

**Tanta University
Faculty of Agriculture
Plant Protection Department**



Abundance of Some Insect Pests and their Natural Enemies in Rice Fields

BY

**Eman Ahmed Samir Hendawy
B.Sc. Economic Entomology Department,
Faculty of Agriculture, Kafr El-Sheikh University (2009)**

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Abstract

Rice, *Oryza sativa* L. is a very important food crop, in Egypt as well as all over the world. Rice plants are attacked by several insect pest species, The current study was undertaken at the experimental farm of Sakha Agricultural Research Station during 2017 and 2018 seasons. Twenty-one insect pest species, belonging to Diptera, Hemiptera, Lepidoptera, Orthoptera and Thysanoptera were surveyed from rice nurseries and paddy fields using sweep net and pitfall traps. Orders Hemiptera, Orthoptera and Diptera had the majority of species number, with 33.33, 28.57 and 23.81%, respectively, Larvae of *Chilo agamemnon* Bles. were rare during July, moderate during August, and highest during September. Dead heart, due to the borer, increased gradually from 2.36-4.01 in July to 3.58-9.53/100 plants in August, and became highest (12.47-16.17) in September. The white heads took the same trend, but with much higher values. *Hydrellia prosternalis* Deem. was more dominant just after transplanting, on rice sown after mid-May. Population density of *Chironomus* spp. was moderate during May, higher in July, greatly declined in September. As for insect predators, 34 species were captured, belonging to eight orders and 16 families. Order Coleoptera was represented by 15 species (44.12% out of total), followed by Hymenoptera (20.59%), and Odonata (14.71%). Sixteen spider species, belonging to nine families, were surveyed. They were found belonging to Lycosidae, Tetragnathidae and Salticidae. All spiders and insect predators covered the period from nurseries up to harvest. This indicates the richness of rice fields in Egypt, with bio control agents that should be conserved to minimize application of insecticides, and regain the natural balance in rice fields. Seventeen hymenopteran parasitoids were surveyed, one parasitoid species was detected from each of Chalcididae and Dryinidae, two species were found belonging to each of Trichogrammatidae, Mymaridae, Ichneumonidae, Eulophidae and Platygasteridae. and 6 species were found belonging to Braconidae. Most of the parasitoids were collected from July up to September, except *Apanteles* sp. and *Elasmus* sp. that were collected only in August and September, respectively.

Key Words: Predators, parasitoids, spiders, insect pests, rice fields.

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