

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

Andre Nel and Markus J. Poschmann

*Acta Palaeontologica Polonica* 66 (3), 2021: 641-646 doi:<https://doi.org/10.4202/app.00879.2021>

*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.

André Nel [[anel@mnhn.fr](mailto:anel@mnhn.fr), <https://orcid.org/0000-0002-4241-7651>],

Institut de Systématique, Evolution, Biodiversité (ISYEB), Muséum


national d’Histoire naturelle, CNRS, Sorbonne Université, EPHE,

Université des Antilles, CP 50, 57 rue Cuvier, 75005 Paris, France.

Markus J. Poschmann [[markus.poschmann@gdke.rlp.de](mailto:markus.poschmann@gdke.rlp.de), <https://orcid.org/0000-0001-9710-1673>],

Generaldirektion Kulturelles Erbe RLP, Direktion Landesarchäologie/Erdgeschichte, Niederberger Höhe 1, D-56077 Koblenz, Germany.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see [creativecommons.org](https://creativecommons.org)), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

 [Full text \(1,130.9 kB\)](#)