

Monitoring Biodiversity and Database Development

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Monitoring is useful for understanding the dynamic pattern and trends of biodiversity. Butterfly has been one of the most popular taxon chosen for monitoring biodiversity. The Taiwan Butterfly Monitoring Network (TBMN) was created in 2009 to set up baseline data for future monitoring as well as to reflect changes and trends of biodiversity in Taiwan. Species and number of butterflies were recorded along 3 transects, each about 2km, once every two weeks in northern Taiwan. A total of 13,923 butterflies, belonging to 157 species, were recorded from the 3 transects during the period from April 2009 to November 2010. The number of butterfly species recorded from these transects, namely Hushan transect, Lunggong transect and Ergeshan transect, was 98, 117 and 130, respectively while the number of individuals recorded from the 3 transects was of 2,848, 6,848 and 4737, respectively. The species and number of butterflies were recorded along additional 31 shorter transects, each 500m long, all over the island of Taiwan. A total of 8,194 butterflies, belonging to 192 species, were recorded from 3 times of monitoring along these transects in the summer of 2010. In sum, 217 species of butterflies, including 1 protected species and 14 endemic species, were recorded from these transects. However, these species only accounted for a bit more than 50% of the rich butterfly fauna in Taiwan. All data collected in the field, including butterfly species, numbers, temperature, relative humidity, and wind speed, was stored in database on a MySQL server that was built on a website <http://www.tbmn.org.tw/butterfly/index.php> so that all information collected during the monitoring processes can be shared. This website and its functions will be demonstrated during the presentation. The significance of creating TBMN and future improvement on biodiversity monitoring are discussed in detail.