

Forest of the Anthropocene: the role of *Pinus sylvestris* in the formation of modern states, societies and environments in the 18th and 19th centuries

The turn of the 18th and 19th centuries in Europe was one of the most turbulent political periods in history. This political upheaval coincided with major changes associated with a progressing energy transition, resulting in increasing reliance on fossil fuels at the expense of wood biomass. Furthermore, the Enlightenment profoundly reshaped social and state order. These ideas and processes, initially developing strongly in the west of the continent, eventually reached Central and Eastern Europe. This period saw the extraordinary event of the complete collapse of one of the region's largest states – the Polish-Lithuanian Commonwealth – at the end of the 18th century. The lands of the former Polish-Lithuanian state were incorporated into three different Enlightenment monarchies, each with a completely different legal, social, and economic order.

Against this backdrop of major historical events, a revolution unfolded from the mid-18th century, one that has received little attention to date. Naturally growing forests in Europe, often exploited rapaciously, began to be increasingly replaced by tree monocultures, primarily dominated by two species: pine and spruce. Significantly, most states attempting to adopt the established German model of scientific forestry in the 18th and 19th centuries began with pine cultivation. However, despite its considerable ecological plasticity, pine did not adapt everywhere. Consequently, spruce gradually replaced pine.

Our project focuses specifically on the period of this forest transformation and its beginnings at the turn of the 18th and 19th centuries. We aim to analyse the region's history within the context of pine's significance for the development of early state administration (i.e., the beginnings of the forestry service), the economy (pine's role in the energy transition of that period), and the relationship between the state apparatus and rural inhabitants. A crucial part of the project will involve interdisciplinary research (palaeoecological, genetic, dendrochronological, cartographic, and historical), enabling us to answer questions about how the monoculture cultivation of Scots pine changed past landscapes and what the ecological consequences of our ancestors' decisions from several hundred years ago are.

The primary focus of our analysis will be the territories of present-day Poland, which at the end of the 18th century were under the administration of three different states – Austria, Russia, and Prussia – and the Czech lands, which at that time were located within the stable heartland of the Habsburg Monarchy. By comparing these two areas, we aim to pay particular attention to how the transition to monoculture forests occurred and what the short-term and long-term effects of the introduction of scientific forestry were on forest ecosystems.