

# Journal of Research and Development

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## *Impact of Environment on Agriculture, Health, Water Resources, Social Life & Industrial Development*

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**Dr. R. V. Bhole**

'Ravichandram' Survey No-101/1, Plot  
No-23, Mundada Nagar, Jalgaon

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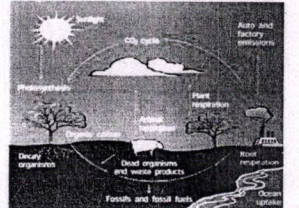
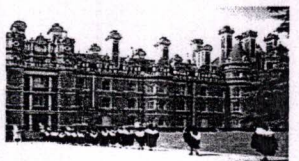
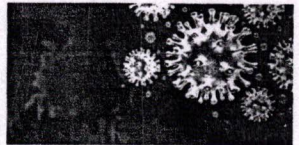
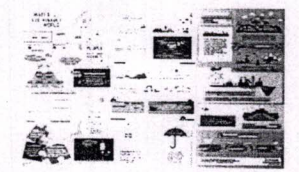
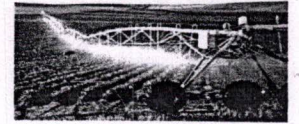
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On

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## New Records Of Beetles (Coleoptera : Insecta : Histeridae : Histerid) Infesting Stored Products : A Case Study

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**Key words :** Histeridae, stored product, habitat, new records, india, infestation

### Introduction

Histeridae family is a large and divers contains about 4,800 species belonging to 410 genera (Gyllenhal, 1808) of mostly predaceous beetles, that occur in diverse habitats. (Hinton 1945) reorded 15 species of histerid beetles infesting various stored products in diferent parts of the globe. Excluding India (Aitken 1975). The scrutiny of literature reveals that there is no publishad information of any histerid species infesting stored products in india. Acordingly, the present communication deals with four species, namely pactolinus (santalus) parallelus Redtenbacher, Baccanius rombobhoru (Aube), carcinos troglodytes (paykull), Hypocacculus metallescens (Erichson) as new records from stored products. These species hare been collected from different stored products from Kinwat, Degloor and Bhokar of Nanded district and its vicinity during 2018 – 2021

### Description:

1. pactolinus (santalus) parallelus Redtenbacher : The species, under reternce, is recorded from stored dry fish and also heaps of bark of Acacia Sp. Kept for tanning purposes. Material examined : ex. India, Mahorashtra, Kinwat, Bhokar, Mahur, Dharmabad Sheds, ex. Dry fish, 8 – X - 2019, 2 ex.; Himayatnagar, ex. Leather 6 – VII - 2019. 2 ex.; maisa, ex. Bark of Acacia Sp., 6 – VII - 2019, 1 ex.; Barad, ex. Cattle feed, 2 – II - 2020.

2. Baccanius rombophorus (Aube) : It has been collected from tamarind seed meal and poultry feed. Material examined : 4 ex. India, Maharashtra, nanded, Shitakhandi, Bhoker, ex. Tamarind seed meal and poultry feed, 2 – II - 2019, 2 ex.; ex poultry feed, 2 – II - 2019. 2 ex. 3. Carcinops troglodytes (paykull) Therond (1959) reported this species from carrion, dung and decaying vegetable matter predation on other insects. Halstead (1969) reported it from flour spillage of Senegal and soya beans of Nigeria.

Presently, it has been found from oli cakes (mustard, mahua, coconut), fodder (maise starch, cattle and poultry feed) leather and tanneries. It has also been intercepted from tamarind seed meal, flour and saw dust. Material examined : 12 ex. India, Maharashtra, Nanded, Himaynagar, ex. Tamarind seed meal, 2 – II - 2019, 2 ex.; ex. Coconut oilcake; 20 – IV - 2018, 2. ex, coconut oicake; 20 – IV - 2018 4. ex.; Himayatnagar, ex. Cattle feed, 2 – II - 2019, 2. ex.; ex. Himayatnagar, Railway yard, ex, saw dust, 8 – II - 2019, 1 ex.; Nanded, ex. Toonarind seed meal, 2 – II - 2019, 1 ex.

4. Hypocacculus metallescens (Erichson) :

This species was also intercepted from poultry feed and tamarind seed meal in fodder processing industries Elsewhere, this species has been collected mostly from such animal products as mouldy leather and raw hide from within tanneries. Material examined : 4 ex. India : Maharashtra, Nanded, Wajegaon, ex. Raw hide. 6 – VI - 2020, 2 ex.; Nanded, ex. Tamarind seed meal, 10 – X - 2020, 1 ex.; ex. Poultry feed, 10 – X - 2020, 1 ex.

**Table 1. Infestation pattern at Histeride in stored products**

Species	Habitat record												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Pactolinus (santalus)													
Paralellus redtenbacher =	+	+	-	+	+	+	+	+	-	+	+	+	+
Baccanius rombophorus = (Aube)	-	+	+	+	-	-	-	-	+	-	+	-	-
Carcinops troglodytes = (paykull)	-	-	-	-	+	-	+	-	-	-	-	-	-
Hypocacculus metallescens = (Erichson)	+	+	-	-	+	-	+	-	-	-	-	-	-
Larvel population of = Insects	L	VL	VL	VL	-	L	M	-	-	-	-	L	M



No of Non-histerid beetles = 2 6 3 11 4 3 1 4 - 5 2 4 4

Habitats : A-Raw hide, B-Leather, C-Dry fish, D-Cattle feed, E-Poultry feeds, F-Maize starch, G-Tamarind seed meal, H-Saw dust, I-Bark of Acacia sp., J-Mahua oil cake, K-Mustard oil cake, L-Coconut oil cake, M-Flour. Population levels : VL-Very low, L-Low, M-Moderate.

**Habitats :**

The range at products infested by each species at Histeridae, associate other beetles and larval population of insects, assessed on the modalities suggested by freeman (1948) are presented in above Table 1.

**Remarks :**

Comparison of the infestation pattern sows *carcinops troglodytes* (paykull) to be the most common stored product histerid of the various categories of products inspected, Various animal feeds and fodder exhibited the highest incidence of infestation followed by animal products and oil cakes. Unhygienic storage conditions of animal feeds, harbouring several types of insects, including dead roaches serve hot only to attract the predatory histerids and carabids but also the scavenger staphylinid that are common in this habitat. These seem to be a correlation between the abundance of different larvae and the occurrence of histerids. In fodder, where other beetles and larvae were seen in large numbers, histerids occurred more frequently. It is, however, observed that the population sizes at histerids in stores are generally, low. They do not damage directly nor deteriorate stored commodities. Necrophagy, teimitophily, myrmecophily and even symbiosis. Both the larvae and adults are well known predators on soft bodied insects and maggots. In stored products habitats, their target preys, nature and magnitude of predation are as yet partially known. The number of histerid species, associated organisms and predator prey relationship in stored material need to be studied extensively so as to ascertain the efficacy of different histerid beetles as potential biological agents of destructive organisms to stored products.

**Acknowledgement :**

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