

Anomuran (Crustacea, Decapoda) fauna of Fethiye Bay (Turkey, eastern Mediterranean)

Cengiz KOÇAK*, Fevzi KIRKIM, Tuncer KATAĞAN

Department of Hydrobiology, Fisheries Faculty, Ege University, TR 35100 Bornova, İzmir - TURKEY

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Abstract: A study of the anomuran crustaceans found in Fethiye Bay, on the Mediterranean coast of Turkey, revealed 22 species belonging to 4 families (Diogenidae, Paguridae, Galatheaidae, and Porcellanidae). Of these, 14 species (*Pagurus prideaux* Leach, 1815, *P. forbesii* Bell, 1845, *P. cheuvreuxi* (Bouvier, 1896), *P. cuanensis* Bell, 1845, *P. excavatus* (Herbst, 1791), *Anapagurus petiti* Dechance and Forest, 1962, *A. chiroacanthus* (Lilljeborg, 1856), *A. bicorniger* A. Milne Edwards and Bouvier, 1892, *Dardanus calidus* (Risso, 1827), *Paguristes syrtensis* De Saint Laurent, 1971, *Diogenes pugilator* (Roux, 1829), *Galathea dispersa* Bate, 1859, *G. bolivari* Zariquiey Álvarez, 1950, and *Pisidia longimana* (Risso, 1816)) were new records for Fethiye Bay, and 5 species (*A. chiroacanthus*, *A. petiti*, *A. bicorniger*, *P. cheuvreuxi*, and *P. prideaux*) were new records for the Mediterranean coast of Turkey. In addition, *A. chiroacanthus* was recorded for the first time from the Levantine Sea. Distribution of the species in the Turkish waters is provided, together with photographs of some of the species.

Key words: Anomura, Fethiye Bay, eastern Mediterranean, Turkish Mediterranean coast

Fethiye Körfezi'nin (Türkiye, Doğu Akdeniz) anomur (Crustacea, Decapoda) faunası

Özet: Fethiye Körfezi'nden (Türkiye'nin Akdeniz kıyıları) Diogenidae, Paguridae, Galatheaidae ve Porcellanidae familyalarına dahil toplam 22 anomur türü tespit edilmiştir. Çalışma boyunca saptanan 22 türden 14'ü (*Pagurus prideaux* Leach, 1815, *P. forbesii* Bell, 1845, *P. cheuvreuxi* (Bouvier, 1896), *P. cuanensis* Bell, 1845, *P. excavatus* (Herbst, 1791), *Anapagurus petiti* Dechance and Forest, 1962, *A. chiroacanthus* (Lilljeborg, 1856), *A. bicorniger* A. Milne Edwards and Bouvier, 1892, *Dardanus calidus* (Risso, 1827), *Paguristes syrtensis* De Saint Laurent, 1971, *Diogenes pugilator* (Roux, 1829), *Galathea dispersa* Bate, 1859, *G. bolivari* Zariquiey Álvarez, 1950, *Pisidia longimana* (Risso, 1816) Fethiye Körfezi'nden; 5'i (*A. chiroacanthus*, *A. petiti*, *A. bicorniger*, *P. cheuvreuxi* and *P. prideaux*) Türkiye'nin Akdeniz kıyılarından ilk kez rapor edilmektedir. *A. chiroacanthus* ayrıca Levantin Denizi'nden ilk kayıttır. Türlerin Türk sularındaki dağılımları ve bazılarının fotoğrafları verilmiştir.

Anahtar sözcükler: Anomura, Fethiye Körfezi, Doğu Akdeniz, Türk Akdeniz kıyıları

* E-mail: cengiz.kocak@ege.edu.tr

Introduction

Anomurans (Crustacea, Decapoda) represent an important component of intertidal and moderately deep benthic marine communities worldwide, where they play an important role in the food chain (Fransozo and Mantelatto, 1998). The only scientific report to date on the anomurans of Fethiye Bay in Turkey (Özcan, 2007) recorded 8 species (*Galathea intermedia* Lilljeborg, 1851, *Pisidia bluteli* (Risso, 1816), *Porcellana platycheles* (Pennant, 1777), *Calcinus tubularis* (Linnaeus, 1767), *Paguristes eremita* (Linnaeus, 1767), *Cestopagurus timidus* (Roux, 1830), *Clibanarius erythropus* (Latreille, 1818), and *Pagurus anachoretus* Risso, 1827). The aim of the present study was to produce a thorough inventory of the Anomuran fauna of Fethiye Bay.

Materials and methods

Anomurans were collected from the waters of the Fethiye Bay in June, July, and September 2008 during 2 diving expeditions that sampled a total of 50 stations in 18 intertidal and 32 subtidal sites. Intertidal sites (0-5 m depth) were sampled by hand collection when snorkeling, while subtidal habitats to a maximum depth of 34 m were sampled when scuba diving. Specimens of Anomura were captured at different depths (0-34 m) at 41 stations of out of the 50 stations sampled (Figure 1). Collected specimens were first fixed with 5% formaldehyde in the field and transferred to 70% ethyl alcohol in the laboratory. Sex was determined under a stereomicroscope, by observing the position of the gonopores (on the coxa of the third pereopod in females or the coxa of the fifth pereopod in males).

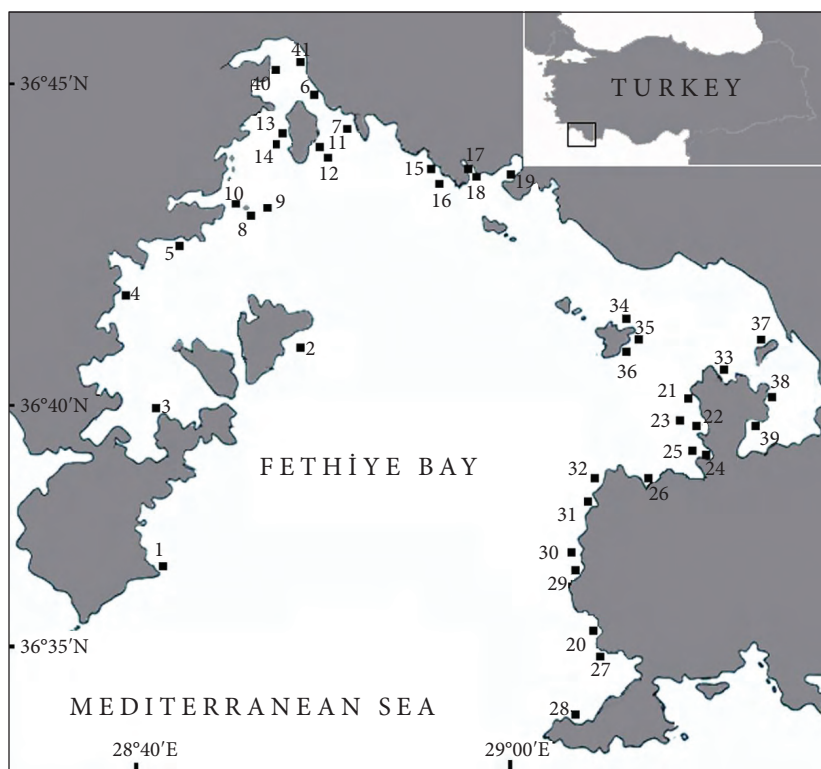


Figure 1. Map of the study area showing the sampling localities where anomurans were collected.

All anomurans were identified to species level using the works by Zariquiey Álvarez (1968), Falciai and Minervini (1996), and Ingle (1993), and the higher classification used followed Martin and Davis (2001).

Results

A total of 308 specimens of anomurans belonging to 4 families and 22 species were found to occur in Fethiye Bay. The Paguridae was represented by 10 species, the Diogenidae by 6 species, the Porcellanidae by 3 species, and the Galatheididae by 3 species. Fourteen species (*Pagurus prideaux*, *P. forbesii*, *P. cheuvreuxi*, *P. cuanensis*, *P. excavatus*, *Anapagurus petiti*, *A. chiroacanthus*, *A. bicorniger*, *Dardanus calidus*, *Paguristes syrtensis*, *Diogenes pugilator*, *Galathea dispersa*, *G. bolivari*, and *Pisidia longimana*) were new records for Fethiye Bay, 5 of which (*P. prideaux*, *P. cheuvreuxi*, *A. petiti*, *A. chiroacanthus*, and *A. bicorniger*) were new to the Mediterranean coast of Turkey, and 1 species (*A. chiroacanthus*) was reported for the first time from the Levantine Sea.

Family PAGURIDAE

Pagurus prideaux Leach, 1815 (Figure 2)

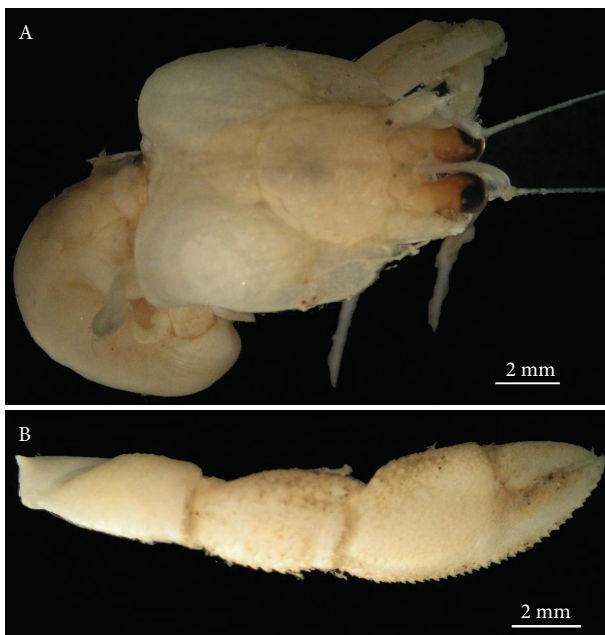


Figure 2. *Pagurus prideaux* ♀ (Carapace length, CL: 8.11 mm), A- Dorsal aspect, B- Right cheliped, outer aspect (photo by C. Koçak).

Material examined: 1♀, St. 5, 36°41'54"N-28°53'22"E, 20 m, 02.07.2008; 2♀♀, St. 12, 36°43'31"N-28°57'02"E, 5-30 m, 08.07.2008.

This species has been reported to occur from a number of localities in the Aegean coast of Turkey (by Koçak et al., 2001, Bakır and Katağan, 2005, Ateş et al., 2004; 2007; as *Pagurus prideauxi* by Geldiay and Kocataş, 1970, Balkıs, 2001, Kocataş and Katağan, 2003, but the present study is the first time it has been found at a locality on the Mediterranean coast of Turkey.

General Distribution: Atlantic Ocean, Mediterranean Sea (Falciai and Minervini, 1996).

Pagurus anachoretus Risso, 1827

Material examined: 2♀♀, St. 13, 36°43'35"N-28°55'59"E, 0-5 m, 08.07.2008; 1♂, 1♀, St. 17, 36°42'41"N-29°00'13"E, 0-5 m, 09.07.2008; 2♂♂, St. 14, 36°43'35"N-28°55'59"E, 15 m, 08.07.2008; 2♀♀, St. 19, 36°42'43"N-29°01'11"E, 0-5 m, 10.07.2008; 1♂, St. 8, 36°15'23"N-29°53'17"E, 0-5 m, 07.07.2008; 1♀, St. 38, 36°38'02"N-29°06'03"E, 0-5 m, 20.09.2008; 1♀, St. 27, 36°42'45"N-28°54'39"E, 5-30 m, 15.09.2008; 2♀♀, 1♂, St. 30, 36°35'26"N-29°01'37"E, 25 m, 16.09.2008; 2♂♂, St. 29, 36°35'26"N-29°01'37"E, 0-5 m, 16.09.2008.

This species (as *Eupagurus anachoretus*) was reported by Colombo (1885) and Ostroumoff (1896) from the Marmara Sea; by Geldiay and Kocataş (1970), Balkıs (2001), Koçak et al. (2001), Kocataş and Katağan (2003), Ateş et al. (2004, 2005, 2006, 2007), Bakır and Katağan (2005), and Kırkıım et al. (2005a) from the Aegean coast of Turkey; and by Holthuis (1961) and Özcan (2007) from the Mediterranean coast of Turkey.

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

Pagurus forbesii Bell, 1845

Material examined: 2♀♀, St. 7, 36°43'38"N-28°57'39"E, 5-30 m, 05.07.2008; 1♂, 1♀, St. 18, 36°42'41"N-29°00'13"E, 5-30 m, 09.07.2008; 1♂, St. 30, 36°38'02"N-29°06'03"E, muddy, 12 m, 20.09.2008; 2♀♀, St. 28, 36°32'52"N-29°01'32"E, sandy, 25 m, 16.09.2008.

The species was recorded by Ostroumoff (1896) from the Marmara Sea; by Kocataş (1981), Koçak et al.

(2001), Kocataş and Katağan (2003), and Ateş et al. (2004, 2006, 2007) from the Aegean coast of Turkey; and by Kocataş (1981) and Kocataş and Katağan (2003) from the Mediterranean coast of Turkey, but this is the first record of this species from Fethiye Bay.

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

***Pagurus chevreuksi* (Bouvier, 1896)** (Figure 3)

Material examined: 2♀♀, St. 9, 36°28'52"N-29°50'21"E, *Posidonia oceanica*, 22 m, 07.07.2008; 1♂, 2♀♀, St. 2, 36°39'49"N-28°55'36"E, *Cystoseira crinita*, 12 m, 27.06.2008; 1♂, 1 juvenile, St. 31, 36°36'11"N-29°01'37"E, *Cystoseira* sp., 30 m, 17.09.2008; 1♀, St. 26, 36°36'55"N-29°03'08"E, 0-5 m, 14.09.2008; 2♂♂, St. 33, 36°38'40"N-29°05'07"E, *Balanus* sp., 1 m, 17.09.2008; 1♂, 1♀, St. 29, 36°35'26"N-29°01'37"E, 0-5 m, 16.09.2008; 1♂, St. 36, 36°39'32"N-29°03'14"E, *Cystoseira spinosa*, 30 m, 18.09.2008.

This species was reported from the Aegean coast of Turkey by Koçak et al. (2001), Kocataş et al. (2004), Kırkım et al. (2005a, 2005b), Kocataş and Katağan (2003), Bakır and Katağan (2005), and Ateş et al. (2004, 2007). This is the first record of *P. chevreuksi* from Fethiye Bay and the Mediterranean coast of Turkey.

General Distribution: Atlantic Ocean, Mediterranean Sea (Ingle, 1993).

***Pagurus cuanensis* Bell, 1845**

Material examined: 1♀, St. 32, 36°36'11"N-29°01'37"E, 5-30 m, 17.09.2008; 1♂, St. 38, 36°42'51"N-28°56'23"E, 0-5 m, 20.09.2008; 1♂, St. 31, 36°36'11"N-29°01'37"E, *Cystoseira* sp., 30 m, 17.09.2008.



Figure 3. *Pagurus chevreuksi* ♂ (CL: 3.01 mm), Dorsal aspect (photo by C. Koçak).

The species was recorded (as *Eupagurus lucasi*) by Colombo (1885) and Ostroumoff (1896) from the Marmara Sea. It was also recorded by Geldiay and Kocataş (1970), Balkıs (2001), Koçak et al. (2001), Kocataş and Katağan (2003), and Ateş et al. (2004, 2005, 2006, 2007) from the Aegean coast of Turkey; and by Kocataş (1981), Kocataş and Katağan (2003), and Özcan (2007) from the Turkish Mediterranean coast, but this is the first record of *P. cuanensis* from Fethiye Bay.

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

***Pagurus excavatus* (Herbst, 1791)**

Material examined: 1♀, St. 22, 36°37'30"N-29°04'32"E, *Halophylla* sp., 20 m, 13.09.2008.

This species was reported by Balkıs (2001) and Kocataş and Katağan (2003) from the Aegean coast of Turkey, and by Kocataş and Katağan (2003) and Özcan (2007) from the Mediterranean coast of Turkey, but this is the first record of *P. excavatus* from Fethiye Bay.

General Distribution: Atlantic Ocean, Mediterranean Sea (Ingle, 1993).

***Cestopagurus timidus* (Roux, 1830)**

Material examined: 1♀, St. 13, 36°43'35"N-28°55'59"E, 0-5 m, 08.07.2008; 2♂♂, 1♀, St. 7, 36°43'38"N-28°57'39"E, 5-30 m, 05.07.2008; 2♂♂, St. 3, 36°38'47"N-28°52'57"E, *Posidonia oceanica*, 12 m, 28.06.2008; 8♂♂, 14♀♀ (1 ovigerous), St. 2, 36°39'49"N-28°55'36"E, *Cystoseira crinita*, 12 m, 27.06.2008; 5♂♂, 1♀, St. 16, 36°42'51"N-28°56'23"E, sandy, 10 m, 09.07.2008; 2♀♀, St. 12, 36°39'37"N-28°53'45"E, 5-30 m, 08.07.2008; 3♀♀ (1 ovigerous), St. 8, 36°15'23"N-29°53'17"E, 0-5 m, 07.07.2008; 1♂, St. 31, 36°36'11"N-29°01'37"E, *Cystoseira* sp., 30 m, 17.09.2008; 1♂, St. 20, 36°34'32"N-29°02'02"E, 30 m, 09.09.2008; 2♂♂, 1♀, St. 40, 36°42'43"N-29°01'11"E, 0-5 m, 22.09.2008; 4♂♂, 4♀♀, St. 25, 36°36'56"N-29°04'14"E, *Posidonia oceanica*, 24 m, 14.09.2008; 2♀♀, St. 37, 36°39'07"N-29°05'52"E, 0-5 m, 19.09.2008; 3♀♀, 4♂♂ (1 ovigerous), St. 33, 36°38'40"N-29°05'07"E, *Balanus* sp., 1 m, 17.09.2008; 3♂♂, St. 34, 36°39'32"N-29°03'14"E, *P. oceanica*, 17 m, 18.09.2008; 9♂♂, 7♀♀ (1 ovigerous), St. 35, 36°39'32"N-29°03'14"E, *Halophylla* sp., 30 m, 18.09.2008; 1♂, St. 27, 36°33'58"N-29°02'02"E, 15 m, 15.09.2008; 28♂♂, 18♀♀ (6 ovigerous), St. 30,

36°35'26"N-29°01'37"E, *Cystoseira spinosa*, 25 m, 16.09.2008; 1♀, St. 29, 36°35'26"N-29°01'37"E, 0-5 m, 16.09.2008; 1♀, St. 21, 36°38'16"N-29°04'29"E, *Halophylla* sp., 30 m, 13.09.2008.

This species was reported from the Mediterranean coast of Turkey by Holthuis (1961) (as *Catapaguroides timidus*) and Özcan (2007); from the Aegean coast of Turkey by Kocataş (1981), Balkıs (2001), Koçak et al. (2001), Kocataş and Katağan (2003), Kocataş et al. (2004), and Bakır and Katağan (2005); and the Sea of Marmara by Müller (1986).

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

Anapagurus petiti Dechance and Forest, 1962 (Figure 4)

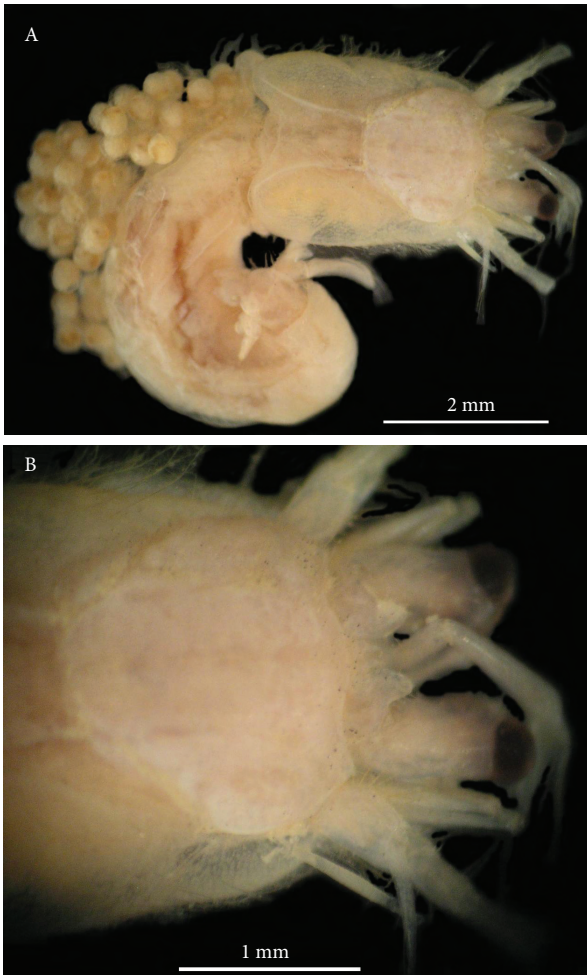


Figure 4. *Anapagurus petiti* ovigerous ♀ (CL: 2.87 mm), A- Dorsal aspect, B- Shield and associated appendages (photo by C. Koçak).

Material examined: 1 ovigerous ♀, St. 23, 36°37'30"N-29°04'32"E, *Halophylla* sp., 34 m, 08.07.2008.

This species was reported by Kocataş (1981), Koçak et al. (2001), Kocataş and Katağan (2003), and Ateş et al. (2004, 2005) from the Turkish coast of the Aegean, but this is the first record of *A. petiti* from Fethiye Bay and the Mediterranean coast of Turkey.

General Distribution: Mediterranean Sea (Ingle, 1993).

Anapagurus chiroacanthus (Lilljeborg, 1856) (Figure 5)

Material examined: 1♂, 1 ovigerous ♀, St. 4, 36°41'10"N-28°52'08"E, *Posidonia oceanica*, 23 m, 01.07.2008; 1♀, St. 25, 36°36'56"N-29°04'14"E, *Posidonia oceanica*, 24 m, 14.09.2008; 3♂♂, 2♀♀ (1 ovigerous), St. 23, 36°37'30"N-29°04'32"E, *Halophylla* sp., 34 m, 13.09.2008.

This species was reported by Kocataş (1981), and Kocataş and Katağan (2003) from the Aegean coast of

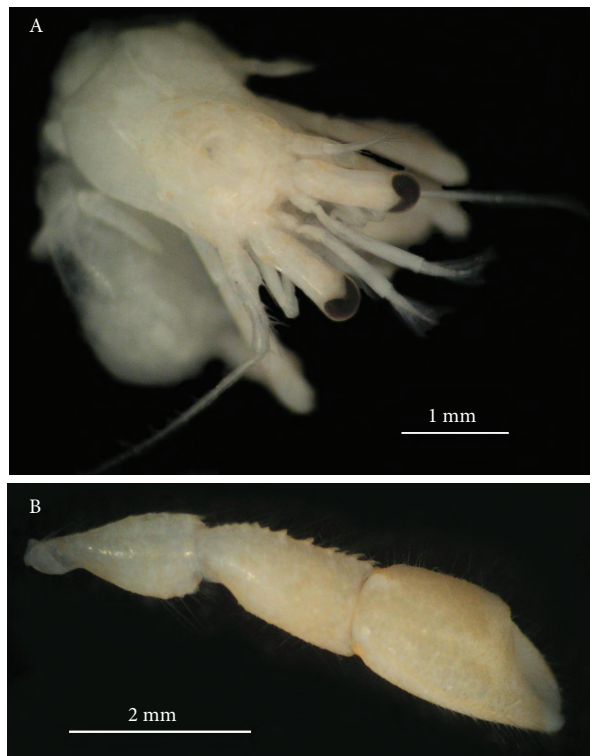


Figure 5. *Anapagurus chiroacanthus* ♂, A- Dorsal aspect (CL: 2.40 mm), B- Right cheliped, outer aspect (photo by C. Koçak).

Turkey, but the present report represents a new record for *A. chiroacanthus* from Fethiye Bay, the Mediterranean coast of Turkey, and the Levantine Sea.

General Distribution: Atlantic Ocean, Mediterranean Sea (Falciai and Minervini, 1996).

Anapagurus bicorniger A. Milne Edwards and Bouvier, 1892 (Figure 6)

Material examined: 1♀, St. 12, 36°43'31"N-28°57'02"E, 5-30 m, 08.07.2008.

This species was recorded from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Kocataş (1981), Balkis (2001), Koçak et al. (2001), and Kocataş and Katağan (2003); and from the Sea of Marmara by Müller (1986). The present report represents a new record for *A. bicorniger* from Fethiye Bay and the Mediterranean coast of Turkey.

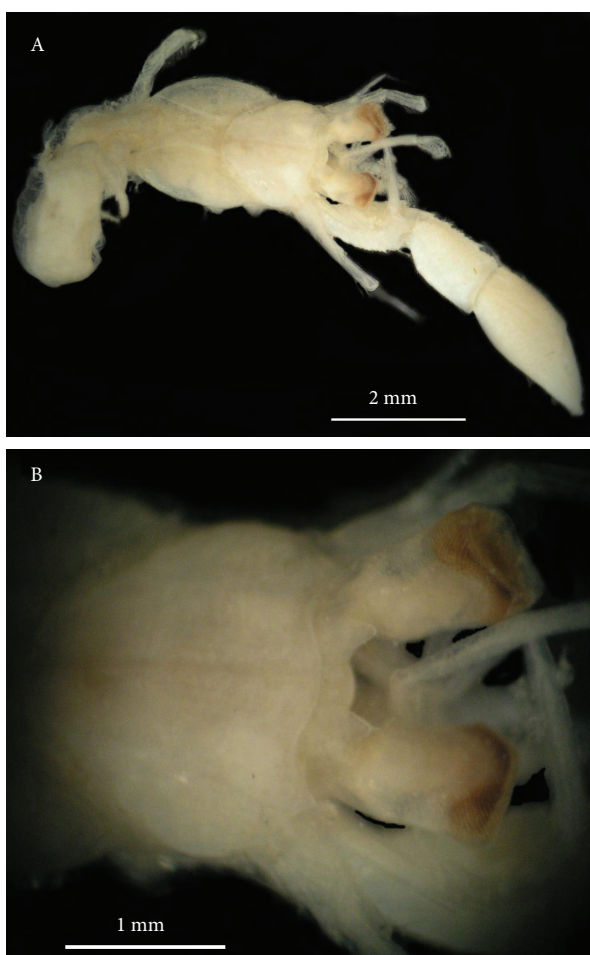


Figure 6. *Anapagurus bicorniger* ♀ (CL: 2.52 mm), A- Dorsal aspect, B- Shield and associated appendages (photo by C. Koçak).

General Distribution: Atlantic Ocean, Mediterranean Sea (Ingle, 1993).

Family DIOGENIDAE

***Calcinus tubularis* (Linnaeus, 1767)**

Material examined: 3♀♀, 4♂♂, St. 10, 36°28'57"N-29°50'41"E, 0-5 m, 07.07.2008; 1♂, 1 ovigerous ♀, St. 13, 36°43'35"N-28°55'59"E, 0-5 m, 08.07.2008; 2♀♀, St. 19, 36°42'43"N-29°01'11"E, 0-5 m, 10.07.2008; 3♀♀, 1♂, St. 8, 36°15'23"N-29°53'17"E, 0-5 m, 07.07.2008; 3♂♂, St. 27, 36°33'58"N-29°02'02"E, 5-30 m, 15.09.2008; 5♂♂, 2♀♀, St. 29, 36°35'26"N-29°01'37"E, 0-5 m, 16.09.2008; 7♂♂, 9♀♀, St. 24, 36°36'56"N-29°04'14"E, 0-5 m, 14.09.2008.

This species was reported from the Mediterranean coast of Turkey by Holthuis (1961) (as *C. ornatus*) and Özcan (2007); and from the Aegean coast of Turkey by Kocataş (1981), Koçak et al. (2001), and Kocataş and Katağan (2003).

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

***Clibanarius erythropus* (Latreille, 1818)**

Material examined: 2♀♀, 1♂, St. 10, 36°28'57"N-29°50'41"E, 0-5 m, 07.07.2008; 1♂, 2♀♀, St. 11, 36°43'31"N-28°57'02"E, 0-5 m, 08.07.2008; 1♀, St. 19, 36°42'43"N-29°01'11"E, 0-5 m, 10.07.2008.

This species was reported from the Sea of Marmara by Ostroumoff (1896), Demir (1952) (as *C. misanthropus*), Kocataş (1981), and Kocataş and Katağan (2003). It was also reported from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Kocataş (1981), Balkis (2001), Koçak et al. (2001), Kocataş and Katağan (2003) and Kocataş et al. (2004); from the Mediterranean coast of Turkey by Kocataş (1981), Kocataş and Katağan (2003), and Özcan (2007); and from the Black Sea coast of Turkey by Kocataş (1981) and Kocataş and Katağan (2003).

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

***Dardanus calidus* (Risso, 1827)**

Material examined: 2♀♀, 2♂♂ St. 1, 36°36'19"N-28°52'12"E, 5-12 m, 20.06.2008. 1♀ St. 29, 36°35'26"N-29°01'37"E, 0-5 m, 16.09.2008.

This species was reported from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Kocataş (1981) (as *D. callidus*), and Kocataş and Katağan (2003), and from the Mediterranean coast of Turkey by Koçak et al. (2005). The present report represents a new record of this species from Fethiye Bay.

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

***Paguristes eremita* (Linnaeus, 1767)**

Material examined: 1♀, St. 7, 36°43'38"N-28°57'39"E, 5-30 m, 05.07.2008; 1♂, St. 30, 36°38'02"N-29°06'03"E, muddy, 12 m, 20.09.2008; 1♀, St. 7, 36°43'38"N-28°57'39"E, 0-5 m, 05.07.2008.

This species was reported from the Sea of Marmara (Ostroumoff, 1896, as *Pagurus maculatus*), the Aegean coast of Turkey (Geldiay and Kocataş, 1970; Kocataş, 1981, as *Paguristes oculatus*; Balkıs, 2001; Koçak et al., 2001; Kocataş and Katağan, 2003; Ateş, 2003, 2004; Bakır and Katağan, 2005), and the Mediterranean coast of Turkey (Kocataş, 1981; Kocataş and Katağan, 2003; Koçak et al., 2005; Özcan, 2007).

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

***Paguristes syrtensis* De Saint Laurent, 1971**

Material examined: 1♀, St. 32, 36°36'11"N-29°01'37"E, 5-30 m, 17.09.2008.

This species was recorded from the Aegean coast of Turkey by Koçak et al. (2001), Kocataş and Katağan (2003), Ateş et al. (2004, 2005, 2007), Kırkım et al. (2005a), and Bakır and Katağan (2005). It was also reported from the Mediterranean coast of Turkey by Özcan (2007). The present report represents a new record of this species from Fethiye Bay.

General Distribution: Mediterranean Sea (Ingle, 1993).

***Diogenes pugilator* (Roux, 1829)**

Material examined: 4♂♂, 3♀♀ (1 ovigerous), St. 17, 36°42'41"N-29°00'13"E, 0-5 m, 09.07.2008.

This species was recorded from the Sea of Marmara by Colombo (1885) and Ostroumoff (1896) (as *D. varians*), Demir (1952), and Holthuis (1961); from the Turkish coast of the Black Sea by Holthuis

(1961), Kocataş (1981), Ateş (1997), Kocataş and Katağan (2003), and Kırkım et al. (2006); from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Balkıs (2001), Koçak et al. (2001), Kocataş and Katağan (2003), and Ateş et al. (2007); and from the Mediterranean coast of Turkey by Kocataş (1981), Kocataş and Katağan (2003), and Özcan (2007). The present report represents a new record of this species from Fethiye Bay.

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

Family GALATHAEIDAE

***Galathea dispersa* Bate, 1859**

Material examined: 3♀♀, 2♂♂, St. 16, 36°42'51"N-28°56'23"E, 5-30 m, 09.07.2008; 1♂, St. 27, 36°33'58"N-29°02'02"E, 5-30 m, 15.09.2008.

This species was recorded from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Kocataş (1981), Koçak et al. (2001) and Kocataş and Katağan (2003); and from the Mediterranean coast of Turkey by Kocataş (1981), and Kocataş and Katağan (2003). The present report represents a new record of this species from Fethiye Bay.

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

***Galathea bolivari* Zariquiey Álvarez, 1950**

Material examined: 1♂, St. 4, 36°41'10"N-28°52'08"E, *Posidonia oceanica*, 23 m, 01.07.2008; 1♂, 1♀, St. 2, 36°39'49"N-28°55'36"E, *Cystoseira crinita*, 12 m, 27.06.2008; 2♀♀, St. 15, 36°42'51"N-28°56'23"E, sandy, 10 m, 09.07.2008; 1♀, 1♂, St. 12, 36°43'31"N-28°57'02"E, 5-30 m, 08.07.2008; 4♂♂, 2♀♀, St. 35, 36°39'32"N-29°03'14"E, *Halophylla* sp., 30 m, 18.09.2008.

This species was recorded from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Kocataş (1981), Koçak et al. (2001), Kocataş and Katağan (2003), Kocataş et al. (2004), Ateş et al. (2004, 2005, 2006, 2007), Bakır and Katağan (2005), and Kırkım et al. (2005a, 2005b); and from the Mediterranean coast of Turkey by Holthuis (1961), Kocataş (1981), Kocataş and Katağan (2003), and Özcan (2007). The present report represents a new record of this species from Fethiye Bay.

General Distribution: Mediterranean Sea (Falciai and Minervini, 1996).

***Galathea intermedia* Lilljeborg, 1851**

Material examined: 1♂, 1♀, St. 3, 36°38'47"N-28°52'57"E, *Posidonia oceanica*, 12 m, 28.06.2008; 2♂♂, St. 34, 36°39'32"N-29°03'14"E, *P. oceanica*, 17 m, 18.09.2008.

The species was recorded from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Kocataş (1981), Koçak et al. (2001), Kocataş and Katağan (2003), Ateş et al. (2004, 2005, 2006, 2007), and Bakır and Katağan (2005); from the Sea of Marmara by Demir (1952); and from the Mediterranean coast of Turkey by Holthuis (1961), Kocataş (1981), Kocataş and Katağan (2003), and Özcan (2007).

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

Family PORCELLANIDAE

***Pisidia longimana* (Risso, 1816)**

Material examined: 2♂♂, St. 13, 36°43'35"N-28°55'59"E, 0-5 m, 08.07.2008; 1♀, St. 2, 36°39'49"N-28°55'36"E, *Cystoseira crinita*, 12 m, 27.06.2008; 1♀, St. 8, 36°15'23"N-29°53'17"E, 0-5 m, 07.08.2008; 15♀♀, 9♂♂, St. 41, 36°45'05"N-29°47'13"E, 0-5 m, 22.09.2008.

This species was recorded from the Turkish coast of the Black Sea by Holthuis (1961), Ateş (1997), Gönlügür (2003), and Gönlügür-Demirci and Katağan (2004); from the Sea of Marmara by Ostroumoff (1896) (as *Porcellana rissoi*), Holthuis (1961), Kocataş (1981), and Kocataş and Katağan (2003); from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Kocataş (1981), Balkıs (2001), Koçak et al. (2001), Kocataş et al. (2004), Kocataş and Katağan (2003), Ateş et al. (2004, 2005, 2006), and Kırkım et al. (2005b); and from the Mediterranean coast of Turkey by Holthuis (1961), Kocataş (1981), Kocataş and Katağan (2003), and Özcan (2007). The present report represents a new record of this species from Fethiye Bay.

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

***Pisidia bluteli* (Risso, 1816)**

Material examined: 2♂♂, 2♀♀, St. 37, 36°39'07"N-29°05'52"E, 0-5 m, 19.09.2008; 1♀, St. 29,

36°35'26"N-29°01'37"E, 0-5 m, 16.09.2008; 1♂, St. 33, 36°38'40"N-29°05'07"E, *Balanus* sp., 1 m, 17.09.2008.

The species was recorded from the Aegean coast of Turkey by Geldiay and Kocataş (1970), Kocataş (1981), Balkıs (2001), Koçak et al. (2001), Kocataş et al. (2004), Kocataş and Katağan (2003), Ateş et al. (2004, 2005), and Kırkım et al. (2005a); from the Sea of Marmara by Topaloğlu and Khiara (1993) and Yurdabak (2004); and from the Mediterranean coast of Turkey by Holthuis (1961), Kocataş (1981), Kocataş and Katağan (2003), and Özcan (2007).

General Distribution: Mediterranean Sea (Falciai and Minervini, 1996)

***Porcellana platycheles* (Pennant, 1777)**

Material examined: 1♀, St. 37, 36°39'07"N-29°05'52"E, 0-5 m, 19.09.2008; 1♂, St. 41, 36°45'05"N-29°47'13"E, 0-5 m, 22.09.2008; 1♀, St. 6, 36°44'12"N-28°56'56"E, 5-30 m, 05.07.2008; 1♂, St. 27, 36°33'58"N-29°02'02"E, 5-30 m, 15.09.2008.

This species has been reported from Turkish waters from the Sea of Marmara (Ostroumoff, 1896; Demir, 1952; Kocataş, 1981; Müller, 1986; Kocataş and Katağan, 2003), the Aegean Sea (Geldiay and Kocataş, 1970; Kocataş, 1981; Balkıs, 2001; Koçak et al., 2001; Kocataş and Katağan, 2003), and the Mediterranean Sea (Holthuis, 1961; Kocataş, 1981; Kocataş and Katağan, 2003; Özcan, 2007).

General Distribution: Atlantic Ocean, Mediterranean Sea (d'Udekem d'Acoz, 1999).

Discussion

In the present study, 22 anomuran species were identified from the study area, 10 of which belong to the Paguridae, 3 to the Porcellanidae, 6 to the Diogenidae, and 3 to the Galatheididae. Fourteen species were new records for Fethiye Bay. Among these, 5 were new records for the Mediterranean coast of Turkey. *A. chiroacanthus* was also recorded herein for the first time from the Levantine Sea.

The earlier study by Özcan (2007) reported only 8 anomuran species from Fethiye Bay (*Galathea intermedia*, *Pisidia bluteli*, *Porcellana platycheles*, *Calcinus tubularis*, *Paguristes eremita*, *Cestopagurus timidus*, *Clibanarius erythropus*, and *Pagurus anachoretus*). The studies on the decapod fauna of Turkey comprehensively reviewed in Kocataş and

Katağan (2003) reported a total of 17 anomuran species from the Mediterranean coast of Turkey. Since then 6 more anomuran species have been reported from the Mediterranean coast of Turkey (*Albunea carabus* (Linnaeus, 1758) (Katağan and Çevik, 2003), *Dardanus calidus* (Risso, 1827) (Koçak et al., 2005), *Anapagurus laevis* (Bell, 1845), *A. longispina* A. Milne Edwards and Bouvier, 1900, *Paguristes syrtensis*, and *Pisidia longicornis* (Linnaeus, 1767) (Özcan, 2007)). These contributions raised to 23 the total number of anomuran species found off the Mediterranean coast of Turkey, and the present study raises this number again, to 28, with the addition of 5 new records (*Pagurus prideaux*, *P. chevreuxi*, *Anapagurus petiti*, *A. chiroacathus*, and *A. bicorniger*).

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