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Symposium

Cenozoic Diversification and Climate Change

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Modern biodiversity patterns are largely the result of the Cenozoic radiation that occurred after the mass extinction event at the K/T-boundary about 65 Ma ago. The well-documented phylogenetic diversification during the Cenozoic is paralleled by a profound paleogeographic reorganization of the globe and by complex climate change. Hence, the question arises to what extent Cenozoic diversification and environmental changes are linked. For instance, what is the evolutionary impact of the overall cooling trend, increasing seasonality, increasing aridity or short-term cooling or warming events?

Dated phylogenetic trees can help to link paleogeographic and paleoclimatic changes with diversification patterns across taxa. In this context it is also possible to investigate patterns of niche evolution in different groups of organisms. Questions arising are:

1. Is there a consistent pattern in the Cenozoic diversification of selected taxa?
2. Does species proliferation occur at a constant rate or do we see radiations at certain time intervals with more rapid speciation?
3. Is there a consistent pattern in the evolution of ecospace of the taxa considered?