Impact of the European beaver *Castor fiber* on deadwood resources in lowland river valley – a case study in Wigry National Park (NE Poland)

Wojciech MISIUKIEWICZ¹, Sławomir PIĘTKA²*, Ernest BIELINIS²

¹Wigry National Park, Krzywe 82, 16-402 Suwałki, Poland
²Department of Forestry and Forest Ecology, University of Warmia and Mazury in Olsztyn, pl. Łódzki 2, 10-727 Olsztyn, Poland

*e-mail: slawomir.pietka@uwm.edu.pl (corresponding author)*

---

**INTRODUCTION**

Beavers have great capacity to transform their environment. Their activity can slow down water movement, create new marshland, and change channel depth and sediment retention in an area (Butler and Malanson 2005, Andersen et al. 2011, Grygoruk and Nowak 2014, Giriat et al. 2016, Puttock et al. 2017). Beaver activity increases sediment storage (Levine and Meyer 2014). Creation of ponds raises groundwater level (Feiner and Lowry 2015). Temporary flooding can negatively affect some terrestrial plants and in certain cases can also decrease the diversity of aquatic plants (Franczak and Czarnecka 2015). However, due to an increase in habitat heterogeneity, beaver activity mainly promotes diversity of herbaceous plants (Wright et al. 2002, Nummi and Kuuluvainen 2013, Osei et al. 2015). Trees – felled either by flooding or by beavers – together with other deposited materials sometimes create small “islands”, on which seeds deposited by the river can germinate (Zielonka 2001,