DNA evidence for multiple introductions of barley into Europe following dispersed domestications in Western Asia

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It has long been recognised that the Neolithic spread across Europe via two separate routes, one along the Mediterranean coasts, the other following the axis of the major rivers. But did these two streams have a common point of origin in south-west Asia, at least with regard to the principal plant and animals species that were involved? This study of barley DNA shows that the domesticated barley grown in Neolithic Europe falls into three separate types (groups A, B and C), each of which may have had a separate centre of origin in south-west Asia. Barley was relatively rarely cultivated by the early Linearbandkeramik farmers of Central and Northern Europe, but became more common during the fifth and fourth millennia BC. The analysis reported here indicates that a genetic variety of barley more suitable for northern growing conditions was introduced from south-west Asia at this period. It also suggests that the barley grown in south-eastern Europe at the very beginning of the Neolithic may have arrived there by different routes from two separate centres of domestication in south-west Asia. The multiple domestications that this pattern reveals implies that domestication may have been more a co-evolutionary process between plants and people than an intentional human action.

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Supplementary references


