

Comparative SEM analysis reveals high diversity of setae on hind tibiae and basitarsi of Peruvian Stingless Bees (Apidae: Meliponini)

Basic reporting: The manuscript is an interesting paper due to its novel details and clear SEM figures. However, there are a few points that could be improved before publication, as outlined in the attachment.

Validity of the findings: The large amount of information on setae types and abbreviations makes them difficult to understand. Some types of setae exhibit similar characteristics and overlap in the range of lengths, so the definitions of the setae need to be clarified. Additionally, the methods for measurements should be made clearer.

Line no.	Comments
Abstract	
Lines 25-26	Please check the spelling of “necrophagus”; it might be necrophagous. It is an interesting point that the variation in foraging behavior among stingless bees might explain the differences in their hind leg setae. However, there is no information that shows the relationship between setae characters and their foraging ecology (e.g., flower-visiting foragers to kleptoparasites and obligate necrophagus). Please include this point somewhere such as discussion section.
Introduction	
Line 50	It might be helpful to introduce the readers to the various functions of the hind legs in stingless bees. Are they used solely for pollen collection, or do they serve other purposes, such as resin handling or nest building? If the hind legs are used for multiple functions, the setae might be specialized for these activities as well. The authors could discuss this point further to provide additional context.
Line 94-95	“Scanning electron microscopy (SEM)” was introduced previously on line 80; on line 95, you can simply use “SEM.”
Materials and Methods	
Line 111	Please provide details on how the specimens were collected and preserved, including any specific techniques or equipment used to ensure the integrity of the samples. Additionally, Table 1 is difficult to read in its current format. Consider reorganizing the information into separate columns for Species, Location, Altitude, and Coordinates to improve clarity and readability.
Line 120	How many specimens of stingless bees from each species were used for SEM analysis?
Line 126-134	How many legs and bees were used for each measurement? Were three lengths used to calculate an average length, meaning the data were collected from three bees? Please clarify and define this in the Methods section.

	It is some unclear points about the measurements: max length, max width, branching length and angle. I am not sure if you used the angle data in your analysis. Providing a figure to illustrate these measurements would greatly benefit the readers. Additionally, if there are previously published methods available, please include appropriate citations.
Line 136	The provided link is not the update one. Change it to https://imagej.net/ij/download.html .
Line 145	The references are not in italics.
Lines 150-168	It is good to have the terminology included. However, some of the terms displayed in Fig. 1 are not included in it.
Results	
Lines 171-218	Can it convert to tables? Then, compare them among species.
Lines 223-233	How different between ss and hs1? Please define more detail.
Line 229	Please check the table number again. The sequences of Figure number after Fig.4 might be wrong.
Line 347-	Why do the measurements show averaged data, which differ from the previous data? Could you also provide the standard deviation (SD)?
Table 5	The numbers in the table show 2 different formats such as column 2 (row 2 and row 4). L. sp. Write full genus name.
Fig.12	Need captions or label on the figure: tibia, basitarsus, outer and inner
Discussion	
-	Include the relationship between setae characters and their foraging ecology (e.g., flower-visiting foragers to kleptoparasites and obligate necrophagus).
References	
	- Check cited references I text. Two different formats are found; (Winterton, 2009) on line 66 and (<i>Thorp, 1979; Portman & Tepedino, 2017</i>) on lines 515-516. - Many non-italics scientific names are found.