

ALEYRODIDS, COCCIDS, DIASPIDIDS AND PSEUDOCOCCIDS (HOMOPTERA) FROM ASWAN GOVERNORATE

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Abstract

This work included the survey of Families Aleyrodidae(11), Coccidae (7), Halimococcidae (1), Lecanodspididae (1), Phoenicococcidae (1), and Pseudococidae (4) (Homoptera) and their parasitoids in Aswan Governorate during 2001-2002. Forty one species of these pests were recorded as well as hosts, distribution and parasitoids of the species were given. Twenty parasitoids species were recorded attacking the formentioned pests. Diaspidis is the largest group in Aswan Governorate, followed by the aleyroidids.

INTRODUCTION

Climatic factors has an ultimate determining role in the distribution and abundance of organisms (Huffaker *et al.*, 1984). It also greatly influences (and at least restricts) the distribution and abundance of animal and plant populations (Huffaker and Gutierrez, 1990).Aswan Governorate characterized by special weather condition which reflects on fauna and flora of this location (Abd-Rabou, 1998). The present work dealt with the collected material from whiteflies (Aleyrodids), armored scale insects (Diaspidids), soft scale insects (Coccids), pseudomealybugs (Pseudococcids) and their parasitoids in different locations in Aswan Governorate during 2001-2002.

MATERIALS AND METHODS

A survey was carried out allover Aswan Governorate during 2001-2002. Infested host plants with any of the prospective insect groups were examined in the field, using a pocket lens. Leaves from different host plants were collected and placed

separately in paper bags for further examination in the laboratory. Identification of aleyrodids, coccids, diaspidids and pseudococcids and other scale insect families were made by examining their pupal case and mounted adults in Canada balsam, according to Bink-Moenen (1983). Materials were also kept in a well-ventilated container until the emergence of any parasitoids. Identification of parasitoids was made by examining their mounted adults in Hoyer's medium (Noyes, 1982).

RESULTS AND DISCUSSION

Whiteflies (Aleyrodidae), armored scale insects (Diaspididae), soft scale insects (Coccidae), pseudomealybugs (Pseudococcidae) and their parasitoids at different locations in Aswan Governorate during 2001-2002, are presented in Table 1.

During the present work forty one species of aleyrodids, coccids, diaspidids, halimococcids, lecanodiaspidids, phoenicococcids and pseudococcids and other scale insects families were collected from Aswan Governorate. Bink –Moenen (1983) recorded 6 species of whiteflies from Aswan. Later, Abd-Rabou (1997) added two new recorded species from the same Governorate. While Mohammed and Nada (1991) recorded two species from soft scale insects. Priesner and Hosny (1940) recorded three parasitoid species from Aswan attacking some species of these pests. While in the present work twenty two of parasitoids species were collected.

Table 1. Aleyrodids, coccids, diaspidids and pseudococcids and their parasitoids

Family	Species	Common Name	Host Plants	Locations	Recorded Parasitoids
I. Aleyrodidae	1. <i>Acaudaleyrod-es citri</i> Priesner & Hosny)	The black alurodid	<i>Acacia</i> sp., <i>Acacia tortilis</i> , <i>A. nilotica</i> , <i>Alhagi mauromum</i> , <i>Leptadenia heterophlla</i>	Kom Ombo, El-Deka and Selwa; Idfu, El-Ramady; Aswan city, Elefantine Island and El-Aaqab	None
	2. <i>Aleurocanthus zizyphi</i> Priesner	Nabkh whitefly	<i>Balanites aegyptiaca</i> , <i>Zizyphus spina-christi</i>	Aswan city, Elefantine Island and Kom Ombo, Korta	<i>Encarsia lutea</i> (Masi).
	3. <i>Aleurolobus niloticus</i> Priesner & Hosny	Mignonette whitefly	<i>Balanites</i> sp., <i>B. aegyptiaca</i> , <i>Lawsonia inermis</i> , <i>Ficus sycamorus</i> , <i>Z. spina-christi</i>	Idfu, El-Tonab; Kom Ombo, El-Kagog; Aswan city, El-Aaqab and Abu Simbil	<i>Encarsia elegans</i> Masi.

Table 1.Con't

Family	Species	Common Name	Host Plants	Locations	Recorded Parasitoids
	<i>4. Aleurotuerculatus porosus</i> (Priesner & Hosny)	Porosus nebkh whitefly	<i>Z. spina-christi</i>	Kom Ombo, Korta	None
	<i>5. Aleuroplatus acacia</i> Bink-Moenen	Sunt whitefly	<i>A. nilotica</i>	Aswan city, Elefantine Island	None
	<i>6. Bemisia afer</i> (Priesner & Hosny)	Sycamore whitefly	<i>A. nilotica</i> and <i>Albizia</i> sp.	Kom Ombo, El-hegadya and El-Kagog	<i>Encarsia davidi</i> Viggiani, <i>E. lutea</i> , <i>Eretmocerus corni</i> Haldeman, <i>E. mundus</i> (Mercet).

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Family	Species	Common Name	Host Plants	Locations	Recorded Parasitoids
	<i>Bemisia (tabaci complex)</i> (Genn.)	Cotton whitefly	<i>Acacia</i> sp., <i>A. tortilis</i> , <i>Althaea</i> sp., <i>Bauhinia</i> sp., <i>Cucumis sativus</i> , <i>Helianthus annuus</i> , <i>Lantana camara</i> , <i>Lathyrus articulatus</i> , <i>Lotus arabicus</i> , <i>Lycopersicum esculentum</i> , <i>Malva rotundifolia</i> , <i>M. sylvestris</i> , <i>Parkinsonia aculeeata</i> , <i>Saccharum officinarum</i> , <i>Withania somnifera</i>	Kom Ombo, El-Rakawa, Selwa, Korta, El-Kagog and El-Aqilate; Idfu, El-Rdisya, El-Sebaya and El-Tonab; Daraw, El-Gaafera and El-Retay; Aswan city, El-Aaqab	<i>Encarsia davidi</i> Viggiani, <i>E. lutea</i> , <i>Eretmocerus corni</i> Haldeman, <i>E. mundus</i> (Mercet).

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Family	Species	Common Name	Host Plants	Locations	Recorded Parasitoids
	8. <i>Dialeurodes kirkaldyi</i> (Kotinsky)	Jasmine whitefly	<i>M. rotundifolia</i>	Daraw, El-Retay	None
	9. <i>Ramsesseus follioti</i> Zahradink	Egyptian whitefly	<i>M. rotundifolia</i>	Aswan city Elefantine Island	<i>Encarsia ramsesi</i> Polaszek and <i>Eretmocerus</i> sp
	10. <i>Siphoninus phillyreae</i> (Hal.)	Pomegranate whitefly	<i>Punica granatum</i>	Aswan city, Elefantine Island	<i>Encarsia inaron</i> (Walker).
	11. <i>Tetraleurodes leguminicola</i> Bink-Moenen	Leguminous whitefly	<i>A. nilotica</i>	Aswan city, Elefantine Island	<i>Encarsia acaudaleyrodjs</i> Hayat, <i>E. davidi</i> , <i>E. ramsesi</i> and <i>Euderomphale</i> sp.

Table 1.Con't

Family	Species	Common Name	Host Plants	Locations	Recorded Parasitoids
II. Coccidae	1. <i>Ceronoma africana</i> Macfic	African wax scale	<i>Ficus nitida</i>	Kom Ombo, Korta	None
	2. <i>Coccus hesperidum</i> L.	Brown soft scale	<i>Bambusa</i> sp.	Aswan city, El-Aaqab	<i>Diversinervus elegans</i> Silvestri.
	3. <i>Parasaissetia nigra</i> (Nietner)	Niger soft scale	<i>F. scaymours</i>	Kom Ombo, El-Ramady	<i>Paracerapterocerus africanus</i> Girault
	4. <i>Pulvinaria tenuivalvata</i> (Newstead)	Sugar cane soft scale	<i>S.officinatum</i>	Nasr El-Noba, Dar El-Salam	<i>Coccophagus scutellaris</i> (Dalman)
	5. <i>Saissetia coffeae</i> (Walker)	Hemispherical soft scale	<i>Ficus nitida</i>	Kom Ombo, El-Kagog	None

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Family	Species	Common Name	Host Plants	Locations	Recorded Parasitoids
III. Diaspididae	6. <i>Saissetia oleae</i> (Walker)	Mediterranean black scale	<i>Ficus nitida</i>	Idfu, El-Sebaya	<i>D. elegans</i> and <i>Scutellista cyaneae</i> (Mot.).
	7. <i>Waxiella mimosea</i> (Signoret)	Acacia wax scale	<i>A. nilotica</i>	Aswan city, Elefantine Island	<i>P. africanus</i>
	1. <i>Abgrallaspis cyanophylli</i> (Signoret)	Chaff scale	<i>Ancaetus pritehardia</i>	Kom Ombo, Selwa	None
	2. <i>Adiscodiaspis tamaricola</i> Malenotti	Tamarix scale	<i>Tamarix</i> sp.	Aswan city, Elefantine Island	<i>Habrolepis aspidioti</i> Compere.
	3. <i>Aonidiella aurantii</i> (Maskell)	Red scale	<i>Ficus nitida</i>	Kom Ombo, El-Hegadya)	None
	4. <i>Artemisaspis farsetiae</i> (Hall) species.	Farsetia scale	<i>Tamarix</i> sp.	Aswan city, Elefantine Island	None

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Family	Species	Common Name	Host Plants	Distribution	Recorded Parasitoids
	5. <i>Aspidaspis longilobus</i> (Hall)	Long tailed scale	<i>Tamarix</i> sp.	Aswan city, Elephantine Island	None
	6. <i>Chrysomphalus aonidum</i> (L.)	Black scale	<i>Eucalyptus</i> sp.	Kom Ombo, El-Deka	<i>Encarsia lounsburyi</i> (Berlese & Paloli).
	7. <i>Chrysomphalus dictyospermi</i> (Morgan)	Dictyospermum scale	<i>Ficus nitida</i>	Kom Ombo, El-Hegadya	None
	8. <i>Contigaspis zillae</i> (Hall)	Zilla scale	<i>Calatropis procera</i> , <i>Farsetia aegyptiaca</i> , <i>Ochradenus baccatus</i> , <i>Telephium sphaerospermum</i>	Kom Ombo, El-Rakawa and El-Aqilate; Idfu, El-Rdisya; Daraw, El-Retay	None
	9. <i>Insulaspis pallidula</i> (Green).	Mango scale	<i>Mangifera indica</i>	Kom Ombo, Selwa	None
	10. <i>Lepidosaphes beckii</i> (Signoret)	Purple scale	<i>M. indica</i>	Nasr El-Noba, Balana	None

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Family	Species	Common Name	Host Plants	Distribution	Recorded Parasitoids
	11. <i>Lineaspis striata</i> (Newstead)	Arborvitae scale	<i>Thuja ouantali</i>	Nasr El-Noba, Balana	<i>E. lounsburyi</i>
	12. <i>Kirshenkella cellulose</i> (Hall)	Unknown	<i>Iperata cylindrical</i>	Kom Ombo, El-Rakawa	None
	13. <i>Nilotaspis isis</i> (Hall)	Isis scale	<i>Tamarix</i> sp.	Nasr El-Noba, Balana	None
	14. <i>Parlatoria oleae</i> (Clovee)	Olive scale	<i>Oleander</i> sp.	Daraw, El-Retag	<i>Aphytis diaspidis</i> How.
	15. <i>Pseudotargionia glandulosa</i> (Newstead)	Acacia scale	<i>Acacia</i> sp.	Kom Ombo, El-Kagog	None
	16. <i>Salicicola africana</i> (Newstead)	Willow scale	<i>Salix</i> sp.	Nasr El-Noba, Dar El-Salam	None

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Family	Species	Common Name	Host Plants	Distribution	Recorded Parasitoids
IV. Halimococcidae	1. <i>Halimococcus thebaicae</i> Hall	Thebaica scale	<i>Hyphaene thebaica</i>	Kom Ombo, Korta	None
V. Lecanodiaspididae	1. <i>Lecanodiaspis africana</i> (Newstead)	African scale	<i>Psidium guajava</i>	Kom Ombo, Korta	None
VI. Phoenicococcidae	1. <i>Phoenicococcus marlatti</i> Cockerell	Red date palm scale	<i>Phoenix dactylifera</i>	Kom Ombo, , El- Sebaya	None
VII. Pseudococcidae	1. <i>Dysmicoccus trisponsus</i> (Hall)	Unknown	Halfa grass	Kom Ombo, El-Hegadya	<i>Leptomastidae abnormis</i> (Girault).
	2. <i>Kiritchenkella sacchari</i> (Green)	saccharum mealybug	Halfa grass	Aswan city, Elefantine	<i>Anagyrus pseudococci</i> (Girault).
	3. <i>Maconellicoccus hirsutus</i> (Green)	Hibiscus mealybug	<i>Hibiscus</i> sp.	Idfu, El-Tonab	<i>Anagyrus kamali Moursi</i>
	4. <i>Saccharicoccus sacchari</i> (Cockerell)	Pink sugar cane mealybug	<i>S.officinarum</i>	Idfu, El-Rdisya	<i>Paraphaenaodiscus</i> sp.

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الذباب الأبيض والحشرات القشرية الرخوة والمسوحة والبق الدقيقي وطفيلياتهم في محافظة أسوان

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معهد بحوث وقاية النباتات مركز البحوث الزراعية - للدقي جيزة - مصر

تم في هذا العمل حصر للذباب الأبيض والحشرات القشرية المسوحة والحشرات القشرية الرخوة والبق الدقيقي والطفيليات المصاحبة لهم بالأضافة الي العوائل النباتية والتوزيع الجغرافي لهذه الأنواع في محافظة أسوان أثناء الفترة من ٢٠٠١-٢٠٠٢. وقد أظهرت النتائج أن محافظة أسوان بها ٤٢ نوعا من هذه الأفات مصاحبة لها ٢٢ طفيل.