

Third Note on the Coccidae of Palestine*).

by

Dr. F. S. BODENHEIMER.

80. **Targionia nigra Sign.** In my first note I recorded this species from El Arish on an undetermined desert shrub. As El Arish is now considered the zoogeographical frontier of Palestine, this species has to be included in this list.

81. **Targionia vitis (Sign.)** This species lives together with *T. distincta* Leon. on the oaks in the maqui near Nahalal.

82. **Cocomytilus retamae Hall.** A moderate infestation on the stem of *Retama retamae* in a wadi between Jericho and the Dead Sea. April 1926.

83. **Chionaspis evonymi Comst.** Only once on some shrubs of *Evonymus japonica* in very heavy incrustation at Tel-Aviv, 28.I.27. Evidently a recent introduction.

84. **Ceroplastes actiniformis Green.** On the leaves of *Phoenix canariensis*, *Pritchardia filifera* and *Jucca whippleri* in the acclimatisation garden of the Experiment Station at Tel Aviv, 20.III.27. Seems to be a recent introduction.

85. **Ceroplastes mimosae Sign.** One adult female on a small twig of *Tamarix* sp. at Jisr-el-Ghoraniyeh, 18.III.27.

*) See: F. S. Bodenheimer, The Coccidae of Palestine. P. Z. E. Agr. Exp. Stat. Bull. 1. July 1924.

Second Note on the Coccidae of Palestine. Bull. Ent. Res. Vol. XVII. 1926 p. 189—192.

86. *Ripersia asphodeli* n. sp. Adult female oval, of dark pink colour. Antennae 6-jointed, the last joint by far the longest. Antennae 6, 3, 2, 1, 5, 4.

5 individual measures are given in the following table:

Nr.	1	2	3	4	5
Joint 1	24	24	27	24	24 μ
2	27	27	24	30	27 μ
3	30	33	33	33	30 μ
4	12	15	15	15	15 μ
5	15	18	16	18	18 μ
6	57	57	57	57	57 μ

Legs normal. The relative length femur : tibia : tarsus is
for the anterior legs 22 : 25 : 35
for the posterior legs 22 : 30 : 35.

There are no knobbed hairs on the tarsus and no pores on the coxa. Posterior spiracles larger than the anterior.

Analring normal with 6 long and strong setae. Caudal setae long and stout, somewhat smaller than the longest of the analring setae. Cerarii confined to the anal and two preceding segments: consisting in the first of 4, in the last of 2 stout spines surrounded by a group of small trilocular ceriferous pores. Length of adult female 3—3½ mm. Breadth 1,8—2,1 mm.

Dermis with numerous trilocular, mixed with ring-shaped pores.

Mentum with 6 short divergent hairs at the apex.

Rostral loop extending to the insertion of the median pair of limbs.

Host plant: *Asphodelus microcarpus*.

The adult females are found between the leaf sheaths and the parent cane. There seems to be only one yearly generation in Palestine. The biology of this species is being investigated

by Dr. Carmin. It seems to be scattered all over the coastal plains (Rehoboth, Chederah, Ben Shemen).

87. *Trabutina palestina* n. sp. Body of the adult female broad oval. Colour of the living insect red-brown, of the dead dark red-brown. The lower surface is flat and the upper convex. No wax-stratum is apparent on the living insect.

Antennae normal, 7-jointed. Length of the joints is very variable, the seventh joint being the longest, then follow the first and second joints which are subequal, the second being sometimes decidedly longer, the fifth joint is usually the shortest, but sometimes of equal length with the fourth or sixth joint. The total length of antennae varies from 200—220 μ ; they are covered with only a small and variable number of hair. Details of the length are submitted in the following table:

Joints	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	Average
1	33	30	33	30	30	33	31,5 μ
2	33	39	33	33	30	36	34 μ
3	27	21	24	24	24	18	23 μ
4	18	24	27	24	30	24	25 μ
5	18	21	18	24	21	21	20,5 μ
6	18	24	21	24	21	24	22 μ
7	54	63	54	60	54	54	56,5 μ
Total length	201	222	210	219	210	210	212,5 μ

Legs well developed. The femura are always the longest joints, then come the tibiae and then the tarsi. Those of the inner group much stronger and longer than the external.

Anal ring broad with 30—40 circumanal setae. One longer caudal seta reaching nearly $\frac{3}{5}$ of the length of the larger circumanal setae. The ventral surface of the anal and preanal segments is covered with short hair. The dorsal dermis and that

of the last ventral segments abundantly furnished with glands. Annular and small circular pores predominant on the ventral surface, while small circular and large cylindrical pores are equally distributed on the dorsal surface. Spiracles well developed. Rostral loop not reaching the insertion of the third pair of legs.

Length of adult female 2—3 mm, breadth 1,2—1,8 mm.

The adult female is entirely wrapped in a large and pouched ovisac having a smooth surface. At the back of the ovisac, surrounded by wrinkles, there is a broad padded operculum for the exit of the newly-hatched larvae. On its ventral face the ovisac is strongly grown together with the tamarix bark, which when separated from the branch, remains partially adherent to the ovisac. Recently after the formation of the ovisac there is a broad white stripe, leading from the aperture to the posterior end of the ovisac. This stripe is not to be seen on older specimens. It is of a tough, rubber-like substance which can be extended into threads. Its form is quite different from these of *Trabutina elastica*.

Length of the ovisac 3—4 mm, breadth 1,5—2 mm.

Eggs ovate, dark brown $0,40 \times 0,25$ mm.

The female lays only a few dozen eggs which, in January, still lie in its ovisac. It seems that they hatch in February. I found the first adult females in the end of March. From May up to July the Tamarix twigs are covered by this Coccidae. They begin to die in July. In summer all the twigs are soiled by a black sticky liquid excreted by the *Trabutina palestina*. Apart from its smaller quantity this phenomenon resembles the manna production described by Ehrenberg. As the liquid is always mixed with the salt incrustations of the Tamarix twigs I could not find out its taste.

It differs from the two other known species of this genus,

Trabutina elastica March. and *T. leonardii* Silv., by the number of antennal joints (7 instead of 6) and by the form of the ovisac.

The female of *Trabutina palestina* comes very near to that of *Najococcus serpentinus* var. *minor* Green and may only be distinguished by its waxen ovisac. Mr. E. E. Green stated (i. l.), that the genus *Najococcus* comes very near *Trabutina* and differs from it in the same manner as *Pulvinaria* from *Lecanium*.

88. ***Kermococcus nahalali* n. sp.**

89. ***Kermococcus greeni* n. sp.** The description of these species will be shortly published together with a preliminary revision of the palaeartic species of this genus.

90. ***Guerinia serratulae* Sign.** The migrant females of this species have been found on *Salsola*, Thistles, *Quercus*, *Cerantonia* and many other plants.

Ovisacs have been discovered up till now only on *Calycotome villosa*. *G. serratulae* has apparently two generations in Palestine: migrant females being found in June and September. A special note on its ecology is in print (Bull. Soc. Ent. Franc. 1927). Its distribution in Palestine (Nahalal, Kabarah, Zichron Jacob, Dilb) seems to be limited by the isohypse of 550 mm. rainfall.

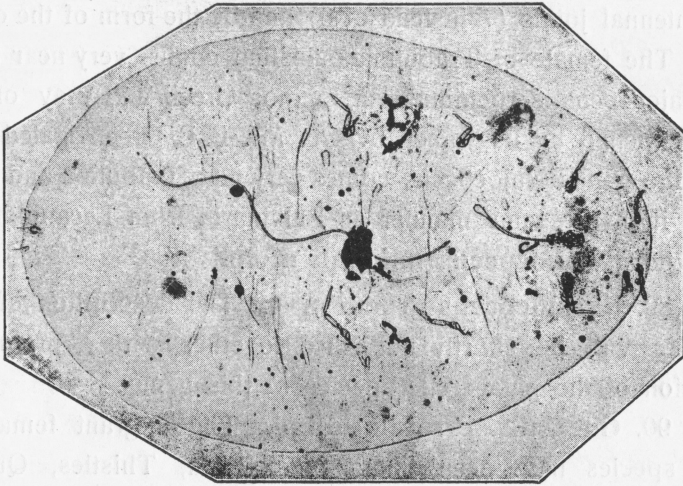
78. ***Pseudococcus daganiae* Bdhr.** has been found between *Dagania* and *Kinnereth* on *Injil* (*Cynodon dactylum*) under a stone on the shore of the Lake of Galilee (V. 25).

I have to thank Mr. E. E. Green and W. J. Hall for many advices and help.

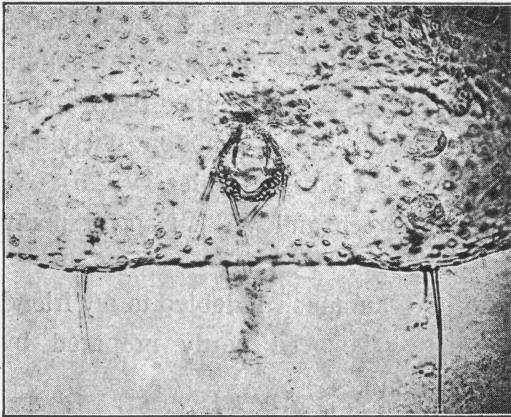
For preparing the photos I am much indebted to my friend Mr. O. Theodor; the drawings have been partly prepared by Mr. H. Aron, partly by Dr. Carmin.

June 1927.

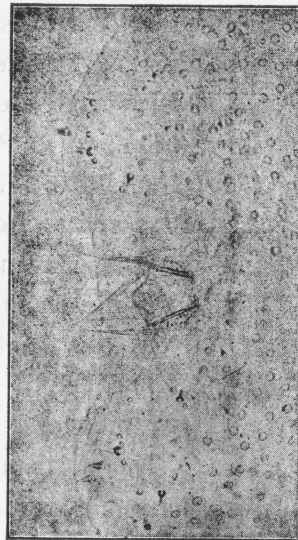
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A



B



C

Fig. 1. *Ripersia asphodeli* n. sp.

a) Adult female, b) Anal segment (ventral view), c) Anal segment (dorsal view).

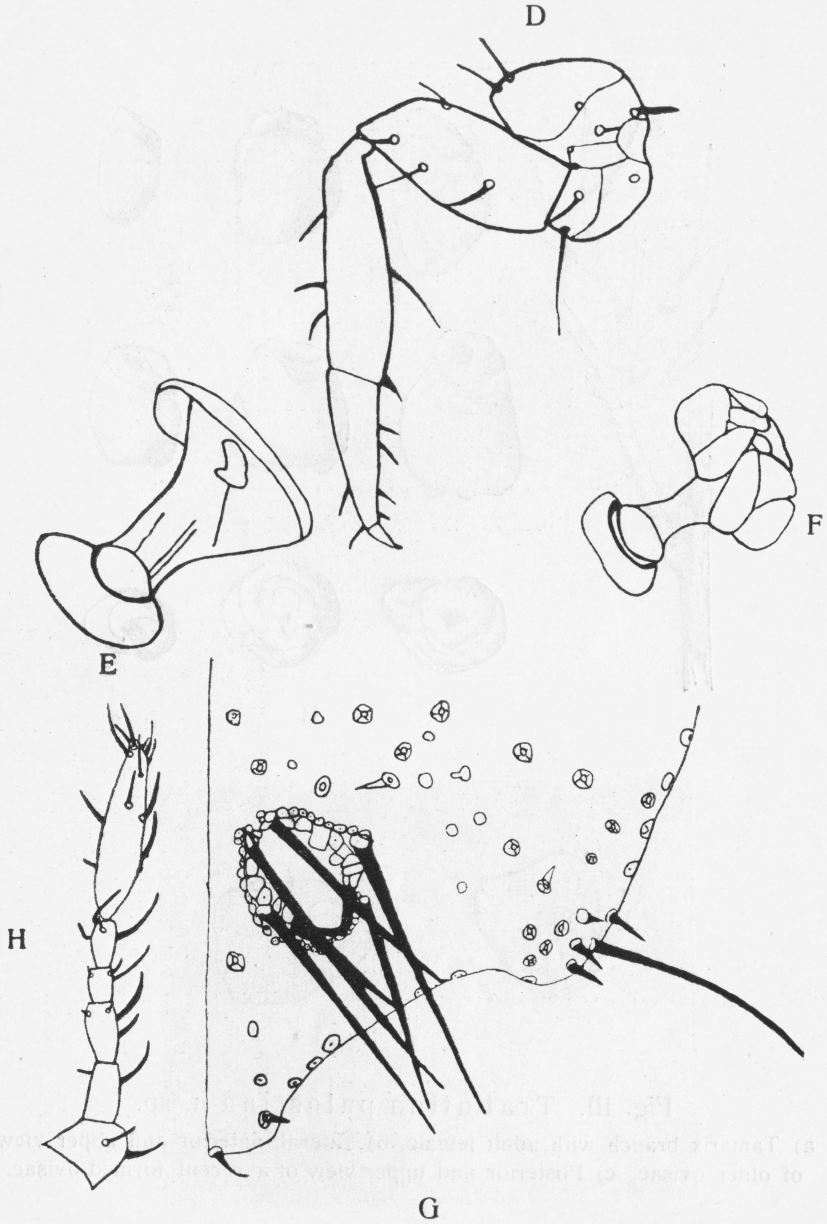


Fig. II. *Ripersia asphodeli* n. sp.

d) Posterior leg of adult female, e) Anterior spiracle, f) Posterior spiracle, g) Anal segment (sketch), h) Antenna of adult female.

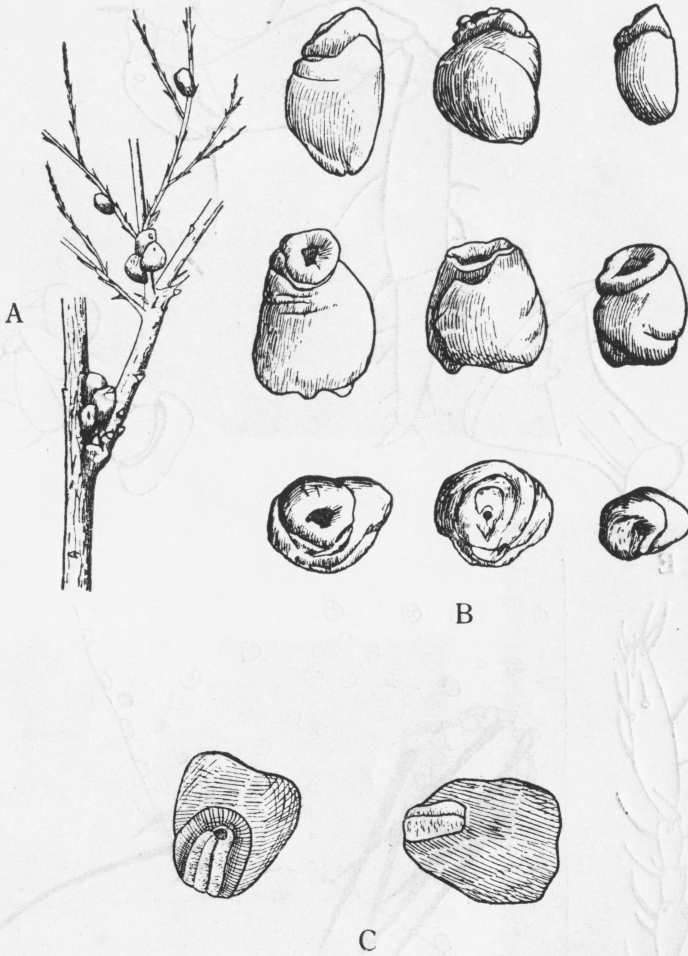
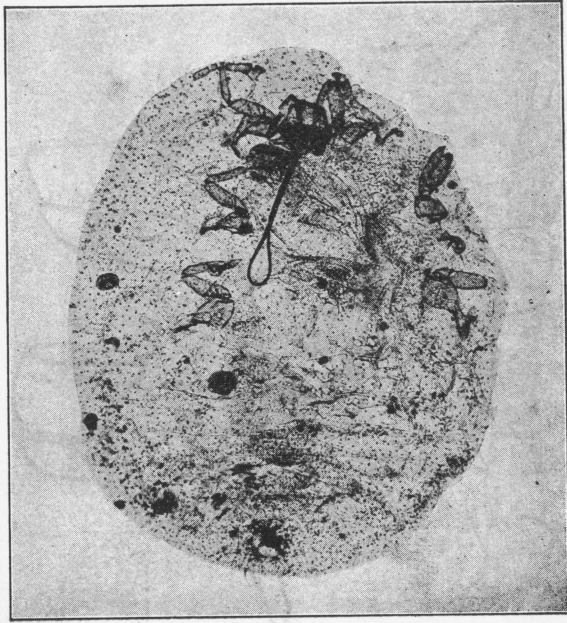
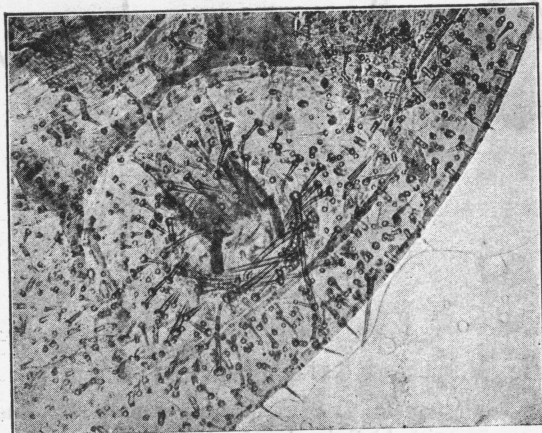


Fig. III. *Trabutina palestina* n. sp.

- a) *Tamarix* branch with adult female, b) Lateral, anterior and upper view of older ovisac, c) Posterior and upper view of a recent formed ovisac.



D



E

Fig. IV. *Trabutina palestina* n. sp.

d) Adult female (ventral surface), e) Ventral view of the anal segment of the adult female.

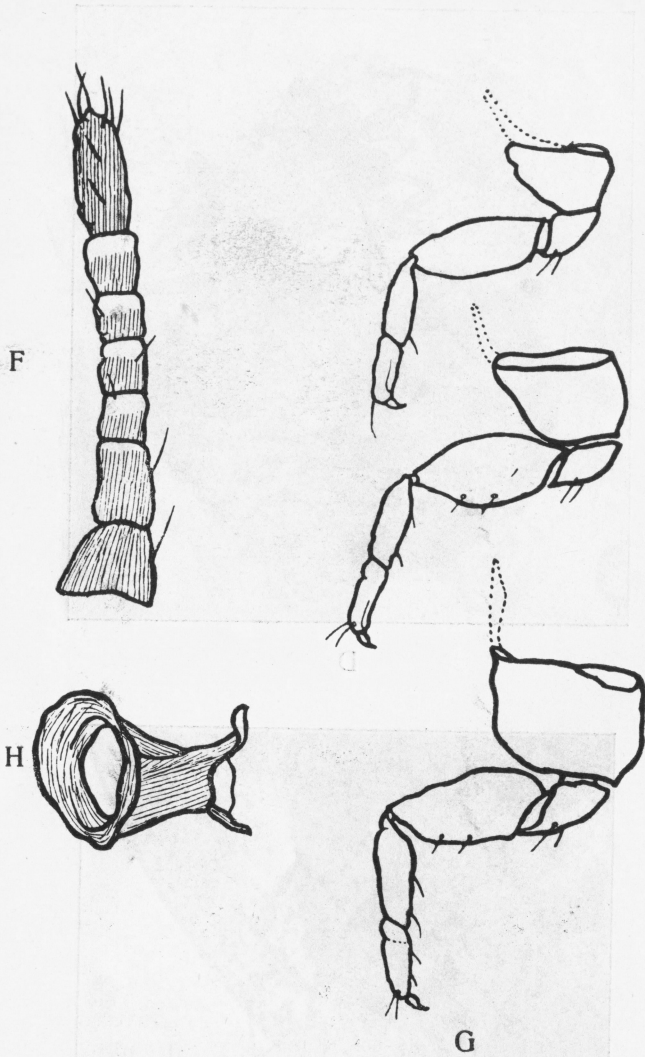


Fig. V. *Trabutina palestina* n. sp.

f) Antenna of adult female, g) Legs of adult female (1st, 2nd and 3rd pair), h) Spiracle of adult female.

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