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DATA PAPER

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Long-term (2005–2017) macromoth community monitoring at Mt. Jirisan National Park, South Korea

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Abstract

Moths, which are one of the mega-diversity insect groups, play important roles as herbivores in terrestrial ecosystems. Because most moths are nocturnal and easily attracted to lights, the utilization of consistent and uniform sampling methods based on a set of standardized protocols can lead to creation of comparable datasets on regional to global scales. These datasets can be used to address environmental issues such as the biological impacts resulting from climate change and land-use policies. More than 60% of the Korean peninsula is mountainous, and the forests on most mountains are undergoing marked changes related to forest succession and recent climatic variability. Therefore, the present study was conducted to monitor macromoth communities in a mountain ecosystem of Korea. Our study site, Mt. Jirisan National Park is the first national park and the highest mountain on the mainland of South Korea. This mountain range runs 34 km east to west and 26 km north to south, harboring more than 1,400 vascular plant and more than 3,000 insect species. We monitored macromoth communities at six sites in Mt. Jirisan National Park, South Korea from 2005 to 2017, during which time moths were collected from May to October using an ultraviolet bucket trap. The generated dataset, which contains 1,089 species and 40,694 individuals in 20 families, can be used to establish a baseline for development of a network-oriented database to assess the temporal and spatial changes of moths in temperate and tropical forests and the biotic impact of environmental change.

KEYWORDS

diversity, long-term monitoring, macromoths, Mt. Jirisan, South Korea

The complete data set for this abstract published in the Data Paper section of the journal is available in electronic format in Ecological Research Data Paper Archives at http://db.cger.nies.go.jp/JaLTER/ER_DataPapers/archives/2019/ERDP-2019-02.

