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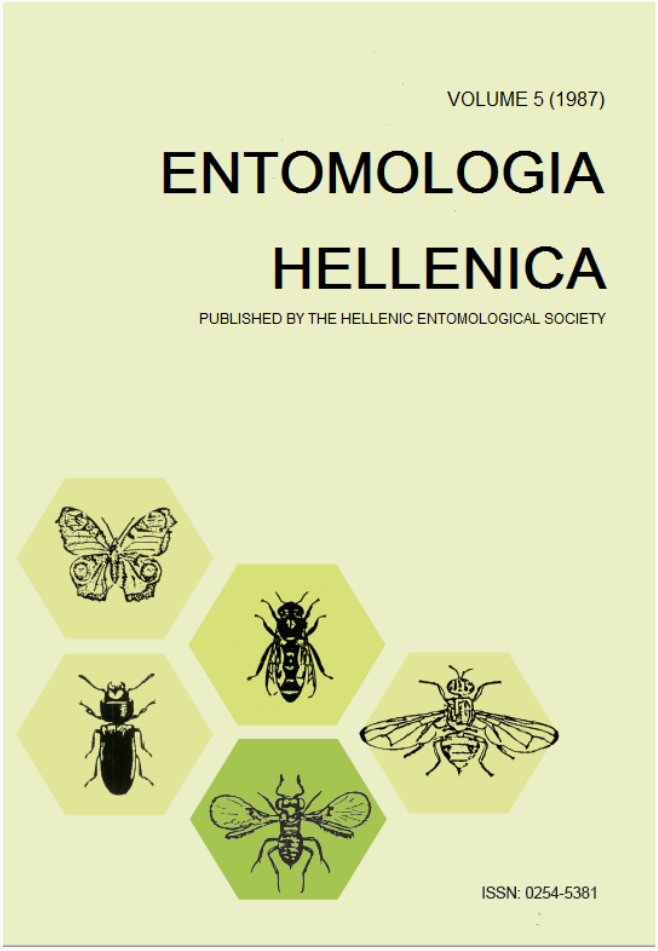

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A Revision of the Genus *Cenopalpus* in Greece (Acari: Tenuipalpidae)[1]

E.N. HATZINIKOLIS and N.G. EMMANOUEL

Acarology Laboratory, Agricultural Research Center of Athens, 141 23 Lycovrysi Attiki, Greece and Department of Agricultural Zoology and Entomology, College of Agricultural Sciences of Athens 118 55 Athens, Greece

ABSTRACT

The genus *Cenopalpus* from Greece is revised and a key to 17 species is provided, with illustrations of the nymphs. Of these species, *C. bakeri* Düzgünes, *C. carpini* (Livshitz and Mitrofanov) and *C. pseudospinosus* (Livshitz and Mitrofanov) are recorded for the first time from this country. A new species *C. arbuti* is described and illustrated. Information on the hosts, distribution data and economic importance is presented for each species. Some of the hosts and damage symptoms are recorded for the first time.

Introduction

Pritchard and Baker (1958) proposed the genus *Cenopalpus* for those species of *Brevipalpus* in which the first pair of dorsosublateral hysterosomal setae is present and the solenidia on tarsi I and II are slender and tapering. Wainstein (1960), Mitrofanov (1973) and Chaudhri et al. (1974) recognized *Cenopalpus* as a valid genus. Meyer (1979) described a new species which has the general features of a *Cenopalpus* species but it lacks the first pair of dorsosublateral setae. She did not accept *Cenopalpus* as a valid genus. Later, contrary to the opinion of Meyer, Akbar and Chaudhri (1985) continued to accept *Cenopalpus* as a valid genus.

Cenopalpus Pritchard and Baker (1958) is distinguished by the four-segmented palpus, 5 or 6 pairs of hysterosomal dorsolateral setae, one pair of dorsosublateral setae, and three pairs of dorsocentral hysterosomal setae. Solenidia on tarsi I and II are also slender and tapering. The genital plate is broader than the anterior ventral plate. Nymphs are useful in species identification. *Cenopalpus* species, some of considerable economic importance, have been recorded from Europe, Africa, Asia and Australia. Although, a relatively large number of *Cenopalpus* species is known from Greece, there is no information about the distribution, economic importance, relation to host plants etc. Those species were recorded by Hatzinikolis as follows: 1969a *C. pulcher* from loquat, 1969 b *C. eriobotryi* n. sp. from loquat, 1970 *C. lineola* from pine, 1982 *C. platani* from *Platanus*, *C. pterinus* from *Rosmarinium officinalis*, *C. spinosus* from rasberry, 1983 *C. lanceolatisetae* from apricot, *C. mespili* from apple, *C. pennatisetis* from willow, *C. populi* from poplar, *C. pritchardi* from apple, *C. ruber* from *Thuja* and *C. wainsteini* from pine.

Materials and Methods

The material for this study was collected at the Acarology Laboratory, during the period 1966-85, from plant samples which were provided by Agricultural Institutions, local Agricultural Services, individuals or collected by the first author. Methods of collecting, killing, preservation, clearing, pigmentation, fixing and mounting were described by Hatzinikolis (1982). Most of the samples were collected in the eastern part of Greece, including Macedonia, and to a lesser extent in western Greese, Thrace and the Islands. The great majority of samples was taken from cultivated fruit trees, vegetables, ornamental plants, fodder, grapes and crops cultivated for the food processing industry. A limited number of samples was also taken from cereals, forest trees and various indigenous plants. All the material is deposited in the collection

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of the Acarology Laboratory of the Agricultural Research Centre of Athens.

Results and Discussion

The present study has revealed the presence of *C. bakeri, C. carpini, C. pseudospinosus* and *C. arbuti* n. sp. in addition to the 13 previously known species. Female, male, and deuteronymph of *C. arbuti* are described and illustrated. The symptoms induced by the 17 mites are briefly described and the host range of each species is also included. A key based on the female and nymph is provided. Illustrations of nymphs (dorsal view showing setae) to facilitate the separation of the species of *Cenopalpus* in Greece are given (Figs. 11-26).

a. Description

Cenopalpus arbuti n. sp.

FEMALE

Dimensions, colour. Body length 375, including rostrum 388; width 194; colour bright red (all measurements are given in microns, μm).

Dorsum (Fig. 1). Rostral shield smooth with one relatively long median and one short lateral lobes on each side. Dorsal integument with large polygonal reticulations. All dorsal setae long and narrowly lanceolate. Prosomal body setae 51, 47 and 42 in length. Dorsolateral hysterosomal setae 47, 44, 32, 44 and 22 in length. Hymeral setae 49. Dorsosublateral setae 42. Dorsocentral setae 53, 51 and 28 in length.

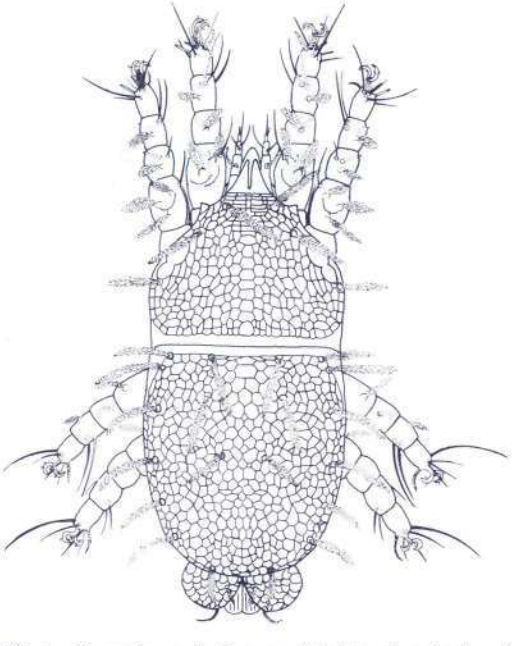

FIG. 1. *Cenopalpus arbuti*, n. sp., holotype, female, dorsal aspect.

Venter (Fig. 2). Metapodosoma with venter smooth except for reticulations behind posterior medioventrals and posterolaterally of coxae III and IV. Several striae present between posterior end of coxae IV. Vetral propodosomal setae 61. Anterior and posterior medioventral metapodosomal setae 28 and 53, respectively. Ventral and genital plates with one and two pairs of large lanceolate setae, respectively. Ventral and genital plates not entirely covered by reticulations; in ventral plate those reticulations cover most of the central area while in genital plate there are no reticulations anteriorly and posteriorly. Ventral and genital plates with one and two pairs of large lanceolate setae, respectively. Annal plate with large reticulations.

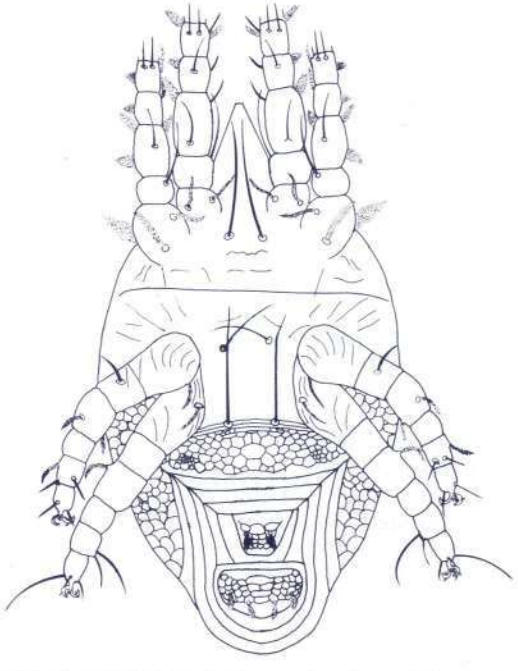

FIG. 2. *Cenopalpus arbuti*, n. sp., female, ventral aspect.

Gnathosoma (Fig. 3). Venter with one pair of setae. Palpus (Fig. 4) four-segmented; second segment with one lanceolate seta which is 18 in length; the third with two simple setae and the fourth with

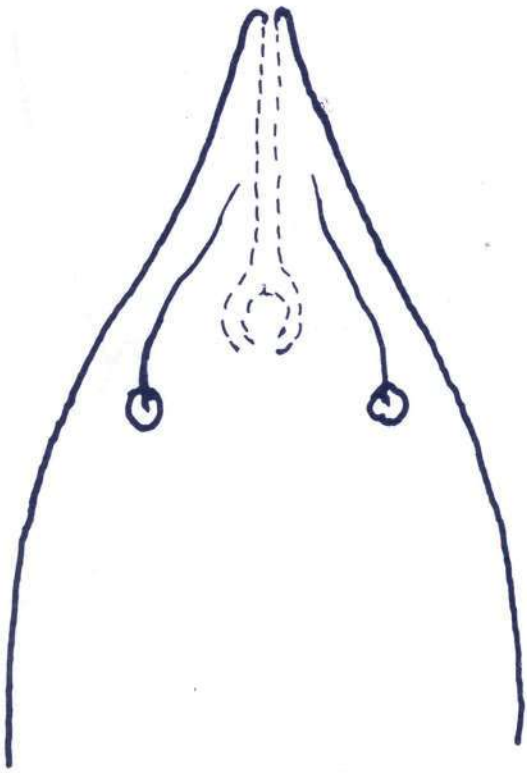

FIG. 3. *Cenopalpus arbuti*, n. sp., holotype, female, gnathosoma.

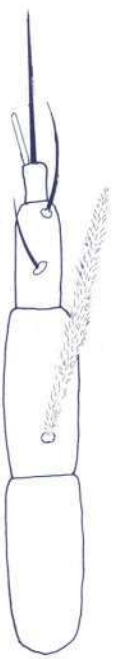

FIG. 4. *Cenopalpus arbuti*, n. sp., holotype, female, palpus.

a sensory seta (13 in length) and a shorter sensory peg (6 in length) distally. Rostrum reaching before end of femur I.

Legs. Inclusive counts of setae and solenidia (in parentheses) on the podomeres of legs I-IV: tarsi 6(2)-6(2)-5-5; tibiae 5-5-5-3; genua 3-3-1-0; femora 4-4-2-2; trochanters 1-1-1-0; coxae 2-2-1-1. Tarsi I and II (Figs. 5 and 6) each with two slender sensory rods dorsodistally; sensory rod measure 14, 12 and 12, 11, respectively. Femur I (Fig. 7) with inner distal seta less lanceolate and shorter (3/4 in length) than the inner dorsal. Femur II (Fig. 8) with inner dorsal and inner distal setae large, lanceolate, measuring 28 and 17, respectively; the proximal seta slender, lanceolate, 33 in length.

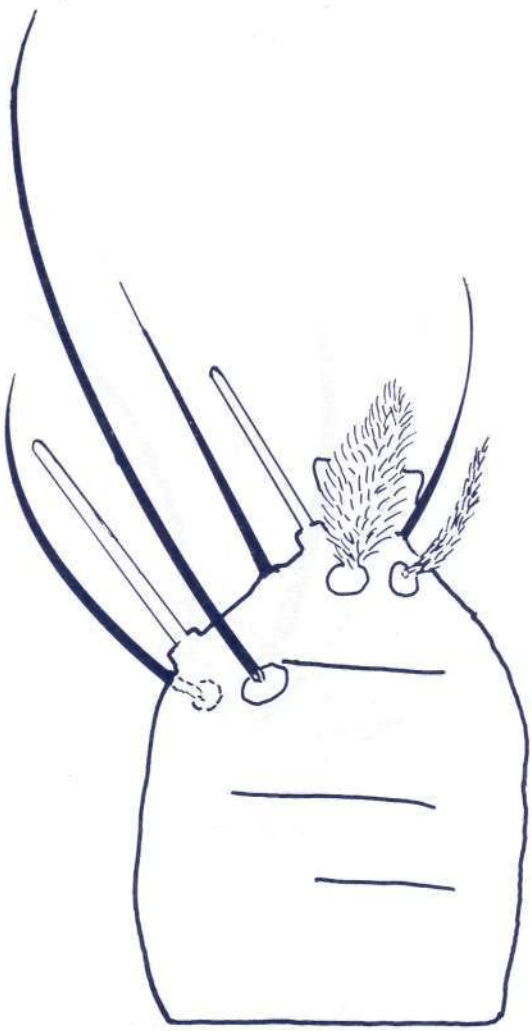

FIG. 5. *Cenopalpus arbuti*, n. sp., holotype, female, tarsus I.

MALE

Dimensions, colour. Body length 232, including rostrum 256; width 127; colour red.

Dorsum (Fig. 9). Rostral shield with rectangular reticulations and one long median lobe. Dorsal integument with polygonal reticulations which are smaller than those of female. All dorsal setae long and similar to those of female. Prosomal body setae 35, 35 and 40 in length. Dorsolateral hysterosomal setae 51, 51, 33, 37, and 21 in length. Hymeral setae 47. Dorsosublateral 37. Dorsocentral setae 27, 32, and 19 in length.

Gnathosoma. Rostrum reaching after middle of femur I. Palpus similar to female.

Legs. Similar to female.

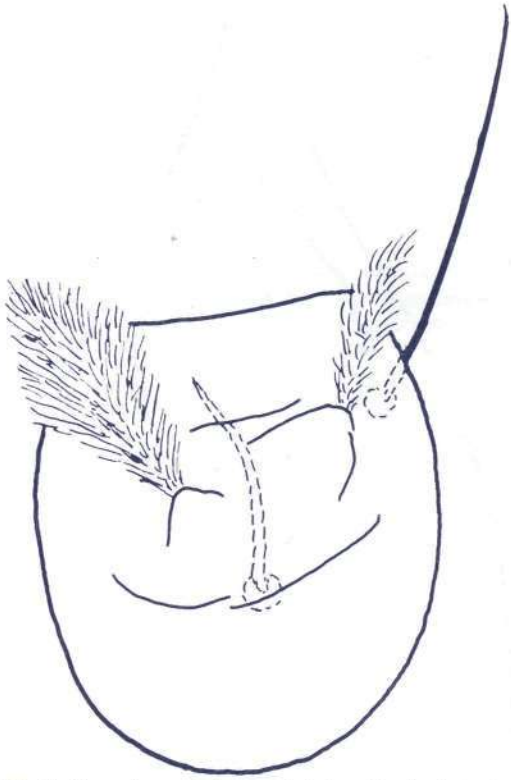

FIG. 7. *Cenopalpus arbuti*, n. sp., holotype, female, femur I.

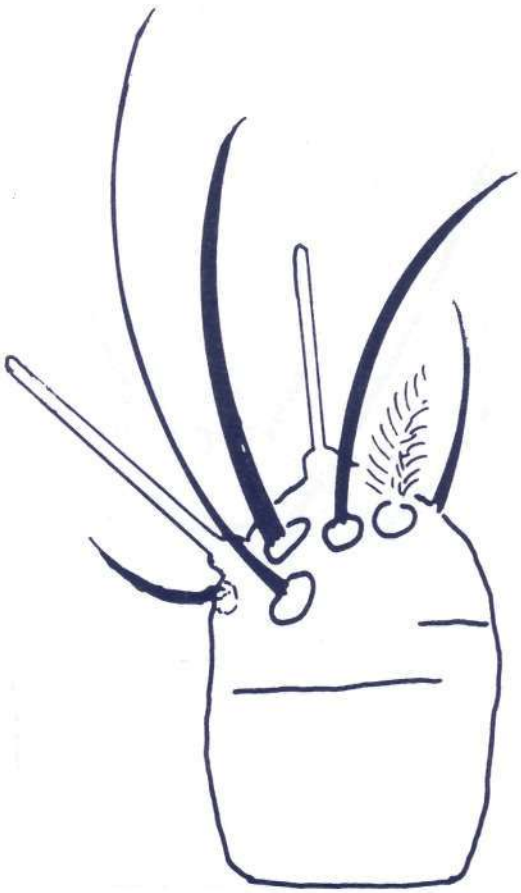

FIG. 6. *Cenopalpus arbuti*, n. sp., holotype, female, tarsus II.

FIG. 8. *Cenopalpus arbuti*, n. sp., holotype, female, femur II.

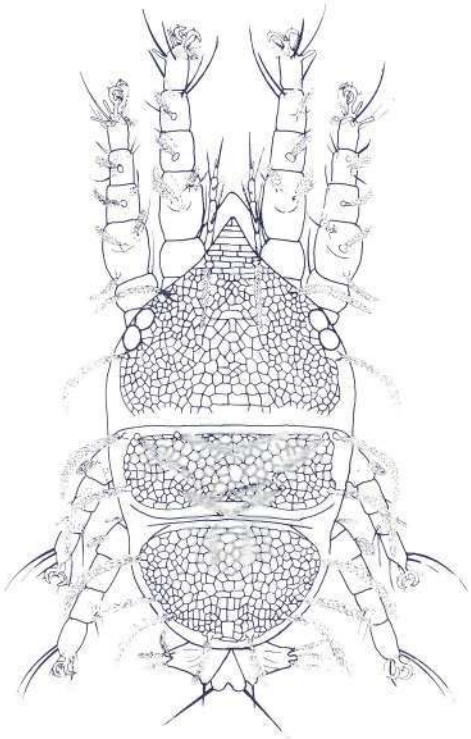

FIG. 9. *Cenopalpus arbuti*, n. sp., male, dorsal aspect.

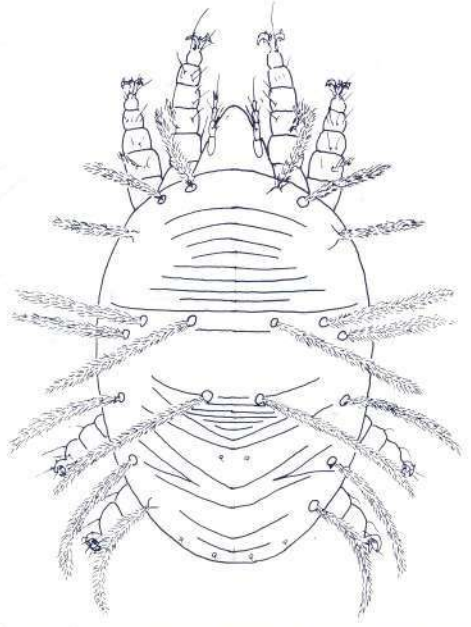

FIG. 10. *Cenopalpus arbuti*, n. sp., deuteronymph, dorsal aspect.

NYMPH (Fig. 10)

Body length, including rostrum 222, width 116. The number, arrangement and shape of the dorsal body setae are similar to those of the female except hysterosoma with fourth and fifth dorsolateral and third dorsolateral minute, prosomals 30, 30 and 32 in length. Hymerals 45. Dorsosublaterals 53. First three dorsolateral setae 46, 55, 55 in length while fourth and fifth ones minute. First and second dorsocentrals 70, 80 in length and third minute.

TYPE MATERIAL

Holotype female, five paratype females, three paratype males, two paratype nymphs, and one paratype pronymph, September 1968, Marmari, Evvia, Greece (Code Number 178/68). The material was collected by the senior author from *Arbutus unedo* (strawberry) and is mounted on six slides which are deposited in the collection of the Acarology Laboratory of the Agricultural Research Centre of Athens.

RELATION TO HOST

The mites were found on the ventral surface of the leaves.

ETYMOLOGY

The name of this new species is derived from *Arbutus*.

b. Remarks

This new species is related to *C. pterinus* Pritchard and Baker, 1958. However, the female can be separated from the latter by the following: rostrum reaching before end of femur I, the dorsal body setae narrowly lanceolate to setiform, rostral shield smooth with two median and two lateral lobes, and tarsi I and II each with two solenidia. Dorsal integument of the male is provided with polygonal unsubdivided reticulations. In the nymph, fourth and fifth dorsolateral and third dorsocentral hysterosomal setae are minute.

c. Key to species based on females and nymphs

1. Hysterosoma with five pairs of dorsolateral setae 2
– Hysterosoma with six pairs of dorsolateral setae 3
2. Rostrum extending beyond end of femur I. Dorsal setae featherlike. Nymphs 1, 2, 4 dorsolateral setae long; 3, 5 minute ..... *pterinus*

– Rostrum reaching before end of femur I. Dorsal setae narrowly lanceolate. Nymphs 1, 2, 3 dorsolateral setae long; 4, 5 minute ..... *arbuti*
3. Idiosoma mostly striate 4
– Idiosoma mostly reticulate 5
4. Rostral shield shallowly inciced; metapodosomal dorsum smooth. Nymphs 1, 2, 3, 4, 5 dorsolateral setae long; 6 small ..... *lineola*
– Rostral shield deeply inciced; metapodosomal dorsum striate. Nymph 1 dorsolateral seta small; 2, 3, 4, 5, 6 long ..... *wainsteini*
5. Propodosoma with dorsal setae narrowly lanceolate to setiform 6
– Propodosoma with dorsal setae broadly lanceolate to spatulate 13
6. Rostral shield with 4 lobes or with more than 4 lobes 7
– Rostral shield with 2 lobes 9
7. Propodosomal setae setiform. Rostral shield with more than 4 lobes 8
– Propodosomal setae narrowly lanceolate. Rostral shield with 4 lobes. Nymphs 1, 2, 4 dorsolateral setae long; 3, 5, 6 minute ..... *populi*
8. Propodosoma with small, round, granulate elements dorsally. Nymphs 1, 2, 3 dorsolateral setae long; 4 very long; 5, 6 minute ..... *pseudospinosus*
– Propodosoma with great polygonal reticulation elements dorsally. Nymphs 1, 2, 3, 4 dorsolateral setae long; 5, 6 minute ..... *bakeri*
9. Rostrum no more than end of femur I 10
– Rostrum extending to middle of femur I and more 11
10. Rostrum reaching end of femur I. Propodosoma with smaller, rounder granulate elements dorsally. Nymphs 1, 2, 3 dorsolateral setae long; 4 flagellate; 5, 6 minute ..... *spinosus*
– Rostrum not reaching end of femur I. Propodosoma with larger, polygonal reticulation dorsally. Nymphs 1, 2, 4 dorsolateral setae long; 3, 5, 6 minute ..... *pulcher*
11. Rostrum extending to middle of femur I 12
– Rostrum reaching middle of genu I. Dorsal body setae narrowly lanceolate. Nymphs 1, 2, 3 dorsolateral setae long; 4 very long; 5 medium; 6 minute ..... *ruber*
12. Metapodosomal venter with medial linear texture or reticulation elements between coxae IV polygonal and broader than long. Nymphs 1, 2, 4, 4 dorsolateral setae long; 5 small; 6 minute ..... *carpini*
– Metapodosomal venter with polygonal granulate elements medially equal breadth and length. Nymphs 1, 2, 3, 4 dorsolateral setae long; 5, 6 minute ..... *mespili*
13. Propodosoma with dorsal setae longer than distance between bases of consecutive setae. Nymphs 1, 2, 3, 4, 5 dorsolateral setae long; 6 small ..... *pennatisetis*
– Propodosoma with dorsal setae shorter than distance between bases of consecutive setae. Nymph 1 dorsolateral seta long; 2, 3, 4, 5 small; 6 minute ..... *lanceolatisetae*
14. Dorsal body setae subspatulate 15
– Dorsal body setae broadly spatulate. Nymphs 1, 2 dorsolateral setae long; 4 very long; 3, 5, 6 minute ..... *eriobotryi*
15. Metapodosomal venter not reticulate anteriorly to ventral plate. Nymphs 1, 2, 4 dorsolateral setae long; 3, 5, 6 minute ..... *platani*
– Metapodosomal venter reticulate anteriorly to ventral plate. Nymphs 1, 2 dorsolateral setae long; 3 small; 4 very long; 5, 6 minute ..... *pritchardi*

d. Notes on the species

Cenopalpus bakeri Düzgünes, 1967

Cenopalpus bakeri Düzgünes, 1967.
Brevipalpus bakeri Meyer, 1979.
Records: Iran, Turkey.
Host: *Crataegus* (hawthorn).
New records: Evros, Drama on hawthorn.
Relation to host: This mite has been found in small populations on both leaf surfaces.

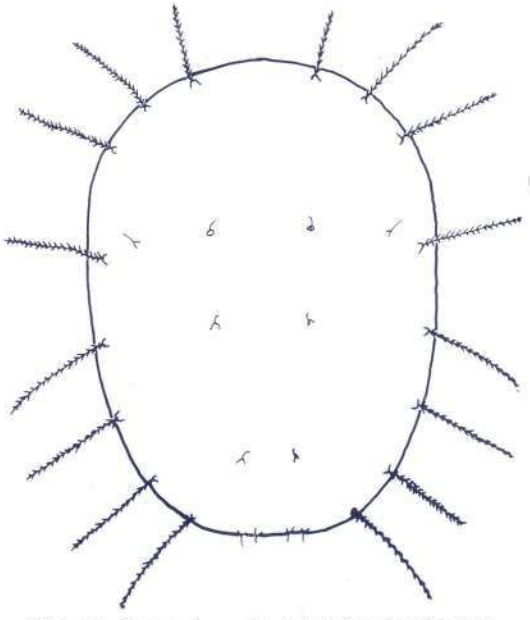

FIG. 11. *C. bakeri*, nymph, dorsal view showing setae.

Cenopalpus carpini (Livshitz and Mitrofanov)

Brevipalpus carpini Livshitz and Mitrofanov, 1967; Meyer, 1979.
Record: U.S.S.R.
Host: *Carpinus orientalis*.
New records: Imathia and Pella on *Populus*.

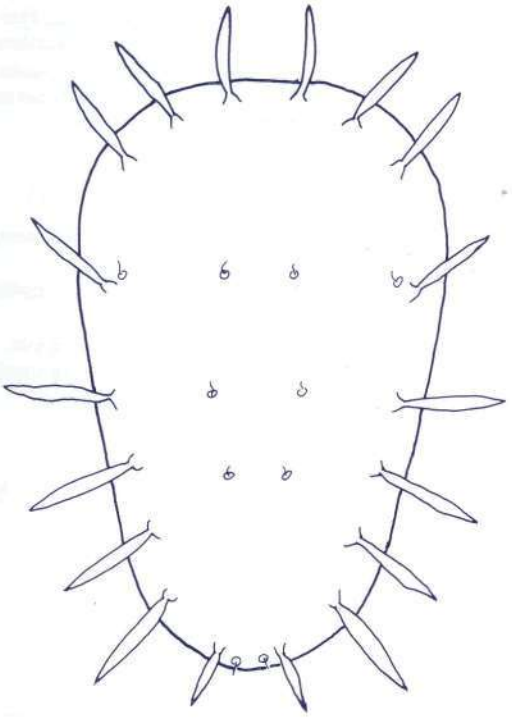

FIG. 12. *C. carpini*, nymph, dorsal view showing setae.

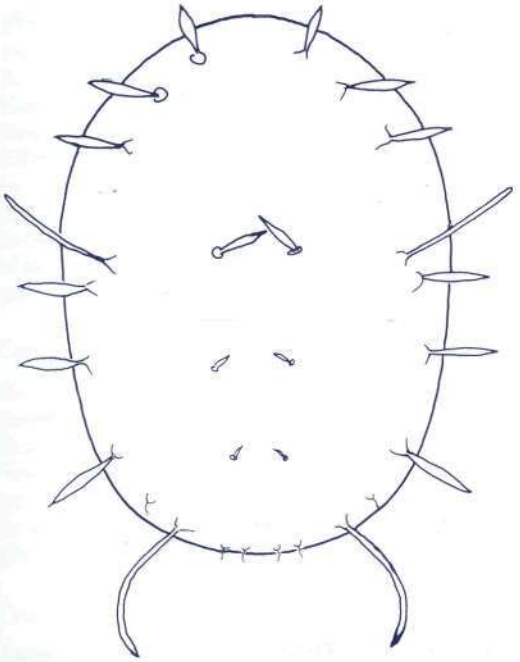

FIG. 13. *C. eriobotryi*, nymph, dorsal view showing setae.

Relation to host: This mite has been found in small populations on the ventral surface of leaves.

Cenopalpus eriobotryi Hatzinikolis

Cenopaplus eriobotryi Hatzinikolis, 1969 b.
Brevipalpus eriobotryi Meyer, 1979.
Record: Greece (Attiki).
Host: *Eriobotrya japonica* (loquat).
New records: Ahaia, Argolis, Arta, Attiki, Etoloakarnania, Ilia, Messinia, Preveza on loquat trees and *Pyrus communis* (pear).
Relation to host: This mite is an important pest of loquat and pear. It is found on the ventral side of the leaf near the base of the main rib and on the fruits. It causes cellular necroses of the epidermis of fruits. In heavy infestation on pear tree the leaves become dry and fall.

Cenopalpus lanceolatisetae (Attiah)

Brevipalpus lanceolatisetae Attiah, 1956; Meyer, 1979.
Cenopalpus lanceolatisetae Pritchard and Baker, 1958; Zaher and Yousef, 1969; Yousef and Shehata, 1971; Jeppson, Keifer and Baker, 1975.
Records: Cyprus, Egypt, Greece, Iran, Libya, Portugal.
Hosts: *Pyrus communis* (pear), *P. malus* (apple), *Prunus armeniaca* (apricot), *P. domestica* (plum), *P. persica* (peach), *Punica granatum* (pomegranate).
New records: Dodekanisos (Kos, Rodos), Kriti (I-

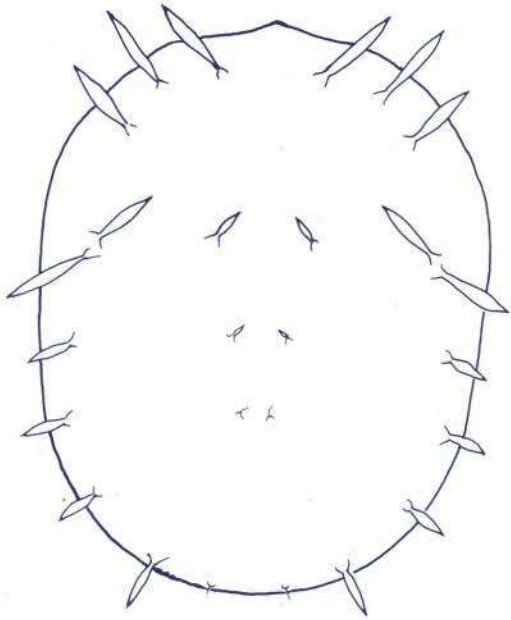

FIG. 14. *C. lanceolatisetae*, nymph, dorsal view showing setae.

raklion, Chania), Laconia, Samos on *Cydonia oblonga* (quince), *Prunus insititia*, apricot tree, pomegranate tree.
Relation to host: These mites are found on young shoots, buds and on both leaf surfaces.

Cenopalpus lineola (Canestrini and Fanzago)

Tetranychus lineola Canestrini and Fanzago, 1876.
Caligonus lineola Canestrini and Fanzago, 1878.
Tenuipalpus lineola Berlese, 1886; Berlese, 1887; Canestrini, 1889.
Brevipalpus kalandadzei Reck, 1951 (new synonymy).
Bevipalpus asyntactus Baker and Pritchard, 1952 (new synonymy).
Brevipalpus lineola Livshitz and Mitrofanov, 1967; Pegazzano, 1970-71.
Cenopalpus lineola Pritchard and Baker, 1958; Ehara, 1966; Jeppson et al., 1975.
Records: China, Greece, Holland, Italy, Japan, Poland, Portugal, Turkey, U.S.S.R.
Hosts: *Pinus* spp., *P. halepensis, P. luchuensis, P. pallasiana, P. pinea, P. silvestris, Diospyros maritima.*

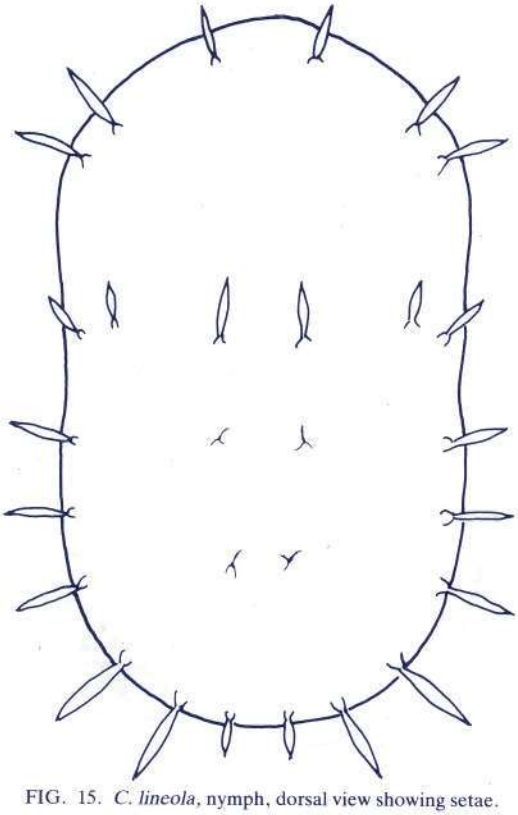

FIG. 15. *C. lineola*, nymph, dorsal view showing setae.

New records: Argolis, Attiki, Drama, Evvia, Halkidiki, Korinthos, Imathia, Thessaloniki, Skiathos and Thasos on *P. halepensis, P. nigra* and *P. pinea.*
Relation to host: This mite is a pest of pine trees in Greece, and it causes drying of the needles.

Cenopalpus mespili (Livshitz and Mitrofanov)

Brevipalpus mespili Livshitz and Mitrofanov, 1967.
Hosts: *Eriobotrya japonica* (loquat), *Pyrus malus* (apple).
New records: Kavala, Magnisia, Pieria on apple.
Relation to host: This mite has been found in small populations on the ventral surface of the leaf.

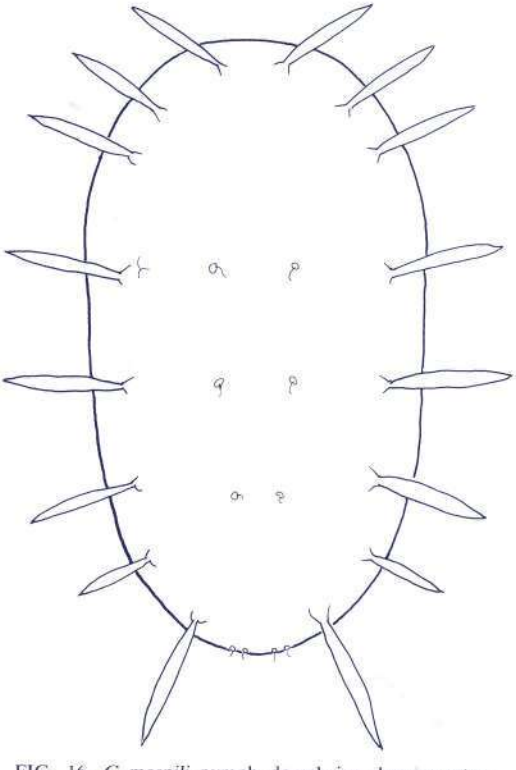

FIG. 16. *C. mespili*, nymph, dorsal view showing setae.

Cenopalpus pennatisetis (Wainstein)

Brevipalpus pennatisetis Wainstein, 1958.
Cenopalpus pennatisetis Wainstein, 1960.
Records: Greece, Iran, U.S.S.R.
Host: *Populus.*
New records: Pieria, Viotia on *Populus.*
Relation to host: This mite has been found in small populations on both leaf surfaces.

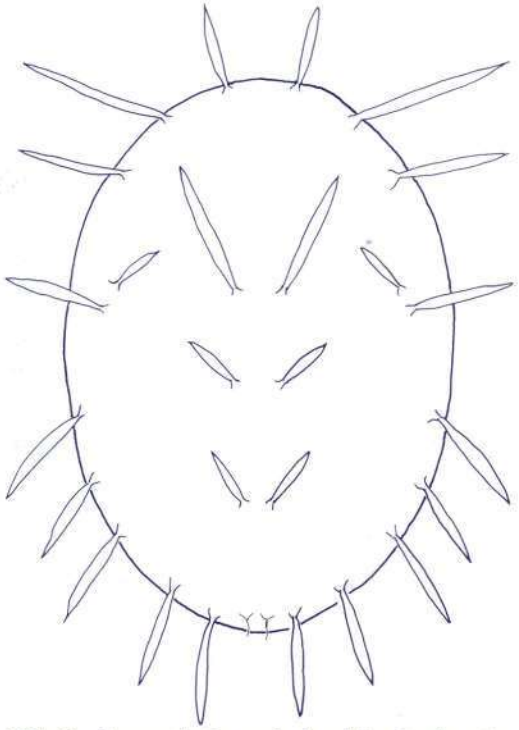

FIG. 17. *C. pennatisetis*, nymph, dorsal view showing setae.

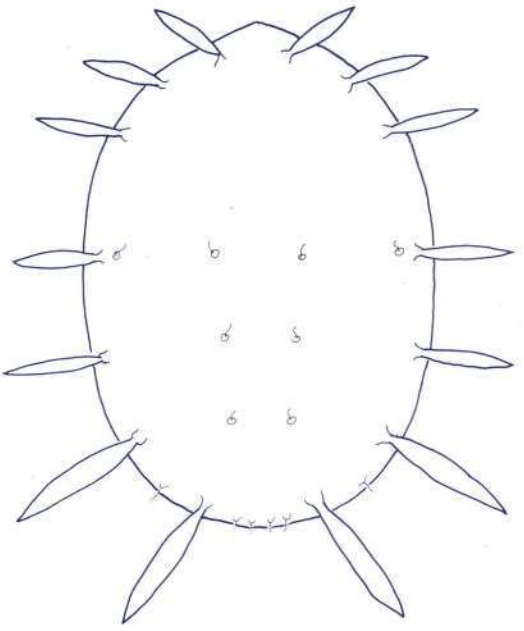

FIG. 18. *C. platani*, nymph, dorsal view showing setae.

Cenopalpus platani (Livshitz and Mitrofanov)

Bvevipalpus platani Livshitz and Mitrofanov, 1967.
Records: Greece, U.S.S.R.
Host: *Platanus*.
New records: Attiki, Drama, Halkidiki, Kavala, Kilkis, Phthiotis, Thessaloniki, Viotia on *Platanus* sp. and *Platanus orientalis*.
Relation to host: Numerous mites are frequently found on the ventral side of the leaf near the base of the main rib, causing, apparently, slight damage.

Cenopalpus populi (Livshitz and Mitrofanov)

Brevipalpus populi Livshitz and Mitrofanov, 1967.
Records: Greece, U.S.S.R.
Host: *Populus*.
New records: Drama, Phthiotis, Viotia on *Populus* spp.
Relation to host: This mite is found in small populations on both leaf surfaces.

Cenopalpus pritchardi Düzgünes

Cenopalpus pritchardi Düzgünes, 1967.
Records: Greese, Iran, Turkey.

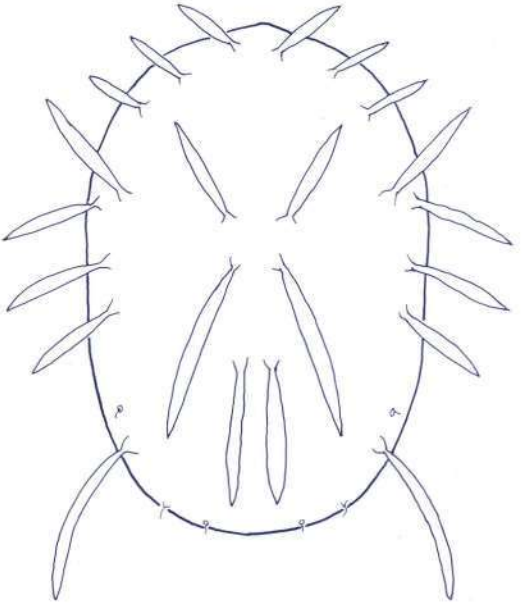

FIG. 19. *C. populi*, nymph, dorsal view showing setae.

Host: *Pyrus communis* (pear).
New records: Evros, Kavala, Pella on *P. amygdaloformis* and *P. malus*.
Relation to host: This mite has been found in small populations on the ventral surface of leaves.

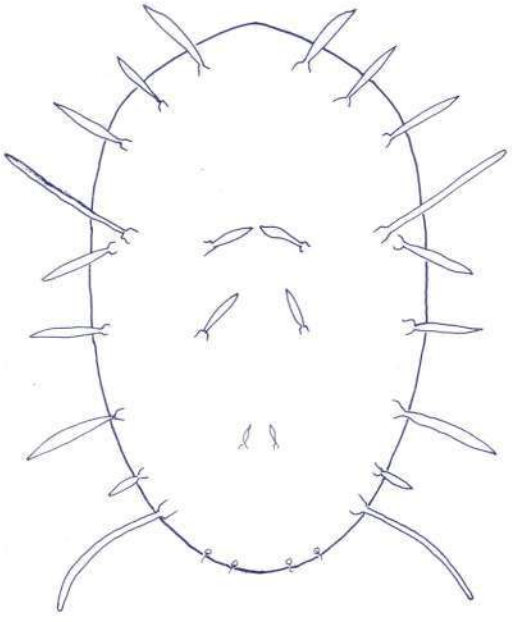

FIG. 20. *C. pritchardi*, nymph, dorsal view showing setae.

Cenopalpus pseudospinosus (Livshitz and Mitrofanov)

Brevipalpus pseudospinosus Livshitz and Mitrofanov, 1967.
Records: U.S.S.R., Greece (first recorded).
Host: *Rubus* (rasberry).
New records: Kastoria and Pella on rasberry.
Relation to host: This mite is found feeding on the undersurface of rasberry foliage.

Cenopalpus pterinus Pritchard and Baker

Cenopalpus pterinus Pritchard and Baker, 1958.
Records: Greece, Mallorca (Spain).
Hosts: *Adenostoma*, *Rosmarinium officinalis*.
New records: Greece (Attiki, Sounio, August 15, 1983) on *Pistacia terevinthus* and France (Montpellier, September 8, 1980) on *Adenostoma* sp.
Relation to host: This mite has been found in small populations on the leaves.

Cenopalpus pulcher (Canestrini and Fanzago)

Caligonus pulcher Canestrini and Fanzago, 1876; Canestrini and Fanzago, 1878.
Tenuipalpus pulcher Berlese, 1886; Canestrini, 1889.
Tenuipalpus bodenheimeri Bodenheimer, 1930 (new synonymy).
Tenuipalpus oudemansi Geijskes, 1939; Sayed, 1942; Dosse, 1953 (new synonymy).

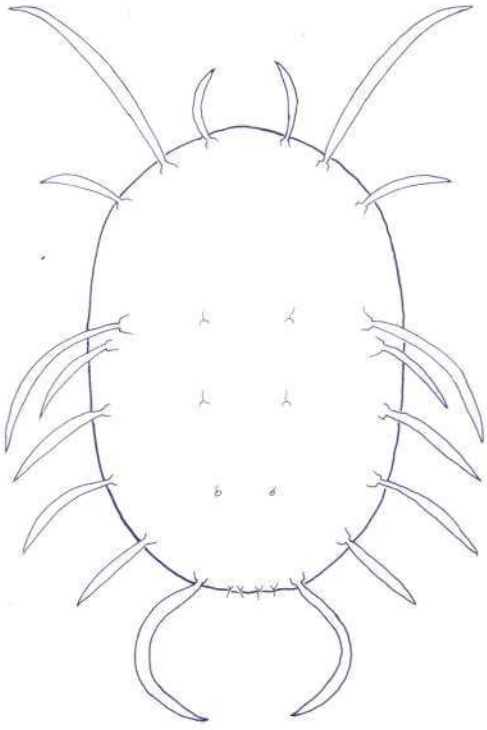

FIG. 21. *C. pseudospinosus*, nymph, dorsal view showing setae.

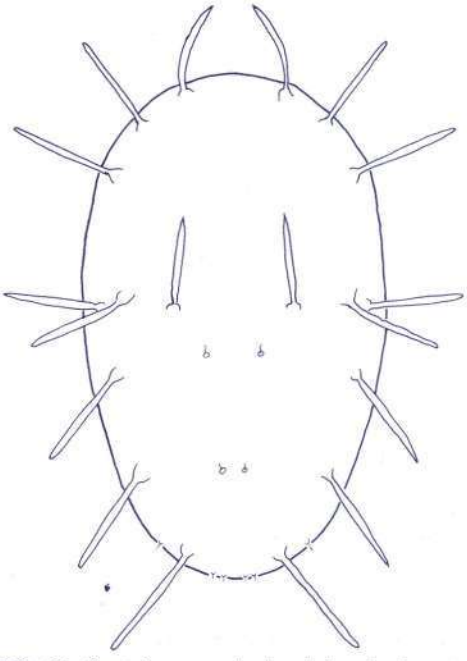

FIG. 22. *C. pterinus*, nymph, dorsal view showing setae.

Brevipalpus oudemansi Sayed, 1946; Baker, 1949; Wainstein, 1956 (new synonymy).
Brevipalpus pyri Sayed, 1946; Baker, 1949 (new synonymy).
Brevipalpus ciferii Lombardini, 1951 (new synonymy).
Brevipalpus geisenheyneri Baker and Pritchard, 1952; André, 1954; Attiah, 1956 (misidentification).
Brevipalpus pulcher Baker, 1949; Livshitz and Mitrofanov, 1967; Meyer, 1979.
Cenopalpus pulcher Pritchard and Baker, 1958, Wainstein, 1960; Zaher and Yousef, 1969; Jeppson, Keifer and Baker 1975.
Records: Algeria, Afghanistan, Austria, Bulgaria, China, Greece, Cyprus, Denmark, Egypt, England, Germany, India, Iran, Israel, Italy, Lebanon, Nederland, Portugal, Syria, Turkey, U.S.S.R. and Soviet Central Asia.
Hosts: *Eriobotrya japonica* (loquat), *Cydonia oblonga* (quince), *Juglans regia* (persian walnut), *Prunus armeniaca* (apricot), *P. domestica* (plum), *P. persica* (peach), *Pyrus communis* (pear), *P. malus* (apple), *Salix* (willow).
New records: This mite has been found throughout Greece on *Amaranthus bletum*, *Citrus limon* (lemon), *E. japonica*, *C. oblonga*, *J. regia*, *Ficus carica* (fig), *Hydrangea macrophylla*, *Pistacia vera* (pistachio), *Prunus domestica*, *P. insititia*, *P. armeniaca*, *P. persica*, *P. avium* (cherry), *Pyrus communis*, *P. malus*, *Punica granatum* (pomegranate), *Syringa vulgaris* (lilac), *Vitis vinifera* (grape).
Relation to host: This mite lives on the undersurface of the leaf along the midrib and leaf veins. It is important pest fo the apple, grape, quince, loquat and pear.

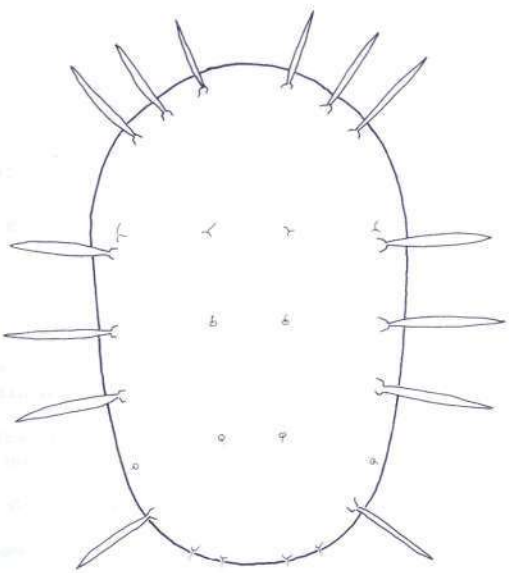

FIG. 23. *C. pulcher*, nymph, dorsal view showing setae.

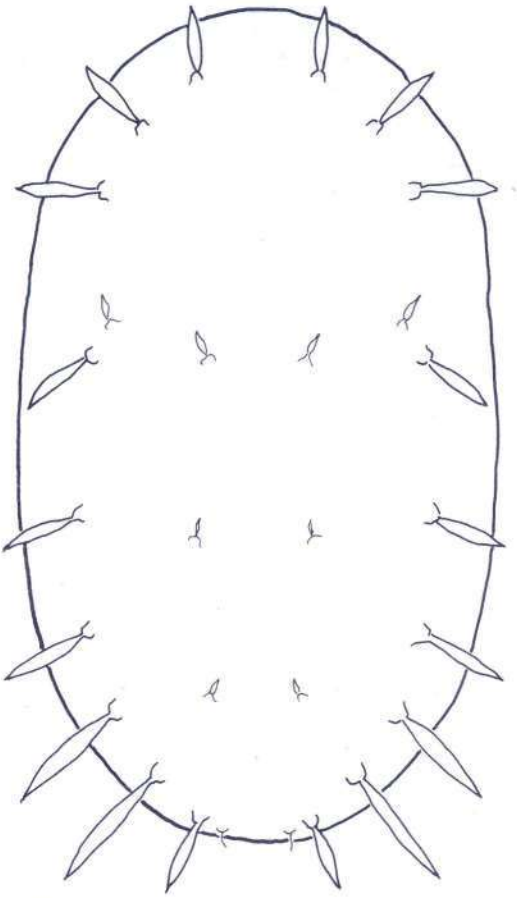

FIG. 24. *C. ruber*, nymph, dorsal view showing setae.

Cenopalpus ruber Wainstein

Cenopalpus ruber Wainstein, 1960.
Brevipalpus ruber Livshitz and Mitrofanov, 1967.
Records: Greece, U.S.S.R.
Hosts: *Pyrus communis* (pear), *P. malus* (apple).
New records: Imathia, Kozani, Pella on pear trees.
Relation to host: This mite has been found in medium populations on the ventral surface of leaves.

Cenopalpus spinosus (Donnadieu)

Tenuipalpus spinosus Donnadieu, 1875.

Brevipalpus spinosus Baker, 1949.
Tenuipalpus glaber Donnadieu, 1875.
Tenuipalpus geisenheyneri Rübsaamen, 1910; Ross and Hedicke, 1927.
Brevipalpus geisenheyneri Baker, 1949; Dosse, 1955.
Brevipalpus donnadieui Baker, 1949.
Cenopalpus spinosus Pritchard and Baker, 1958; Jeppson, Keifer and Baker, 1975.
Records: Germany, Greece, France, Iran, Monaco.
Hosts: *Cornus* (doowood), *Oenothera* (primrose), *Rosa* (rose), *Rubus* (blackberry, dewberry, rasberry).
New records: France, in Antibes region, November 6, 1981, on *Rubus*. In Greece, this mite is distributed throughout the warmer and coastal regions of the mainland and islands on *Rubus*. In Attiki and Viotia it is found on roses.
Relation to host: This mite has been found in large populations on the ventral surface of leaves. It causes yellow or dark spots on the leaves of the rose.

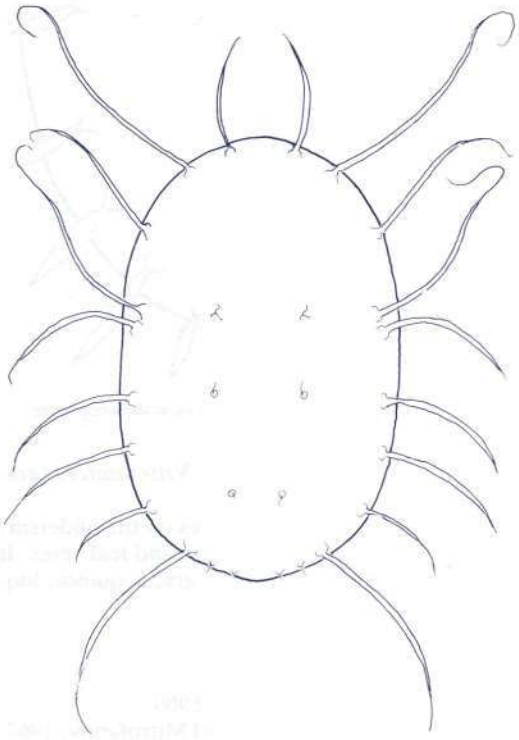

FIG. 25. *C. spinosus*, nymph, dorsal view showing setae.

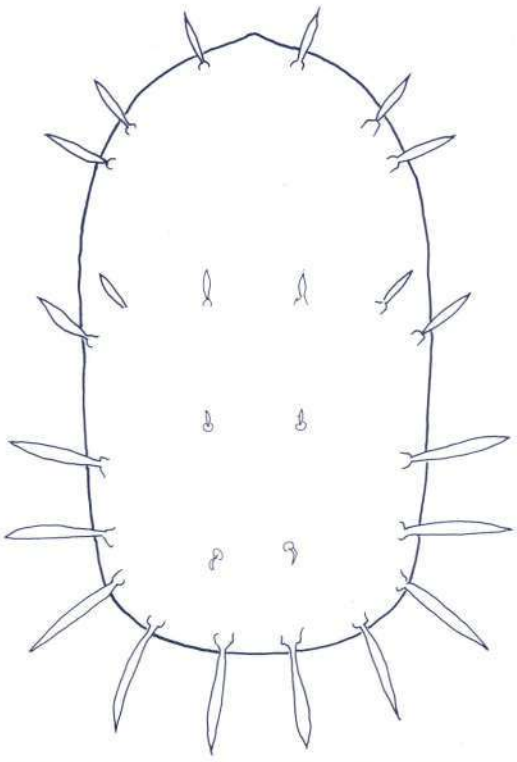

FIG. 26. *C. wainsteini*, nymph, dorsal view showing setae.

Cenopalpus wainsteini (Livshitz and Mitrofanov)

Brevipalpus wainsteini Livshitz and Mitrofanov, 1967; Pegazzano, 1970-71; Meyer, 1979.
Cenopalpus fewstrei Zaher and Yousef, 1969; Wafa, 1968-69 (new synonymy).
Cenopalpus wainsteini Hatzinikolis, 1983.
Records: Egypt, Greece, Italy, U.S.S.R.
Hosts: *Pinus* spp., *P. halepensis*, *P. pinea*.
New records: Macedonia, Thraki, Attiki on *Pinus* sp., *P. halepensis* and *P. pinea*.
Relation to host: Infested pinus trees showed distorted and later dried needles.

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KEY WORDS: Acari, Tenuipalpidae, *Cenopalpus* in Greece, *Cenopalpus arbuti* n. sp.

Αναθεώρηση του Γένους *Cenopalpus* στην Ελλάδα (Acari: Tenuipalpidae)

Ε.Ν. ΧΑΤΖΗΝΙΚΟΛΗΣ και Ν.Γ. ΕΜΜΑΝΟΥΗΛ

Εργαστήριο Ακαρολογίας, Κέντρο Γεωργικής Έρευνας Αθηνών, Υπουργείο Γεωργίας και Εργαστήριο Γεωργικής Ζωολογίας και Εντομολογίας, Ανωτάτη Γεωπονική Σχολή Αθηνών

ΠΕΡΙΛΗΨΗ

Το γένος *Cenopalpus* αναθεωρείται και δίνεται ένα κλειδί για τα 17 ανευρεθέντα στην Ελλάδα είδη, με σχεδίαση των νυμφικών σταδίων. Δεκατρία είδη έχουν αναφερθεί στην Ελλάδα: *C. eriobotryi* Hatzinikolis, *C. lanceolatisetae* (Attiah), *C. lineola* (Canestrini και Fanzago), *C. mespili* (Livshitz και Mitrofanov), *C. pennatisetis* (Wainstein), *C. platani* (Livshitz και Mitrofanov), *C. pritchardi* Düzgünes, *C. pterinus* Pritchard and Baker, *C. populi* (Livshitz και Mitrofanov), *C. pulcher* (Canestrini και Fanzago), *C. ruber* Wainstein, *C. spinosus* (Donnadieu) και *C. wainsteini* (Livshitz και Mitrofanov). Τρία είδη αναφέρονται τώρα για πρώτη φορά στην Ελλάδα: *C. bakeri* Düzgünes, *C. carpini* (Livshitz και Mitrofanov) και *C. pseudospinosus* (Livshitz και Mitrofanov). Το νέο είδος *C. arbuti* περιγράφεται και εικονογραφείται. Δίνονται πληροφορίες της παγκόσμιας εξάπλωσης και ξενιστών των παραπάνω ακάρεων. Επίσης αναφέρονται οι ξενιστές, τα συμπτώματα προσβολής και η οικονομική σημασία των ανευρεθέντων ακάρεων στην Ελλάδα.