
Molecular biomarkers of anthropic impacts in natural archives

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Abstract

Molecular fossils are becoming increasingly important tools in paleoenvironmental research, and over recent years, some were shown to be useful indicators of human activities. Common indicators of human impacts include pollen, charcoal, sedimentation rates, and magnetic susceptibility, each of which has its limitations.

Thus the advent of novel molecular markers of human activities provides an additional set of tools to make the difficult distinction between anthropogenic and natural factors that have influenced the environment in the past. The fossil biomarkers record preserved in natural archives provides valuable temporal and spatial insights on land use such as cultivation practices and pastoral activities, post-harvesting activities (e.g. retting), and their consequences on the environments and ecosystems.

Here we will present a review of the progress that has been made in developing novel biomarkers of human activities, differentiating those indicating environmental changes that can be related to human activities from those unambiguously attributable to human activities.

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