

CHIRONOMIDAE (DIPTERA) LARVAE OF ÇANAKKALE REGION AND THEIR DISTRIBUTION

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Abstract: In this study, Chironomidae (Diptera) larvae were evaluated in faunistic points of view which were collected from 72 localities in Çanakkale city borders (except Gökçeada and Bozcaada) in Marmara Region between 1997 and 2001. In this region, 78 species were identified from Tanypodinae, Diamesinae, Prodiamesinae, Orthoclaadiinae and Chironominae subfamilies of Chironomidae family. *Procladius (Holotanypus) sp.*, *Chironomus (Chironomus) riparius* Mg., *C. (C.) viridicollis* K. and *C. (C.) anthracinus* Zett were the most widespread species. *Diamesa insignipes* K., *Parametrioctenemus stylatus* Sparck., *Bryophaenocladus muscicola* K. and *Hydrobaenus lugubris* Fries are new records for Turkey's larval Chironomidae fauna. Distribution of species for localities and their habitat preferences were given in the region studied.

Key words: Chironomidae Larvae, Çanakkale, Faunistik, Limnofauna, Türkiye.

Çanakkale Bölgesi Chironomidae (Diptera) Larvaları ve Yayılışları

Özet: Bu çalışmada, 1997–2001 yılları arasında Marmara Bölgesi, Çanakkale il sınırları (Gökçeada ve Bozcaada hariç) içinde 72 lokaliteden toplanan Chironomidae (Diptera) larvaları faunistik açıdan değerlendirildi. Bölgede Chironomidae familyasının Tanypodinae, Diamesinae, Prodiamesinae, Orthoclaadiinae ve Chironominae altfamilyalarına ait 78 tür saptandı. En çok yayılış gösteren türler *Procladius (Holotanypus) sp.*, *Chironomus (Chironomus) riparius* Mg., *C. (C.) viridicollis* K. ve *C. (C.) anthracinus* Zett.'tur. *Diamesa insignipes* K., *Parametrioctenemus stylatus* Sparck., *Bryophaenocladus muscicola* K. ve *Hydrobaenus lugubris* Fries türleri Türkiye larval Chironomidae faunası için yeni kayıtlardır. Çalışmada ayrıca, türlerin lokalitelere göre dağılımları ve habitat tercihleri de verildi.

Anahtar Kelimeler: Chironomidae Larvaları, Çanakkale, Faunistik, Limnofauna, Türkiye

Introduction

Larvae of Chironomidae family are one of the most important group of benthic fauna in various inland water. Because they are one of the most important indicators in biological classification of inland water reservoir both their abundance in unit area of bottom and species compositions (Özkan, 1991 and Kırgız, 1988).

Şahin (1987), Kırgız (1988), Şahin et al. (1988), Özkan (1991, 1995, 1998, 2002, 2003) and Sever (1997) have studied larval Chironomidae as systematically or ecologically in Marmara region of Turkey.

Previous studies on Chironomidae larvae in Çanakkale have been done by Şahin et al. (1988) in Gökçeada and by Özkan (2006a, 2006b) in Bozcaada and Gökçeada. Thrace part of Turkey has been researched by Özkan (2003) but research in Anatolian part of the Turkey has not been carried out yet. The aim of this study was to reveal the contributions of larval Chironomidae fauna in Marmara Region of Turkey.

Material and Method

Study material was collected from 72 localities in Çanakkale city boundary (except Gökçeada and Bozcaada) between April 1997 and August 2001 (Figure 1). Samples were fixed with 70% alcohol and brought to the laboratory (Figure 1). Chironomid larvae were cleaned under binocular microscope and separated from other groups. Firstly temporary and then permanent slides were done according to Şahin (1984) and Özkan's (1991). During this treatment, firstly head capsules and then bodies of the larvae were separated under a binocular microscope. Head capsules were boiled in 10% KOH for 5-15 minutes and waste tissues were removed with this treatment. They were waited for 20 minutes in pure water and then, they were waited in 70% alcohol for 15 minutes. Lastly, they were kept in 80% – 90% – 96% – 100% alcohol series for 10 minutes and they were kept in xylene for 1 – 2 minutes and closed with entellan. Bodies of larvae were taken only in alcohol series and closed with entellan. Then species identification was done under an Olympus microscope.

Publications by Epler (1993), Fittkau and Roback (1983), Kırgız (1988), Moller Pillot (1978–79, 1984), Özkan (2002, 2003), Şahin (1980, 1984, 1991) were used in identification of species.

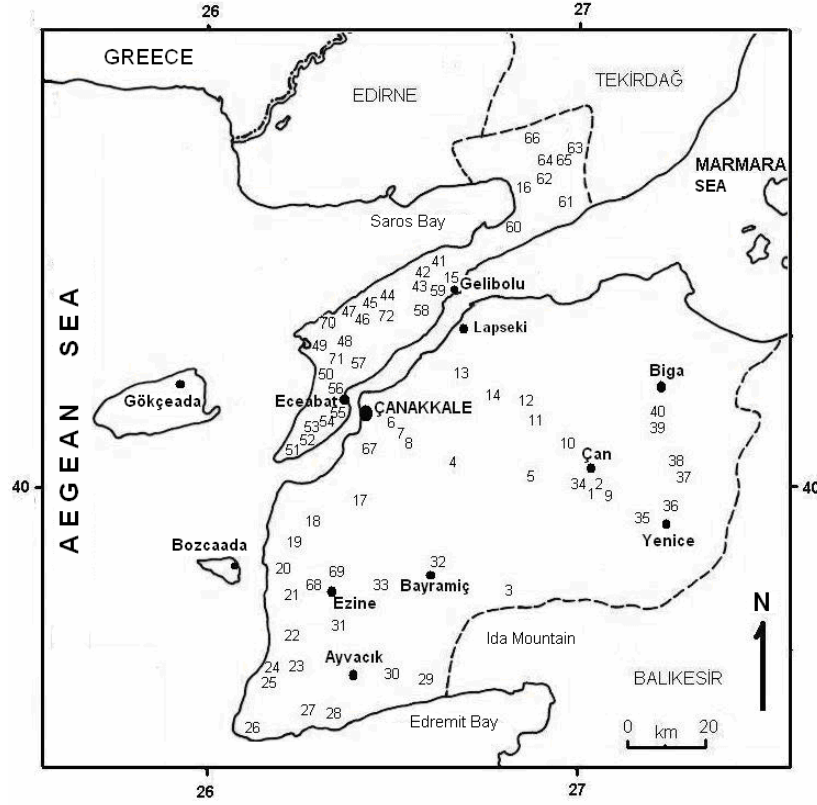


Figure 1: Localities of sampling stations in Çanakkale city boundaries (Numbers show the localities in Table 1.)

Table 1: Field Work Localities of Çanakkale Region

Locality number	Locality	Habitat type	Date
1	Çan / Terzialan (Masıt Stream)	S, St	April 19,1997
2	Çan / Terzialan (Kayalı Stream)	S, St	April 20,1997
3	Bayramiç / (İda) Kaz Mountain (Sarı kız Foot of the mountain)	M	September 05,1997
4	Merkez / Kirazlı	St, Ap	April 09,1998
5	Çan / Şerbetli (Şerbetli Stream)	St, Ap	April 09,1998
6	Merkez / Çanakkale (Sarıçay-under the dam)	S, St	April 09,1998
7	Merkez / Çanakkale (Sarıçay- 4 km upper side of the dam)	S	April 09,1998
8	Merkez / Serçeler (Sarıçay)	S, St	April 09,1998
9	Çan / Terzialan (Koca Çınarlar)	S, St	April 10,1998
10	Çan / Kocayayla	M, Ap	April 12,1998
11	Çan / Dondurma (5 km kala)	M, St, Ow	April 12,1998
12	Çan / Dondurma – Elçialan (Havsara Stream)	St, Ap	April 12,1998
13	Lapseki / Asmalı (Beybaş)	S, St, Ab	April 12,1998
14	Lapseki / Bağcılar	St, Ap	April 12,1998
15	Gelibolu / Gelibolu (Under the bridge)	M, Ap	April 12, 1998
16	Gelibolu / Evreşe	M, Ap	April 12,1998
17	Merkez / Dürmek Stream (Under the bridge)	S, St, Ap	August 13,1999
18	Ezine / Pınarbaşı Stream	S, St, Ap	August 13,1999
19	Ezine / Kumburun	M	August 13,1999
20	Ezine / Geyikli – New Port (1 km from the village)	M	August 15,1999
21	Ezine / Kestanbol (Hacıstream)	S, St, Ow	August 15,1999

22	Ayvacık/ Kösedere (Village Stream)	S, M, St, Ap	August 15,1999
23	Ayvacık/ Tuzla (Tuzla Stream)	S, St	August 15,1999
24	Ayvacık/ Gülpınar (Shore)	S, Ap	August 16,1999
25	Ayvacık/ Gülpınar (Kumbağlar)	M, Ow	August 16,1999
26	Ayvacık/ Babakale	M, Ow	August 16,1999
27	Ayvacık/ Behramkale (2 km from the village)	Ap	August 16,1999
28	Ayvacık/ Behramkale (Behramkale Stream)	S, Ap	August 16,1999
29	Ayvacık/ Küçük kuyu (Yeşilyurt Stream)	S, St	August 17,1999
30	Ayvacık/ Ayvacık (Gemedere)	M, St	August 17,1999
31	Ezine / Ayvacık-Ezine (Kocadere)	S, M, St, Ap	August 17,1999
32	Bayramiç / Bayramiç (Bayramiç Stream)	Ow	August 17,1999
33	Bayramiç / Bayramiç- Ezine (Kavaklı)	M, Ap	August 17,1999
34	Çan / Terzialan	M, Ap	August 18,1999
35	Çan / Yenice – Davutköy (irrigation pond)	S, M, St, Ow	August 18,1999
36	Yenice / Nevruz Village (Yenice Stream)	M	August 18,1999
37	Yenice / Sofular	M	August 18,1999
38	Yenice / Yukarı İnova Village	M	August 18,1999
39	Biga / Yeşilköy (Kırgeçit Stream)	S, St	August 18,1999
40	Biga / Akkayrak Village (Kocabaş Stream)	S, St	August 18,1999
41	Gelibolu / Yeniköy,	M, Ap	August 31,2000
42	Gelibolu / Fındıklı, Gelibolu	M, Ap	August 31,2000
43	Gelibolu / Fındıklı Pond, Fındıklı Village	St, Ow	August 31,2000
44	Gelibolu / Değirmendüzü Village (Burgaz Stream)	M, St, Ow	August 31,2000
45	Eceabat / Tayfur Pond, Tayfur Village	M, St, Ap	August 31,2000
46	Eceabat / Karainebeyli Village	Ap	August 31,2000
47	Eceabat / Karainebeyli Pond, Karainebeyli Village	M, St, Ow	August 31,2000
48	Eceabat / Yolağzı Pond, Yolağzı Village	M, St, Ow	August 31,2000
49	Eceabat / Asmak Stream, Küçük Anafarta Village	S, M, Ap	September 01,2000
50	Eceabat / Karatepe Harbor – Abide	M, Ap	September 01,2000
51	Eceabat / Seddülbahir Village	M	September 01,2000
52	Eceabat / Seddülbahir Village	M, Ap	September 01,2000
53	Eceabat / Seddülbahir – Alçitepe	Ap	September 01,2000
54	Eceabat / Behramlı Village	M, Ab	September 01,2000
55	Eceabat / Kilitbahir (Karakas)	M	September 01,2000
56	Eceabat / Eceabat	Ap	September 02,2000
57	Eceabat / Yalova Stream, Yalova Village	M, Ap	September 02,2000
58	Eceabat / Bayırköy	M, Ap	September 02,2000
59	Gelibolu / Münipbey Stream	S, M, Ow	September 02,2000
60	Gelibolu / Koruköy	S	September 02,2000
61	Gelibolu / Demircili Pond	M	September 02,2000
62	Gelibolu / Evreşe, Gelibolu	S, Ap	September 02,2000
63	Gelibolu / Kiremitlik Stream, Çokal Village	Ow	September 02,2000
64	Gelibolu / Çokal – Yüllüce	M	September 02,2000
65	Gelibolu / Yüllüce Village	M, Ap	September 02,2000
66	Gelibolu / Seymaniye Village	S, M, Ow	September 02,2000
67	Merkez / Kepez Stream	S, M, St, Ap	July 21,2001
68	Ezine / Gökçebayır-Ezine	M, Ap	July 21,2001
69	Ezine / Ezine (Stream)	M, Ap	July 21,2001
70	Eceabat / Ece Harbor Stream, Beşyol	M, Ap, Ow	August 22,2001
71	Eceabat / Uzunhızırılı Dam, Kumköy	M, Ow	August 22,2001
72	Gelibolu / Tayfur Dam, Tayfur Village	St, Ap, Ow	August 24,2001

S: Sand, M: Mud, St: Stone, Ap: Aquatic plant, Ow: Organic waste.

Results

In this study, 78 species from 5 subfamily of Chironomidae were identified from 72 localities without distinguishing stagnant or stream water in Çanakkale city boundary between 1997 and 2000. Distributions, localities and habitat preferences of larvae of subfamilies and genus are given below.

- Subfamily : Chironominae G. 1928
 Tribus : Chironomini Edw., 1928
 Genus : *Chironomus* Meigen 1803
 Species : *Chironomus (Chironomus) riparius* Meigen 1804
 Localities it was found in study region : 10, 14, 16, 18, 20, 23, 25, 26, 27, 33, 37, 39, 41, 42, 44, 46, 50, 51, 52, 53, 54, 55, 56, 58, 59, 60, 62, 64 and 69.
 Habitat : Mostly stagnant, dirty, muddy waters, mud and rarely streams, sand-mud ground.
 Species : *Chironomus (Chironomus) anthracinus* Zetterstedt 1860
 Localities it was found in study region: 10, 14, 16, 18, 19, 20, 22, 26, 27, 33, 34, 35, 36, 37, 38, 39, 40, 42, 50, 52, 54, 56, 58, 59, 62 and 69.
 Habitat : Mostly stagnant waters and mud, rarely ground with organic waste, mossy ground and seldomly mud of stream.
 Species : *Chironomus (Chironomus) viridicollis* v.d.w., 1877
 Localities it was found in study region : 14, 16, 18, 19, 20, 23, 25, 26, 33, 35, 36, 37, 38, 39, 40, 42, 44, 46, 50, 52, 53, 54, 56, 58, 59 and 64
 Habitat : Generally muddy ground and sometimes ground with organic waste of stagnant water and seldomly mud, sand and stone ground of stream.
 Species : *Chironomus (Camptochironomus) tentans* Fabricius 1805
 Localities it was found in study region : 11, 27, 34, 35, 38, 51, 52, 5 and 69
 Habitat : Mud- organic waste of stagnant waters, mud-sand ground of streams.
 Species : *Chironomus (Chironomus) plumosus* (Linnaeus 1758)
 Localities it was found in study region : 11, 28, 34, 35, 38, 50, 51, 54 and 59
 Habitat : Generally mud of stagnant, dirty waters, sand and muddy ground of streams.
 Species : *Chironomus (Chironomus) aprilinus* Meigen 1918
 Localities it was found in study region : 10, 16, 20, 23 and 50
 Habitat : Mostly muddy ground of stagnant waters
 Species : *Chironomus (Chironomus) salinarius* Kieffer 1915
 Localities it was found in study region : 21
 Habitat : Ground with mixture of sand, stone and organic waste in stream.
 Genus : *Einfeldia* Kieffer, 1954
 Species : *Einfeldia pagana* (Mg. 1838)
 Localities it was found in study region : 63 and 71
 Habitat : Ground with mud, aquatic plant and organic waste in stream
 Species : *Einfeldia dissidens* (Walker, 1856)
 Localities it was found in study region : 63
 Habitat : Ground with mud, aquatic plant and organic waste in stream
 Genus : *Lipiniella* Shilova 1961
 Species : *Lipiniella* sp.
 Localities it was found in study region: 2
 Habitat : Sandy ground in stream.
 Genus : *Kiefferulus* Goetghebuer, 1922
 Species : *Kiefferulus (Kiefferulus) tendipediformis* (Goetghebuer, 1921)
 Localities it was found in study region: 47
 Habitat : On tree branches in stagnant water
 Genus : *Parachironomus* Lenz 1921
 Species : *Parachironomus vitiosus* (Goetghebuer 1921)
 Localities it was found in study region : 40
 Habitat : Sandy ground in stream
 Genus : *Polypedium* Kieffer 1912
 Species : *Polypedium (Polypedium) nubifer* (Skuze, 1889)
 Localities it was found in study region : 18, 27, 30, 31, 34, 35, 36, 37, 38, 42, 45, 49, 50, 52, 54, 55, 59, 62, 65, 69, 70 and 72
 Habitat : Generally muddy regions in stream and stagnant water

- Species : *Polypedilum (Tripodura) scalaenum* (Schrank 1803)
 Localities it was found in study region : 1, 2, 17, 18, 23, 31, 32, 33, 36, 42, 44, 52, 57, 59 and 69
 Habitat : Generally sand and mud in stream, muddy ground in stagnant water
- Species : *Polypedilum (Uresipedilum) convictum* (Walker 1856)
 Localities it was found in study region : 1, 2, 6, 11, 18, 35, 43, 45, 47, 59, 63, 69, 71 and 72
 Habitat : Sand and mud in stagnant water, mostly sand and seldomly muddy regions in stream
- Species : *Polypedilum (Tripodura) bicrenatum* Kieffer 1921
 Localities it was found in study region : 44 and 47
 Habitat : Heterogeneous ground in stagnant water and stream
- Species : *Polypedilum (Polypedilum) pedestre* (Meigen 1830)
 Localities it was found in study region : 8, 44 and 57
 Habitat : Sandy ground in stream
- Species : *Polypedilum (Pentapedilum) exsectum* (Kieffer 1916)
 Localities it was found in study region : 10 and 36
 Habitat : Mud in stagnant water
- Genus : *Stictochironomus* Kieffer 1919
 Species : *Stictochironomus longipugionis* Şahin 1987
 Localities it was found in study region : 2, 17, 22, 28, 36, 37, 39, 44, 65, 69 and 71
 Habitat : Generally sand, mud, moss in stream, muddy ground in stagnant water
- Genus : *Dicrotendipes* Kieffer 1913
 Species : *Dicrotendipes nervosus* (Stæger 1839)
 Localities it was found in study region : 18, 23, 35, 40, 45, 47 and 71
 Habitat : Generally in stagnant water, seldomly sandy ground in stream
- Species : *Dicrotendipes tritonus* (Kieffer 1916)
 Localities it was found in study region : 20, 22, 35, 45, 47, 49, 53, 70 and 71
 Habitat : Ground with mixture of mud, sand and aquatic plant especially in stagnant water
- Genus : *Endochironomus* Kieffer 1918
 Species : *Endochironomus tendens* (Fabricius 1775)
 Localities it was found in study region : 45, 63, 70 and 71
 Habitat : Heterogeneous ground in stream and stagnant water
- Genus : *Beckidia* Sæther 1979
 Species : *Beckidia zabolotzkyi* (Goetghebuer 1938)
 Localities it was found in study region : 2
 Habitat : Sandy regions in stream
- Genus : *Cryptochironomus* Kieffer 1918
 Species : *Cryptochironomus defectus* (Kieffer 1913)
 Localities it was found in study region : 18, 22, 31, 40, 44, 45, 59, 69, 70, 71 and 72
 Habitat : Mostly sand, seldomly mud, stone and aquatic plants in stream
- Genus : *Cryptocladopelma* Sæther 1971
 Species : *Cryptocladopelma laccophila* Lenz 1954
 Localities it was found in study region : 18, 43 and 72
 Habitat : Generally muddy ground in stream
- Genus : *Cryptotendipes* Beck & Beck 1969
 Species : *Cryptotendipes holsatus* Lenz 1959
 Localities it was found in study region : 21, 40, 43 and 72
 Habitat : Sandy ground in stream
- Genus : *Microtendipes* Kieffer 1915
 Species : *Microtendipes chloris* (Meigen 1818)
 Localities it was found in study region : 22, 44, 57 and 71
 Habitat : Mixture of mud, sand and aquatic plant in stagnant water
- Genus : *Paratendipes* Kieffer 1911
 Species : *Paratendipes demirsoyus* Şahin 1987
 Localities it was found in study region : 33, 36, 44 and 57
 Habitat : Muddy ground in stagnant water
- Species : *Paratendipes intermedius* Chern. 1949
 Localities it was found in study region : 36
 Habitat : Mud in stagnant water
- Genus : *Harnischia* Kieffer 1921
 Species : *Harnischia fuscimana* Kieffer 1921

- Localities it was found in study region : 40, 43, 63 and 71
Habitat : Sandy ground in stream
Tribus : *Tanytarsini* Edw., 1929
Genus : *Tanytarsus* van der Wulp 1874
Species : *Tanytarsus gregarius* Kieffer 1909
- Localities it was found in study region : 2, 6, 18, 30, 33, 36, 37, 59 and 71
Habitat : Mud in stagnant water, sandy, muddy and stony ground in stream
Genus : *Virgatanytarsus* Pinder 1982
Species : *Virgatanytarsus arduennensis* (Goetghebuer 1922)
- Localities it was found in study region : 18, 21, 42, 44, 59 and 72
Habitat : Generally sandy and stony ground in stream
Genus : *Cladotanytarsus* Kieffer 1921
Species : *Cladotanytarsus mancus* (Walker 1856)
- Localities it was found in study region : 18, 23, 33, 35, 43, 45, 47, 59, 70, 71 and 72
Habitat : Generally sand and stone in stream, rarely muddy-mossy ground in stream
Genus : *Micropsectra* Kieffer 1908
Species : *Micropsectra praecox* Wiedemann, 1918
- Localities it was found in study region : 1, 10 and 57
Habitat : Muddy and mossy ground in stream
Genus : *Rheotanytarsus* Thienemann & Bause 1913
Species : *Reotanytarsus* sp.
- Localities it was found in study region : 58
Habitat : Mud, ground with plant and organic waste in stagnant water
Genus : *Paratanytarsus* Thienemann & Bause 1913
Species : *Paratanytarsus lauterborni* (Kieffer 1909)
- Localities it was found in study region : 63
Habitat : Organic waste in stream
Subfamily : *Prodiamesinae* Saeth., 1979
Genus : *Prodiamesa* Kieffer 1906
Species : *Prodiamesa olivacea* (Meigen 1818)
- Localities it was found in study region : 39 and 44
Habitat : Sand-stone ground in stream
Subfamily : *Diamesinae* Mall., 1915
Genus : *Diamesa* Meigen 1835
Species : *Diamesa discoloriventris* Şahin 1987
- Localities it was found in study region : 4 and 13
Habitat : On huge stones in stream
Species : *Diamesa (Diamesa) insignipes* Kieffer 1908
- Localities it was found in study region : 5
Habitat : Stone and moss in stream
Genus : *Pothastia* Kieffer 1922
Species : *Pothastia alternis* Şahin 1987
- Localities it was found in study region : 8 and 12
Habitat : Mostly on stones, seldomly ground with sand and organic waste in stream
Species : *Pothastia gaedii* (Meigen 1838)
- Localities it was found in study region : 6, 7 and 12
Habitat : Sand-stone ground in stream
Subfamily : *Tanypodinae* G., 1927
Genus : *Tanypus* Meigen 1803
Species : *Tanypus (Tanypus) punctipennis* Meigen 1818
- Localities it was found in study region : 18, 35, 38, 47, 61, 69, 71 and 72
Habitat : Mostly mud, seldomly heterogeneous ground in stream and stagnant water
Species : *Tanypus (Tanypus) kraatzi* (Kieffer 1912)
- Localities it was found in study region : 35
Habitat : Heterogeneous ground in stagnant water
Genus : *Procladius* Skuse 1889
Species : *Procladius (Holotanypus) sp.*
- Localities it was found in study region : 10, 16, 17, 18, 22, 24, 25, 26, 28, 32, 34, 35, 36, 37, 38, 39, 40, 42, 44, 45, 49, 52, 57, 59, 62, 65, 67, 68, 69 and 71

- Habitat : Mud, seldomly organic material in stagnant water, heterogeneous ground in stream
 Genus : *Psectrotanypus* Kieffer 1909
 Species : *Psectrotanypus varius* (Fabricius 1787)
 Localities it was found in study region : 10, 58, 67, 68 and 69
- Habitat : Mostly between plants and mud in stream
 Genus : *Clinotanypus* Kieffer 1913
 Species : *Clinotanypus pinguis* (Loew 1861)
 Localities it was found in study region : 57
- Habitat : Mud and aquatic plant in stream
 Genus : *Macropelopia* Thienemann 1916
 Species : *Macropelopia nebulosa* (Meigen 1804)
 Localities it was found in study region : 3, 29, 33, 37 and 44
- Habitat : Seldomly mud in stagnant water, generally sandy ground in stream
 Species : *Macropelopia goetgheuberi* K. 1918
 Localities it was found in study region : 3
- Habitat : Muddy ground in stagnant water
 Genus : *Ablabesmyia* Johannsen, 1905
 Species : *Ablabesmyia aequidensi* Şahin 1987
 Localities it was found in study region : 44
- Habitat : Mud, stone and organic waste in stream
 Species : *Ablabesmyia monilis* (Linnaeus 1758)
 Localities it was found in study region : 59
- Habitat : Mixture of sand, mud and organic waste in stream
 Genus : *Zavrelimyia* Fittk. 1962
 Species : *Zavrelimyia melanura* (Mg, 1804)
 Localities it was found in study region : 65 and 71
- Habitat : Mud and aquatic plant in stream and stagnant water
 Genus : *Telmatopelopia* Fittkau 1962
 Species : *Telmatopelopia nemorum* (Goetghebuer 1921)
 Localities it was found in study region : 11 and 71
- Habitat : Mud and organic waste in stagnant water
 Genus : *Paramerina* Fittkau 1962
 Species : *Paramerina cingulata* (Walker 1856)
 Localities it was found in study region : 11
- Habitat : Mud and organic waste in stagnant water
 Genus : *Pentaneurella* Fittkau & Murray 1983
 Species : *Pentaneurella katterjokki* Fittkau & Murray 1983
 Localities it was found in study region : 1 and 18
- Habitat : Sand and stone ground in stream
 Genus : *Arctopelopia* Fittkau 1962
 Species : *Arctopelopia sp.*
 Localities it was found in study region : 22
- Habitat : Heterogeneous ground in stream
 Genus : *Natarsia* Fittkau 1962
 Species : *Natarsia punctata* (Fabricius 1805)
 Localities it was found in study region : 40
- Habitat : Sand and stone in stream
 Subfamily : Orthocladiinae Edw., 1929
 Genus : *Orthocladius* van der Wulp 1874
 Species : *Orthocladius (Euorthocladius) frigidus* (Zetterstedt 1838)
 Localities it was found in study region : 4, 5, 6, 9, 10 and 15
- Habitat : Generally on stones and aquatic plants in stream
 Species : *Orthocladius (Euorthocladius) thienemanni* Kieffer 1906
 Localities it was found in study region : 6, 9, 14 and 41
- Habitat : Stone, seldomly moss and sand in stream
 Species : *Orthocladius (Euorthocladius) rivulorum* Kieffer 1909
 Localities it was found in study region : 6 and 8
- Habitat : Stone, seldomly moss and sand in stream
 Genus : *Psectrocladius* Kieffer 1906

- Species : *Allopectrocladius (Allopectrocladius) dilatatus* van der Wulp 1859
 Localities it was found in study region : 15 and 16
 Habitat : Mud, aquatic plant in stream
- Species : *Psectrocladius (Allopectrocladius) calcaratus* (Edwards, 1929)
 Localities it was found in study region : 15
 Habitat : Mud, aquatic plant in stream
- Species : *Psectrocladius (Allopectrocladius) platypus* (Edwards 1929)
 Localities it was found in study region : 15
 Habitat : Mud, aquatic plant in stream
- Species : *Psectrocladius (Psectrocladius) barbimanus* (Edwards 1929)
 Localities it was found in study region : 13, 15 and 58
 Habitat : Mud, aquatic plant in stream
- Species : *Psectrocladius (Psectrocladius) limbatellus* (Holmgren, 1869)
 Localities it was found in study region : 44,
 Habitat : Mud, stone and organic waste in stream
- Genus : *Paratrissocladius* Zavrel 1937
 Species : *Paratrissocladius excerptus* (Walker 1856)
 Localities it was found in study region : 1, 2, 12, 15 and 29
 Habitat : Mostly stone ground, seldomly sand, mud, aquatic plant in stream
- Genus : *Paratrissocladius* Santos Abréu 1918
 Species : *Paratrissocladius rufiventris* (Meigen 1830)
 Localities it was found in study region : 8, 13, 14, 16, 18, 21, 22, 26 and 69
 Habitat : Generally on stone, rarely ground with mud and aquatic plant in stream.
- Genus : *Bryophaenocladius* Thienemann 1934
 Species : *Bryophaenocladius muscicola* (Kieffer 1906)
 Localities it was found in study region : 2
 Habitat : On stone in stream
- Genus : *Parametriocnemus* Goetghebuer 1932
 Species : *Parametriocnemus stylatus* (Spärck 1923)
 Localities it was found in study region : 2
 Habitat : On stone in stream
- Genus : *Heleniella* Gouin 1943
 Species : *Heleniella ornatcollis* (Edwards 1929)
 Localities it was found in study region : 2
 Habitat : On stone in stream
- Genus : *Halocladius* Hirvenoja 1973
 Species : *Halocladius (Halocladius) fucicola* (Edwards 1926)
 Localities it was found in study region : 10
 Habitat : Mud and moss in stagnant water
- Genus : *Cricotopus* van der Wulp 1874
 Species : *Cricotopus (Isocladius) sylvestris* (Fabricius 1794)
 Localities it was found in study region : 41, 53 and 72
 Habitat : Sand and stone in stream
- Species : *Cricotopus (Isocladius) suspiciosus* Hirvenoja 1973
 Localities it was found in study region : 26
 Habitat : Mixture of mud, stone and aquatic plant in stagnant water
- Genus : *Eukiefferiella* Thienemann 1926
 Species : *Eukiefferiella claripennis* (Lundbeck 1898)
 Localities it was found in study region : 13 and 15
 Habitat : Stone and mud in stream
- Species : *Eukiefferiella ikleyensis* (Edwards 1929)
 Localities it was found in study region : 12
 Habitat : On stone, in stream
- Genus : *Chaetocladius* Kieffer 1911
 Species : *Chaetocladius (Chaetocladius) dentiforceps* (Edwards 1929)
 Localities it was found in study region : 15
 Habitat : Mud-aquatic plant in stream.
- Species : *Chaetocladius (Chaetocladius) piger* (Goetghebuer 1913)
 Localities it was found in study region : 8

Habitat	: On stone, in stream
Genus	: <i>Hydrobaenus</i> Fries 1830
Species	: <i>Hydrobaenus lugubris</i> Fries 1830
Localities it was found in study region	: 15
Habitat	: Mud-aquatic plant in stream
Genus	: <i>Paracladius</i> Hirvenoja 1973
Species	: <i>Paracladius conversus</i> (Walker 1856)
Localities it was found in study region	: 16
Habitat	: Mud-aquatic plant in stream

Discussion

During this study, 78 species in 5 subfamily of Chironomidae family from 72 localities (Fig.1, Table1) of Çanakkale were identified (Table 2). *Diamesa insignipes* K., *Parametriocnemus stylatus* Sparc, *Bryophaenocladus muscicola* (K.) and *Hydrobaenus lugubris* Fries are new records from these species for the larval Chironomidae family of Turkey.

From these 78 species that were determined from the study area, 12 species were found in stagnant water, 46 species were found in streams, 20 species were found both in stagnant water and streams. It can be understood from table 2, that the more species found in streams than in stagnant water. We thought that the main reason for this was the variation of type of basis of streams and also because of some of the streams dried up.

When 72 localities were examined in detail (Table 1), it can be seen that species don't behave optional in habitat selection. This is suitable with the literature Özkan (1991 and 2003). But there are no strict boundaries between the habitats of fresh water environment. In stagnant water or streams, many habitats like sandy, stony, muddy, aquatic and organic waste, might be found similar to each other without strict boundaries.

According to the localities, the variability of species: it was found that 16 species in Pınarbaşı stream, 15 species were found in Burgaz and Ece Limanı stream, 14 species were found in Ezine stream and there were no Chironomid larvae found in Lake Yolağzı. The reason that no Chironomid larvae were found in Lake Yolağzı is related to its depth and the basis of the lake which is muddy.

This study does not include Chironomid larval species of Gökçeada and Bozcaada because Chironomid larval species of Gökçeada were studied by Şahin, Tanatmış, Küçük (1988), and Özkan (2006b) and Bozcaada's species were studied by Özkan (2006a) in the preceding years. In this study, 18 specimens that belong to the 60 species determined from Gökçeada and one specimen of the 14 species from Bozcaada could not be found. The species found in Çanakkale showed similarity with the species found in islands although there is sea barrier between them. The species that couldn't be found were reported from Thrace in the previous studies. As a conclusion, in this study, Chironomid larval species in Çanakkale were determined and it is revealed that Marmara and Islands' larval Chironomid fauna showed similarity to each other.

References

- EPLER, J. H. Identification Manual for the Larval Chironomidae (Diptera) of Florida. FL Dept. Environ. Reg., Orlando, FL. 317 pp, 1995.
- FITTKAU, E. J. and ROBACK, S. S. The Larvae of Tanypodinae (Diptera: Chironomidae) of the Holarctic Region (Keys and diagnoses). Ent. Scand. Suppl. 19: 33 – 110. Lund, Sweden, 1983.
- KIRGIZ, T., Gala Gölü Chironomidae (Diptera) Larvaları Üzerinde Bir Ön Çalışma. IX. Ulusal Biyoloji Kongresi Bildiri Özetleri. Cumhuriyet Üniv. Fen Ed. Fak. Biyoloji Böl., 221 – 23 Eylül, S. 11, Sivas, 1988.
- MOLLER PILLOT, H. K. M. De Larven der Nederlandse Chironomidae (Diptera), Leiden, I – I – IX. 2. 7, 1978 - 1979.
- MOLLER PILLOT, H. K. M. De Larven der Nederlandse Chironomidae (Diptera) (Orthoclaadiinae sensu lato), Leiden, S: 1 – 164, 1984.
- ÖZKAN, N. Edirne Bölgesi Chironomidae (Diptera) Limnofaunasının Tespiti ve Taksonomik İncelenmesi. Yüksek Lisans Tezi, Trakya Üniversitesi, Fen Bilimleri Enstitüsü, Edirne, 1–80, 1991.
- ÖZKAN, N. The Larval Chironomidae (Diptera) Fauna of Bozcaada (Tenedos). *Gazi Univ. Journal of Science*. Vol. 19, No. 2. 57–67, 2006a.
- ÖZKAN, N. The Larval Chironomidae (Diptera) Fauna of Gökçeada (Imbroz). *Gazi Univ. Journal of Science*. Vol. 19, No. 2. 69–75, 2006b.
- ÖZKAN, N. ve KIRGIZ, T. Edirne Bölgesi Chironomidae (Diptera) Larvaları ve Yayılışları. *Doğa Tr. Jr. of Zoology*, 19: 51 – 58, 1995.
- ÖZKAN, N. Trakya Bölgesi (Kırklareli, İstanbul ve Çanakkale) Chironomid (Chironomidae; Diptera) Türlerinin Tespiti. T.Ü. Bilimsel Araştırmalar Projeleri - TÜBAP – 320, 17+65 sayfa. 2003.
- ÖZKAN, N. Five New Chironomidae (Diptera) Species for the Turkish Fauna. *Tr. Jr. of Zoology*, 26: 183 – 188, 2002.
- ÖZKAN, N. Meriç ve Ergene Nehirleriyle Bazı Kollarında Chironomidae (Diptera) Larvalarının Dinamiği. Trakya Üniv. Fen Bilimleri Inst. Doktora Tezi. 1 – 143, 1998.
- SEVER, F. Tekirdağ İli Chironomidae (Diptera) Limnofaunasının Tespiti ve Taksonomik İncelenmesi. Trakya Üniv. Fen Bilimleri Enstitüsü, Yüksek Lisans Tezi, 1 – 49, 1997
- ŞAHİN, Y. Elazığ ve Kısmen Çevre İllerinin Chironomidae (Diptera) Limnofaunasının Tespiti ve Taksonomik İncelenmesi. *Fırat Üniv. Vetr. Fak. Derg.*, Cilt V, No: 1 (1980).
- ŞAHİN, Y. Doğu ve Güneydoğu Anadolu Bölgeleri Akarsu ve Göllerindeki, Chironomidae (Diptera) Larvalarının Teşhisi ve Dağılımları. *Anadolu Üniv. Yay. No: 57*, Fen Ed. Fak. Yay. No: 2, Eskişehir, 1984.
- ŞAHİN, Y. Marmara, Ege ve Sakarya Sistemi Akarsuları Chironomidae (Diptera) Larvaları ve Yayılışları. *Doğa TU Zooloji Derg.*, C. 11, S. 3, 179 – 188, 1987.
- ŞAHİN, Y. TANATMIŞ, M. ve KÜÇÜK, A., Gökçeada Faunası. Kısım 1: Chironomidae Larvaları. *Anadolu Üniv. Fen Ed. Fak Derg.*, Eskişehir, 1: 1 – 15, 1988.
- ŞAHİN, Y. Türkiye Chironomidae Potamofaunası, Tübitak – Proje No: TBAG –869 ve VHAG – 347, 1991.

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