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Many species of wind-pollinated plants are frequently visited by bees to collect pollen. This has been especially observed in solitary bees; for example, pollen from poplar (*Populus*), oak (*Quercus*) and birch (*Betula*) is often found in the pollen provisions prepared for the offspring of the red mason bee (*Osmia bicornis*). Honeybees also collect pollen from wind-pollinated species, such as common hazel (*Corylus avellane*) and maize (*Zea mays*).

Pollen from wind-pollinated plants is often considered as of poor quality. Yet, data on its chemical composition is generally scarce.

The main objective of this study was to determine the amino acid composition in pollen of wind-pollinated plants on which bees were reported to forage. Twenty four tree species and six herbaceous species were included in the analyses. Assessment of the amino acid composition were performed using ion-exchange chromatography (IEC).

The highest concentration in the aqueous phase was found for proline and arginine in most species. In samples after acid hydrolysis, high amounts of aspartic acid, glutamic acid, alanine, leucine, and lysine were detected across samples. Among non-proteinogenic amino acids, gamma-aminobutyric acid was found in all pollen samples. The highest content of water-soluble amino acids was detected in the pollen of *Cannabis sativa*, *Picea abies* and *Populus* spp. Protein-bound amino acids were of high concentration in the pollen of *Fraxinus excelsior*, *Plantago media* and *Quercus palustris*.

This study fills the gap in knowledge on pollen resources quality and suggests the need to reconsider wind-pollinated species in managing pollinator-friendly habitats.

The study was a part of the project no. 2023/07/X/NZ8/00792 funded by the National Science Centre, Poland.