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TIME OF QUEEN REPLACEMENT IN *Scaptotrigona depilis* (APIDAE, MELIPONINI)

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Colonies of highly eusocial bees Meliponini tribe shows reproductive division of labour, which only one queen is responsible for reproduction. New queen are constantly produced to, after mating, heade new nest through swarming. In Scaptotrigona depilis there is an overproduction of queens that should be needed for swarming, with one royal cell (with a virgin queen) per brood comb produced. This excess could come to replace the other queen when this is dead for any reason. We removed 20 fisogastric queens of S. depilis from their respective colonies and verify periodically the presence of a new queen. We verify that 14 of the 20 queens removed were replaced in 10 days. The other 6 were replaced in the subsequent 10 days. Moreover, we checked the proportion of males in the brood produced by the new queens and verified that in one of them there are strong evidences of diploid male production (55% of males randomly distributed by the comb). The results shows that queen replacement in S. depilis is a relatively quick process, what lead us to deduce that there are sexually mature virgin queens inside the nests. The presence of diploid males shows that a matched mating occurred (a mating between a male and a queen with the same sexual allele). This proportion of matched mating (PMM) of 5% could be used to estimate the quantity of sexual alleles in the population through the formula PMM=2/n, where "n" is the number of alleles in the population. Thus, we found 40 sexual alleles for this population, however the confidence interval of 95% with this sample size is too high, being necessary increase sampling at least 10 times. This results also could be interesting to stingless bees beekeeping, once the obtention of fisogastric queens is still a bottleneck on nest multiplication.

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