

**EOCENE GIANT LACEWINGS (NEUROPTERA:  
POLYSTOECHOTIDAE) FROM THE OKANAGAN HIGHLANDS  
(BRITISH COLUMBIA, CANADA AND WASHINGTON STATE, USA),  
FLORISSANT (COLORADO, USA), AND DENMARK**

[ARCHIBALD, S. Bruce](#), Organismic and Evolutionary Biology, Harvard University, Museum of Comparative Zoology, 26 Oxford Street, Cambridge, MA 02138, [barchibald@oeb.harvard.edu](mailto:barchibald@oeb.harvard.edu) and MAKARKIN, Vladimir N., Institute of Biology and Soil Sciences, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, 690022, Russia

The known Cenozoic fossil record of Polystoechotidae is restricted to the Eocene, and includes 16 species (14 named), in two genera. These range from the earliest Ypresian of Denmark; the middle to latest Ypresian of the Okanagan Highlands, British Columbia and Washington State; and the latest Priabonian from Florissant, Colorado. A new species of *Palaeopsyrops* Andersen, from Horsefly River, British Columbia, bears a dense cover of hairs across a portion of the hind wing membrane, not previously known in the order. Fossils of the order Neuroptera may be usually excluded or reduced in most fossil assemblages by their large wings in relation to body mass, which extends floating time in actualistic studies. In the Danish Fur Formation, however, Neuroptera (and Polystoechotidae) are well represented, along with Lepidoptera, likely usually excluded from compression fossil assemblages for similar reasons. Factors such as passive aerial transport combined with the presence of diatom aggregates acting as sticky traps may have enhanced their fossil assemblage representation there. Dispersal of *Palaeopsyrops* between Denmark and the Okanagan Highlands (direction unknown) was likely by the North Atlantic route, not before the late Paleocene, during periods of continuous land connection between North America and northern Europe. Polystoechotidae in the Eocene, as today, appear to have ranged in forested regions of microthermal to lower mesothermal climate where habitat climatic parameters are known.

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