

A Report on Occurrence of Mites on Stored Products and Grocery Floor Dust in South 24 Parganas District of West Bengal



Zoology

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ABSTRACT

The present paper reports the occurrence of 26 species of mites under 20 genera ,11 families and 5 orders from stored product and grocery floor dust from South 24 Parganas district of West Bengal . All the species are listed giving their collection data ,localities ,habitats ,status and remarks indicating economic importance, if any .

1. Introduction

Mites form important communities in any stored products ecosystem and are of manifold importance not only due to feeding upon stored grains and making those unsuitable for human consumption and germination but also those are known to increase humidity which invite fungal infection and thereby do further damage to the stored products .In addition , they are also known to reduce contents of protein carbohydrate , sugar, etc of the grains .Due to all these ,the mites do enormous economic loss.(Sinha et al ,1963).

Though some works on stored product insects and mites have been done in various parts of the country including .West Bengal but those studies were mostly localized and many areas were not properly explored . The various places in South 24 Parganas district were not surveyed earlier and hence the fauna has not been documented .

Therefore , keeping the above in view ,it was thought

to study the occurrence of insects and mites on stored products and grocery floor dust .

2. Material and Methods :

The sample of stored products (rice, wheat flour , pulses ,dry fruits ,farinaceous products etc.) and grocery floor dust from different places of South 24 Parganas district the samples were collected during June 2015 to March 2016.The samples were examined under stereo binocular microscope for isolation of mites .The mites were preserved in 70% alcohol and were mounted in Hoyer's medium .The identification of mites was done by the junior author (SKG).

3. Results and Discussion :

The mites identified from the mentioned habitats have been listed in Table -1 ,giving their collection data ,localities ,habitats ,status and remarks, mentioning their nature of association and economic importance.

4= Table1:List of Mites infesting dust and stored products at Kolkata during January 2015 to March2016.

Sl No	Name of Mites/Insect Order/Families/ Species	Habitat	Location	Status	Remarks
	ORDER 1 Astigmata				
	Family 1 Pyroglyphidae				
1	<i>Dermatophagoides pteronyssinus</i> (Trouessart)	Floor dust	South 24 Parganas	1	This is a dust allergy causing mite ,its record on floor dust is probably through contamination of dust
2	<i>Dermatophagoides ferinae</i> (Hughes)	Bed dust and Rice dust	South 24 Parganas	1	This is a dust allergy causing mite.A heavy infestation noticed on rice, is probably through contamination of dust
3	<i>Pyroglyphus</i> sp.	Rice	South 24 Parganas	3	Very few observed .This is a dust allergic mite and its record on rice is probably through contamination of dust .
	Family 2 Acaridae				
4	<i>Acarus siro</i> Linn.	Wheat , Rice ,Pulses and flour	South 24 Parganas	1	A very heavy infestation noticed specially on rice and wheat flour as they are damage causing mites . All stages were found in the infested rice grains those became crumpled .
5	<i>Acarus farris</i> (Oudemans)	Rice and paddy ,Dry fruits ,Semolina	South 24 Parganas	2	Occasionally encountered, no noticeable damage .
6	<i>Acarus gracilis</i> Hughes	Storage floor	South 24 Parganas	3	Very rare occurrence . They are damage causing mites .
7	<i>Tyrophagus longior</i> (Gervais)	Chips,Pulses,dry fruits	South 24 Parganas	2	Population poor, all stages occurred, no noticeable damage .They are fungivorous.

8	<i>T.brevicinis</i> (Robertson)	Rice	South 24 Par-ganas	3	Very rare occurrence . They are fungivorous.
9	<i>Rhizoglyphus echinopus</i> Claparede	Dry fruits,Pulses,Floor dust	South 24 Par-ganas	2	Occasionally encountered caused no damage ,poor population
10	<i>Tyrophagus putrescentiae</i> (Schrank)	Puffed rice	South 24 Par-ganas	1	Abundantly found, caused considerable damage.
	Family 3 Saproglyphidae				
11	<i>Suidesia nesbitti</i> Hughes	Rice ,Floor dust ,Pressed rice,Dry fruits	South 24 Par-ganas	1	A heavy infestation noticed ,and caused considerable damage. They are fungivorous.
	Family 4 Glycyphagidae				
12	<i>Aleuroglyphagus ovatus</i> (Zachvatkin)	Dry fruits	South 24 Par-ganas	3	Rare occurrence, and caused considerable damage. They are fungivorous..
13	<i>Glycyphagus domesticus</i> (De Geer)	Rice,floor dust	South 24 Par-ganas	2	Only occasionally collected , no damage caused .They are allergy causing mites .
14	<i>Austroglycyphagus</i> spp.	Floor dust ,Pulses,Wheat flour	South 24 Par-ganas	3	The flour became stinky and lost its normal colour . They are allergy causing mites .
	ORDER II Prostigmata				
	Family 5 Cheyletidae				
15	<i>Cheyletus eruditus</i> (Shrank)	Rice,Pulses,Wheat, wheat husk,Floor dust ,Dry fruits	South 24 Par-ganas	1	Abundantly found , good predator of Acarid mites and beetle grubs .They are predatory .
16	<i>Cheyletus malaccensis</i> (Oudemans)	Pulses ,Floor dust ,Dry fruits,Semolina .	South 24 Par-ganas	1	Abundantly found, good predator of Acarid mites and beetle grubs.
17	<i>Cheyletus fortis</i> (Oudemans)	Pulses ,Floor dust ,Dry fruits,Semolina Rice , Husk.	South 24 Par-ganas	1	Abundantly found ,good predator of Acarid mites and beetle grubs. They are allergy causing mites .
18	<i>Cheyletus trouessarti</i> (Oudemans)	semolina , Rice , Wheat husk.	South 24 Par-ganas	1	Highly abundant .A good predator of Acarid mites.
19	<i>Cheyletus aversor</i> (Rohdendorf)	Wheat husk.	South 24 Par-ganas	3	Very rare occurrence . A good predator of Acarid mites.
	Family 6 Tydeidae				
20	<i>Tydeus</i> sp.	Puffed rice, Dry fruits,Semolina .	South 24 Par-ganas	1	Heavy infestation noticed. A good predator of Acarid mites
21	<i>Paratydeus</i> sp.	Rice , Husk ,Dry fruits.	South 24 Par-ganas	3	Very rare occurrence. A good predator of Acarid mites
	Family 7 Tetranychidae				
22	<i>Schizotetranychus cajani</i> (Gupta)	Floor dust	South 24 Par-ganas	4	Accidental occurrence.
	Family 8 Cunaxidae				

23	<i>Cunaxoides croceus</i> (Koch)	Wheat flour	South 24 Par- ganas	3	Very rare occurrence. A good predator of Acarid mites
	ORDER III Mesostigmata				
	Family 9 Ascidae				
24	<i>Lasioseius</i> sp.	Pulses ,Floor dust ,Dry fruits,Semolina.	South 24 Par- ganas	2	Very few were found. A good predator of Acarid mites
	Family 10 Parasitidae				
25	<i>Parasitus consanguineus</i> (Oudemans and Voiges)	Wheat flour	South 24 Par- ganas	3	Very rare occurrence. A good predator of Acarid mites
	ORDER IV Cryptostigmata				
	Family 11 Oribatidae				
26	Oribatid	Floor dust.	South 24 Par- ganas	3	Very rare occurrence. They are fungivorous.

1=Highly abundant 2=Moderate 3=Rare Accidental

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