A new genus and species of Sieblorsiidae from the Middle Miocene of Germany (Odonata: Epiproctophora)

ANDRÉ NEL & GUNTHER FLECK
CNRS UMR 7205, Muséum National d'Histoire Naturelle, CP 50, Entomologie, 57 Rue Cuvier, F- 75231 Paris, France.
E-mails: anel@mnhn.fr, fleckgunther@gmail.com

Abstract

Germanostenolestes lutzi, new genus and species of Sieblorsiidae is described from the Middle Miocene of Öhningen (Germany). It probably belongs to the clade (Paraoligolestes + (Parastenolestes (Germanolestes + Stenolestes))) sensu Nel et al. (2005). It is the third representative of the Sieblorsiidae described from this outcrop, showing that this family was still quite diverse in the Middle-Late Miocene.

Key words: Insecta, Odonatoptera, Epiproctophora, Neogene, diversity

The Sieblorsiidae is an enigmatic small family of Odonata, probably belonging to the Epiproctophora (Fleck et al. 2004), that comprises seven genera dated during a relatively short period between the Early Oligocene and the Late Miocene in Europe, from Spain to Russia (Caucasus). The timing and causes of its extinction remain very hypothetical, maybe in relation to the global cooling of the area during the Pliocene and Pleistocene. We describe a new fossil from the Middle Miocene of Öhningen (Germany), stored in the historical collection of the British Museum (Natural History), London. Sieblorsiids were already known from this outcrop, but the new specimen has a particular combination of character that allows designation of a new genus.

Material and methods

Abbreviation NHMUK: The Natural History Museum (British Museum, Natural History), London, U.K.

The specimen was examined with a Leica MZ12.5 dissecting microscope and illustrated with the aid of a drawing tube attached to the microscope. Line drawings were made using Adobe Photoshop CS graphic software.

The wing venation nomenclature used in this paper follows Riek (1976) and Riek and Kukalova-Peck (1984), as amended by Nel et al. (1993) and Bechly (1996). We used the following standard abbreviations: Ax1, Ax2 primary antenodal cross-veins; CuA cubitus anterior; IR1, IR2 intercalary radial veins; MA distal branch of median anterior; MAb posterior branch of median anterior; MP median posterior; ‘O’ oblique vein; RA radius anterior and RP radius posterior; ScP subcosta posterior.

Systematic palaeontology
Family Sieblorsiidae Handlirsch, 1906
Genus Germanostenolestes gen. nov.

Type species. Germanostenolestes lutzi sp. nov.

Etymology. Named after Germany and Stenolestes.

Diagnosis. Wing characters only. ScP crossing through nodus, nodal crossvein and subnodus nearly vertical, discoidal cell of forewing very broad, with its anterior and posterior sides not parallel and distal side much longer than basal side, oblique vein present; bases of RP3/4 and IR2 between arculus and nodus; long pterostigma, without pterostigmal brace; base of RP2 well distal of subnodus; numerous postnodal crossveins; CuA short, ending just distal of...