V. CONCLUSIONS AND SUGGESTIONS

5.1 Conclusions

Based on this study, it can be concluded that:

1. There were 12 haplotypes of 22 *Anguilla* species observed in West Sumatra based on the *cytochrome b* gene.
2. The haplotype diversity of *A. marmorata* from West Sumatera based on *Cytochrome b* was 0.294 that showing that the genetic variation of *A. marmorata* in West Sumatera was included in the low category, while the genetic variation of *A. bicolor bicolor* was included in the high category due to the value of haplotype diversity of 1.

5.2 Suggestions

Given the haplotype of *Anguilla* species that are shared among several localities in West Sumatra, further study is needed to understand the distribution and transportation mechanisms of freshwater eels by investigating the spawning sites of all species with their population structure, phylogeny, and life history analyses, especially in West Sumatra.