

CORRESPONDENCE OF PALEOLATITUDINAL DIVERSITY IN HERBIVOROUS DINOSAURS AND PLANTS DURING THE JURASSIC
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Diversity of herbivorous dinosaurs and of common leaf taxa were plotted on the latest paleogeographic maps produced by the Paleogeographic Atlas Project. Both assemblages showed very prominent bimodal distributions, with pronounced diversity peaks at mid-latitudes in the northern and southern hemispheres, and a relative lack of taxa at high and *paraequatorial latitudes*. *The floral biomes include "seasonally dry subtropical", "warm temperate, and "cool temperate", with diversity being greatest in the warm temperate zone, about 40° to 60° in each hemisphere. Dinosaur diversity, however, seems to be centered on the "subtropical" zone, centered about 20° to 40° from the equator. The preserved vegetation in this zone was dominated by microphyllous conifers and cycadophytes, which would not have proved very nutritious for large herbivores. However, herbaceous forms such as ferns and sphenophytes also occur and would have flourished during wet periods. Thus, a savannah-like environment is envisaged, much like modern biomes that support large herbivores. In the Late Jurassic, the formations exhibiting the greatest diversity, the Morrison Formation in North America and the Tendaguru Formation in Tanzania, are notable in the high redundancy of sauropod taxa (four genera, three families in the Tendaguru, nine genera, four families in the Morrison), taxa which presumably would have been the most active consumers of the herbaceous vegetation. The paucity of large herbivores and herbaceous plants at equatorial latitudes correlates with what appear to have been superheated, arid parts of the continental interior. Thus both diversity gradients appear to be a function of moisture as well as temperature.*