SUMMARY AND CONCLUSION

This work was done to study the ecology and the biology of an important species of pollinators Eucera nigrilabris Lep. Fam Anthophoridae in Mahmoudia village, Sharkiya Governorate during the years 1979, 1980 and 1981.

a) Ecological studies:

This species has one generation in the year. Males begin to appear first from the nests in the middle of December, then it was followed by females after one week. Mating is the first process which took place after the appearance of insects during the last week of December and the first week of January.

The females were observed to look for sites free from plants to avoid their roots when they build their new nests. The new generation of adults usually nested beside their parent nests. To build the nest the bee excavated the soil using its mandibles for carrying the big granules and the rest of the tumulus was removed by its hind legs and the posterior end of its abdomen.

The entrance of the nest was always kept open, exept if it was blocked by external factors. The tumulus

remains for a time differs according to the effect of the surrounding environmental factors.

The nest consisted of the main tunnel without any branches and it ended with 3-4 cells in vertical position. The average depth of the nest was about 30-40 cm. and the maximum was about 45 cm., while the minimum was about 25 cm. The depth of the tunnel could be divided into two parts; the entering tunnel (about 5 cm.) and the descending one (about 30 cm.). The tunnel diameter was about 8 mm. The cell was elongated (about 15 mm. in length and 10 mm. in width). The cell neck was about 3 mm. in length. The bee covered the cell by the particles of the soil.

In one nest usually live one female. In some cases, however, more than one with a maximum of 4 occupied the same nest. At the first time of leaving the nest to start its daily activity, an orientation flight was usually made. The female usually carries a compact pollen load moisted with nectar.

The bee remained in its nest when it was raining.

b) Biological studies:

The female deposited the cylindrical curved egg on the middle of the provision's surface, it was attached to the surface of the provision by both ends which were stightly embeded into it. After complete hatching the larva laid on its lateral side on the provision. After the larva had finished its food it voided its feces and began to spin its cocoon of two layers. After finishing spinning, the larvae inside its cocoon leaned on the cell wall with its back sticking to it. The larva inside its cocoon passed the summer season in a quiescent stage as a postdefecating larva or prepupa, then transferred into pupa.

The analysis of soil in which Eucera nigrilabris Lep. nested showed that it was composed of clay loam, saline and moisture soil.