

**PREVALENCE OF INSECT FAUNA IN SOUTH SINAI, EL ARISH,
LUXOR AND EL KHARGAH**

BY

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ABSTRACT

This survey represented a picture of the insect fauna in both South and North Egypt and revealed the presence of 91 species belonging to 46 families and 10 orders, from which 76 species were collected from the North with insect number 654, while in the South 73 species were collected with insect number 551. In general the total number collected from cultivated areas exceed the number collected from deseratic areas due to the difference in habitat as temperature, plantation and soil.

INTRODUCTION

The present survey from North and South Egypt aimed to compare between their insect fauna. North Egypt is represented by desert region (Sinai) and a cultivated region (El Arish), while South Egypt is represented by a

desert region (Luxor) and cultivated region (El Khargah Oasis). Several authors surveyed and gave valuable information about the insect fauna in some areas in Egypt. Others studied insects belonging to one order or more all over Egypt. Krauss (1909), Alfierii (1920, 1967), Efflatoun (1922-1945), Uvarov (1929), Hafez (1939), Priesner and Alfieri (1953), Sayed et al (1964), Taha and Salwa (1984) and Zalat and Salwa (1985).

MATERIALS AND METHODS

The survey was conducted in the different regions of the investigation during the same intervals; the collections were achieved by the sweeping methods. Collected insects were killed, then pinned and kept in preservation boxes, sorted and identified to their genera and species.

RESULTS and DISCUSSION

Data obtained from the collected species and their numbers in each region are listed alphabetically in the following table:-

Species and numbers of insects collected at four regions during the period of investigation.

Species	North Egypt		South Egypt	
	El Arish No.	Sinai No.	Luxor No.	El Khargah No.
Odonata				
Coenagriidae				
<u>Ischnura senegalensis</u> Rambur	3	2	6	5
Libellulidae				
<u>Brachythemis leucosticta</u> Burm.	-	2	3	2
<u>Crocothemis erythraea</u> Brulle	7	5	11	10
<u>Orthetrum chrysostigma</u> Burm.	2	6	4	1
Orthoptera				
Acrididae				
<u>Anacridium aegyptium</u> L.	3	3	4	1
<u>Calephorus venustus</u> Walk.	1	-	2	2
<u>Euprepacnemis plorans</u> Charp.	-	-	-	3
<u>Platypterna gracilis</u> Kraysi	3	-	2	1
<u>Pyrgomorpha cognata</u> Krauss	-	7	-	-
<u>Schistocerca gregaria</u> Forsk	12	2	3	2
<u>Tenuitarsus angustus</u> Blanch	-	-	2	-
<u>Thisoicetrus litteralis</u> Ramb.	3	-	4	2
Gryllidae				
<u>Acheta burdigalensis</u> Lata.	-	-	-	4
	10	-	6	14

Continued

Species	North Egypt		South Egypt	
	El Arish No.	Sinai No.	Luxor No.	El Khargah No.
Tettigoniidae				
<u>Diogena fausta</u> Buam.	2	-	3	-
Dermaptera				
Labiduridae				
<u>Labidura confusa</u> Capra	-	-	-	2
<u>Labidura riparia</u> Pall.	5	2	-	2
Dictyoptera				
Blattidae				
<u>Periplaneta americana</u> L.	16	7	19	2
<u>Blatta orientalis</u> L.	-	1	3	-
Polyphagidae				
<u>Polyphaga aegyptiaca</u> L.	1	4	2	2
Mantidae				
<u>Ameles aegyptiaca</u> Werm	1	2	1	1
<u>Blepharopsis mendica</u> Fabricius	3	-	-	-
<u>Mantis religiosa</u> L.	4	7	8	5
<u>Sphodromantis viridis</u> Forsk	2	3	2	1
Hemiptera				
Coreidae				
<u>Coriomeris affinis</u> His.	-	1	-	-
<u>Riptortus aegyptiacus</u> Ldbg.	-	-	2	-

Continued

Species	North Egypt		South Egypt	
	El Arish No.	Sinai No.	Luxor No.	El Khargah No.
Jassidae				
<u>Chiasmus conspurcatus</u> per.	4	-	1	-
Lygidae				
<u>Oxycarnus hyalinipenus</u>	-	-	3	-
Miridae				
<u>Cyrtopeltis tenuis</u> Reut.	1	1	1	-
<u>Nasocoris albipennis</u> Linn.	-	2	1	-
Pentatomidae				
<u>Brachynema cinctum</u> F.	1	-	-	-
<u>Eurydema ornatum</u> L.	3	5	-	2
<u>Eusarcocoris inconspicua</u> H.S.	2	1	8	-
<u>Nezera viridula</u>	10	2	5	-
Neuroptera				
Myrmeleontidae				
<u>Creoleon africanus</u> Ramb.	-	3	7	1
<u>Creoleon klugi</u> Navas	2	-	-	-
<u>Creoleon indigus</u> Navas	1	2	5	-
Lepidoptera				
Nymphalidae				
<u>Vanessa atalanta</u> L.	2	10	-	1
<u>Vanessa cardui</u> L.	7	9	5	-

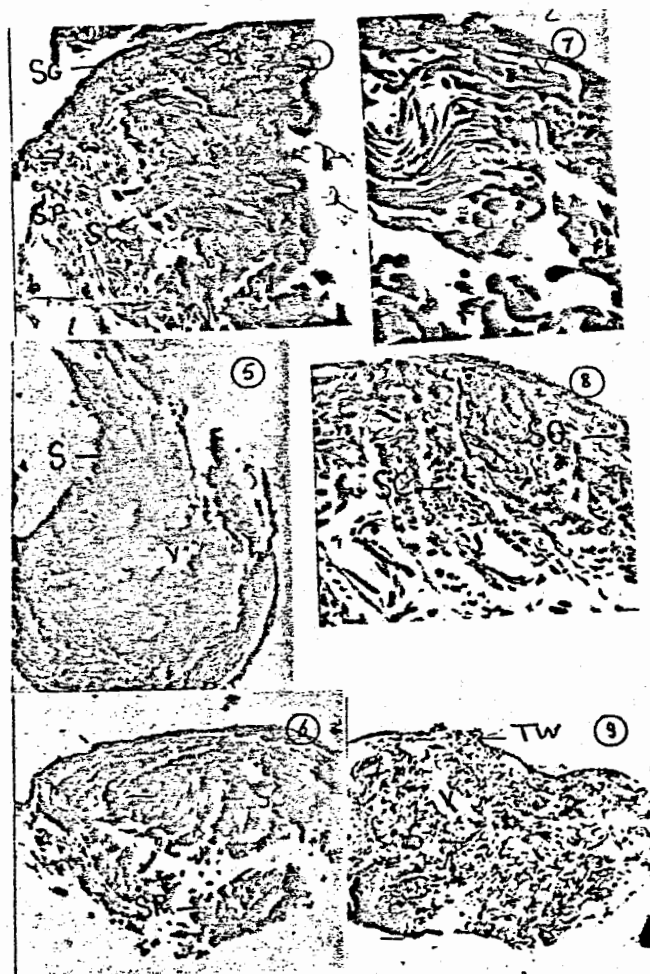
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Species	North Egypt		South Egypt	
	El Arish No.	Sinai No.	Luxor No.	El Khargah No.
Pieridae				
<u>Colias crocea</u> Geoffery	6	10	-	3
<u>Colotis fausta</u> oliv.	-	8	1	2
<u>Pieris rapae</u> L.	20	12	6	-
<u>Pontia glauconma</u> Klug.	3	3	5	-
Sphingidae				
<u>Hippotion celerio</u> L.	3	12	5	-
<u>Hyles liveroneca</u> Esp.	-	6	-	-
Diptera				
Asilidae				
<u>Apoclea algira</u> L.	-	3	-	1
<u>Promachus argentipennis</u> Effl.	-	1	-	-
Bombyliidae				
<u>Anthrax tripunctata</u> Wied.	-	1	-	-
<u>Exoprosopa decrepita</u> Wied.	-	1	-	3
Calliphoridae				
<u>Chrysomia albiceps</u> Wied.	2	6	2	1
<u>Lucilia sericata</u> Mg.	2	2	1	-
Conopidae				
<u>Conops elegans</u> Mg.	-	2	-	1
<u>Myopa dorsalis</u> F.	-	-	-	2

present in some cases. Spermatocytes were degenerated and often lacking cytoplasm, leaving almost empty cysts. In some follicles the spermatocytes were completely lost. Spermatids and sperms were abnormal and appeared necrotic. Immature sperms were seen scattered here and there and mature spermatozoa were degenerated indicating that a dose of 300 Gy is sufficient to arrest the process of spermatogenesis (Fig. 6).

The testes from adults emerged from treated five days old pupae with 100 Gy exhibited all stages of spermatogenesis. The germinal area was normal in appearance. Few changes appear such as vacuoles under testicular follicle (Fig. 7).

Although no differences were observed in sections of testes from adults after treatment with 100 Gy, the sections of adult testes emerging from irradiated five days old pupae with 200 Gy revealed relatively significant damage. Spermatogonia showed a destruction, cyst membranes of spermatocytes were often broken. Spermatids, sperms and testicular wall appear more or less normal (Fig. 8). The effects were more pronounced with the increase in dose. A severe destruction occur in the gonads of adults emerged from treated five days old pupae at dose 300 Gy. The effects seen were in the form of thickened and destructed testicular wall. Abnormal germ cells were observed in



Sections in tests of *S. littoralis*:

- 4) Testis of adult emerged from irradiated 3-day-old pupae with 100 Gy.
- 5) Testis of adult emerged from irradiated 3-day-old pupae with 200 Gy.
- 6) Testis of adult emerged from irradiated 5-day-old pupae with 300 Gy.
- 7) Testis of adult emerged from irradiated 5-day old pupae with 100 Gy.
- 8) Testis of adult emerged from irradiated 5-day-old pupae with 200 Gy.
- 9) Testis of adult emerged from irradiated 5-day-old pupae with 300 Gy.

TW (testicular wall), SG (spermatogonia), SC (spermatocyte), SP (spermatid), S (sperm) and V (vacuole).

Continued

Species	North Egypt		South Egypt	
	El Arish No.	Sinai No.	Luxor No.	El Khargah No.
Xylocopidae				
<u>Xylocopa pubescence</u> L.	1	2	2	5
Coleoptera				
Buprestidae				
<u>Anthaxia angustipennis</u> Klug.	-	1	-	-
<u>Julodis onopordi</u> Cheverolat	-	-	3	-
<u>Steraspis squamosa</u> Klug.	-	10	-	3
Carabidae				
<u>Harpalus tenebrosus</u> Dejean	-	2	-	-
Cerambycidae				
<u>Chlorophorus varius</u> Muller	3	-	-	-
Chrysomelidae				
<u>Cryptocephalus curvilinea</u> Olivier	-	4	-	-
Coccinellidae				
<u>Coccinella undecimpunctata</u> Reiche	38	13	19	3
<u>Epilachna chrysomelina</u> Zinn.	1	1	1	3
<u>Scymnus marmottani</u> Kirsch.	-	-	-	2
Curculionidae				
<u>Brachycerus cinereus</u> Oliver	4	1	3	-
<u>Cleonus excoriatus</u> Gyll.	2	-	5	-
<u>Eremiarhinus</u> sp.	2	6	-	3

Continued

Species	North Egypt		South Egypt	
	El Arish No.	Sinai No.	Luxor No.	El Khargah No.
<u>Larinus elegans</u> Desbrochers	1	2	-	-
<u>Sitona humeralis</u> Stephens	2	8	1	-
Dermeestidae				
<u>Anthrenus verbasci</u> Linn.	-	1	-	4
<u>Attagenus aegyptiacus</u> Pic.	3	1	8	-
<u>Dermestes maculatus</u> Degeer	4	1	6	-
Meloidae				
<u>Meloe proscarabaeus</u> Linn.	-	-	-	2
Scarabaeidae				
<u>Anisophila pumila</u> Marseul	2	-	-	1
<u>Pachnoda savignyi</u> Gory	5	1	4	-
<u>Pentadon deserti</u> Heyden	3	4	2	2
<u>Scarabaeus cristatus</u> Fab.	-	-	1	-
<u>Scarabaeus puncticollis</u> Latreille	2	1	1	1
<u>Scarabaeus sacer</u> Linn.	5	3	-	4
<u>Tropinota squalida</u> Scopoli	14	2	10	3
Tenebrionidae				
<u>Erodius gibbus</u> Fab.	-	2	-	-
<u>Pimelia angulata</u> Fair.	2	2	3	5
<u>Pimelia grandis</u> Klug.	2	1	5	2
<u>Pimelia serica</u> Oliver	5	4	3	3
<u>Sepidium tricuspidatum</u> Fab.	-	1	-	1
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Total	354	300	343	208
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	654		551	
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REFERENCES

- Alfieri, A. (1920) Contributions à la fauna entomologique du Nord. Est du Sinai. Bull. Soc. Ent. Egypte, XL: 451-452.
(1967) The Coleoptera of Egypt. Mem. Soc. Ent. Egypte, Vol. 5:361 pp.
- Efflatoun, H.C. (1922-1945): A monograph of Egyptian Diptera: Mem. Soc. Ent. Egypte.
- Hafez, M. (1939): Some ecological observations on the insect fauna of dung. Bull. Soc. Entom. Egypt, 23:241-287.
- Krauss, H.A. (1909): Dermaptera and Orthoptera aus Aegypten der Halbinsel Sinai, Palaestina und Syrien. Verh. Nat. Vet. Karlsruhe, 21:23-43.
- Priesner, H. and A. Alfieri (1953) A review of Hemiptera, Heteroptera known to us from Egypt. Bull. Soc. Egypte, 37:1-119.
- Sayed, M.T., Z.M.F. Rostom and A.H. Kaschef (1964): Contributions to the insect fauna of some oasis of the Egyptian Western Desert. Bull. Soc. Ent. Egypt, 48:260-267.
- Taha, M.A. and Salwa Kamal (1984): Survey of the insect fauna in certain areas of Southern Sinai. J. of the Faculty of Education, No., 7 (2), 287-300.
- Uvarov, B. P. (1929) Orthoptera collected in Sinai by Dr. Bodenheimer and Dr. Theodor in Ergebnisse der Sinai Expedition 1927: 90-103.
- Zalat, S.M. and Salwa, K. (1985): Seasonal abundance and distribution of Bees and Wasps in Southern Sinai. First Int. Conf. App. Sci. Zagazig Univ. IV: 292-308.

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