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ON SOME DESCRIBED AND A NEW SPECIES OF MIDDLE-EASTERN MEALYBUGS (HOMOPTERA : COCCOIDEA : PSEUDOCOCCIDAE)*

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ABSTRACT

New information is given on the taxonomy, host plants and distribution of 10 mealybug species from the Middle East *Brevennia cynodontis* (Bodenheimer) n. comb. is redescribed and a lectotype designated; *B.femoralis* Borchsenius is synonymized with this species. *Chorizococcusparietaricola* (Bodenheimer) n. comb. is redescribed and a lectotype designated. *Ferrisia consobrina* Williams and Watson is newly recorded from Israel and southern Africa. *Lacombia dactyloni* (Bodenheimer) n. comb. is redescribed and illustrated, a lectotype designated, and *L. urbanii* Boratynski is synonymized with it. *Metadenopus ankaranus* (Bodenheimer) is redescribed and a lectotype designated. *Peliococcus daganiae* (Bodenheimer) n. comb. is redescribed and a lectotype designated. *Peliococcus zillae* (Hall) is newly recorded from the Sinai Peninsula. *Phenacoccus alonim* n. sp., found on *Quercus ithaburensis* in Israel, is described from the adult female. *Pseudococcus fathyi* Bodenheimer is a new synonym of *P. affinis* (Maskell). *Trionymus angustifrons* (Hall) is newly recorded from Israel.

KEY WORDS: Coccoidae, Pseudococcidae, systematics, Middle East, Egypt, Iraq, Israel, Turkey.

INTRODUCTION

During his studies on scale insects of the Middle East, F.S. Bodenheimer described 19 species of mealybugs (Homoptera: Pseudococcidae). The original descriptions and illustrations of these taxa are practically inadequate for a proper recognition of their taxonomic identity. A taxonomic interpretation has been presented only for three of them by Ben-Dov (1980,1988) and by Ben-Dov and Matile-Ferrero (1989), whereas the remainder are inadequately known (Ben-Dov and Harpaz, 1985).

This paper is intended to give preliminary new data on the generic assignment and taxonomic characters of six mealybug species described by Bodenheimer. In addition it presents new records of three formerly described species, as well as the description of a new species from the Middle East.

The material examined and discussed in this paper is available in collections which are denoted in the text as follows: BCR = Bodenheimer's Collection of Coccoidea, Department of Entomology, Faculty of Agriculture, Rehovot, Israel; BMNH = British Museum (Natural History), London, UK; ICV = Coccoidae Collection, Department of Entomology, The Volcani Center, Bet Dagan, Israel; MNP = Museum National d'Histoire Naturelle, Paris, France; ZIAS = Zoological Institute, Academy of Sciences, Leningrad, USSR.

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Brevennia cynodontis (Bodenheimer) n. comb.

Rhizoecus cynodontis Bodenheimer, 1943:16.
Brevennia femoralis Borchsenius, 1949:270, **n. syn.**
Heterococcus femoralis (Borchsenius); Miller and McKenzie, 1970:443.

Bodenheimer's species was described from Iraq, Basra on *Cynodon dactylon* and its junior synonym *B. femoralis* from Tadzhikistan and Azerbaijan in USSR, on *Cynodon dactylon* and *Sorghum* sp.

Adult female elongate, oval; mounted female 1.8 mm long, 0.8 mm wide (young) up to 2.7 mm long, 1.7 mm wide (fully grown). Anal lobes slightly developed in young female, not distinct in fully developed ones; each with one apical seta about 110 μm long. Antennae 6-segmented, 170–190 μm long in type series of *R. cynodontis*; 6- or 7-segmented, 180–190 μm long in specimens of *B. femoralis*. Front and middle legs subequal in size; coxa ca. 60 μm long, trochanter + femur ca. 115 μm long and 30 μm wide, tarsus ca. 62 μm long and 20 μm wide. Femora and tibiae of hind legs enlarged in comparison to front and middle legs; trochanter + femur ca. 150 μm long and 55 wide, tibia ca. 95 μm long and ca. 25 μm wide, tarsus ca. 60 μm long and 20 μm wide. Translucent pores present only on hind femora and tibiae. Claw without a denticle. Tarsal digitules slender, with finely pointed apices; claw digitules slender, slightly longer than tarsal ones and with slightly expanded apices. Circulus absent. Ostioles present on abdomen only. Anal ring with 2 rows of pores and 6 setae, each about 60 μm long. With 2–3 pairs of cerarii on last abdominal segments, each with 2 pointed setae. Quinquelocular and trilocular pores scattered on dorsum and venter. Multilocular pores disposed along body margin, in transverse rows on dorsum of last three abdominal segments and surrounding the vulva. Tubular ducts of the oral collar type, few, present on dorsum and venter of last 3–4 abdominal segments.

MATERIAL EXAMINED. *Rhizoecus cynodontis* Bodenheimer, lectotype female, here designated, and 13 paralectotypes, Iraq, Basra, 20.x.1942, on *Cynodon dactylon* (BCR). *Brevennia femoralis* Borchsenius, syntypes female and additional females mounted from the original collection, USSR, Tadzhikistan, ix.1944, on *Cynodon dactylon* (ZIAS, ICV).

TAXONOMIC NOTES. *Brevennia femoralis* is placed here as a junior synonym of *B. cynodontis*, since the taxonomic characters of both species, as observed in the type-series, agree with each other. This species differs from other species of *Brevennia* in the enlargement of the hind femora and tibiae; the hind femur is about twice as wide as the middle and front ones.

Chorizococcus parietaricola (Bodenheimer) n. comb.

Pseudococcus parietaricola Bodenheimer, 1943:14.

Adult female described as yellowish, covered with white mealy secretions. Originally described from Iraq, Ruwanduz gorge, on *Parietaria judaica.*

Young female (mounted) elongate, oval, 1.5 mm long, 0.8 mm wide. Anal lobes moderately developed, each with an apical seta about 110 μm long. Antennae 8-segmented, about 370 μm long. Legs subequal in size; all joints without translucent pores. Claw without a denticle; tarsal and claw digitules spinose, subequal in length. Circulus present. Ostioles present on head and abdomen. Anal ring with 2 rows of pores and 6 setae, each about 80 μm long. With 2 pairs of cerariii situated on the last 2 abdominal segments; each with 2 conical setae, 40–70 μm long. Quinquelocular pores absent. Trilocular pores scattered on dorsum and venter. Multilocular pores, number about 20, placed around vulva. Oral collar tubular ducts absent. Oral rim tubular ducts, numbering about 100, distributed over all tergites of dorsum. Flagellate setae scattered on dorsum and venter; ventral and dorsal setae of similar shape and size, 10–20 μm long.

MATERIAL EXAMINED. Lectotype female, here designated, and one paralectotype, Iraq, Ruwanduz gorge, 11.x.1942, on *Parietaria judaica* (BCR).

COMMENTS. The genera *Atrococcus, Chorizococcus* and *Spilococcus* are closely related and their separation from one another appears to be arbitrary (see Williams, 1962). Nevertheless and until the division between them is better understood, this species is assigned to *Chorizococcus* because it possesses 2 pairs of cerarii and lacks auxiliary setae on the cerarii. *Chorizococcus parietaricola* is not referred to *Atrococcus,* since it lacks auxiliary setae as well as the cluster of oral collar tubular ducts and multilocular pores in front of the anterior spiracles. It differs from species of *Spilococcus* in the reduced number of cerarii.

Ferrisia consobrina Williams and Watson

Ferrisia consobrina Williams and Watson, 1990:77.

This species has recently been described from Queensland, Australia and also recorded from several islands in the tropical South Pacific region (Williams and Watson, 1990). Morphologically it is very close to *Ferrisia virgata* (Cockerell) and therefore it was pertinent to re-examine previous records of the latter from Israel. Consequently, it is concluded that all previous records of *F. virgata* from Israel by Ben-Dov (1980) were misidentifications of *F. consobrina.*

The present new records from Israel, as well as unpublished records (in ICV) from southern Africa, constitute the first records of *F. consobrina* outside Australia and the tropical South Pacific region. They indicate that the latter is probably widely distributed over other regions. It is also possible that some previous records of *F. virgata* from various regions might be misidentifications of *F. consobrina.*

Male *F. consobrina* have not been found in Israel. The females reproduce parthenogenetically and are successfully reared in the laboratory on sprouting potato tubers.

MATERIAL EXAMINED. Israel. ASCLEPIADACEAE: En Yahav, x.1978, *Calotropis procera.* BORAGINACEAE: Rehovot, 23.vi.1978, *Echium* sp. CACTACEAE: Tivon, ix.1989, *Rebutia* sp. CHENOPODIACEAE: Tel Aviv, 5.xii.1977, *Suaeda monoica;* Bazra, 13.v.1988, *Kochia;* Bazra, 13.ix.1989, *Chenopodium mariana.* COMPOSITAE: Beer Sheva, 28.xi.1977, *Tagetes* sp.; *Erigeron* sp., Rehovot, 24.x.1979, Sede Nizan, 5.xi.1981, Alfe Menashe, 18.x.1986. CONVOLVULACEAE: Tel Aviv, 5.xii.1977, *Cressa cretica.* CRUCIFERAE: Bet Dagan, 19.i.1987, *Brassica rapa.* LAURACEAE: Bet Dagan, 1.ix.1985, *Persea americana.* LEGUMINOSAE: Bet Dagan, 6.vi.1985, *Phaseolus vulgaris.* LILIACEAE: Rehovot, 25.x.1984, *Ruscus aculeatus.* MALVACEAE: Tel Aviv, 17.xi.1977, *Gossypium hirsutum.* PROTEACEAE: Yotvata, 4.x.1984, *Macadamia.* SOLANACEAE: Bet Dagan, 1.1.1984, *Solanum tuberosum.* VERBENACEAE: Tel Aviv, 5.xii.1977, *Avicennia marina.* All deposited in ICV.

Lacombia Goux

Ripersia (Lacombia) Goux, 1940:62. Type-species: *Ripersia bouhelieri* Goux, by original designation and monotypy.

Lacombia Goux; Morrison, 1945:41; Borchsenius, 1949:43; Morrison and Morrison, 1966:102; Boratynski, 1968:401.

Lacombia was first introduced as a subgenus of *Ripersia* and accepted by subsequent workers as a distinct genus.

The adult female of this genus is broadly oval; anal lobes not prominent, each with one apical seta; without cerarii; anterior and posterior ostioles present, both pairs with sclerotized inner lips; circulus present; anal ring with pores and 6 setae; antennae 6-segmented; legs well-developed; trilocular and quinquelocular pores present on venter and dorsum; multilocular pores absent;

tubular ducts of the oral collar type, with a sclerotized collar around the orifice; flagellate setae present on venter and dorsum.

The genus is distinguished by the absence of cerarii and of multilocular pores; presence of only tri- and quinquelocular pores on venter and dorsum.

The absence of multilocular pores and of cerarii separates *Lacombia* from *Ripersia* and *Euripersia*. *Mirococcus* is similar to *Lacombia* in the absence of cerarii, but differs in possessing multilocular pores.

Previously, species of this genus were reported only from Morocco and Malta in the West Mediterranean. The genus is here recorded for the first time from Israel and the Middle East.

Lacombia dactyloni (Bodenheimer) **n. comb.**
(Fig. 1)

Rhizoecus dactyloni Bodenheimer, 1943:31.
Lacombia urbanii Boratynski, 1968:403, **n. syn.**

Originally described from Israel, Jerusalem, where the mealybug was found on roots of *Cynodon dactylon*. Its junior synonym, *Lacombia urbanii*, was described from Malta, where it was collected in the nest of the ant *Tapinoma erractium*.

Males were not recorded by Bodenheimer (1943) or Boratynski (1968) (for *L. urbanii*) nore were they observed in the populations newly recorded here from Israel and Tunisia.

Live adult females (as observed in Israel) are pink, covered with a thin layer of white mealy wax.

Mounted female, broadly oval, 1.8–3.3 mm long, 1.4–2.3 mm wide. Anal lobes each with an apical seta 150–200 μm long and a subapical seta 50–77 μm long. Antenna 6-segmented, 280–310 μm long (in specimens from Israel), 250–300 μm (in the type-series of *L. urbanii*). Length in μm of hind leg: coxa 150–180; trochanter + femur 230–280; tibia 150–180; tarsus 80–90; claw 30–40, without a denticle. Labium 150–170 μm long, 100–110 μm wide. Circulus circular, 45–50 μm long, 60–70 μm wide; placed between segments 4 and 5; margin well-defined. Anterior lips of anterior ostioles and both lips of posterior ostioles without setae or pores; posterior lips of anterior ostiole with 5–7 setae and 2–5 trilocular pores. Anal ring diameter 50–80 μm; anterior part with two rows of pores, and posterior part with one row of widely separated pores; with 6 setae, each 60–75 μm long; interval between anterior and middle seta about ½ as long as that between middle and posterior setae; posterior margin of anal ring placed at a distance of 150–230 μm (correlated to size of female) from posterior apex of body.

Dorsum with slender, pointed setae, 15–30 μm long, evenly distributed. Trilocular pores, about 4 μm wide, evenly distributed. Discoidal pores subequal in size to triloculars, scattered. Quinquelocular pores, 5–7 μm diameter, placed on head, thorax and abdomen; absent from abdominal segments 7 and 8. Oral collar ducts, scattered in numbers smaller than quinqueloculars; less frequent on posterior segments.

Venter with slender, pointed setae, subequal in size to dorsal, but less numerous. Trilocular pores evenly distributed. Discoidal pores of same size and structure as dorsal, scattered. Quinquelocular pores on all segments, more numerous around vulva. Oral collar tubular ducts of same size and shape as on dorsum, distributed on all segments.

MATERIAL EXAMINED. *Rhizoecus dactyloni* Bodenheimer, lectotype female here designated, and two paralectotype females, Israel, Jerusalem, on roots of *Cynodon dactylon*, ii.1919 (*Bodenheimer*) (BCR). *Lacombia urbanii* Boratynski, holotype female and 3 paratypes female, Malta, Comino Island, in nest of the ant *Tapinoma erraticum*, 21.iv.1965 (*Urbani*) (BMNH, ICV).

FURTHER MATERIALS EXAMINED. Israel: Borot Lutz, roots of *Artemisia herba-alba* (with *Tapinoma*

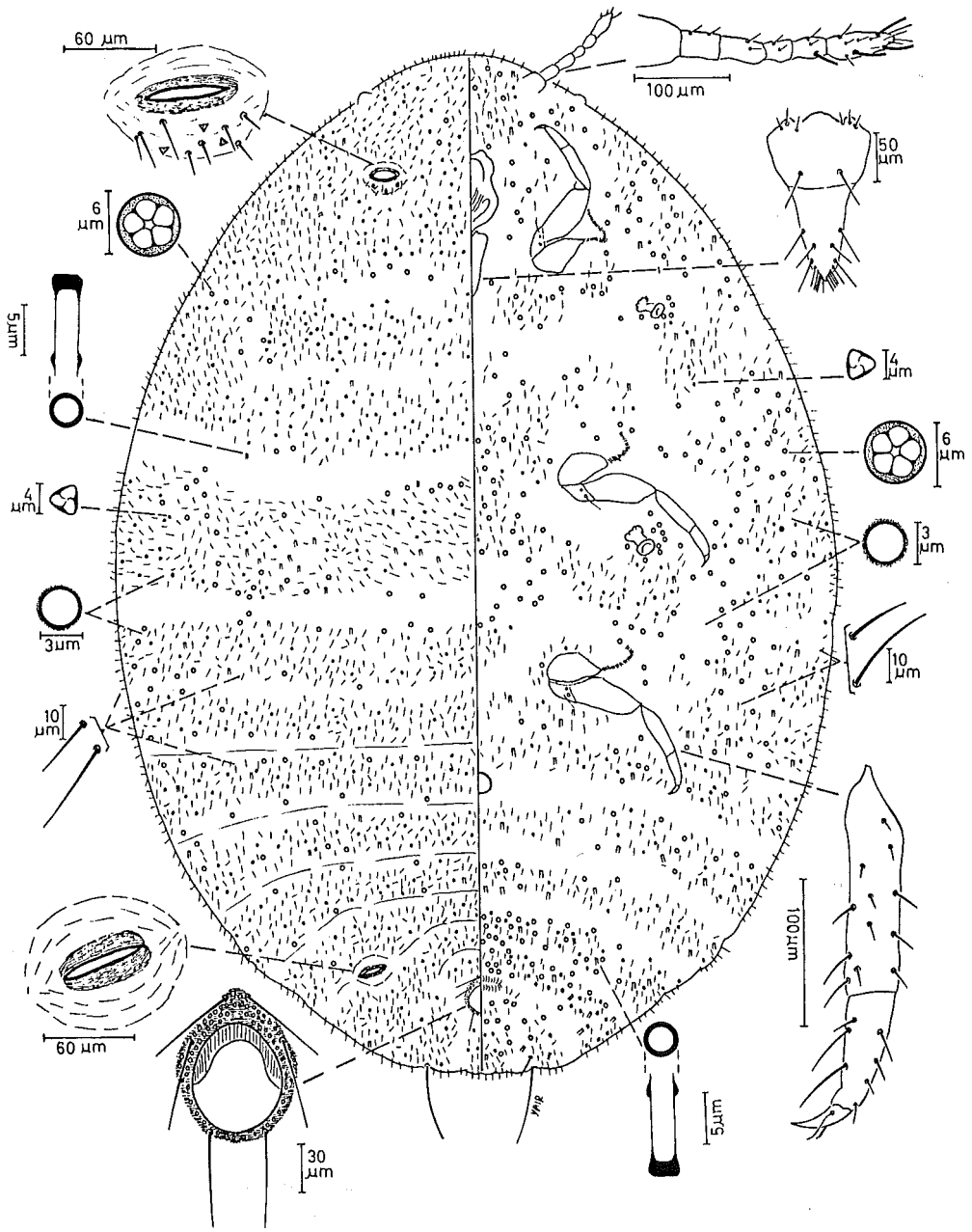

Fig. 1. *Lacombia dactyloni* (Bodenheimer, 1943), adult female.

erraticum), 8.ii.1986, 16.iv.1988 (*Ben-Dov*) (ICV); Mizpor Arod, roots of *A. herba-alba* (with *Tapinoma erraticum*), 8.ii.1986, 16.iv.1988 (*Ben-Dov*) (ICV). Tunisia: Sidi Bouzid, Djebel Rmilia, under stones with *Tapinoma erraticum*, 3.iv.1979 (*Matile-Ferrero*) (MNP); Dzebel Zaghouan, on roots of *Anacyclus clavatus*, 13.iv.1979 (*Matile-Ferrero*) (MNP).

TAXONOMIC NOTES. *Lacombia urbani* is here synonymized with *L. dactyloni* because its characters, as observed in the type-series, agree with those of the senior nominal species. It is likely that *L. dactyloni* is a synonym of the type-species *L. bouhelieri*. However, only one paratype of the latter species (deposited in MNP) was available for this study. This specimen differs from *L. dactyloni* in the absence of quinquelocular pores on the median and submedian areas of the dorsum. Until all the type-series of *L. bouhelieri* become available for study and the intra-specific variation of its taxonomic characters are evaluated, these species will be regarded as distinct.

ASSOCIATION WITH ANTS. The published records of *L. dactyloni* (Bodenheimer, 1943; Boratynski, 1968) and the new records (see 'Material examined'), indicate that this mealybug species was observed only in association with the ant *Tapinoma erraticum*. Until more observations are available on *L. bouhelieri* and on the range of food sources of the ant, it seems premature to comment on the exclusiveness of this association.

Metadenopus ankaranus (Bodenheimer)

Ripersia ankarana Bodenheimer, 1953:125.
Metadenopus ankaranus (Bodenheimer); Kozar and Walter, 1985:70.

Originally described from Turkey, Ankara, on *Festuca ovina*.

Adult female, elongate, oval; young female (mounted) 1.6 mm long, 0.7 mm wide; fully grown female up to 3 mm long; 1.3 mm wide. Anal lobes moderately developed, each with an apical seta about 140 μm long. Antennae 6- or 7-segmented, about 240 μm long. Legs subequal in size; coxae of hind legs with translucent pores. Claw with a faint denticle; tarsal and claw digitules thin and slender, subequal in length; with knobbed apices. Circulus roughly quadrate in outline, 70 μm long, 60 μm wide; with very distinct margins; placed along the intersegmental line between segments 4 and 5; in young female both lateral margins are notched at the intersegmental line. Ostioles present on abdomen only. Anal ring with 2 rows of pores and 6 setae, each about 100 μm long. Cerarii absent. Each of last 3 abdominal segments with 2 elongate setae (40–70 μm long), not surrounded by trilocular pores. Quinquelocular pores absent. Trilocular pores scattered on dorsum and venter. Multilocular pores placed in transverse rows on dorsum and venter of last 3–4 abdominal segments. Tubular ducts of the oral collar type, without a sclerotized collar at the outer opening; placed on margin and submargin of head, thorax and abdomen, in transverse rows along abdominal sternites, and on tergites of last 3–4 abdominal segments. Slender setae of similar shape and size (10–20 μm long) scattered on dorsum and venter.

MATERIAL EXAMINED. Lectotype female here designated and 12 paralectotype females, Turkey, Ankara, on *Festuca ovina*, 8.iv.1941 (Bodenheimer) (BCR).

COMMENTS. Kozar and Walter (1985) assigned this species to *Metadenopus* on the basis of the original description. Tentatively, this generic change is here adopted, since *M. anakaranus* resembles the type species of *Metadenopus* in having a 6-segmented antenna, in the distribution of multilocular pores in dorsum and venter and in the absence of cerarii. It differs, however, in the presence of the large quadrate circulus, in the translucent pores on hind coxae and in the structure of the oral collar tubular ducts. Future studies of the grass-infesting mealybugs in the Palaearctic region and improved interpretation of the division between the genera to which they are assigned will clarify the proper generic placement of this species.

Peliococcus daganiae (Bodenheimer) n. comb.

Pseudococcus daganiae Bodenheimer, 1926:191; 1927:181.

Bodenheimer (1926) did not indicate the type data in the original description, but supplemented it later (Bodenheimer, 1927). The type-series was collected in Israel, between Deganya and Kinneret (at the Sea of Galilee), on *Cynodon dactylon*.

Adult female (mounted) oval; young female 1.5 mm long, 0.7 mm wide; fully grown female up to 2.5 mm long, 1 mm wide. Anal lobes slightly developed, each with one apical seta about 140 μm long. Antenna 7-, 8-, or 9-segmented, 285–325 μm long; the frequency distribution of the number of segments, in 13 antennae of the type-series is: 3 with 7 segments, 9 with 8 and 1 with 9 segments. Legs well-developed, subequal in size and shape; hind femora and tibiae without translucent pores. Claw without a denticle. Claw and tarsal digitules setose. Circulus absent. Anterior and posterior ostioles present; inner lips not sclerotized. Anal ring with pores and 6 setae, each about 80 μm long. Three pairs of cerarii, each with two spines, situated on last abdominal segments. Multilocular pores present on dorsum and venter; on dorsum they are disposed in transverse bands along the posterior margins of the tergites. Quinquelocular pores present on venter only. Oral collar tubular ducts of two sizes; disposed on venter and dorsum on the areas occupied by the transverse bands of multilocular pores.

MATERIAL EXAMINED. Lectotype female, here designated, and 8 paralectotype females, Israel, Deganya, *Cynodon dactylon*, vii.1925 (Bodenheimer) (BCR).

TAXONOMIC NOTES. This species resembles *P. priesneri*, also known from *Cynodon dactylon* in the Middle East, in the absence of a circulus. It differs, however, from *P. priesneri* in the dorsal multilocular pores disposed in transverse bands rather than in the circular groupings, in the absence of quinquelocular pores on dorsum and in generally having a 7–8-segmented antenna, as compared to the 9-segmented antenna in *P. priesneri*.

Peliococcus zillae (Hall)

Phenacoccus zillae Hall, 1926:5.
Peliococcus zillae (Hall); Borchsenius, 1949:246.

Published records of this mealybug presented a disjunct distribution in Africa, Egypt (type locality) and Central Asia countries of USSR (Borchsenius, 1949). The present new records from the Sinai Peninsula partly fill the gap in the distribution range of *P. zillae*.

MATERIAL EXAMINED. Egypt, Sinai Peninsula, Nabek Mangroves, on *Avicennia marina* (Verbenaceae), 12.xii.1974 (J. Halperin), 24.xii.1981 (Y. Ben-Dov), 12.xii.1988 (J.M. Cox) (ICV, BMNH).

Phenacoccus alonim n. sp.

(Fig. 2)

Adult female, bright brown, covered with white mealy secretion.

Males not observed.

Mounted female, oval; young female 2.1 mm long, 1.1 mm wide; fully grown female up to 4.2 mm long, 2.5 mm wide. Anal lobes well developed; with an apical seta 210–240 μm long and a subapical one about half as long. Antennae 9-segmented, 450–515 μm long. Legs well developed; length (in μm) of hind leg: coxa 210–230; trochanter + femur 300–320; tibia 260–275; tarsus 95–100; claw 30–34. Labium 150–165 μm long; clypeolabral shield about 360 μm long. Circulus notched at either side; anterior part 175–185 μm wide; posterior part 70–115 μm wide; length

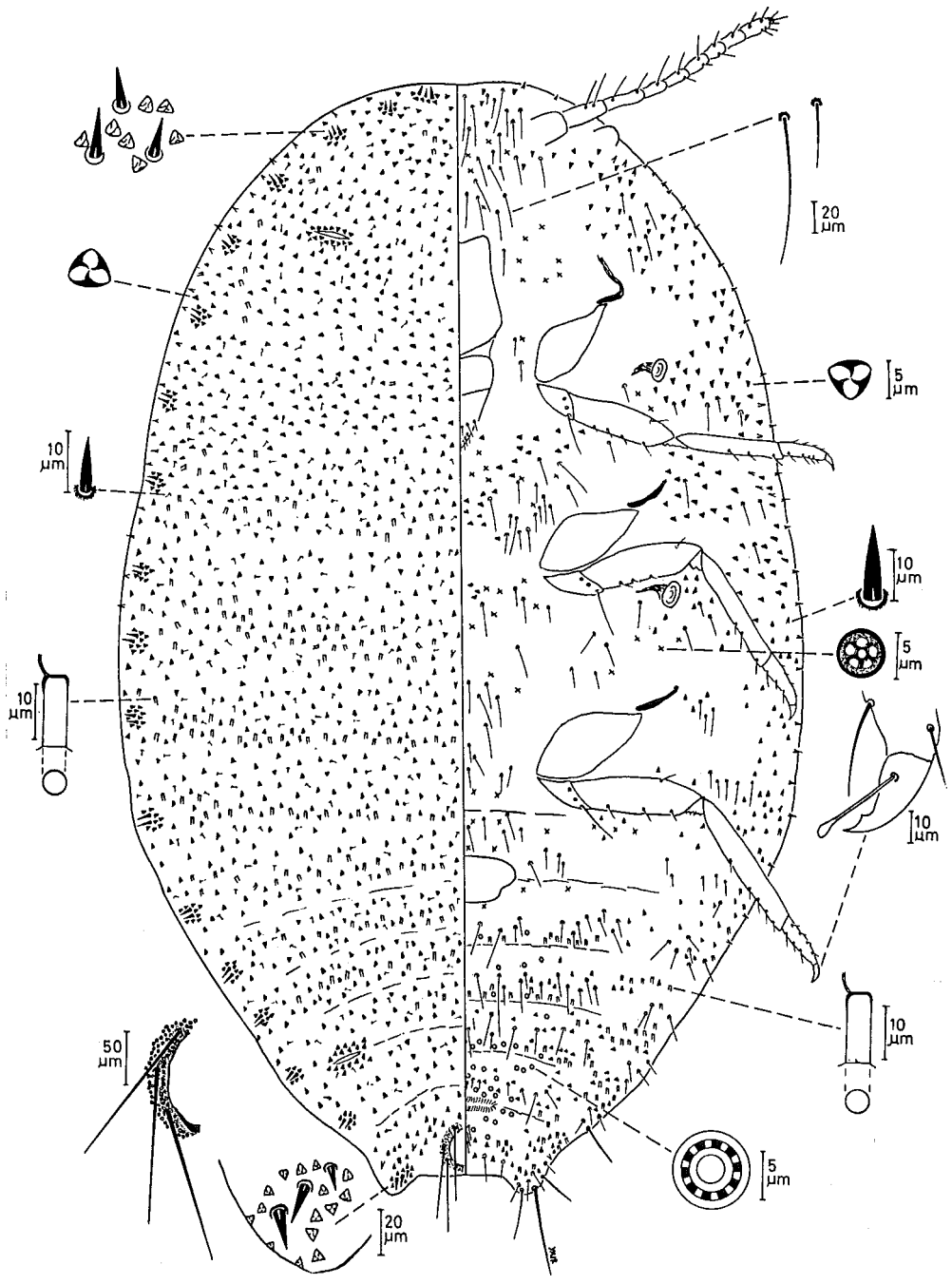

Fig. 2. *Phenacoccus alonim* n. sp., adult female.

85–95 μm. Anterior and posterior ostioles present; lips not sclerotized; 6–10 trilocular pores and 3–6 setae placed on each lip. Anal ring with pores and six setae, each 140–150 μm long. Cerarii numbering 18 pairs; without auxiliary setae. Anterior cerarii each with 3 setae; second cerarii each with 2–3 setae; third with 2–4 setae; cerarii 4 to 17 each with 2 setae; anal lobe cerarii each with 3 setae, one of which is half the size of the large ones.

Dorsum with pointed setae 10–12 μm long; along the margin of dorsum and venter these setae are stouter and longer. Trilocular pores evenly distributed. Oral collar ducts less numerous than trilocular pores; placed in transverse bands on abdomen, thorax and head; less numerous on thorax; absent on abdominal tergites 7 and 8.

Venter with flagellate, pointed setae; longest up to 175 μm long; shortest about 30 μm long. Trilocular pores less numerous than on dorsum. Multilocular pores present on midregion of abdominal sternites posterior to the circulus. Quinquelocular pores distributed on midregion of abdomen (as from segment 5), thorax, and head. Oral collar tubular ducts of same size and shape as on dorsum, present on abdomen only; on midregion of sternites posterior to the circulus, and submarginally as far forward as segments 4–3.

MATERIAL EXAMINED. Holotype and 9 paratype female, Israel, Alone Aba Nature Reserve, on *Quercus ithaburensis*, 11.ii.1987, Y. Ben-Dov (ICV).

ADDITIONAL MATERIAL EXAMINED. Israel, Alonim, on *Quercus ithaburensis*, 11.ii.1987, Y. Ben-Dov (ICV).

ETYMOLOGY. The specific name is a transliteration of the Hebrew noun (masculine) meaning oaks.

AFFINITIES. *Phenacoccus alonim* belongs to a group of species in the genus which are characterized by having 18 pairs of cerarii, multilocular pores situated only on venter and by the absence of quinquelocular pores on dorsum. It resembles the Mediterranean species, *P. arambougi* Balachowsky, 1954, known so far from Lebanon, but differs from it in the following combination of characters:

	P. arambourgi	*P. alonim*
1. Circulus	not notched	notched
2. Tubular ducts, ventral, between antennae	present	absent
3. Tubular ducts, dorsal, on VI & VII	present	absent
4. Multilocular pores on submargin of VI	present	absent

It also differs from *P. aceris* (Signoret) in having only one circulus, from *P. avenae* Borchsenius in having oral collar tubular ducts of one size and from *P. mespili* (Signoret) in the disposition of the oral collar tubular ducts on all areas of dorsum. In addition it differs from *P. ferulae* Borchsenius and *P. yerushalmi* Ben-Dov, both of which lack quinquelocular pores on the venter.

Pseudococcus affinis (Maskell)

Dactylopius affinis Maskell, 1894:90.
Pseudococcus affinis (Maskell); Miller et al., 1984:707.
Pseudococcus fathyi Bodenheimer, 1944:90, **n. syn.**

Pseudococcus fathyi was originally described from Iran, Haraj, where it was collected in galls

of *Prociphilus* on *Fraxinus*. The taxonomic features of its type-series (see below) agree very well with the characters of *P. affinis* with which therefore it is synonymized.

Miller et al. (1984) have given the world-wide distribution of this species, indicating, however, the need to substantiate many of its literature records. The present record from Iran, together with earlier records from Israel (Ben-Dov, 1987), suggest that this mealybug is common in the Middle East.

MATERIAL EXAMINED. Seven adult females, mounted on slides labelled by Bodenheimer "CIn 153, Iran, *Fraxinus*, Haraj, C. Afchar" and with a Manuscript Name. These specimens, considered here as the syntypes of *P. fathyi*, were remounted each on a slide, labelled by me *Pseudococcus fathyi* Bodenheimer, 1944 and a lectotype designated (BCR).

Trionymus angustifrons Hall

Trionymus angustifrons Hall, 1926:11.

Previously this mealybug was known only from Egypt (Hall, 1926) and Saudi Arabia (Matile-Ferrero, 1988). These records together with the new ones from Israel suggest that it is widespread in the Middle East.

MATERIAL EXAMINED. Israel, Rehovot, 28.v.1988, *Carthamus glauca* (ICV); Golan Heights, Qazrin, 1.vi.1988, *Echinops viscosus* (ICV).

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