SECTION-IV
4.1. Summary and Conclusion

Ecology of weaver birds in some parts of Mid Western Ghats of Karnataka was undertaken for the first time in Karnataka state. The field survey revealed the following aspects.

The population of weaver birds, *Ploceus philippinus*, *Ploceus manyar*, *Ploceus benghalensis* were surveyed in the study area, among these *Ploceus philippinus* was abundant and it is followed by *Ploceus benghalensis* and *Ploceus manyar* respectively. The latter two species are depleting, required immediate conservation measures to be undertaken.

In zone-III (Shimoga) *Ploceus manyar* was cited. Here a total of 28 nests were recorded on *Ipomea aquatica* plants only.

In zone-I the population of *Ploceus benghalensis* was also identified. In this zone a total of 240 nests were recorded. All the nests were constructed on *Typha latifolia* plants. Out of 240 nests only 47 nests were complete and suitable for breeding.

In zone-II, 150 nests of *Ploceus benghalensis* were recorded in sugarcane crop; This number is quite high when compared to zone I. This may be due to the reason that the area was surrounded by paddy field and the vegetation which provided assured food and protection. *Ploceus benghalensis* is very specific in its host plant. Selection unlike *Ploceus philippinus*. Hence, the survey revealed that
*Ploceus benghalensis* may be considered as vulnerable species. The increased sugarcane plantation in the irrigated zone of Karnataka especially in Shimoga has become a plus point for this species.

The monsoon winds play an important role in baya activities. Monsoon winds are strongly directional and consistent and may cause complete nest failure in inappropriately constructed nests. Males built nests on the leeward sides of colony trees, with nest entrance facing away from the prevailing wind. Female did not appear to choose from the nests available to them. This is perhaps because the marked clustering of nests results in only a weak relationship between nest placement and direction and the retention of eggs and nestlings.

The analysis of nest building by weaver birds attempts to illustrate the basic external forces that guide a bird at each stage of nest weaving. The male *Ploceus philippinus* goes through seven stages in weaving the complete nest. Nest building by weaver birds has been considered a classical example of “instinct” but it also found that a weaver bird must practice a great deal before it can build its complex nest. In case of yearlings it was found to be true.

In the present investigation a total of 5502 nests of *Ploceus philippinus* were visited in the three study zones. Out of this only 9.16% were abnormal of which 10.91% were multistalked and 50.59% bistoreyed. This trend confirmed that the area is found to be the most suitable habitat for the baya birds.
In the present field survey, the baya birds hanged their nest in three types of orientations namely lateral, central and peripheral colonies. Among them lateral colonies were maximum in number i.e., about 92% such colonies can face one or two or even three directions in lateral position. Colonies which were facing exactly the eastern side were maximum in number. The reason behind constructing the nest on east side may be attributed to seek protection from southwest monsoon.

In the present investigation, a total of 161 plants and belonging to the 27 species were recorded in zone I, a total of 134 host plants from 16 different species of trees were recorded in zone-II and 30 different species of host plants in zone III. The comparative study of complete nests in all the three zones revealed that, the most preferred plant species was Cocos nucifera which ranked first and subsequently followed by Prosopis juliflora in zone II and again Cocos nucifera in zone I respectively.

The study revealed that the Ploceus philippinus is not specific in selecting host tree.

In the present study, it was observed that the nestlings of weaver birds feed mainly on animal diet most of which is constituted by insects and agricultural pests. But in some regions of our study area Ploceus philippinus is considered to be a agricultural pest and farmer destroyed large number of nests during peak breeding season in some areas. So, there have been no studies on the assessment
of useful and harmful activities of the weaver birds in this region and is to be investigated further.

To evaluate the nest destruction trend, field survey was conducted in three zones of different habitats. It was realized from the data that different quantum of destruction of nests takes place in different habitats. Nest colonies present in wells were more secured than all the others.

Various associations that exist between baya birds and other species at their nesting sites were documented. It was evidenced that abandoned nests of weaver birds play an important role in protection and conservation of many small animals. So, destruction of such abandoned nest of weaver birds deprives many small animals of shelter.

The study on nest location, host plants, orientation, place of nesting and population of baya bird species revealed that among the three species of baya Ploceus philippinus is more evolved and constructs its nests near human dwellings. At par with Ploceus philippinus, Ploceus benghalensis is less social to human beings it constructed its nest near wetland grass and sugar cane crops. The least sociable bird Ploceus manyar always constructed its nest far away from human dwellings.