BOULDER COUNTY OPEN SPACE BUTTERFLY DIVERSITY AND ABUNDANCE

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Abstract. The purpose of this data set was to investigate the effects of habitat characteristics and urbanization on grassland butterfly diversity. We sampled butterflies at 66 sites in Boulder County Open Space in the years 1999 and 2000. We tested for effects of habitat characteristics (grassland type and quality) and landscape context (percentage surrounding urbanization) on butterfly diversity and abundance. Although both habitat characteristics did affect butterfly diversity, landscape context did not. The data contain butterfly species diversity and individual species’ abundance for the five periods sampled: July 1999, August 1999, June 2000, July 2000, and August 2000. Our samples included 58 species from five butterfly families: Hesperiidae (17 species), Papilionidae (4 species), Pieridae (7 species), Lycaenidae (11 species), and Nymphalidae (19 species). These data include endangered butterfly species, as well as surveys from relictual tallgrass prairie. There is some limitation to these data, as our sampling was not exhaustive through the year. That is, many species we observed also occur outside of the period sampled, and some butterfly species may not have been present as adults during the months of June, July, and August, and thus were not sampled. We present these data with the hope that they be combined with future surveys using the methods described here to constitute a long-term data set. These data will undoubtedly be useful in understanding temporal changes in butterfly abundance and diversity, effects of urbanization on different taxa, and determinants of local and large-scale faunal diversity.

Key words: biodiversity; Boulder County Open Space, Colorado (USA); butterflies; climate change; habitat; Lepidoptera; urbanization.

The complete data sets corresponding to abstracts published in the Data Papers section of the journal are published electronically in Ecological Archives at (http://esapubs.org/archive). (The accession number for each Data Paper is given directly beneath the title.)