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Production of workers, queens and males in *Plebeia remota* colonies (Hymenoptera, Apidae, Meliponini), a stingless bee with reproductive diapause

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ABSTRACT. Queen, male and worker production was studied during one year in three *Plebeia remota* colonies from Atlantic Rainforest in Cunha, São Paulo State, and two from a subtropical Araucaria forest in Prudentópolis, Paraná State. All the colonies were kept in São Paulo city during our study. *Plebeia remota* has reproductive diapause during autumn and winter, which makes its biology of special interest. Brood production begins before spring, renewing the colony cycle. We sampled brood combs monthly in these five colonies. The number of cells in each comb varied

significantly with time of the year; the smallest brood combs appear to be a consequence of reduced food availability. However, worker, queen and male frequencies did not differ significantly in time, and this presumably is due to the fact that they all are necessary for the growth, maintenance and reproduction of the colony. Although some molecular, morphological and behavioral differences have been detected in several studies comparing populations from Cunha and from Prudentópolis, we did not find significant differences between the colonies from these two localities in number of brood cells and worker, queen and male production.

Key words: *Plebeia remota*; Stingless bees; Queen production; Worker production; Male production

