

Chapter 6

Conclusions and Suggestions

- 1) The mangrove in the upper Gulf of Thailand appears 4 orders, 5 families, 12 genera and 18 species of pulmonate snails. *Laemodonta* sp. and *Platevindex* sp. are considered as new record in Thailand. Five species reported by Brandt (1974) are not found at this time.
- 2) Shell morphology is distinctly different among mangrove pulmonate snails. There are 4 key characters using for most ellobiid snails identification i. e. shape, aperture, aperture-dentition, and suture of shell. Foot width, dorsal papillae and number of dorsal eyes are important characters in Onchidiids identification.
- 3) Shell morphometry is not informative for species identification of the genus *Laemodonta*.
- 4) Radula may be character for identification pulmonate species in mangrove of upper gulf of Thailand. The number and shape of cusps and base of the teeth, the arrangement of radular teeth and the reduction of marginal teeth are considered.
- 5) Penial complexes show a wide range of variation and are categorized into 3 subfamilies in Ellobiidae. *Ellobium aurisjudae* show the most advanced penial complex in all mangrove pulmonates by its wall of the penis possesses cartilage-like substance. *Melampus* and *Siphonaria* show a derived penial complex by lacking penis.
- 6) Concentration and fusion of pleural and parietal ganglia of Onchidiids show the most advanced nervous system among pulmonate in mangrove habitats. Left parietal ganglion of genus *Ellobium* shows a derived character by divided into anterior and posterior part.
- 7) Cladograms of ellobiids show a wide radiation of Pythiinae. The ancestor of Ellobiinae and Melampinae may arise from Pythiinae. More characters and more taxa are required for a better and complete family tree reconstruction.