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LEAF-FEEDING COLEOPTERA OF GREECE

I. CHRYSOMELOIDEA AND CURCULIONOIDEA COLLECTED IN THE YEARS 1961 AND 1962

by M.E. TZANAKAKIS, B.J. SELMAN and R.T. THOMPSON

The present paper is the first report on an attempt to collect, preserve, and identify the leaf-feeding Coleoptera of Greece, to determine their host plants, the degree and type of damage they do, their distribution, abundance and life history under Greek conditions.

Most of the species listed hereunder have been previously reported from Greece but, for most of them, there are no records of host plants, feeding habits, etc. in this country, and for some not even from other countries.

In the text, the numerals preceding the location name indicate the number of specimens observed or collected. Those in parenthesis refer to the literature sources used which are listed at the end of the paper.

Except where otherwise stated, the material on which this paper is based was collected by the senior author. The *Chrysomeloidea* were determined by B.J.S.(1) and the *Curculionoidea* by R.T.T.(2).

CLYTRIDAE

1. *Clytra atraphaxidis* LAICHARTING. 2 ♂♂, 5 ♀♀ Aegina 2.VII. 1961 feeding on the leaves of young female pistachio trees *Pistacia vera* L.; 1 ♀ Evinohorion (near Messolongion) 8.VII.1962 on dry annual Compositae; 2 ♂♂, 2 ♀♀ Zachlorou (Achaia) 21.VII.1962 on *Cynodon dactylon* (Bermuda grass).

This species was also found in Greece in 1885 by VON OERTZEN

(1) Commonwealth Institute of Entomology, London.
(2) British Museum (Natural History), London.

in Attica, the Peloponnese, and the islands of Aegina, Rhodos, and Chios (13). It has also been recorded in other parts of the world such as France, Asia Minor, Iran, Turkestan, the Atlas, the Sierra Nevada, Southern Russia and Mongolia, on the leaves of willow, the flowers of *Sambucus*, and on other plants.

2. **Clytra novempunctata** OL. Many males and females from several localities in Attica 7.V.1961, 20.V.1961, 29.V.1961, 31.V.1961, 5.VI.1961; Nea Peramos (Megaris), 8.V.1961; Xylocastron (Corinthia) 8.V.1961, feeding on the foliage of male and female *Pistacia vera* L.; Alyssos (Achaia) 15.VI.1961 feeding on the leaves of *Pistacia vera* and *Pistacia terebinthus* L.; Agrinion 17.VI.1961 and Criklos (Valtos) 25.VI.1961 feeding on the leaves of *P. terebinthus*.

CALWER (4) mentions that this species occurs in Sardinia and Greece. It has also been reported by other authors as occurring in Europe, North Africa, the Caucasus, Asia Minor, Iran, Syria, and Crimea.

3. **Tituboea biguttata** OL. Many males and females Alyssos (Achaia) 15.VI.1961 feeding on foliage of *Pistacia vera* L. and *P. terebinthus* L.; Aegialia 13.VI.1961 on *P. lentiscus* L.

VON OERTZEN recorded it in Greece (Peloponnese), and other authors in southern France, Spain, Algeria, Italy, Sicily, and Greece (Peloponnese), occurring usually on oak, *Tamarix*, and other plants.

4. **Lachnaea orientalis** WEISE. Many males and females from several localities in Attica 4.V.1961 to 5.VI.1961, and Xylokastron (Corinthia) 8.V.1961 feeding on leaves of *Pistacia vera*; Alyssos (Achaia) 15.VI.1961 feeding on leaves of *P. vera* and *P. terebinthus*; Aegialia 13.VI.1961 on *P. terebinthus* and *P. lentiscus* L.; southern shores of the Ambrakikos gulf 18.VI.1961 feeding on leaves of *P. terebinthus*; Kiaton (Corinthia) 11.VI.1961 feeding on leaves of *P. lentiscus*.

OERTZEN (13) found it in continental Greece and Crete, and CALWER (4) states that it occurs in Greece. We have not traced any reports of this species from countries other than Greece.

5. **Macrolenes dentipes** OL. Many males and females from several localities in Attica from 4.V.1961 to 31.V.1961 feeding on the foliage of *Pistacia vera* L.; Nea Peramos (Megaris) 8.V.1961

on *P. vera*; Alyssos (Achaia) 15.VI.1961 on *P. vera* and *P. terebinthus* L.; Kerkyra (Corfu) 23.VI.1961 on *P. vera* and *P. terebinthus*; Aegialia 13.VI.1961 on *P. terebinthus* and *P. lentiscus* L.; Kiaton (Corinthia) 11.VI.1961 on *P. lentiscus*; Salamis 9.VII.1961 on *P. lentiscus*.

It has recently been reported that this species in Attica caused appreciable damage to young pistachio trees in May, eating up most of their tender foliage (17).

OERTZEN (13) found it in several parts of continental Greece, and on the islands of Crete, Cephallenia, and Aegina. It is known to occur all over southern Europe and North Africa, according to LEFÈVRE (11) on young oak trees.

CRYPTOCEPHALIDAE

6. **Cryptocephalus fulvus** GOEZE. One, Paenia (Attica) 7.V.1961; 2, Nea Peramos (Megaris) 8.V.1961; 7, Achinos (Magnesia) 5.V.1962 on *Pistacia vera*; 2, Psathopyrgos (Achaia) 18.V.1962 on *Pistacia lentiscus*.

OERTZEN found it in Attica. This species which in length does not exceed 3.0 mm. has a wide distribution. It has been reported from Italy, Southern Europe, Germany, England, Russia, Siberia and North China, occurring on willow, poplar, oak, hazel, *Thymus* sp. and on lawns.

7. **Cryptocephalus imperialis** LAICH. 1 ♂, Psathopyrgos (Achaia) 14.V.1962 on *Pistacia terebinthus* L.

This species was found by Oertzen in Attica, Elis, and the mount Parnassus. It is also known to occur in Italy, France, Austria and generally in Central and Southern Europe. It has also been reported on birch and hazel.

8. **Cryptocephalus ilicis** OLIV. 4 ♂♂, 5 ♀♀ Achinos (Magnesia) 5.V.1962 on *Pistacia vera*; 11 ♂♂, 8 ♀♀ Atalanti 12.V.1962 on *Pistacia terebinthus* and *P. lentiscus*; 1 ♀ Psathopyrgos (Achaia) 14.V.1962 on *P. lentiscus*.

This species was found in the summer of 1962 feeding on the foliage of *Pyracantha* in Kifissia by Dr. K. HAGEN and in home gardens of other locations of Attica by the last author.

OERTZEN found it in Attica and the Parnassus. CLAVAREAU (5) reports that the ab. *posticeinstitutus* Pic of this species was found

in Yannina (Epirus). It has also been reported from Austria, Italy, Sardinia, Sicily, Istanbul, Asia Minor and generally in Southern Europe. We have not been able to find other reports on the host or food plants of this species.

9. *Pachybrachys limbatus* MÉNÉTR. Many males and females from several localities in Attica from 4.V.1961 to 5.VI.1961; One, Achinos (Magnesia) 5.V.1962, many males and females Alyssos (Achaia) on 14.V.1962 and few on 7.VII.1962 on *Pistacia vera*. Many in Atalanti 12.V.1962, a few in Psathopyrgos (Achaia) 14.V.1962 and many in Alyssos (Achaia) 14.V.1962 on *P. terebinthus*. A few in Atalanti 12.V.1962 on *P. lentiscus*.

OERTZEN collected it in Greece Peloponnese, the Parnassus, Corfu, Aegina, and Rhodes as early as 1885. ISAAKIDES (10) reported it as injurious to the grape vines *Vitis vinifera* in Zakynthos (Zante) in 1934. It was also recorded on grape in Attica in 1950-1952 (2). This species has thus far been reported only from Greece and Turkey.

CHRYSOMELIDAE

10. *Chrysolina (Chrysomela) menthastri* SUFFR. Many near Kiaton (Corinthia) 11.VI.1961 feeding on the leaves of mint. OERTZEN (13) reported it as occurring on the Greek mainland and the islands of Kerkyra (Corfu), Scopelos, and Sciathos.

This species is known to occur on mint in central and southern Europe as well as in Siberia and the Caucasus (4,20).

11. *Plagioderma versicolora* (LAICH.) Many in Arta 30.III.1962 on willow, feeding on the tender new leaves at the tips of twigs.

This species, which has a wide distribution covering Europe, North Africa, Siberia and Japan (20) was recorded in Greece by Oertzen on the Parnassus and Crete (13).

HALTICIDAE

12. *Podagrica fuscicornis* (L.) Many in Patras 15.IV.1961 on *Malva sp.* Known to occur in Greece (Attica, the Parnassus and Cephalonia) (13). HEIKERTINGER and CSIKI mention that the range of distribution of this species extends from south England and France to Holland, Denmark, northern Germany, Poland and the Caucasus and that in the south it is found as the subspecies *chry-*

somelina (9). Reported on *Malva*, *Althaea rosea* and willow in temperate Europe (4), and on Malvaceae throughout Italy (16).

13. *Podagrica malvae semirufa* (KÜST.) Many in Patras 15.IV.1961 on the same *Malva* plants as the previous species. HEIKERTINGER and CSIKI give as its distribution the Mediterranean countries of Europe and Africa (9), and CALWER mentions that it was recorded in Sardinia (4).

14. *Psylliodes sp. nr. dulcamarae* (KOCH) 6 near Sounion (Attica) 20.V.1961 on *Carduus sp.* *P. dulcamarae* is widely distributed in Europe including Italy, Albania, Bulgaria, in Asia Minor and the Caucasus (9). Reported on *Solanum dulcamara*.

15. *Aphthona pallida* (BACH) *ssp. nigriceps* Redt. 5 Marathon (Attica) 10.VI.1961 on non identified annual weeds. It has been reported from the Mediterranean countries of Europe and Africa including Greece and some of its islands as well as from the Caucasus (9). PORTA reports it on *Geranium platense* in several parts of Italy (16).

16. *Haltica sp.* 8 Marathon 10.VI.1961 on thistle.

17. *Haltica sp.* Many Achaia 14.VI.1961 on grape vines (*Vitis vinifera*).

18. *Haltica sp.? oleracea* (L.) 8 Arta (Epirus) 24.VI.1961 on an un-identified annual weed. *H. oleracea* L. which is well distributed over southern Europe, Asia Minor, the Caucasus, Persia, Turkestan and Manchuria, was recorded in Attica, the Taygetus and Crete by OERTZEN (13).

19. *Epitrix pubescens* (KOCH) Many Kiaton (Corinthia) 11.VI.1961 on *Solanum nigrum*. Found by Emge in Greece (13). Known to occur in Europe, Asia Minor, the Caucasus, Turkestan and West Siberia. It has been recorded on *Solanum* and *Hyoscyamus* in western and central Italy, Sardinia and Corsica (12).

GALERUCIDAE

20. *Aulacophora foveicollis* (LUC.) 3 Zakynthos (Zante) on Cucurbitaceae 10.V.1961. This species has in recent years been reported from several localities in Greece, as a pest of Cucurbitaceae and especially of melon in Argolis, Theosprotia, Messolon-

gion and Lechaena (2, 3, 10). It is known to occur along the Mediterranean coast (21).

HISPIDAE

21. *Dicladispa testacea* (L.) Many, Aegialia 13.VI.1961 on the leaves of *Cistus* sp. skeletonizing them. Distributed over southern Europe, north Africa, Syria and Asia Minor (4, 19) and recorded on *Cistus* in Italy and several Italian islands. OERTZEN found it in Greece (Attica and Corfu).

CURCULIONIDAE

22. *Polydrosus armipes* BRULLÉ. Numerous near Evinochorion (Messolongion) 2.IV.1962 on willow and almond, feeding on the tender foliage at the tips of twigs. On the almond trees two weevils per twig were counted on an average, and many were seen mating. Several near Velesinon (Thessaly) 9.V.1962 on willow which was, at the time, in full bloom. Many near Atalanti 12.V.1962 on *Pistacia terebinthus* L., and several near Psathopyrgos (Achaia) 18.V.1962 on *Pistacia lentiscus* L.. Recorded from Greece, Sicily and Asia Minor (7). OERTZEN who mentions it as *P. armipes* Schönh. found it in Greece and the Greek islands Crete and Corfu (13).

23. *Polydrosus angustus* (LUCAS) Several in Philothei (Attica) 4.V.1961 on male pistachio. Many in Koukouvaounes (Attica) 5.VI.1961 on female young pistachio trees (*Pistacia vera* L.). Many in Anabyssos (Attica) 20.V.1961 on almond. Several in Xylocastron and Nea Peramos (Megaris) 8.V.1961 and Liopesi (Attica) 7.V.1961 on male pistachio. Many near Evinochorion (Messolongion) 16.V.1962 on the same almond trees on which *P. armipes* was collected in early April 1962. This species has been known to occur in Greece and its islands Crete, Naxos and Lesbos, as well as in Asia Minor (7).

24. *Phyllobius montanus* MILLER. Many near Liopesi (Attica) 11.IV.1962 on oak, feeding on the tender foliage. This species has been recorded in Greece (the mountains Parnassus, Parnes and Taygetus, the islands of Euboea and Cephallenia and Athens (4, 12, 13). LONA (12) gives no records from other countries besides Greece.

25. *Phyllobius oblongus* (L.) Many in Arta 30.III.1962 on willow, feeding on the tender foliage at the tips of twigs. This species is known to occur in Europe (4, 12). CALWER mentions that it is found in temperate and southern Europe from May to July, and that it becomes harmful by gnawing the buds of fruit trees in the spring. OERTZEN (13) found it in northern Greece and the Peloponnese eighty years ago. It has recently been recorded in Greece as destructive to sweet cherry in Steno Mantinias (Peloponnese) in 1931 (10), Kastoria (2), and Zahori, Eurostini (14). It was also recorded on walnut in Kalavryta in 1961 (3).

26. *Sitona crinitus* (HBST.) Many near Larissa 25.V.1961 on bean foliage. It occurs in the palaeartic region, and has also been reported from western north America (Oregon and Southern California) (8). OERTZEN found it in Attica and the island Cephallenia (13).

27. *Sitona lineatus* (L.) Three near Larissa 25.V.1961 on bean foliage (in the same field with the specimens of the previous species). Known from many parts of Europe and the palaeartic region (8) where it occurs on conifers, clover, peas, beans etc., eating the young plants in early spring (4). Already recorded in Greece (Parnassus, Nafplion, Corfu, Crete, Scopelos, Karystos) (13). ISAAKIDES (10) reported it as injurious to lucerne in Naousa (N. Greece) in 1937.

28. *Larinus cynarae* (F.) Many near Agrinion 17.VI.1961 on *Carduus* sp. This species is known to exist in southern France, Spain, Italy, the Balears, Corsica, Sardinia, Sicily, Malta, and Tremiti, Tunisia, Hungary and southern Russia (4, 6, 15).

29. *Larinus latus* (HBST.) Several in Paramythia (Epirus) 20.VI.1961 on the flower heads of *Carduus* sp. Known to occur in southern Europe, Asia Minor, Syria, the Caucasus, and Persia (4, 6). OERTZEN found it on the Greek mainland, in Cephallenia and Crete (13).

30. *Larinus scolymi* (OLIV.) Many in Agrinion 17.VI.1961 on *Cirsium* sp. This species is known to exist in the Mediterranean region including Italy and the Italian islands, Spain, Madeira and southern France (4, 6, 15). OERTZEN reports it in Greece (Elis and the Taygetus).

31. *Larinus syriacus* GYLL. Several near Corinth 8.IV.1961 on the flowerheads of *Cirsium* sp.. CSIKI mentions that this species has been recorded in Romelia, Greece, Crete, Asia Minor, Syria, Palestine, Persia, Transcaspia and Turkestan (6). OERTZEN (13) found it on the Creek islands of Kos and Scopelos.

32. *Larinus orientalis* CAP. Several in Corinth 8.VI.1961 on the flower heads of *Cirsium* sp. CSIKI (6) mentions that it has been found in Greece and Asia Minor.

33. *Larinus rusticanus* GYLL. Many near Agrinion 17.VI.1961 on *Cirsium* sp. flower heads. Known to live in the Mediterranean region (6) including Italy (15) and Greece (4). OERTZEN found it in Nafplion, the Taygetus and the island of Naxos.

34. *Bangasternus planifrons* (BRULLÉ). Many near Mesolongion 16.VI.1961 on *Cirsium* sp. This species has been recorded on the Italian island Lussina, in Dalmatia, Herzegovina, Greece, Asia Minor and Syria (4, 6, 15). OERTZEN also found this species, which he recorded as *B. planifrons* Gyll., in Greece and the Greek island Corfu (13).

35. *Pseudocoeliodes rubricus* (GYLL.) Many on male *Pistacia vera* in May 1961 attacking foliage. Several locations in Attica and Xylocastron (Corinthia). Larvae in April in male flower buds, and inflorescences feeding on male flowers and burrowing into the floral axes (18).

OERTZEN found it on the Parnassus and Bohemann reported it from Rhodes (5). It was first found in Asia Minor and has since been reported also from Sicily, the Caucasus, Istria and Croatia, Dalmatia, Italy and Greece.

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