

ABSTRACT

In England the biology of Osmia rufa was studied and also that of five other megachilid species for comparison. Trapnests were placed at ten localities there and bees built 163 nests in them. Cells and nests were measured, the sexes of occupants and their emergences from cocoons were recorded, and samples of pollen from 302 cells examined. Life tables were constructed for four species. The nesting biology of five species in an insectary and of O. rufa in the field was studied.

In Jamaica the nesting biology and food preferences of two Exomalopsis species were studied in detail. Nests of three other anthophorid species, three megachilid, one halictid and one colletid species were examined. Life tables were constructed for six species. The searching by males of four Centris species for females was investigated. Several species new to Jamaica were collected. The species of plants were recorded that 26 bee species visited.

Evolutionary trends in the behaviour of male bees searching for females are suggested. An evaluation is attempted of the effects of factors that influence the behaviour of bees and the sizes of their populations in the two climatic zones.