CONCLUSION
8. CONCLUSION

_A. fluviatilis_ continues to occur in Jeypore hill tracts of Koraput district but relatively in low densities when compared to pre DDT era. Apart from running water habitats such as streams and rivers this species also breeds in ponds, wells, borrow pits and paddy fields. It is found to be closely associated with _A. culicifacies_ and _A. annularis_, the other two vectors of malaria in this area, in streams and ponds. It is predominantly an exophilic mosquito which might have developed due to the prolonged indoor residual spray. However, this could not be confirmed due to the lack of comparable data during the pre DDT period. There has been a marked reduction in the proportion of indoor resting mosquitoes in human dwellings when compared to pre DDT period suggesting a change in its resting behaviour. In houses, a considerable proportion of _A. fluviatilis_ females has been found resting in unsprayable surfaces. Though this species recorded low human blood index, it was found to be the predominant man biting mosquito among the anophelines recorded in this area.

During the pre-DDT period _A. fluviatilis_ and its closely related species viz., _A. minimus_ and _A. varuna_ (formerly these three species were included under _funestus_ group) were mainly responsible for malaria transmission. Present study revealed that while _A. varuna_ is prevalent in very low numbers, _A. minimus_ has almost disappeared.
However, *A. fluviatilis*, though relatively less in abundance, continues to be the major vector involved in malaria transmission in this area. The highest natural infection rate and the positive relationship between the vectorial capacity of this species and the incidence of malaria cases further suggests the efficiency of this species in transmission.

There are evidences for the existence of two biological races in this species based on the differences observed in feeding behaviour and the efficiency in disease transmission in different zones within this district. However, cytogenetic studies are necessary to confirm this view.

Among the four different ecotopes, the top-hill villages have to be considered with top priority for controlling the disease as the density of *A. fluviatilis* and the incidence of malaria cases were the maximum in this ecotope.