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First record of trap-jaw ant species of Genus *Anochetus* Mayr, 1861 (Hymenoptera: Formicidae) from Pakistan

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Abstract: Two species of trap-jaw ant of Genus *Anochetus* Mayr, 1861 (Hymenoptera: Formicidae) from Pakistan were identified *Anochetus graeffei* Mayr, 1870 and. *Anochetus madaraszi* Mayr, 1897 were collected first time from territory of Pakistan. Some species aretree-living. These ants are predator of tiny insects and mainly famous to concentrate on termites, tapping their trap-like mouths and nip to capture and restrain target. Keys along with notes are presented.

Keywords: Ants, Formicidae, Formicinae, *Anochetus*.

1. INTRODUCTION

There are 47 genera and 1266 species under subfamily Ponerinae Lepeletier de Saint-Fargeau(Bolton, 2014)Genus *Anochetus* Mayr, 1861 is one of the important genus of subfamily found throughout the world more than 115 species (Bolton 2020) .In South east Asia considerable contribution by (Bingham, 1903), (Mamoru Terayama, 1989), (Wang, 1993), (Zhou, 2001), (MAMO Terayama, 2009), (Zettel, 2012) and (Bharti, 2011).

Anochetus establish minor nests, normally amongst below 100 workers, into the soil, either in termite cases, beneath woods and in wretched timber. They usually feed in the leaves and are a smaller amount discovered in the wide open, especially while contrasted to workers of the strongly related genus *Odontomachus*. Numerous species has been discovered to fake death when frightened. Some species are tree-dwelling. They are predator on small insects and mainly famous to concentrate on termites, tapping their trap-like mouths and nip to capture and restrain target The very fresh review is becoming somewhat dated (Brown Jr, 1978), also consist of key to species.

When viewed from the front face, the external side of the head is complicated, with slender portions at the top and bottom swollen convexities which include the eyes. The jaws are protracted and straight, are incorporated in the center of the front face of the head, and commonly have only 2 or 3 big teeth close to the tips. The crest of the head is evenly colored and not allowing dark rows. The top face of the head is mostly smooth out even though it occasionally has a soft, poorly-defined central main channel. The sole structure of the skull and jaws will separate these ants from every one else except for *Odontomachus*.

2. MATERIAL AND METHODS

The material presented here was collected from 2015 to 2018. The field studies covered the plains, foothills, and middle mountains (up to 4200 meters) of Pakistan. Detailed information about theelevation, when not be recorded directly on the ground with the assistance of a GPS, was obtained from Google Earth Pro v. 7.1.8.3036 based upon the coordinates. The main sampling method used to collect ants was hand collection targeting nests.

Specimens have been imaged using a Leica DFC450 camera mounted on a Leica M205 C dissecting microscope. Stack imaging was performed with 40 to 50images per montage of the samples collected, improved and with specimens assessed using the Leica Application Suite v. 4.5.

Material is awell-preserved in The Entomological Museum of the Department of Entomology, Sindh Agriculture University, Tandojam Sindh, Pakistan (SAU); Lakho Ghulam Mujtaba's a private collection (GMLK), and Insect Biodiversity and Biogeography Laboratory (IBBL) of the University of Hong Kong.

3. RESULTS AND DISCUSSION

As a consequence of research two species of ants of genus Anochetus were found *Anochetus graeffei* Mayr, 1870 and. *Anochetus madaraszi* Mayr, 1897 first time from territory of Pakistan.

***Anochetus graeffei* Mayr, 1870**

Material Examined

PUNJAB, Changa Manga Forest Chiniote, 31.076356, 73.967126,30. VI.17leg G.M. Lakho, 12☿.

Morphological characters of worker

TL 3–12 mm Color varying, testaceous to dark brown, small to intermediate slim ants with the essential characters of Ponerini. Head and body glossy, striatum or rugo-reticulate, as well as light to rich pilosity and not much to no pubescence. Head curiously designed: generally around as extended as widespread with a gradual tapering at the back of eyes, the subsequent side of the scalp clearly dipped, the nuchal carina constantly arched, and the latter side of the head with no set of separate apophyseal lines Jaws stretched and slim, articulating by the head towards the middle, skilled have being kept fully open at 180°, and together with a triangle of apical teeth and frequently a line of tinier teeth alongside the chewing edge. Head with a pair of extended elicit bristle/setae under the jaws. Clypeus shorten sideways and frontal. Front parts / lobestiny. Eyes minor to modest in size, placed in the front of head center line on terrestrial projections. Mesopleuron hardly split by a sloping hollow. Metanotal hollow low to great. Propodeum softly to sharply reduced dorsally, the later boundaries often with a couple of little spines or teeth. Propodeal spiracles slight and turned. Metatibial spur equation (1p) - (1s, 1p). Petiole flexible, normally squamiform. (Brown, 1978).

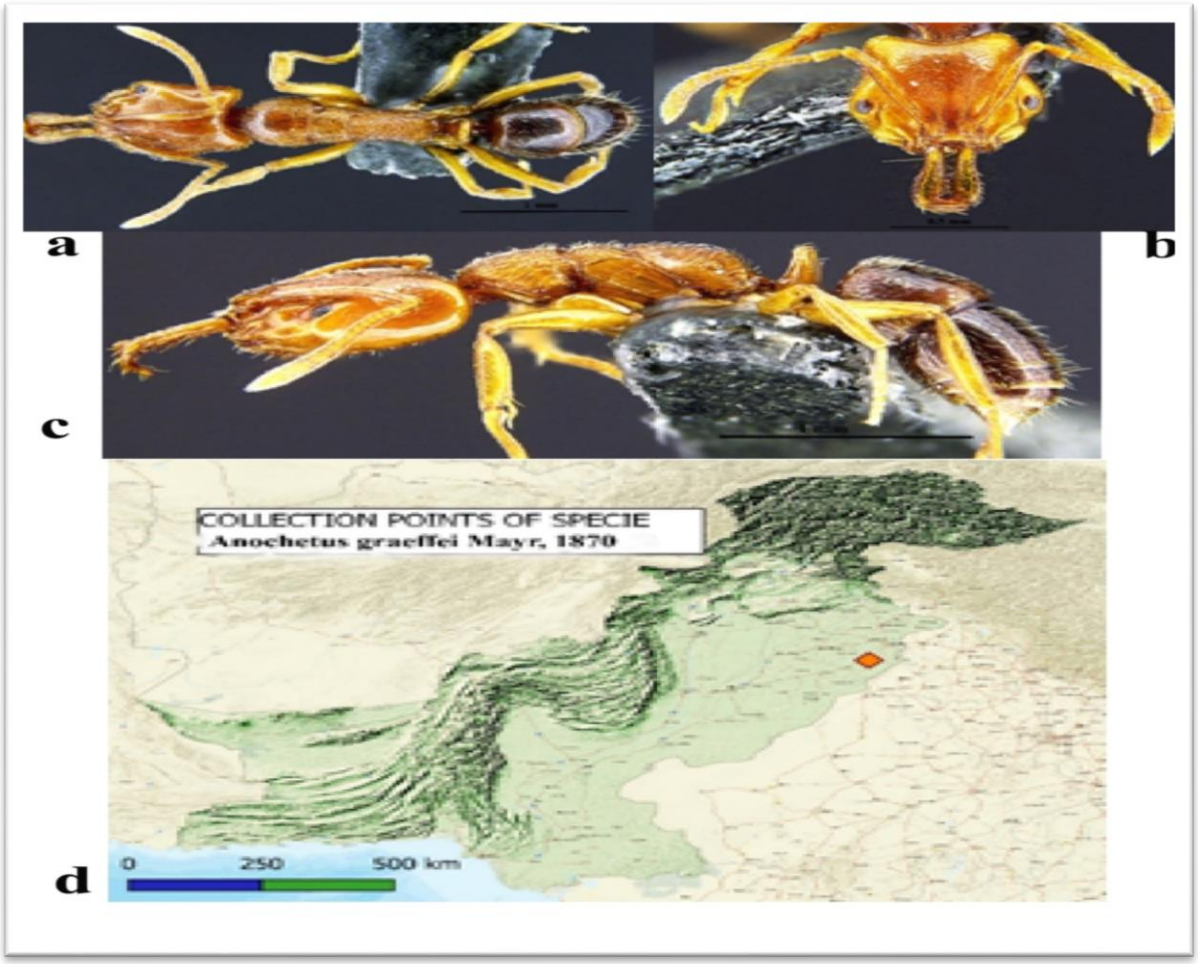

Plate: -01.*Anochetus graeffei* Mayr, 1870

a. Dorsal view b. Full Face view c. Profile view d. Distribution Map

***Anochetus madaraszi* Mayr, 1897**

Material Examined.

Capital Margalla hills Islamabad Trial 6 near Faisal Mosque, 33. 710402, 73. 038688, 3.VII.17 leg G.M. Lakho,12☿.

Morphological characters of worker

In full-face assessment head somewhat lengthier than widespread, later brim sharply curved in. Jaws straight, slowly widened towards up; internal border deprived of teeth; upper top part by three separate choppers teeth. Antennae twelves-jointed; scapes reasonable achieving to later angles of head. Eyes big, highest width broader than lower thickness of scape. In crosswise sight mesosoma firm, pronotum curved. Promesonotal joint feebly bowl-shaped posteriorly. Metanotal furrow in crosswise sight slightly overwhelmed. posterior of propodeum level, posterodorsal angle curved. Petiole broad, clearly taller than extended, reduction posteriorly, posterior top hardly curved; frontal border upright, later border clearly curved; sub petiolar handle process enlarged, sub three-cornered. Inner dorsum of head and anterior portions laterally striate, rest of head flat and glossy. Pronotum and propodeal dorsum unevenly marked/ rugose. Mesonotum and propodeal declivity diagonally striate. Propodeal edges indirectly striate. Mesopleuron flat and brilliant. Petiole flat and glossy, lower zone indirectly striate. Gaster flat and glossy. Body dorsum with dispersed sub rigid hairs and thin curved young hairs pubescence; scapes and tibiae with thick curved young hairs. Body blackish russet to tan; antennae, legs yellowish coffee in color.

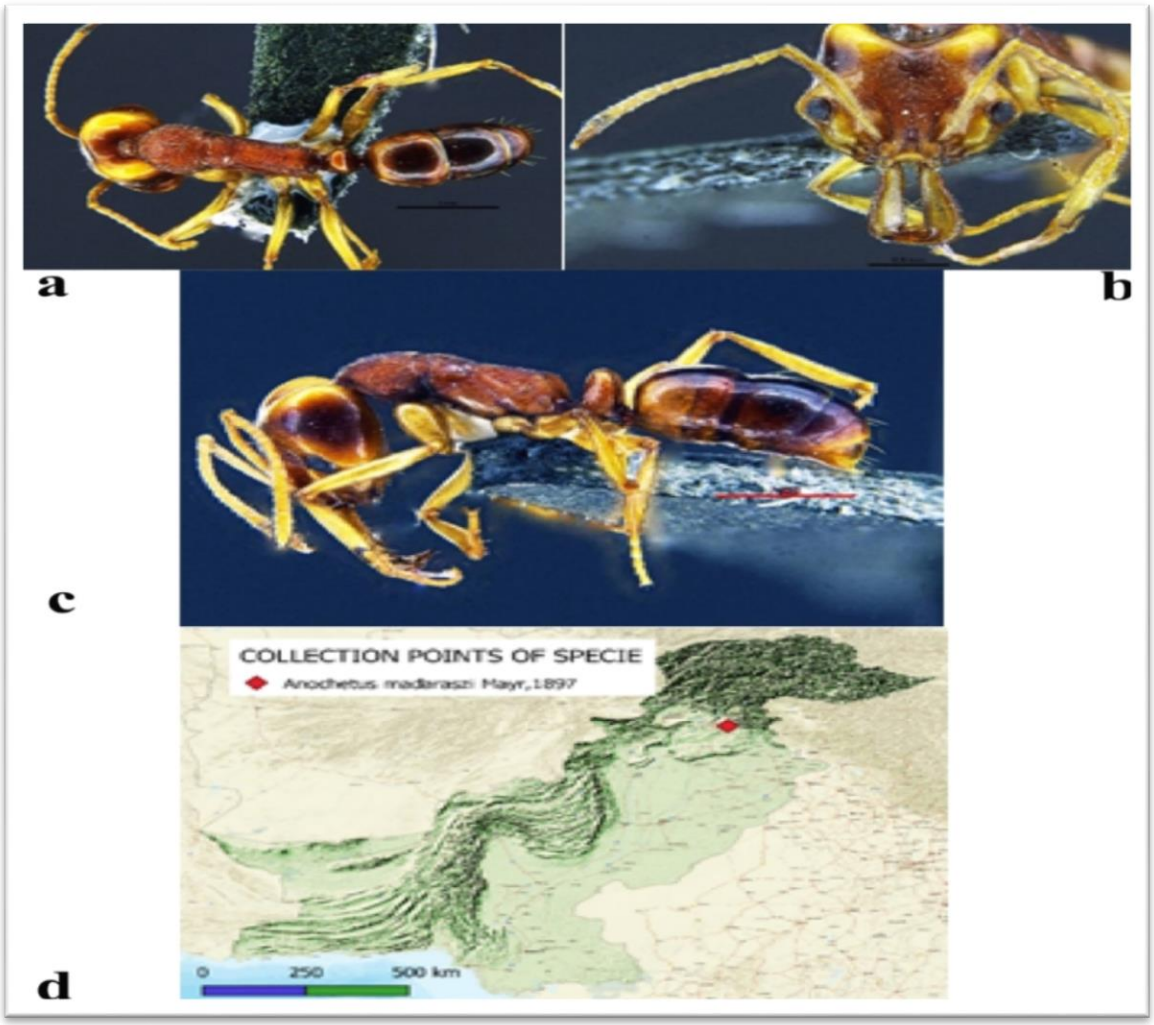

Plate: -02.*Anochetus madaraszi* Mayr, 1897

a. Dorsal view b. Full Face view c. Profile view d. Distribution Map.

Keys.

Head somewhat longer than wide; mesonotum diagonally striate; petiolebroad, two times as tall as prolonged .....A. madaraszi – Head clearly lengthier than a wide mesonotum squarely retirugose; petiole slender, more than three times as tall aslengthy....A. graeffei

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