

## Faunistic studies on the Trichoptera fauna of northwestern Turkey and Thrace

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**Abstract.** A faunistic list of Trichoptera of Düzce and Sakarya provinces in northwestern Turkey is given, Fourty-seven species belonging to 26 genera and 16 families are reported, of these 36 species are recorded for the first time in these provinces. The Trichoptera species of Yedigöller National Park, located near Düzce province, and Kırklareli province in Thrace are also listed. Among them *Parasetodes respersellus* (RAMBUR, 1842) is a new genus record and *Wormaldia occipitalis* PICTET, 1834 and *Ceraclea dissimilis* (STEPHENS, 1836) are new species records for the Turkish Trichoptera fauna. A sketch map in the distribution in Düzce and Sakarya provinces is provided.

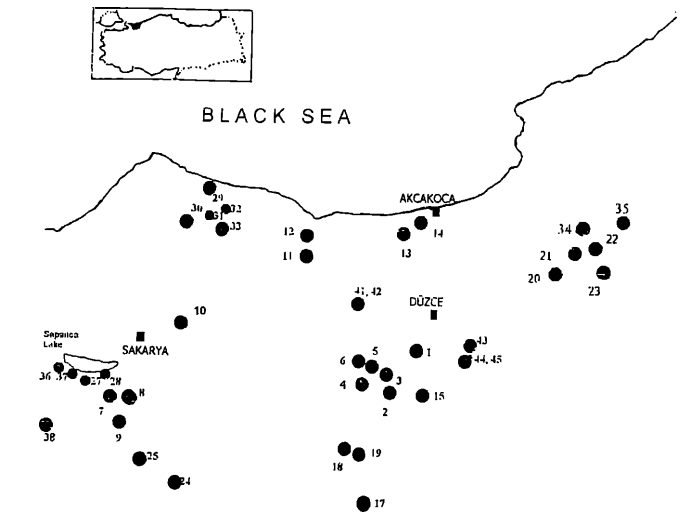
**Key Words.** Trichoptera, faunistic, new record, northwestern Turkey, Thrace, Düzce, Sakarya, Yedigöller National Park.

There are several studies on the Trichoptera fauna of northwestern Turkey (SİPAHİLER, 2007, 2012, 2014), but Düzce and Sakarya provinces in the west of the region are poorly known. There are three species records from Sakarya province (SİPAHİLER & MALICKY 1987) and one species from Düzce province, which was described as new species *Glossosoma yigilca* SİPAHİLER, 1996 (SİPAHİLER, 1996). Later some new species from the region were described (SİPAHİLER, 2014a). In the present study, a faunistic list for both provinces including the neighbouring areas is given. As a result of field studies conducted in 2012 and 2013, 47 species belonging to 26 genera and 16 families are listed, 36 of which are new for these provinces. Both provinces have a poor fauna, when compared with northeastern Turkey (SİPAHİLER, 2010, 2012). This is the result of pollution, excessive use of water resources for drinking water and agriculture. For comparing the richness of the faunas, the faunistic list of the species of Yedigöller National Park, a small area protected since 1965 located near the border of Düzce province is given, which is represented by 36 species belonging to 26 genera and 12 families (Table 1). In addition, a list of Trichoptera for Kırklareli province in Thrace is given, based on the unpublished data and the results of collected material, identified by H. Malicky. Among them *Parasetodes respersellus* (RAMBUR, 1842) is a new genus record and the species *Wormaldia occipitalis* PICTET, 1834 and *Ceraclea dissimilis* (STEPHENS, 1836) are new records for the Turkish fauna.

### I- List of localities in Düzce and Sakarya Provinces

#### (Figure 1)

- 1- Düzce, Aydınpınar direction, 40°45' N, 31°06' E, 23.9.2012.
- 2- Düzce, Kardüz Yaylası direction, 695 m, 40°40'N, 31°02'E, 23.9.2012; 12.6.2013; 5.7.2013; 15.8.2013.
- 3- Düzce, Kardüz Yaylası direction, 710 m, 40°43'N, 31°03'E, 23.9.2012; 12.6.2013; 5.7.2013; 15.8.2013.
- 4- Düzce, Kardüz Yaylası direction, 1054 m, 40°41'N, 30°58'E, 23.9.2012.
- 5- Düzce, Kardüz Yaylası direction, 837 m, 40°42'N, 30°58' E, 23.9.2012.
- 6- Düzce, Kardüz Yaylası direction, Melen Stream, Göksu Spring, (light), 836 m, 40°45'N, 30°57'E, 23.9.2012.



- 7- Sakarya, Sapanca, Mahmudiye, Dereiçi, 244 m, 40°39' N, 30°12' E, 24.9.2012.
- 8- Sakarya, Sapanca, Mahmudiye, 1 km south of Dereiçi, 362 m, 40°39'N, 30°32'E, 24.9.2012.
- 9- Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N, 30°15'E, 34.9.2012; 3.7.2013.
- 10- Sakarya, Adapazarı, Sakarya River, (light), 28 m, 40° 48' N, 30°12' E, 24.9.2012, 3.7.2013.
- 11- Sakarya, Karasu, Kurudere, Şeker Pınarı direction, 25 m, 40°58'N, 30°45'E, 25.9.2012.
- 12- Sakarya, Karasu, Şerbet Pınarı, Maden Deresi direction, 76 m, 41°00'N, 30°46'E, 25.9.2012; (light), 4.7.2013.
- 13- Düzce, Akçakoca, Aktaş, İdilli Village, 80 m, 41°02' N, 31°06' E, 25.9.2012.
- 14- Düzce, Akçakoca, Aktaş, 2.5 km south, 32 m, (light), 41°03' N, 31°06' E, 25.9.2012.
- 15- Düzce, Odayeri Yaylası direction, 832 m, 40°41' N, 31°08' E, 26.9.2012.
- 16- Düzce, Odayeri Yaylası direction 1200 m, 26.9.2012.
- 17- Bolu, Göynük, Sünet Lake, 883 m, 40°26' N, 30° 57' E, 22.10.2012.
- 18- Sakarya – Bolu province border, Tavşansuyu Village, Sülüklü Göl direction, 40°32' N, 30° 52'E, 900 m, 22.10.2012.
- 19- Sakarya - Bolu province border, Tavşansuyu Village, Sülüklü Göl direction, 40°32' N, 30°52'E, 860 m, 22.10.2012.
- 20- Düzce, Yiğilca, Yoğunpelit direction, 40°58'N, 31°31'E, 490 m, 23.10.2012.
- 21- Düzce, Yiğilca, Yoğunpelit direction, 40° 58' N, 31°35' E, 535 m, 23.10.2012
- 22- Düzce, Yiğilca, Yoğunpelit, Yedigöller direction, 40°59'N, 31°38'E, 945 m, 23.10.2012.
- 23- Düzce- Bolu province border, Yiğilca, Yoğunpelit, Yedigöller direction small spring, 40°58' N, 31°42' E, 508 m, 23.10.2012.
- 24- Sakarya, Taraklı, 492 m, 40°22' N, 30°31'E, 10.6.2013.
- 25- Sakarya, Geyve, Doğançay, 10.6.2013.
- 26- Sakarya, Sapanca, İstanbuldere, 323 m, 40° 38' N, 30° 18' E, 10.6.2013
- 27- Sakarya, Sapanca, Mahmudiye, Mahmudiye Stream, 315 m, 40°39' N, 30°12' E, 10.6.2013.
- 28- Sakarya, Sapanca, Mahmudiye, Mahmudiye Stream, 262 m, 40°39'N, 30°12'E, 10.6.2013.
- 29- Sakarya, Karasu, Yassıgeçit Village, 122 m, 40°57'N, 38°45'E, 11.6.2013; 4.7.2013.
- 30- Sakarya, Karasu, Bıçakçı Spring, 199 m, 40°58' N, 30°42' E, 11.6.2013.

- 31- Sakarya, Karasu, Şerbet Pınarı Stream, 168 m, 40°59'N,30°46'E, 11.6.2013; 4.7.2013.
- 32- Sakarya, Karasu, Maden Stream, 100 m, 41°00'N,30°46' E, 11.6.2013.
- 33- Sakarya, Karasu, Kirazlı Village, a tributary of Maden Stream, 46 m, 41°00'N,30°46'E, 11.6.2013.
- 34- Düzce, Yiğilca, Yoğunpelit, Melen Stream, 40°58' N,31°31' E, 423 m, 12.6.2013; 5.7.2013
- 35- Düzce- Zonguldak province border, Yiğilca, Alaplı direction, 385 m, 40°00' N,31°25'E, 12.6.2013.
- 36- Sakarya, Sapanca, Yanıkdere, 179 m, 40°40'N,30°09' E, 3.7.2013.
- 37- Sakarya, Sapanca, Maşukiye Stream, 239 m, 40°41'N,30°07'E, 4.7.2013.
- 38- Kocaeli-Sakarya province border, Serinlik Village, Serindere, 251 m, 40°38' N,30°01' E, 4.7.2013.
- 39- Düzce, Gölyaka, Hendek direction, Kadifekale, large stream, 277 m, 40°44'N, 30°52'E, 15.8.2013.
- 40- Düzce, Gölyaka, Hendek direction, Kadifekale, a spring, 450 m, 40°43'N,30°50'E, 15.8.2013
- 41- Düzce, Gölyaka, Hendek direction, Kadifekale source, 415 m, 40°43'N, 30°51'E, 15.8.2013.
- 42- Düzce, Hendek, Benlevit Village, Altındere (source of Dinsiz Stream, 182 m, 40°40'N,30°41' E, 15.8.2013.
- 43- Düzce, Kaynaşlı, Çatalçam Village, Samandere, 830 m, 40°43' N,31°16'E, 17.8.2013.
- 44- Düzce, Kaynaşlı, Samandere, Abant direction, 1245 m, 40°39'N,31°14'E, 17.8.2013.
- 45- Düzce, Kaynaşlı, Samandere, Abant direction, 1248 m, 40°40'N,31°15' E, 17.8.2013.

**List of Species in Düzce and Sakarya Provinces**  
(\*: New record for the provinces)

**Rhyacophilidae**

*Rhyacophila fasciata fasciata* HAGEN, 1859\*

Localities: Düzce, Kardüz Yaylası direction, 710 m, 40°43'N,31°03'E, 23.9.2012, 1 female; Sakarya, Sapanca, Mahmudiye 1 km south of Dereçi, 362 m, 40°39'N,30°32'E, 24.9.2012, 1 male, 1 female pupa; Bolu, Göynük, Sünnet Lake, 883 m, 40°26'N,30°57'E, 22.10.2012, 1 male, 1 prepupa; Sakarya, Sapanca, Yanıkdere, 179 m, 40°40'N, 30°09' E, 3.7.2013, 1 female pupa; Sakarya, Sapanca, Maşukiye stream, 239 m, 40°41'N,30°07'E, 4.7.2013, 1 male pupa; Kocaeli-Sakarya province border, Serinlik Villace, Serindere, 251 m, 40°38'N,30°01'E, 4.7.2013, 1 male pupa; Düzce, Kaynaşlı, Samandere, Abant direction, 1245 m, 40°39' N,31°14' E, 17.8.2013, 7 male and female pupa.

*Rhyacophila nubila* ZETTERSTEDT, 1840\*

Localities: Düzce, Kardüz Yaylası direction, Aydınpınar, a tributary of Melen Stream, Göksu Spring, (light), 836 m, 40°45'N,30°57'E, 23.9.2012, 1 female; Sakarya, Sapanca, Mahmudiye 1 km south of Dereçi, 362 m, 40°39'N,30°32'E, 24.9.2012, 1 female; Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N,30°15'E, 34.9.2012, 1 male, 1 female; Sakarya, Taraklı, 492 m, 40°22'N,30°31'E, 10.6.2013, 1 female pupa; Sakarya, Geyve, Doğançay, 10.6.2013, 8 pupa; Sakarya, Karasu, Maden Stream, 100 m, 41°00'N,30°46'E, 11.6.2013; same place (light), 1 female; Düzce, Yiğilca, Yoğunpelit direction, Melen Stream, 40°58'N,31°31'E, 423 m, 5.7.2013, 1 female pupa; same place, 5.7.2013, 1 female pupa, 3 prepupa; Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N,30°15'E, 15.8.2013, 1 female.

**Glossosomatidae**

*Glossosoma yigilca* SİPAHİLER, 1996

Localities: Düzce, Aydınpınar direction, 40°45'N,31°06' E, 23.9.2012, 1 male, 1 female pupa; Düzce, Kardüz Yaylası direction, 695 m, 40°40'N,31°02' E, 23.9.2012, 1 male pupa and larva; same place, 733 m, 40°43'N,31°02' E, 12.6.2013, larva and pupa; Düzce, Kardüz Yaylası direction, 710 m, 40°43' N,31°03' E, 23.9.2012, larva and pupa; same place, 15.8.2013, 1 female; same place, 837 m, 40°42'N,30°58'E, 23.9.2012, larva and pupa; Sakarya, Sapanca, Mahmudiye 1 km south of Dereçi, 362 m, 40°39'N,30°32' E, 24.9.2012, 1 larva; Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N,30°15' E, 34.9.2012, 1 male, larva, pupa; Sakarya, Karasu, Kurudere, Şerbet Pınarı direction, 25 m, 40°58' N,30°45' E, 4.7.2013, pupa and larva; Düzce, Odayeri Yaylası direction, 832 m, 40°41'N,31°08' E, 26.9.2012, 1 male, 1 female; Sakarya, Karasu, Şerbet Pınarı Stream, 168 m, 40°59'N,30°46' E, 11.6.2013, larva and pupa; Maden Stream, 100 m, 41°00',30°46' E, 11.6.2013; same place (light) 11.6.2013, 3 female; Düzce, Yiğilca, Yoğunpelit direction, Melen Stream, 40°58'N,31°31'E, 423 m, 12.6.2013, larva and pupa; Düzce- Zonguldak province border, Yiğilca, Alaplı direction, 385 m, 40°00' N,31°25'E, 12.6.2013, larva and pupa; Sakarya, Sapanca, Yanıkdere, 179 m, 40°40'N,30°09' E, 3.7.2013, 2 male pupa, larva; Kocaeli-Sakarya province border, Serinlik Village, Serindere, 251 m, 40°38'N,30°01'E, 4.7.2013, 4 male pupa, larva; Düzce, Kaynaşlı, Samandere, Abant direction, 1245 m, 40°39'N,31°14' E, 17.8.2013, 1 pupa, 1 larva.

*Agapetus episkopi* MALICKY, 1972

Locality. Bolu, Göynük, Sünnet lake, 883 m, 40°26'N,30°57' E, 22.10.2012, 1 male.

**Hydroptilidae**

*Allotrichia vilnensis* RACIECKA, 1937\*

Locality: Sakarya, Maden Stream, 100 m, 41°00'N,30°46' E, 4.7.2013, 2 females.

*Hydroptila angustata* MOSELY, 1939\*

Localities: Sakarya River, (light), 28 m, 40° 48' N, 30°12' E, 3.7.2013, 8 males, 40 females; Maden Stream, 100 m, 41°00'N,30°46' E, 4.7.2013, 1 male.

*Hydroptila atargatis* MALICKY, 1997\*

Localities: Düzce, Akçakoca, Aktaş, 2.5 km south, 32 m, (light), 41°03'N,31°06'E, 25.9.2012, 10 males, 68 females; Düzce, Kardüz Yaylası direction, Aydınpınar, a tributary of Melen Stream, Göksu Spring, (light), 836 m, 40°45'N,30°57' E, 23.9.2012, 21 males, 33 females; same place, 4.7.2013, 1 male, 7 females; Sakarya River, (light), 28 m, 40° 48' N, 30°12' E, 3.7.2013, 4 males; Maden Stream, 100 m, (light), 41°00'N,30°46' E, 32 males, 61 females.

*Hydroptila lotensis* MOSELY, 1930\*

Locality: Sakarya, Maden Stream, 100 m, 41°00'N,30°46' E, 4.7.2013, 1 male.

*Hydroptila occulta* EATON, 1873\*

Localities: Düzce, Kardüz Yaylası direction, Aydınpınar, a tributary of Melen Stream, Göksu Spring, (light), 836 m, 40°45'N,30°57' E, 23.9.2012, 10 males, 11 females; Maden Stream, 100 m, 41°00'N,30°46' E, 4.7.2013, 1 male, 7 females.

*Hydroptila simulans* MOSELY, 1920\*

Localities: Sakarya, Karasu, Maden Stream, (light), 100 m, 41°00', 30°46'E, 11.6.2013, 42 males, 332 females; Sakarya, Adapazarı, Sakarya River, (light), 28 m, 40°48'N, 30° 12' E, 24.9.2012, many.

**Ptilocolepidae***Ptilocolepus colchicus* MARTYNOV, 1913\*

Localities: Düzce, Hendek, Benlevit Village, Altındere (Dinsiz Stream), 182 m, 40°40'N, 30° 41'E, 15.8.2013, 2 males; Düzce, Kaynaşlı, Çatalçam Village, Samandere, 830 m, 40°43'N, 31°16'E, 17.8.2013, 6 males.

*Ptilocolepus dilatatus* MARTYNOV, 1913\*

Localities: Sakarya, Taraklı, Gürleyik Stream, 500 m, 19.5.2006, 1 male; Düzce, Kardüz Yaylası direction, 695 m, 40°40'N, 31°02'E, 5.7.2013, 1 male; same place, 15.8.2013, 2 males; same place, 710 m, 40°43'N, 31°03'E, 15.8.2013, 1 female; Sakarya, Karasu, Şerbet Pınarı, Maden Stream direction, 76 m, 41°00'N, 30°46' E, 25.9.2012, 1 female; Düzce, Hendek, Benlevit Village, Altındere, source of Dinsiz Spring, 182 m, 40°40'N, 30°41'E, 15.8.2013, 1 male, 1 female.

**Philopotamidae***Philopotamus montanus* (DONOVAN, 1813) \*

Localities: Düzce, Kardüz Yaylası direction, 695 m, 40°40'N, 31°02'E, 23.9.2012, 1 female; same place: 733 m, 40°43'N, 31°02' E, 12.6.2013, 1 female; 5.7.2013, 1 male; Düzce, 710 m, 40°43'N, 31°03'E, 23.9.2012, 1 male; 6.7.2013, 2 males; 15.8.2013, 1 male, 1 female; Sakarya, Sapanca, Mahmudiye, Dereiçi, 244 m, 40°39'N, 30°12' E, 24.9.2012, 1 female; Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N, 30°15'E, 34.9.2012, 1 male; same place, 15.8.2013, 1 male, 2 females.

*Philopotamus variegatus* (SCOPOLI, 1763)\*

Localities: Sakarya, Sapanca, Mahmudiye, Mahmudiye Stream, 262 m, 40°39'N, 30°12'E, 10.6.2013, 1 male, 1 female; Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N, 30°15'E, 15.8.2013, 1 male.

*Wormaldia balcanica* KUMANSKI, 1979\*

Localities: Düzce, Kardüz Yaylası direction, 1054 m, 40°41'N, 30°58' E, 23.9.2012, 1 male; same place, 832 m, 40°41'N, 31°08'E, 26.9.2012, 3 male.

*Wormaldia subnigra* MCLACHLAN, 1865\*

Localities: Sakarya, Karasu, Kurudere, Şerbet Pınarı direction, 25 m, 40°58'N, 30°45'E, 25.9.2012, 1 male, 1 female; same place, 76 m, 41°00'N, 30°46'E, 25.9.2012, 1 male; 168 m, 40°59'N, 30°46' E, 11.6.2013, 5 males, 2 females; Sakarya, Karasu, Maden Stream, 100 m, 41°00', 30°46' E, 11.6.2013, 1 male, 1 female; Düzce, Odayeri Yaylası direction, 832 m, 40° 41' N, 31°08' E, 26.9.2012, 3 males; same place, 1200 m, 3 males, 26.9.2012.

**Polycentropodidae***Polycentropus mazdacus* SCHMID, 1959\*

Localities: Sakarya, Sapanca, Mahmudiye 1 km south of Dereiçi 362 m, 40°39'N, 30°32'E, 24.9.2012, 1 male; Kocaeli-Sakarya province border, Serinlik Village, Serindere, 251 m, 40° 38'N, 30°01'E, 4.7.2013, 1 male pupa; Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40° 36'N, 30°15' E, 3.7.2013, 2 males; 15.8.2013, (light), 1 male, 3 females.

**Ecnomidae***Ecnomus tenellus* (RAMBUR, 1842)\*

Locality: Sakarya, Adapazarı, Sakarya River, (light), 28 m, 40°48'N, 30°12'E, 24.9.2012, 3 males, 1 female.

**Psychomyiidae***Lype phaeopa* (STEPHENS, 1836)\*

Localities: Sakarya, Karasu, Kurudere, Şerbet Pınarı direction, 25 m, 40°58'N, 30°45'E, 25.9.2012, 1 male; Sakarya, Karasu, Yassigeçit Village, 122 m, 40°57'N, 38°45'E, 11.6.2013, 3 males; Düzce, Hendek, Benlevit Village, Altındere, source of Dinsiz Stream, 182 m, 40°40' N, 30°41'E, 15.8.2013, 1 male.

*Psychomyia mengenenensis* SİPAHİLER, 2006\*

Localities: Düzce, Kardüz Yaylası direction, Aydınpınar, a tributary of Melen Stream, Göksu Spring, (light), 836 m, 40°45'N, 30°57'E, 23.9.2012, 99 males, 74 females; Sakarya, Adapazarı, Sakarya River, (light), 28 m, 40°48'N, 30°12'E, 24.9.2012, 4 males; same place, (light), 4.7.2013, 201 males, 18 females.

*Psychomyia pusilla* (FABRICIUS, 1781)\*

Localities: Düzce, Kardüz Yaylası direction, 837 m, 40°42'N, 30°58'E, 23.9.2012, 1 male; Aydınpınar, Melen Stream, a tributary of Melen Stream, Göksu Spring, (light), 836 m, 40°45' N, 30°57' E, 23.9.2012, 1 male; Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N, 30°15'E, 34.9.2012, 1 male, 1 female; same place, 15.8.2013, 2 males, 1 females; Düzce, Akçakoca, Aktaş, İdilli Village, 80 m, 41°02'N, 31°06'E, 25.9.2012, 9 males, 4 females; same place, 2.5 km south, 32 m, (light), 41°03'N, 31°06' E, 25.9.2012, 3 females; Sakarya, Karasu, Maden Stream, 100 m, 41°00'N, 30°46' E, 11.6.2013, 2 males; same place, (light), 4.7.2013, 11 males; Düzce, Gölyaka, Hendek direction, Kadifekale, 277 m, 40°44'N, 30°52'E, 15.8.2013, 10 males, 17 females; Düzce, Kaynaşlı, Çatalçam Village, Samandere, 830 m, 40°43' N, 31°16'E, 17.8.2013, 2 males; Kocaeli-Sakarya province border, Serinlik Village, Serindere, 251 m, 40°38' N, 30°01' E, 4.7.2013, 64 males, 9 females.

*Tinodes devrekensis* SİPAHİLER, 2014

Localities: Düzce, Akçakoca, Aktaş, İdilli Village, 80 m, 41°02'N, 31°06'E, 25.9.2012, 2 male, 1 female; same place, 2.5 km south, 32 m, (light), 41°03'N, 31°06' E, 25.9.2012, 1 male, 4 female; Düzce, Kardüz Yaylası direction, 710 m, 40°43'N, 31°03' E, 15.8.2013, 2 males.

*Tinodes izginehirae* SİPAHİLER, 2014

Localities: Sakarya, Sapanca, Mahmudiye, Mahmudiye Spring, 315 m, 40°39'N, 30°12'E, 10.6.2013, 2 males, 1 female; same place, 262 m, 40°39'N, 30°12'E, 10.6.2013, 2 males, 3 females; 239 m, 40°41'N, 30°07'E, 4.7.2013, 3 males.

**Hydropsychidae***Diplectrona atra* MCLACHLAN, 1878\*

Localities: Düzce, Kardüz Yaylası direction, 695 m, 40°40'N, 31°02' E, 5.7.2012, 1 female; same place, 710 m, 40°43'N, 31°03'E, 23.9.2012, 1 male; 3.7.2013, 1 male; 6.7.2013, 1 male pupa; 15.8.2013, 1 female; Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N, 30°15' E, 34.9.2012, 1 male pupa; Düzce, Gölyaka, Hendek direction, Kadifekale, source, 415 m, 40°43'N, 30°51'E, 15.8.2013, 3 males; Benlevit Village, Altındere (source of Dinsiz Çayı),

182 m, 40°40'N, 30°41'E, 15.8.2013, 1 male; 450 m, 40°43'N, 30°50'E, 15.8.2013, 1 male.

*Hydropsyche incognita* PITSCH, 1993

Localities: Sakarya, Karasu, Maden Stream, 100 m, 41°00', 30°46'E, 11.6.2013, 1 male, 1 female; same place (light), 4.7.2013, 2 females; Düzce, Yiğilca, Yoğunpelit direction, Melen Stream, 40°58'N, 31°31'E, 423 m, 5.7.2013, 1 male pupa.

*Hydropsyche instabilis* (CURTIS, 1834)

Locality: Sapanca, Yanıkdere, 179 m, 40°40'N, 30°09' E, 3.7.2013, 1 male pupa.

*Hydropsyche contubernalis* MCLACHLAN, 1865

Localities: Sakarya, Sapanca, Haydarpaşa, 1902 (SİPAHİLER & MALICKY, 1987)

*Hydropsyche cornuta* MARTYNOV, 1909

Locality: Sakarya, Adapazarı, Sakarya River, (light), 28 m, 40°48'N, 30°12'E, 24.9.2012, 1 male.

*Hydropsyche lepnevae* BOTOSANEANU, 1967\*

Locality: Düzce, Yiğilca, Yoğunpelit, Melen Stream, 40° 58' N, 31°31'E, 423 m, 12.6.2013, 1 male pupa.

*Hydropsyche bulbifera* MCLACHLAN, 1878\*

Locality: Düzce, Akçakoca, Aktaş, 2.5 km south, 32 m, (light), 41°03'N, 31°06' E, 25.9.2012, 15 males, 8 females.

*Hydropsyche modesta* Navas, 1925

Localities: Sakarya, Adapazarı, Sakarya River, (light), 28 m, 40°48'N, 30°12' E, 24.9.2012, 6 males, 3 females; same place, 4.7.2013, 2 males, 10 females.

*Hydropsyche sappho* MALICKY, 1976\*

Localities: Düzce, Akçakoca, Aktaş, 2.5 km south, 32 m, (light), 41°03'N, 31°06'E, 25.9.2012, 1 males, 2 females; Düzce, Yiğilca, Yoğunpelit, Melen Stream, 40°58'N, 31°31'E, 423 m, 12.6.2013, 1 male pupa.

*Hydropsyche taskalensis* SİPAHİLER, 2012\*

Locality: Sakarya, Taraklı, 492 m, 40°22' N, 30°31'E, 10.6.2013, 2 males (pupa).

## Goeridae

*Lithax musaca* MALICKY 1972

Localities: Sakarya, Taraklı, Mahdumlar Village, Gürleyik Spring, 19.5.2006, 500 m, 32 males, 2 females; Sakarya, Karasu, Şerbet Pınarı, Maden Stream direction, 76 m, 41°00'N, 30°46'E, 25.9.2012, 1 larval case; Sakarya, Geyve, Doğançay, 10.6.2013, larval case; Sakarya, Sapanca, Yanıkdere. 179 m, 40°40'N, 30°09'E, 3.7.2013, larval case.

## Limnephilidae

*Drusus demirsoyi* ÇAKIN, 1983

Locality: Sakarya – Bolu province border, Tavşansuyu Village, Sülüklü Göl direction, 40°32' N, 30°52' E, 860 m, 22.10.2012, 1 female.

*Limnephilus auricula* CURTIS, 1834\*

Locality: Sakarya, Taraklı, Karagöl yaylası, 40°30'N, 30°33'E 1000 m, 21.5.2006, 5 females.

*Limnephilus bipunctatus* CURTIS, 1834\*

Locality: Sakarya, Taraklı, Karagöl yaylası, 40°30'N, 30°33'E 1000 m, 21.5.2006, 1 male, 3 females.

*Limnephilus lunatus* CURTIS, 1834\*

Locality: Sakarya, Taraklı, 492 m, 40°22' N, 30°31' E, 10.6.2013, 1 female (pupa).

*Potamophylax latipennis* (CURTIS, 1834)\*

Locality: Düzce, Kaynaşlı, Samandere, Abant direction, 1245 m, 40°39'N, 31°14'E, 17.8.2013; 1 male, 5 females (pupa).

## Uenoidae

*Thremma anomalum* MCLACHLAN, 1876\*

Localities: Düzce, Kardüz Yaylası direction, 1054 m, 40°41'N, 30°58'E, 23.9.2012, 1 male; Düzce, Hendek, Benlevit Village, Altındere (source of Dinsiz Spring), 182 m, 40°40'N, 30° 41'E, 15.8.2013, 1 male; Düzce, Gölyaka, Hendek direction, Kadifekale, source, 415 m, 40°43'N, 30°51'E, 15.8.2013, 1 female.

## Leptoceridae

*Adicella altandroconia* BOTOSANEANU & NOVAK, 1965\*

Localities: Düzce, Kardüz Yaylası direction, 710 m, 40°43'N, 31°03'E, 6.7.2013, 1 male; Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N, 30°15' E, 4.7.2013, 1 male; Sakarya, Karasu, Kurudere, Şerbet Pınarı direction, 25 m, 40°58'N, 30°45' E, 25.9.2012, 1 female; Sakarya, Sapanca, Mahmudiye, Mahmudiye Spring, 262 m, 40°39'N, 30°12'E, 10.6.2013, 2 males; Kocaeli-Sakarya province border, Serinlik Village, Serindere, 251 m, 40°38'N, 30°01'E, 4.7.2013, 1 female; Düzce, Hendek, Benlevit Village, Altındere (Dinsiz Spring), 182 m, 40°40'N, 30°41'E, 15.8.2013, 1 female.

*Adicella syriaca* ULMER, 1907\*

Localities: Sakarya, Sapanca, Mahmudiye, Mahmudiye Spring, 262 m, 40°39'N, 30°12'E, 10.6.2013, 1 male; Düzce, Yiğilca, Yoğunpelit, Melen Stream, 40°58'N, 31°31'E, 423 m, 12.6.2013, 1 female.

*Leptocerus interruptus* (FABRICIUS, 1775)\*

Locality: Düzce, Yiğilca, Yoğunpelit, Melen Stream, 40°58'N, 31°31'E, 423 m, 12.6.2013, 1 female.

*Oecetis notata* RAMBUR, 1842\*

Locality: Sakarya, Adapazarı, Sakarya River, (light), 28 m, 40° 48' N, 30°12' E, 3.7.2013, 1 female.

## Lepidostomatidae

*Dinarthrum iranicum* SCHMID, 1959\*

Localities: Düzce, Odayeri Yaylası direction, 832 m, 40°41'N, 31°08'E, 26.9.2012, 1 female; Bolu, Göynük, Sünnet Lake, 883 m, 40°26'N, 30°57'E, 22.10.2012, 4 males; Düzce, Kaynaşlı, Samandere, Abant direction, 1248 m, 40°40'N, 31°15'E, 17.8.2013, 2 males, 1 female.

## Calamoceratidae

*Calamoceras illiesi* MALICKY & KUMANSKI, 1974\*

Localities: Sakarya, Sapanca, İkramiye Village, Akçay, 510 m, 40°36'N, 30°15'E, 4.7.2013, 2 pupa; Düzce, Yiğilca, Yoğunpelit, Melen Stream, 40°58'N, 31°31'E, 423 m, 12.6.2013, 1 larva.

## Beraeidae

*Beraemyia devrekensis* SİPAHİLER, 2005\*

Locality: Kocaeli-Sakarya province border, Serinlik Village, Serindere, 251 m, 40°38'N, 30°01' E, 4.7.2013, 1 female.

## II- List of the species of Trichoptera of Yedigöller National Park

Yedigöller National Park (1623 hectares; 40°50'N,31°35' E, 900 m) located near the eastern border of Düzce province. There are 36 species, 10 of which are endemic to Turkey (27%). See table 1 (page 16).

## III- List of localities of Kırklareli province in Trace

- 1- Strandscha-Gebirge, SW Koruköy, 41°50'N, 28°18'E, 480 m, 11.7.2014, leg. Rausch, coll. Malicky.
- 2- Kırklareli, W İğneada, Madara Deresi, 15 m, 41°52'N,27°54'E, 8.6.2001, leg. Rausch, coll. Malicky.
- 3-Trace, Langoz, İğneada, Demirköy, 50-150 m, 2.7.1995, 41°48'N,51°49' E, leg. B. Horvat, coll. Malicky.
- 4- Kırklareli, Demirköy, Dupnisa Mağarası, Sarpdere, İncesirt, 350 m, 41°50'N,27°33' E, 3.7.1995, leg. B. Horvat, coll. Malicky.
- 5-Trace, Velika Köprü, Yenice, 10 km SW Demirköy, 350 m, 41°49'N,27°45'E, 4.7.1995, leg. B. Horvat, coll. Malicky.
- 6- Kiyıköy, Pabuç Stream, 41°38'N,28° 04'E, 31.7.1994 leg. and coll. Siphahiler.
- 7- Vize, Demirköy, 470 m, Kadinkule, 41°52'N,27°45'E, 1.8.1994 leg. and coll. Siphahiler.

## List of Species of Kırklareli province

### Rhyacophilidae

- Rhyacophila osellai* MALICKY, 1981 (3, 5)  
*Rhyacophila nubila* ZETTERSTEDT, 1840 (5)  
*Rhyacophila obtusa* KLAPALEK, 1894 (5)

### Glossosomatidae

- Agapetus delicatulus* MCLACHLAN, 1884 (7, 5)  
*Synagapetus anatolicus* ÇAKIN, 1983 (4)

### Hydroptilidae

- Hydroptila angustata* MOSELY, 1939 (1)  
*Hydroptila forcipata* (EATON, 1873) (1)  
*Hydroptila taurica* MARTYNOV, 1934 (1)  
*Hydroptila vectis* CURTIS, 1834 (1)  
*Orthotrichia costalis* (CURTIS, 1834) (6)  
*Orthotrichia tragetti* MOSELY, 1930 (6)  
*Oxyethira falcata* MORTON, 1893 (1)

### Philopotamidae

- Wormaldia balcanica* KUMANSKI, 1979 (7)  
*Wormaldia occipitalis* PICTET, 1834 (5)  
 New record for Turkey.

- Wormaldia subnigra* MCLACHLAN, 1865 (3, 4)  
*Philopotamus variegatus* (SCOPOLI, 1763) (4)

### Polycentropodidae

- Crynus trimaculatus* (CURTIS, 1834) (3)

### Ecnomidae

- Ecnomus tenellus* (RAMBUR, 1842) (1, 6)

### Psychomyiidae

- Lype phaeopa* (STEPHENS, 1836) (5)  
*Lype reducta* (HAGEN, 1868) (3)  
*Tinodes popovi* KUMANSKI, 1975 (7, 4)

### Hydropsychidae

- Hydropsyche bulbifera* MCLACHLAN, 1878 (1)  
*Hydropsyche emarginata* NAVAS, 1923 (1)  
*Hydropsyche modesta* NAVAS, 1925 (1)  
*Hydropsyche ornatula* MCLACHLAN, 1878 (1)  
*Hydropsyche peristerica* BOTOSANEANU. & MARIN-KOVIC, 1966 (7)

### Limnephilidae

- Drusus botosaneanui* KUMANSKI, 1968 (3, 4)  
*Limnephilus rhombicus* (LINNAEUS, 1758) (2)  
*Micropterna nycterobia* MCLACHLAN, 1875 (3, 4)  
*Micropterna sequax* MCLACHLAN, 1875 (4)

### Helicopsychidae

- Helicopsyche bacescui* ORGHIDAN & BOTOSANEANU 1953 (4, 5)

### Calamoceratidae

- Calamoceras illiesi* MALICKY & KUMANSKI, 1974 (3, 4)

### Leptoceridae

- Adicella altandroconia* BOTOSANEANU & NOVAK, 1965 (6)  
*Adicella syriaca* ULMER, 1907 (3, 4)  
*Athripsodes bilineatus aegeus* MALICKY, 1999 (3)  
*Ceraclea dissimilis* (STEPHENS, 1836) (1)  
 New record for Turkey.  
*Leptocerus interruptus* (FABRICIUS, 1775) (1, 3)  
*Leptocerus tineiformis* CURTIS, 1834 (1,6)  
*Oecetis furva* (RAMBUR, 1842) (6)

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	<b>Rhyacophilidae</b>	
1	<i>Rhyacophila armeniaca</i> GUERIN, 1843	
2	<i>Rhyacophila clavalis</i> MARTYNOV, 1913	
3	<i>Rhyacophila fasciata fasciata</i> HAGEN, 1859	
4	<i>Rhyacophila tristis</i> PICTET, 1834	
5	<i>Rhyacophila alaplica</i> SİPAHİLER 2013	Endemic
	<b>Glossosomatidae</b>	
6	<i>Synagapetus anatolicus</i> ÇAKIN, 1983	Endemic, type place
	<b>Ptilocolepidae</b>	
7	<i>Ptilocolepus dilatatus</i> MARTYNOV, 1913	
	<b>Philopotamidae</b>	
8	<i>Philopotamus achemenus</i> SCHMID, 1959	
9	<i>Philopotamus variegatus</i> (SCOPOLI, 1763)	
10	<i>Wormaldia balcanica</i> KUMANSKI, 1979	
	<b>Hydropsychidae</b>	
11	<i>Hydropsyche kebab</i> MALICKY, 1974	Endemic
12	<i>Hydropsyche mahrkusha</i> SCHMID, 1959	
	<b>Polycentropodidae</b>	
13	<i>Crynus trimaculatus</i> (CURTIS, 1834)	
14	<i>Plectrocnemia brevis</i> MCLACHLAN, 1871	
15	<i>Plectrocnemia latissima</i> MARTYNOV, 1913	
16	<i>Polycentropus flavomaculatus hebraeus</i> BOTOSANEANU & GASITH, 1971	
	<b>Psychomyiidae</b>	
17	<i>Lype phaeopa</i> (Stephens, 1836)	
18	<i>Lype reducta</i> (HAGEN, 1868)	
19	<i>Tinodes unidentatus</i> KLAPALEK, 1894	
	<b>Limnephilidae</b>	
20	<i>Drusus demirsoyi</i> ÇAKIN, 1983	Endemic, type place
21	<i>Chaetopteryx nalanae</i> SİPAHİLER, 1996	Endemic, type place
22	<i>Psilopteryx turcicus</i> ÇAKIN, 1983	Endemic, type place
23	<i>Glyphotaelius pellucidus</i> (Retzius, 1783)	
24	<i>Micropterna sequax</i> MCLACHLAN, 1875	
25	<i>Limnephilus flavicornis</i> (FABRICIUS, 1787)	
26	<i>Halesus digitatus</i> (SCHRANK, 1781)	
27	<i>Potamophylax cingulatus</i> (STEPHENS, 1837)	
	<b>Lepidostomatidae</b>	
28	<i>Dinarthrum iranicum</i> SCHMID, 1959	
	<b>Leptoceridae</b>	
29	<i>Mystacides azurea</i> (LINNEAEUS, 1761)	
	<b>Sericostomatidae</b>	
30	<i>Oecismus monedula pinkeri</i> MALICKY 1976	Endemic
31	<i>Schzopelex boluensis</i> SİPAHİLER 2012	Endemic, type place
	<b>Beraeidae</b>	
32	<i>Beraea walteri</i> MALICKY, 1975	
33	<i>Beraeodes minitus</i> (LINNEAEUS, 1761)	
34	<i>Ernodes abanticus</i> SİPAHİLER, 1983	Endemic
35	<i>Ernodes dirgenensis</i> SİPAHİLER, 1998	Endemic, type locality
	<b>Calamoceratidae</b>	
36	<i>Calamoceras illiesi</i> MALICKY & KUMANSKI, 1974	

Table 1. Trichoptera Fauna of Yedigöller National Park.

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