

A new record of stingless bee, *Tetragonula gressitti* Sakagami (Hymenoptera: Apidae: Meliponini) from Nagaland, India

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ABSTRACT

The stingless bee, *Tetragonula gressitti* Sakagami was first recorded from Vietnam in 1978 followed by India in 2013 and from China in 2019. This is first report of the discovery of this species of stingless bee from Nagaland after Arunachal Pradesh in India. A survey was conducted in different parts of Nagaland in 2019. The feral colonies of stingless bees were marked, the specimens were collected and brought to the laboratory at Medziphema, Dimapur, Nagaland. The morphology and morphometrics were described. The bees were black in colour with total body length 6.11 mm with head width of 1.90 mm. Data on different taxonomical parameters revealed this stingless bee as new species, *Tetragonula gressitti* Sakagami and it was later confirmed by taxonomy section of Division of Entomology, Indian Agricultural Research Institute, New Delhi, India.

Keywords: Stingless bee; *Tetragonula gressitti* Sakagami; morphology; morphometry

INTRODUCTION

Stingless bees are a large group of bees having about 500 described species (Michener 2013) comprising the tribe Meliponini and sub-tribe Meliponina. They belong to the family Apidae and are closely related to common honeybees. Stingless bees are reported to be found throughout most of the tropical and subtropical regions of the world such as Australia, Africa, Southeast Asia, and tropical America (Silveira et al 2002). Approximate numbers of species so far identified were 50 in Africa, 300 in the Americas, 60 in Asia, 10 in Australia and 4 in Madagascar (Bradbeer 2009). According to Roubik (1989) local and regional diversities are high in the Neotropics where up to 60 meliponine species can be found locally in a single forest. Nests of stingless bees are mostly found on cavities of tree trunk, old walls, inside the termite mounds and subterranean cavities (Nogueira-Neto 1997, Eltz et al 2003, Roubik 2006).

Bingham (1897) described most of the Indian species under *Melipona* almost a century ago. There is sporadic information on stingless bees and only recent

account was given by Sakagami (1978) and Rasmussen (2013) for continental Asia and Indian subcontinent. Only the two genera, *Trigona* Jurine and *Lisotrigona* Moure have long been found in Indian subcontinent (Michener 2007). Rasmussen (2013) studied the distribution of stingless bees throughout the Indian subcontinent and concluded that stingless bees are available in most parts of the Indian subcontinent except at higher elevations or the drier interior regions. The author found different species of stingless bees like *Lepidotrigona arcifera* (Cockerell), *Lisotrigona cacciae* (Nurse), *L. mohandasi* Jobiraj and Narendran, *Tetragonula* aff *laeviceps* (Smith), *T. bengalensis* (Cameron), *T. iridipennis* (Smith), *T. praeterita* (Walker) and *T. ruficornis* (Smith) in Indian subcontinent.

The distribution pattern of stingless bees in India was studied by Rahman et al (2015). They have reported different species of stingless bees prevalent in south India viz *Tetragonula. iridipennis* *T. laeviceps* and *Lepidotrigona arcifera*. Whereas *T. iridipennis* and *T. laeviceps* were present in the northwestern India. Likewise from Kerela, two stingless bees are