

**A NEW SPECIES OF *CONCHASPIS* COCKERELL (HOMOPTERA:  
COCOIDEA: CONCHASPIDIDAE) FROM THE ORIENTAL REGION\***

Y. BEN-DOV<sup>1</sup> and D.J. WILLIAMS<sup>2</sup>

<sup>1</sup>Department of Entomology, Agricultural Research Organization,  
Bet Dagan 50250, Israel, <sup>2</sup>Commonwealth Institute of Entomology,  
c/o British Museum (Natural History), Cromwell Road,  
London SW7 5BD, United Kingdom

**ABSTRACT**

A description is given of the adult female of *Conchaspis malesiana* n. sp.  
(Homoptera: Conchaspidae) collected on the petioles of a plant of the family  
Apocynaceae in Singapore.  
**KEY WORDS:** *Conchaspis malesiana* n. sp., Homoptera, Coccoidea,  
Conchaspidae, Apocynaceae, Singapore, Oriental Region.

Records of the family Conchaspidae (Homoptera: Coccoidea) until the early  
1970s (Mamet, 1954; Munting, 1964; Hodgson, 1967) showed that its natural distribution  
was South America, southern Africa and Madagascar but one species, *Conchaspis socialis*  
Green, was known from the Oriental Region (Sri Lanka). A further species has since been  
described from Malaya (Khoo, 1978) and Ben-Dov (1974) has shown that the family  
extends into tropical Africa. Most species are restricted to a single zoogeographical region,  
however, *C. angraeci* Cockerell is known in all zoogeographical regions (Ben-Dov, 1981),  
probably as a result of recent introductions.

In this paper we describe a new species from Singapore. Together with *C. socialis*  
Green and *C. vaccinii* Khoo this makes a total of three species endemic to the Oriental  
Region. As Williams (1984) has suggested, these species may have evolved there recently.

*Conchaspis malesiana* Ben-Dov and Williams, n.sp.  
(Fig. 1)

Scale (alcohol preserved) of adult female white; oval, about 5 mm long, 2.5 mm  
wide; convex, about 1 mm high; top of scale bluntly pointed; tip of scale slightly bent  
subcentrally; without ridges.

\*Contribution from the Agricultural Research Organization, The Volcani Center, Bet  
Dagan, Israel, No. 1259-E, 1984 series.



Male not observed.

Female (mounted specimens) oval, 1.2 mm long, 0.5 mm wide (across metathorax). Prothoracic protuberances well-developed, rounded marginally. Cuticular stippling of dorsum and venter of similar pattern, composed of dark circular or oval spots. Antennae 3-segmented, 140-150  $\mu\text{m}$  long; basal segment with 2 pointed setae at its base, and one near distal end; second segment with one, club-shaped, falcate seta; third segment apically with 3 club-shaped falcate setae and 2 pointed setae. Dorsal ocellar spots membranous; without cuticular stippling; not surrounded by a rim; with a few folds in cuticle radiating from a longitudinal area. One cicatrice located lateral to each ocellar spot. Tubular ducts placed marginally on dorsum of metathorax and abdominal segments 1 to 4, in frequency of 10-16, 8-12, 4-12, 4-9 and 2-5 respectively. One rounded boss, slightly invaginated, located submarginally on dorsum of abdominal segments 1 to 5. Legs with fused trochanter and femur (200-230  $\mu\text{m}$  long, hind leg) and fused tibia and tarsus (140-150  $\mu\text{m}$  long, hind leg); claw without denticle. Ventral thoracic invaginations present on meso- and metathorax; circular or oval in outline; one invagination placed posterior to first and second coxae. Each spiracle with 2-5 quinquelocular pores. Ventral multilocular pores present each with 11 loculi, on abdomen, there being 2-7 on each side of third segment and 1-5 on each side of fourth segment. A few crenulae located ventrally on submargins of abdominal segments 4, 5, and 6. Long slender setae (2-3 times as long as antenna) on venter of head, and on margins of thorax and abdomen, becoming shorter towards posterior segments of abdomen.

**MATERIAL EXAMINED.** Female holotype and 9 paratypes, SINGAPORE, Bukit Timah, 17.XII.1972, on petioles of a plant of the family Apocynaceae, D.H. Murphy, CIE no. A6728. The holotype and part of the paratypes are deposited in the British Museum (Natural History), London (BMNH). Paratypes are also deposited in Museum National d'Histoire Naturelle, Paris; U.S. National Museum of Natural History, Washington, D.C.; Coccoidea Collection, Department of Entomology, The Volcani Center, Bet Dagan, Israel (ICV).

**ETYMOLOGY.** The specific name is based on Malesia, the latinised form of Malaysia commonly used by botanists for the Malaysian subregion of the Oriental Region.

**NOTES.** *C. malesiana* is morphologically related to *C. vaccinii* which is also known from the Malayan peninsula. It differs from *C. vaccinii* in possessing dorsal cicatrices lateral to the ocellar spots; these cicatrices being present also in the second female instar. Females of *C. vaccinii* do not possess these cicatrices, as observed in paratype specimens available in BMNH and ICV.

## REFERENCES

- Ben-Dov, Y. 1974. On the species of Conchaspidae (Homoptera: Coccoidea) from Africa and Madagascar with description of a new species. *Revue de Zoologie Africaine* 88: 363-373.
- Ben-Dov, Y. 1981. A catalogue of the Conchaspidae (Insecta, Homoptera, Coccoidea) of the world. *Annales de la Société Entomologique de France* (N.S.) 17: 143-156, 271.
- Hodgson, C.J. 1967. A species of *Conchaspis* (Homoptera: Conchaspidae) from Central Africa. *Arnoldia (Rhodesia)* 3: 1-3.
- Khoo, S.G. 1978. A new species of *Conchaspis* Cockerell (Homoptera: Conchaspidae) from Peninsular Malaysia. *Malaysian Journal of Science* 5(A): 79-83.
- Mamet, R. 1954. A monograph of the Conchaspidae Green (Homoptera: Coccoidea). *Transactions of the Royal Entomological Society of London* 105: 189-239.
- Munting, J. 1964. A new species of *Conchaspis* Cockerell from South Africa (Homoptera: Conchaspidae). *Journal of the Entomological Society of Southern Africa* 27: 59-61.
- Williams, D.J. 1984. Some aspects of the zoogeography of scale insects (Homoptera: Coccoidea). *Proceedings of the 10th International Central European Entomofaunistic Symposium, Hungary, Budapest, August 1983*: 331-333.