

THE SPIDER FAUNA OF KÜTAHYA PROVINCE IN TURKEY

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ABSTRACT: This study was done Kütahya province in Inner Part of Western Anatolia of Turkey. Spiders were collected from field by using aspirator, sweep net and pitfall traps in study area during two years, beginning from April 2015 to October 2016. A total of 147 spider species in 23 families were recorded from study area. All specimens were labelled and preserved as museum materials in Arachnology Museum of Niğde Ömer Halisdemir University.

KEY WORDS: Spider, fauna, Kütahya, Turkey

The spider fauna of Turkey is poorly known compared to other countries of the world. Up to now, 47309 species of 4076 genera of spiders have been described in the world (World Spider Catalog, 2018). There are only 1117 species, belonging to 52 families known from Turkey (Demir & Seyyar, 2017). In this study, we determined the spider diversity of Kütahya provinces and have contributed to Turkish spider fauna.

MATERIALS AND METHODS

All specimens were collected from field by using aspirator, sweep net and pitfall traps from 37 localities (Fig. 1). in Kütahya (Fig. 2) province during two years, beginning from April 2015 to October 2016. The identification was made by means of a SZX61 Olympus stereomicroscope. Museum materials were used for the species identification. The specimens which were labelled and preserved as museum materials in Arachnology Museum of Niğde Ömer Halisdemir University (NOHUAM).

RESULTS

Totally 147 spider species in 23 families determined from study area (Table 1). Most species rich families were Gnaphosidae, Salticidae and Lycosidae (Fig. 3). According to the result of this study, the spider diversity in Kütahya Province contains 40,4% at the family level, and 13,2% at the species level of all Turkish spiders.

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Table 1. The spider list of Kütahya province.

SPIDER LIST		♀	♂
FAM. AGELENIDAE			
1	<i>Agelena labyrinthica</i> (Clerck, 1757)	+	+
2	<i>Agelena orientalis</i> C.L.Koch, 1837	+	+
3	<i>Agelescape gideoni</i> Levy, 1996	+	+
4	<i>Maimuna vestita</i> (C. L. Koch, 1841)	+	+
5	<i>Tegeneria argaica</i> (Nosek, 1905)	+	+
6	<i>Textrix denticulata</i> (Olivier, 1789)	+	+
FAM. ARANEIDAE			
1	<i>Aculepeira armida</i> (Audouin, 1826)	+	+
2	<i>Aculepeira ceropegia</i> (Walckenaer, 1802)	+	+
3	<i>Agalenatea redii</i> (Scopoli, 1763)	+	+
4	<i>Araneus diadematus</i> (Clerck, 1757)	+	+
5	<i>Araniella cucurbitina</i> (Clerck, 1757)	+	+
6	<i>Argiope lobata</i> (Pallas, 1772)	+	+
7	<i>Cyclosa conica</i> (Pallas, 1772)	+	+
8	<i>Gibbaranea bituberculata</i> (Walckenaer, 1802)	+	+
9	<i>Larinioides cornutus</i> (Clerck, 1757)	+	+
10	<i>Neoscona adianta</i> (Walckenaer, 1802)	+	+
FAM. CLUBIONIDAE			
1	<i>Chubiona caerulescens</i> L. Koch, 1867	+	-
FAM. DICTYNIDAE			
1	<i>Dictyna uncinata</i> (Thorell, 1856)	+	+
2	<i>Emblyna annulipes</i> (Blackwall, 1846)	+	+
3	<i>Lathys humilis</i> (Blackwall, 1855)	+	+
FAM. EUTICHURIDAE			
1	<i>Cheiracanthium erraticum</i> (Walckenaer, 1802)	+	+
2	<i>Cheiracanthium pennyi</i> O. P.-Cambridge, 1873	+	+
FAM. GNAPHOSIDAE			
1	<i>Aphantauxax trifasciata</i> (O. P.-Cambridge, 1872)	+	-
2	<i>Berinda hakani</i> Chatzaki & Seyyar, 2010	+	-
3	<i>Civizelotes caucasius</i> (L.Koch, 1866)	+	+
4	<i>Cryptodrassus creticus</i> Chatzaki, 2002	+	-
5	<i>Drassodes lacertosus</i> (O. P.-Cambridge, 1872)	+	+
6	<i>Drassodes lapidosus</i> (Walckenaer, 1802)	+	+
7	<i>Drassodes lutescens</i> (C.L.Koch, 1839)	-	+
8	<i>Drassodes pubescens</i> (Thorell, 1856)	+	+
9	<i>Drassyllus crimeaensis</i> Kovblyuk, 2003	+	+
10	<i>Drassyllus praeficus</i> (L.Koch, 1866)	+	+
11	<i>Gnaphosa opaca</i> Herman, 1879	+	-
12	<i>Haplodrassus dalmatensis</i> (L. Koch, 1866)	+	+
13	<i>Haplodrassus invalidus</i> (O. P.-Cambridge, 1872)	-	+
14	<i>Haplodrassus morosus</i> (O. P.-Cambridge, 1872)	-	+
15	<i>Haplodrassus signifer</i> (C.L.Koch, 1839)	+	+
16	<i>Micaria albovittata</i> (Lucas, 1846)	+	-
17	<i>Micaria coarctata</i> (Lucas, 1846)	+	-
18	<i>Nomisia aussereri</i> (L.Koch, 1872)	+	+

19	<i>Nomisia conigera</i> (Spassky, 1941)	+	+
20	<i>Nomisia exornata</i> (C.L.Koch, 1839)	+	+
21	<i>Nomisia ripariensis</i> (O.P.-Cambridge, 1872)	+	+
22	<i>Parasyrjica turkenica</i> Ovtsharenko, Platnick & Marusik, 1995	+	-
23	<i>Phaeoedus braccatus</i> (L. Koch, 1866)	+	+
24	<i>Poecilochroa variana</i> (C. L. Koch, 1839)	+	+
25	<i>Pterotricha kochi</i> (O.P.-Cambridge, 1872)	+	-
26	<i>Scotophaeus scutulatus</i> (L. Koch, 1866)	+	+
27	<i>Trachyzelotes malkini</i> (Platnick ve Murphy, 1984)	+	-
28	<i>Zelotes cingarus</i> (O. P.-Cambridge, 1874)	+	+
29	<i>Zelotes longipes</i> (L.Koch, 1866)	+	+
30	<i>Zelotes puritanus</i> (Chamberlin, 1922)	+	-
31	<i>Zelotes subterraneus</i> (C.L.Koch, 1833)	+	+
FAM. LIOCRANIDAE			
1	<i>Mesiotelus scopensis</i> Drensky, 1935	+	-
FAM. LIYNIPHIIDAE			
1	<i>Erigone atra</i> Blackwall, 1833	+	+
2	<i>Frontinellina frutetorum</i> (C.L.Koch, 1834)	+	+
3	<i>Lepthyphantes leprosus</i> (Ohlert, 1865)	+	+
4	<i>Linyphia triangularis</i> (Clerck, 1757)	+	+
5	<i>Megalepthyphantes nebulosus</i> (Sundevall, 1830)	+	+
6	<i>Neriere peltata</i> (Wider, 1834)	+	+
FAM. LYCOSIDAE			
1	<i>Alopecosa accentuata</i> (Latreille, 1817)	+	+
2	<i>Alopecosa cursor</i> (Hahn, 1831)	+	+
3	<i>Alopecosa pulverulenta</i> (Clerck, 1757)	+	+
4	<i>Arctosa cinerea</i> (Fabricius, 1777)	+	-
5	<i>Arctosa leopardus</i> (Sundevall, 1833)	+	-
6	<i>Arctosa tbilisiensis</i> Mcheidze, 1946	+	+
7	<i>Geolycosa vultuosa</i> (C.L.Koch, 1838)	+	+
8	<i>Hogna radiata</i> (Latreille, 1817)	+	-
9	<i>Lycosa praegrans</i> C.L.Koch, 1836	+	-
10	<i>Pardosa agrestis</i> O.P.-Cambridge, 1895	+	+
11	<i>Pardosa agricola</i> (Thorell, 1856)	+	-
12	<i>Pardosa proxima</i> (C.L.Koch, 1847)	+	+
13	<i>Piratula latitans</i> (Blackwell, 1841)	+	-
14	<i>Trochosa hispanica</i> Simon, 1870	+	-
15	<i>Trochosa spinipalpis</i> (O. P.-Cambridge, 1895)	+	-
16	<i>Wadicosa fidelis</i> (O. P.-Cambridge, 1872)	+	+
FAM. OECOBIDAE			
1	<i>Oecobius rhodiensis</i> Kritscher, 1966	+	+
2	<i>Uroctea durandi</i> (Latreille, 1809)	+	+
FAM. OXYOPIIDAE			
1	<i>Oxyopes heterophthalmus</i> (Latreille, 1804)	+	+
2	<i>Oxyopes lineatus</i> Latreille, 1806	+	+
3	<i>Oxyopes ramosus</i> (Martini & Goeze, 1778)	+	+
FAM. PALPIMANIDAE			
1	<i>Palpimanus uncatatus</i> Kulczyński, 1909	+	+
2	<i>Palpimanus orientalis</i> Kulczyński, 1909	+	+
FAM. PISAURIDAE			
1	<i>Pisaura mirabilis</i> (Clerck, 1757)	+	-
FAM. PHILODROMIDAE			
1	<i>Philodromus cespitum</i> (Walckenaer, 1802)	+	+
2	<i>Thanatus atratus</i> Simon, 1875	+	-
3	<i>Thanatus formicinus</i> (Clerck, 1757)	+	-

4	<i>Thanatus oblongiusculus</i> (Lucas, 1846)	+	+
5	<i>Thanatus pictus</i> L.Koch, 1881	+	+
6	<i>Thanatus vulgaris</i> Simon, 1870	+	-
FAM. PHOLCIDAE			
1	<i>Holocnemus pluchei</i> (Scopoli, 1763)	+	+
2	<i>Pholcus opilionoides</i> (Schrank, 1781)	+	+
3	<i>Pholcus phalangoides</i> (Fuesslin, 1775)	+	-
FAM. SALTICIDAE			
1	<i>Aehurillus luctuosus</i> (Lucas, 1846)	+	+
2	<i>Ballus chalybeius</i> (Walckenaer, 1802)	+	+
3	<i>Chalcoscirtus infimus</i> (Simon, 1868)	+	-
4	<i>Chalcoscirtus nigrinus</i> (Thorell, 1875)	-	+
5	<i>Cyrrba algerina</i> (Lucas, 1846)	+	+
6	<i>Heliophanus cupreus</i> (Walckenaer, 1802)	+	-
7	<i>Heliophanus dampfi</i> Schenkel, 1923	+	+
8	<i>Heliophanus dubius</i> C.L.Koch, 1835	+	-
9	<i>Heliophanus edentulus</i> Simon, 1871	-	+
10	<i>Heliophanus flavipes</i> (Hahn, 1832)	-	+
11	<i>Leptorchestes sikorskii</i> Prószyński, 2000	-	+
12	<i>Pellenes geniculatus</i> (Simon, 1868)	+	-
13	<i>Philaeus chrysops</i> (Poda, 1761)	+	+
14	<i>Phlegra bresnieri</i> (Lucas, 1846)	+	-
15	<i>Phlegra fasciata</i> (Hahn, 1826)	-	+
16	<i>Salticus scenicus</i> (Clerck, 1757)	+	-
17	<i>Talavera aequipes</i> (O. P.-Cambridge, 1871)	+	-
FAM. SCYTOTIDAE			
1	<i>Scytodes thoracica</i> (Latreille, 1802)	+	+
FAM. SPARASSIDAE			
1	<i>Eusparassus walckenaeri</i> (Audouin, 1825)	-	+
2	<i>Micrommata virescens</i> (Clerck, 1757)	+	+
FAM. TETRAGANATHIDAE			
1	<i>Tetragnatha obtusa</i> C.L.Koch, 1837	+	+
FAM. THERIDIIDAE			
1	<i>Asagena phalerata</i> (Panzer, 1801)	+	-
2	<i>Enoplognatha oelandica</i> (Thorell, 1875)	-	+
3	<i>Enoplognatha mandibularis</i> (Lucas, 1846)	-	+
4	<i>Enoplognatha mordax</i> (Thorell, 1875)	-	+
5	<i>Enoplognatha thoracica</i> (Hahn, 1833)	-	+
6	<i>Episinus truncatus</i> Latreille, 1809	+	-
7	<i>Kochiura aulica</i> (C. L. Koch, 1838)	+	-
8	<i>Neottiura herbigrada</i> (Simon, 1873)	+	-
9	<i>Simitidion simile</i> (C. L. Koch, 1836)	+	+
10	<i>Steatoda albomaculata</i> (De Geer, 1778)	+	-
11	<i>Steatoda paykulliana</i> (Walckenaer, 1805)	+	+
12	<i>Steatoda triangulosa</i> (Walckenaer, 1802)	+	-
13	<i>Theridion melanurum</i> (Hahn, 1831)	+	-
FAM. THOMISIDAE			
1	<i>Heriaeus graminicola</i> (Doleschall, 1852)	+	-
2	<i>Misumena vatia</i> (Clerck, 1757)	+	-
3	<i>Synema globosum</i> (Fabricius, 1775)	+	-
4	<i>Thomisus onustus</i> Walckenaer, 1805	+	+
5	<i>Ozyptila atomaria</i> (Panzer, 1801)	+	-
6	<i>Runcinia grammica</i> (C.L.Koch, 1837)	+	-
7	<i>Xysticus abramovi</i> Marusik & Logunov, 1995	+	+
8	<i>Xysticus caperatus</i> Simon, 1875	+	+

9	<i>Xysticus edax</i> (O. P.-Cambridge, 1872)	+	+
10	<i>Xysticus kaznakovi</i> Utochkin, 1968	+	+
11	<i>Xysticus kempeleni</i> Thorell, 1872	+	-
12	<i>Xysticus ninnii</i> Thorell, 1872	+	+
13	<i>Xysticus pseudorectilineus</i> (Wunderlich, 1995)	+	-
14	<i>Xysticus striatipes</i> L.Koch, 1870	+	-
FAM. TITANOCIDAE			
1	<i>Nurscia albomaculata</i> (Lucas, 1846)	+	+
2	<i>Titanoeca quadriquttata</i> (Hahn, 1833)	+	+
FAM. ZODARIDAE			
1	<i>Pax islamita</i> (Simon, 1873)	+	+
2	<i>Zodarion kossamos</i> Bosmans, 2009	+	+
3	<i>Zodarion thoni</i> Nosek, 1905	+	+

LOCALITIES	
1 Kütahya, Dumlupınar, Büyükturak	19 Kütahya, Domanıç, Muhacırlar
2 Kütahya, Dumlupınar Şehitliği	20 Kütahya, Domanıç, Çamlıca- Küçükköy
3 Kütahya, Dumlupınar, Ağaç	21 Kütahya, Tavşanlı- Emet on road1
4 Kütahya, Dumlupınar-Altıntaş on road1	22 Kütahya, Tavşanlı- Emet on road 2
5 Kütahya, Dumlupınar-Altıntaş on road 2	23 Kütahya, Tavşanlı- Emet on road 3
6 Kütahya, Altıntaş, Pusan- Doğanlar on road	24 Kütahya, Tavşanlı- Emet (in valley 1)
7 Kütahya, Aslanapa, Haydarlar	25 Kütahya, Tavşanlı- Emet Yolu 4
8 Kütahya, Aslanapa, Ada village	26 Kütahya, Emet, İkibaşlı
9 Kütahya, Koçak	27 Kütahya, Emet, Esentepe
10 Kütahya, Gellinkaya	28 Kütahya, Hisarcık
11 Kütahya, Göynükören	29 Kütahya, Tavşanlı- Simav road
12 Kütahya- Uşak road	30 Kütahya, Tavşanlı- Simav (in valley 1)
13 Kütahya, Kuman	31 Kütahya, Tavşanlı- Simav (in valley 2)
14 Kütahya, Aydoğdu	32 Kütahya, Simav, Kapıkaya
15 Kütahya- Tavşanlı on road 1	33 Kütahya, between Simav- Şaphane
16 Kütahya- Tavşanlı on road 2	34 Kütahya, Şaphane
17 Kütahya, Tavşanlı	35 Kütahya, Gediz, Pınarbaşı
18 Kütahya, Tunçbilek	37 Kütahya, Çavdarhisar

Figure 1. Localities in Kütahya province.



Figure 2. Location of Kütahya province in Turkey.

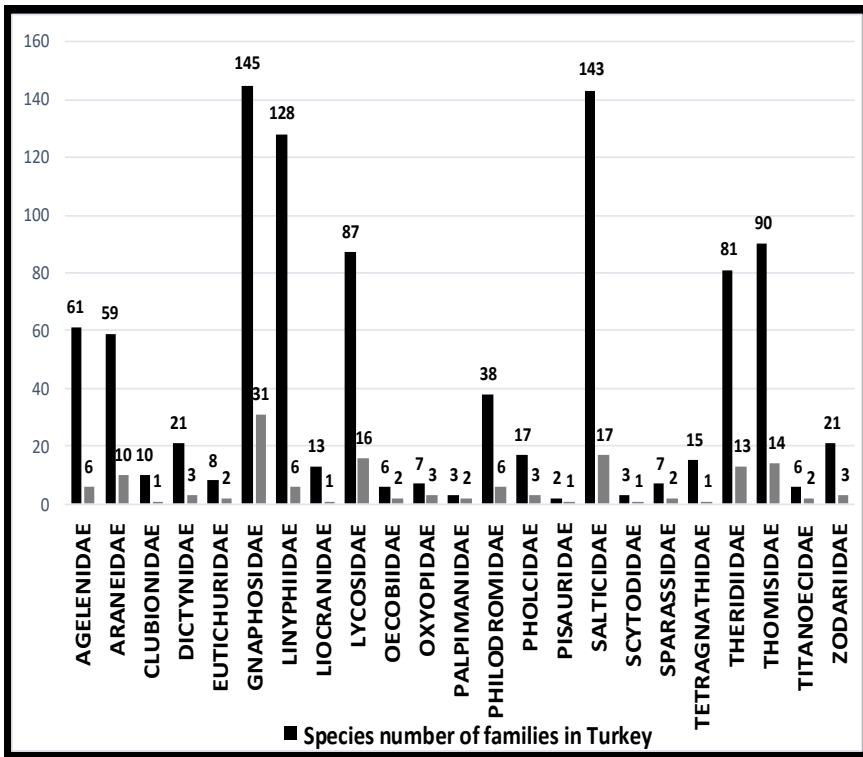


Figure 3. Comparison of species numbers of 23 spider families in Turkey and Kütahya province (Black column: Turkey, grey column: Kütahya).