

RESEARCH ARTICLE

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### A new species of genus *Heriades krombein* (Hymenoptera: Apoidea: Megachilidae) from India

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#### ABSTRACT

*Heriades Krombein* sp. nov. from Himachal Pradesh (India) is described and recognized as a member of the *Heriades* species group. Superficially, the species closely resembles *Heriades variolosa* Cresson. The distinctive features of this species are: apical margin of clypeus is angulate at laterals, tubercles on apical margin absent, mandibles without subapical tooth, gap in between 2<sup>nd</sup> and 3<sup>rd</sup> tooth shortened down, general wing color clear hyaline, tegulae brown, anteriorly dark pale.

**Key words:** *Heriades krombein*, Hymenoptera, Megachilidae

#### INTRODUCTION:

The genus *Heriades* was reported polylectic in habit (Mitchell, 1962). In India they have been collected from the composites only, that too only from the steps regions of North West Himalayan range (around 1000-1500 meters heights). The new species described here falls under subgenus *Michenerella* Krombein on the basis of character i.e. clypeal apical margin thickened but tubercles are either absent or feebly developed.

#### REVIEW LITERATURE:

*Heriades* himself provided the type species for many new combinations among them few are: *Ashmeadiella* Cockerell, 897 (*Heriades opuntiae* Cockll.), *Prochelastoma* Robertson, 1903 (*Heriades philadelphii* Rob.), *Proteriades* Titus, 1904 (*Heriades semirubra* Cockll.) and *Pseudoheriades* Peters, 1970 (*Heriades moricei* Friese). Besides a large no. of species were also transferred to *Noteriades* Cockll. However, author has failed to find any trace of this genus from Australia region, particularly north-west as well as most of the Holarctic around Russia and China.

#### METHODOLOGY:

The adults were collected in the field with traps, manually and aerial sweep net. The collected insects were killed by using benzene. These were stretched, pinned, labelled, identified, preserved in the wooden collection boxes and deposited at Department of Zoology, Agra College, Agra. The insect pest was identified as *Heriades* Krombein. The collected specimens were examined taxonomically and studied for diagnostic characters including genitalia. The standard technique given by Robinson (1976) and Zimmerman (1978) has been followed for wing venation and genitalia, respectively. In the field and laboratory observation, specimens were photographed prior to studies.

#### *Heriades (Michenerella) simlaensis* sp. nov.

#### DESCRIPTION:

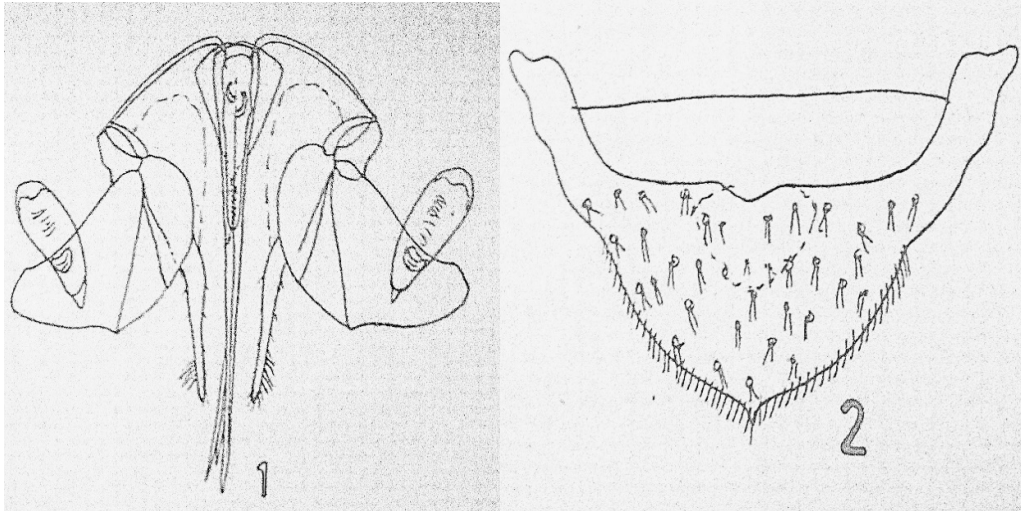
**Measurement:** Female: 4mm; **Female:** Integument black, shining, apical margins of terga much black; tegulae brown shining; apical tarsi of legs pale brown, punctures coarsely and

sparingly distributed all over the body except more on terga, lateral sides of mesosoma and legs.

Pubescence all over the body white with silky transparent lusture at metatarsi and tarsi 2, 3, 4 hairs of pale colour dominant, scope pale at median area, otherwise white.

♀ **genitalia:** Quadrate plate triangular, well developed, inner margin protuberant apically, outer margin is straight and slightly protuberant apically, basal margin flat, apical portion articulates with the arm of sting bulb, fulcral plate is well developed.

**Fig:** *Heriades (Michenerella) simlaensis* (1: Female Genitalia; 2: Sternum 6)



**Stylet:** Elongated, pointed and covered with membranous stylet sheath. Sting bulb narrow; elongate with narrow curved apex, chitinous hooks well developed, both hooks lie in the basal portion of sting bulb.

Palp appendages; Short in comparison to other genera of the family; elongated with pointed apices. Apex with fine setae.

**Sternum 6:** Surface transversally as well as vertically convex, with coarse punctures sparsely placed, apex broadly rounded, apical margin with short white pubescence.

**Material examined:**

Collected from Simla hills, Pathankot (India) on 03-05-1986 (V.K.)

Holotype: Female deposited at ZSI Calcutta. Paratypes: 7 females Entomology section, Deposited at Department of Zoology, Agra college, Agra.

**Distribution:** India, Pakistan, Nepal.

**Floral Record:** *Caesulia* sp., *Salex* sp.

**REMARKS (CONCLUSION):**

The new species is close to *Heriades (Neotrypetes) variolosa* Cresson. However, *H. simlaensis* sp. nov. can be distinctly separated from *H. variolosa* by :smaller in size; general body pubescence is white silky; scope pale at median area, otherwise white; apical margin of clypeus is angulate at laterals: tubercles on apical margin absent; mandibles without subapical tooth, gat between 2<sup>nd</sup> and 3<sup>rd</sup> tooth shortened down, general wing color clean hyaline; tegulae brown anteriorly dark pale.

**Male:** Not known

This specimen has been named after the location Simla from where it was collected.

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