

Two contrasting ecotypes of Crepis tectorum

Göte Turesson (1892-1970)

Ecotypes in the 21st century: from local adaptation to speciation and conservation

The concept of ecotypes, genetically distinct entities within species connected to specific habitat types, has been an important source for debate and research since its introduction by the Swedish geneticist Göte Turesson one hundred years ago (1922). The existence of ecotypes and other kinds of local adaptation raises several issues in systematics, evolution and conservation, including the role of ecology in speciation (e.g. the development of crossing barriers that result from differences in local selection pressures) and the question of how best to describe intraspecific variation for conserving genetic diversity and evolutionary potential of rare and threatened species.

Göte Turesson performed common-garden studies to describe ecotypes in more than 50 plant species, mostly in relation to climate and soil type. Today, ecotypes have been described for a much broader variety of organisms, including fungi and animals, and evidence is accumulating that many ecotypes result from human activities such as mowing and biotic factors such as grazing animals and pollinators. Current research topics include how often ecotypes represent an early step towards speciation and how ecotypic divergence can be maintained in the face of strong gene flow between populations.

Nordic Journal of Botany launches the special issue "Plant ecotypes in the 21 century: from local adaptation to ecological speciation and conservation biology". We welcome contributions on the origin, systematics and conservation implications of ecotypes and other kinds of local adaptation in both plants and fungi. We also accept contributions on how the ecotype concept and research in the field have developed since the days of Turesson.

Guest editors: Renate Wesselingh, Stefan Andersson Abstract deadline: 31st January 2023 Full paper submission deadline: 30th April 2023 Send abstracts to njb@oikosoffice.lu.se