

# DISTRIBUTION AND ABUNDANCE OF GEOTRUPIDAE IN DIFFERENT HABITATS OF CURONIAN SPIT

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Investigation of beetles in Curonian Spit in different dunes habitat and colony of Great Cormorants have been carried out in 2008 – 2010 and 2012 years. Dunes in different stages of development and different degree of human exposure have been selected (gray and white dunes, alder forest in dunes, pine forest, Mountain pine forest, and burned Mountain pine forest, burned and cut Mountain pine forest, old mixed forest), also four sites in colony of Great Cormorants with different degree of dune forest habitat disturbance have been selected. Beetles belonging to three species: *Anoplotrupes stercorosus* (Scriba 1791), *Geotrupes (Geotrupes) stercorarius* (Linnaeus 1758) and *Trypocopris (Trypocopris) vernalis* (Linnaeus 1758), were found during the investigation. Main distributed areas of the Geotrupidae beetles are old mixed forest and eastern side of Great Cormorants colony, where beetles of *A. stercorosus* predominated (average number of specimens each year  $1303,75 \pm 405,6$  in old mixed forest and 1662 specimens in Eastern side of Colony at 2012). In central part of Great Cormorants colony beetles of *T. vernalis* predominated (189 specimens of *T. vernalis* and 80 specimens of *A. stercorosus*). First specimens of Geotrupidae appear in first decade of May, the highest abundance of Geotrupidae beetles was established from first decade of July to first decade of September.

Key words: Geotrupidae, Curonian Spit, Great Cormorants colony, habitats preference, abundance.

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## INTRODUCTION

Knowledge of beetles compositions in various temporary and unstable habitats of Curonian Spit are poor for this time. Forest habitat changes are very significant in territory of Great Cormorant colony. The Great Cormorant colony was established near Juodkrantė in old old-growth mixed forest, where predominated old pines.

Birds occupy new forest territories each year, dead forest places are expanding.

The six species of Geotrupidae are known in Lithuania (Tamutis et al. 2011). *Anoplotrupes stercorosus* (Scriba 1791) and *Trypocopris (Trypocopris) vernalis* (Linnaeus 1758), which at the larval stage feed on the partly decomposed plant litter together with faeces of small mammals it contains, the faeces of large animals, if available, are both forest species; the latter one ought to be considered a forest generalist. By digging tunnels and bringing plant litter underground they contribute to soil fertilization (Byk 2011).











