



Taxonomic History of Formicidae Hymenoptera Pakistan

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Abstract: The taxonomic study of ants is neglected and poorly investigated from Pakistan but has rich ant fauna, most of the part has been studied before the creation of Pakistan during British Rule including; Bingham (1897), Forel, 1904, Manozi 1939, Eidmann, 1942, Later an expedition undertaken by Brown, (1955) in Baluchistan and Sindh Provinces. Haji (2008) worked on house hold ants of Karachi, Pakistan. More recently Umair *et al.* 2010 described the ants from Potohar plateau of Punjab Pakistan and Ahmed *et al.* (2013) provided description on ants of Quetta, Baluchistan. Further, The study is based on comprehensive review of literature, collection and study from throughout country, Author prepare first checklist of ants of Pakistan it is updated with Eight_subfamilies; Dolichoderinae, Dorylinae, Formicinae, Myrmicinae, Proceratiinae Pseudomyrmecinae, Leptanillinae , Ponerinae 43 genera and 134 species.

Keywords: Formicinae, Dorylinae, Myrmicinae, Fauna

1. INTRODUCTION

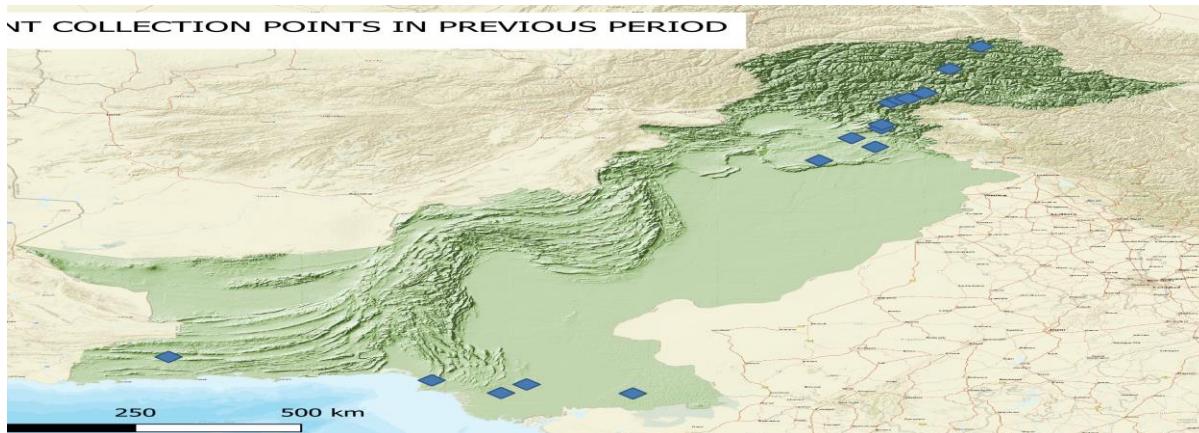
Pakistan holds about 881,640 km² with important terrestrial position. The coastal areas of Makran Baluchistan and Sindh, the palearctic nonstop with Iranian border of Baluchistan, the oriental area of Pakistan connected with Rajasthan and Indian Punjab. The Pakistan represents oriental Ethiopian and palearctic fauna. (Qadri 1968) The ant fauna of Pakistan is very rich but totally ignored and not explored from Pakistan. The study of ant fauna starts before the creation of Pakistan British rule including; Bingham (1897), Forel, (1904), Manozi. (1939), Eidmann, (1942), Brown, (1955) started expedition of Sindh and Baluchistan provinces. Haji (2008) worked under the supervision of Dr. James Wetterer on house hold ants of Karachi Sindh. During (2010) umair and its coworkers worked on the ants of Potohar region of Punjab, and Ahmed *et al.* (2013) provided taxonomic identification

of Quetta Baluchistan, further some species of ants described by Dr S. Yamani, Radchenko, Seifert collingwood and various authors in scattered publications is under taken. The Author has managed scattered publications and provided this list of ants in Pakistan which will provide basic knowledge for the researchers on Ants.

2. MATERIALS AND METHODS

The literature is collected from several journals, books and websites. Recently Kazi et al (unpublished) studies data from volume of Hymenoptera; (Bingham, 1897) is taken.

Format adapted: The checklist is arranged in alphabetic order, all the species presented in current genus. Each listed species is provided with page number and numbered reference the help of software Endnote.



Map showing Ant collection points in previous period.

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3. RESULTS

Family formicidae from Pakistan is represented with genera and 134 species records 43 Genera within 8 subfamilies.

S. NO	SUB FAMILY	GENUS and SPECIES	LOCALITY/PROVENCE
	Dolichoderinae		
1		<u>Chronoxenus dalyi</u> (Forel, 1895) 307(Bingham 1903)	Khyber Pakhtunkhwa and Punjab
2		<u>Chronoxenus wroughtonii</u> (Forel, 1895) 306(Bingham 1903)	Khyber Pakhtunkhwa
3		Chronoxenus myops (Forel, 1895) 308 (Menozzi 1939)	Jehlum velly Punjab Himmalla,Kararum Khyber Pakhtunkhwa
4		<u>Iridomyrmex anceps</u> (Roger 1863): 298 (Bingham 1903)	Spread throughout, Punjab
5		<u>Tapinoma melanocephalum</u> (Fabricius, 1793): 04 (Haji 2008)	Karachi Sindh,
6		Tapinoma wroughtonii Forel, 1904 308,308,26(Eidmann 1942, Menozzi 1939, Forel 1904)	Sindh velly,Jehlum velly Kashmir Himmalla Karakrum, Khyber Pakhtunkhwa,
	Dorylinae		
7		Aenictus sagei Forel, 1901 (and Yamani 2010)	Khyber Pakhtunkhwa and Gilgit Baltistan
8		Dorylus fulvus (Westwood, 1839) (Fisher, Esposito and Prado 2002)	Sindh,Punjab and Khyber Pakhtunkhwa
9		Dorylus labiatus Shuckard 1840:87 (Aslam, Shaheen and Ayyaz 2006)	Rawalpindi Punjab
10		Dorylus orientalis Westwood 1835: 04(Bingham 1903)	Sindh, Punjab and Khyber Pakhtunkhwa
11		Lioponera longitarsus Mayr, 1879: 703, (Umair et al. 2012)	Rawalpindi, Gujjar khan, Mari, Potohar Punjab
	Formicinae		
12		Camponotus angusticollis (Jerdon, 1851): 366(Bingham 1903)	Sindh,Punjab and Khyber Pakhtunkhwa
13		<u>Camponotus sylvaticus basalis</u> Smith, 1878 Camponotus basalis Smith 1878: 315,30 (Menozzi 1939, Eidmann 1942, Forel 1904)	Sindh velly Kashmir, Himmalla and Karakrum
14		Camponotus compressus Fabricius 1787: 703(Umair et al. 2012)	Rawalpindi, Texla, Kotli Sthiyan, Potohar Punjab
15		Camponotus confucii Forel 1894: 702(Umair et al. 2012, YASUMATSU and BROWN JR 1957)	Rawalpindi, Texla, Gujjar Khan,potohar punjab
16		Camponotus irritans (Smith 1857): 347(Bingham 1903)	Khyber Pakhtunkhwa
17		<u>Camponotus japonicus</u> Mayr, 1866: 703 (Umair et al. 2012, YASUMATSU and BROWN JR 1957)	Potohar Punjab (Naga parbat) Gilgit Baltistan
18		Camponotus buddhae Forel, 1892. 315 (Menozzi 1939)	Himallian ranges and high-altitude areas (Khyber Pakhtunkhwa and Gilgit Baltistan)
19		Camponotus oblongus (Smith, 1858): 358(Umair et al. 2012)	Potohar Punjab
20		<u>Camponotus parius</u> Emery, 1889 364(Bingham 1903)	Potohar Punjab
21		Camponotus rufoglaucus (Jerdon, 1851): 363(Bingham 1903)	Khyber Pakhtunkhwa
22		Camponotus sericeus (Fabricius,1798): 705(Umair et al. 2012)	Potohar Punjab
23		Camponotus sp(c.maculatus Forel,c.aetheops,c.kashmirensis) 30 (Forel 1904)	Sindh velly Kashmir,Punjab and Khyber Pakhtunkhwa
24		<u>Camponotus barbatus taylori</u> Forel, 1892 353(Bingham 1903)	Sindh,Punjab and Khyber Pakhtunkhwa
25		Camponotus socrates Forel, 1904 315,29(Menozzi 1939, Forel 1904)	Jehlum velly takhte soleman Kashmir,Potohar Punjab
26		Camponotus sylvaticus paradichrous Emery, 1925 315,0,85(Menozzi 1939, Chhotani and Ray 1975, Mani and Singh 1955)	Jehlum velly Punjab
27		Camponotus variegatus dulcis Dalla Torre, 1893:(Fisher et al. 2002)	Sindh,Punjab and Khyber Pakhtunkhwa
28		Cataglyphis aenescens (Nylander, 1849)229 (Brown 1959)	Makran Balouchistan
29		Cataglyphis cugiai Menozzi, 1939 323,0,84(Eidmann 1942, Menozzi 1939, Mani and Singh 1955)	Skardu velly Gillgit Baltistan
30		Cataglyphis setipes Forel, 1894:229, (Radchenko 1998, Eidmann 1942, Brown 1959)	Makran ,pasni Pangoor Balouchistan
31		Formica sanguinea Latreille, 1798 321,85(Menozzi 1939, Mani and Singh 1955)	Sindh velly,chenab base kashmir,Himmalla Gillgit Baltistan and

			Khyber PakhtunKhwa
32		<i>Formica truncorum</i> Fabricius, 1804(Eidmann 1942)	Sindh,Punjab and Khyber PakhtunKhwa
33		<i>Formica picea</i> Nylander, 1846 320,84(Menozzi 1939, Mani and Singh 1955)	Desoe,brock velly,Sindh velly Drainage areas of Indus and Jehlum Punjab
34		<i>Formica gagates</i> Latreille, 1798 0,81(Eidmann 1942, Mani and Singh 1955) <i>formica rufibarbis</i>	Himallia gilgit Baltistan and Khyber PakhtunKhwa
35		<i>Formica pamirica</i> Dlussky, 1965(Dlussky 1965)	Khyber PakhtunKhwa
36		<i>Formica clara</i> Forel, 1886 0,85(Seifert and Schultz 2009, Mani and Singh 1955)	Sindh,Punjab
37		<i>Formica cunicularia</i> Latreille, 17980,0,85(Mani and Singh 1955, Menozzi 1939, Eidmann 1942)	Punjab, Khyber PakhtunKhwa,GILGilgit Baltistan andKashmir
38		<i>Formica fusca</i> Linnaeus, 1758: 336,319,27(Menozzi 1939, Bingham 1903, Forel 1904)	Himalia and Karakrum vallies, Punjab and Khyber PakhtunKhwa
39		<i>Lasius alienus</i> (Foerster, 1850): 705(COLLINGWOOD 1982, Umair et al. 2012, Menozzi 1939)	Potohar Punjab
40		<i>Lasius brunneus</i> (Latreille, 1798): (COLLINGWOOD 1982, Wilson 1955, Seifert 1992)	Khyber PakhtunKhwa
41		<i>Lasius carniolicus</i> Mayr, 1861:313(COLLINGWOOD 1982, Menozzi 1939)	Himalia and Karakrum ranges Khyber PakhtunKhwa
42		<i>Lasius crinitus</i> (Smith 1858): 339(Bingham 1903)	Punjab and Khyber PakhtunKhwa
43		<i>Lasius alienoflavus</i> Bingham, 1903(COLLINGWOOD 1982)	Punjab and Khyber PakhtunKhwa
44		<i>Lasius himalayanus</i> Bingham, 1903 313(Menozzi 1939, Seifert 1992)	Kaghanvelly,Sindh velly,Potohar Punjab
45		<i>Lasius hirsutus</i> Seifert, 1992: (Seifert 1992)	Khyber PakhtunKhwa
46		<i>Lasius lawarai</i> Seifert, 1992: (Seifert 1992)	Khyber PakhtunKhwa
47		<i>Lasius niger</i> (Linnaeus, 1758):312,27 (Wilson 1955, COLLINGWOOD 1982, Menozzi 1939, Forel 1904)	Brock, Sindh velly Khyber PakhtunKhwa
48		<i>Lasius talpa</i> Wilson, 1955: (Yamane 2010)	Sindh,Punjab and Khyber PakhtunKhwa
49		<i>Lasius wittmeri</i> Seifert, 1992: (Seifert 1992)	Potohar Punjab
50		<i>Lepisiota capensis lunaris</i> (Emery, 1893)312(Menozzi 1939)	Sindh velly Kashmir,Khyber PakhtunKhwa
51		<i>Lepisiota frauenfeldi integra</i> (Forel, 1894)(Eidmann 1942)	Punjab and Khyber PakhtunKhwa
52		<i>Lepisiota sericea</i> (Forel, 1892)312(Menozzi 1939, Brown 1959)	Jehlum velly, Sindh,Punjab and Khyber PakhtunKhwa
53		<i>Lepisiota frauenfeldi</i> Mayr 1855: 312, 705 (Umair et al. 2012, Menozzi 1939)	Jehlum velly Kashmir,Potohar Punjab
54		<i>Paratrechina longicornis</i> (Latreille, 1802):229 (Forel 1904)	Potohar Punjab
55		<i>Plagiolepis balestrierii</i> Menozzi, 1939 310 (Menozzi 1939, Mani and Singh 1955)	SkarduandIndus drainage areas
56		<i>Plagiolepis pontii</i> Menozzi, 1939 309 (Menozzi 1939)	HIMALIA KARAKRUM VELLIES Gilgit Baltistan, Khyber PakhtunKhwa
57		<i>Polvrachis bicolor</i> Smith, 1858: (YASUMATSU and BROWN JR 1957)	Sindh,Punjab and Khyber PakhtunKhwa
58		<i>Polyrhachis hodgsoni</i> Forel, 1902: 705(Umair et al. 2012)	Potohar Punjab
59		<i>Polyrhachis griseescens</i> Emery, 1895(Fisher et al. 2002)	Potohar Punjab
60		<i>Polyrhachis punctillata</i> Roger, 1863: 409(Bingham 1903)	Kaghan Khyber PakhtunKhwa
61		<i>Polyrhachis tibialis</i> Smith, 1858: 396(Bingham 1903)	Sindh,Punjab and Khyber PakhtunKhwa
62		<i>Nylanderia indica</i> (Forel, 1894) 329(Bingham 1903)	Sindh,Punjab and Khyber PakhtunKhwa
63		<i>Prenolepis naoroji</i> Forel 1902: 331(Bingham 1903)	Sindh,Punjab and Khyber PakhtunKhwa
	Myrmicinae		
64		<i>Aphaenogaster beesoni</i> Donisthorpe, 1933(Donisthorpe 1933)	Sindh,Punjab and Khyber PakhtunKhwa
65		<i>Aphaenogaster smythiesii</i> (Forel, 1902)0,25,85(Menozzi 1939, Mani and Singh 1955, Forel 1904)	Himalia,Karakrum,nangaparbat,Gilgit Baltistan, Khyber PakhtunKhwa and Kashmir
66		<i>Aphaenogaster sagei</i> (Forel, 1902) 0,25,0,84(Menozzi 1939, Fisher et al. 2002, Mani and Singh 1955, Forel 1904)	Himmalian ranges,tibat,Gilgit Baltistan . Khyber PakhtunKhwa
67		<i>Paratopula ceylonica</i> (Emery, 1901) 705(Menozzi 1939)	Potohar Punjab
68		<i>Cardiocondyla mauritanica</i> Forel, 1890: (Wetterer 2012, Seifert 2002, Seifert 2008)	Potohar Punjab

69		<i>Crematogaster auberti</i> Emery, 1869:229 (Forel 1904)	Thatta Sindh
70		<i>Crematogaster himalayana</i> Forel, 1902:84 (Eidmann 1942, Mani and Singh 1955)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa and Kashmir
71		<i>Crematogaster perelegans</i> Forel, 1902: 142 (Bingham 1903)	Punjab
72		<i>Crematogaster subnuda</i> Mayr, 1879: 129 (Bingham 1903)	Khyber PakhtunKhwa
73		<i>Crematogaster subdentata</i> kaschgariensis Forel, 1901 300 (Menozzi 1939)	Jehlum velly Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa, Kashmir
74		<i>Crematogester rothneyi</i> Mayr, 1879: 705(Umair et al. 2012)	Potohar Punjab
75		<i>Leptothorax acervorum</i> (Fabricius, 1793) 302 (Menozzi 1939)	Brocks velly Khyber PakhtunKhwa Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan and Kashmir
76		<i>Meranoplus bicolor</i> (Guérin-Méneville, 1844): (Umair et al. 2012, Schödl 1998)	Kohat, Khyber PakhtunKhwa Punjab
77		<i>Messor instabilis</i> (Smith, 1858):297(Menozzi 1939, Eidmann 1942)	Jehlum and skardu velly.Gilgit Baltistan
78		<i>Messor himalayanus</i> (Forel, 1902): 297,25(Menozzi 1939, Chhotani and Ray 1975, Eidmann 1942, Tak 2000, Das and Rathore 2004, Forel 1904)	Himalia,Karakrum,Nangaparbat, indus velly Kashmir
79		<i>Messor reticuliventris</i> Karavaiev1911(Fisher et al. 2002)	Quetta,Balouchistan
80		<i>Monomorium indicum</i> Forel, 1902: 235: (Brown 1959, Bingham 1903)	Sindh,Punjab, Khyber PakhtunKhwa
81		<i>Monomorium longi</i> Forel, 1902: 705 (Umair et al. 2012)	Potohar Punjab
82		<i>Monomorium pharaonis</i> (Linnaeus, 1758):6 (Eidmann 1942)	sindh,Punjab, Khyber PakhtunKhwa
83		<i>Monomorium schurri</i> Forel, 1902: 705 (Menozzi 1939, Pisarski 1967)	himalia,karakrum,nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
84		<i>Monomorium luisae</i> Forel, 1904 25(Forel 1904)	Jehlum velly Kashmir
85		<i>Monomorium sagei</i> Forel, 1902 302(Menozzi 1939, Pisarski 1967)	Kaghan K.P.K
86		<i>Monomorium subopacum</i> (Smith, 1858):6 (Eidmann 1942)	Karachi sindh Pakistan
87		<i>Myrmica afghanica</i> Radchenko and Elmes, 2003:	Balochistan Khyber PakhtunKhwa
88		<i>Myrmica aimonis sabaudiae</i> Menozzi, 1939:(Radchenko and Elmes 2010, Radchenko and Elmes 2001, Menozzi 1939, Eidmann 1942, Weber 1947, Bharti, Sasi and Radchenko 2016, Jansen, Savolainen and Vepsäläinen 2010)	Skardu Gilgit Baltistan Kashmir
89		<i>Myrmica cachmirensis</i> Forel, 1904 292,23 (Radchenko and Elmes 2010, Radchenko and Elmes 2001, Menozzi 1939, Bharti et al. 2016, Forel 1904)	Sindh velly Kashmir,skardu velly Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan
90		<i>Myrmica ordinaria</i> Radchenko and Elmes, 1999(Radchenko and Elmes 2010, Radchenko and Elmes 2001, Bharti et al. 2016, Radchenko and Elmes 1999)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
91		<i>Myrmica brancuccii</i> Radchenko, Elmes and Collingwood, 1999: (Radchenko and Elmes 1999, Radchenko and Elmes 2010, Bharti et al. 2016, Radchenko and Elmes 2001)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
92		<i>Myrmica elmesi</i> Bharti and Sharma 2011: (Brown 1959)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
93		<i>Myrmica pseudorugosa</i> Bharti, 2012: (Bharti 2012, Bharti et al. 2016)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
94		<i>Myrmica vittata</i> Radchenko and Elmes, 1999 (Radchenko and Elmes 2001, Radchenko and Elmes 1999, Radchenko and Elmes 2010, Bharti et al. 2016)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
95		<i>Myrmica wardi</i> Radchenko and Elmes, 1999 (Radchenko and Elmes 2001, Radchenko and Elmes 2010, Radchenko and Elmes 1999, Bharti et al. 2016)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
96		<i>Myrmica wittmeri</i> Radchenko and Elmes, 1999(Radchenko and Elmes 1999, Radchenko and Elmes 2001, Radchenko and Elmes 2010, Jansen et al. 2010)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
97		<i>Myrmica rigatoi</i> Radchenko and Elmes, 1998:(Radchenko and Elmes 2001, Radchenko and Elmes 2010, Radchenko and Elmes 1998, Bharti et al. 2016)	Gilgit Baltistan, Khyber PakhtunKhwa and Kashmir
98		<i>Myrmicaria brunnea</i> Saunders, 1842: (Yahya, Yamane and Mohamed 2009)	Khyber PakhtunKhwa

99		Pheidole nietneri Emery, 1901:(Umair et al. 2012)	Rawalpindi Texla Gujjarkhan(Pothohar Punjab)
100		Pheidole megacephala (Fabricius, 1793): (Haji 2008)	Himalia,Karakrum, Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
101		Pheidole mus Forel, 1902: 705:(Umair et al. 2012)	Rawalpindi Islamabad Capital city and Punjab
102		Pheidole singaporenensis (Li-zhong 2006)	Gilgit Baltistan Khyber PakhtunKhwa
103		Pheidole indica Mayr, 1879 298(Pisarski 1967, Menozzi 1939)	Jehllum velly Himalia Khyber PakhtunKhwa,Baluchistan
104		Pheidole pronotalis Forel, 1902 (Umair et al. 2012)	Rawalpindi Islamabad(Pothohar Punjab
105		Pheidole roberti Forel, 1902(Eidmann 1942)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
106		Pheidole Sagei Forel, 1902 297 (Menozzi 1939)	Jehllum velly Himalia,Karakrum, Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
107		Solenopsis geminata (Fabricius 1804): 705 (Menozzi 1939)	pothohar Punjab
108		Stenamma jeriorum DuBois, 1998(Liu and Xu 2011, Fisher et al. 2002)	Malam jaba Khyber PakhtunKhwa
109		Stenamma kashmirensse Baroni Urbani, 1977 (Liu and Xu 2011, Dubois 1998)	Himalia Kashmir
110		Tetramorium simillimum (Smith 1851):9 (Eidmann 1942)	Karachi sindh
111		Tetramorium salvatum Forel, 1902 (Fisher et al. 2002)	Kalash velly Gilgit Baltistan , Khyber PakhtunKhwa
112		Tetramorium sulcinode Santschi, 1927: (Csösz, Radchenko and Schulz 2007)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
113		Tetramorium smithi Mayr, 1879: 705 (Umair et al. 2012)	Pothohar Punjab
114		Tetramorium bicarinatum (Nylander, 1846):8 (Eidmann 1942)	Karachi sindh
115		Tetramorium nursei Bingham 1903: 181(Bolton 1979, Li-zhong 2006, Fisher et al. 2002)	Quetta Balouchistan
116		Temnothorax desioi (Menozzi, 1939) (Menozzi 1939, Fisher et al. 2002)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
117		Temnothorax pamiricus (Ruzsky, 1902) (Menozzi 1939)	Himalia,Karakrum,Nangaparbat, ,Gilgit Baltistan Khyber PakhtunKhwa Kashmir
118		Temnothorax rothneyi (Forel, 1902): 217 (Bingham 1903)	Punjab
119		<u>Trichomyrmex destructor</u> (Jerdon, 1851) = Monomorium destructor (Jerdon, 1851):5 (Eidmann 1942)	Karachi Sindh
120		Trichomyrmex glaber (André, 1883) (Umair et al. 2012)	Pothohar Punjab
121		<u>Trichomyrmex scabriceps</u> (Mayr, 1879) (Umair et al. 2012)	Pothohar Punjab
	Proceratiinae		
122		Proceratium confinium Baroni Urbani and De Andrade, 2003(Urbani and Andrade 2003)	Pakistan
	Pseudomyrmecinae		
123		Tetraponera allaborans (Walker, 1859)(Bodlah et al. 2016)	Rawalpindi Islamabad
124		Tetraponera nigra (Jerdon, 1851)(Ward 2001, Bodlah et al. 2016)	Rawalpindi Islamabad
125		Tetraponera rufonigra (Jerdon, 1851)(Ward 2001, Thirumalai and Krishnan 2006)	Margalla Hills,Capital city and Kashmir
	Leptanillinae		
126		Protanilla rafflesii Bolton, 1990: (COLLINGWOOD 1982)	Himallia Khyber PakhtunKhwa
	Ponerinae		
127		Ectomomyrmex annamitus (André, 1892): 87(Bingham 1903)	Sindh,Punjab and Khyber PakhtunKhwa
128		Leptogenys diminuta (Smith, 1857) 61(Bingham 1903)	Punjab,
129		Odontoponera denticulata (Smith, 1858)(Yamane 2009)	Margalla Hills and Khyber PakhtunKhwa
130		<u>Brachyponera sennaarensis</u> (Mayr, 1862) [18]	Karachi Sindh
131		Platythyrea sagei Forel, 1900: 74(Bingham 1903)	punjab,
132		Bothroponera sulcata (Mayr, 1867): 98(Bingham 1903)	Khyber PakhtunKhwa and Punjab
133		Brachyponera luteipes (Mayr, 1862): 101(Bingham 1903)	Punjab
134		Diacamma scalpratum (Smith, 1858)(Laciny, Pal and Zettel 2015)	Sindh

4. DISCUSSION

Pakistan created in (1947) but the taxonomic History stats before creation. The published material including fauna of British India compiled and presented here the checklist of Formicidae in Pakistan. With the collection of material Author visited about all museums and collection centers of Pakistan and included. Present list is very preliminary, and it will help future for further studies.

REFERENCE:

- Aslam, M., F. A. Shaheen and A. Ayyaz (2006) Management of *Callosobruchus chinensis* Linnaeus in stored chickpea through interspecific and intraspecific predation by ants. *World Journal of Agricultural Sciences*, 2, 85-89.
- Bharti, H. (2012) Two new species of the genus *Myrmica* (Hymenoptera: Formicidae: Myrmicinae) from the Himalaya. *Tijdschrift voor Entomologie*, 155, 9-14.
- Bharti, H., S. Sasi and A. Radchenko (2016) Biogeography and Ecology of *Myrmica* species (Formicidae: Hymenoptera) in Himalayan regions., 63, 956-975.
- Bingham, C. (1903) The Fauna Of British India Hymenoptera Vol II.
- Bodlah, I., M. T. Rasheed, A. Gull-e-Fareen, M. S. Ajmal and M. A. Bodlah (2016) First record of two new species of genus *Tetraponera* (Hymenoptera: Pseudomyrmecinae: Formicidae) from Pakistan. *J. Entomol. Zool. Stud*, 4, 1028-1030.
- Bolton, B. (1979) The ant tribe Tetramoriini (Hymenoptera: Formicidae). The genus *Tetramorium* Mayr in the Malagasy region and in the New World. *Bulletin of the British Museum, Natural History. Entomology Series*.
- Chhotani, O. and K. Ray (1975) Fauna of Rajasthan, India (Hymenoptera). *Records of Zoological Survey of India*, 71, 13-49.
- Collingwood, C. A. (1982) Himalayan ants of the genus *Lasius* (Hymenoptera: Formicidae). *Systematic Entomology*, 7, 283-296.
- Csösz, S., A. Radchenko and A. Schulz (2007) Taxonomic revision of the Palaearctic *Tetramorium chefketi* species complex (Hymenoptera: Formicidae). *Zootaxa*, 1405, 1-38.
- Das, S. and N. Rathore (2004) Herpetofauna of the Desert National Park, Rajasthan. India. *Zoo's Print Joainai*, 19, 1626-162.
- Dlussky, G. (1965). Ants of the genus *Formica* L. of Mongolia and northeast Tibet (Hymenoptera, Formicidae). In *Annales Zoologici*, 15-43.
- Donisthorpe, H. (1933) A new species of *Aphaenogaster* (Hym. Formicidae) from India. *Systematic Entomology*, 2, 24-24.
- Dubois, M. B. (1998) A revision of the ant genus *Stenamma* in the Palaearctic and Oriental regions. 32.
- Eidmann, H. (1942) Zur Kenntnis der Ameisenfauna des Nanga Parbat.
- Fisher, B., M. Esposito and E. Prado (2002) Antweb. The California Adademy of Sciences, San Francisco, USA Available from <http://www.antweb.org> (accessed 13 September 2010).
- Haji, M. (2008). House Ants of Karachi, Pakistan. Florida Atlantic University, Honors College.
- Jansen, G., R. Savolainen and K. Vepsäläinen (2010) Phylogeny, divergence-time estimation, biogeography and social parasite-host relationships of the Holarctic ant genus *Myrmica* (Hymenoptera: Formicidae). *Molecular Phylogenetics and Evolution*, 56, 294-304.
- Laciny, A., A. Pal and H. Zettel (2015) Taxonomic notes on the ant genus *Diacamma* Mayr, 1862 (Hymenoptera: Formicidae), part 1. *Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen*, 67, 83-136.
- Li-zhong, H. (2006). List of Chinese insects. Vol. IV. Sun Yatsen University Press, Guangzhou, China.
- Liu, X. and Z.-H. Xu (2011) Three New Species of the Ant Genus *Stenamma*(Hymenoptera: Formicidae) from Himalaya and the Hengduan Mountains With a Revised Key to the Known Species of the Palaearctic and Oriental Regions. 58Pp.
- Mani, M. and S. Singh (1955) Entomological survey of the Himalaya. Part XIII. Second Entomological Expedition to the North-West (Punjab) Himalaya. *Agra Univ. J. Res.(Sci.)*, 4, 717-740.
- Menozzi, C. (1939) Formiche dell' Himalaya edel Karakorum. *Atti SocItal Sc Nat*, 78, 285-345.
- Pisarski, B. (1967). Fourmis (Hymenoptera: Formicidae) d' Afghanistan récoltées par M. Dr K. Lindberg= Mrówki (Hymenoptera: Formicidae) zebrane w Afganistanie Przez Dra K. Lindberga. In *Annales Zoologici*, 375-425. Państwowe Wydawnictwo Naukowe.

- Radchenko, A. (1998) A Key to ants of the genus *Cataglyphis* Foerster (Hymenoptera, Formicidae) from Asia. Entomological Review, 78, 475-480.
- Radchenko, A. and G. Elmes (1998) Taxonomic revision of the ritae species-group of the genus *Myrmica* (Hymenoptera, Formicidae). Vestnik zoologii, 32, 3-27.
- Radchenko, A. and G. W. Elmes (2010) Myrmica ants (Hymenoptera: Formicidae) of the old world.
- Radchenko, A. G. and G. W. Elmes (2001) A taxonomic revision of the ant genus *Myrmica* Latreille, 1804 from the Himalaya (Hymenoptera, Formicidae). Entomologica Basiliensis, 23, 237-276.
- Schödl, S. (1998) Taxonomic revision of Oriental Meranoplus (Insecta: Hymenoptera: Formicidae: Myrmicinae). Annalen des Naturhistorischen Museums in Wien. Serie B für Botanik und Zoologie, 361-394.
- Seifert, B. (1992) A taxonomic revision of the Palaearctic members of the ant subgenus *Lasius* s. str. (Hymenoptera, Formicidae). Abhandlungen und Berichte des naturkundemuseums Görlitz, 66, 1-67.
- Seifert, B. (2002) The ant genus *Cardiocondyla* (Insecta: Hymenoptera: Formicidae)-a taxonomic revision of the *C. elegans*, *C. bulgarica*, *C. batesii*, *C. nuda*, *C. shuckardi*, *C. stambuloffii*, *C. wroughtonii*, *C. emeryi*, and *C. minutior* species groups. Annalen des Naturhistorischen Museums in Wien. Serie B für Botanik und Zoologie, 203-338.
- Seifert, B. (2008) *Cardiocondyla atalanta* Forel, a cryptic sister species of *Cardiocondyla nuda* (Hymenoptera: Formicidae). Myrmecological News, 11, 43-48.
- Seifert, B. and R. Schultz (2009) A taxonomic revision of the *Formica rufibarbis* group (Hymenoptera: Formicidae). Myrmecological News, 12, 255-272.
- Tak, N. (2000) Studies on Ants (Formicidae) of Rajasthan-III. Banswara. Entomon-Trivandrum-, 25, 97-102.
- Thirumalai, G. and S. Krishnan (2006) Fauna of Biligiri Rangaswamy Temple Wildlife Sanctuary, Karnataka.
- Umair, M., A. Zia, M. Naeem and M. T. Chaudhry (2012) Species composition of ants (Hymenoptera: Formicidae) in Potohar plateau of Punjab province, Pakistan. Pakistan Journal of Zoology, 44, 699-705.
- Urbani, C. B. and M. L. d. Andrade. 2003. ant genus *Proceratium* in the extant and fossil record (hymenoptera: formicidae). Museo regionale di scienze naturali.
- Ward, P. S. (2001) Taxonomy, phylogeny and biogeography of the ant genus *Tetraponera* (Hymenoptera: Formicidae) in the Oriental and Australian regions. Invertebrate Systematics, 15, 589-665.
- Weber, N. A. (1947) A revision of the North American ants of the genus *Myrmica* Latreille with a synopsis of the Palearctic species. I. Annals of the Entomological Society of America, 40, 437-474.
- Wetterer, J. K. (2012) Worldwide spread of the African big-headed ant, *Pheidole megacephala* (Hymenoptera: Formicidae). Myrmecological News, 17, 51-62.
- Yahya, B. E., S. Yamane and M. Mohamed (2009) Morphological and Behavioral Characters of the Two Species Groups of the Ant Genus *Myrmicaria* (Insecta: Hymenoptera: Formicidae: Myrmicinae) from Southeast Asia. Species Diversity, 14, 249-265.
- Yamane, S. (2009) *Odontoponera denticulata* (F. Smith) (Formicidae: Ponerinae), a distinct species inhabiting disturbed areas. Ari, 32, 1-8.
- Yamane, W. J. S. (2010) The army ant *Aenictus wroughtonii*(Hymenoptera: Formicidae: Aenictinae) and related species in the Oriental.
- Yasumatsu, K. and W. L. Brown J. R (1957) A second look at the ants of the *Camponotus herculeanus* group in Eastern Asia. 11, 45-51.