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Research Article

Myrmecofauna (Hymenoptera, Formicidae) of Gökçeada Island, Türkiye

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ABSTRACT

Türkiye is a very important country for faunal and floral studies due to its geographical location, the zoogeographic importance of its location and the biological richness it brings. This important area has been the subject of research on ants since second half of 19th century. However, studies on the ant fauna of the islands of Türkiye are very old and insufficient. For this reason, the ant fauna of Gökçeada, the largest island of Türkiye, was investigated by direct collecting and litter sifting methods in 2017-2018. 72 species belonging to 4 subfamilies and 23 genera were identified from 1105 ant samples obtained from 73 different localities and 16 different habitats. Among these species, *Messor maculifrons* Santschi, 1927 and *Tetramorium sahlbergi* Finzi, 1936 are new records for the ant fauna of Türkiye. In addition, the ergatoid queen of *Hypoponera eduardi* (Forel, 1894) was recorded for the first time outside the Afrotropical region.

1. Introduction

Studies on ants in Türkiye started with the work of Rigler in 1852 [1]. Since then, many studies have been carried out, and as a result of these studies, 380 ant taxa have been recorded from Türkiye (Karaman & Kiran, unpublished data). The majority of these studies are related to the Turkish mainland, and very few studies have been carried out on the ant fauna of the Turkish islands. In 5 studies carried out by foreign researchers between the end of the 1800s and 1950, 7 ant species [*Camponotus sylvaticus* (Olivier, 1792), *C. samius* Forel, 1889, C. thoracicus (Fabricius, 1804), *C. vagus* (Scopoli, 1763) *Crematogaster ionia* Forel, 1911, *Lasius brunneus* (Latreille, 1798) and *Lepisiota frauenfeldi* (Mayr, 1855)] were recorded from the Prince Islands of İstanbul [2-6]. However, as can be seen, these studies are far from reflecting the ant fauna of the Prince Islands.

Later, [7] investigated the ant fauna of Gökçeada (Çanakkale) and Bozcaada (Çanakkale) Islands in 1992 and 1994, respectively [7, 8]. [7] recorded 35 ant taxa belonging to 3 subfamilies and 16 genera from Gökçeada as a result of their research in 9 different localities in 5 days in 1992.

Afterwards, in 1994, [8] conducted research on the ant fauna of Bozcaada and recorded 26 taxa belonging to 3 subfamilies and 13 genera.

Gökçeada, district of Çanakkale Province, is the largest island of Türkiye with an area of 289 km^2. Although Gökçeada, located in the Aegean Sea, is in the Mediterranean climate type and specifically included in the "Marmara Transition Climate" type. 77% of the island area is mountainous (highest point is Doruktepe with 673m), 12% is hilly and 11% is plain [9]. Such different geographical structures contain many different vegetation types. It is inevitable that all this diversity in Gökçeada will affect ant biodiversity positively.

This information made us think that Gökçeada's ant fauna contains more than what is known. Therefore, the ant fauna of Gökçeada was investigated in this study.

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2. Material and Methods

The ant samples were collected from the region in 2017 and 2018. Specimens were collected by hand collecting (direct sampling). This method has sometimes been supplemented by litter sifting in suitable habitats. Study details (locality numbers, geographic coordinates, altitudes, habitat types and study dates) are shown in Table 1 and Figure 1. In the Results section the ant records are given as "**(G1),** 18/0001, 1♀, 3♂♂, 1♃, 39☿☿". **(G1)** indicates the locality number in Table 1 and Figure 1. 18/0001 and/or 17/0001 indicates the protocol number of the material in the author database. "1♀, 3♂♂, 1♃, 39☿☿": this expression shows how many individuals represent each caste of the species obtained from the research area. Description of symbols used in the results section: ♀: queen, ♂: male, ♃: soldier, ☿: worker. ☿☿ symbol means more than 50 individuals. "*" symbol after the species names in the Results section indicates recorded species by [7] from the Gökçeada Island.

Figure 1. Studied localities in Gökçeada

The ant photographs were taken using Nikon D800e camera attached to 3.2× and 8× microscope objectives. The Helicon Focus software (Helicon Soft Ltd., Kharkiv Ukraine) were used to stack the photos. The map of the studied localities was prepared with Google Earth.

The study material is deposited in Entomological Museum of Trakya University (EMTU), Edirne, Türkiye.

3. Results

Family: FORMICIDAE

Subfamily: DOLICHODERINAE Forel

1. ***Bothriomyrmex communista*** Santschi, 1919
Material: **(G4)**, 18/0051, 9☿☿; **(G7)**, 18/0088, 11☿☿; **(G14)**, 18/0161, 21☿☿; **(G16)**, 18/0182, 10☿☿; **(G20)**, 18/0211b, 1☿; **(G21)**, 18/0222, 27☿☿; **(G22)**, 18/0233, 2☿☿; **(G23)**, 18/0252, 15☿☿; **(G54)**, 18/7092a, ☿☿.

2. ***Dolichoderus quadripunctatus*** (Linnaeus, 1771)*
Material: (**G9)**, 18/0111, 17☿☿; **(G33)**, 18/0362a, 8☿☿; **(G52)**, 18/7076b, 4☿☿; **(G68)**, 17/0008e, 2☿☿; **(G72)**, 17/0020b, 14☿☿.

3. ***Tapinoma* cf. *festae*** Emery, 1925
Material: **(G12)**, 18/0147, 5☿☿; **(G51)**, 18/7064a, 18☿☿; **(G66)**, 17/0003d, 5☿☿.

Remarks: According to [10], we left our material as *Tapinoma* cf. *festae*. Aras and Aktaç recorded *T. erraticum* (Latreille, 1798) and *T. nigerrimum* (Nylander, 1856) from Gökçeada island. However, [11] stated that *T. nigerrimum* distributed in the West and Central Mediterranean parts of Europe and Africa, but not distributed in Balkans and Asia Minor. Thus, [10] excluded this species from Turkish ant fauna and clarified the status of the *T. erraticum* species complex, giving *T. erraticum* as a common species only in the northern Balkan Peninsula, and reported that based on personal contact with Lech Boroweic another species, *Tapinoma* cf. *erraticum* BALC., present in Türkiye. Our *Tapinoma* Foerster, 1850 material did not congruent with *T. erraticum* species complex.

4. ***Tapinoma subboreale*** Seifert, 2012
Material: **(G66)**, 17/0003d, 5☿☿.

Subfamily: FORMICINAE Latreille

5. ***Camponotus aethiops*** (Latreille, 1798)*
Material: **(G1)**, 18/0008b, 1☿; **(G2)**, 18/0014b, 1☿; **(G4)**, 18/0049, 12☿☿; **(G7)**, 18/0090c, 18/0091, 3♂♂, 18☿☿; **(G8)**, 18/0100a, 24♂♂, 6☿☿; **(G10)**, 18/0128d, 1☿; **(G13)**, 18/0153b, 1☿; **(G16)**, 18/0184a, 4☿☿; **(G17)**, 18/0196, 14☿☿; **(G20)**, 18/0216b, 1♂, 12☿☿; **(G21)**, 18/0229e, 1☿; **(G22)**, 18/0237, 1☿; **(G24)**, 18/0257b, 8☿☿; **(G35)**, 18/0384, 7☿☿; **(G36)**, 18/0400b, 1☿;

(G37), 18/0417, 20☿☿; **(G38)**, 18/0421, 19☿☿; **(G40)**, 18/0450, 11☿☿; **(G42)**, 18/0467, 9☿☿; **(G43)**, 18/0484, 14☿☿; **(G44)**, 18/0498, 14☿☿; **(G49)**, 18/7046c, 1☿; **(G50)**, 18/7054, 18/7055b, 18/7060, 1♀, 5☿☿; **(G51)**, 18/7064e, 1☿; **(G52)**, 18/7077, ☿☿; **(G54)**, 18/7090b, 18/7095d, 11☿☿; **(G58)**, 18/7131, 12☿☿; **(G59)**, 18/7150a, 14☿☿; **(G72)**, 17/0020i, 3☿☿.

6. ***Camponotus baldaccii*** Emery, 1908
Material: **(G6)**, 18/0074b, 10☿☿; **(G14)**, 18/0166, 1☿; **(G15)**, 18/0176b, 1☿; **(G19)**, 18/0204, 5☿☿; **(G26)**, 18/0274b, 3☿☿; **(G33)**, 18/0368, 12☿☿; **(G36)**, 18/0387c, 2☿☿; **(G47)**, 18/7027a, 5☿☿; **(G48)**, 18/7037b, 10☿☿; **(G49)**, 18/7052, 17☿☿; **(G56)**, 18/7113, 2☿☿; **(G58)**, 18/7140, 3♂♂, 12☿☿; **(G60)**, 18/7180, 5☿☿; **(G61)**, 18/7184, 3☿☿; **(G63)**, 18/7205, 4☿☿; **(G64)**, 18/7211, 18/7216, 21☿☿; **(G66)**, 17/0005, 23☿☿; **(G71)**, 17/0013b, 1☿.

7. ***Camponotus dalmaticus*** (Nylander, 1849)*
Material: **(G8)**, 18/0105, 1☿; **(G30)**, 18/0329d, 1☿; **(G31)**, 18/0335a, 16☿☿; **(G58)**, 18/7133a, 2☿☿.

8. ***Camponotus fallax*** (Nylander, 1856)
Material: **(G31)**, 18/0344a, 2☿☿; **(G53)**, 18/7084, 18/7085b, 1♀, 25☿☿; **(G72)**, 17/0019, 17/0020k, 5☿☿.

Table 1. Details of the researched localities

Loc.	Coordinates	Alt.	Habitat	Date
G1	40° 14.156′ N, 25° 56.636′ E	84 m	*Pinus silvestris* L. forest	04.VI.2018
G2	40° 12.912′ N, 25° 56.136′ E	73 m	Mixed forest	04.VI.2018
G3	40° 11.865′ N, 25° 53.917′ E	74 m	*P. silvestris* forest	04.VI.2018
G4	40° 10.783′ N, 25° 55.499′ E	407 m	Bushes + Meadow	04.VI.2018
G5	40° 13.272′ N, 25° 54.621′ E	192 m	Bushes	04.VI.2018
G6	40° 14.061′ N, 25° 53.955′ E	97 m	Bushes	05.VI.2018
G7	40° 13.940′ N, 25° 54.984′ E	224 m	Milk vetch	05.VI.2018
G8	40° 13.307′ N, 25° 53.135′ E	52 m	Maquis	05.VI.2018
G9	40° 12.488′ N, 25° 52.689′ E	18 m	Olive orchard	05.VI.2018
G10	40° 13.194′ N, 25° 57.947′ E	133 m	Milk vetch	05.VI.2018
G11	40° 12.254′ N, 25° 57.821′ E	64 m	Oak forest	05.VI.2018
G12	40° 11.633′ N, 25° 58.026′ E	61 m	Bushes + Milk vetch	05.VI.2018
G13	40° 09.631′ N, 25° 54.538′ E	232 m	Bushes + Milk vetch	06.VI.2018
G14	40° 08.997′ N, 25° 54.785′ E	98 m	Bushes	06.VI.2018
G15	40° 09.245′ N, 25° 54.098′ E	146 m	Oak forest	06.VI.2018
G16	40° 09.152′ N, 25° 57.394′ E	28 m	Maquis	06.VI.2018
G17	40° 10.537′ N, 25° 57.942′ E	13 m	Barren land	06.VI.2018
G18	40° 08.047′ N, 25° 58.372′ E	0 m	Coastal dune	06.VI.2018
G19	40° 08.544′ N, 25° 59.518′ E	7 m	Bushes	06.VI.2018
G20	40° 08.618′ N, 25° 56.831′ E	30 m	Maquis	07.VI.2018
G21	40° 07.808′ N, 25° 56.113′ E	28 m	River bank	07.VI.2018
G22	40° 07.084′ N, 25° 53.479′ E	12 m	Maquis	07.VI.2018
G23	40° 06.555′ N, 25° 50.900′ E	67 m	Barren land	07.VI.2018
G24	40° 06.151′ N, 25° 49.369′ E	65 m	Barren land	07.VI.2018
G25	40° 06.897′ N, 25° 48.300′ E	51 m	Milk vetch	07.VI.2018
G26	40° 06.217′ N, 25° 47.555′ E	35 m	Milk vetch	07.VI.2018
G27	40° 19.350′ N, 25° 53.111′ E	99 m	Mixed forest	08.VI.2018
G28	40° 11.582′ N, 25° 52.601′ E	41 m	Olive orchard	08.VI.2018
G29	40° 10.501′ N, 25° 52.260′ E	99 m	Maquis	08.VI.2018

Table 1. Details of the researched localities (Continue)

Loc.	Coordinates	Alt.	Habitat	Date
G30	40° 09.899′ N, 25° 51.996′ E	143 m	Maquis	08.VI.2018
G31	40° 09.248′ N, 25° 51.198′ E	193 m	*Pinus brutia* Ten. forest	08.VI.2018
G32	40° 08.338′ N, 25° 50.622′ E	238 m	Bushes	23.VII.2018
G33	40° 07.563′ N, 25° 49.911′ E	79 m	River bank	23.VII.2018
G34	40° 07.917′ N, 25° 52.051′ E	122 m	Mixed forest	23.VII.2018
G35	40° 11.575′ N, 25° 50.749′ E	148 m	Mixed forest	23.VII.2018
G36	40° 09.989′ N, 25° 49.983′ E	98 m	Olive orchard	24.VII.2018
G37	40° 09.576′ N, 25° 49.495′ E	119 m	*P. brutia* forest	24.VII.2018
G38	40° 08.512′ N, 25° 48.480′ E	272 m	Maquis	24.VII.2018
G39	40° 08.636′ N, 25° 46.929′ E	153 m	*P. brutia* forest	24.VII.2018
G40	40° 09.570′ N, 25° 46.629′ E	278 m	Barren land	24.VII.2018
G41	40° 09.197′ N, 25° 45.405′ E	169 m	*P. brutia* forest	24.VII.2018
G42	40° 09.352′ N, 25° 44.156′ E	155 m	Mixed forest	24.VII.2018
G43	40° 10.235′ N, 25° 45.203′ E	175 m	*P. brutia* forest	25.VII.2018
G44	40° 11.349′ N, 25° 45.052′ E	13 m	Mixed forest	25.VII.2018
G45	39° 53.872′ N, 25° 34.977′ E	56 m	*P. brutia* forest	25.VII.2018
G46	40° 08.395′ N, 25° 43.866′ E	76 m	*P. brutia* forest	25.VII.2018
G47	40° 07.527′ N, 25° 43.898′ E	30 m	Milk vetch	25.VII.2018
G48	40° 07.732′ N, 25° 44.825′ E	98 m	Olive orchard	25.VII.2018
G49	40° 06.205′ N, 25° 43.695′ E	40 m	Barren land	25.VII.2018
G50	40° 12.620′ N, 25° 50.270′ E	46 m	Maquis	26.VII.2018
G51	40° 12.423′ N, 25° 49.861′ E	146 m	Marsh area	26.VII.2018
G52	40° 12.422′ N, 25° 49.408′ E	188 m	Oak forest	26.VII.2018
G53	40° 11.460′ N, 25° 49.094′ E	339 m	Barren land	26.VII.2018
G54	40° 11.486′ N, 25° 47.811′ E	553 m	Barren land	26.VII.2018
G55	40° 09.463′ N, 25° 41.076′ E	0 m	Maquis	27.VII.2018
G56	40° 10.057′ N, 25° 41.985′ E	3 m	Maquis	27.VII.2018
G57	40° 09.235′ N, 25° 41.898′ E	141 m	*P. brutia* forest	27.VII.2018
G58	40° 08.719′ N, 25° 41.629′ E	408 m	Maquis	27.VII.2018

Table 1. Details of the researched localities (Continue)

Loc.	Coordinates	Alt.	Habitat	Date
G59	40° 10.217′ N, 25° 48.372′ E	525 m	Barren land	17.IX.2018
G60	40° 07.316′ N, 25° 46.323′ E	76 m	Dry river bank	17.IX.2018
G61	40° 06.288′ N, 25° 45.235′ E	12 m	Barren land	17.IX.2018
G62	40° 08.414′ N, 25° 42.534′ E	92 m	*P. brutia* forest	18.IX.2018
G63	40° 07.222′ N, 25° 42.248′ E	23 m	*P. brutia* forest	18.IX.2018
G64	40° 07.546′ N, 25° 44.123′ E	38 m	*P. brutia* forest	18.IX.2018
G65	40° 08.528′ N, 25° 40.723′ E	163 m	*P. brutia* forest	18.IX.2018
G66	40° 13' 53" N 25° 53' 41" E	79 m	Bushes	14.V.2017
G67	40° 14' 02" N 25° 54' 13" E	0 m	Bushes	14.V.2017
G68	40° 13' 16" N 25° 54' 22" E	139 m	Urban area	14.V.2017
G69	40° 11' 38" N 25° 54' 16" E	50 m	Urban area	14-15.V.2017
G70	40° 11' 23" N 25° 52' 17" E	105 m	Urban area	14.V.2017
G71	40° 11' 24" N 25° 50' 03" E	288 m	Urban area	14.V.2017
G72	40° 12' 07" N 25° 49' 58" E	253 m	Maquis	14.V.2017
G73	40° 09' 03" N 25° 46' 17" E	258 m	Urban area	15.V.2017

9. ***Camponotus gestroi*** Emery, 1878

Material: **(G1)**, 18/0001b, 18/0004b, 18/0009, 8☿☿; **(G2)**, 18/0028b, 13☿☿; **(G5)**, 18/0061c, 1☿; **(G7)**, 18/0086c, 1☿; **(G8)**, 18/0099a, 18/0106d, 2☿☿; **(G10)**, 18/0124, 1☿; **(G13)**, 18/0153c, 1☿; **(G15)**, 18/0177b, 1☿; **(G17)**, 18/0192b, 18/0199b, 2☿☿; **(G23)**, 18/0242b, 18/0251b, 2☿☿; **(G25)**, 18/0262b, 18/0263b 12☿☿; **(G38)**, 18/0424a, 1☿; **(G68)**, 17/0008i, 17/0009e, 2☿☿; **(G70)**, 17/0011f, 1☿.

10. ***Camponotus ionius*** Emery, 1920

Material: **(G5)**, 18/0061a, 13☿☿; **(G29)**, 18/0309a, 18/0314b, 16☿☿; **(G30)**, 18/0329b, 1☿; **(G36)**, 18/0398, 20☿☿; **(G45)**, 18/7011a, 19☿☿; **(G48)**, 18/7041, 1☿; **(G53)**, 18/7081a, 2☿☿; **(G64)**, 18/7218, 19☿☿.

11. ***Camponotus kiesenwetteri*** (Roger, 1859)

Material: **(G1)**, 18/0004a, 18/0008a, 15☿☿; **(G2)**, 18/0021a, 18/0028a, 9☿☿; **(G8)**, 18/0101a, 17☿☿;

(G14), 18/0159d, 1☿; **(G15)**, 18/0174, 28☿☿; **(G20)**, 18/0213, 1☿; **(G25)**, 18/0263c, 3☿☿; **(G26)**, 18/0278, 1☿; **(G27)**, 18/0280b, 23☿☿; **(G29)**, 18/0309b, 18/0313, 17☿☿; **(G30)**, 18/0322, 25☿☿; **(G31)**, 18/0333, 7☿☿; **(G37)**, 18/0406, 18/0414, 24☿☿; **(G38)**, 18/0427, 2☿☿; **(G39)**, 18/0443, 23☿☿; **(G42)**, 18/0466a, 18/0474d, 27☿☿; **(G43)**, 18/0479, 18☿☿; **(G44)**, 18/0495b, 1♂, 6☿☿; **(G45)**, 18/7003, 12☿☿; **(G46)**, 18/7015, 7☿☿; **(G47)**, 18/7027c, 2☿☿; **(G48)**, 18/7038, 3☿☿; **(G49)**, 18/7046b, 5☿☿; **(G50)**, 18/7053a, 5☿☿; **(G53)**, 18/7088a, 1☿; **(G55)**, 18/7102c, 18/7107, 1♀, 1♂, 19☿☿; **(G57)**, 18/7126, 1☿; **(G58)**, 18/7138a, 1☿; **(G60)**, 18/7178b, 1☿; **(G63)**, 18/7201, 12☿☿; **(G64)**, 18/7212, 18/7213, 9♀♀, 19♂♂, ☿☿.

12. ***Camponotus lateralis*** (Olivier, 1792)*
Material: **(G3)**, 18/0032b, 18/0041, 20☿☿; **(G7)**, 18/0089, 4☿☿; **(G9)**, 18/0110a, 4☿☿; **(G11)**, 18/0130, 18/0134, 23☿☿; **(G12)**, 18/0148a, 3☿☿; **(G15)**, 18/0171, 18/0179e, 31☿☿; **(G17)**, 18/0198b, 1☿; **(G19)**, 18/0207c, 2☿☿; **(G20)**, 18/0218, 1☿; **(G21)**, 18/0227a, 1☿; **(G23)**, 18/0248, 1♀, 21☿☿; **(G25)**, 18/0262c, 1☿; **(G31)**, 18/0336a, 18/0337a, 22☿☿; **(G32)**, 18/0348, 18/0353b, 18/0356b, 28☿☿; **(G33)**, 18/0366, 1♀, 4☿☿; **(G34)**, 18/0369a, 5☿☿; **(G35)**, 18/0379d, 1☿; **(G39)**, 18/0430b, 18/0434d, 13☿☿; **(G41)**, 18/0454, 18/0456a, 1♀, 3♂♂, 39☿☿; **(G43)**, 18/0476, 7♀♀, 11☿☿; **(G44)**, 18/0490, 18/0493f, 42☿☿; **(G46)**, 18/7012a, 18/7016, 18/7024, 1♀, 5♂♂, 21☿☿; **(G48)**, 18/7037a, 2☿☿; **(G52)**, 18/7069a, 18/7079b 1♀, 4♂♂, 36☿☿; **(G54)**, 18/7096b, 18/7101a, 4♀♀, 1♂, 49☿☿; **(G58)**, 18/7133c, 1☿; **(G60)**, 18/7177a, 20☿☿; **(G63)**, 18/7203, 18/7204, 1♀, 4♂♂, ☿☿; **(G65)**, 18/7233, 14☿☿; **(G70)**, 17/0012c, 3☿☿.

13. ***Camponotus lateralis*** **morph 2** sensu Seifert
Material: **(G2)**, 18/0027, 12☿☿; **(G12)**, 18/0148b, 1☿; **(G13)**, 18/0150c, 18/0154, 26☿☿; **(G14)**, 18/0159c, 2☿☿; **(G16)**, 18/0186, 7☿☿; **(G19)**, 18/0207a, 3☿☿; **(G20)**, 18/0212b, 1☿; **(G25)**, 18/0263a, 5☿☿; **(G26)**, 18/0273, 5☿☿; **(G27)**, 18/0282b, 18/0283a, 18/0291, 1♀, 11☿☿; **(G28)**, 18/0303, 32☿☿; **(G29)**, 18/0316, 17☿☿; **(G30)**, 18/0324, 18/0327, 1♀, 7☿☿; **(G31)**, 18/0342b, 2☿☿; **(G32)**, 18/0350a, 1♀, 3☿☿; **(G35)**, 18/0380, 3♂♂, 9☿☿; **(G37)**, 18/0404, 18/0409, 1♀, 14☿☿; **(G39)**, 18/0432, 1♀, 2☿☿; **(G42)**, 18/0468, 21☿☿; **(G45)**, 18/7005a, 13☿☿; **(G52)**, 18/7076a, 3☿☿; **(G53)**, 18/7082a, 1☿; **(G55)**, 18/7105a, 1♀, 13☿☿; **(G57)**, 18/7125, 18☿☿; **(G58)**, 18/7142, ☿☿; **(G60)**, 18/7179, 6☿☿; **(G64)**, 18/7214, 25☿☿.

Remarks: The all records of *Camponotus candiotes* Emery, 1894 in [12-15], from Türkiye are belong to *Camponotus lateralis* morph 2 sensu Seifert. [13] described the queen and male of *C. candiotes* but these descriptions are also belonging to *C. lateralis* morph 2. Moreover, [16] mentioned this taxon as a setose form of *C. lateralis* in monograph of "Greek Ants" book.

14. ***Camponotus piceus*** (Leach, 1825)*
Material: **(G3)**, 18/0031a, 1☿; **(G8)**, 18/0099b, 1☿; **(G9)**, 18/0118a, 5☿☿; **(G22)**, 18/0236e, 4☿☿; **(G26)**, 18/0270a, 1☿; **(G40)**, 18/0449, 6☿☿; **(G42)**, 18/0472, 1☿; **(G51)**, 18/7064c, 3☿☿; **(G52)**, 18/7074a, 1☿; **(G55)**, 18/7108a, 5☿☿; **(G65)**, 18/7222b, 18/7224, 19☿☿; **(G74)**, 1♀.

15. ***Camponotus samius*** Forel, 1889*
Material: **(G1)**, 18/0001a, 2☿☿; **(G2)**, 18/0028c, 1☿; **(G3)**, 18/0039, 11☿☿; **(G5)**, 18/0061b, 3☿☿; **(G8)**, 18/0101b, 9☿☿; **(G11)**, 18/0133b, 1☿; **(G13)**, 18/0152, 7☿☿; **(G15)**, 18/0175a, 18/0176c, 2♀♀, 7♂♂, 10☿☿; **(G20)**, 18/0215, 2☿☿; **(G22)**, 18/0240, 16☿☿; **(G25)**, 18/0267a, 8☿☿; **(G27)**, 18/0286, 7☿☿; **(G28)**, 18/0301, 3☿☿; **(G34)**, 18/0374b, 8☿☿; **(G35)**, 18/0386, 8☿☿; **(G37)**, 18/0403, 18/0416, 9☿☿; **(G41)**, 18/0460, 1☿; **(G42)**, 18/0474b, 1☿; **(G43)**, 18/0483, 11☿☿; **(G44)**, 18/0492, 1☿; **(G45)**, 18/7009, 14☿☿; **(G46)**, 18/7022, 18/7025b, 5☿☿; **(G52)**, 18/7078c, 16☿☿; **(G53)**, 18/7082c, 18/7087c, 2☿☿; **(G57)**, 18/7116, 9☿☿; **(G58)**, 18/7134, 8☿☿; **(G62)**, 18/7198, 13☿☿; **(G65)**, 18/7226, 20☿☿; **(G72)**, 17/0015b, 14☿☿.

16. ***Camponotus sanctus*** Forel, 1904*
Material: **(G2)**, 18/0014a, 1☿; **(G25)**, 18/0268, 2☿☿; **(G36)**, 18/0392b, 1☿.

17. ***Cataglyphis nodus*** (Brullé, 1833)*
Material: **(G1)**, 18/0005, 5♂♂, 2☿☿; **(G2)**, 18/0018, 1☿; **(G3)**, 18/0043, 1☿; **(G5)**, 18/0064, 11☿☿; **(G8)**, 18/0108a, 1☿; **(G9)**, 18/0115, 2☿☿; **(G10)**, 18/0121, 1♀, 1☿; **(G14)**, 18/0170b, 1☿; **(G15)**, 18/0173d, 1☿; **(G16)**, 18/0187, 1☿; **(G17)**, 18/0202, 1☿; **(G18)**, 18/0203, 2☿☿; **(G19)**, 18/0207b, 1☿; **(G24)**, 18/0253a, 1♂, 2☿☿; **(G25)**, 18/0260a, 7☿☿; **(G28)**, 18/0306, 1☿; **(G29)**, 18/0309c, 2☿☿; **(G32)**, 18/0350b, 1☿; **(G33)**, 18/0359, ☿☿; **(G34)**, 18/0374d, 1☿; **(G38)**, 18/0423, 3☿☿; **(G45)**, 18/7000, 2☿☿; **(G46)**, 18/7025a, 1☿; **(G47)**, 18/7031, 1☿; **(G48)**, 18/7033c, 1☿; **(G49)**, 18/7045, 1☿; **(G51)**, 18/7064d, 1☿; **(G52)**, 18/7067, 2☿☿; **(G53)**, 18/7081b, 1☿; **(G58)**, 18/7144d, 2☿☿; **(G63)**, 18/7207, 1☿; **(G65)**, 18/7232, 1☿; **(G68)**, 17/0008d, 3☿☿; **(G73)**, 17/0021, 4☿☿.

18. ***Colobopsis truncata*** (Spinola, 1808)
Material: **(G5)**, 18/0061d, 18/0065b, 18/0066a, 14☿☿; **(G12)**, 18/0141b, 18/0142a, 6☿☿; **(G15)**, 18/0172b, 29☿☿; **(G19)**, 18/0206, 2♀♀, 1♂, 3☿☿; **(G22)**, 18/0236d, 1♀, 8☿☿; **(G25)**, 18/0264a, 3♀♀, 3♂♂, 8☿☿; **(G27)**, 18/0281, 6♀♀, 8☿☿; **(G28)**, 18/0296, 1♀, 5♂♂, 28☿☿; **(G31)**, 18/0345a, 15☿☿; **(G32)**, 18/0354b, 1☿; **(G36)**, 18/0393, 1☿; **(G46)**, 18/7013a, 16☿☿; **(G47)**, 18/7029b, 1☿; **(G50)**, 18/7057a, 1♀; **(G53)**, 18/7083c, 2☿☿; **(G61)**, 18/7185b, 18/7186, 5☿☿; **(G68)**, 17/0008j, 1☿; **(G71)**, 17/0013a, 2☿☿; **(G72)**, 17/0014b, 17/0020g, 10☿☿.

19. ***Lasius alienus*** (Foerster, 1850)*
Material: **(G3)**, 18/0030b, 1☿; **(G5)**, 18/0067, 1♂, 23☿☿; **(G21)**, 18/0229a, 9☿☿; **(G27)**, 18/0288, 1♀, 20♂♂, 12☿☿; **(G31)**, 18/0335b, 2☿☿; **(G52)**, 18/7075, 26☿☿; **(G54)**, 18/7098b, 2☿☿; **(G59)**, 18/7153, 18/7172, 35☿☿; **(G68)**, 17/0008c, 17☿☿; **(G72)**, 17/0016, 25☿☿.

Remarks: [7] recorded *L. brunneus* (Latreille, 1798) from Gökçeada in 1992. *Lasius brunneus* is an arboricol species and characteristic with almost bicolored body, and smooth body with appressed and short pubescence on its whole surface without erect seta. Although many arboricolous *Lasius* Fabricius, 1804 specimens were obtained in this study, no specimens consistent with *L. brunneus* characteristics were obtained. This shows us that the record of *L. brunneus* given by [7] should be rechecked.

20. ***Lasius turcicus*** Santschi, 1921
Material: **(G2)**, 18/0023b, 1♂, 11☿☿; **(G3)**, 1♀, 30☿☿; **(G6)**, 18/0084a, 11☿☿; **(G9)**, 18/0113, 9☿☿; **(G14)**, 18/0164, 7☿☿; **(G23)**, 18/0246, 12☿☿; **(G25)**, 18/0266, 3☿☿; **(G27)**, 18/0283c, 1☿; **(G28)**, 18/0298, 18/0299b, 5☿☿; **(G29)**, 18/0319a, 2☿☿; **(G30)**, 18/0326, 9☿☿; **(G36)**, 18/0392a, 12☿☿; **(G51)**, 18/7064b, 12☿☿; **(G52)**, 18/7076d, 1☿; **(G54)**, 18/7100a, 15☿☿; **(G60)**, 18/7177b, 6☿☿.

21. ***Lepisiota frauenfeldi*** (Mayr, 1855)*
Material: **(G1)**, 18/0001c, 18/00013, 1♀, 11☿☿; **(G2)**, 18/0016b, 3☿☿; **(G4)**, 18/0044, 18☿☿; **(G5)**, 18/0061h, 18/0062b, 8☿☿; **(G6)**, 18/0075c, 18/0082, 34☿☿; **(G7)**, 18/0086b, 6☿☿; **(G8)**, 18/0107, 4☿☿; **(G9)**, 18/0119, 4☿☿; **(G10)**, 18/0120a, 3☿☿; **(G12)**, 18/0138a, 1♀, 22☿☿; **(G13)**, 18/0149, 44♂♂, 30☿☿; **(G14)**, 18/0160, 1♂, 18☿☿; **(G15)**, 18/0175f, 1☿; **(G16)**, 18/0188b, 1☿; **(G17)**, 18/0195b, 10☿☿; **(G19)**, 18/0205a, 5☿☿; **(G20)**, 18/0216a, 2☿☿; **(G21)**, 18/0220, 10☿☿; **(G22)**, 18/0234, 22☿☿; **(G23)**, 18/0241c, 4☿☿; **(G24)**, 18/0259b, 7☿☿; **(G25)**, 18/0260d, 9☿☿; **(G26)**, 18/0271a, 3☿☿; **(G27)**, 18/0285, 4☿☿; **(G28)**, 18/0304, 2♀♀, 45☿☿; **(G30)**, 18/0330c, 5☿☿; **(G31)**, 18/0338, 11☿☿; **(G33)**, 18/0357, 9☿☿; **(G34)**, 18/0369e, 18/0370e, 18/0374e, 3☿☿; **(G35)**, 18/0382, 24☿☿; **(G36)**, 18/0395a, ☿☿; **(G37)**, 18/0402b, 5☿☿; **(G38)**, 18/0419a, ☿☿; **(G40)**, 18/0447, 6☿☿; **(G43)**, 18/0482b, 7☿☿; **(G46)**, 18/7026, 1☿; **(G47)**, 18/7030, 11☿☿; **(G48)**, 18/7033b, 2☿☿; **(G49)**, 18/7043a, 6☿☿; **(G50)**, 18/7059, 10☿☿; **(G52)**, 18/7068, 15☿☿; **(G53)**, 18/7080b, 7☿☿;

(G54), 18/7090a, 18/7095a, 1♀, ☿☿; **(G55)**, 18/7106, ☿☿; **(G56)**, 18/7115, ☿☿; **(G58)**, 18/7132, 18/7136b, 5☿☿; **(G59)**, 18/7149, 8♀♀, 3☿☿; **(G60)**, 18/7176a, 1☿; **(G61)**, 18/7194, 16☿☿; **(G62)**, 18/7200, 28☿☿; **(G65)**, 18/7222a, 15☿☿; **(G66)**, 17/0003f, 17/0006a, 104☿☿; **(G67)**, 17/0007b, 20☿☿; **(G70)**, 17/0011b, 36☿☿; **(G72)**, 17/0020e, 9☿☿.

22. ***Plagiolepis pallescens*** Forel, 1889*
Material: **(G23)**, 18/0241d, 1☿; **(G25)**, 18/0263d, 1☿; **(G37)**, 18/0408, 15☿☿; **(G46)**, 18/7013b, 18/7017, 5☿☿; **(G72)**, 17/0020d, 7☿☿.

23. ***Plagiolepis perperamus*** Salata, Borowiec & Radchenko, 2018
Material: **(G9)**, 18/0117, 8☿☿; **(G12)**, 18/0139, 6☿☿; **(G17)**, 18/0197b, 8☿☿; **(G19)**, 18/0208c, 2☿☿; **(G20)**, 18/0209, 50☿☿; **(G21)**, 18/0226a, 2☿☿; **(G22)**, 18/0236a, 1♀, 13☿☿; **(G24)**, 18/0257a, 3☿☿; **(G40)**, 18/0446b, 18/0453b, 15☿☿; **(G44)**, 18/0489, ☿☿; **(G47)**, 18/7027b, 1☿; **(G50)**, 18/7062b, 1☿; **(G52)**, 18/7074c, 1♀; **(G62)**, 18/7196, ☿☿; **(G64)**, 18/7220, 31☿☿; **(G67)**, 17/0007c, 40☿☿; **(G69)**, 17/0010b, 2☿☿.

24. ***Plagiolepis pygmaea*** (Latreille, 1798)*
Material: **(G1)**, 18/0002, ☿☿; **(G2)**, 18/0016a, 18/0021b, 18/0029, 2♀♀, 31☿☿; **(G3)**, 18/0031b, 18/0037, 26♂♂, 16☿☿; **(G4)**, 18/0045, 10☿☿; **(G5)**, 18/0062c, 18/0065c, 1♀, 2☿☿; **(G6)**, 18/0072a, 1♂, 20☿☿; **(G7)**, 18/0086e, 18/0090b, 1♀, 8♂♂, 19☿☿; **(G8)**, 18/0100b, 2♂♂, 4☿☿; **(G10)**, 18/0125, 6☿☿; **(G11)**, 18/0132, 18/0137c, 35☿☿; **(G13)**, 18/0151, 6♀♀, 14♂♂, 27☿☿; **(G15)**, 18/0172a, 18/0175e, 8☿☿; **(G16)**, 18/0185, 5♂♂, 7☿☿; **(G26)**, 18/0276, 3☿☿; **(G27)**, 18/0282a, 2♀♀, 10♂♂, 25☿☿; **(G28)**, 18/0294, 18/0299d, 2♀♀, ♂♂, ☿☿; **(G29)**, 18/0312, 2☿☿; **(G30)**, 18/0320, ☿☿; **(G31)**, 18/0331b, 14☿☿; **(G32)**, 18/0355b, 2☿☿; **(G33)**, 18/0367b, 3☿☿; **(G39)**, 18/0431, 18/0439, 1♂, ☿☿; **(G41)**, 18/0455a, 18/0457c, 36☿☿; **(G42)**, 18/0470, 23☿☿; **(G43)**, 18/0477d, 1☿; **(G45)**, 18/0499, 1♀, ☿☿; **(G46)**, 18/7014c, 1☿; **(G50)**, 18/7058, 27☿☿; **(G52)**, 18/7071, ☿☿; **(G53)**, 18/7089a, ☿☿; **(G54)**, 18/7098a, 18/7101b, 1♀, 53☿☿; **(G58)**, 18/7135a, 5☿☿; **(G66)**, 17/0003g, 2☿☿; **(G68)**, 17/0008f, 17/0009b, 7♀♀, ☿☿.

25. ***Plagiolepis xene*** Stärcke, 1936
Material: **(G54)**, 18/7101c, 29♀♀, 4♂♂.

Subfamily: MYRMICINAE Lepeletier de Saint-Fargeau

26. ***Aphaenogaster balcanica*** (Emery, 1898)
Material: **(G3)**, 18/0032a, 3☿☿; **(G5)**, 18/0061g, 1☿; **(G6)**, 18/0074a, 2☿☿; **(G9)**, 18/0114, 1♂, 7☿☿; **(G27)**, 18/0290b, 3☿☿; **(G28)**, 18/0307, 7☿☿; **(G29)**, 18/0309d, 5☿☿; **(G36)**, 18/0387b, 3☿☿; **(G37)**, 18/0401b, 2☿☿; **(G66)**, 17/0003a, 27☿☿; **(G68)**, 17/0008h, 2☿☿; **(G70)**, 17/0011e, 2☿☿.

Remarks: [7] recorded *A. simonellii* Emery, 1894 from Gökçeada. However, according to [17], the distribution of *A. simonellii* is known only from Greece. The known records of the species from other countries belong to the *A. balcanica* species. For this reason, the specimens previously recorded from Türkiye as *A. simonelli* are actually records of the *A. balcanica* species.

27. ***Aphaenogaster festae*** Emery, 1915
Material: **(G6)**, 18/0078, 5☿☿; **(G8)**, 18/0106b, 2☿☿; **(G11)**, 18/0133a, 33☿☿; **(G30)**, 18/0330a, ☿☿; **(G31)**, 18/0334, 25☿☿; **(G39)**, 18/0444, 2♀♀, ☿☿; **(G40)**, 18/0451, 6☿☿; **(G44)**, 18/0493b, 1☿; **(G45)**, 18/7007, 34☿☿; **(G46)**, 18/7019b, 44☿☿; **(G52)**, 18/7074b, 18/7078b, 2♀♀, 6♂♂, ☿☿; **(G57)**, 18/7121, 2☿☿; **(G65)**, 18/7227, ☿☿; **(G68)**, 17/0009a, 14☿☿.

Remarks: [7] recorded *A. subterranea* (Latreille, 1798) from the Gökçeada island. *Aphaenogaster subterranea* is a widespread species known from Western Europe to Iran and Caucasus. *A. subterrranea* species is grouped in the *subterranea* group by [18] with other five *Aphaenogaster* Mayr, 1853 species (*A. graeca* Schulz 1994, *A. ichnusa* Santschi, 1925, *A. illyrica* Bračko, Lapeva-Gjonova, Salata, Borowiec & Polak, 2019, *A. kurdica* (Ruzsky, 1905), *A. maculifrons* Kiran and Aktaç, 2008)

and characteristics of the species group was described in detail. This characteristic species could not found in our study from Gökçeada, thus the identification of the Aras and Aktaç [7] should be checked.

28. ***Cardiocondyla bulgarica*** Forel, 1892
Material: **(G49)**, 18/7048a, 8☿☿.

29. ***Chalepoxenus muellerianus*** (Finzi, 1922)
Material: **(G4)**, 18/0048c, 2♂♂, 1☿; **(G12)**, 18/0144b, 1♂, 2☿☿; **(G13)**, 18/0157b, 7♀♀, 15♂♂; **(G28)**, 18/0299e, 1☿; **(G44)**, 18/0496a, 1♀, 7☿☿.

30. ***Crematogaster schmidti*** (Mayr, 1853)
Material: **(G1)**, 18/0003b, 18/0010, 10☿☿; **(G2)**, 18/0015, 20☿☿; **(G3)**, 18/0030a, 26☿☿; **(G4)**, 18/0059, 19☿☿; **(G5)**, 18/0071, 34☿☿; **(G6)**, 18/0084b, 23☿☿; **(G7)**, 18/0097, 2☿☿; **(G8)**, 18/0102, 13☿☿; **(G9)**, 18/0112, 19☿☿; **(G10)**, 18/0128b, 4☿☿; **(G11)**, 18/0129, 18/0137a, 13☿☿; **(G12)**, 18/0141a, 18/0142c, 9☿☿; **(G13)**, 18/0150a, 7☿☿; **(G14)**, 18/0159a, 10☿☿; **(G15)**, 18/0179b, 13☿☿; **(G16)**, 18/0183, 2☿☿; **(G17)**, 18/0192a, 12☿☿; **(G19)**, 18/0205b, 4☿☿; **(G20)**, 18/0212a, 8☿☿; **(G21)**, 18/0225, 13☿☿; **(G22)**, 18/0236b, 8☿☿; **(G23)**, 18/0241b, 21☿☿; **(G24)**, 18/0258, 24☿☿; **(G25)**, 18/0262a, 18☿☿; **(G26)**, 18/0272a, 1☿; **(G27)**, 18/0283b, 6☿☿; **(G28)**, 18/0293, 18/0299c, 25☿☿; **(G29)**, 18/0309e, 18/0319b, 11☿☿; **(G30)**, 18/0321a, 18/0321b, 18/0329a, ☿☿; **(G31)**, 18/0332, 18/0346e, 18☿☿; **(G32)**, 18/0349a, 7☿☿; **(G33)**, 18/0360b, 18/0361b, 19☿☿; **(G34)**, 18/0370b, 18/0373, 17☿☿; **(G35)**, 18/0376a, 18/0379c, 11☿☿; **(G36)**, 18/0388, 18/0389, 10☿☿; **(G37)**, 18/0402a, 18/0407a, 15☿☿; **(G38)**, 18/0420, 40☿☿; **(G39)**, 18/0433, 18/0434c, 31☿☿; **(G40)**, 18/0448a, 16☿☿; **(G41)**, 18/0455b, 18/0457a, 8☿☿; **(G42)**, 18/0466b, 13☿☿; **(G43)**, 18/0475b, 18/0477a, 26☿☿; **(G44)**, 18/0486, 18/0493c, 18/0496c, 38☿☿; **(G45)**, 18/7005b, 18/7010, 18/7011b, 23♂♂, ☿☿; **(G46)**, 18/7012c, 18/7014a, 3☿☿; **(G47)**, 18/7029a, 20☿☿; **(G48)**, 18/7032a, 8☿☿; **(G49)**, 18/7049, 20☿☿; **(G50)**, 18/7056, 8☿☿; **(G52)**, 18/7069b, 12☿☿; **(G53)**, 18/7082b, 9☿☿; **(G54)**, 18/7092b, 23☿☿; **(G55)**, 18/7104, 13☿☿; **(G57)**, 18/7120a, 18/7129c, 4☿☿; **(G58)**, 18/7133b, 18/7137, 18/7144b, 1♀, 10♂♂, 34☿☿; **(G60)**, 18/7177c, 15☿☿; **(G61)**, 18/7190, 1♂, 38☿☿; **(G62)**, 18/7195, ☿☿; **(G63)**, 18/7202, 23☿☿; **(G64)**, 18/7209, ♂♂, ☿☿; **(G65)**, 18/7230, 44☿☿; **(G68)**, 17/0008b, 18☿☿; **(G70)**, 17/0012b, 6☿☿; **(G72)**, 17/0018d, 17/0020f, 12☿☿.

Remarks: [7] recorded *Crematogaster ionia* Forel, 1911 from Gökçeada island. At that time, the distribution of *C. schmidti* from our region was not known yet. Only *C. ionia* and *C. scutellaris* (Olivier, 1798) species were known from our region. Thus, any specimen that was not *C. scutellaris* was diagnosed as *C. ionia*. Therefore, the specimens identified as *C. ionia* in Aras and Aktaç were refer to *C. schmidti*. *Crematogaster scutellaris* is excluded from the Turkish ant fauna by [15] according to its Western Palearctic distribution. Therefore, the specimens previously recorded from Türkiye as *C. scutellaris* are actually records of the *C. schmidti* species.

31. ***Crematogaster sordidula*** (Nylander, 1849)*
Material: **(G1)**, 18/0007, ☿☿; **(G2)**, 18/0024, 12☿☿; **(G4)**, 18/0052a, 42☿☿; **(G5)**, 18/0063b, 18/0070, 6♀♀, ♂♂, 20☿☿; **(G6)**, 18/0076, 3♀♀, 1♂, 30☿☿; **(G7)**, 18/0086a, 8♂♂; **(G8)**, 18/0108b, 2♂♂, 27☿☿; **(G12)**, 18/0140a, 7♂♂, 18☿☿; **(G13)**, 18/0156a, 3♀♀, 14♂♂, 34☿☿; **(G16)**, 18/0184b, 10♂♂, 8☿☿; **(G21)**, 18/0231, 10♂♂, 48☿☿; **(G23)**, 18/0245, 31☿☿; **(G27)**, 18/0287, 24♂♂, ☿☿; **(G28)**, 18/0297a, 29♂♂, 6☿☿; **(G32)**, 18/0349b, 8☿☿; **(G35)**, 18/0381, 10☿☿; **(G36)**, 18/0397, ☿☿; **(G37)**, 18/0412, ☿☿; **(G39)**, 18/0442, 1☿; **(G40)**, 18/0445, ☿☿; **(G41)**, 18/0464, 2♀♀, 25☿☿; **(G47)**, 18/7028a, 43☿☿; **(G48)**, 18/7035b, 35☿☿; **(G50)**, 18/7055a, 26☿☿; **(G53)**, 18/7086, ☿☿; **(G55)**, 18/7102a, 35☿☿; **(G61)**, 18/7191, 46☿☿; **(G63)**, 18/7208, 3☿☿; **(G64)**, 18/7219, ☿☿; **(G65)**, 18/7225, 39☿☿; **(G66)**, 17/0006b, 1☿; **(G72)**, 17/0018c, 17/0020a, 41☿☿.

32. ***Messor caducus*** (Victor, 1839)
Material: **(G5)**, 18/0068, 8☿☿; **(G6)**, 18/0072b, 10☿☿; **(G14)**, 18/0162, 10☿☿; **(G21)**, 18/0221, 19☿☿; **(G23)**, 18/0250a, 13☿☿; **(G24)**, 18/0254, 1☿; **(G26)**, 18/0270b, 4☿☿; **(G36)**, 18/0387a, 29☿☿; **(G40)**, 18/0448b, 1☿; **(G43)**, 18/0485, 10☿☿; **(G56)**, 18/7114, 7☿☿; **(G58)**, 18/7130b, 3☿☿; **(G59)**, 18/7147b, 18/7171, 25☿☿.

33. ***Messor maculifrons*** Santschi, 1927 (Figure 2)
Material: **(G20)**, 18/0211a, 27☿☿.

Figure 2. *Messor maculifrons* Santschi, worker: A - Whole body (lateral), B - Head (profile)

Remarks: *Messor maculifrons* is characterized by presence of psammaphore (J-shaped long bristle) on the ventral surface of the head (Figure 2A), reddish head and mesosoma, superficilally dot sculptured head, more or less bicolored body (at least part of the mesosoma is lighter colored than the rest of the body), without spines or tubercules on the posterior corners of the propodeum, and without erect setae on first tergite of the gaster. The record of the species from Türkiye should be considered a normal result, considering the geographic distribution of the species.

34. ***Messor mcarthuri*** Steiner et al., 2018
Material: **(G2)**, 18/0025, 48☿☿; **(G5)**, 18/0063a, 3☿☿; **(G7)**, 18/0090a, 39☿☿; **(G10)**, 18/0128a, 5☿☿; **(G23)**, 18/0242a, 4☿☿; **(G25)**, 18/0260b, 18/0269b, 17☿☿; **(G28)**, 18/0297b, ☿☿; **(G34)**, 18/0374a, 1☿; **(G42)**, 18/0466c, 2☿☿; **(G48)**, 18/7039, 2☿☿; **(G49)**, 18/7046a, 18/7050, 28☿☿; **(G51)**, 18/7065c, 1☿; **(G61)**, 18/7187, 8☿☿.

35. ***Messor oertzeni*** Forel, 1910*
Material: **(G25)**, 18/0267b, 6☿☿; **(G36)**, 18/0400a, 24☿☿; **(G42)**, 18/0474c, 1☿; **(G48)**, 18/7033a, 18/7040, 12☿☿; **(G49)**, 18/7047, 5☿☿; **(G50)**, 18/7053b, 9☿☿; **(G53)**, 18/7085c, 1☿; **(G60)**, 18/7183a, 9☿☿; **(G61)**, 18/7192, 6☿☿; **(G65)**, 18/7221, 13☿☿.

36. ***Messor* cf. *rufotestaceus***
Material: **(G36)**, 18/0399, 27☿☿.

Remarks: [7] identified *Messor meridionalis* (André, 1883) and *M. sultanus* Santschi, 1917 species from Gökçeada. *Messor meridionalis* was removed from the ant list of Turkey by [8] and thus the absence of species in this study is an expected result. The fact that *M. sultanus*, which is known to be distributed in Egypt, Jordan, Israel, Palestine, Iran and Turkey, was not detected in this study can be explained by the fact that *Messor* cf. *rufotestaceus*, which is morphologically similar to *M. sultanus*, was detected in this study.

37. ***Messor structor*** (Latreille, 1798)*
Material: **(G54)**, 18/7095c, 28☿☿; **(G72)**, 17/0014a, 50☿☿.

38. ***Messor wasmanni*** Krausse, 1910
Material: **(G4)**, 18/0054, 18/0056, 68☿☿; **(G6)**, 18/0081, 12☿☿; **(G8)**, 18/0103, 26☿☿; **(G13)**, 18/0158, 4☿☿; **(G14)**, 18/0167, 22☿☿; **(G16)**, 18/0190, 20☿☿; **(G17)**, 18/0194, 34☿☿; **(G20)**, 18/0219c, 1☿; **(G21)**, 18/0223a, 24☿☿; **(G22)**, 18/0235, 30☿☿; **(G24)**, 18/0256, 4☿☿; **(G27)**, 18/0292, 19☿☿; **(G36)**, 18/0396, 21☿☿; **(G38)**, 18/0418, 18/0422, 55☿☿; **(G49)**, 18/7044, 15☿☿; **(G50)**, 18/7062a, 10☿☿; **(G52)**, 18/7076h, 18/7079c, 40☿☿; **(G53)**, 18/7089b, 4☿☿; **(G54)**,

18/7100b, 25☿☿; **(G55)**, 18/7108b, 5☿☿; **(G56)**, 18/7112, 4☿☿; **(G57)**, 18/7127, 9☿☿; **(G58)**, 18/7139, 18/7143, 38☿☿; **(G59)**, 18/7148, 18/7155, ☿☿; **(G60)**, 18/7175, 18/7182, 18/7183b, 16☿☿; **(G61)**, 18/7189, 18/7193a, 22☿☿; **(G64)**, 18/7215, 17☿☿; **(G66)**, 17/0003e, 8☿☿; **(G67)**, 17/0007a, 25☿☿; **(G70)**, 17/0011a, 20☿☿.

39. ***Monomorium monomorium*** Bolton, 1987*
Material: **(G2)**, 18/0022b, 4☿☿; **(G3)**, 18/0038b, 3☿☿; **(G4)**, 18/0048b, 14☿☿; **(G5)**, 18/0061e, 6☿☿; **(G6)**, 18/0073b, 1☿; **(G8)**, 18/0106a, 2☿☿; **(G10)**, 18/0128c, 1☿; **(G14)**, 18/0159e, 1☿; **(G15)**, 18/0179d, 5☿☿; **(G16)**, 18/0191, 7☿☿; **(G19)**, 18/0208b, 1☿; **(G21)**, 18/0230, 2☿☿; **(G22)**, 18/0238b, 1☿; **(G23)**, 18/0250b, 6☿☿; **(G25)**, 18/0260e, 18/0264b, 11☿☿; **(G26)**, 18/0271b, 1☿; **(G27)**, 18/0290d, 2☿☿; **(G28)**, 18/0295, 3☿☿; **(G32)**, 18/0351d, 1☿; **(G33)**, 18/0367a, 4☿☿; **(G34)**, 18/0369c, 18/0370a, 13☿☿; **(G35)**, 18/0379e, 1☿; **(G36)**, 18/0395b, 1☿; **(G37)**, 18/0413, 5☿☿; **(G38)**, 18/0426, 3☿☿; **(G40)**, 18/0446a, 7☿☿; **(G42)**, 18/0473, 14☿☿; **(G45)**, 18/7011d, 1☿; **(G48)**, 18/7032b, 4☿☿; **(G49)**, 18/7043c, 18/7051d, 3☿☿; **(G51)**, 18/7065b, 4☿☿; **(G52)**, 18/7076g, 11☿☿; **(G53)**, 18/7089c, 1☿; **(G54)**, 18/7093b, 3☿☿; **(G57)**, 18/7119c, 18/7129b 7☿☿; **(G58)**, 18/7144c, 6☿☿; **(G59)**, 18/7150b, 18/7158, 3☿☿; **(G66)**, 17/0003h, 1☿☿; **(G68)**, 17/0008g, 2☿☿; **(G72)**, 17/0015a, 87☿☿.

40. ***Myrmoxenus* cf. *kraussei***
Material: **(G14)**, 18/0169b, 1♀.

41. ***Pheidole* cf. *pallidula****
Material: **(G1)**, 18/0006, 1☋, 6☿☿; **(G2)**, 18/0017, 36☿☿; **(G3)**, 18/0034, 7☿☿; **(G5)**, 18/0065a, 2♂♂, 1☋, 11☿☿; **(G6)**, 18/0073a, 2☋☋, 17☿☿; **(G7)**, 18/0096, 18/0098, 1♀, 5☿☿; **(G8)**, 18/0104, 1☋, 24☿☿; **(G9)**, 18/0110b, 5☿☿; **(G10)**, 18/0122, 18/0126, 1♀, 8☋☋, 6☿☿; **(G11)**, 18/0131b, 18/0136a, 4☋☋, 15☿☿; **(G12)**, 18/0145, 8☋☋, 26☿☿; **(G13)**, 18/0155, 26☿☿; **(G14)**, 18/0159b, 10☿☿; **(G15)**, 18/0175b, 18/0179c, 1♀, 1☋, 17☿☿; **(G17)**, 18/0195a, 1☋, 29☿☿; **(G20)**, 18/0210, 18/0219b, 9☿☿; **(G21)**, 18/0223b, 18/0224, 18☿☿; **(G22)**, 18/0232, 2☋☋, 8☿☿; **(G23)**, 18/0243, 8☿☿; **(G25)**, 18/0260c, 18/0263e, 6☿☿; **(G26)**, 18/0272c, 2☿☿; **(G27)**, 18/0280a, 18/0290a, 3☋☋, 22☿☿; **(G28)**, 18/0302, 1☋, 17☿☿; **(G29)**, 18/0318, 10☋☋, 37☿☿; **(G31)**, 18/0346d, 2☿☿; **(G32)**, 18/0347a, 18/0355c, 18/0356a, 1☋, 21☿☿; **(G33)**, 18/0358a, 18/0364, 4☋☋, 35☿☿; **(G34)**, 18/0369d, 18/0370c, 18/0374c, 8☿☿; **(G35)**, 18/0376b, 18/0379a, 28☿☿; **(G36)**, 18/0390, 32☿☿; **(G37)**, 18/0401a, 18/0410b, 1☋, 19☿☿; **(G39)**, 18/0429, 3☋☋, 5☿☿; **(G41)**, 18/0458, 18/0463, 4☋☋, 39☿☿; **(G42)**, 18/0474a, 1☿; **(G43)**, 18/0481, 1☋, 1☿; **(G44)**, 18/0493a, 18/0494, 18/0495a, 1♀, 6♂♂, 7☋☋, 43☿☿; **(G45)**, 18/7002, 18/7011c, 10☋☋, 43☿☿; **(G46)**, 18/7021, 8☿☿; **(G47)**, 18/7027d, 1☋, 8☿☿; **(G48)**, 18/7034, 1☋, 9☿☿; **(G49)**, 18/7051b, 5☿☿; **(G52)**, 18/7066, 2☋☋, ☿☿; **(G53)**, 18/7083a, 2☋☋, 1☿; **(G54)**, 18/7093c, 1☿; **(G55)**, 18/7102b, 10☋☋, 38☿☿; **(G56)**, 18/7111, 2☋☋, 10☿☿; **(G57)**, 18/7119b, 18/7128, 18/7129d, 2☋☋, 5☿☿; **(G58)**, 18/7130a, 18/7138b, 3☿☿; **(G59)**, 18/7156, 18/7170, 18☋☋, ☿☿; **(G60)**, 18/7174, 3☋☋, 38☿☿; **(G61)**, 18/7193b, 3☋☋, 4☿☿; **(G62)**, 18/7199, 1☋, 18☿☿; **(G63)**, 18/7206a, 10☿☿; **(G64)**, 18/7217, 1☿; **(G65)**, 18/7223, 7☋☋, ☿☿; **(G68)**, 17/0008a, 17/0009c, 2☋☋, 25☿☿; **(G69)**, 17/0010c, 1☿; **(G70)**, 17/0011c, 17/0012d, 1☋, 5☿☿; **(G72)**, 17/0015e, 17/0018b, 17/0020c, 69☿☿.

42. ***Solenopsis lusitanica/fugax*** (Latreille, 1798)*
Material: **(G4)**, 18/0046a, 33☿☿; **(G6)**, 18/0075a, 18/0080, 54☿☿; **(G11)**, 18/0135b, 18/0137b, 2☿☿; **(G23)**, 18/0247b, 1☿; **(G29)**, 18/0315, 40☿☿; **(G30)**, 18/0320b, ☿☿; **(G31)**, 18/0339a, 18/0340a, 18/0346c, 1♀, ☿☿; **(G34)**, 18/0375b, 10☿☿; **(G35)**, 18/0378, 22☿☿; **(G37)**, 18/0411b, 1☿; **(G39)**, 18/0437, 25☿☿; **(G41)**, 18/0456b, 18/0465, 65☿☿; **(G42)**, 18/0471, ☿☿; **(G43)**, 18/0477c, 18/0478, 29☿☿; **(G44)**, 18/0491, ☿☿; **(G45)**, 18/7001, 18/7011e, 46☿☿; **(G46)**,

18/7012b, 18/7018, ☿☿; **(G52)**, 18/7078a, 16☿☿; **(G55)**, 18/7103a, 1☿; **(G57)**, 18/7117a, 18/7118b, ☿☿; **(G59)**, 18/7147a, 15☿☿; **(G63)**, 18/7206, 3☿☿; **(G65)**, 18/7228, ☿☿; **(G66)**, 17/0004b, 4☿☿; **(G72)**, 17/0017b, 10☿☿.

43. ***Temnothorax aeolius*** (Forel, 1911)
Material: **(G6)**, 18/0077b, 18/0085, 16♂♂, 12☿☿; **(G12)**, 18/0143b, 1♂, 5☿☿; **(G15)**, 18/0173b, 3♀♀, 11☿☿; **(G21)**, 18/0229b, 5☿☿; **(G22)**, 18/0236c, 1♂, 1☿; **(G24)**, 18/0255, 2☿☿; **(G61)**, 18/7185a, ☿☿.

44. ***Temnothorax affinis*** (Mayr**,** 1855)
Material: **(G17)**, 18/0201, 2☿☿.

45. ***Temnothorax antigoni*** (Forel, 1911)
Material: **(G1)**, 18/0011, 18/0012, 2♀♀, 26☿☿; **(G2)**, 18/0020, 18/0021c, 1♀, 1♂, 13☿☿; **(G3)**, 18/0033, 18/0040, 18/0042, 3♀♀, 22☿☿; **(G5)**,

18/0062a, 1☿; **(G12)**, 18/0142b, 18/0143a, 18/0144a, 4♀♀, 1♂, 40☿☿; **(G14)**, 18/0169a, 10☿☿; **(G15)**, 18/0178, 10☿☿; **(G28)**, 18/0299f, 18/0305, 5☿☿; **(G30)**, 18/0325, 18/0328, 18/0329c, 17☿☿; **(G31)**, 18/0336c, 18/0346b, 7☿☿; **(G32)**, 18/0347b, 18/0351c, 18/0356c, 2♀♀, 3☿☿; **(G33)**, 18/0360a, 18/0361a, 18/0363, 28☿☿; **(G34)**, 18/0370f, 1☿; **(G39)**, 18/0434b, 18/0435, 1♀, 44☿☿; **(G41)**, 18/0462, 25☿☿; **(G42)**, 18/0469, 1♀, 37☿☿; **(G44)**, 18/0496b, 13☿☿; **(G46)**, 18/7020, 26☿☿; **(G53)**, 18/7087a, 29☿☿; **(G55)**, 18/7105b, 1♀, 18☿☿; **(G57)**, 18/7122, ☿☿; **(G63)**, 18/7206c, 1☿; **(G72)**, 17/0015d, 1☿.

46. ***Temnothorax bulgaricus*** (Forel, 1892)
Material: **(G2)**, 18/0023c, 1♀, 2☿☿; **(G11)**, 18/0131a, 1♀, 8☿☿; **(G15)**, 18/0177a, 18/0179a, 5♀♀, 47☿☿; **(G23)**, 18/0247a, 5♀♀, 3♂♂, 35☿☿; **(G29)**, 18/0309f, 1☿; **(G31)**, 18/0331a, 18/0336b, 18/0344b, 18/0346a, 3♀♀, ☿☿; **(G35)**, 18/0377, 18/0379b, 1♀, 39☿☿; **(G37)**, 18/0405, 18/0407c, ☿☿; **(G39)**, 18/0440, 1♀, 11☿☿; **(G43)**, 18/0477b, 2☿☿; **(G44)**, 18/0497, 18☿☿; **(G45)**, 18/7008, 49☿☿; (G49), 18/7048a, 8☿☿; **(G52)**, 18/7079a, 32☿☿; **(G53)**, 18/7087b, 1☿; **(G72)**, 17/0020,1☿.

47. ***Temnothorax dessyi*** (Menozzi, 1936)
Material: **(G15)**, 18/0175d, 1♀; **(G31)**, 18/0345b, 1☿.

48. ***Temnothorax flavicornis*** (Emery, 1870)
Material: **(G31)**, 18/0343, 1☿; **(G37)**, 18/0415a, 1☿; **(G46)**, 18/7014b, 1☿.

49. ***Temnothorax graecus*** (Forel, 1911)*
Material: **(G37)**, 18/0410a, 29☿☿.

50. ***Temnothorax helenae*** Csősz, Heinze & Miko, 2015
Material: **(G39)**, 18/0434a, 1♀, 6☿☿.

Remarks: This species was recorded from Gökçeada island only by litter sifting method. This record shows us that the species nests among leaf litter.

51. ***Temnothorax kemali*** (Santschi, 1934)
Material: **(G17)**, 18/0199a, 18/0201, 22☿☿.

52. ***Temnothorax lucidus*** Csősz, Heinze & Miko, 2015
Material: **(G52)**, 18/7073, 2♀♀, ☿☿.

53. ***Temnothorax nadigi*** (Kutter, 1925)
Material: **(G72)**, 17/0015c, 2☿☿.

54. ***Temnothorax semiruber*** (André, 1881)
Material: **(G7)**, 18/0086d, 18/0094, 18/0095, 1♀, 3♂♂, 37☿☿; **(G10)**, 18/0123, 18/0128e, 1♀, 22☿☿; **(G12)**, 18/0146, 25☿☿; **(G13)**, 18/0153a, 1☿; **(G16)**, 18/0180, 31☿☿; **(G17)**, 18/0200, 1♀, 8☿☿; **(G23)**, 18/0244b, 11☿☿; **(G35)**, 18/0385, 2☿☿; **(G45)**, 18/7004, 30☿☿; **(G54)**, 18/7091, 1♀, 12☿☿; **(G57)**, 18/7124, 23☿☿; **(G59)**, 18/7146, 1♀, ☿☿.

55. ***Temnothorax strymonensis*** Csősz, Salata & Borowiec, 2018
Material: **(G27)**, 18/0290c, 8☿☿; **(G28)**, 18/0299a, 1♀, 18☿☿; **(G37)**, 18/0411a 1♀, 21☿☿.

56. ***Temnothorax subtilis*** Csősz, Heinze & Miko, 2015

Material: **(G37)**, 18/0407b, 2☿☿.

57. ***Temnothorax turcicus*** (Santschi, 1934)
Material: **(G3)**, 18/7083b, 1☿.

58. ***Temnothorax unifasciatus*** (Latreille, 1798)
Material: **(G7)**, 18/0093, 2♂♂, 18☿☿.

59. ***Tetramorium chefketi*** Forel, 1911*
Material: **(G68)**, 17/0008k, 1☿.

60. ***Tetramorium diomedeum*** Emery, 1908
Material: **(G15)**, 18/0176a, 8☿☿; **(G36)**, 18/0391, 3☿☿; **(G54)**, 18/7094, 2♀♀, ☿☿; **(G57)**, 18/7120b, 4☿☿; **(G58)**, 18/7141, 18/7144a, ☿☿; **(G59)**, 18/7159, ☿☿.

61. ***Tetramorium ferox*** Ruzsky, 1903*
Material: **(G1)**, 18/0003a, 43☿☿; **(G47)**, 18/7028b, 1☿; **(G69)**, 17/0010a, 10☿☿.

62. ***Tetramorium feroxoides*** Dlussky & Zabelin, 1985
Material: **(G9)**, 18/0116, 40☿☿.

63. ***Tetramorium galaticum*** Menozzi, 1936
Material: **(G7)**, 18/0092, 13☿☿; **(G13)**, 18/0156b, 1☿; **(G14)**, 18/0165, 18/0170a, ☿☿; **(G20)**, 18/0217, 5☿☿; **(G22)**, 18/0238a, 6☿☿; **(G23)**, 18/0244a, 19☿☿; **(G29)**, 18/0311, 6☿☿; **(G38)**, 18/0425, 18/0428, ☿☿; **(G53)**, 18/7085a, ☿☿; **(G57)**, 18/7119a, 18/7129a, 17☿☿; **(G59)**, 18/7145, 18/7157, 47☿☿; **(G60)**, 18/7176b, 1☿.

64. ***Tetramorium hippocrate*** Agosti & Collingwood, 1987*
Material: **(G2)**, 18/0019, 18/0023a, 17☿☿; **(G4)**, 18/0050, 18/0052b, 29☿☿; **(G6)**, 18/0079, 3☿☿; **(G7)**, 18/0087, 2♀♀, 7♂♂, 9☿☿; **(G10)**, 18/0120b, 18/0127, 2♀♀, 31☿☿; **(G11)**, 18/0135a, 18/0136b, 6☿☿; **(G12)**, 18/0138b, 18/0140b, 2☿☿; **(G15)**, 18/0173c, 18/0175c, 1♀, 2☿☿; **(G16)**, 18/0189, 8☿☿; **(G17)**, 18/0193, 18/0197a, 2♀♀, 51☿☿; **(G19)**, 18/0208a, 5☿☿; **(G20)**, 18/0214, 37☿☿; **(G21)**, 18/0229c, 5☿☿; **(G25)**, 18/0260f, 18/0261, 12☿☿; **(G27)**, 18/0284, 18/0289, 4♀♀, 31♂♂, 55☿☿; **(G29)**, 18/0308, 18/0317, 52☿☿; **(G32)**, 18/0351b, 18/0352, 18/0354a, 33☿☿; **(G33)**, 18/0362b, 18/0365, 15☿☿; **(G34)**, 18/0371, 18/0375a, 23☿☿; **(G35)**, 18/0383, 13☿☿; **(G36)**, 18/0394, ☿☿; **(G37)**, 18/0415b, 6☿☿; **(G38)**, 18/0424b, 11☿☿; **(G40)**, 18/0452a, 20☿☿; **(G43)**, 18/0482a, 6☿☿; **(G44)**, 18/0487, 18/0493d, 9☿☿; **(G48)**, 18/7035a, 18/7036, ☿☿; **(G52)**, 18/7079d, ☿☿; **(G53)**, 18/7080a, ☿☿; **(G54)**, 18/7093a, 17☿☿; **(G55)**, 18/7103b, 15☿☿; **(G58)**, 18/7135b, 18/7136a, ☿☿; **(G59)**, 18/7151, 18/7152, 66☿☿; **(G62)**, 18/7197, 12☿☿; **(G66)**, 17/0004a, 82☿☿; **(G67)**, 17/0007d, 20☿☿; **(G70)**, 17/0011d, 3☿☿; **(G72)**, 17/0017a, 17/0018a, 17/0020h, 85☿☿.

65. ***Tetramorium immigrans*** Santschi, 1927
Material: **(G2)**, 18/0022a, 22☿☿; **(G3)**, 18/0035, 29☿☿; **(G13)**, 18/0150b, 1☿; **(G15)**, 18/0173a, 2☿☿; **(G24)**, 18/0259c, 6☿☿; **(G32)**, 18/0355d, 2☿☿; **(G34)**, 18/0369b, 2☿☿; **(G49)**, 18/7043b, 1☿; **(G57)**, 18/7123, 9☿☿; **(G61)**, 18/7188, 8☿☿; **(G64)**, 18/7210, 1☿.

Remarks: [7] recorded *Tetramorium caespitum* (Linnaeus, 1758), *T. forte* Forel, 1904 and *Tetramorium* sp. from Gökçeada. They did not give any information about *Tetramorium* sp. It could be any recorded *Tetramorium* Mayr, 1855 species in this study and that's why it is normal not to record this taxon in this study. *Tetramorium forte* was excluded from Turkish ant list by [14] according to its Western Palearctic distribution and its material attributed to *T. chefketi* which was recorded in this study. One other species, *T. caespitum*, could not be recorded from Gökçeada in this study.

According to the study of [19], *T. caespitum* is not very common in Türkiye, while *T. immigrans* is known to be more common. Therefore, the detection of *T. immigrans* and the absence of *T. caespitum* should be considered normal in our study. Furthermore, [7] detected the social parasite species *Strongylognathus testaceus* (Schenck, 1852) in *Tetramorium* nest.

Although 114 different *Tetramorium* nest samples were detected in the study, the fact that any *Strongylognathus* Mayr, 1853 sample was not detected and this can be explained by chance

factor. It is thought that parasite species belonging to this genus can be recorded as a result of detailed studies to be carried out in order to identify possible parasites in *Tetramorium* nests.

66. ***Tetramorium lucidulum*** Menozzi, 1933
Material: **(G4)**, 18/0058, 18☿☿; **(G6)**, 18/0072c, 18/0073c, 1♀, 1☿; **(G7)**, 18/0086f, 1♀; **(G23)**, 18/0241a, 1☿.

67. ***Tetramorium moravicum*** Novák & Sadil, 1941
Material: **(G26)**, 18/0279, 12☿☿; **(G49)**, 18/7051a, 6☿☿.

68. ***Tetramorium rhodium*** Emery, 1924
Material: **(G4)**, 18/0053a, ☿☿; **(G15)**, 18/0173e, 1☿; **(G21)**, 18/0226b, 18/0228, 1♀, 47☿☿; **(G24)**, 18/0259a, 1♀, 7☿☿; **(G38)**, 18/0419b, 13☿☿.

69. ***Tetramorium sahlbergi*** Finzi, 1936 (Figures 3-5)
Material: **(G2)**, 18/0026, 3☿☿; **(G4)**, 18/0055, 18/0057, 2♀♀, 2♂♂, ☿☿; **(G5)**, 18/0069, 4♀♀, 10♂♂, ☿☿.

New record for Turkish ant fauna.

Remarks: *Tetramorium sahlbergi* is distinguished from other similar species by the fact that superficilally sculptured head and mesosoma, wide petiole and postpetiole, small propodeal spines and brown to darkbrown-black body color. Due to the taxonomically chaotic situation in the species group in which *T. sahlbergi* is located, the taxonomic position of the species may change as a result of the revision in this species group.

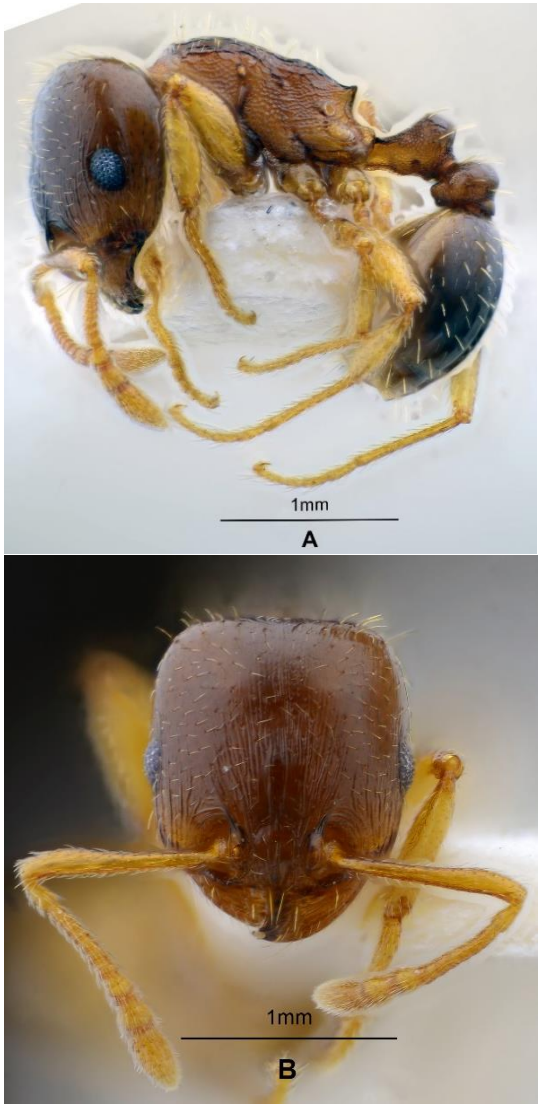

Figure 3. *Tetramorium sahlbergi* Finzi, worker: A - Whole body (lateral), B - Head (profile)

70. ***Trichomyrmex perplexus*** (Radchenko, 1997)
Material: **(G6)**, 18/0083, 5☿☿; **(G14)**, 18/0163, 25☿☿; **(G23)**, 18/0251a, 10☿☿; **(G24)**, 18/0253b, 1☿; **(G25)**, 18/0269a, 15☿☿; **(G26)**, 18/0277, 20☿☿; **(G34)**, 18/0370d, 18/0372, 2☋☋, 1☿; **(G49)**, 18/7048b, 4☿☿; **(G60)**, 18/7173, 1♀, 16☋☋, 23☿☿; **(G66)**, 17/0003b, 36☿☿.

Figure 4. *Tetramorium sahlbergi* Finzi, queen: A - Whole body (lateral), B - Head (profile)

Figure 5. *Tetramorium sahlbergi* Finzi, male: A - Whole body (lateral), B - Head (profile)

Subfamily: PONERINAE Lepeletier de Saint-Fargeau

71. ***Hypoponera eduardi*** (Forel, 1894) (Figures 6, 7)
Material: **(G32)**, 18/0355a, 2☿☿; **(G51)**, 18/7065a, 2♀♀, 3♂♂, 35☿☿.

Remarks: During the research, one of the workers from the samples collected from the G51 locality had multi-faceted compound eyes as in the queens, while the remaining had compound eyes with a few ommatidiums (Fig. 6A and Fig. 7A). When the reason for this situation was investigated, we found that [20] stated in their study that some workers belonging to the same colony in the Afrotropical region had compound eyes with zero-seven ommatidiums, while some workers had 7-30 ommatidiums as in queens.

They also reported that individuals with these different characters also usually have a shorter petiole in profile and a slightly enlarged gaster, and sometimes a queen-like horizontal sulcus in the mesopleuron, and defined such individuals as an ergatoid queen (worker-queen intermediate caste). In the individuals with multi-faceted compound eyes we found during the study, the mesosoma is more developed, the junction of the mesopleuron with the mesonotum is in a narrower structure compared to the workers with few facets.
Moreover, it is also seen that there is a small sulcus in the mesopleuron. These data indicate that the worker-like individuals with multiple facets are ergatoid queens. This situation has been recorded for the first time in our country and Palearctic region, and added the data *Hypoponera eduardi* forms ergatoid queens outside the Afrotropical region to its biology.

72. ***Ponera testacea*** Emery, 1895
Material: **(G30)**, 18/0330b, 1☿; **(G31)**, 18/0339b, 18/0341, 10☿☿; **(G39)**, 18/0438, 6☿☿; **(G52)**, 18/7076c, 1☿.

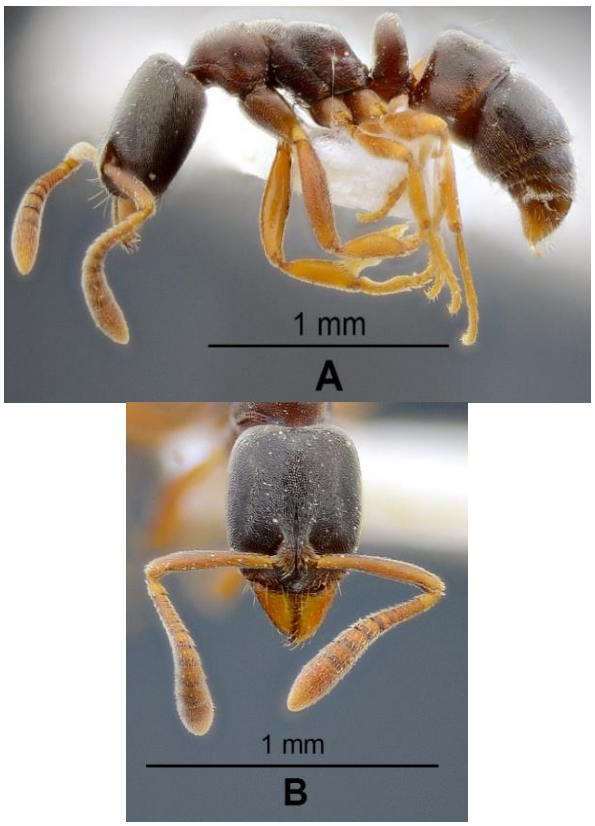

Figure 6. *Hypoponera eduardi* (Forel), worker: A - Whole body (lateral), B - Head (profile)

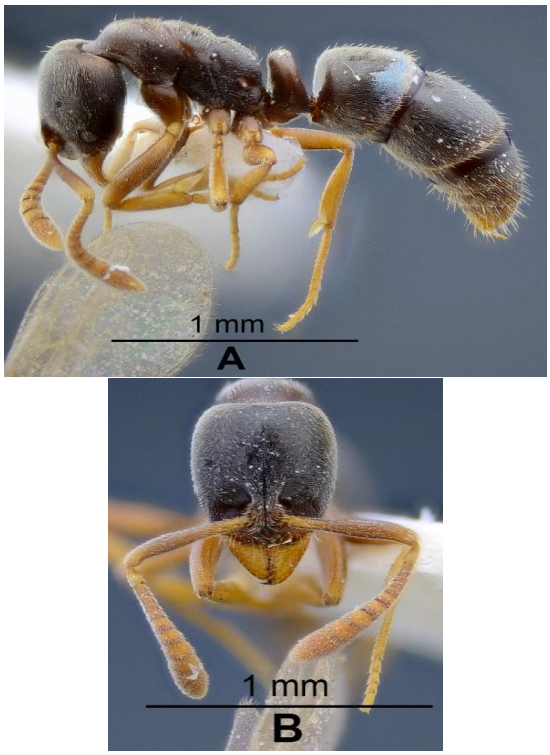

Figure 7. *Hypoponera eduardi* (Forel), ergatoid queen: A - Whole body (lateral), B - Head (profile)

4. Discussion

In this study, 1185 ant materials obtained as a result of field studies carried out in 73 different localities in 2017 and 2018 were evaluated and 72 taxa belonging to 4 subfamilies (Dolichoderinae, Formicinae, Myrmicinae, Ponerinae) and 23 genera were identified. Ponerinae subfamily and seven of (*Cardiocondyla* Emery, 1969, *Chalepoxenus* Menozzi, 1923, *Colobopsis* Mayr, 1861, *Hypoponera* Santschi, 1938, *Myrmoxenus* Ruzsky, 1902, *Ponera* Latreille, 1804 and *Trichomyrmex* Mayr, 1865) 23 genera are new records for the ant fauna of Gökçeada. Moreover, two of the identified species (*Messor maculifrons* and *Tetramorium sahlbergi*) are new records for the ant fauna of Türkiye.

22 of the 72 taxa identified (which mentioned by * in the results section) (*Camponotus aethiops*, *C. dalmaticus*, *C. lateralis*, *C. piceus*, *C. samius*, *C. sanctus*, *Cataglyphis nodus*, *Crematogaster sordidula*, *Dolichoderus quadripunctatus*, *Lasius alienus*, *Lepisiota frauenfeldi*, *Messor oertzeni*, *M. structor*, *Monomorium monomorium*, *Pheidole* cf. *pallidula*, *Plagiolepis pallescens*, *P. pygmaea*, *Solenopsis fugax*, *Temnothorax graecus*, *Tetramorium chefketi*, *T. ferox*, *T. hippocratis*) are common with the species recorded by [7]. We could not record 13 taxa (*Aphaenogaster simonelli*, *A. subterranea*, *Crematogaster ionia*, *C. scutellaris*, *Lasius brunneus*, *Messor meridionalis*, *M. sultanus*, *Strongylognathus testaceus*, *Tapinoma erraticum*, *T. nigerrimum*, *Tetramorium caespitum*, *T. forte* and *Tetramorium* sp.) recorded by [7]. The reasons for why not detecting the species recorded in [7] but not detected in our study are discussed under the relevant species in the results section.

During the study, besides the classical hand collecting method, the litter sifting method was also used. This method was used when a leaf litter present on the ground in the studied habitats. With this method, 21 ant taxa (*Aphaenogaster festae, Camponotus dalmaticus, C. ionius, C. lateralis, Chalepoxenus muellerianus, Crematogaster schmidti, Lasius alienus, Lepisiota frauenfeldi, Monomorium monomorium, Pheidole* cf. *pallidula, Plagiolepis pygmaea, Solenopsis fugax, Temnothorax antigoni, T. bulgaricus, T. flavicornis, T. helenae, T. subtilis, T. strymonensis, Tetramorium galaticum, Te. hippocratis* and

Trichomyrmex perplexus) were recorded in the study. Among these taxa, *Temnothorax helenae* and *T. subtilis* species were determined only by litter sifting method. These findings once again demonstrated the necessity of using different methods together for the detection of rare ant species in the field.

When the distribution of the detected species according to the genera was examined, it was determined that the genus represented by the highest number of species was *Temnothorax* with 16 taxa. The genus *Temnothorax* is followed by the genus *Camponotus* represented by 12 species. It was determined that 13 genera (*Bothriomyrmex*, *Cardiocondyla*, *Cataglyphis*, *Chalepoxenus*, *Colobopsis*, *Dolichoderus*, *Hypoponera*, *Monomorium*, *Myrmoxenus*, *Pheidole*, *Ponera*, *Solenopsis* and *Trichomyrmex*) are represented by a single species in Gökçeada. The genus *Temnothorax*, which is represented by 42 species all over Türkiye, is the genus represented with the most species after the genus *Camponotus*, which is represented by 50 taxa [15], at recently. The fact that the genus *Temnothorax* is represented by 38% of total number of species in Türkiye in a very small region like Gökçeada is clearly an unexpected situation in this study. However, the real richness of the genus *Temnothorax* in Türkiye is unknown and it is expected and known that the true species richness of *Temnothorax* will emerge with many new species for the science still waiting to be defined, and it is expected to surpass *Camponotus* in terms of species number (Karaman and Kıran, unpublished data).

In addition, when the distribution of the species according to the habitats was examined, *Lepisiota frauenfeldi* was found to be the species with the highest ecological value, which was determined from 14 of the 16 habitats examined. After *Lepisiota frauenfeldi*, *Camponotus lateralis*, *Cataglyphis nodus*, *Crematogaster schmidti*, *Monomorium monomorium*, *Pheidole* cf. *pallidula* and *Plagiolepis pygmaea* species recorded from 13 of 16 different habitats were identified as the second species with the highest ecological valance. Among the 16 habitats studied, the habitat with the highest number of species was barren soil with 53 taxa. The barren soil habitat was followed by maquis with 48 taxa and then *Pinus brutia* forest with 43 taxa. It is an expected result that barren soil and maquis habitats are the habitats represented by the highest number of taxa. Because these habitats are the dominant habitats in the region and most of the field studies were carried out in these habitats.

Pinus brutia forest is also the dominant forest type in Gökçeada and although these forests do not cover much area, this result can be explained by the high species diversity and microhabitats suitable for ants despite the other habitats. The habitat represented by the fewest ant species was the coastal dune habitat (one species = *Cataglyphis nodus*). In this habitat, no ant species other than *C. nodus* was found, despite surveying for about two hours. This can be explained by the fact that coastal dune habitat is not suitable for ants to build nests due to the very loose soil structure.

Crematogaster schmidti, which was recorded from 64 of the 73 localities surveyed, was found to be the most dominant species in the study area. In addition, this species nests in all kinds of microhabitats and exhibits a different behavior model in Gökçeada, which is different from the previous behavior of the species. This situation is also unprecedented when compared to the mainland. *Crematogaster schmidti*, normally known as arboricolous, has been recorded to exhibit unusual behavior in Gökçeada, such as "forming paths of successive individuals" and dominating a large part of the area, which is known as the typical behavior of *Messor* colonies. *Crematogaster schmidti* was followed by *Pheidole pallidula* and *Lepisiota frauenfeldi* species recorded from 59 and 55 localities each, respectively.

It is obvious that many new and valuable information will be obtained as a result of detailed studies on the ant fauna of the Turkish islands. For this reason, it is necessary to continue the ant fauna studies of the Turkish islands in the future.

Article Information Form

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Authors' Contribution
Conceptualization, E.S. and C.K.; Design: E.S. and C.K.; Execution: E.S. and C.K.; Material supplying: C.K.; Data acquisition: E.S. and C.K.; Data analysis/interpretation: E.S. and C.K.; Writing: E.S. and C.K.; Critical review: C.K. All authors have read and agreed to the published version of the manuscript.

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No conflict of interest or common interest has been declared by the authors.

The Declaration of Ethics Committee Approval
This study does not require ethics committee permission or any special permission.

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