ANNALS OF THE UPPER SILESIAN MUSEUM IN BYTOM ENTOMOLOGY

Vol. **31 (online 010)**: 1–14

ISSN 0867-1966, eISSN 2544-039X (online)

Bytom, 22.11.2022

Lech Borowiec¹, Claude Lebas², Sebastian Salata³

Notes on ants (Hymenoptera: Formicidae) from three northern Aegean islands – Lemnos, Samothraki and Thasos

http://doi.org/10.5281/zenodo.7346453

1.3 University of Wrocław, Department of Biodiversity and Evolutionary Taxonomy, Przybyszewskiego 65, 51-148 Wrocław, Poland,

² 2 impasse del Ribas, F-66680, Canohes, France

e-mail: ¹lech.borowiec@uwr.edu.pl, ORCID 0000-0001-5668-6855; ² cllebas@free.fr, ORCID 0000-0003-2725-6105; ³ sebastian.salata@ uwr.edu.pl, ORCID 0000-0003-0811-2309

Abstract: We provide a list of 27 ant species from Lemnos (26 new to the island), 50 species from Samothraki (44 new to the island), and additional data of 8 species new to Thasos. *Tapinoma magnum* Mayr collected on Thasos is the first certain record from Greece. *Camponotus baldaccii* Emery, *Myrmica rubra* (Linnaeus), *Temnothorax angustifrons* Csösz, Heinze & Mikó, *Temnothorax brackoi* Salata & Borowiec, *Temnothorax smyrnensis* (Forel), *Tetramorium staerckei* Kratochvil, and *Trichomyrmex perplexus* (Radchenko) are new to Thrace.

Key words: ants, Greece, Lemnos, Samothraki, Thasos, faunistics.

INTRODUCTION

This paper is a continuation of the faunistic review of ants from Greek islands. So far, faunistic reviews were published for Cephalonia (Borowiec & Salata 2014), Corfu (Borowiec & Salata 2021), Crete (Salata *et al.* 2020), the Dodecanese (Borowiec et al. 2021), Euboea (Borowiec & Salata 2018c), Samos (Borowiec & Salata 2018a), Thasos (Borowiec & Salata 2022), and Zakynthos (Borowiec & Salata 2018b). In this paper we note ants from three moderately large islands in the northern part of the Aegean Sea. They belong to the three Greek provinces, Lemnos is placed in the Aegean Islands (in new Greek administrative division in North Aegean), Samothraki in Thrace (in new administrative division in Eastern Macedonia and Thrace), and Thasos in Macedonia (in new administrative division in Eastern Macedonia and Thrace). Lemnos and Samothraki are the least studied medium-sized Greek islands in terms of myrmecology. So far only one ant species was recorded from Lemnos and 8 species from Samothraki (Finzi 1939, Scupola & Borowiec 2022). Thasos, with 52 recorded species and morphospecies, is the best studied (Borowiec & Salata 2022) and in this paper we list only species not recorded from Thasos hitherto.

STUDY AREA

Lemnos (Greek: $\Lambda \dot{\eta} \mu \nu o \varsigma$) with an area of 476 km² is the 8th largest Greek island. It is the least mountainous of the large Greek islands with the highest peak reaching 470 m, only its northwest part is rough with several hills and low mountains. It is almost completely deforested, very dry, with predominant Mediterranean scrub and arable crops like wheat, barley and sesame. The hillsides afford pasture for sheep, and Lemnos has a strong husbandry tradition. There are no large rivers and streams, and the few streams are periodic. The permanent population of Lemnos is approximately 17,000 inhabitants. The island is under moderate tourist pressure.

Samothraki (Greek: Σαμοθράκη), the 22^{nd} largest Greek island, with an area 178 km^2 is clearly smaller than Lemnos and, in contrast, very mountainous with the highest peak of 1611 m, the highest mountain in the Aegean area. It is less deforested than Lemnos, especially in the northern parts, and large parts of pine forests are preserved on the northern slopes of mountains. There are permanent streams in its northern face, on the banks covered with plane trees. The south side is dry with Mediterranean vegetation. Permanent population is very small, with only 2,900 inhabitants. Tourist pressure is very low and limited to Kamariotissa harbor and a small healt resort Loutra.

Thasos is the northernmost major Greek island and overall, the 12th largest island for this country (380 km²). The island has a permanent population of 13 770, but tens of thousands of visitors explore the island during the tourist season. Detailed characteristics of Thasos are given in Borowiec & Salata (2022).

MATERIAL AND METHODS

The main method, applied at all sites, was direct sampling (hand collecting). Nests and individual specimens were collected on the ground, in leaf litter, under stones, in dead wood, on tree trunks and twigs. All specimens were preserved in 75% ethanol. The ants were collected by Claude Lebas in June 2022.

Distribution in Greece refers to Borowiec (2014), Salata and Borowiec (2018), and unpublished data from the Database and Collection of Greek Ants (DCGA), preserved at the University of Wrocław. Geographical coordinates are given in a decimal system. Materials are deposited in the Museum of Natural History, University of Wrocław, in temporary deposit by Myrmecological Laboratory, Department of Biodiversity and Evolutionary Taxonomy, University of Wrocław, Poland, some doublets are preserved in the Upper Silesian Museum, Bytom (Poland).

LIST OF LOCALITIES

LEMNOS

- 01 Kotsinas, 39.94054 / 25.28322, 3 m, 18 VI 2022, around church and old castle;
- 02 Ifestia, archeological site, 39.96434 / 25.31876, 23 m, 19 VI 2022, soil and many small pebbles;
- 03 Neftina, 39.98493 / 25.35295, 5 m, 19 VI 2022, beach and several trees;
- 04 Repanidi, 39.92444 / 25.31546, 31 m, 19 VI 2022, Mediterranean oaks;
- 05 Kaminia, 39.8626 / 25.32387, 74 m, 20 VI 2022, trees in the town;
- 06 Roussopouli Chapelle, 39.87977 / 25.30837, 66 m, 20 VI 2022, pine forest;

- 07 Moudros, 39.87239 / 25.27071, 11 m, 20 VI 2022, parks and trees in the city;
- 08 Koukonesi island, 39.88519 / 25.26799, 6 m, 20 VI 2022, cereal fields, low walls and fig trees;
- 09 Neas Koutali, 39.89555 / 25.20407, 36 m, 20 VI 2022, pine forest;
- 10 Gomati, 39.99071 / 25.15007, 10 m, 21 VI 2022, sand dunes with rocks;
- 11 Therma, 39.90544 / 25.12211, 76 m, 21 VI 2022, park;
- 12 Panagia Kakaviotissa, 39.87239 / 25.10797, 161 m, 21 VI 2022, rocky hill;
- 13 Myrina, 39.87384 / 25.06073, 3 m, 21 VI 2022, town area;
- 14 Dafni, 39.95115 / 25.16526, 167 m, 21 VI 2022, town area;

SAMOTHRAKI

- 15 Gorge Fiona loc. 1, 40.48029 / 25.64593, 94 m, 13 VI 2022, river banks with Mediterranean oaks at the bottom of the valley;
- 16 Gorge Fiona loc. 2, 40.4759 / 25.64054, 243 m, 13 VI 2022, river bank with Mediterranean oaks;
- 17 Ano Meria, 40.46641 / 25.67348, 109 m, 13 VI 2022, walnut and other hardwood trees;
- 18 Kipos Beach, 40.4224 / 25.69117, 13 m, 13 VI 2022, little rocks and sand;
- 19 Port Kamariotissa, 40.47413 / 25.47619, 21 m, 13 VI 2022, harbour gardens in the town;
- 20 Ammos Beach, 40.3968 / 25.57907, 17 m, 14 VI 2022, beach and back beach: large rocks and spaced trees;
- 21 Vatos Beach, 40.39635 / 25.60426, 8 m, 14 VI 2022, desert with fig trees and rocks;
- 22 Koitada, 40.42251 / 25.543181, 104 m, 14 VI 2022, dry river bed with Mediterranean oaks;
- 23 Site of Samothraki (Paleopoli), 40.50436 / 25.52957, 14 m, 15 VI 2022, parking, boulders and ruins;
- 24 Gria Vathra ad Therma, 40.48716 / 25.6113, 198 m, 15 VI 2022, river bank and waterfalls with plane trees;
- 25 Therma, 40.49155 / 25.61258, 76 m, 15 VI 2022, plane forest;
- 26 Mt Fonias, ad Kantaratika, 40.46092 / 25.64199, 892 m, 16 VI 2022, Mediterranean oaks;
- 27 Mt Fonias upper parts loc. 1, 40.45337 / 25.64008, 957 m, 16 VI 2022, spaced Mediterranean oaks;
- 28 Mt Fonias upper parts loc. 2, 40.45704 / 25.63863, 956 m, 16 VI 2022, spaced Mediterranean oaks, larges rocks;
- 29 Chora (Samothraki), 40.47146 / 25.52421, 267 m, 17 VI 2022, town and fields around; 30 Xiropotamos, 40.44834 / 25.53334, 205 m, 17 VI 2022, Mediterranean oaks and fig trees;

THASOS

- 31 Moni Agiou Panteleimonos ad Mikro Prinos, 40.70643 / 24.59932, 742 m, 08 VI 2022, path with boulders near the monastery;
- 32 Mikro Prinos, 40.721 / 24.616, 310 m, 08 VI 2022, path in a meadow with walnut trees, fruit trees and oak trees in the village;

- 33 Skala Potamias, 40.71185 / 24.75849, 4 m, 08 VI 2022, beach resort, trees;
- 34 Aliki archeological site, 40.60335 / 24.74164, 18 m, 09 VI 2022, pine forest.

LIST OF SPECIES

Aphaenogaster balcanica (EMERY, 1898)

Localities: 01, 12.

Note: It is a common species in mainland Greece, the Ionian Islands, Cyclades and northern Islands of the Aegean region.

Aphaenogaster epirotes (EMERY, 1895)

Localities: 12, 17, 18, 23.

Note: It is a common species, recorded from the Aegean Islands, the Ionian Islands, Epirus, Macedonia, the Peloponnese, Sterea Ellas, Thessaly and Thrace.

Aphaenogaster festae Emery, 1915

Localities: 12, 16, 24.

Note: It is an eastern species, recorded from Thrace, the Aegean Islands, Cyclades, Macedonia (only Thasos island) and the Dodecanese.

Aphaenogaster subterranea (Latreille, 1798)

Localities: 16, 24, 26.

Note: It is a very common species so far noted from all Greek provinces except Crete.

Bothriomyrmex communista Santschi, 1919

Locality: 23.

Note: It is a common species, recorded from all Greek provinces except Crete and Cyclades.

Camponotus aethiops (Latreille, 1798)

Localities: 01, 05, 06, 15, 25, 27, 28.

Note: It is a common species, recorded from all Greek provinces.

Camponotus atricolor (Nylander, 1849)

Localities: 06, 10, 30.

Note: It is a northern species recorded from Epirus, Macedonia, northern Thessaly and Thrace.

Camponotus baldaccii Emery, 1908

Localities: 03, 06, 09, 13, 15.

Note: It is southern and eastern species in Greece, recorded from Crete, the Aegean Islands, the Dodecanese and from only one locality in Sterea Ellas. New to Thrace.

Camponotus boghossiani Forel, 1911

Locality: 32.

Note: It is an eastern and southern species known from the Aegean Islands, Crete, Cyclades, the Dodecanese and Peloponnese. Record from Thasos is first for Macedonia and the most northwestern in the Balkan region.

Camponotus dalmaticus (Nylander, 1849)

Locality: 16.

Note: It is a northern and western species in Greece, known from all mainland provinces, and Aegean and Ionian islands.

Camponotus gestroi Emery, 1878

Localities: 01, 06, 08, 12, 34.

Note: It is a thermophilous species, uncommon but noted from all Greek provinces except Epirus.

Camponotus ionius Emery, 1920

Localities: 16, 22, 24.

Note: It is a common species known from all Greek provinces except Crete.

Camponotus kiesenwetteri (Roger, 1859)

Localities: 15, 24.

Note: It is a common species, so far not recorded only from Epirus and Thessaly.

Camponotus lateralis (OLIVIER, 1792)

Localities: 01, 06, 08, 09, 15, 20, 22, 23, 24, 26, 28, 29, 30.

Note: It is one of the commonest Greek ants, recorded from all provinces.

Camponotus piceus (LEACH, 1825)

Localities: 25, 26, 27.

Note: It is a common species, known from all Greek provinces.

Camponotus samius Forel, 1889

Localities: 16, 17, 23, 24, 26.

Note: It is an uncommon southern and eastern species, recorded from the Aegean Islands, Cyclades, the Dodecanese, Macedonia, the Peloponnese, Sterea Ellas and Thrace.

Cataglyphis nodus (Brullé, 1833)

Localities: 01, 02, 03, 04, 06, 08, 09, 10, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 26, 27, 28, 30.

Note: It is a common species, known from all Greek provinces except Cyclades and from a single record from Crete which has been recently questioned (SALATA *et al.* 2020)

Colobopsis truncata (Spinola, 1808)

Locality: 17.

Note: It is a common species, recorded from all Greek provinces except Cyclades.

Crematogaster ionia Forel, 1911

Locality: 33.

Note: It is a common species, known from all Greek provinces, but our unpublished data on molecular variability of Greek populations showed that with great probability in this area occur three cryptic taxa. Their taxonomic status will be clarified after analysis or all studied samples.

Crematogaster lorteti Forel, 1910

Localities: 20, 21, 24.

Note: It is a rare species, known from a few localities in the Aegean Islands, Macedonia, Sterea Ellas, Thessaly and Thrace.

Crematogaster schmidti (MAYR, 1853)

Localities: 01, 03, 05, 06, 08, 11, 15, 17, 22, 23, 26, 29, 30.

Note: It is a common species, known from all Greek provinces, but based on our unpublished genetic studies status of populations from Crete is unclear and maybe they include a cryptic undescribed species.

Crematogaster sordidula (Nylander, 1849)

Localities: 16, 22, 23.

Note: It is a common species, known from all Greek provinces.

Dolichoderus quadripunctatus (Linnaeus, 1771)

Localities: 07, 12, 16, 24.

Note: It is an uncommon species although known from almost all Greek provinces except Cyclades.

Formica rufibarbis Fabricius, 1793

Locality: 15.

Note: It is moderately common in mainland Greece, recorded also from the Aegean Islands and Cyclades.

Lasius alienus (Förster, 1850)

Locality: 31.

Note: *Lasius alienus* was recorded from all Greek provinces but due to the recent revision of this genus (Seifert 2020) its historical records should be reinvestigated.

Lasius brunneus (Latreille, 1798)

Locality: 26.

Note: It is known mostly from mountain forests of all mainland provinces, the Ionian Islands and the Aegean Islands.

Lasius illyricus Zimmermann, 1935

Localities: 15, 16, 24, 27, 28.

Note: It is species common in northern Greece and the Ionian Islands, rare in Crete and the southern Aegean islands.

Lasius lasioides (EMERY, 1869)

Localities: 06, 13, 15, 30.

Note: It is a common species, known from all Greek provinces.

Lasius neglectus Van Loon, Boomsma & Andrasfalvy, 1990

Localities: 01, 03.

Note: It is known mostly from eastern islands, especially from tourist resorts. Confirmed records are from the Aegean Islands, Cyclades, the Dodecanese and from two mainland provinces, Peloponnese and Thrace.

Lasius turcicus Santschi, 1921

Locality: 15.

Note: It is a moderately common species, recorded from the Aegean Islands, Crete, Cyclades, the Dodecanese, Epirus, Macedonia, Peloponnese and Thrace.

Lepisiota frauenfeldi (MAYR, 1855)

Localities: 01, 02, 03, 05, 06, 07, 11, 15, 16, 19, 20, 21, 23, 24, 25, 26, 29, 30.

Note: Taxonomical status of Greek populations of *Lepisiota frauenfeldi* need detailed genetic and morphological studies. At least four morphospecies have been observed in various parts of Greece. Populations from Lemnos and Samothraki recorded here belong to the most common morphospecies known from all mainland provinces, the Ionian Islands and Crete.

Liometopum microcephalum (Panzer, 1798)

Localities: 20, 23, 24, 29, 30.

Note: It is moderately common species, recorded from the Aegean Islands, Epirus, the ionian Islands, Macedonia, Peloponnese, Sterea Ellas, Thessaly and Thrace.

Messor hellenius Agosti & Collingwood, 1996

Localities: 01, 14, 15, 20.

Note: Known from almost all Greek provinces except the Ionian Islands, common in mainland, rare on islands.

Messor ibericus Santschi, 1931

Localities: 16, 23.

Note: It is a common species but still unrecorded from the Aegean Islands, Cyclades and Sterea Ellas.

Messor oertzeni Forel, 1910

Localities: 05, 07, 12, 15.

Note: It is a northeastern species, recorded from the Aegean Islands, the Dodecanese, northern Macedonia and Thrace.

Messor wasmanni Krausse, 1910

Localities: 01, 07, 09, 23, 25, 26.

Note: One of the commonest Greek ants, recorded from all provinces.

Myrmica rubra (Linnaeus, 1758)

Locality: 16.

Note: In Greece rare species recorded only from northern parts of Macedonia province. New to Thrace.

Myrmica sabuleti Meinert, 1861

Locality: 27.

Note: It is a northern species recorded only from mainland provinces Epirus, Macedonia, Sterea Ellas, Thessaly and Thrace.

Pheidole cf. pallidula

Localities: 03, 06, 07, 09, 12, 13, 14, 15, 17, 20, 21, 22, 23, 24, 26, 30.

Note: It is one of the commonest Greek ants. Mediterranean populations of the taxon named *Pheidole pallidula* (NYLANDER, 1849) have recently been divided into four species, three of them recorded in Greece (SEIFERT 2016), but this revision is still under discussion owing to the great local variability of this very common Mediterranean ant. From the northern Aegean Islands was recorded *Pheidole balcanica* SEIFERT, 2016 and *Pheidole koshewnikovi* Ruzsky, 1905.

Plagiolepis pallescens Forel, 1889

Localities: 20, 22.

Note: It is a common species, recorded from all Greek provinces except Epirus.

Plagiolepis perperamus Salata, Borowiec & Radchenko, 2018

Localities: 01, 11, 15, 25, 29, 31.

Note: It is an uncommon species but known from all Greek provinces.

Plagiolepis pygmaea (LATREILLE, 1798)

Localities: 05, 15, 16, 17, 18, 19, 24.

Note: It is the most common and ubiquistic species of the genus *Plagiolepis*, known from all Greek provinces.

Solenopsis cf. lusitanica

Localities: 03, 12, 17, 18, 24.

Note: The status of most European species of the genus *Solenopsis* requires extensive revision. Galkowski *et al.* (2010) redescribed *Solenopsis fugax* and suggested that four distinct species groups occur in Europe and the Mediterranean region. Our samples from Lemnos and Samothraki, characterized by short and sparse hairs on the mesosoma and small gynes, belong to the *Solenopsis lusitanica* group as proposed by Galkowski *et al.* (2010).

Tapinoma cf. erraticum BALC

Localities: 15, 29.

Note: According to B. Seifert's note in Wagner *et al.* (2018), populations of *Tapinoma erraticum* in south-eastern Europe consist of a complex of two similar species easily separated by the morphology of male genitalia. Our material from Balkans suggested that the true *T. erraticum* is common only in northern parts of the Balkan Peninsula. In the Greek material, we found only morphospecies identified by Wagner *et al.* (2018) as *Tapinoma* cf. *erraticum_BALC*. Examined specimens come from all Greek provinces.

Tapinoma magnum Mayr, 1861

Locality: 33.

Note: *Tapinoma magnum*, probably native to the western part of the Mediterranean basin,

is an invasive species in Greece. Known from North Africa from Morocco east to Tunisia, over entire Italy, in Corsica, Sardinia, and southeast and many infested cities in the west of France. This is first certain record from Greece.

Temnothorax angustifrons Csösz, Heinze & Mikó, 2015

Locality: 29.

Note: It is a common species in the Aegean Islands and with a single record from Sterea Ellas. New to Thrace.

Temnothorax cf. angustulus

Locality: 30.

Note: It is a very distinct undescribed species probably belonging to the *Temnothorax angustulus* species group. The closest at first glance is *Temnothorax dessyi* (Menozzi, 1936) known from the Dodecanese and eastern Peloponnese.

Temnothorax antigoni (Forel, 1911)

Localities: 03, 04, 05, 08, 09, 11.

Note: It is an eastern species known only from the Aegean Islands and the Dodecanese.

Temnothorax brackoi Salata & Borowiec, 2019

Locality: 16.

Note: It is recently described species, recorded from Epirus, the Ionian Islands, Macedonia and Peloponnese. New to Thrace. Locality from Samothraki is easternmost for this species.

Temnothorax bulgaricus (Forel, 1892)

Localities: 12, 25, 26.

Note: It is a common species although not recorded from Crete and Cyclades.

Temnothorax kemali (Santschi, 1934)

Localities: 24, 28.

Note: It is an eastern species, recorded from the Aegean Islands and the Dodecanese. From Thrace noted under name *Temnothorax* cf. *affinis* (Bračko *et al.* 2016).

Temnothorax lichtensteini (Bondroit, 1918)

Localities: 27, 28.

Note: It is a northern species recorded from Epirus, the Ionian Islands, Macedonia, Sterea Ellas, Thessaly and Thrace.

Temnothorax recedens (Nylander, 1856)

Locality: 26.

Note: It is a widely distributed species, recorded from all Greek provinces. Populations from Samothraki belong the palest morphotype with mesosoma and head uniformly yellow or with indistinct dark patches. This form is known only from Thrace and needs genetic studies, maybe it is a distinct species intermediate between widespread *Temnothorax recedens* and recorded only from the Aegean Islands and the Dodecanese *T. antigoni* (FOREL, 1911).

Temnothorax semiruber (André, 1881)

Localities: 23, 27.

Note: It is an uncommon species although recorded from all Greek provinces except the Ionian Islands.

Temnothorax smyrnensis (Forel, 1911)

Locality: 15.

Note: It is an eastern species, in Greece recorded only from the Aegean Island and the Dodecanese. From Thrace firstly noted under name *Temnothorax* cf. *graecus* (Bračko *et al.* 2016).

Tetramorium chefketi Forel, 1911

Localities: 01, 34.

Note: It is a moderately common species, recorded from the Aegean Islands, Crete, the Ionian Islands, Macedonia, Thessaly and Thrace.

Tetramorium hippocratis Agosti & Collingwood, 1987

Locality: 27.

Note: It is a rare species, recorded from the Aegean Islands, Crete, the Dodecanese, Peloponnese and Thrace.

Tetramorium immigrans Santschi, 1927

Localities: 15, 33.

Note: It is a tramp species of subcosmopolitic distribution. In Greece, it was noted from most provinces except Cyclades and Epirus.

Tetramorium impurum (Förster, 1850)

Localities: 08, 27.

Note: In Greece it is a mountain species, noted from Epirus, the Ionian Islands, Macedonia, Peloponnese, Sterea Ellas and Thrace.

Tetramorium kephalosi Salata & Borowiec, 2017

Localities: 05, 06, 07, 12, 16, 17, 18, 20, 23, 24, 25, 27.

Note: It is a recently described species confused with *Tetramorium semilaeve* ANDRÉ, 1883. In Greece appears to be a very common species, known from all Greek provinces.

Tetramorium staerckei Kratochvil, 1944

Localities: 13, 23.

Note: It is a widely distributed species, but its status was clarified recently (Wagner *et al.* 2017) thus it remains still not recorded from many countries. Verified records are from Austria, Bulgaria, Czech Republic, Hungary, Kyrgyzstan, Republic of Macedonia, Romania, SW Russia, Serbia, Slovakia and Turkey. The only Greek record is from Lesbos of the Aegean Islands. New to Thrace.

Trichomyrmex perplexus (RADCHENKO, 1997)

Locality: 25.

Note: It is an uncommon species known from most Greek provinces except Epirus and here is recorded as new to Thrace.

DISCUSSION

Our research revealed 50 species and morphospecies from Samothraki, 27 from Lemnos, and added additional 8 species to the list of 52 taxa known from Thasos (species previously known from these islands are marked with an asterisk):

Samothraki

- 1. Aphaenogaster epirotes
- 2. Aphaenogaster festae
- 3. Aphaenogaster subterranea
- 4. Bothriomyrmex communista
- 5. Camponotus aethiops*
- 6. Camponotus atricolor
- 7. Camponotus baldaccii
- 8. Camponotus dalmaticus
- 9. Camponotus ionius*
- 10. Camponotus kiesenwetteri
- 11. Camponotus lateralis*
- 12. Camponotus piceus
- 13. Camponotus samius
- 14. Cataglyphis nodus*
- 15. Colobopsis truncata
- 16. Crematogaster lorteti
- 17. Crematogaster schmidti
- 18. Crematogaster sordidula*
- 19. Dolichoderus quadripunctatus
- 20. Formica rufibarbis
- 21. Lasius illyricus
- 22. Lasius lasioides
- 23. Lasius turcicus
- 24. Lepisiota frauenfeldi*
- 25. Liometopum microcephalum
- 26. Messor hellenius
- 27. Messor ibericus
- 28. Messor oertzeni
- 29. Messor wasmanni
- 30. Myrmica sabuleti
- 31. Pheidole cf. pallidula
- 32. Plagiolepis pallescens
- 33. Plagiolepis perperamus
- 34. Plagiolepis pygmaea

- 35. Solenopsis cf. lusitanica
- 36. Tapinoma cf. erraticum BALC
- 37. Temnothorax angustifrons
- 38. Temnothorax antigoni
- 39. Temnothorax cf. brackoi
- 40. Temnothorax bulgaricus
- 41. Temnothorax kemali
- 42. Temnothorax lichtensteini
- 43. Temnothorax semiruber
- 44. Temnothorax smyrnensis
- 45. Temnothorax cf. angustulus
- 46. Tetramorium hippocratis
- 47. Tetramorium immigrans
- 48. Tetramorium kephalosi
- 49. Tetramorium staerckei
- 50. Trichomyrmex perplexus

Lemnos

- 1. Aphaenogaster balcanica
- 2. Aphaenogaster epirotes
- 3. Aphaenogaster festae
- 4. Camponotus aethiops
- 5. Camponotus atricolor
- 6. Camponotus baldaccii
- 7. Camponotus gestroi
- 8. Camponotus lateralis
- 9. Cataglyphis nodus
- 10. Crematogaster schmidti
- 11. Dolichoderus quadripunctatus
- 12. Lasius lasioides
- 13. Lasius neglectus
- 14. Lepisiota frauenfeldi
- 15. Messor hellenius
- 16. Messor oertzeni*
- 17. Messor wasmanni
- 18. Pheidole cf. pallidula
- 19. Plagiolepis perperamus
- 20. Plagiolepis pygmaea
- 21. Solenopsis cf. lusitanica
- 22. Temnothorax antigoni

- 23. Temnothorax bulgaricus
- 24. Temnothorax smyrnensis
- 25. Tetramorium chefketi
- 26. Tetramorium kephalosi
- 27. Tetramorium staerckei

New to Thasos

- 1. Camponotus boghossiani
- 2. Camponotus gestroi
- 3. Crematogaster ionia
- 4. Lasius alienus
- 5. Plagiolepis perperamus
- 6. Tapinoma magnum
- 7. Tetramorium chefketi
- 8. Tetramorium immigrans

Finzi (1939) recorded from Samothraki also *Tetramorium caespitum* var. ? but according to the recent revision of the *T. caespitum* group (Wagner *et al.* 2017) today it is difficult to determine specimens of which species he studied.

Samothraki, although the smallest island of the three examined, has an exceptionally rich myrmecofauna. It is more than twice smaller than Thasos but has only slightly lower number of recorded species – 50 versus 60 (including new species for Thasos in this paper). This can be explained by the diverse terrain, with high mountains creating various habitats, and low pressure from tourism. A surprisingly small number of ant species have been shown from Lemnos (27 taxa), an island almost three times larger than Samothraki and only slightly larger than Thasos. Undoubtedly, it is due to the less diverse terrain (the lack of mountains) and the strong deforestation of this island. It is also located more to the south of two other islands, so it is dominated by extremely dry Mediterranean habitats. The observations by the first author at the Aegean island of Samos, explored at the same time in June 2022, showed that the activity of ants was strongly impacted by the extreme heat in June, and this in turn influenced the lower collecting outcome. Lemnos was explored as the last of the islands during the June expedition, when the temperature reached 40°C during the day. In our opinion, to obtain comparable results, Lemnos should be re-explored at the turn of May and June, when ants forage the most intensively.

REFERENCES

Borowiec L. 2014. Catalogue of ants of Europe, the Mediterranean Basin and adjacent regions (Hymenoptera: Formicidae). *Genus* (Special issue – Monograph) 25: 1–340.

Borowiec L., Salata S. 2014a. Redescription of *Camponotus nitidescens* Forel, 1889, new status and notes on ants from Kefalonia, Greece (Hymenoptera: Formicidae). *Genus* 25: 499–517.

Borowiec L., Salata S. 2018a. Notes on ants (Hymenoptera: Formicidae) of Samos Island, Greece. *Annals of the Upper Silesian Museum Bytom in Bytom, Entomology* 27(online003): 1–13.

Borowiec L., Salata S. 2018b. Notes on ants (Hymenoptera: Formicidae) of Zakynthos Island, Greece. *Annals of the Upper Silesian Museum in Bytom, Entomology* 27(online 004): 1–13.

Borowiec L., Salata S. 2018c. Notes on ants (Hymenoptera: Formicidae) of the Euboea Island, Greece. *Annals of the Upper Silesian Museum in Bytom, Entomology* 27(online 005): 1–15.

Borowiec L., Salata S. 2021. Notes on ants (Hymenoptera: Formicidae) of Corfu Island, Greece. *Annals of the Upper Silesian Museum in Bytom, Entomology* 30(online 002): 1–19.

- BOROWIEC L., SALATA S. 2022. Notes on ants (Hymenoptera: Formicidae) of Thassos Island, Greece. *Annals of the Upper Silesian Museum in Bytom, Entomology* 31(online 002): 1–15.
- BOROWIEC L., WIECZOREK K., SALATA S. 2021. Review of ants (Hymenoptera: Formicidae) of the Dodecanese Archipelago, Greece. *Annals of the Upper Silesian Museum*, *Entomology* 30(online 006): 1–33.
- Bračko G., Kiran K., Karaman C., Salata S., Borowiec L. 2016. Survey of the ants (Hymenoptera: Formicidae) of the Greek Thrace. *Biodiversity Data Journal* 4: e7945.
- Finzi B. 1939. Ergebnisse der von Franz Werner und Otto v. Wettstein auf den Ägäischen Inseln unternommenen Sammelreisen. Ameisen. Sitzungsberichte der Akademie der Wissenschaften in Wien. Mathematisch Naturwissen schaftliche Klasse. Abteilung I, 148: 153–161.
- Galkowski C., Casevitz-Weulersee J., Cagniant H. 2010. Redescription de *Solenopsis fugax* (Latreille, 1798) et notes sur les *Solenopsis* de France (Hymenoptera, Formicidae). *Revue Française d'Entomologie* 32(3): 151–163.
- SALATA S., BOROWIEC L. 2018. Taxonomic and faunistic notes on Greek ants (Hymenoptera: Formicidae). *Annals of the Upper Silesian Museum in Bytom, Entomology*, 27: 1–51
- SALATA S., BOROWIEC L., TRICHAS A. 2020. Review of ants (Hymenoptera: Formicidae) of Crete, with keys to species determination and zoogeographical remarks. *Monographs of the Upper Silesian Museum* 12: 5–296 pp.
- Scupola A., Borowiec L. 2022. Ants (Hymenoptera Formicidae) of Greek islands: Where we are. In: Life on islands 2: Zoological diversity of the Aegean Archipelago. Studies dedicated to Norma Chapmann, in print.
- SEIFERT B. 2016. Inconvenient hyperdiversity the traditional concept of "Pheidole pallidula" includes four cryptic species (Hymenoptera: Formicidae). Soil Organisms 88(1):1–17.
- Wagner H.C., Arthofer W., Seifert B., Muster C., Steiner F.M., Schlick-Steiner B.C. 2017. Light at the end of the tunnel: Integrative taxonomy delimits cryptic species in the *Tetramorium caespitum* complex (Hymenoptera: Formicidae). *Myrmecological News* 25: 95–129.
- Wagner H.C., Seifert B., Borovsky R., Paill W. 2018. First insight into the ant diversity of the Vjosa valley, Albania (Hymenoptera: Formicidae). *Acta ZooBot Austria* 155: 315–321.