



TAXOLOGICAL STUDY OF THE BEE MELIPONA QUADRIFACIATA ANTHIDIODES

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ABSTRACT

To maximize quality in bee production and conservation, it is essential to use identification techniques, such as native bee measurement and taxonomy. This process involves the detailed measurement of the bees' body structures, allowing for accurate identification and the application of appropriate management practices. This work aims to expose the anatomical and morphometric characteristics of *Melipona Quadrifaciata Anthidioides* known as Mandaçaia MQA, and to highlight its importance in conservation and production. By understanding the taxonomy, it is possible to accurately identify this species and apply specific management techniques that promote its preservation and productive efficiency. The methodology used included the collection of 3 worker bee specimens of the species Mandaçaia MQA from each box, the dismemberment of these samples totaled 6 analyzed specimens, and the measurement of their structures using an electron microscope, a computer and a measurement application called ImageView. These tools allowed a detailed analysis of the morphometric characteristics of bees. The analysis revealed species-specific anatomical and morphometric details, such as the structure of the wings, head, antennae, legs, thorax, and abdomen. This data is critical for the accurate identification of the species and the implementation of conservation and production methods tailored to its needs. For example, knowing the exact size of the structures of the MQA Mandaçaia allows the creation of environments that meet their specific needs for food, habitat, seasonality and survival. In addition, it helps to optimize the collection of products produced by these bees, promoting more effective and sustainable management. The taxonomy of *Melipona Mandaçaia MQA* is essential for the accurate identification and effective conservation of this species. Understanding their anatomical and morphometric characteristics allows the application of specific management methods, ensuring the preservation and increase of the productivity of Mandaçaia bees (*Melipona Quadrifaciata Anthidioides*).

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