

A new representative of the “orthopteroid” insect family Cnemidolestidae from the lower Permian of Germany

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Palatinarkema prokopi gen. et sp. nov., the third German representative of the late Carboniferous–early Permian archaeorthopteran clade Cnemidolestidae is described and figured. It is compared to the other known genera. We discuss putative aspects of the paleoecology of these stick-insect-like “orthopteroids”, based on their body and leg structures, plus the presence of a high disparity of color patterns in their forewings, suggesting an important diversity of biology and habitats for these insects. Their elongate bodies and legs show some similarities with the extant but distantly related stick insects. Cnemidolestids possibly expressed cryptic behaviours among the vegetation, using disruptive colors but also ovale eye-like spots, as in the extant insects.

Key words: Insecta, Polyneoptera, Archaeorthoptera, cryptic behavior, insect predation, Palaeozoic, Germany.

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