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DATA PAPER

Hiroki Itô · Takeshi Seki · Ikutaro Tsuyama
Shigeo Iida

Long-term data on forest regeneration after catastrophic windthrow in Tomakomai, Hokkaido, northern Japan

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Abstract Typhoon No. 15 in 1954 (Marie) caused catastrophic windthrow in Hokkaido, northern Japan. The Tomakomai District of the National Forest was one of the forests severely damaged. A study site was established in a stand of the National Forest within the jurisdiction of the Iburi East District Forest Office. The stand was located on the eastern slope of Mt. Tarumae at an elevation of approximately 300–310 m a.s.l. at an angle of approximately 5°. Two belts sized 4 m × 40 m, crossing at right angles at the center, were established within the site in 1957, and censuses on regeneration were conducted in 1957, 1970, 1973, 1978, 1983, 1990, 1996, 2001, 2006, 2011, and 2016. All stems of coniferous tree species (height ≥ 10 cm) that regenerated in the belts were marked. For broadleaved tree species, all stems with height ≥ 1.3 m were marked in 1957–1990, but stems with height ≥ 10 cm were marked after 1996. Height was measured for all marked stems, and the diameter at breast height was measured for stems with height ≥ 1.3 m. During the censuses, 27 coniferous and broadleaved tree species were identified and three more species were identified to the genus level. There are 2152 records for the occurrence data and 10,660 records for the measurement data, including missing values. The stem occurrence data were compiled following the Darwin Core format, and the measurement data were compiled following the Darwin Core Measurement or Fact Extension format. Finally all data were compiled for the Darwin Core Archive, an international standard format for biodiversity data. These data can help in understanding the succession of forests following large-scale disturbance and in managing this type of forest properly.

Keywords Broadleaved tree · Catastrophic windthrow · Conifer · Growth pattern · Forest regeneration · Mixed forest · Natural disturbance · Succession · Time series · Typhoon

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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/2018/ERDP-2018-01.

H. Itô (✉) · T. Seki · I. Tsuyama
Hokkaido Research Center, Forestry and Forest Products Research Institute, Sapporo 062-8516, Japan
E-mail: abies.firma@gmail.com
Tel.: +81 11 590 5523

S. Iida
Kyushu Research Center, Forestry and Forest Products Research Institute, Kumamoto 860-0862, Japan