Data Papers

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Quadrat-based monitoring of desert grassland vegetation at the Jornada Experimental Range, New Mexico, 1915–2016

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Abstract. The data set covers a 101-yr period (1915–2016) of quadrat-based plant sampling at the Jornada Experimental Range in southern New Mexico. At each sampling event, a pantograph was used to record the location and perimeter of living plants within permanent quadrats. Basal area was recorded for perennial grass species, canopy cover area was recorded for shrub species, and all other perennial species were recorded as point data. The data set includes 122 1 × 1 m permanent quadrats, although not all quadrats were sampled in each year of the study and there is a gap in monitoring from 1980 to 1995. These data provide a unique opportunity to investigate changes in the plant community over 100 yr of variation in precipitation and other environmental conditions. We provide the following data and data formats: (1) the digitized maps in shapefile format; (2) a data table containing coordinates (*x*, *y*) of perennial species within quadrats, including cover area for grasses and shrubs; (3) a data table of counts of annual plant individuals per quadrat; (4) a species list indicating growth form and habit of recorded species; (5) a table of dates when each quadrat was sampled; (6) a table of the pasture each quadrat was located within (note that pasture boundaries have changed over time); (7) a table of depth to petrocalcic layer measurements taken at quadrat locations; (8) a table of particle size analysis of soil samples taken at quadrat locations; (9) a table of topographic characteristics of quadrat locations (e.g., concave or convex topography). Pantograph sampling is currently conducted at 5-yr intervals by USDA-ARS staff, and new data will be added periodically to the EDI Data Portal Repository (see section V.E.2). This information is released under the Creative Commons license—Attribution—CC BY and the consumer of these data is required to cite it appropriately in any publication that results from its use.

Key words: arid grasslands; Chihuahuan Desert; long-term research; New Mexico; particle size analysis; plant community; plant populations; quadrat; rangeland; soil texture.

The complete data set is available as Supporting Information at: http://onlinelibrary.wiley.com/doi/10.1002/ecy.3530.

Open Research

Data are also available from EDI: https://doi.org/10.6073/pasta/cf6b1f5845078fbbf82053bb3594faef.

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