

Benthic diatoms in the ping river and its tributaries in mae taeng district, Chiang Mai Province, Thailand

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Abstrak

Mae Teang District is home to many tributaries of the Ping River. Each tributary is associated with different geographical characteristics and uses. This study is the first report on benthic diatom diversity in the designated water bodies and the first comparison of benthic diatom distribution in the Ping River and its tributaries, including the Mae Hao and Mae Luang Streams in Mae Taeng District of Chiang Mai Province, Thailand. The benthic diatom distribution and physico-chemical properties were investigated in August and November 2015 at three locations in each water body. The highest abundance of benthic diatoms was found in the Ping River (143 species), followed by Mae Hao (132 species) and Mae Luang Streams (90 species). The most abundant species found in the Ping River were *Planothidium lanceolatum*, *Nitzschia palea*, *Navicula cryptotenella* and *Seminavis strigosa*. The most abundant species found in the Mae Hao Stream were *Nitzschia palea*, *Seminavis strigosa*, *Surirella splendida* and *Sellaphora pupula*. The most abundant species found in the Mae Luang Stream were *Navicula cryptotenella*, *Diadesmis contenta*, *Karayevia oblongella* and *Achnanthes brevipes*. Additionally, *Amphipleura lindheimeri* Grunow was identified as a newly recorded species for Thailand. This study revealed that the Ping River and Mae Hao Stream are similar bodies of water when compared with the Mae Luang Stream in terms of benthic diatom diversity and water quality. In addition, indicator species of tolerance and sensitivity to organic pollution were found. In conclusion, the areas of utilization were found to have affected the distribution of benthic diatoms in these water bodies, along with the water quality of the Ping River and its tributaries.