

Short Communication

Survey of Scale Insects and Their Natural Enemies in Riyadh Region (Saudi Arabia)

A.M. Al-Ahmed and A. Badawi

Plant Protection Department, College of Agriculture, King Saud University,
Riyadh, Saudi Arabia

A general survey of scale insects attacking fruit trees, shade trees and ornamental plants in Riyadh region was carried out throughout the year 1987-1988. Specimens were collected from the city of Riyadh as well as from the following surrounding vil-lage: Deriya, Uyayna, Huraymila, Quwayiya, Durma, Muzahimiya and Sanam.

Ten species of scales were recovered: *Aonidiella orientalis* (Newstead) on a wide range of host plants; *Parlatoria blanchardii* (Targ.) and *Asterolecanium phoenicis* Rao on *Phoenix dactylifera*; *Parlatoria crypta* McKenzie on *Nerium oleander*; *Coccus longulus* (Douglas) and *C. hesperidium* Linn. on *Tipuana tipa*; *Saissetia oleae* (Oliv.) on *Ficus nitida*; *Parasaissetia nigra* (Nietner) on *F. carica*; *Contigaspis zillae* (Hall) on *F. nitida* and *Crotolaria aculeata*, and *Lecanodiaspis africana* Newstead on *F. carica* and *Acacia curenbergiana*. The former species was the most dominant. It seems to be more adapted to the arid climate of the area.

Previous surveys carried out in different regions of Saudi Arabia has been reviewed by Abu-Thuraya [1] who mentioned 31 species of scales belonging to 4 families and 19 genera. Matile-Ferrero [2, pp. 219-228] added several species to the previous list, 20 of which were recorded for the first time in Saudi Arabia.

In the present work, 11 species of natural enemies emerged from infested scales; 7 parasitoids for *A. orientalis*, 3 for *L. africana* and a single predator for *P. blanchardii*. Eight of these (marked by an asterisk) were recorded for the first time in Saudi Arabia.

The parasitoids of *A. orientalis* included 4 aphelinids; *Marietta leopardina* Mots.* , *Encarsia aurantii* (Howard)* , *E. sp. nr citrina* (Craw)* , *Azotus chrysomphali* Ghesq.* , and 3 encyrtids; *Comperiella lemniscata* Com. and Ann.* , *C. aspidiotophaga* Subba Rao and *Haprolepis aspidiotii* Com. and Ann.

Two encyrtids, *Lakshaphagus hautfeuillei* (Mahd.)* and *Parechthrodrynus com-bretae* Risb.* and a single pteromalid, *Scutellista* sp. nr *hispanica* (Masi) were recorded as parasitoids of *L. africana*. The nitidulid *Cybocephalus* sp.* was the only predator recorded for *P. blanchardii*. This predator is probably capable of attacking other scales species.

Three species of parasitoids belonging to the genera *Aphytis*, *Haprolepis* and *Aspidiotophaga* were reared from the oriental scale insect, *A. orientalis* received in California with a shipment from Saudi Arabia [3]. Nine species of parasitoids of scale insects in Saudi Arabia have been mentioned by Abu-Thuraya [1]. Two aphelinids in the genera *Azotus* and *Marietta*, and two encyrtids in the genus *Comperiella* were recorded by Moussa [4] as parasitoids for *A. orientalis* in Riyadh region.

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References

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حصر للحشرات القشرية وأعدائها الطبيعية في منطقة الرياض (المملكة العربية السعودية)

عزام محمد الأحمد و علي إبراهيم بدوي

قسم وقاية النبات، كلية الزراعة، جامعة الملك سعود، الرياض،

المملكة العربية السعودية

ملخص البحث. أجريت عملية حصر عام للحشرات القشرية التي تصيب أشجار الفاكهة وأشجار الظل ونباتات الزينة في منطقة الرياض وما يصابها من أعداء حيوية خلال العام ١٩٨٧ / ١٩٨٨ م. وقد جمعت العينات من مدينة الرياض والقرى المحيطة بها وقد شملت الدرعية، العيينة، حريملاء، القويمية، ضرماء، المزاحمية، سنام.

وقد أمكن الحصول على ١٠ أنواع من الحشرات القشرية وكانت الحشرة القشرية الشرقية هي السائدة. كما أمكن حصر ١١ نوعاً من الأعداء الطبيعية للحشرات القشرية منها ثمانية أنواع (٧ طفيليات، مفترس واحد) يسجل وجودها لأول مرة في المملكة.