are oval, spindle- or pear-shaped cells measuring 72 to 94 \( \mu \text{m} \) in length and 43 to 80 \( \mu \text{m} \) in width. They are uninucleate, green coloured and contain many densely packed brown coloured, rod-shaped symbionts measuring 1.4 to 1.8 \( \mu \text{m} \). In the adult female the mycetocytes are concentrated towards the posterior end, near the oviduct and vagina. The ovarian ampulla (terminal end of lateral oviducts, where the fifth egg stalk is attached) also harbours a large number of similar symbionts. But these symbionts occur freely in ovarian ampulla and do not seem to be arranged in the mycetocytes, hence filial mycetomes (as shown in C. columbae columbae) are not structured. They stain darker than those present in the abdominal mycetocytes.

As the ripe egg passes through the oviduct the symbionts pass into the egg and reach the centre, losing their staining ability. At the time when midgut is undergoing formation (during embryonic development), the cell limits appear around the symbionts and embryonal mycetomes are formed. Now these embryonal mycetome swarm out and penetrate the midgut. From there, they wander further through the fat bodies under the hypodermis, to take their position in the abdomen. When the third instar larva of female readsies itself to metamorphose into the adult, the mycetocytes begin to wander towards the abdominal end (because in adult female the mycetocytes are concentrated towards posterior end). The manner in which the symbionts are able to reach the ovarian ampulla in A. persicus could not be studied.

It seems that the phenomenon of endosymbiosis is also exhibited by A. persicus which is purely a feather feeder. In A. persicus the mycetocytes are present in adult females unlike C. columbae columbae in which, it is reported that all the mycetocytes are used up during formation of filial mycetomes in ovarial ampulla. Examination of crop content of a number of specimens of this louse reveals no host blood in it. It is believed that in ischnoceran Mallophaga the symbionts provide a substance which helps in digestion of feather keratin. However, in another nonhaematopagous ischnoceran, Lipurus lawrensis tropicalis (infesting the poultry bird, Gallus domesticus) mycetocytes do not occur. Symbionts were not detected in any part of gut* or reproductive system*. On the other hand mycetocytes have been reported in Lipurus baculus. It seems that endosymbiosis occurs in some species of Mallophaga, being absent in others.

14 November 1984; Revised 28 February 1985


ANNOUNCEMENT

THE K A A S AWARDS 1985

The Karnataka Association for the Advancement of Science invites applications from young scientists (below 35 years of age as on 31.12.1984) belonging to Karnataka who have carried out original and creative work in the fields of Physics, Chemistry, Biology, Mathematics and Geology. The Award carries a cash prize of Rs 2000/- and a citation. Eligible candidates are requested to contact the Secretary, The Karnataka Association for the Advancement of Science (Regd), Mathematics Building Annexae, Central College, Bangalore-560 001 for details. Last date for receipt of Applications is 1st September 1985.