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ORIGINAL ARTICLE

Description of two Indian Apterygotes (Insecta-Collembola) in Rampur region (U.P.)

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ABSTRACT
Two species of family Hypogastruridae is described and illustrated. In addition, we present a list with new records of two species family Hypogastruridae from the Rampur region Uttar Pradesh West. hypogastrura communis principalis Yosii and Protanura granulata are for the first time recorded in Rampur region. The present paper detailed external morphology of two species, which related to family Hypogastruridae .
Keywords: *Hypogastruridae, Protanura granulat, Protanura granulata sp. nov.*

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INTRODUCTION

The Collembola are well known apterygotes among insects and are most interesting due to their jumping habits and popularly called as "Springtails" and "Snowfleas". They are minute delicate and soft bodied insects. They inhabit a wide range of ecological niche and climate. They are present in soil, in decaying vegetables, moist organic matter, wooden logs, on the surface of water, fallen leaves, litter and humus layer in forest Toor, grassland, in ant and termite nests, caves, among moss, fungus, foliage of herbs and shrubs. They are generally present in wet and damp surroundings. The only condition which may be essential for their welfare is a certain amount of moisture because the integument is so delicate that in low humidity the body dries out rapidly. They are also common in Indian soil, hence called as soil microarthropods. The external anatomy of springtails (class Collembola) has been investigated for a long time [1-3]. Since then, our knowledge of springtail morphology has increased significantly. However, most studies have focused on single groups of different levels: Subfamily [4], genus [5] or even a single species [6]. Almost no attempts have been made to generalize to the other groups, with the exception of a comprehensive work on the labial palps [7]. Consequently, several nomenclatures exist for the same structures according to different groups and usually the homologies have not been clarified.

MATERIAL AND METHODS

The soil samples were collected at the rate of 1 to 5 samples from each agriculture site thrice in month. Every samples was collected on separate polythene bag and brought to the laboratory and the extraction process was done through modified dynamic Tullgren's funnel as modified by Murphy (1962) under 25W electric bulb. After identification of major taxonomic unit all the specimens were preserved in 70% ethanol separately. Prior to identification of collembola, specimens were mounted in Hoyer's solution mounting media and identified by using face contrast microscope with an enlarged view of 10x X 100x. All soil micro-arthropods were identified up to the level of their order or, family using a range of taxonomic keys (O'Connell and Bolger, 1994).

RESULT AND DISCUSSION

Order - Collembola
Sub Order –Arthropleona Borncr,1901 .
Family - **Hypogastruridae Borner, 1913**
The member of this family are small, broad, heavily pigmented which are with or without jumping organs. Under this family two species have been studied.

***Hypogastrura communis principalis* Yosii**

Hypogastrura communis principalis collected from the wheat field of Rampura region. Body dorsally purple with blackish blue pigmentation and grey ventrally, black legs and furcula present with pigmentation. Body clothed by simple setae, which longer and somewhat numerous around the last abdominal segment.

Fig 1. Hypogastrura communis principalis Yosii

Protanura granulata sp. nov.

Collembola collected under dry leaves near Shahabad Rampur Region Uttar Pradesh region. Body deep orange dorsally and yellowish orange ventrally. ocellar field black. Leg without any pigmentation, covered by setae, with dorsal and lateral bosses. Anal spines and furcula absent. Anus ventral. Clothing of short simple setae and long capitate hairs.

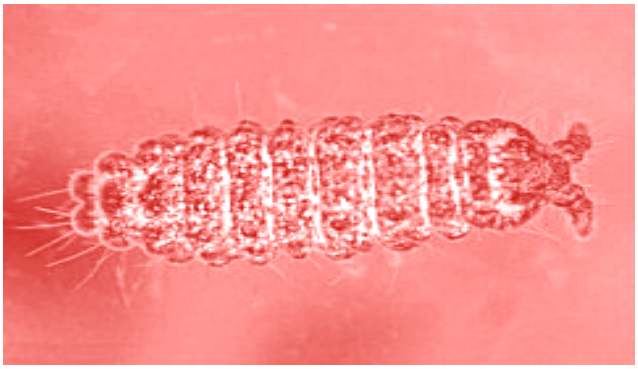

Fig 2. Protanura granulata

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