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On the Staphylinidae of the Greek island Samothraki (Insecta, Coleoptera)

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A b s t r a c t : Aside from individual records of two widespread species, the Staphylinidae of Samothraki, a Greek island in the north of the Aegean Sea, had never been studied. In April 2019, a field trip was conducted to Samothraki to investigate the staphylinid fauna. A study of 1372 specimens collected during this field trip yielded 123 species, 114 of them named and six of them endemic. Two species and one subspecies are reported from Greece for the first time. Seven species are described and illustrated: *Apimela procera* ASSING nov.sp. (Greece: Samothraki, Fthiotis; Turkey: Osmaniye) of the Aleocharinae; *Cyrtotyphlus samothracicus* ASSING nov.sp. (endemic) and *Metrotyphlus samothracicus* ASSING nov.sp. (endemic) of the Leptotyphlinae; *Cephennium samothracicum* ASSING nov.sp. (endemic) and *Scydmorephes samothracicus* MEYBOHM nov.sp. (endemic) of the Scydmaeninae; *Bryaxis samothracicus* BRACHAT nov.sp. (endemic) and *Tychobythinus assingi* BRACHAT nov.sp. (endemic) of the Pselaphinae. A checklist of the species recorded from Samothraki is provided. Samothraki is characterized by a relatively poor forest fauna, but a high diversity of wetland species. It is compared to that of the North Aegean Islands Chios, Lesbos, Samos, and Ikaria regarding total diversity and number of endemic species. In an appendix, *Bryaxis pangeonicus* BRACHAT nov.sp. from Oros Pangéo (Northeast Greece) is described.

K e y w o r d s : Coleoptera, Staphylinidae, Palearctic region, East Mediterranean, Greece, Samothraki, Aegean Islands, taxonomy, new species, diversity, zoogeography, endemism, island biogeography, endogean fauna, new records, checklist.

1 Introduction

Samothraki (synonym Samothrace) is situated in the north of the Aegean Sea, 36 km from the Northeast Greek mainland and 45 km from the Turkish peninsula Gelibolu (Çanakkale province). Though relatively small in area (180 km²; maximal east-west extension 22 km and north-south extension 12 km), the island features a formidable mountain range (Fengari or Saos) with the highest summit at 1611 m and several additional peaks above 1400 m.

Owing to the low population density (< 3,000 inhabitants), as well as limited attractivity for tourists (no airport) the island still has rather extensive areas with natural or semi-natural vegetation, particularly in the Fengari range, which forms the major part of the island and which is accessible only for hikers. The most significant human impact in these regions is overgrazing by innumerable sheep and goats. While the flat parts along the north, west, and south coast are characterized mostly by arable land and pastures interrupted by occasional gallery forests with dominant *Platanus orientalis*, the steep north slopes of the Fengari range still have extensive forests composed of *Quercus* spp.,

Platanus orientalis (near the streams), and various other, mostly deciduous trees. Such forests are largely absent in the more easily accessible (less steep) northeastern parts of the Fengari range. Above the tree-line at approximately 1,000 m, the habitats are characterized by rock and sparse phrygana. Several permanent and numerous temporary streams are present on the island, fed by numerous springs and high amounts of precipitation provided by the Fengari range and owing to the domination of impermeable substrates (SKOULIKIDIS et al. 2013).

The formation of Samothraki is the result of volcanic and tectonic activity, as is today witnessed by the complex geological composition (SEYMOUR et al. 1996, TSIKOURAS & HATZIPANAGIOTOU 1995) and the presence of hot springs. According to the geological maps provided by TRIANTIS & MYLONAS (2009), what is Samothraki today was part of the mainland in the early Miocene, was then completely submersed in the late Miocene, was subsequently connected to the northwest Anatolian mainland (together with the Greek island Limnos and the Turkish island Gökçeada during the Messinian 5-6 mya), and an isolated island during the Pliocene. During the glacial maxima of the Pleistocene, there was again a land connection with what is Thrace today.

According to a recent synopsis (BIEL & TAN 2014), 1534 species of plants are known from Samothraki, 15 of them endemic to the island.

Next to nothing was previously known about the staphylinid fauna of Samothraki. Only two species had been reported from the island, *Stenus maculiger* WEISE, 1875 and *Medon fuscus* (MANNERHEIM, 1830) (ASSING 2004, 2006b).

In April 2019, a field trip to Samothraki was conducted aiming at an exploration of the Staphylinidae fauna, with a special focus on endemic species. Based on the geological history and on the topography of the island, it did not seem unlikely that it hosted an endemic fauna.

In an appendix, a new species of *Bryaxis* KUGELANN, 1794 (Pselaphinae) is described from Oros Pangeo, Northeast Greece, based on type material partly collected on the way to Samothraki.

2 Material and methods

The material treated in this study is deposited in the following public and private collections:

MNB Museum für Naturkunde Berlin (J. Frisch)

cAss..... author's private collection

cBra..... private collection Volker Brachat, Geretsried

cMey private collection Heinrich Meybohm, Großhansdorf

The Pselaphinae and Scydmaeninae (except *Cephennium*) are all deposited in cBra and cMey, respectively. Reference material of the remaining species is deposited in cAss and MNB.



Map 1: Geographic position of Samothraki in the Aegean Sea, Greece.

For the species described by the first author, a Stemi SV 11 microscope (Zeiss), a Discovery V12 microscope (Zeiss), and a Jenalab compound microscope (Carl Zeiss Jena) were used. The images were created using digital cameras (Nikon Coolpix 995, Axiocam ERc 5s), as well as Labscope and Picolay stacking software. The map was created with MapCreator 2.0 (primap) software.

The descriptions of Pselaphinae and Scydmaeninae (exclusive of *Cephennium samothracicum*) are authored by Volker Brachat (Geretsried) and Heinrich Meybohm (Großhansdorf), respectively. Their photos were produced with the help of Thure Dalsgaard, Zoological Museum Hamburg, using Keyence photographic equipment at his disposal.

Measurements: body length was measured from the anterior margin of the mandibles (in resting position) or the labrum (whichever forms the anterior apex of the head) to the posterior apex of the elytra (Scydmaeninae) or to the abdominal apex (other subfamilies), the length of the forebody from the apex of the head to the posterior margin of the elytra (all subfamilies except Scydmaeninae), head length along the middle from the anterior margin of the clypeus (without ante-clypeus) to the posterior constriction of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of (the median lobe of) the aedeagus from the apex of the median

lobe (without internal structures) or the apices of parameres (whichever extends farther) to the base of the median lobe (Pselaphinae) or from the apex of the ventral process to the base of the aedeagal capsule (other subfamilies). The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

3 Results

3.1 Diversity and species list

During the field trip conducted in spring 2019, 34 localities and various habitats (forests, pastures, fallows, abandoned fields, wetlands, particularly stream banks, coastal habitats) at altitudes between 5 and 900 m were sampled by sifting leaf litter, grass roots, wet moss, beach debris, and mule dung, by washing soil, floating gravel of stream banks, and turning stones. Owing to the weather and snow conditions, as well as for logistic reasons (difficult accessibility), it was not possible to sample habitats at altitudes above 1,000 m (peak region of Fengari).

In all, 1372 adult specimens of Staphylinidae belonging to at least 123 species were collected. Nine of these species were not, or only tentatively named, either because they were represented by females (four species), because they belong to groups that are currently in taxonomic confusion (*Hydrosmeeta* spp., *Mocyta* sp.), or because they are most likely undescribed, but represented by insufficient material for an adequate description (e.g., *Atheta* (*Microdota*) sp.). The description of one currently unnamed species of Scydmaeninae (*Stenichnus assingi*) will be published in the near future (MEYBOHM in prep.). Two species and one subspecies are reported from Greece for the first time. As many as seven species are newly described, one of the Aleocharinae, two of the Leptotyphlinae, two of the Scydmaeninae, and two of the Pselaphinae. Except for the aleocharine, all of them most likely represent island endemics. Whether or not additional endemic species are present in the peak region of Fengari remains to be investigated in the future.

The forest fauna of Samothraki is remarkably poor, not only in diversity, but also quantitatively. This applies to both the epigeic and the endogean fauna. Even large samples of sifted litter and washed soil produced only few specimens of relatively few species. Habitats with deeper layers of litter were found almost exclusively in gallery forests with *Platanus orientalis*. In other forest habitats, particularly those with deciduous oak, the litter cover was generally thin, often even practically non-existent. Surprisingly, some of the most common epigeic taxa (e.g., *Othius lapidicola* MÄRKEL & KIESENWETTER, 1848, *Tachyporus hypnorum* (FABRICIUS, 1775), *Geostiba* spp.) recorded from all other previously studied Aegean islands were not found in Samothraki.

Similarly, soils suitable for endogean species were encountered only in few localities, again nearly exclusively in gallery forests with *Platanus orientalis*. In other habitats, the soil was generally too hard to support an endogean fauna.

In contrast to the fauna of terrestrial habitats, that of wetland habitats, in particular stream banks, margins of wetlands, and beach debris, was significantly richer in both diversity and specimen numbers, a result reflected also in the proportions of the specimens collected in Samothraki (terrestrial habitats: 25 %; wetlands and stream banks: 41 %; beach debris: 34 %).

Tab. 1: Staphylinidae collected in Samothraki in April, 2019. Species preceded by an asterisk (*) most likely represent island endemics.

Localities/samples (all leg. Assing): **1:** WSW Ano Meria, 40°27'40"N, 25°38'50"E, 790 m, stony slope with juniper and scattered oak trees, roots and litter beneath oak trees sifted, 8.IV.2019; **2:** W Ano Meria, 40°28'00"N, 25°38'36"E, 630 m, steep stream valley with oak, oak litter near temporary stream sifted, 8.IV.2019; **3:** W Ano Meria, 40°28'03"N, 25°38'41"E, 580 m, steep stream valley with oak, oak litter sifted, 8.IV.2019; **4:** W Ano Meria, 40°28'07"N, 25°39'22"E, 260 m, dry stream valley with old *Platanus orientalis*, soil washing, 8.IV.2019; **4a:** same data, but deep *Platanus* litter sifted; **5:** W Paleopoli, 40°29'49"N, 25°30'23"E, 10 m, pasture, under stones, 9.IV.2019; **6:** S Samothraki, 40°27'47"N, 25°31'43"E, 300 m, *Quercus ilex* forest, litter sifted, 9.IV.2019; **7:** S Samothraki, 40°27'50"N, 25°31'47"E, 280 m, wet *Platanus* litter near temporary stream sifted, 9.IV.2019; **8:** WNW Lakkoma, 40°25'56"N, 25°30'28"E, 30 m, fallow, under stones, 9.IV.2019; **9:** W Lakkoma, 40°25'57"N, 25°30'54"E, 20 m, river bank, gravel floated, 9.IV.2019; **9a:** same data, but 16.IV.2019; **10:** Therma, 40°29'58"N, 25°36'27"E, 30 m, pasture, under stones, 9.IV.2019; **10a:** same data, but 15.IV.2019; **11:** Therma, 40°30'01"N, 25°36'23"E, 20 m, pasture margin with old *Platanus*, other trees, and bushes, soil washing beneath *Platanus*, 10.IV.2019; **11a:** same data, but litter sifted; **11b:** same data, but 15.IV.2019; **12:** W Therma, 40°30'15"N, 25°35'19"E, 10 m, wetland with *Platanus orientalis*, wet litter near water sifted, 10.IV.2019; **12a:** same data, but wetland with temporary stream, gravel floated, 10.IV.2019; **13:** Therma, 40°29'51"N, 25°36'30"E, 30 m, pasture, under stones, 10.IV.2019; **13a:** same data, but 15.IV.2019; **14:** Therma, 40°29'49"N, 25°36'31"E, 30 m, stream bank, soil washing beneath old *Platanus*, 10.IV.2019; **14a:** same data, but *Platanus* and oak litter sifted, 15.IV.2019; **15:** WSW Ano Meria, 40°27'39"N, 25°38'26"E, 890 m, N-slope with oak and juniper, roots and litter sifted, 11.IV.2019; **16:** WSW Ano Meria, 40°27'39"N, 25°38'32"E, 900 m, roots and litter between rocks and beneath old oak sifted, 11.IV.2019; **17:** E Therma, 40°30'09"N, 25°36'38"E, 10 m, river bank, gravel floated, 11.IV.2019; **18:** E Therma, 40°30'00"N, 25°37'11"E, 10 m, between oak forest and road margin, moist oak litter near water sifted, 11.IV.2019; **19:** E Therma, 40°29'55"N, 25°37'27"E, 10 m, river bank, gravel floated, 11.IV.2019; **20:** above Therma, 40°29'40"N, 25°36'05"E, 110 m, moist *Platanus* forest, soil washing, 12.IV.2019; **20a:** same data, but litter sifted; **20b:** same data, but mule dung sifted; **21:** N Ano Meria, 40°28'48"N, 25°40'25"E, 1 m, beach, seaweed and debris sifted, 13.IV.2019; **22:** S Ano Meria, 40°26'44"N, 25°40'12"E, 260 m, abandoned arable land with *Platanus orientalis* and fern undergrowth, soil washing, 13.IV.2019; **23:** S Ano Meria, 40°26'54"N, 25°40'07"E, 230 m, stream valley with very old *Platanus orientalis* and scattered old *Castanea*, soil washing near very old *Platanus*, 13.IV.2019; **23a:** same data, but *Platanus* litter sifted; **24:** S Ano Meria, 40°26'45"N, 25°40'39"E, 190 m, pasture, under stones, 14.IV.2019; **25:** SSE Ano Meria, 40°26'21"N, 25°41'39"E, 5 m, stream gravel floated, 14.IV.2019; **26:** SE Ano Meria, 40°26'52"N, 25°41'46"E, 5 m, stream gravel floated, 14.IV.2019; **27:** ESE Ano Meria, 40°27'41"N, 25°41'25"E, 30 m, *Platanus* forest near stream, soil (partly sandy) washing, 14.IV.2019; **27a:** same data, but under bark of dead oak, 17.IV.2019; **27b:** same data, but stream bank, gravel floated, 17.IV.2019; **28:** Therma, 40°29'32"N, 25°36'45"E, 60 m, moist *Platanus* forest, soil washing near very old *Platanus*, 14.IV.2019; **28a:** same data, but litter sifted; **29:** WNW Lakkoma, 40°26'04"N, 25°30'16"E, 40 m, abandoned stony field, under stones, 15.IV.2019; **30:** above Therma, 40°29'36"N, 25°36'28"E, 70 m, waterfall, wet moss and leaves in spraying zone sifted, 16.IV.2019; **31:** SE Kamariotissa, 40°26'48"N, 25°29'53"E, 40 m, *Platanus* litter near temporary stream sifted, 16.IV.2019; **31a:** SE Kamariotissa, 40°26'48"N, 25°29'53"E, 40 m, bank of temporary stream, gravel floated, 16.IV.2019; **32:** W Samothraki, 40°28'30"N, 25°30'33"E, 70 m, grassy slope, under stones, 16.IV.2019; **33:** E Therma, 40°30'03"N, 25°37'00"E, 5 m, stream bank, gravel floated, 17.IV.2019; **34:** E Therma, 40°29'21"N, 25°39'34"E, 5 m, wetland with *Juncus*, hand-collected, 17.IV.2019.

Species	Localities/samples
<i>Omalinae</i>	
<i>Dropephylla</i> sp. (♀)	20(1)
<i>Omalium riparium impar</i> MULSANT & REY, 1861	21(16)
<i>Omalium rugatum</i> MULSANT & REY, 1880	2(1), 7(1), 9(3), 11b(1), 27b(2), 30(1)
<i>Proteininae</i>	
<i>Megarthus bellevoeyi</i> SAULCY, 1862	20b(1)

Species	Localities/samples
<i>Proteinus utrarius</i> ASSING, 2004	6(1), 15(1)
P s e l a p h i n a e	
<i>Brachygluta spnicoxis fuchsii</i> PAGANETTI-HUMMLER, 1899	19(1), 26(1), 27b(7), 31a(2)
* <i>Bryaxis samothracicus</i> BRACHAT nov.sp.	11b(2), 14a(2), 15(2), 16(3)
<i>Bythinus acutangulus lunifer</i> KARAMAN, 1948	3(1), 9a(1), 14a(2), 20(1), 20a(6), 23a(9), 28(1), 28a(15), 30(1)
<i>Faronus parallelus</i> BESUCHET, 1958	11b(1)
<i>Trimium</i> sp. (♀)	16(5)
* <i>Tychobythinus assingi</i> BRACHAT nov.sp.	14(1)
T a c h y p o r i n a e	
<i>Mycetoporus ignidorsum</i> EPPELSHEIM, 1880	6(1)
<i>Mycetoporus simillimus</i> FAGEL, 1965	15(1)
<i>Sepedophilus testaceus</i> (FABRICIUS, 1792)	14a(2)
<i>Tachinus corticinus</i> GRAVENHORST, 1802	21(1)
<i>Tachyporus nitidulus</i> (FABRICIUS, 1781)	6(1), 16(4), 29(1), 31a(1)
H a b r o c e r i n a e	
<i>Habrocerus capillaricornis</i> (GRAVENHORST, 1806)	7(1)
<i>Habrocerus pisidicus</i> KORGE, 1971	3(8), 4a(2), 11b(2), 12(1), 20a(2)
A l e o c h a r i n a e	
<i>Acrotona muscorum</i> (BRISOUT, 1860)	3(1)
<i>Acrotona parvula</i> (MANNERHEIM, 1830)	20b(1)
<i>Aleochara albopila</i> (MULSANT & REY, 1852)	21(4)
<i>Alevonota rufotestacea</i> (KRAATZ, 1856)	20a(1)
<i>Aloconota aegea</i> ASSING, 2016	12a(3), 17(1), 26(113), 27b(2)
<i>Aloconota cambrica</i> (WOLLASTON, 1855)	9(3), 9a(1), 12a(21), 17(1), 19(16), 26(18), 28b(15), 31a(4), 33(2)
<i>Aloconota gregaria</i> (ERICHSON, 1839)	9(9), 19(1), 30(1)
<i>Aloconota insecta</i> (THOMSON, 1856)	27b(1)
<i>Anaulacaspis laevigata</i> (DUVIVIER, 1883)	27b(1)
<i>Apimela procera</i> ASSING nov.sp.	17(1), 19(4), 26(23), 31(1), 31a(4)
<i>Atheta atramentaria</i> (GYLLENHAL, 1810)	20b(2)
<i>Atheta ischnocera</i> THOMSON, 1870	20b(3)
<i>Atheta laevana</i> (MULSANT & REY, 1852)	20b(14)
<i>Atheta laevigata</i> (HOCHHUTH, 1849)	9(4), 31a(4)
<i>Atheta luctuosa</i> (MULSANT & REY, 1853)	16(1)
<i>Atheta (Microdota)</i> sp. ²⁾	23a(1)
<i>Atheta (Mocyta)</i> sp.	9(1), 11a(15), 11b(64), 12(2), 14a(1), 18(1)
<i>Autalia rivularis</i> (GRAVENHORST, 1802)	3 (1)
<i>Caloderina hierosolymitana</i> (SAULCY, 1865)	31a(1)
<i>Cordalia obscura</i> (GRAVENHORST, 1802)	20b(1)
<i>Cypba graeca</i> ASSING, 2004	1(2)

Species	Localities/samples
<i>Dexiogygia corticina</i> (ERICHSON, 1837)	27a(1)
<i>Halobrecta algae</i> (HARDY, 1851)	21(17)
<i>Hydrosmeeta fluvialis</i> (KRAATZ, 1854)	9(4), 9a(1), 25(1), 26(57), 31a(1), 33(1)
<i>Hydrosmeeta fragilis</i> (KRAATZ, 1854)	19(1)
<i>Hydrosmeeta insularum</i> ASSING, 2019	9a(1), 26(17), 27b(6), 31a(1)
<i>Hydrosmeeta</i> sp. 1	19(1), 25(1)
<i>Hydrosmeeta</i> sp. 2	25(1), 26(7), 27b(1), 31a(4)
<i>Hydrosmeeta</i> sp. 3 (aff. <i>perpusilla</i>)	9(1), 9a(1), 31a(1)
<i>Liogluta longiuscula</i> (GRAVENHORST, 1802)	11b(1), 31(2), 31a(1)
<i>Myllaena infuscata</i> KRAATZ, 1853	20a(1)
<i>Myllaena intermedia</i> ERICHSON, 1837	27b(1)
<i>Myrmecopora convexula</i> ASSING, 1997	13a(1)
<i>Myrmecopora sulcata</i> (KIESENWETTER, 1850)	21(364)
<i>Myrmecopora uvida</i> (ERICHSON, 1840)	21(57)
<i>Ocalea badia</i> ERICHSON, 1837	2(3)
<i>Oxypoda carbonaria</i> (HEER, 1841)	20b(1)
<i>Oxypoda ignorata</i> ZERCHE, 1996	20b(3)
<i>Oxypoda lurida</i> WOLLASTON, 1857	19(1), 31(1)
<i>Oxypoda nova</i> BERNHAUER, 1902	1(1), 3(2), 16(1), 20(1)
<i>Oxypoda opaca</i> (GRAVENHORST, 1802)	20b(1)
<i>Parocysa longitarsis</i> (ERICHSON, 1839)	9(2), 26(3), 27b(28), 31a(1)
O x y t e l i n a e	
<i>Anotylus clypeonitens</i> (PANDELLÉ, 1867)	9(1)
<i>Anotylus complanatus</i> (ERICHSON, 1839)	6(1), 20b(14)
<i>Anotylus inustus</i> (GRAVENHORST, 1806)	20b(2), 22(1), 27(2), 31a(1)
<i>Anotylus sculpturatus</i> (GRAVENHORST, 1806)	20b(3), 27(1)
<i>Anotylus tetracarlinatus</i> (BLOCK, 1799)	12a(1), 20b(17), 31a(1)
<i>Carpelimus corticinus</i> (GRAVENHORST, 1806)	12(1), 27b(2)
<i>Carpelimus fuliginosus</i> (GRAVENHORST, 1802)	31a(2)
<i>Carpelimus gracilis</i> (MANNERHEIM, 1830)	9(1), 31a(4)
<i>Carpelimus similis</i> (SMETANA, 1967)	12(1), 27b(25), 31a(1)
<i>Ochtheophilus andalusiacus</i> (FAGEL, 1957)	12a(1), 27b(2)
<i>Platystethus alutaceus</i> THOMSON, 1861	12(1)
<i>Thinobius petzi</i> BERNHAUER, 1908	26(3)
<i>Thinodromus bodemeyeri</i> (BERNHAEUER, 1902)	9(1), 27b(1)
S t e n i n a e	
<i>Stenus clavicornis</i> (SCOPOLI, 1763)	34(1)
<i>Stenus maculiger</i> WEISE, 1875	26(1), 27b(6), 31a(1)
<i>Stenus parciior</i> BERNHAUER, 1929	29(1)
<i>Stenus turbulentus</i> BONDROIT, 1912	6(1), 11a(6), 11b(7), 14a(1), 23a(1), 28a(3)
<i>Stenus turcicus</i> BERNHAUER, 1912	33(1)
L e p t o t y p h l i n a e	

Species	Localities/samples
* <i>Cyrtotyphlus samothracicus</i> ASSING nov.sp.	14(2), 23(1), 27(2), 28(1)
* <i>Metrotyphlus samothracicus</i> ASSING nov.sp.	20(1)
<i>Scydmaeninae</i>	
* <i>Cephennium samothracicum</i> ASSING nov.sp.	16(1)
<i>Microscydmus</i> sp. (♀)	20a(1), 28a(1)
* <i>Scydmorephes samothracicus</i> MEYBOHM nov.sp.	16(4), 23a(1)
<i>Stenichnus assingi</i> MEYBOHM in prep.	16(1)
<i>Paederinae</i>	
<i>Astenus lyonessius</i> (JOY, 1908)	8(1)
<i>Astenus melanurus</i> (KÜSTER, 1853)	5(1), 13a(1)
<i>Astenus procerus</i> (GRAVENHORST, 1806)	17(1)
<i>Astenus thoracicus</i> (BAUDI DI SELVE, 1857)	10(5), 13(3), 13a(3),
<i>Homaetarsus chaudoirii</i> HOCHHUTH, 1851	20a(2), 28a(2)
<i>Lobrathium rugipenne</i> (HOCHHUTH, 1851)	27b(2), 30(1)
<i>Medon dilutus pythonissa</i> (SAULCY, 1865)	6(1)
<i>Medon fuscus</i> (MANNERHEIM, 1830)	3(3), 12(2), 21(2)
<i>Medon maronitus</i> (SAULCY, 1865)	3(1), 4a(1), 7(1), 12(1)
<i>Medon pocofer</i> (PEYRON, 1858)	21(1)
<i>Micranops pilicornis</i> (BAUDI DI SELVE, 1870)	12(1)
<i>Paederus littoralis</i> GRAVENHORST, 1802	10a(1), 34(1)
<i>Pseudobium hellenicum</i> ASSING, 2006	9(12), 9a(1)
<i>Pseudomedon obscurellus</i> (ERICHSON, 1840)	31a(7)
<i>Rugilus orbiculatus</i> (PAYKULL, 1789)	20b(2)
<i>Scopaeus gracilis</i> (SPERK, 1835)	17(1), 19(2), 26(1), 27b(1), 31a(3)
<i>Scopaeus portai</i> LUZE, 1910	27b(1)
<i>Scopaeus pusillus</i> KIESENWETTER, 1843	9(1), 12a(1), 26(4)
<i>Sunius fallax</i> (LOKAY, 1919)	12(1)
<i>Staphylininae</i>	
<i>Erichsonius subopacus</i> (HOCHHUTH, 1851)	27b(1)
<i>Gabrius nigrifolius</i> (GRAVENHORST, 1802)	27b(1), 31a(3)
<i>Gyrophypnus fracticornis</i> (MÜLLER, 1776)	20b(3)
<i>Leptacinus intermedius</i> DONISTHORPE, 1936	20b(1)
<i>Neobisnius procerulus</i> (GRAVENHORST, 1806)	9a(1)
<i>Philonthus debilis</i> (GRAVENHORST, 1802)	20b(2)
<i>Philonthus juvenilis</i> PEYRON, 1858	6(1), 25(2), 26(6), 27b(1)
<i>Ocypus simulator</i> EPPELSHEIM, 1878	29(1)
<i>Othius laeviusculus</i> STEPHENS, 1833	32(2)
<i>Quedius meridiocarpaticus</i> SMETANA, 1958	10(1)
<i>Quedius nemoralis</i> BAUDI DI SELVE, 1848	3(1), 6(1), 15(1), 30(1)
<i>Quedius suturalis</i> KIESENWETTER, 1845	2(3)
<i>Quedius umbrinus</i> ERICHSON, 1839	7(1)
<i>Remus filum</i> (KIESENWETTER, 1849)	21(7)

Species	Localities/samples
<i>Remus pruinus</i> (ERICHSON, 1840)	21(1), 26(1)
<i>Stenistoderus cephalotes</i> (KRAATZ, 1858)	31a(1)
<i>Xantholinus chersonesicus</i> ASSING, 2007	1(1), 2(1), 3(1), 14a(2), 15(1), 16(1), 23a(1)
<i>Xantholinus graecus</i> KRAATZ, 1858 (♀) ¹⁾	9(1)
<i>Xantholinus rufipennis</i> ERICHSON, 1839	13(2), 13a(1), 24(1), 29(5)

Footnotes: ¹⁾ identification based on females and consequently tentative; ²⁾ most likely undescribed (VOGEL pers. comm.).

3.2 Comparison with other Aegean Islands

The Staphylinidae faunas of several Aegean Islands have been studied in the recent past, among them the North Aegean Islands Chios (ASSING 2015a), Lesbos (ASSING 2016b), Samos (ASSING 2015b, 2017b), and Ikaria (ASSING 2017b).

Considering its northern geographic position and its small area compared to those of Chios (840 km²), Lesbos (1,633 km²), Samos (477 km²), and Ikaria (255 km²), Samothraki is characterized by a relatively rich Staphylinidae fauna, both regarding total diversity and number of endemic species. For comparison, 41 species (two endemic, both undescribed) are known from Chios, 201 (eleven endemic) from Lesbos, 157 (17 endemic) from Samos, and 70 (seven endemic) from Ikaria. It should be noted, however, that the endogean faunas of these four islands have not been studied. The relatively high figures for total diversity and number of endemics may be explained with the diverse wetland fauna and the comparatively long time of isolation of the island, respectively.

3.3 Notes on some species

Bythinus acutangulus lunifer KARAMAN, 1948

According to SCHÜLKE & SMETANA (2015), this subspecies had been recorded from Albania, Macedonia, Bulgaria, and Turkey, but was previously unknown from Greece.

Aloconota aegea ASSING, 2016

The previously known distribution of this recently described species was confined to Samos and Lesbos (ASSING 2016b).

Atheta (Philhygra) laevigata (HOCHHUTH, 1849)

Atheta laevigata is widespread and not uncommon in the Caucasus region and Turkey. Based on a record from the South Aegean island Kos, it was recently reported from Greece for the first time (ASSING 2017a).

Hydrosmeeta fluviatilis (KRAATZ, 1854)

This widespread ripicolous species was newly reported from Greece (Crete) only very recently (ASSING 2019).

***Hydrosmeeta fragilis* (KRAATZ, 1854)**

A d d i t i o n a l r e c o r d : Turkey: 15 exs., Aydın, ca. 20 km NE Kuyucak, Bayrak Tepe, 38°00'09N, 28°34'53E, 1480 m, 7.IV.2006, leg. Assing (cAss).

Based on material from the Ionian island Corfu, *H. fragilis* was recently reported from Greece for the first time. The above specimens from Aydın represent the first record from Turkey.

***Hydrosmeeta insularum* ASSING, 2019**

The known distribution of this recently described species is confined to Crete and the Aegean islands Ikária, Lesbos, and Samothraki (ASSING et al. 2019).

***Myrmecopora (Myrmecopora) convexula* ASSING, 1997**

The previously known distribution of this myrmecophile included South Bulgaria, the Aegean islands Chios and Lesbos, and West Turkey (ASSING 2015a, 2016b).

***Thinobius (Thiphonilus) petzi* BERNHAUER, 1908**

According to SCHÜLKE & SMETANA (2015), this species was previously unknown from Greece.

***Stenichnus assingi* MEYBOHM, in prep.**

This species is not endemic to Samothraki, but has also been found in mainland Greece, the Pelopónnisos, and in South Italy (Puglia: Monte Gargano). It will be described in the framework of a different project (MEYBOHM in prep.).

***Medon pocofer* (PEYRON, 1858)**

The specimen listed in Tab. 1 represents the second record of this rare littoral species from Greece. The first record (Crete) dates back to the end of the 19th century (OERTZEN 1887). For a map illustrating the currently known distribution see ASSING (2013).

***Pseudobium hellenicum* ASSING, 2006**

Pseudobium hellenicum, evidently a rare species, has been recorded from few localities in mainland Greece (including the Pelopónnisos) and West Turkey (ASSING 2006a, 2007a, 2012).

***Xantholinus (Helicophallus) chersonesicus* ASSING, 2007**

The record of this flightless species is of particular zoogeographic interest. It was previously known only from the type locality, the Gelibolu peninsula, Çanakkale, northwestern Turkey (ASSING 2007b). Not only do the specimens listed in Tab. 1 represent the first records from Greece and since the original description, these records also confirm a land connection between Samothraki and Northwest Turkey.

3.4 Descriptions of new species

3.4.1 Aleocharinae

Apimela procera ASSING nov.sp. (Figs 1-8, 25-27)

Type material: Holotype ♂: "GR – Samothraki [33], SE Ano Meria, 40°26'52"N, 25°41'46"E, 5 m, stream gravel, 14.IV.2019, V. Assing / Holotypus ♂ *Apimela procera* sp.n. det. V. Assing 2019" (cAss). Paratypes: 10♂♂, 12♀♀: same data as holotype (cAss); 1♀: "GR – Samothraki [24], E Therma, 40°30'09"N, 25°36'38"E, 10 m, river bank, gravel floated, 11.IV.2019, V. Assing" (cAss); 1♂, 3♀♀: "GR – Samothraki [26], E Therma, 40°29'55"N, 25°37'27"E, 10 m, river bank, gravel floated, 11.IV.2019, V. Assing" (cAss); 1♀: "GR – Samothraki [38], SE Kamariotissa, 40°26'48"N, 25°29'53"E, 40 m, stream bank, sift., 16.IV.2019, V. Assing" (cAss); 1♂, 3♀♀: "GR – Samothraki [38a], SE Kamariotissa, 40°26'48"N, 25°29'53"E, 40 m, stream gravel, 16.IV.2019, V. Assing" (cAss); 1♀: "GR. Fthiotis, 470 m, 9, 38°49'31N, 22°04'58E, SW Lamia, Inachos river bank, 05.IV.2001, Assing & Wunderle" (cAss); 1♀: "Turkey (Adana): 6 km NE Osmaniye, 37°06'40"N, 36°18'46"E, 130 m, river bank washed, 10.IV.2004, leg. V. Assing & M. Schülke [T04-31]" (cAss).

Etymology: The specific epithet (Latin, adjective: slender) alludes to the habitus of this species, which immediately distinguishes it from the closely related and widespread *A. mulsanti* (GANGLBAUER, 1895).

Description: Body length 2.9-3.7 mm; length of forebody 1.3-1.7 mm. Habitus as in Fig. 1. Coloration: head and pronotum pale-yellowish to reddish-brown; elytra dark-yellow; abdomen reddish with the preapical segments sometimes slightly darker; legs yellow; antennae brown with the basal three antennomeres reddish.

Head (Fig. 2) weakly oblong, with convex lateral margins, broadest behind eyes; punctation dense and fine; interstices mostly without, rarely with indistinct traces of microsculpture. Eyes small and weakly convex, not distinctly protruding from lateral contours of head and slightly more than half as long as postocular region in dorsal view. Antenna (Fig. 3) approximately 1.0 mm long; antennomeres IV-X approximately 1.5 times as broad as long, or nearly so, and of gradually increasing width.

Pronotum (Fig. 2) slender, weakly oblong, 1.05-1.10 times as long as broad and slightly broader than head, broadest anteriorly, and distinctly tapering posteriad; lateral margins weakly concave in posterior two-thirds in dorsal view; punctation finer and denser than that of head; interstices without distinct microsculpture.

Elytra (Fig. 2) 0.90-0.95 times as long as pronotum; punctation fine, shallow, and dense; interstices without microsculpture. Hind wings fully developed. Metatarsomere I longer than metatarsomere II, but shorter than the combined length of metatarsomeres II and III.

Abdomen (Fig. 4): tergites III-VI with anterior impressions, that of tergite VI usually shallower and narrower than those of tergites III-V; tergite III with pronounced sexual dimorphism; punctation sexually dimorphic, dense, fine, but distinct on tergites III-VI, sparse on tergite VII; posterior margin of tergite VII with pronounced palisade fringe; posterior margin of tergite VIII broadly and shallowly concave, without sexual dimorphism (Fig. 25).

♂: abdominal tergite III broadly triangularly produced and in the middle with pronounced, apically truncate process posteriorly; punctation of abdomen weakly granulose (Fig. 4); sternite VIII (Fig. 26) strongly transverse, posterior margin convexly produced

in the middle; median lobe of aedeagus 0.35-0.40 mm long and shaped as in Figs 5-7.

♀: abdominal tergite III unmodified; punctuation of abdomen not granulose; sternite VIII (Fig. 27) approximately as long as broad and with posterior margin of triangular shape; spermatheca as in Fig. 8.

Comparative notes: Based on the similar modifications of the male abdomen, the similar general morphology of the aedeagus, and the similarly shaped spermatheca, *A. procera* undoubtedly belongs to the *A. mulsanti* group. Aside from *A. procera*, this group is represented in the West Palaearctic region by two species, the widespread *A. mulsanti* (GANGLBAUER, 1895) and an undescribed species from Turkey and the Caucasus region. The new species is readily distinguished from both by the absence of distinct microsculpture on the forebody and by the shape of the median lobe of the aedeagus, and from *A. mulsanti* additionally by numerous characters, i.e., larger body size, a more slender habitus, distinct punctuation of the forebody (*A. mulsanti*: punctuation of forebody extremely fine, indistinct in the pronounced microsculpture), the shape of the head (*A. mulsanti*: head subquadrate), smaller and less convex eyes, longer antennae with less transverse antennomeres IV-X, the shape of the pronotum (*A. mulsanti*: pronotum weakly transverse, only indistinctly tapering posteriad, and with practically straight lateral margins), and more pronounced modifications of the male tergite III.

Distribution and natural history: *Apimela procera* is currently known from four localities in Samothraki, one near Lamia in the Greek mainland, and one near Osmaniye in central southern Turkey. Except for one specimen that was sifted from debris on a stream bank, the material was washed from fine gravel of stream banks. The altitudes range from 5 to 470 m.

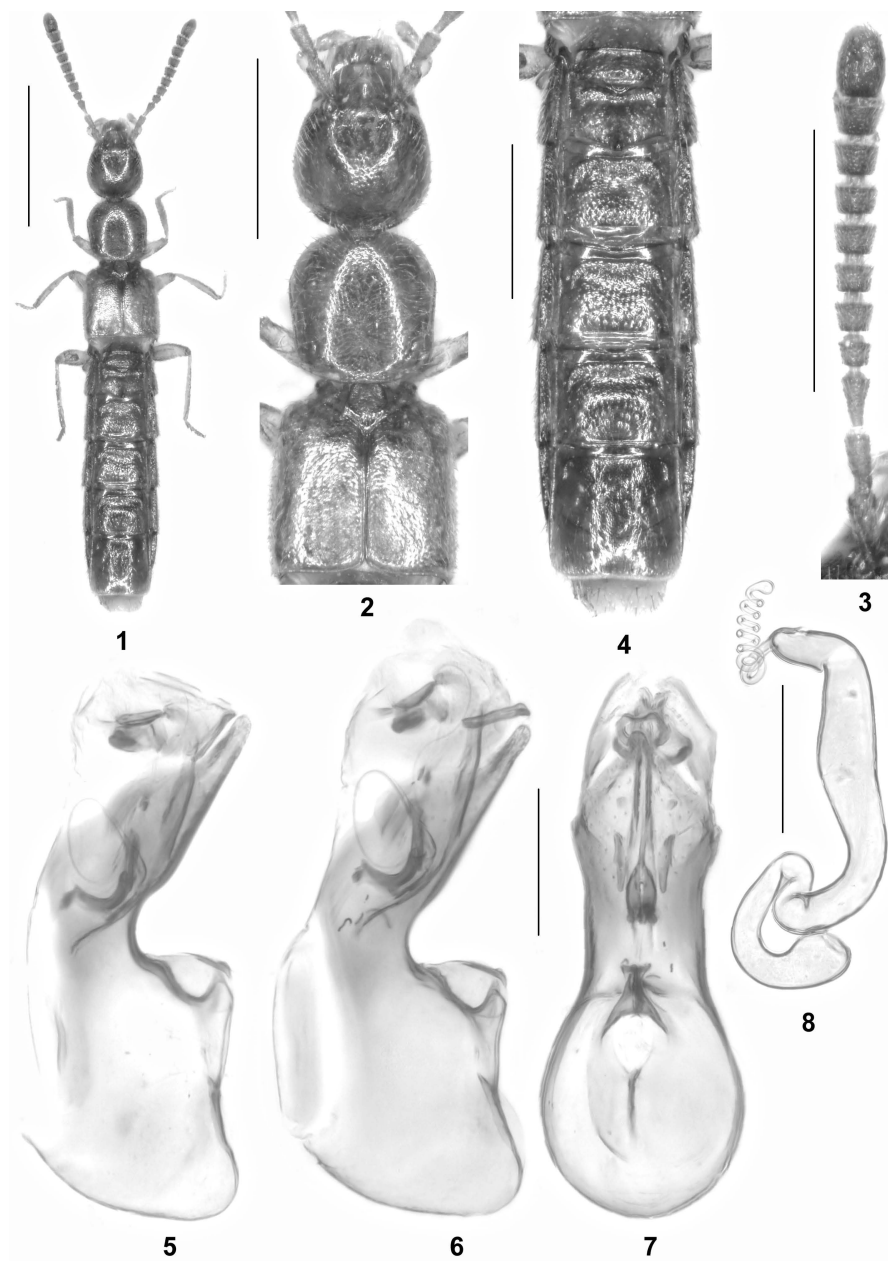
3.4.2 Leptotyphlinae

Cyrtotyphlus samothracicus ASSING nov.sp. (Figs 9-14, 34)

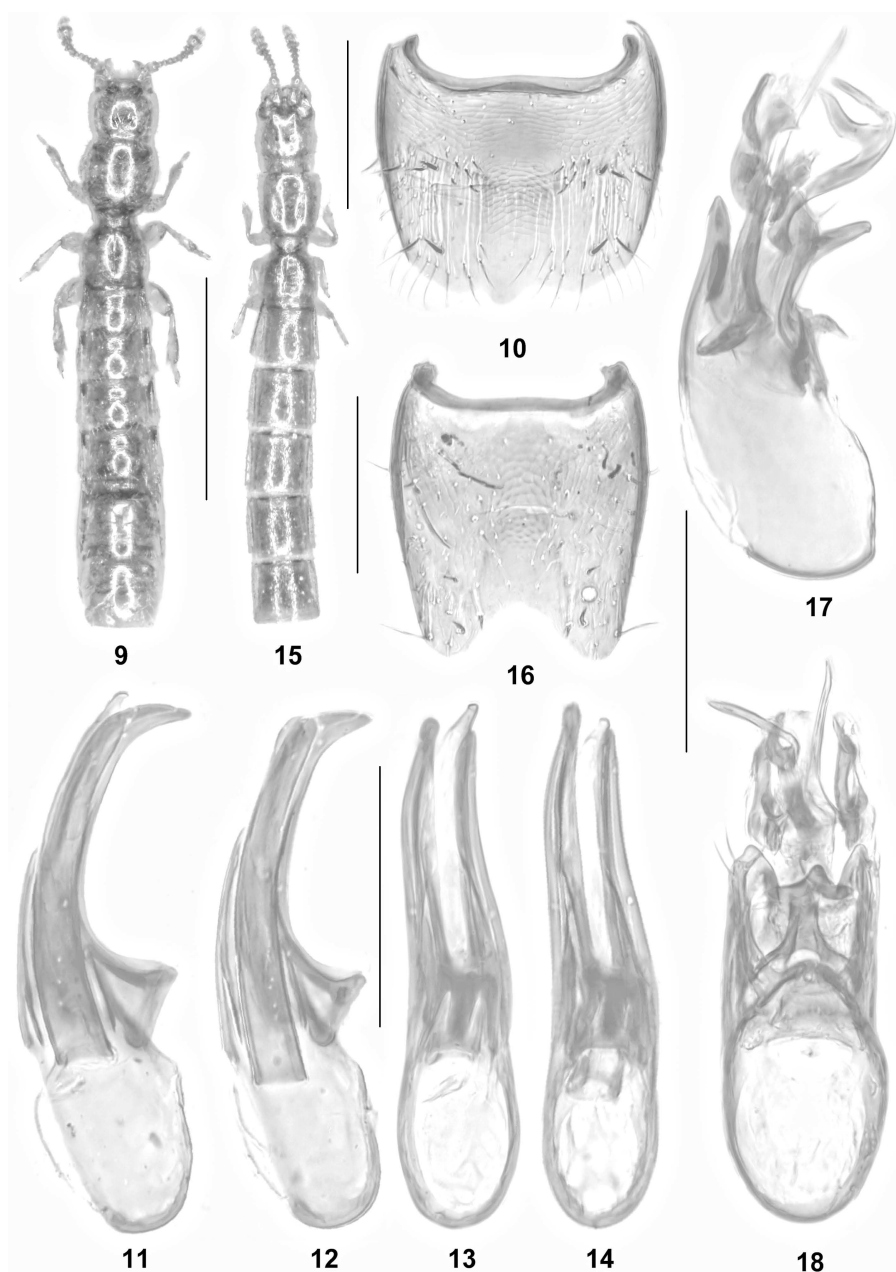
Type material: Holotype ♂: "GR – Samothraki [34], ESE Ano Meria, 40°27'41"N, 25°41'25"E, 30 m, soil washing, 14.IV.2019, V. Assing / Holotypus ♂ *Cyrtotyphlus samothracicus* sp.n. det. V. Assing 2019" (cAss). **Paratypes:** 1♀: same data as holotype (cAss); 1♂, 1♀: "GR – Samothraki [21], Therma, 40°29'49"N, 25°36'31"E, 30 m, soil washing near stream, 10.IV.2019, V. Assing" (cAss); 1♀: "GR – Samothraki [30], S Ano Meria, 40°26'54"N, 25°40'07"E, 230 m, soil washing, 13.IV.2019, V. Assing" (cAss); 1♀: "GR – Samothraki [35], Therma, 40°29'32"N, 25°36'45"E, 60 m, *Platanus* forest, soil wash., 14.IV.2019, V. Assing" (cAss).

Etymology: The specific epithet is an adjective derived from Samothrace, one of the synonyms of Samothraki.

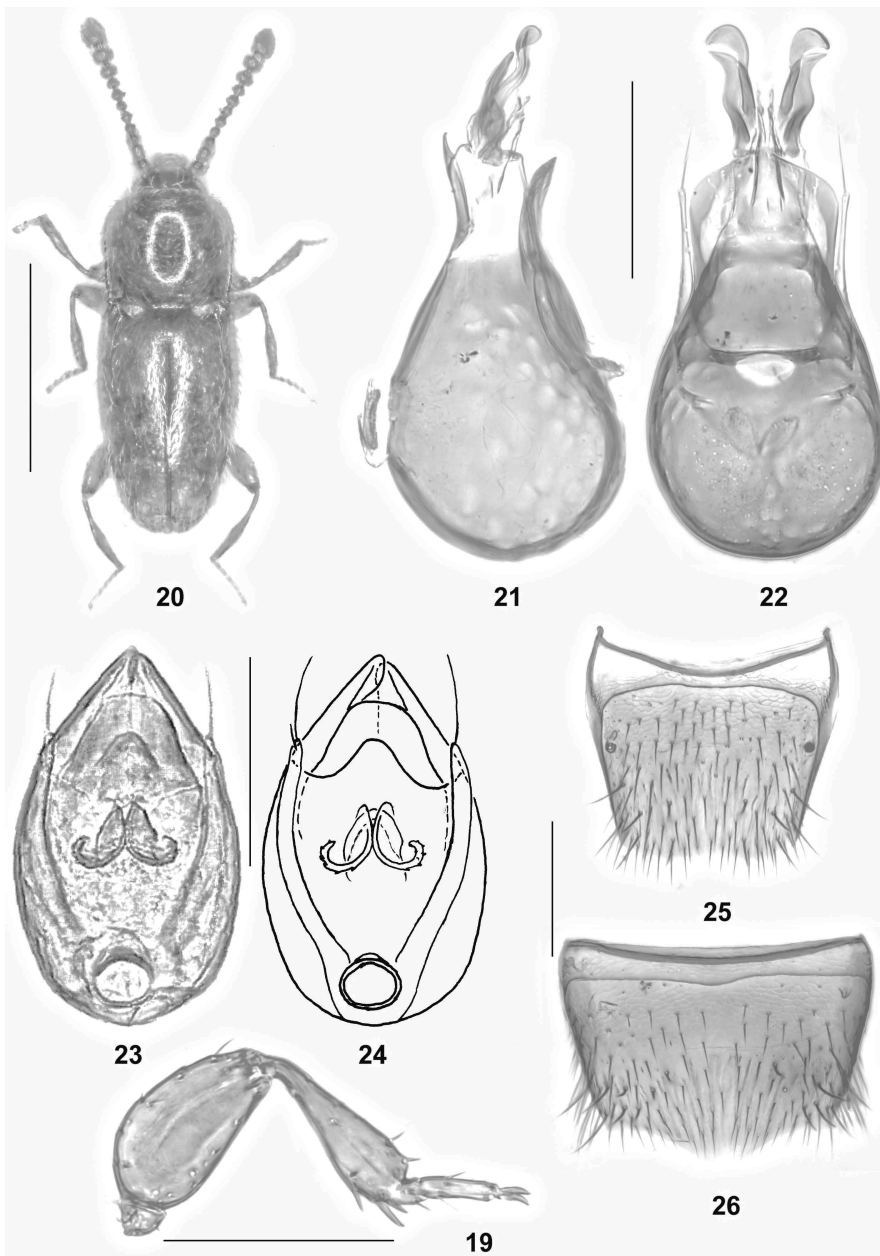
Description: Body length 1.2-1.4 mm; length of forebody approximately 0.5 mm. Habitus as in Fig. 9. Reliably distinguished from other species only by the male sexual characters.



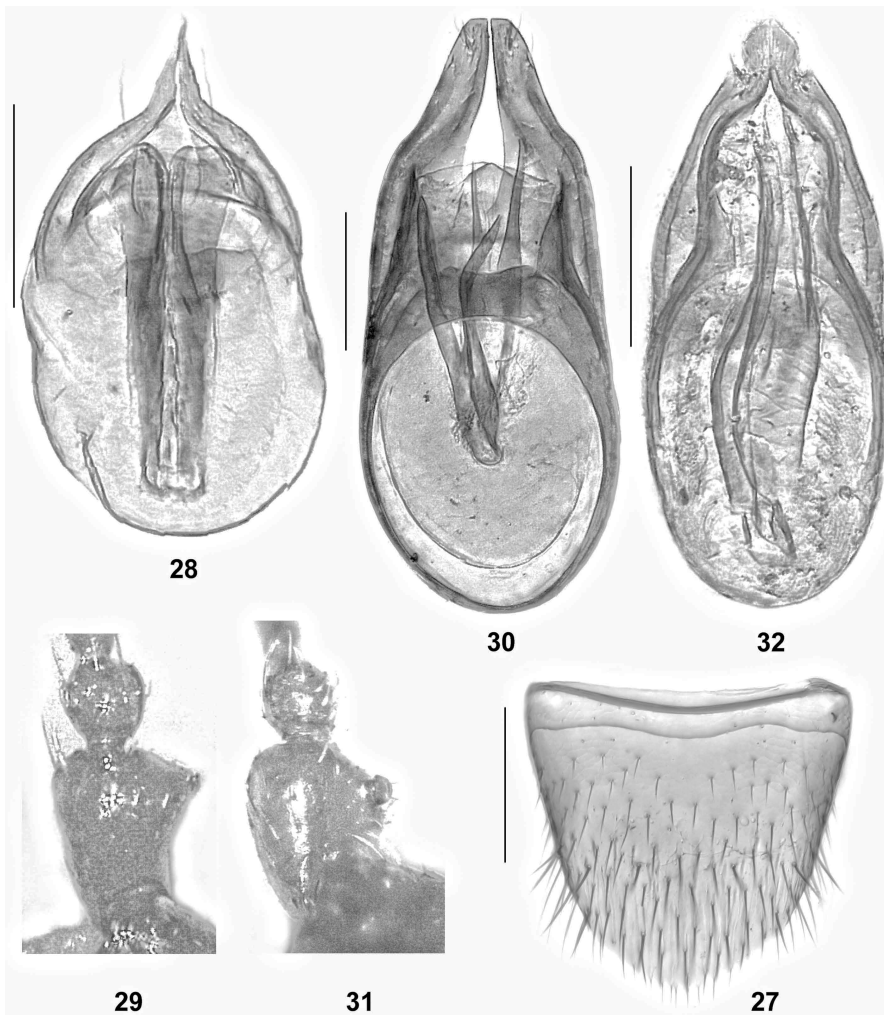
Figs 1-8: *Apimela procera*: (1) male habitus; (2) male forebody; (3) male abdomen; (4) antenna; (5-7) median lobe of aedeagus in lateral and in ventral view; (8) spermatheca. Scale bars: 1: 1.0 mm; 2-4: 0.5 mm; 5-8: 0.1 mm.



Figs 9-18: *Cyrtotyphlus samothracicus* (9-14) and *Metrotyphlus samothracicus* (15-18): (9, 15) habitus; (10, 16) male sternite VIII; (11-14, 17-18) median lobe of aedeagus in lateral and in ventral view. Scale bars: 0.1 mm.



Figs 19-26: *Metrotyphlus samothracicus* (19), *Cephennium samothracicum* (20-22), *Scydmorephes samothracicus* (23-24), and *Apimela procera* (25-26): (19) hind leg; (20) habitus; (21-24) aedeagus in lateral and in ventral view; (25) male tergite VIII; (26) male sternite VIII. Scale bars: 20: 0.5 mm; 25-26: 0.2 mm; 19, 21-24: 0.1 mm.



Figs 27-32: *Apimela procera* (27), *Tychobythinus assingi* (28), *Bryaxis samothracicus* (29-30), and *Bryaxis pangeonicus* (31-32): (27) female sternite VIII; (28, 30, 32) aedeagus in dorsal view; (29, 31) male antennomeres I-II. Scale bars: 27: 0.2 mm; 28, 30, 32: 0.1 mm; 29, 31: without scale.

♂: sternite VIII (Fig. 10) transverse, slightly asymmetric; across middle and near posterior margin with pubescence, otherwise without pubescence, posterior margin with median projection; aedeagus (Figs 11-14) 0.20-0.21 mm long; ventral process deeply bifid, both halves of different shapes and different lengths.

Comparative notes: The genus *Cyrtotyphlus* DODERO, 1900 previously included five species, one from the West Alps and northern Apennines, one in the Apennines, one in the southeastern Alps, one in Montenegro, and one in northeastern Greece (COIFFAIT 1972, SCHÜLKE & SMETANA 2015). The original description of the species from Thrace in Greece, *C. thracicus* COIFFAIT, 1957, is based on an unspecified number of females ("Mâle inconnu") from "Thrace grecque: Sapé" (COIFFAIT 1957),

today Sapes (41°01'N, 25°42'E), i.e., the region in the Greek mainland to the north of Samothraki. Since Leptotyphlinae species are reliably identified only based on the male sexual characters, an interpretation of *C. thracicus* will only be possible when males from the vicinity of the type locality are available. However, according to the original description of *C. thracicus*, this species is 1.6 mm long and thus of greater size than *C. samothracicus*. Aside from this morphological difference, it appears rather unlikely that an endogean species from Samothraki should be conspecific with a species from the mainland.

Distribution and natural history: The new species, most likely and endemic of Samothraki, was found in four localities in the north of the island. The specimens were washed from soil taken in stream valleys with old *Platanus orientalis* at altitudes of 30-230 m. One of the localities is illustrated in Fig. 34.

***Metrotyphlus (Agnotyphlus) samothracicus* ASSING nov.sp. (Figs 15-19, 33)**

Type material: Holotype ♂: "GR – Samothraki [27], Therma, 40°29'40"N, 25°36'05"E, 110 m, *Platanus* forest, soil wash., 12.IV.2019, V. Assing / Holotypus ♂ *Metrotyphlus samothracicus* sp.n. det. V. Assing 2019" (cAss).

Ety m o l o g y : The specific epithet is an adjective derived from Samothrace.

Description: Body length 1.3 mm; length of forebody 0.5 mm. Habitus as in Fig. 15. Tarsal formula 2, 2, 2 (Fig. 19). Reliably distinguished from other species of the genus only by the male sexual characters.

♂: sternites III-VIII with shallow, but extensive median impressions; sternite VIII (Fig. 16) weakly oblong and nearly symmetric, posterior margin with a large median excision; aedeagus (Figs 17-18) 0.15 mm long and, except internal structures, symmetric; internal structures of distinctive shapes.

Comparative notes: *Metrotyphlus* COIFFAIT, 1959 previously included twelve species in two subgenera, four in the nominal subgenus and eight in the subgenus *Agnotyphlus* COIFFAIT, 1972 (SCHÜLKE & SMETANA 2015). Those assigned to *Agnotyphlus* had been recorded from the Alpi Apuane and across the southern Alps southeastwards to Istria (Croatia). Thus, the record of *M. samothracicus* expands the known range of both the genus and the subgenus southeastwards by a distance of more than 1,000 km and suggests that at least *Agnotyphlus* is far more widespread and diverse than presently known.

The new species differs from other *Agnotyphlus* species by the distinctive male primary and secondary sexual characters, particularly the internal structures of the aedeagus. For illustrations of the previously described species see COIFFAIT (1972) and PACE (1997).

Distribution and natural history: *Metrotyphlus samothracicus* is most likely endemic to Samothraki. Despite extensive soil washing in numerous localities, only a single male was found. It was collected in the north of the island in a moist *Platanus* forest at an altitude of 110 m. The locality is illustrated in Fig. 33.



Figs 33-34: Type localities of *Metrotyphlus samothracicus* (sample number 20) (above) and of *Tychobythinus assingi* (sample number 14) (below). In the latter locality, *Cyrtotyphlus samothracicus* was found, too.



Fig. 35: Type locality of *Cephennium samothracicum* and *Scydmorephes samothracicus* (sample number 16). *Bryaxis samothracicus*, too, was found in this locality.

3.4.3 Scydmaeninae

***Cephennium samothracicum* ASSING nov.sp. (Figs 20-22, 35)**

Type material: Holotype ♂: "GR – Samothraki [23], WSW Ano Meria, 40°27'39"N, 25°38'32"E, 900 m, roots and litter, 11.IV.2019, V. Assing / Holotypus ♂ *Cephennium samothracicum* sp.n. det. V. Assing 2019" (cAss).

E t y m o l o g y : The name (adjective) is derived from Samothrace.

D e s c r i p t i o n : Body length 0.93 mm. Habitus as in Fig. 20. Coloration pale-reddish with yellowish legs and palpi. Whole body with extremely fine punctation barely visible even at a magnification of 100 x and without microsculpture. Pronotum and elytra relatively weakly convex in cross-section. Anophthalmous, without traces of eyes. Antenna 0.4 mm long, with antennomeres IX-XI forming a distinct club; antennomeres IX-X strongly transverse and XI barely 1.5 times as long as broad.

Pronotum weakly transverse, barely 1.15 times as broad as long and 1.75 times as broad as head, broadest anteriorly and weakly tapering posteriad; lateral margins nearly straight. Elytra slender, 1.8 times as long as pronotum and 1.5 times as long as combined width, with narrow, but distinct humeral keel of approximately one-third the length of elytron. All tibiae distinctly dilated in apical two thirds.

♂: aedeagus (Figs 21-22) 0.21 mm long, with broadly house-shaped ventral process in ventral view; internal sac with three pairs of sclerotized spines of distinctive shapes.

Comparative notes: Since the subgeneric concept currently in use is problematic (JALOSZYŃSKI & STEVANOVIĆ 2015), *C. samothracicum* is not assigned to any of the six subgenera represented in the Palaearctic region. *Cephennium* MÜLLER & KUNZE, 1822 is represented in the Greek mainland and the Aegean islands by numerous species, many of them anophthalmous or subanophthalmous and locally endemic, but mostly undescribed (MEYBOHM pers. comm.). The new species is distinguished from the four described species from the Greek mainland and Corfu currently assigned to the subgenus *Phennecium* NORMAND, 1912 (*C. granulum* REITTER, 1884, *C. ionicum* HOLDHAUS, 1908, *C. lesinae* REITTER, 1881, *C. puncticolle* REITTER, 1885), as well as from other described and undescribed species of the Aegean islands and West Turkey by the morphology of the aedeagus (short parameres; shapes of the ventral process and of the internal structures).

Distribution and natural history: This anophthalmous and most likely island-endemic species was found in the northeast of Samothraki. The holotype was sifted from litter and roots between rocks in the shade of large rocks and beneath an old oak tree at an altitude of 900 m (Fig. 35).

***Scydморарһes samothracicus* MEYBOHM nov.sp. (Figs 23-24, 35)**

Type material: Holotype ♂: "GR – Samothraki [23], WSW Ano Meria, 40°27'39"N, 25°38'32"E, 900 m, roots and litter 11.IV.2019, V. Assing / *Scydморарһes samothracicus* m. Meybohm 2019 det. / Holotypus" (cMey). Paratypes: 3 ♀♀: same data as holotype (cMey). 1 ♀: "GR – Samothraki [30a], S Ano Meria, 40°26'54"N, 25°40'07"E, 230 m, *Platanus* sifted 13.IV.2019, V. Assing / *Scydморарһes samothracicus* m. Meybohm 2019 det. / Paratypus" (cMey).

Etymology: The specific epithet (adjective) alludes to the hypothesized distribution, which is most likely confined to Samothraki.

Description: External characters as in the widespread *S. tricavulus* (REITTER, 1881) (Balkans, Hungary, Romania), a species redescribed and illustrated by FRANZ (1961), except as follows:

Body length 1.00-1.03 mm. Pubescence longer and less erect. Head width including eyes 0.18 mm, head length 0.16 mm. Supra-antennal tubercles more distinct. Eyes much smaller, diameter of eyes as long as antennomere V, distance between eyes about four times as long as diameter of eyes. Antenna longer (0.43 mm); antennomeres II almost twice as long as broad, III as long as broad, IV and V 1.5 times as long as broad, VI as long as broad, VII to X of increasing width, X almost twice as broad as long. Pronotum more slender, 0.30 mm long and 0.25 mm broad, broadest at anterior third, at base 0.19 mm broad. Elytra without sexual dimorphism, 0.64 mm long and 0.40 mm broad, broadest at anterior third, regularly convex, in dorsal view laterally more rounded and apically more narrowed, in lateral view more rounded.

♂: aedeagus shaped as in Figs 23-24, with straight apico-lateral parts ("retinaculum" in CASTELLINI 2007); internal sac with a large dorso-apical plate ("median lobe" in CASTELLINI 2007), a pair of frond-shaped median sclerites ("wedelartige Gebilde" in FRANZ 1961), and with a small horseshoe-shaped plate situated dorsally of these sclerites.

Comparative notes: *Scydморарһes samothracicus* belongs to a species group that is mainly characterised by a pair of frond-shaped sclerites in the internal sac of the aedeagus and by a pronotum with carinate lateral margins only in the posterior half. There are several similar, but undescribed species in Northwest Turkey and Samos

(material in cMey), all of which are distinguished by larger eyes and the absence of a horseshoe-shaped structure in the internal sac of the aedeagus.

Distribution and natural history: This species is most likely endemic to Samothraki. The specimens were sifted from leaf litter and grass roots between large rocks and beneath an old oak tree at 900 m, and from leaf litter in a stream valley with very old *Platanus orientalis* and scattered old chestnut trees at an altitude of 230 m. The type locality is identical to that of *Cephennium samothracicum* and illustrated in Fig. 35.

3.4.4 Pselaphinae

Tychobythinus assingi BRACHAT nov.sp. (Fig. 28, 34)

Type material: Holotype ♂: "GR – Samothraki [21], Therma, 40°29'49"N, 25°36'31"E, 30 m, soil washing near stream, 10.IV.2019, V. Assing / *Tychobythinus assingi* spec.nov. ♂, det. Brachat / Holotypus" (cBra).

Ety m o l o g y: This species is dedicated to Volker Assing, who collected the holotype.

Description: Body length 1.15 mm. Body brownish with yellowish appendages, glossy, and smooth with scattered and mostly indistinct (more distinct and somewhat rugose on head) punctation. Pubescence sparse, relatively long (0.08 mm) on elytra, shorter on head and pronotum.

Head indistinctly transverse (length 0.22 mm; width 0.23 mm). Eye strongly reduced, reduced to only a single ommatidium. Frontal lobe 0.13 mm broad. Antenna 0.54 mm long; antennomeres I slender and elongate (length 0.15 mm; width 0.04 mm), II oval (length 0.06 mm; width 0.04 mm) III minute (length 0.03 mm; width 0.025 mm), IV-VII globular (length and width 0.025), VIII weakly transverse (length 0.020 mm; width 0.025 mm); IX (length 0.03 mm; width 0.04 mm) transverse and distinctly broader than VIII, X (length 0.03 mm; width 0.05 mm) more distinctly transverse, broader than IX, and XI large, as long as the combined length of VIII-X (length 0.11 mm; width 0.08 mm). Maxillary palpi slender; palpomeres II and III with numerous small tubercles; palpomere III oblong; palpomere IV approximately 2.5 times as long as broad (length 0.16 mm; width 0.07 mm). Pronotum transverse, longer and broader than head (length 0.27 mm; width 0.31 mm), without lateral carina. Elytra 0.39 mm long, 0.48 mm broad, and 1.25 times as broad as long; humeral angles weakly marked. Hind wings completely reduced.

♂: head ventrally with transverse gular impression with slightly elevated anterior and lateral margins, anterior margin medially with short and erect lamella; profemur dilated and with scattered tubercles on inner face; protrochanter with small tooth; mesofemur slightly dilated; metafemur simple, not dilated; meso- and metatrochanter with fine carina on inner side; metaventrite weakly convex; aedeagus (Fig. 28) 0.26 mm long; internal sac with a pair of sclerotized structures of distinctive shape; paramere with long seta in apical third.

♀: unknown.

Comparative notes: Two anophthalmous, troglobiontic *Tychobythinus* species are known from Greece: *T. naxius* BESUCHET, 1993 from Naxos and *T. brachati*

BESUCHET, 2008 from Samos. The new species is distinguished from both of them by distinctly shorter antennae and by the shapes of the internal structures of the aedeagus. All other *Tychobythinus* species known from Greece are winged and have eyes of normal size.

Distribution and natural history: *Tychobythinus assingi* is most likely endemic to Samothraki. The holotype was collected by washing soil beneath old *Platanus orientalis* near a stream at an altitude of 30 m (Fig. 34). *Cyrtotyphlus samothracicus* was found in the same sample.

***Bryaxis samothracicus* BRACHAT nov.sp. (Figs 29-30, 35)**

Type material: Holotype ♂: "GR – Samothraki [18b], Therma, 40°30'01"N, 25°36'23"E, 20 m, mixed forest, sifted, 15.IV.2019, V. Assing / *Bryaxis samothracicus* spec.nov. ♂, det. Brachat / Holotypus" (cBra). Paratypes (all in cBra): 1♂: same data as holotype; 1♂, 1♀: "GR – Samothraki [21a], Therma, 40°29'49"N, 25°36'31"E, 30 m, bank of stream, litter sifted, 15.IV.2019, V. Assing"; 2♀♀: "GR – Samothraki [22], WSW Ano Meria, 40°27'39"N, 25°38'26"E, 890 m, roots and litter, 11.IV.2019, V. Assing"; 3♀♀: "GR – Samothraki [23], WSW Ano Meria, 40°27'39"N, 25°38'32"E, 900 m, roots and litter, 11.IV.2019, V. Assing".

E t y m o l o g y : Named after the island where this species is probably endemic.

D e s c r i p t i o n : Body length 1.55-1.70 mm. Body reddish-brown, glossy, and with suberect yellow pubescence (length of setae 0.1 mm), with scattered longer setae.

Head weakly transverse (length 0.30-0.31 mm; width 0.32-0.35 mm). Eye size highly variable, in male with 10-20 and in female with 9-12 ommatidia. Frontal lobe 0.18 mm broad. Antenna 0.64-0.68 mm long; antennomeres III 1.25 x times as long as broad, IV-VII globular and as broad as III, VIII shorter, IX transverse and slightly broader and longer than VIII, X more distinctly transverse, longer and broader than IX, and XI large, slightly longer than the combined length of VIII-X and about three times as long as broad. Maxillary palpomeres II and III with more or less numerous tubercles, IV petiolate (length 0.24-0.27 mm; width 0.09-0.10 mm). Pronotum distinctly longer and broader than head, weakly transverse (length 0.36-0.39 mm; width 0.38-0.41 mm). Elytra weakly transverse (length 0.58-0.61 mm; width 0.66-0.68 mm), with marked humeral angles and with sparse, but distinct punctation. Hind wings present. Legs slender.

♂: head ventrally with transverse gular impression with distinctly elevated anterior margin; antennomere I (Fig. 29) oblong (length 0.15 mm; width 0.11 mm) and distally broadened, on inner side with tubercle at apical fifth; antennomere II (Fig. 29) narrower, as long as broad (0.06 mm), on inner side with fine longitudinal carina; profemur dilated, basally with a distinct impression ventrally; protibia with a tooth and a deep incision at apical third; mesofemur weakly, metafemur strongly dilated; metatibia broadened, with a spine and a deep incision at apical third and with a small apical spine; metaventricle impressed in posterior half and with median sulcus; aedeagus (Fig. 30) 0.40-0.42 mm long and with internal structures of distinctive shapes; parameres narrowed in apical third and with three subapical setae.

♀: antennomere I twice as long as broad (length 0.12 mm; width 0.06 mm); antennomere II weakly oblong (length 0.06 mm; width 0.05 mm); metaventricle flattened in posterior half and with median sulcus.

C o m p a r a t i v e n o t e s : The new species is distinguished from the highly similar *B. simoni* (REITTER, 1880), a widespread species in the southern Balkans, by the

shapes of the aedeagus and of the male antennomeres I and II. The aedeagus of *B. simoni* is illustrated in KARAMAN (1957).

Distribution and natural history: *Bryaxis samothracicus* is most likely endemic to Samothraki. The specimens were sifted from *Platanus* and oak litter near a stream and at the margin of a pasture, as well as from litter and grass roots on rocky slopes with scattered oak trees at altitudes of 20-900 m. One of the localities is illustrated in Fig. 35.

Appendix

On the way to Samothraki, several soil-washing samples were taken in Oros Pangéo (= Pangaion), a mountain situated near Kavála, Northeast Greece, and reputed for its diverse endemic Staphylinidae fauna (ASSING & WUNDERLE 1999). Material of several undescribed species of Staphylinidae was found in the samples, most of them represented exclusively by females. One of these species is described below.

Bryaxis pangeonicus BRACHAT nov.sp. (Figs 31-32)

Type material: Holotype ♂: "GR-Makedonia, Bez.: Kavala, Mt. Pangeo, ca. 700 m, 11.VI.2002, leg. Brachat / *Bryaxis pangeonicus* spec.nov. ♂ det.Brachat 8.2019 / Holotypus" (c.Bra). Paratypes (all in cBra): 4♂♂, 4♀♀: same data as holotype; 1♂: "GR-Makedonia, Geb. Pangeo, 1200 m, 28.5.99, leg. Wunderle"; 1♀: "GR - E-Makhedonia [1] Pangeo, rd to ski resort, 40°55'14"N, 24°12'30"E, 590 m, oak forest, 6.IV.2019, V. Assing"; 1♀: "GR - E-Makhedonia [2] Pangeo, rd to ski resort, 40°55'07"N, 24°12'11"E, 620 m, soil washing, 6.IV.2019, V. Assing".

Etymology: Named after the mountain where this species was discovered.

Description: Body length 1.20-1.45 mm. Body reddish-brown with slightly paler appendages, glossy, with suberect short pubescence (length of setae 0.06 mm), and with scattered longer setae; anterior half of the head, parts of the pronotum, and the elytra with indistinct sparse punctation.

Head weakly transverse (length 0.24-0.26 mm; width 0.28-0.30 mm). Eyes small, as long as the weakly convex temples. Frontal lobe 0.14-0.15 mm broad. Vertex with distinct median keel. Antenna 0.51-0.56 mm long; antennomeres III-VIII of equal width, III weakly oblong, IV-VI globular, VII as long as broad, VIII weakly transverse, IX twice as broad as long, X transverse, broader and longer than IX, and XI large, as long as the combined length of VI-X, and broader than the preapical antennomeres. Maxillary palpi elongate; palpomeres III and IV with few tubercles, IV 2.25-2.50 times as long as broad. Pronotum longer and broader than head, weakly transverse (length 0.30-0.34 mm; width 0.32-0.35 mm). Elytra transverse (length 0.45-0.47 mm; width 0.52-0.56 mm), with marked humeral angles. Hind wings present. Metaventricle posteriorly with shallow impression of semicircular shape. Abdomen 0.24-0.26 mm long, shorter than elytra.

♂: head ventrally with transverse gular impression with elevated anterior margin; antennomere I (Fig. 31) stout (length 0.12 mm; width 0.10 mm), with a distinct round tubercle approximately in the middle, below this tubercle with a broad sulcus directed towards base; antennomere II (Fig. 31) oval (length 0.06 mm; width 0.05 mm), with fine carina on inner side; femora slightly dilated; profemur ventrally with a distinct basal impression; protibia with an incision at apical third; metatibia with a minute apical spine; aedeagus (Fig. 32) 0.29-0.32 mm long; parameres converging apically, with a subapical

constriction, and with one long and stout and two fine apical setae; internal structures indistinct.

♀: antennomere I nearly twice as long as broad (length 0.10 mm; width 0.06 mm); antennomere II oval (length 0.06 mm; width 0.045 mm).

Comparative notes: Regarding body size and the modifications of the male antennae, *B. pangeonicus* is highly similar to *B. rambouseki* (MATCHA, 1916) from Montenegro and Bosnia-Herzegovina. It is distinguished from this species by a shorter female antennomere I, a shorter maxillary palpomere IV, and the different shapes of the internal structures and the parameres of the aedeagus. The aedeagus of *B. rambouseki* is figured by KARAMAN (1957) (as *Bythinites lamerei* KARAMAN, 1957).

Distribution and natural history: *Bryaxis pangeonicus* is probably endemic to Oros Pangéo, a mountain known for its rich endemic fauna. The specimens were collected partly by sifting oak and beech litter, partly by washing soil. The altitudes range from 590 to 1200 m.

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Zusammenfassung

Abgesehen von Einzelnachweisen zweier weit verbreiteter Arten war die Staphylinidenfauna von Samothraki, einer griechischen Insel in der nördlichen Ägäis, bislang gänzlich unbekannt. Im April 2019 wurde eine Forschungsreise mit dem Ziel der Erfassung dieser Fauna durchgeführt. Die 1372 dort gesammelten Staphyliniden gehören zu 123 Arten, davon 114 benannt und sechs endemisch. Zwei Arten und eine Unterart werden erstmals aus Griechenland nachgewiesen. Sieben Arten werden beschrieben und abgebildet: *Apimela procera* ASSING nov.sp. (Griechenland: Samothraki, Fthiotis; Türkei: Osmaniye) aus der Unterfamilie Aleocharinae; *Cyrtotyphlus samothracicus* ASSING nov.sp. (endemisch) und *Metrottyphlus samothracicus* ASSING nov.sp. (endemisch) der Leptotyphlinae; *Cephennium samothracicum* ASSING nov.sp. (endemisch) und *Scydmoraphes samothracicus* MEYBOHM nov.sp. (endemisch) der Scydmaeninae; *Bryaxis samothracicus* BRACHAT nov.sp. (endemisch) und *Tychobythinus assingi* BRACHAT nov.sp. (endemisch) der Pselaphinae. Eine Checkliste der von Samothraki nachgewiesenen Arten wird erstellt. Während die Waldbodenfauna relativ artenarm ist, sind Arten von Feuchtbiotopen (Bachufer, Strandanwurf, Sümpfe) in vergleichsweise hoher Artenzahl vertreten. Die Fauna von Samothraki wird mit der der nordägäischen Inseln Chios, Lesbos, Samos und Ikaria hinsichtlich der Gesamtdiversität und der Zahl endemischer Arten verglichen. In einem Anhang wird *Bryaxis pangeonicus* BRACHAT nov.sp. (Nordost-Griechenland: Oros Pangéo) beschrieben.

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