

13: Domestication of Perennial Plants: Evolution and Dispersal

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Involved subjects: Archaeobotany; Evolutionary Ecology; History; Agronomics; Paleontology; and Plant Biology

Number of positions requested: 1

Abstract:

Some of the most heavily investigated research topics in the sciences relate to the origins of agriculture. Over the past century and a half, scholars from across several fields of scholarship have dedicated their careers to the questions of when, where, how, and why plants and animals were first domesticated. Nonetheless, the vast majority of this research focuses on a handful of crops, notably the large-seeded annual grass crops (cereals) and certain legumes. The domestication of perennials, especially arboreal crops, has received little attention, despite their importance in modern world economies. These crops share similarities in the process of domestication; however, it is clear that they followed very different paths towards domestication than annual grasses. The past five years have seen a revolution in domestication studies, which largely revolved around the rejection of Neolithic Revolution models in favor of protracted models. As new methods are introduced and old methods are applied in new geographic areas, scholars are dramatically revising our understanding of the timing and spread of domestication processes.

This student will work with a growing assemblage of archaeobotanical data from across Europe, Asia, and Africa, specifically focusing on the domestication of perennial crops. Being at the MPI SHH would give the student access to ongoing arboreal domestication research. The student will be able to work with some of the earliest samples in West Asia to show evidence for fruit-tree management or early samples from North Africa that have evidence for heavy fruit collecting. The student will have the unique opportunity to study the domestication of trees from a global perspective. The student will use morphological data on the remains of early fruit seeds in order to model the pathway towards domestication. In this regard, an apple or a grain of wheat is an archaeological artifact that, if properly studied, can tell us about early human cultural changes.