

Mites Associated with Poultry and Rabbits

A. M. Metwally*; Hala M. Gamal El-Din**; A. A. Abdallah* and Amany A. El-Sadawy**

*Faculty of Agriculture, Al-Azhar University, Cairo, Egypt.

**Faculty of Home Economics, Al-Azhar University, Tanta, Egypt.

ABSTRACT

Sixty nine mite species belonging to 2 orders, 5 suborders and 34 families were collected from poultry and rabbits at different location of Egypt during two years (2013-2014). Suborder Gamasida included 30 species of 11 families; suborder Actinedida 17 species of 13 families; suborder Acaridida 17 species of 6 families; suborder Oribatida 2 species of 2 families; and suborder Ixodida one species of one family.

Key words: Incidence; Mites; Poultry, Rabbits.

INTRODUCTION

Mites comprise a large economic group of Arthropoda found in almost every habitat suitable to animal life. Careful examination of the nearest handful of litter under domestic or wild agricultural animals will surely uncover several species. Some are living on minute particles of food. Activities of a few species are well known, people acquainted with their ravage can rarely recognize the mites if they see them. Whoever. However, the small size of mites is responsible for the lack of information available on them.

Mites are so vary in their feeding habits; some are phytophagous, pests of stored products, predators, animal parasites and free livings. However, mites significantly affect the agriculture, food, health and physical comfort of our society.

Rabbit production is one of the fastest growing livestock enterprises globally.

Abo-Taka (1996) examined poultry houses at six localities of Egypt, and determined the prevalence of different mite species inhabiting chicken, ducks and pigeons. Astigmatid mites had in the highest proportion while mesostigmatids had the lowest.

The red mite, *Dermanyssus gallinae* is an example of poultry parasite that also being injurious to man .It was recorded on domestic fowls, pigeons and other birds (Abo-Taka &Allam, 1997).

Mahgoob *et al.* (2006) collected different samples from litter, poultry feed and feather from chickens, ducks, pekeeny ducks and geese and hair from rabbits and feathers from quails, rozella birdsand zebra, birds (as wild animals which were in captivity) and found twenty-seven families of the suborders; Gamasida, Actinedida, Acaridida and Oribatida plus hypopal stage of the family Acaridae.

Therefore, this study dealt with surveying mites associated with poultry and rabbit farm.

MATERIALS AND METHODS

Mites' collection:

Samples were collected monthly from poultry and rabbit litter and feaces during two successive years (2012-2013) and (2013-2014) in plastic bags sent to the laboratory for mites separation. Collected mites were isolated in Nesbitt's solution for clearing then mounted in Hoyer's Medium on glass slides for examining. Mites were identified and kept in the collection at the Department of Agricultural Zoology and Nematology, Faculty of Agriculture Al-Azhar University.

Mite's identification:

Mite identification was conducted according Griffiths, 1960; Hughes, 1961 &1976; Lindquist and Evans, 1965; Summers and Price, 1970; Karg, 1971; Zaher *et al.*, 1986 and Krantz & Walter, 2009.

RESULTS AND DISCUSSION

1 Incidence of mite families:

Mites associated with poultry (domestics birds and rabbits) were recorded during the two successive years (2012-2014).

Order Parasitiformes:

This order was represented by the two suborders: Gamasida which included 11 families Ascidae, Ameroseiidae, Rhodacaridae, Macrochelidae, Digamaseilidae, Ologamasidae, Laelapidae, Macronyssidae, Dermanysidae, Uropodidae and Parasitidae; and thirty species and the suborder Ixodida which included one species belonging to the family Argasidae (Table 1).

Order Acariformes:

This order was represented by three suborders: Actinedida which included 12 families Cheyletidae,

Tydeidae, Tarsonemidae, Eupodidae, Rhagidiidae, Bdellidae, Cunaxidae, Acarophenacidae, Pygmephoroidae, Sitroptidae, Scutacaridae and Psoroptidae; Suborder Acaridida which included

6 families Analgidae, Pyroglyphidae, Acaridae, Chrotyglyphidae, Suidasiidae and Glycyphagidae; and Suborder Oribatida which included 2 families Oribatulidae and Oppidae (Table 2).

Table (1): Incidence of mite species belonging to order Parasetiformes associated with poultry and rabbits in Gharbia, Kafr El-Shiekh and Cairo governorates for two successive years (2012- 2014)

Order: Parasetiformes				
Suborder: Gamasida				
Family	Species	Habitat	Abundance	Locality
Ascidae (5)	<i>Proctolaelaps pygmaeus</i> Muller	Chicken-Ducks-Geese	++	Qotor-Sakha
	<i>Proctolaelaps bickley</i> (Lindiquot&Huntaer)			
	<i>Protogamasellus minutus</i> Nasr	Pigeon-Ducks-Geese –Turkey Hen	++	Nasr city-Sakha
	<i>Protogamasellus denticus</i> Nasr	Quails-pigeon	++	Nasr city
	<i>Blattisocius tarsalis</i> (Berlese)			
Ameroseiidae (2)	<i>Kleemania plumosus</i> (Oudemans)	Chicken-ducks-pekeenyducks--Geese	++	Nasr city-Qotor-Sakha
	<i>Kleemania plumigera</i> (Berlese)			
Macrochelidae (3)	<i>Macrocheles merdarius</i> (Berlese)	Ducks- Turkey Hen-Rabbits	++	Qotor-Tanta
	<i>Macrocheles matrius</i> (Hull)	Pekeeny-Ducks-Rabbits	++	Qotor
	<i>Macrocheles pisentii</i>	Ducks-Turkey Hen-Rabbits	++	Nasr city-Sakha
Rhodacaridae (2)	<i>Rhohacarus roseus</i> (Oudemans)	Ducks-Pigeon-Chicken	++	Qotor-Sakha
	<i>Rhohacarus subterraneus</i> (Willnan)			
Digamasellidae(1)	<i>Dendrolaelaps aegypticus</i> Metwally&Mersal	Turkey Hen	++	
Ologamasidae (1)	<i>Gamasiphis parpulchellus</i> Berlese	Turkey Hen-Rabbits	++	Nasr city
Dermanyssidae (2)	<i>Dermanyssus gallinae</i> (De Geer)	Pigeon -Quails	++	Tanta
	<i>Dermanyssus chellidonis</i> (Oudemans)			
Macronyssidae (5)	<i>Steatonyssus occidentalis</i> (Ewing)	Ducks-Pigeon-Quails	+++	Sakha-Tanta
	<i>Macronyssus longisetosus</i> (Fuymar)			
	<i>Macronyssus japonica</i> Rodovesky			
	<i>Ornithonyssus bacoti</i> (Hirst)	Pigeon-Quails	++	Nasr city TantaQotor
	<i>Ornithonyssus pipstrelli</i> (Oudemans)			
Laelapidae (5)	<i>Androlaelaps casalis</i> (Berlese)	Ducks-Turkey Hen-Rabbits	+++	Qotor -Sakha
	<i>Androlaelaps kefli</i> (Metwally&Ibrahim)			
	<i>Hypoaspis wahabi</i> (Metwally&Ibrahim)	Quails-Pigeons	+++	anta-Qotor-Sakha
	<i>Hypoaspis oblonga</i> (Halbert)			
	<i>Laelapis hiliaris</i> (Koch)	Ducks-PekeenyDucks	++	Tanta-Qotor
Uropodidae (3)	<i>Uroobovella marginada</i> (Berlese)	Ducks-Turkey Hen-Rabbits	++	Qotor-Sakha
	<i>Trichouropoda potaviana</i> (Canestrini)			
	<i>Rhychopolus rhychophori</i> (Oliver)			
Parasitidae (1)	<i>Parasitus consanguineus</i> Oudemans&Voigts	Ducks-Turkey Hen-Rabbits	++	Qotor-Sakha
Suborder: Ixodida				
Argasidae (1)	<i>Ornithorous erraticus</i>	Pigeon Chickens - Quails	++	city- Sakha-Qotor

Table (2): Incidence of mite species belonging to order Acariformes associated with poultry and rabbits in Gharbia, Kafr El-Shiekh and Cairo governorates for two successive years (2012- 2014)

Suborder: Actinedida				
Family	Species	Habitat	Abundance	Locality
Cheyletidae (5)	<i>Acaropsella notchi</i> omaa&Hassan	Chicken-Ducks-Peekeny-Ducks-Pigeon	++	Tanta
	<i>Eucheyletia</i> sp.			
	<i>Cheyletus malaccensis</i> Oudemans	Poultry food-Chicken-Ducks-Turkey-Hen-Pigeon-Quails	++	Nasr city -Qotor-Sakha
	<i>Cheyletus eruditus</i> (Schrank)			
Tydeidae (1)	<i>Parraloryia</i> sp.	Litter of poultry food	++	Tanta-Sakha
Tarsonemidae(1)	<i>Tarsonemus</i> sp.	Litter of all poultry	++++	Tanta-Nasr city
Eupodidae (1)	<i>Eupodes momeni</i> Abou-Awad	Pigeon -Quails	++	Qotor -Tanta- Nasr city
Rhagidiidae (1)	<i>Neothoria niloticus</i> Abou-Awad&El-Bagoury	Pekeeny-Ducks-Turkey-Hen	++	Qotor-Sakha-Nasr city
Bdellidae (1)	<i>Spinibdella bifurcate</i> Atyeo	Ducks-Rrabbits	++	Tanta-Sakha-Nasr city
Cuaxidae (1)	<i>Puleaus glebulentus</i> Den Heyer	Turkey Hen-Rabbits	++	Qotor-Sakha-Tanta
Acarophenacidae (1)	<i>Acarophinax</i> sp.	Ducks-Turkey Hen-Rabbits	++	Tanta -Sakha
Pygmephoroidae (1)	<i>Trochometridium</i> sp.	Ducks-Turkey Hen-Rabbits	+++	Tanta
Sitroptidae (1)	<i>Sitroptes serrateseta</i> Soliman&Kandeel	Pigeon -Quails	++	Nasr city - Qotor
Scutacaridae (1)	<i>Scutacarus</i> sp.	Chicken-Pigeon-Quails	++	Qotor-Tanta
Psoroptidae (2)	<i>Psoroptes communis</i> Ovis	Rabbits	++++	Tanta
	<i>Chorioptes</i> sp.	Rabbits	++++	Tanta
Suborder: Acaridida				
Analgidae (2)	<i>Trouessart</i> sp.		+	
	<i>Analges corrinus</i> (Megnin)	Chicken-Geese-Pigeon-Quails	+	Nasr city
Pyroglyphidae (2)	<i>Dermatophagides farina</i> (Hughes)	Rabbits	++	Tanta- Sakha
	<i>Pyroglyphus</i> sp.	Rabbits	++	Tanta-Sakha
	<i>Tyrophagous putrescentiae</i> (Shank)	Chicken-Ducks-Geese-Pigeon	++++	Tanta
	<i>Tyrophagous palmarum</i> Oudemans	Poultry food	+++	Tanta-Qotor-Nasr city
	<i>Risoglyphus calleae</i> Oudemans	Ducks-Geese-Turkey Hen	++++	Tanta-Qotor-Nasr city
Acaridae (9)	<i>Acarus siro</i> L.	Chicken-pigeon-Turkey Hen-Ducks	++++	Tanta-Qotor-Sakha-Nasr city
	<i>Acarus farris</i> Oudemans	Chicken -Ducks-PekeenDucks-Geese- Turkey Hen	+++	Tanta-Qotor-Sakha
	<i>Acarus gracillis</i> Hughes	Chicken-Pucks-Pigeon- Turkey hen	++	Tanta-Qotor-Sakha-Nasr city
	<i>Tyrophagus neiswandri</i> Johnston&Bruce	Chicken	++	Tanta
	<i>Tyroborus</i> sp.		+++	
	<i>Caloglyphus rizoglyphoides</i>	Poultry food	++++	Tanta-qotor -Sakha
	Chortoglyphidae (1)	<i>Chortoglyphus</i> sp.	Chicken -Ducks-Turkey Hen-Pigeon-Quails	++
Suidasiidae (1)	<i>Suidasiones bitti</i> (Koch)	All poultry	++	Sakha-Tanta
Glycyphagidae (2)	<i>Ctenoglyphus plumiser</i> (Koch)	Chicken	++	Tanta
	<i>Lepidoglyphus destructor</i> (Schrank)	Chicken - Ducks	++	Sakha
Suborder: Oribatida				
Oribatalidae(1)	<i>Zygoribatula tritici</i> (El-Badry Nasr)	Chicken -Ducks-Turkey hen	+	Qotor-Sakha
Oppidae(1)	<i>Oppia</i> sp.	Ducks-Pekeeny-Ducks-Turkey hen	++	Tanta

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