



Conference Abstract

Comparison of carabid assemblages in European bison grazed and non-grazed areas - first results

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Abstract

The European bison (*Bison bonasus* (L.)) is the biggest living wild terrestrial animal in Europe. Because of its grazing feeding type, it has a strong impact on the flora and fauna. In 2017 a study was started with the aim to analyze the impact of European bison grazing on carabid beetle assemblages over the years 2017-2020 in Poland using pitfall traps. The study consists of basically two main experimental parts:

1. a study on five meadow sites located in Augustowska forest complex (northeastern Poland), and
2. a study on ten sites (two meadows, eight forests) in two enclosures (southern Poland).

The plots in Augustowska forest complex were studied in 2017, before release of new population (reintroduced in 2018), and will be studied again in 2019 (after two year presence of the new population). The plots in enclosures were studied in 2018.

In the present paper the results from two enclosures will be presented. In the enclosure “Jankowice”, situated in Kobiór forest District (south of Katowice), two meadow sites (one grazed, one non-grazed) and four forest sites (two grazed, two non-grazed) were located. Grazing intensity was about 0.06 individuals per ha. The enclosure “Niepołomice”, situated

in Niepołomice Forest District (east of Kraków), had four forest sites (two grazed, two non-grazed). Grazing intensity was about 0.4 individuals per ha.

Altogether, 9615 individuals belonging to 61 species were collected. Correspondence analysis (CA) and Cluster analyses showed that, independently from bison grazing, the meadow sites significantly differed from the forest sites. Regarding the forest sites the enclosures were separated from each other. Bison grazed sites were not separated from non-grazed sites in the enclosure "Jankowice", but they were separated in the enclosure "Niepołomice".

Even if habitat type seems to be of major importance, depending on grazing intensity (individuals per ha) bison grazing may have an impact on formation of carabid assemblages, too. However, the preliminary results presented here have to be verified and complemented during the next years of the study.

Keywords

Carabidae, *Bison bonasus*, grazing, biological diversity

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