i>	Khan <i>et al.</i> , 2014	Punjab
Parastenocarididae		
<i>Parastenocaris sutlej</i>	Reddy, 2011	Punjab
<i>Parastenocaris lacustris</i>	Khan <i>et al.</i> , 2014	Punjab
Laophontidae		
<i>Onychocamptus mohammad</i>	Mahar, 2003 unpublished thesis; Baloch, 2004; Ayub <i>et al.</i> , 2018	Sindh, Punjab

Cyclopidae		
<i>Acanthocyclops viridis</i>	Maqbool <i>et al.</i> , 2015	Punjab
<i>Acanthocyclops brevispinosus</i>	Maqbool <i>et al.</i> , 2015	Punjab
<i>Acanthocyclops vernalis vernalis</i>	Siddiqi and Suleman, 1977 as <i>Cyclops vernalis</i>	KP
<i>Cyclops strenuous</i>	Maqbool <i>et al.</i> , 2015	Punjab
<i>Cyclops juri</i>	Parveen, Mahoon and Saleem, 1990	Punjab
<i>Cyclops landei</i>	Mahoon and Zia, 1985	Punjab
<i>Diacyclops bicuspidatus</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Diacyclops nanus</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Eucyclops agilis</i>	Mahoon and Sultana, 1977; Arshad <i>et al.</i> , 1978	Punjab, KP
<i>Eucyclop macrurus</i>	Chaudari <i>et al.</i> , 1986 Mahar <i>et al.</i> , 2009	Punjab Sindh
<i>Eucyclop serrulatus</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Ectocyclops phaleratus</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Ectocyclops bradyi</i>	Mahoon and Zia, 1985	Punjab
<i>Ectocyclops clausi</i>	Mahoon and Zia, 1985	Punjab
<i>Ectocyclops forbesi</i>	Mahoon and Zia, 1985	Punjab
<i>Ectocyclops sarsi</i>	Mahoon and Zia, 1985	Punjab
<i>Macrocyclus albidus</i>	Chaudari <i>et al.</i> , 1986; Mahar <i>et al.</i> , 2009	Punjab, Sindh
<i>Macrocyclus fuscus</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Mesocyclops aspericornis</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Mesocyclops edax</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Mesocyclops leuckarti</i>	Baloch <i>et al.</i> , 2004; Maqbool <i>et al.</i> , 2014; Arshad <i>et al.</i> , 1978	Sindh; Punjab; KP
<i>Mesocyclops cokeri nomen dubium</i>	Najam-un-Nisa, Mahoon and Irfan Khan, 1987	Punjab
<i>Mesocyclops forbesi</i>	Najam-un-Nisa, Mahoon and Khan, 1987	Punjab
<i>Mesocyclops mahooni</i>	Bashir, 1998 unpublished thesis	Punjab
<i>Microcyclops rubellus</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Microcyclops varicans</i>	Mahar <i>et al.</i> , 2010; Maqbool <i>et al.</i> , 2014	Sindh Punjab
<i>Microcyclops bicolor</i>	Baig and Khan, 1976	Sindh
<i>Microcyclopslongiramus</i>	Mahar, 2016	Sindh
<i>Paracyclops fimbriatus</i>	Leghari <i>et al.</i> , 2003	Sindh
<i>Paracyclops multanensis</i>	Bashir, 1998 unpublished thesis	Punjab
<i>Paracyclops affinis</i>	Chaudhari <i>et al.</i> , 1986	Sindh
<i>Thermocyclops hyalinus</i>	Gurney, 1933 Baloch <i>et al.</i> , 2009	Punjab Sindh
<i>Thermocyclops vermifer</i>	Sewell, 1957	Punjab
<i>Thermocyclops rylovi</i>	Defaye <i>et al.</i> , 1987	Punjab
<i>Thermocyclops tinctus</i>	Lindberg, 1941	?
<i>Tropocyclops prasinus</i>	Baloch <i>et al.</i> , 2004	Sindh
Diaptomidae		
<i>Arctodiaptomus salinus</i>	Fada website, 2010	?
<i>Arctodiaptomus dorsalis</i>	Baqai and Rehana, 1974 as <i>Diaptomus dorsalis</i>	Sindh
<i>Diaptomus ahsanulislami</i>	Bashir, 1998 unpublished thesis	Punjab
<i>Diaptomus pakistanicus</i>	Bashir, 1998 unpublished thesis	Punjab
<i>Diaoptomus punjabicus</i>	Bashir, 1998 unpublished thesis	Punjab

<i>Diaptomus castor</i>	Khan <i>et al.</i> , 2014	
<i>Heliodiaptomus viduus</i>	Mahar <i>et al.</i> , 2007; Baqai and Rehana, 1974 as <i>Neodiaptomus kamakhiae</i> ;	Sindh
<i>Heliodiaptomus cinctus</i>	Mahar <i>et al.</i> , 2007	Sindh
<i>Leptodiaptomus siciloides</i>	Maqbool <i>et al.</i> , 2015	Punjab
<i>Neodiaptomus kingherensis</i>	Baqai <i>et al.</i> , 1975	Sindh
<i>Paradiaptomus greeni</i>	Gurney, 1916	Punjab
<i>Skistodiaptomus pallidus</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Skistodiaptomus pygmaeus</i>	Maqbool <i>et al.</i> , 2015	Punjab
<i>Skistodiaptomus oregonesis</i>	Maqbool <i>et al.</i> , 2014	Punjab
<i>Eudiaptomus gracilis</i>	Arshad <i>et al.</i> , 1980 as <i>Diaptomus gracilis</i>	KP
Ergasilidae		
<i>Ergasilus genuinus</i>	Lashari <i>et al.</i> , 2014 as <i>Limnoncaea genuine</i>	Sindh
Ostracoda		
Cyprididae		
<i>Bradleystrandesia reticulata</i>		Punjab
<i>Cyclocypris globosa</i>	Arora, 1935	Sindh
<i>Cypria mediana</i>	Khan <i>et al.</i> , 2014 Korai <i>et al.</i> , 2014	Punjab Sindh
<i>Cypris kumara</i>	Arora, 1931 as <i>Eucypris kumari</i>	
<i>Cypris matthai</i>		
<i>Cypris pubera</i>	Gurney, 1920 as <i>Eucypris pubera</i>	Baluchistan
<i>Cypris subglobosa</i>	Mahar and Jafri, 2012	Sindh
<i>Cypridopsis globulus</i>	Arora, 1931 as <i>Cypretta globulus</i>	Punjab
<i>Cypretta nigra</i>	Arora, 1935	Sindh
<i>Cypretta turgida</i>	Arshad <i>et al.</i> , 1980	KP
<i>Dolerocypris sinensis</i>	Mahar and Jafri, 2012 as <i>D. simensis</i>	Sindh
<i>Eucypris virens</i>	Mahar and Jafri, 2012	Sindh
<i>Eucypris matthai</i>	Arora, 1931 as <i>Eurycypris matthai</i>	Punjab
<i>Herpetocypris fontinalis</i>	Mahar, 2008	Sindh
<i>Heterocypris zugmayeri</i>	Brehm, 1914 as <i>Cyprinotus zugmayeri</i>	Baluchistan
<i>Stenocypris cylindrical major</i>	Arora, 1931 as <i>Stenocypris malcomsoni</i> Arora, 1935	Punjab Sindh
<i>Physocypris devai</i>	Arshad <i>et al.</i> , 1980 as <i>Stenocypris malcomsoni</i> Arora, 1931 as <i>Cypria devai</i>	KP, Punjab
<i>Stenocypris fontinalis</i>	Mahoon and Sultana, 1977	Punjab
Cypridopsidae		
<i>Cypridopsis vidua</i>	Mahar, 2008 as <i>Cypridopsis obesa</i>	Sindh
<i>Cypridopsis dentomarginata</i>	Gurney, 1920 as <i>Cypridopsis dentomarginatus</i>	Baluchistan
<i>Heterocypris incongruens</i>	Gurney, 1920; Arora, 1931; Arshad <i>et al.</i> , 1980 as <i>Cyprinotus incongruens</i>	Baluchistan; Punjab; KP
<i>Heterocypris salina</i>	Arora, 1935 as <i>Cyprinotus fretens</i> Chaudhry <i>et al.</i> , 1978	Sindh KP
<i>Heterocypris chandrai</i>	Arora, 1931 as <i>Cyprinotus chandrai</i>	Punjab
<i>Cyprinotus madyensis</i>	Arora, 1931	Sindh
<i>Cyprinotus crenatus</i>	Arora, 1931	Punjab
<i>Cyprinotus inaequalis</i>	Hartman, 1964	?
<i>Illyocypris bradyi</i>	Gurney, 1920 Arora, 1931	Baluchistan Punjab
<i>Potamocypris villosa</i>		
<i>Potamocypris steueri</i>	Gurney, 1920	Baluchistan

Limnocytheridae		
<i>Limnocythere inopinata</i>	Gurney, 1920	Baluchistan
Amphipoda		
Anisogammaridae		
<i>Anisogammarus madyensis</i>	Chaudhri <i>et al.</i> , 1978	KP
Mysida		
Mysidae		
<i>Mesopodopsis orientalis</i>	Kazmi and Sultana, 2015	Sindh
Decapoda		
Palaeomonidae		
<i>Palaemon styliferus</i>	Shakoor, 1968	Sindh, Baluchistan, Punjab
<i>Macrobrachium altifrons ranjhai</i>	Tiwari, 1963	KP
<i>Macrobrachium rosenbergii</i>	Qureshi, 1956 Shakoor, 1968 Kazmi and Kazmi, 2012 as <i>Macrobrachium dacqueti</i>	Sindh Sindh, Baluchistan, Punjab Sindh
<i>Macrobrachium lamarrei</i>	Qureshi, 1956 Shakoor, 1968	Sindh, Baluchistan, Punjab
<i>Macrobrachium dayanus</i>	Shakoor, 1968	Sindh, Punjab
<i>Macrobrachium scabriculum</i>	Shakoor, 1968	Baluchistan, Sindh
<i>Macrobrachium malcolmsonii</i>	Shakoor, 1968 Ali, 1973 as <i>Palaemonmalcolmsoni</i>	Sindh, KP, Baluchistan Punjab
<i>Macrobrachium semmelinkii</i>	Kazmi and Kazmi, 2012	Sindh Baluchistan
<i>Macrobrachium naraensi</i>	Qadri, 1960	Sindh Baluchistan
<i>Macrobrachium shahpuri</i>	Kazmi and Kazmi, 2012	Punjab
<i>Macrobrachium taunsii</i>	Kazmi and Kazmi, 2012	Punjab
<i>Macrobrachium tirmiziae</i>	Yaqoob and Kazmi, 1987	Punjab
<i>Macrobrachium rude</i>	Husain, 1973	Sindh
<i>Macrobrachium idella</i>	Yaqoob, 1986 as <i>Macrobrachium idea</i>	Sindh
<i>Macrobrachium naso</i>	Siddiqui, 1976	Sindh
<i>Palaemonetes sp</i>	Qadri, 1960	Sindh
Atyidae		
<i>Caridina weberi sumatrensis</i>	Kazmi and Siddiqui, 2002	Sindh
<i>Caridina nolitica</i>	Mehr <i>et al.</i> , 1988	Punjab
<i>Caridina rajadhari</i>	http://aquaforum.lviv.ua/forum/index.php	?
<i>Caridella sp.</i>	Baqai <i>et al.</i> , 1974	Sindh
<i>Kalriana sunahrensis</i>	Zuberi, 1990	Sindh
<i>Kalriana karachi</i>	Zuberi, 1990	Sindh
<i>Kalriana jhimphirensis</i>	Zuberi, 1990	Sindh
<i>Kalriana anissi</i>	Zuberi, 1990	Sindh

Penaeidae		
<i>Parapenaeopsis stylifera</i>	Korai <i>et al.</i> , 2008	Sindh
<i>Penaeus indicus</i>	Korai <i>et al.</i> , 2008	Sindh
<i>Penaeus japonicus</i>	Korai <i>et al.</i> , 2008	Sindh
<i>Penaeus merguensis</i>	Korai <i>et al.</i> , 2008	Sindh
<i>Metapenaeus brevicornis</i>	Korai <i>et al.</i> , 2008	Sindh
Brachyura Gecarcinucidae		
<i>Maydelliathelphusa masoniana</i>	Henderson, 1893 as <i>Thelphusa masoniana</i>	Punjab, KP
<i>Sartoriana cf. spinigera</i>	Alcock, 1910 as <i>Thelphusa spinigera</i>	Sindh, Punjab, KP
<i>Sodhiana afghaniensis</i>	Kazmi <i>et al.</i> , 2005 as <i>Sartoriana afghaniensis</i>	Baluchistan
<i>Sodhiana blanfordi</i>	Alcock, 1909 as <i>Sartoriana blanfordi</i> Pretzmann, 1967	Baluchistan
<i>Oziotelphusa sp</i>	Kazmi <i>et al.</i> , 2006	Sindh
Potamidae		
<i>Acanthopotamon martensi</i>	Henderson, 1893 as <i>Paratelphusa martensi</i>	KP
<i>Kanpotamon simulum</i>	Chaudhri <i>et al.</i> , 1978 as <i>Potamon (P) simulum</i>	KP
<i>Himalayapotamon emphyseteum</i>	Kazmi <i>et al.</i> , 2005	Punjab
<i>Himalayapotamon kooloense</i>	Alcock, 1910 as <i>Potamon kooloense</i>	KP, Punjab
<i>Potamon gedrosianum</i>	Alcock, 1910 Pretzmann, 1963 Pretzmann, 1965 as <i>Potamon (Orientopotamon) gedrosianum waziristanis</i>	KP, Punjab, Baluchistan FATA
<i>Potamonautes perlatum</i>	Hashmi, 1964 as <i>Potamon (Potamonates) sidneyi</i>	Sindh
<i>Telphusa fluviatalis</i>	Henderson, 1893 as <i>Potamon fluviatie</i> Ali, 1973	Baluchistan Punjab, KP
Varunidae		
<i>Varuna litterata</i>	Tirmizi and Ghani, 1996	Sindh
Insecta Bourletiellidae		
<i>Bourletiella sp</i>	Rehana <i>et al.</i> , 2000	Punjab
Isotomidae		
<i>Isotomurus sp</i>	Rehana <i>et al.</i> , 2000	Punjab

Saldidae		
<i>Micracanthia minor</i>	Hamid and Sutana, 1972 as <i>Saldulaminor</i> , Vinokurov, 2012	Punjab, KP
<i>Micracanthia ornatula</i>	Polhemus and Polhemus, 2012	Sindh
<i>Macrosaldula jakowleffi</i>	Vinokurov and Kment, 2015	Gilgit-Balistan
<i>Saldula orthochila</i>	Vinokurov and Kment, 2015	Gilgit-Balistan
<i>Saldula xanthochila</i>	Chen and Lindskog, 1994	Punjab
<i>Saldula burmanica</i>	Lindskog, 1975	Gilgit-Balistan
<i>Saldula palustris</i>	Hamid and Sutana, 1972	Punjab
Leptopodidae		
<i>Valleriola cicindeloides</i>	Hamid, 1971, as <i>Leptopus cicindeloides</i>	Sindh
Oligoneuridae		
<i>Oligoneuriella kashmirensis</i>	Ali, 1971 as <i>Oligoneura kashmirensis</i>	AJK
<i>Lachlania</i> sp	Ahsan and Aazizullah, 1974	KP
Leptophlebiidae		
<i>Choroerpes quadrica</i>	Ali, 1967 as <i>Choroerpes (Euthraulius) quadricus</i> Ali	Punjab
Ephemeridae		
<i>Ephemera annandalei</i>	Chopra in Hafiz, 1937	Sindh
<i>Ephemera brunnea</i>	Ali, 1970a Ali, 1970 b as <i>Ephemera striatus</i>	KP Punjab
<i>Ephemera soanensis</i>	Ali, 1967 as <i>Ephemera (Ephemera) soanica</i>	Punjab
Ephemerellidae		
<i>Torleya swatensis</i>	Ali, 1971 as <i>Ephemerella swatensis</i>	KP
<i>Torleya nepalica</i> (nymph)	Ali, 1971 as <i>Ephemerella wahensis</i>	Punjab, AJK
<i>Crinitella nasiri</i>	Ali, 1971a as <i>Ephemerella nasiri</i> Ali, 1971b as <i>Torleya nasiri</i>	AJK
Isonychiidae		
<i>Isonychia khyberensis</i>	Ali, 1970 as <i>Eatonia khyberensis</i>	KP
Baetidae		
<i>Baetis macanis</i>	Ali, 1967 as <i>Baetis macani</i>	Punjab
<i>Baetis meeheanis</i>	Ali, 1967	Punjab
<i>Cloeon apicatum</i>	Navas, 1931	Baluchistan
<i>Cloeon karachiensis</i>	Ali, 1970	Sindh
<i>Cloeon gilliesi</i> unjustified emendation ICZN (1999) Art. 33.2.3.	Ali, 1967 as <i>Cloeon gillican</i>	Punjab
<i>Centropitulum</i> sp.	Ahsan and Azizullah, 1974	KP
<i>Pseudocloeon</i> sp	Ahsan and Azizullah, 1974	KP
Amelitidae		
<i>Amwletus</i> sp	Ahsan and Azizullah, 1974	KP
Caenidae		
<i>Caenis kimminsis</i>	Ali, 1967	Punjab
<i>Caenis izhari</i>	Ali, 1967	KP
<i>Caenis amini</i>	Ali, 1967	KP
Heptageniidae (= Ecdyonuridae)		
<i>Ecdyonurus pakistanicus</i>	Braasch, 1984 incerta sedis	Punjab
<i>Ecdyonurus hazaraensis</i>	Ali, 1970 as <i>Heptagenia hazaraensis</i>	KP
<i>Notacanthurus islamabadicus</i> (nymph, adult)	Ali, 1967, 1973 as <i>Ecdyonurus islamabadensis</i>	Punjab
<i>Rhithrogena baser</i>	Ali, 1971	KP
Palingeniidae		
<i>Anagenesia minor</i>	Eaton, 1892	Sindh
Coenagrionidae		
<i>Aciagrion hisopa</i>	Kanth, 1985 Khaliq and Maula, 1999	AJK KP
<i>Agriocnemis pygmaea</i>	Kanth, 1985 Khaliq <i>et al.</i> , 1990 Tsuda, 1991	AJK, Punjab, Sindh, Baluchistan, KP ?
<i>Agriocnemis splendidissima</i>	Khaliq, 1990 Khaliq and Siddique, 1995	Baluchistan AJK
<i>Agriocnemis dabreui</i>	Khaliq, 1990 Ahmed <i>et al.</i> , 2008	KP AJK
<i>Agriocnemis nana</i>	Khaliq, 1990	Punjab

<i>Amphiagrion</i> sp	Ali, 1973	Punjab
<i>Ceriagrion coromandelianum</i>	Morton, 1907 Kanth, 1985 Khaliq, 1990 Ahmed <i>et al.</i> , 2009	Baluchistan AJK Punjab, KP, Sindh, Gilgit
<i>Ceriagrion cerinorubellum</i>	Kanth, 1985 Khaliq, 1990	AJK Punjab
<i>Ceriagrion pulchellum</i> (naiads)	Din <i>et al.</i> , 2013	Punjab
<i>Ceriagrion tenellum</i> (naiads)	Din <i>et al.</i> , 2013	Punjab
<i>Coenagrion</i> naiads	Ali, 1973	Punjab
<i>Enallagma cyathigerum</i>	Khaliq <i>et al.</i> , 1994	Gilgit-Baltistan
<i>Amphiallagma parvum</i>	Kanth, 1985 as <i>Enallagma parvum</i> Khaliq, 1990 as <i>Enallagma parvum</i> Ahmed, 2016 as <i>Enallagma parvum</i>	AJK Punjab and KP Gilgit - Baltistan
<i>Helochares anchoralis</i>	Darilmaz and Ahmed, 2015	Sindh
<i>Ischnura fountainei</i>	Khaliq, 1990 Azad <i>et al.</i> , 2016	Baluchistan KP
<i>Ischnura senegalensis</i>	Khaliq, 1990 Khaliq and Siddique, 1995 Ahmed <i>et al.</i> , 2009	Baluchistan, Punjab, Sindh AJK Gilgit-Baltistan
<i>Ischnura aurora</i>	Khaliq, 1990 Kanth, 1985 Ahmed <i>et al.</i> , 2009	Baluchistan, Punjab, KP, Sindh AJK Gilgit-Baltistan
<i>Ischnura aurora rubilio</i>	Kanth, 1985 Tsuda, 1991; Mitra and Babu, 2009 as <i>Ischnura aurora aurora</i> Khaliq and Maula, 1999 Ahmed, unpublished, Ahmed <i>et al.</i> , 2011	AJK, Punjab ?, Sindh, Baluchistan KP Sindh, Punjab. Gilgit-Baltistan
<i>Ischnura elegans elegans</i>	Fraser, 1919 Kanth, 1985 Ahmed <i>et al.</i> 2009 Mitra and Babu, 2009	KP, Baluchistan AJK Gilgit-Baltistan KP, Punjab
<i>Ischnura forcipata</i>	Morton, 1907; Fraser, 1923 Kanth, 1985	Baluchistan Punjab AJK
<i>Ischnura delicata</i>	Khaliq, 1990 Ahmed <i>et al.</i> , 2009 Mitra and Babu, 2009 Khan, 2016	Punjab, Baluchistan, KP Gilgit-Baltistan Punjab and Sindh
<i>Ischnura inarmata</i>	Mitra and Babu, 2009	Punjab, Sindh
<i>Ishnura bhimtalensis</i>	Khan, 2016	Punjab
<i>Mortonagrion gautama</i>	Hussain, 2006	Gilgit-Baltistan
<i>Nehalennia</i> sp	Ali, 1973	Punjab
<i>Paracymus aeneus</i>	Darilmaz and Ahmed, 2015	Sindh
<i>Pseudagrion decorum</i>	Kanth, 1985; Khaliq, 1990	AJK Punjab, Sindh, KP, Baluchistan
<i>Pseudagrion hypermelas</i>	Kanth, 1985; Khaliq, 1990	AJK. Punjab
<i>Pseudagrion laidlawi</i>	Fraser, 1933; Kanth, 1985; Khaliq, 1990	Sindh AJK Punjab, Sindh, KP
<i>Pseudagrion microcephalum</i>	Mitra and Babu, 2009	Sindh
<i>Pseudagrion rubriceps</i>	Kanth, 1985; Niazi, 1984; Khaliq, 1990; Ahmed, 2016	AJK Punjab , KP Gilgit-Baltistan
<i>Pseudagrion spencei</i>	Fraser, 1922; Kanth, 1985; Khaliq, 1990; Ahmed, 2016	Sindh AJK Punjab, KP, Baluchistan Gilgit-Baltistan

<i>Pseudagrion ceylanicum</i>	Ahmed, 2011; Azad <i>et al.</i> , 2016	AJK KP
<i>Agriion aurora</i>		
<i>Agriion cerinum</i>	Khan, 2016	Punjab
<i>Paracercion calamorum dyeri</i>	Khaliq, 1990	Punjab
<i>Paracercion malayanum</i>	Mitra and Babu, 2009	Punjab
<i>Rhodischnura nursei</i> = <i>Ischnura nursei</i>	Morton, 1907	Baluchistan
	Fraser, 1933	Sindh
	Kanth, 1985	AJK
<i>Nanosura aurora</i>	Khaliq, 1990 Khan, 2000	Punjab, Sindh, KP, Baluchistan Punjab
<i>Regimbartia attenuata</i>	Hansen, 1999	KP
<i>Sternolophus rufipes</i>	Darilmaz and Ahmed, 2015	KP, Sindh
<i>Sternolophus decens</i>	Nasserzadeh <i>et al.</i> , 2017	?
<i>Sternolophus solieri</i>	Nasserzadeh <i>et al.</i> , 2017	?
Euphaeidae		
<i>Bayadera indica</i>	Kanth, 1985; Khaliq, 1990	AJK, KP, Punjab
<i>Bayadera longicauda</i>	Ahmed <i>et al.</i> , 2011 ;Yousuf <i>et al.</i> , 2000	Punjab AJK
<i>Epallage fatime</i>	Schmidt, 1961	Baluchistan
Lestidae		
<i>Archilestes sp</i>	Ali, 1973	AJK
<i>Lestes patricia</i>	Rafi <i>et al.</i> , 2009	AJK
<i>Lestes praemorsus praemorsus</i>	Yousuf <i>et al.</i> , 2000	AJK
<i>Lestes thoracicus</i>	Kanth, 1985; Khaliq, 1990	AJK SindhPunjab
<i>Lestes viridulus</i>	Niazi, 1984 ;Rafi <i>et al.</i> , 2009	Punjab AJK
<i>Sympecma paedisca</i>	Morton, 1907 as <i>Sympecma paedisca fusca</i> ; Laidlaw, 1920 as <i>Sympecma annulata</i>	Baluchistan AJK
Synlestidae		
<i>Cylonolestes cyanea</i>	Yousuf <i>et al.</i> , 2000	AJK
<i>Megalestes major</i>	Kanth, 1985; Khaliq, 1990; Ahmed <i>et al.</i> , 2009	AJK Punjab, KP Gilgit-Baltistan
Platycnemidae		
<i>Calicnemis eximia</i>	Khaliq, 1990; Khaliq <i>et al.</i> , 1990.	Punjab, KP. AJK
<i>Calicnemis fortis</i>	Dow <i>et al.</i> , 2014	AJK
<i>Coeliccia renifera.</i>	Khaliq, 1990; Ahmed <i>et al.</i> , 2008	Punjab AJK
<i>Coeliccia vacca</i>	Ahmed, 2016	Gilgit-Baltistan
<i>Copera ciliata</i>	Khaliq, 1990	Punjab
<i>Copera marginipes.</i>	Kanth, 1985; Khaliq, 1990; Ahmed, 2016	AJK Punjab, KP Gilgit
<i>Platycnemis dealbata</i>	Mitra and Babu, 2009	Punjab
Platystictidae		
<i>Drepanosticta polychromatica</i>	Khaliq, 1990	Punjab
<i>Drepanosticta carmichaeli</i>	Ahmed, 2016	Gilgit-Baltistan
Nemouridae		
<i>Amphinemura tricantha</i>	Aubert, 1959 as <i>Amphinemura schmidi</i> and <i>Nemoura schmidi</i>	AJK
<i>Amphinemura mirabilis</i>	Martynov, 1928	AJK
<i>Illiesonemoura atripes</i>	Aubert, 1959 as <i>Nemoura (Nemoura) atripes</i>	KP
<i>Illiesonemoura battakundi</i>	Aubert, 1959 as <i>Nemoura (Nemoura) battakundi</i>	KP
<i>Illiesonemoura besali</i>	Aubert, 1959 as <i>Nemoura besali</i>	KP
<i>Illiesonemoura lilami</i>	Aubert, 1959 as <i>Nemoura (Nemoura) lilami</i>	AJK
<i>Illiesonemoura maluksari</i>	Aubert, 1959 as <i>Nemoura (Nemoura) maluksari</i>	KP

<i>Illiesonemoura pakistani</i>	Aubert, 1959 as <i>Nemoura (Nemoura) pakistani</i>	?
<i>Illiesonemoura polystigma</i>	Aubert, 1959 as <i>Nemoura (Nemoura) polystigma</i>	AJK
<i>Mesonemoura skardui</i>	Aubert, 1959	Gilgit-Baltistan
<i>Mesonemoura vaillanti</i>	Navas, 1922	KP
Capniidae		
<i>Eucapnopsis stigmatica transversa</i>	Aubert, 1959	KP
Perlodidae		
<i>Zhiltzovaia cachemirica</i>	Aubert, 1959 as <i>Perlodes (Skobeleva) cachemirica</i>	KP
<i>Isogenus sp</i>	Ahsan and Azizullah, 1974	KP
Perlidae		
<i>Neoperla schmidi</i>	Aubert, 1959	AJK, Punjab, KP
Chloroperlidae		
<i>Xanthoperla acuta</i>	Zwick, 1980	KP
<i>Xanthoperla kishanganga</i>	Aubert, 1959	AJK
<i>Alloperla sp.</i>	Ahsan and Azizullah, 1974	KP
Aeshnidae		
<i>Aeshna juncea</i>	Ahmed <i>et al.</i> , 2009; Chaudry, 2013 unpublished thesis	Gilgit-Baltistan KP
<i>Anaciaeshna jaspidea</i>	Chaudri <i>et al.</i> , 2013	Sindh
<i>Anax indicus</i>	Chaudri <i>et al.</i> , 2010	Punjab
<i>Anax immaculifrons</i>	Fraser, 1936; Rafi <i>et al.</i> , 2009; Chaudri, 2010	KP AJK Punjab
<i>Anax nigrofasciatus</i>	Chaudri, 2010; Chaudri <i>et al.</i> , 2016	Gilgit-Baltistan KP
<i>Anax parthenope</i>	Rafi <i>et al.</i> , 2009; Chaudri, 2010 unpublished	AJK KP, Punjab, Sindh, Baluchistan, Gilgit
<i>Anax nigrolineatus</i>	Rafi <i>et al.</i> , 2009	AJK
<i>Anax imperator imperator</i>	Fraser, 1936	KP
<i>Boyeria irene</i>	Din <i>et al.</i> , 2013	Punjab
<i>Cephalaeschna masoni</i>	Akhtar <i>et al.</i> , 2014	KP
<i>Gynacanthaeshna sikkima</i>	Chaudri <i>et al.</i> , 2010	Punjab, KP
<i>Gynacantha apicalis</i>	Fraser, 1927, 1934b	Punjab
<i>Hemianax ephippiger</i>	Din <i>et al.</i> , 2013	Punjab
<i>Polycanthagyna erythromelas</i>	Conniff, 2016	Gilgit-Baltistan
Cordulegastridae		
<i>Cordulegaster brevistigma brevistigma</i>	Yousuf, 1972 unpublished as <i>Kuldanagaste r pakistanica</i> Tsuda, 1991; Chaudri, 2016; Mehmood, 2014	? Punjab KP, Baltistan AJK
Gomphidae		
<i>Anormogomphus kiritschenkoi</i>	Fraser, 1934; Ahmad, 1994	Punjab, Sindh, Bluchistan KP
<i>Anormogomphus exilocorpus</i>	Yousuf, 1972 unpublshed	Punjab
<i>Anormogomphus heteropterus</i>	Prasad and Arshney, 1988	?
<i>Anisogomphus vulvalis</i>	Yousuf, 1972 unpublished	KP
<i>Burmogomphus pyramidalis</i>	Fraser, 1934; Chaudri, 2010	AJK Punjab
<i>Burmogomphus sivalikensis</i>	Moore (compiler), 1997	?
<i>Erpetogomphus sp</i>	Ali, 1973	Punjab
<i>Gomphidia nigrum</i>	Chaudri, 2010 as <i>Gomphidia t-nigrum</i> ; Mehmood <i>et al.</i> , 2016	Punjab KP
<i>Ictinogomphus angulosus</i>	Chaudri, 2010; Chaudhry, 2016	AJK KP
<i>Ictinogomphus aloquopterus</i>	Yousuf, 1972 unpublished	Punjab
<i>Ictinogomphus pugnovitatus</i>	Yousuf, 1972 unpublished	Punjab
<i>Ictinogomphus rapax</i>	Yousuf and Yunus, 1976 Chaudri, 2010	Punjab Sindh, AJK, Punjab
<i>Lamelligomphus biforceps</i>	Chaudri, 2010; Chaudri <i>et al.</i> , 2016; Mehmud <i>et al.</i>	AJK

	2016 as <i>Onychogomphus biforceps</i>	Punjab KP
<i>Ocotgomphius sp</i>	Ali, 1973	Punjab
<i>Nepogomphus modestus</i>	Chaudri <i>et al.</i> , 2016	Punjab
<i>Onychogomphus bistrigatus</i>	Perveen <i>et al.</i> , 2014	KP
<i>Ophiogomphus reductus</i>	Khaliq <i>et al.</i> , 1994	Gilgit and Baltistan, AJK
<i>Ophiogomphus caudoforcipus</i>	Yousuf, 1972 unpublished	KP
<i>Platygomphus dolabratus</i>	Mehmud <i>et al.</i> , 2016	KP
<i>Paragomphus lineatus</i>	Rafi <i>et al.</i> , 2009 as <i>Mesogomphus lineatus</i> Rehman <i>et al.</i> , 2015	AJK Sindh
<i>Lindenia tetrphylla</i>	Waterson, 1980	
Libellulidae		
<i>Acisoma panorpoides panorpoides</i>	Chaudri, 2010	Punjab, Sindh, Baluchistan, KP, Baltistan
<i>Belonia sp</i>	Ali, 1973	Punjab
<i>Brachydiplax sobrina</i>	Chaudri <i>et al.</i> , 2010	Punjab, Sindh, AJK, KP
<i>Brachythemis contaminata</i>	Chaudri 2010	Punjab, Sindh, KP, Baluchistan, AJK
<i>Bradinopyga geminate</i>	Chaudri, 2010 Rehmani <i>et al.</i> , 2015	Punjab Sindh
<i>Brechmorhoga sp</i>	Ali, 1973	Punjab
<i>Crocothemis erythraea</i>	Rafi <i>et al.</i> , 2009 Din <i>et al.</i> , 2013 naiads Ullah <i>et al.</i> , 2000	KP Punjab Sindh
<i>Crocothemis servilia</i>	Kirby , 1886 as <i>Crocothemis reticulata</i> Ahmed <i>et al.</i> , 2009; Rafi <i>et al.</i> , 2009; Akhtar <i>et al.</i> , 2014; Rehman <i>et al.</i> , 2015	Punjab Gilgit-Baltistan AJK , Punjab KP Sindh
<i>Diplacodes lefebvrei</i>	Ahmed <i>et al.</i> , 2009; Perveen <i>et al.</i> , 2014 ; Ullah <i>et al.</i> , 2000	Gilgit-Baltistan KP Sindh
<i>Diplacodes trivialis</i>	Perveen <i>et al.</i> , 2014 Ullah <i>et al.</i> 2000	KP Sindh
<i>Erythemis sp</i>	Ali, 1973	Kp
<i>Hydrobasileus croceus</i>	Saeed <i>et al.</i> , 2016	KP
<i>Leucorrhinia sp</i>	Ali, 1973	Punjab
<i>Libellula fulva</i>	Din <i>et al.</i> , 2013 naiads; Akhtar <i>et al.</i> , 2014	Punjab KP
<i>Libellula quadrimaculata</i>	Khaliq <i>et al.</i> , 1994	Gilgit-Baltistan
<i>Macromia sp</i>	Ali, 1973	Punjab
<i>Nannophya pygmaea</i>	Fraser, 1921	KP
<i>Nannothemis sp</i>	Ali, 1973	Punjab
<i>Neurothemis fluctuans</i>	Chaudri <i>et al.</i> , 2016	Punjab
<i>Neurothemis tullia tullia</i>	Din <i>et al.</i> , 2013 naiads Lakhiar and Panhwar , 2015	Punjab Sindh
<i>Orthemis sp</i>	Ali, 1973	Punjab
<i>Orthetrum anceps</i>	Jehangir <i>et al.</i> , 2016	KP Baluchistan
<i>Orthetrum brunneum brunneum</i>	Fraser, 1936; Ahmed <i>et al.</i> , 2009	? Gilgit-Baltistan
<i>Orthetrum cancellatum</i>	Khaliq <i>et al.</i> , 1994	Gilgit-Baltistan
<i>Orthetrum chrysis</i>	Din <i>et al.</i> , 2013 naiads; Akhtar <i>et al.</i> , 2014	Punjab KP
<i>Orthetrum luzonicum</i> (naiads)	Din <i>et al.</i> , 2013	Punjab
<i>Orthetrum glaucum</i>	Ahmed <i>et al.</i> , 2009; Rafi <i>et al.</i> , 2009 ; Khan , 2016 naiad	Gilgit-Baltistan KP Punjab
<i>Orthetrum japonicum internum</i>	Tsuda, 1991	?
<i>Orthetrum chrysostigma luzonicum</i>	Ahmed <i>et al.</i> , 2009	Gilgit – Baltistan
<i>Orthetrum pruinosum neglectum</i>	Perveen <i>et al.</i> , 2014; Rehman <i>et al.</i> , 2015	KP Sindh

<i>Orthetrum sabina</i>	Din <i>et al.</i> , 2013 naiads ; Akhtar <i>et al.</i> , 2014	Punjab KP
<i>Orthetrum taeniolatum</i>	Ahmed <i>et al.</i> , 2009; Din <i>et al.</i> , 2013 naiads; Akhtar <i>et al.</i> , 2014	Gilgit-Baltistan Punjab KP
<i>Orthetrum testaceum testaceum</i>	Chaudri <i>et al.</i> , 2016	Punjab
<i>Orthetrum triangulare triangulare</i>	Perveen <i>et al.</i> , 2014	KP
<i>Palpopleura sexmaculata sexmaculata</i>	Ahmed <i>et al.</i> , 2009 ; Rafi <i>et al.</i> , 2009; Jehangir <i>et al.</i> , 2016	Gilgit-Baltistan AJK KP
<i>Pantala flavescens</i>	Rafi <i>et al.</i> , 2009; Amad Ud Din <i>et al.</i> , 2013 ; Perveen <i>et al.</i> , 2014; Rehman <i>et al.</i> , 2015	AJK Punjab , Sindh KP Sindh
<i>Potamarcha obscura</i>	Saeed <i>et al.</i> , 2016	KP
<i>Rhodothemis rufa</i>	Perveen <i>et al.</i> , 2014	KP
<i>Rhyothemis variegata variegata</i>	Hussain and Niazi, 1999 naiad ;Yousuf <i>et al.</i> , 2013 naiads; Rehman <i>et al.</i> , 2015	Punjab Punjab, Sindh Sindh
<i>Selysiothemis nigra</i> (naiads)	Din <i>et al.</i> , 2013	Punjab
<i>Somatochlora</i> sp	Ali, 1973	Punjab
<i>Sympetrum</i> naiad	Hussain and Ahmed, 2004	Sindh
<i>Tarnetrum</i> sp.	Ali, 1973	Punjab
<i>Tauriphila</i> sp.	Ali, 1973	Punjab
<i>Tramea virginia</i>	Chaudri <i>et al.</i> , 2016	Punjab , KP
<i>Tramea basilaris burmeisteri</i>	Yousuf <i>et al.</i> , 2013 naiads; Rafi <i>et al.</i> , 2009	Punjab , Sindh AJK
<i>Trithemis annulata</i>	insectoid.info	?
<i>Trithemis kirbyi kirbyi</i>	Din <i>et al.</i> , 2013 naiads; Akhtar <i>et al.</i> , 2014 ; Chaudri <i>et al.</i> , 2016	Punjab KP Punjab, Gilgit-Baltistan
<i>Trithemis inervis</i>	Rafi <i>et al.</i> , 2009 ‘ Din <i>et al.</i> , 2013 naiads; Akhtar <i>et al.</i> , 2014; Chaudri <i>et al.</i> , 2016	AJK Punjab KP Sindh
<i>Trithemis parviaurora</i>	Yousuf, 1972	?
<i>Trithemis pallidinervis</i>	Ullah <i>et al.</i> , 2000; Rafi <i>et al.</i> , 2009	Sindh, AJK
<i>Tholymis tillarga</i>	Chaudri <i>et al.</i> , 2016; Fazlullah <i>et al.</i> , 2016	Sindh, KP
<i>Urothemis signata signata</i>	Chaudri , 2016	Sindh, Punjab, KP
<i>Zygonyx torridus isis</i>	Fraser, 1934; Chaudri, 2016	Punjab , P
<i>Zyxomma petiolatum</i>	Chaudri , 2016	Punjab, AJK
Chlorocyphidae		
<i>Libellago greeni</i>	Ahmed <i>et al.</i> , 2009	Gilgit-Baltistan
<i>Libellago lineata lineata</i>	Chaudril, 2010 Ali, 1973	Punjab, KP, AJK Punjab
Protoneuridae		
<i>Elattonaura atkinsoni</i>	Ahmed <i>et al.</i> , 2011	AJK
<i>Elattonaura souteri</i>	Ahmed <i>et al.</i> , 2011	AJK, KP, Punjab
<i>Elattonaura campioni</i>	Ahmed , 2010 unpublished , Ahmed ., 2016	AJK, KP
<i>Elattonaura nigerrima</i>	Kanth , 1985 Niazi, 1984 Khaliq 1990	AJK, Punjab, Punjab and KP
<i>Elattonaura tetrica</i>	Mitra and Babu, 2009	Punjab
Calopterygidae		
<i>Neurobasis chinensis chinensi</i>	Kanth, 1985 Khaliq and Maula, 1999	AJK KP
<i>Rhinocypha quadrimaculata</i>	Kanth , 1985 , Niazi, 1984, Zada <i>et al.</i> , 2016	AJK, Punjab, KP
<i>Rhinocypha immaculata</i>	Khaliq <i>et al.</i> , 1990	AJK
<i>Rhinocypha hiliaryae</i>	Khaliq <i>et al.</i> , 1990	AJK
<i>Rhinocypha trifasciata</i>	Khaliq , 1990 Khaliq <i>et al.</i> 1990	KP, Punjab AJK
<i>Rhinocypha unimaculata</i>	Khaliq <i>et al.</i> , 1990	KP, Punjab

	Ahmed <i>et al.</i> , 2008	AJK
Gyrinidae		
<i>Dineutus indicus</i>	Mazzoldi, 2003 Hájek and Fery, 2004	Baltistan
<i>Orectochilus afghanus</i>		KP ,at the border with Afghanistan
<i>Dineutus sp</i>	Rehana <i>et al.</i> , 2000	Punjab
<i>Dineutus spinosus</i>	Darilmaz and Ahmed, 2015	Sindh
<i>Gyretes sp</i>	Ali, 1973	KP
<i>Patrus haemorrhous</i>	Darilmaz and Ahmed, 2015	Sindh
Dytiscidae		
<i>Agabus solskii</i>	Angelini, 1978	Baltistan
<i>Agabus biguttatus</i>	Ghosh and Nilsson , 2012	KP, Punjab
<i>Agabus conspersus</i>	Ghosh and Nilsson , 2012	KP, Punjab
<i>Agabus bipustulatus</i>	Brancucci , 1979 Ghosh and Nilsson , 2012	KP Punjab
<i>Agabus debilipes</i>	Guignot, 1958 as <i>Agabus skarduensis</i>	Gilgit-Baltistan
<i>Canthydrus laetabilis</i>	Vazirani, 1969 Nilsson, 2012	? Punjab
<i>Clypeodytes orissaensis</i>	Vazirani, 1977	?
<i>Copelatus freudei</i>	Darilmaz and Ahmed, 2015	Sindh
<i>Cybister tripunctatus lateralis</i>	Vazirani , 1969 as <i>Cybister tripunctatus asiaticus</i> Darilmaz and Ahmed, 2009	Baluchistan Sindh
<i>Cybister cardoni</i>	Vazirani, 1969	?
<i>Cybister confusus</i>	Vazirani, 1977 Ali, 1973	? KP
<i>Cybister limbatus</i>	Vazirani, 1977	?
<i>Cybister sugillatus</i>	Vazirani, 1977	?
<i>Deronectes hendrichi</i>	Hajek, 2006	Baluchistan
<i>Deronectes bameuli</i>	Fery and Hosseinie, 1998	KP
<i>Deronectes afghanicus</i>	Hájek and Fery, 2004	KP
<i>Eretes griseus</i>	Hajek, 2006 Miller, 2002 Darilmaz and Ahmed, 2009	Baluchistan ? Sindh
<i>Dytiscus adult</i>	Hasan <i>et al.</i> , 2013	KP
<i>Eretes sticticus</i>	Guéorguiev , 1967 Miller , 2002	Baluchistan ?
<i>Herophydrus musicus</i>	Guéorguiev , 1967	Baluchistan
<i>Hyphydrus lyratus flavicans</i>	Vazirani , 1972	?
<i>Hyphydrus gschwendtneri</i>	Guignot, 1959 as <i>Hyphydrus lindemanna</i> Bistram,1982	Punjab
<i>Hyphydrus renardi</i>	Ghosh and Hedge , 2015	?
<i>Hygrotus (Coelambus)enneagrammus</i>	Vazirani, 1970 Jach, 2003	Baluchistan Baltistan
<i>Hygrotus(Coelambus)confluens</i>	Jach, 2003	KP
<i>Hygrotus(Coelambus)flaviventris</i>	Jach, 2003	KP
<i>Hygrotus(Leptolambus)impressopunctatus</i>	Jach, 2003	KP
<i>Hygrotus (Leptolambus) zigetangco</i>	Jach, 2003	AJK
<i>Hygrotus (Hyphoporus) anitae</i>	Vazirani, 1969 as <i>Hyphoporus anitae</i>	Punjab, Baluchistan
<i>Hygrotus (Hyphoporus) aper</i>	Hájek, 2006 as <i>Hyphoporus aper</i>	Baluchistan
<i>Hygrotus (Hyphoporus) severini</i>	Vazirani, 1977 as <i>Hyphoporus severini</i>	?
<i>Hygrotus (Hyphoporus) bertrandi</i>	Vazirani, 1969 as <i>Hyphoporus bertrandi</i>	Punjab
<i>Hygrotus (Hyphoporus) elevatus</i>	Vazirani, 1977 as <i>Hyphoporus elevatus</i>	?
<i>Hygrotus (Hyphoporus) nilghiricus</i>	Vazirani, 1977 as <i>Hyphoporus nilghiricus</i>	?
<i>Hygrotus (Hyphoporus) pacistanus</i>	Guignot, 1959 as <i>Hyphoporus pacistanus</i>	Punjab
<i>Hydaticus histrio</i>	Guéorguiev , 1967 Franciscolo, 1968 Angelini, 1978	Baluchistan ? Baltistan
<i>Hydaticuspictus</i>	Vazirani 1977 as <i>Prodaticus pictus</i>	Baluchistan
<i>Hydaticus vittatus vittatus</i>	Vazirani , 1977	?
<i>Hydaticus ponticus</i>	Wewalka, 1979 Darilmaz and Ahmed, 2009 as <i>Hydaticus leander</i>	? Sindh

<i>Hydaticus ricinus</i>	Guignot, 1959 Wewalka, 1979	KP ?
<i>Hydaticus fabricii</i>	Vazirani, 1969	?
<i>Hydaticus vthantoides</i>	Wewalka, 1979	KP
<i>Hydronebrius mattheyi mattheyi</i>	Brancucci, 1980	Punjab, KP
<i>Hydroglyphus pendjabensis</i>	Guignot, 1954 as <i>Guignotus pendjabensis</i>	Punjab
<i>Hydroglyphus signatellus</i>	Vazirani, 1969 as <i>Guignotus signatellus</i> Darilmaz and Ahmed, 2015	Baluchistan Sindh
<i>Megadytes sp.</i>	Ahsan and Azizullah, 1974	KP
<i>Hydroglyphus angularis</i>	Guéorguiev, 1967 as <i>Guignotus angularis</i> Vazirani, 1977	KP, Baluchistan
<i>Hydroglyphus geminus</i>	Erman and Erman, 2008	?
<i>Hydrovatus fuscus</i>	Wewalka, 1982	KP
<i>Hydrovatus confertus</i>	Wewalka, 1982	?
<i>Ilybiosoma kermanensis</i>	Hajek, 2006	Baluchistan
<i>Laccophilus maindroni persicus</i>	Brancucci, 1983	Baluchistan
<i>Laccophilus minutus</i>	Vazirani, 1969	Baluchistan
<i>Laccophilus indicus</i>	Vazirani, 1969 as <i>Laccophilus sindensis</i> Hajek, 2006	Sindh Baluchistan
<i>Laccophilus inefficiens</i>	Vazirani, 1970 as <i>Laccophilus chinensis inefficiens</i> Hajek, 2006	? Baluchistan
<i>Laccophilus sharpi</i>	Hajek, 2006	Baluchistan
<i>Laccophilus flexuosus</i>	Gschwendtner, 1936 as <i>Laccophilus solutus indicus</i> Guignot, 1959 Fery and Darvishzadeh, 2012	Punjab Baluchistan
<i>Laccophilus parvulus</i>	Hajek, 2006	?
<i>Macrovatellus sp</i>	Rehana <i>et al.</i> , 2000	Punjab
<i>Nebrioporus airumulus</i>	Vazirani, 1970 as <i>Potamonectes kashmirensis</i> Angelini, 1978 as <i>Hydrophorus kashmirensis</i> Toledo, 1998	Baltistan AJK Gilgit-Baltistan
<i>Nebrioporus indicus</i>	Guignot, 1959 as <i>Potamonectes indicus</i> ; Vazirani, 1970 as <i>Potamonectes manii</i> Angelini, 1978 as <i>Nebrioporus manii</i> , <i>Potamonectes manii</i>	Punjab Gilgit- Baltistan, AJK
<i>Neptosternus circumductus</i>	Hajek, 2006 (likely)	Baluchistan
<i>Peschetius quadricostatus</i>	Biström and Nilsson, 2003	Baluchistan
<i>Platynectes (Gueorguievtes) kashmiranus kashmiranis</i>	Nilsson, 1998	AJK, KP at the border with Afghanistan
<i>Platambus lineatus</i>	Wewalka, 1975	?
<i>Platambus lindbergi</i>	Vazirani, 1965 as <i>Platambus guignoti</i>	Punjab
<i>Platambus sogdianus</i>	Wewalka, 1975 as <i>Platambus holzschuhi</i>	KP
<i>Platambus wewalkai</i>	Plazi, 2017	KP
<i>Potamonectes insignis</i>	Vazirani, 1977	Baluchistan
<i>Pseuduvarus vitticollis</i>	Vazirani, 1977	?
<i>Rhantus sikkimensis</i>	Vazirani, 1970 as <i>Rhantus punjabensis</i>	Punjab
<i>Rhantus taprobanicus</i>	Brancucci, 1979	?
<i>Sandracottus dejeani</i>	Vazirani, 1972 Ghosh and Hedge, 2015	? Baluchistan
<i>Sandracottus festus</i>	Steven, 2013	KP
<i>Thermonectes sp</i>	Ali, 1973 as <i>Thermonectes sp</i>	KP
<i>Uvarus genitalis</i>	Vazirani, 1969	?
Nepidae		
<i>Nepa ruber</i>	Irfan and Bibi, 1999	Punjab
<i>Nepa elongates</i>	Irfan and Bibi, 1999	Punjab
<i>Laccotrephes ruber</i>	Srivastava, 2008	?
<i>Cercotmetus asiaticus</i>	Cheng <i>et al.</i> , 2006	?
<i>Cercotmetus pilipes</i>	Irfan and Bibi, 1999	Punjab
<i>Ranatra filiformis</i>	Srivastava, 2008	?
<i>Ranatra digitata</i>	Vazirani, 1970	?
<i>Ranatra elongata</i>	Ali, 1973	KP
Corixidae		
<i>Agraptocorixa hyalinipennis</i>	Thirumalai and Kumar, 2005	?
<i>Corixa substriata</i>	Irfan and Bibi, 1999	Punjab

<i>Corixa hieroglyphica</i>	Ali, 1973	Punjab, KP
<i>Micronecta proba</i>	Irfan and Bibi, 1999	Punjab
<i>Micronecta thyesta</i>	Irfan and Bibi, 1999	Punjab
Gerridae		
<i>Gerris fossarum</i>	Irfan and Bibi, 1999	Punjab
<i>Neogerris parvula</i>	Thirumalai and Kumar, 2005	?
<i>Limnogonus fossarum fossarum</i>	Kazmi, in press	Sindh
<i>Limnogonus sp</i>	Hsan and Azizullah, 1974	KP
Veliidae		
<i>Microvelia diluta</i>	Irfan and Bibi, 1999	Punjab
<i>Pseudovelina sexualis</i>	Hecher and Zettel, 2006	?
<i>Halovelia sp.</i>	Kazmi, in press	Sindh
<i>Velia (Plesiovelia) affinis marussii</i>	Andersen, 1995	
<i>Diplonychus annulatus</i>	Jhamalar and Chandra, 2012	?
Belostomatidae		
<i>Lethocerus indicus</i>	Ali, 1973 as <i>Belostomaindica</i>	Punjab, KP
<i>Lethocerus indicum</i>	Irfan and Bibi, 1999	Punjab
<i>Lethocerus patruelis</i>	Polhemus, 1995	?
Simuliidae		
<i>Gymnopais sp</i>	Rehana <i>et al.</i> , 2000	Punjab
<i>Parasimulium sp</i>	Rehana <i>et al.</i> , 2000	Punjab
<i>Prosimulium sp</i>	Rehana <i>et al.</i> , 2000	Punjab
Hydrophilidae		
<i>Berosus nigriceps</i>	Schödl, 1994; Darilmaz and Ahmed, 2015	?
<i>Berosus chinensis</i>	Hansen, 1999	Baltistan
<i>Berosus fairmairei</i>	Hansen, 1999	?
<i>Berosus indicus</i>	Hansen, 1999 Darilmaz and Ahmed, 2015	KP Sindh
<i>Berosus indiges</i>	Hansen, 1999 Darilmaz and Ahmed, 2015	KP Sindh
<i>Coelostoma stultum</i>	Darilmaz and Ahmed, 2015	KP
<i>Enochrus (Methydus) esuriens</i>	Hansen, 1999 Darilmaz and Ahmed, 2015	Baluchistan KP, Sindh
<i>Enochrus (Lumetus) ater</i>	Darilmaz and Ahmed, 2015	Sindh
<i>Enochrus (Lumetus) sinuatus</i>	Schödl, 1998	?
<i>Hydrophilus senegalensis</i>	Darilmaz and Ahmed, 2009	Sindh
<i>Helochares anchoralis</i>	Darilmaz and Ahmed, 2015	Sindh
<i>Paracymus aeneus</i>	Darilmaz and Ahmed, 2015	Sindh
<i>Regimbartia attenuata</i>	Hansen, 1999	KP
<i>Sternolophus rufipes</i>	Darilmaz and Ahmed, 2015	KP, Sindh
<i>Sternolophus decens</i>	Nasserzadeh <i>et al.</i> , 2017	?
<i>Sternolophus solieri</i>	Nasserzadeh <i>et al.</i> , 2017	?
Spercheidae		
<i>Spercheus belli belli</i>	Hansen, 1999 Darilmaz and Ahmed, 2015	KP
Notonectidae		
<i>Anisops cavifrons</i>	Thirumalai and Kumar, 2005	
<i>Anisops sardeus sardeus</i>	Irfan and Bibi, 1999 as <i>Anisops sardea</i> ; Dash, 2014	Punjab
<i>Notonecta viridis</i>	Hoberlandt, 1961	?
<i>Notonecta maculata</i>	Berchi, 2013	?
Helophoridae		
<i>Helophorus (Eutrichelophorus) micans</i>	Mart and Erman, 2000	?
Psychomyiidae		
<i>Polycentropus sp</i>	Ali, 1973	Punjab
Rhagionidae		
<i>Atherix sp</i>	Ali, 1973 as <i>Antherix sp</i> in Chironomidae	KP
Chironomidae		
<i>Prodiamesa sp</i>	Ali, 1973	KP
<i>Polypedilum sp</i>	Ali, 1973	KP
<i>Pentaneura sp</i>	Ali, 1973	KP
Midges	Siddiqi and Suleman, 1977	Gilgit Baltistan
Naucoridae		

<i>Ambrysus sp.</i>	Irfan and Bibi, 1999	Punjab
? <i>Cryphocricas sp</i>	Ali, 1973	Sindh
Noteridae		
<i>Canthydrus laetabilis</i>	Fery, 2012	Baluchistan
<i>Hydrocoptus subvittulus</i>	Wewalka, 1982	?
<i>Pronoterus sp</i>	Ali, 1973	KP
Pleidae		
<i>Plea sp.</i>	Ali, 1973	KP
Psephenidae		
<i>Psephenus sp</i>	Ali, 1973	Punjab, AJK
Hydropsychidae		
<i>Cheumatopsyche sp</i>	Ali, 1973 , Ahsan and Azizullah, 1974	Punjab, KP
<i>Smicridea sp</i>	Ali, 1973	Punjab, KP
<i>Macronemum sp.</i>	Ahsan and Azizullah, 1974	KP
<i>Hydropsyche sp.</i>	Ahsan and Azizullah, 1974	KP
Polycentropodidae		
<i>Neureclipsis sp</i>	Ali, 1973	Punjab
Leptoceridae		
<i>Mystacides sp</i>	Ali, 1973	Punjab
Arachnida		
Araneae		
Cybaeidae		
<i>Argyroneta aquatica</i>	Hasan <i>et al.</i> , 2013	KP
Acari		
Limnesiidae		
<i>Limnesia (Limnesia) lembangensis</i>	Khatoon and Ali, 1989	Punjab
Psychomyiidae		
<i>Tinodes sp</i>	Ahsan and Azizullah, 1974	KP
Dipseudopsidae		
<i>Phylocentropus sp.</i>	Ahsan and Azizullah, 1974	KP
Glossosomatidae		
<i>Agapetus sp.</i>	Ahsan and Azizullah, 1974	KP
<i>Glossosoma sp.</i>	Ahsan and Azizullah, 1974	KP
Stenopsychidae		
<i>Stenopsyche sp.</i>	Ahsan and Azizullah, 1974	KP
Limnephilidae		
<i>Pseudostenophylax sp</i>	Ahsan and Azizullah, 1974	KP
Corydalidae		
<i>Corydalus sp.</i>	Ahsan and Azizullah, 1974	KP
Blephariceridae		
<i>Bibiocephala sp.</i>	Ahsan and Azizullah, 1974	KP
Tipulidae		
<i>Limoniasp</i>	Rehana <i>et al.</i> , 2014	KP
Sialidae		
<i>Sialis sp.</i>	Rehana <i>et al.</i> , 2014	?
Limnichidae		
<i>Byrrhinus marginatus</i>	Reisenand Mullen, 1978	Punjab
Pionidae		
<i>Hydrochoreutes sp.</i>	Reisenand Mullen, 1978	Punjab
Homocaligidae		
<i>Annerossella sp.</i>	Reisenand Mullen, 1978	Punjab
Blattisociidae		
<i>Platyseius sp.</i>	Reisenand Mullen, 1978	Punjab
Arrenuridae		
<i>Arrenurus madaraszi</i>	Khatoon and Ali, 1989	Punjab, KP
Hydrachnidae		

<i>Hydrachna (Scutohydrachna) testudinata</i>	Khatoon and Ali, 1989	Punjab
Hydrodromidae		
<i>Hydrodroma monticola</i>	Khatoon and Ali, 1989	Punjab
Protziidae		
<i>Protzia (Calonyx) flagellum</i>	Khatoon and Ali, 1989	Punjab
Eylaidae		
<i>Eylais (Metaeylais) hamata</i>	Khatoon and Ali, 1989	Punjab
<i>Eylais (Protoeylais) degenerata</i>	Khatoon and Ali, 1989	Punjab
Arrenuridae		
<i>Arrenurus (Rhinophoracarus) truncatus</i>	Khatoon and Ali, 1989	Punjab, KP
Lebertiidae		
<i>Lebertia (Pilolebertia) carmamaya</i>	Khatoon and Ali, 1989	Punjab, KP
Torrenticolidae		
<i>Torrenticola (Torrenticola) tetraporella</i>	Khatoon and Ali, 1989	Punjab, KP

Our survey indicates that the fresh water fauna in Pakistan is shrinking. There are programmes running in the country to conserve and sustainably manage freshwater habitats. Hopefully these freshwater programmes will strive to maintain ecological health, hydrological processes and biological diversity.

4 Discussion

4.1 Pakistani “ghost species”

Given in Pakistani literature of fresh water species, some Pakistani “ghost species” whose identities have been shrouded in uncertainty are given below.

(A) *Palaemonetes* sp

There are probabilities that Qadri (1960) has mistaken population of *Macrobrachium* for *Palaemonetes* as juveniles of *Macrobrachium* can easily be mistaken for *Palaemonetes* since they are of same size and similarly found in shallow vegetated areas along the water edge (Kazmi and Kazmi, 2012).

(B) Crayfish

Akhtar (1995) in his country status paper mentioned of presence of crayfish in KP, Pakistan. Crayfish are freshwater crustaceans resembling small lobsters, to which they are related. Some species are found in brooks and streams where there is running fresh water, while others thrive in swamps, ditches, and paddy fields. Taxonomically, they are members of the superfamilies Astacoidea and Parastacoidea. The greatest diversity of crayfish species is found in south eastern North America, whereas large area of Asia including Pakistan lacks a native crayfish fauna except eastern corner of the continent have no clue what fresh water decapod crustacean Akhtar (1995) took for crayfish.

(C) *Daphnia*

Tabassum et al. (2014) mentioned of marine *Daphnia* which seems to be wrong generic identification. It may be pointed out here that the Cladocera are ubiquitous in inland aquatic habitats, but rare in the oceans. Tabassum et al. (2014) specimens may be some podonids but not *Daphnia*.

(D) *Caridella* sp- status of *Caridella* from Pakistan is uncertain.

4.2 Euryhaline genera

There are some euryhaline genera- These marine decapods may be discovered in the river system near river mouths in estuarine environments such as *Charybdis*, *Scylla*, *Varuna* and some Penaeid genera.

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