

## CHAPTER 5

### CONCLUSION

1. A Total of 3,043 male Trichoptera specimens were collected from May 2002-July 2003. Nineteen families, 32 genera, 64 species were identified. Thirteen new species and 3 possibly new species were discovered.

2. In Romgloa-Paradorn Waterfall, family Hydropsychidae (43%), Rhyacophilidae (29%), and Philopotamidae (21%) were found to have the highest, the second highest and third highest abundance, respectively. The five new species of *Ecnomus hyakinthos*, *Dinarthrum kyllalos*, *Moropsyche inachos*, *Psudoneureclipsis lykurgos* and *Rhyacophila lyssa* were found.

In Waterwheel Waterfall, Family Hydropsychidae (37%) showed the highest abundance, while Philopotamidae (22%) and Rhyacophilidae (7%.) levels were the second and third highest in abundance, respectively. Six new species of *Ecnomus hyakinthos*, *Dinarthrum kyllalos*, *Cheumatopsyche peirithoos*, *Moropsyche inachos*, *Leptocerus invantas*, *Polypsectropus ipleicles* were found.

In Kha Mun Noi Stream, family Philopotamidae (35%) was in the highest abundance. Psychomyiidae (16%), Hydropsychidae (15%) Rhyacophilidae (10%) were the second and the third highest abundant families, respectively. Four species of *Ecnomus hyakinthos*, *Lepidostoma latona*, *Leptocerus invantas*, and *Rhyacophila moneta*, were found as new species.

In Man Dang Noi Stream, Family of Ecnomidae (37%) was in the highest abundance. Psychomyiidae (18%) and Polycentropodidae (16%) were the second and the third highest abundant families, respectively. Nine species of *Ecnomus*

*hyakinthos*, *Dinarthrum labdakos*, *Lepidostoma latona*, *Moropsyche inachos*, *Nyctiophylax mentor*, *Plectrocnemia luna*, *Polpectropus hyllos*, *Rhyacophila lyssa* and *Rhyacophila moneta*, were found as new species.

3. The comparison of Malaise trap and black light trap indicated that the number of adult Trichoptera was higher in Malaise trap than the black light trap. This can be explained by the period of operation for each trap. The Malaise trap was set all over the study period, while the black light trap was operated overnight, once a month for 15 months.

4. The results of the study of Trichoptera diversity and spatial variability of the insect indicated a similarity at Romglao-Paradorn Waterfall, Waterwheel Waterfall and Kha Mun Noi Stream, while Man Dang Noi was different from those three sites. Temporally, both larvae and adult Trichoptera clearly showed the trend corresponding to season and water discharge.

5. The results of four sites at Phu Hin Rongkla National Park, was not enough to conclude the number of representative species of the area, therefore more study sites and extended research duration will be needed for further study to accomplish the complete data of the area.