

Data on vegetation across forest edges from the FERN (Forest Edge Research Network)

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Abstract

Many studies have focused on vegetation across forest edges to study impacts of edges created by human activities on forest structure and composition, or patterns of vegetation at inherent natural edges. Our objective was to create a database of plant-related variables across different types of edges from various studies (mainly from across Canada, but also in Brazil and Belize) to facilitate edge research. We compiled data on vegetation along more than 300 transects perpendicular to forest edges adjacent to clear-cuts, burned areas, bogs, lakes, barrens, insect disturbances, and riparian areas from 24 studies conducted over the past three decades. Data were compiled for more than 400 plant species and forest structure variables (e.g., trees, logs, canopy cover). All data were collected with a similar sampling design of quadrats along transects perpendicular to forest edges, but with varying numbers of transects and quadrats, and

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distances from the edge. The purpose for most of the studies was either to determine the distance of edge influence (edge width) or to explore the pattern of vegetation along the edge to interior gradient. We provide data tables for the cover of plant species and functional groups, the species and size of live and dead trees, the density of saplings, maximum height of functional groups and shrub species, and the cover of functional groups at different heights (vertical distribution of vegetation). The Forest Edge Research Network (FERN) database provides extensive data on many variables that can be used for further study including meta-analyses and can assist in answering questions important to conservation efforts (e.g., how is distance of edge influence from created edges affected by different factors?). We plan to expand this database with subsequent studies from the authors and we invite others to contribute to make this a more global database. The data are released under a CC0 license. When using these data, we ask that you cite this data paper and any relevant publications listed in our metadata file. We also encourage you to contact the first author if you are planning to use or contribute to this database.

KEYWORDS

Atlantic tropical forest, boreal forest, contiguous quadrat sampling, cut edge, ecotone, fire edge, forest edge, forest structure, lakeshore edge, non-vascular plants, riparian edge, vascular plants

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data are available as Supporting Information and are also archived on the Borealis repository at <https://doi.org/10.5683/SP3/YO7LE9>.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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