

## POPULATION DYNAMICS OF *Tetranychus urticae* KOCH AND ASSOCIATED PREDATORY SPECIES ON PERSIMMON *Diospyros kaki* AT QALUBYA GOVERNORATE .

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### ABSTRACT

The present work aimed to throw more light on one phytophagous mite; *Tetranychus urticae* koch (Family Tetranychidae ) was observed in persimmon *Diospyros kaki* ( Family :Ebenaceae ) from mid of february till the first week of November .Predaceous mites included 5 species belonging to 5 genera and 2 families as following : *Neoseiulus californicus* , *Ampliseius badryi* , *Phytoseius plumifer* and *Typhlodromus pyri* ( Family : Phytoseiidae ) and only one species for family Stigmidae : *Agistemus* sp . Family Phytoseiidae recorded high numbers of predaceous mites than family Stigmidae . Spider , *Linyphia phrygiana* ( Family : Linyphiidae ) was observed from may to September , Ants was observed on persimmon branches and fruits by different numbers from April to October .

### INTRUDUCTION

Persimmon (*Diospyros kaki* ) is an important fruit in Japan , China , Europe and Italy ( Nizakat et al 2007 ) . It is also gaining popularity in the Mediterranean countries , In the last few years , the persimmon cultivation has increased in main horticultural area in Egypt and newly reclaimed lands. The area under cultivation with persimmon trees in Egypt about 1750 feddans producing about 800 tons. The consumers for this fruit in of great interest due to its contains different types of ( carotinoids , vitamin C , tannins and fiber ) are active in the prevention of chronic – degenerative disease and they have antibacterial activity ( Nizakat 2007 , Ping and Hing , 2006 and Testoni , 2002 ) . The phytophagous mite *Tetranychus urticae* koch is a major pest of wide range of crops all over the world. This species is the most common spider mite that is widely spread in Egypt on different crops ( Zaher , 1984). Various researches have evaluated the spatial distribution of *Tetranychus* species and their associated predators in different crops ( Wilson ,1982 , Wilson et al 1983 and Flaherty et al 1992 ) .

Predaceous mites belonging to the family phytoseiidae have gained to attention of scientists being the potential predators of other harmful mites , small insects and their eggs ( Evans , 1992 , Nomikou et al , 2001). The mites of the genus phytosieus were found feeding on spider mites ( Smith and Summers , 1961).The family stigmidae contain species that are predaceous on phytosieus mites and insects. These mites have been recognized as a very important biological control agent ( Walter 1992, Furtado et al 2005 and Ehara 2005 ). Mealybugs and scale in association with ants can sometimes cause problems .

In Egypt , ecological studies on the phytophagous mites infesting cultivation of persimmon and predaceous associating was out data , so the