

## **Master thesis at the Department of Forest Genetics and Forest Tree Breeding**

One sampling trip to Turkey in summer 2025 is included in the project.

### **Genetic diversity in some *Eriolobus trilobatus* (Labill. ex Poiret) M. Roem. populations in Turkey**

#### **ABSTRACT**

*Eriolobus trilobatus*, a near-threatened arboreal species in Turkey, holds ecological significance for its ability to withstand droughts, produce flavorful fruits, and serve as a source of natural phenolic and antioxidant compounds. It distributes in the eastern part of the Mediterranean basin and has several isolated populations in northern Israel, Lebanon, south and west Anatolia in Turkey. The species reaches its northern as well as westernmost limit in Greek Thrace and Southeastern Bulgaria in Europe. In Turkey, it is located between 250-1500 m altitude. To date, studies regarding the species in Turkey have been mostly carried out on its distribution, seed germination and ethnobotanical characteristics. Samples collected only from Antalya populations in a PhD thesis in 2019 were used to study the location and tree characteristics, ethnobotanical, molecular, stomata, pollen, morphological, and biochemical features of the species, as well as its reproduction. In another study, the genetic diversity of the species was ascertained using nuclear microsatellite and random genomic markers on leaf samples taken from 69 individuals spread across 5 locations in Greece. In this project, genetic diversity in 10 *E. trilobatus* populations from the Aegean, Mediterranean and Southern Marmara Regions in Turkey at nSSRs and expressed sequence tag (EST)-SSR markers will be assessed. Each population will be represented by 15 trees. One leaf from each of the trees will be collected. The assessment and marker analyses will be conducted at the Department of Forest Genetics and Forest Tree Breeding, Göttingen University. This project not only contributes to the conservation of this rare species but also fosters bilateral cooperation between Turkey and Germany. The study's findings are anticipated to be published as an original article in a journal within the scope of SCI, providing valuable insights into the genetic makeup of *E. trilobatus* and its implications for future conservation efforts.

**Keywords:** Conservation, *Eriolobus trilobatus*, Genetic variation, Turkey.