

POSCHMANN, M. & TETLIE, O.E. (2004): On the Emsian (Early Devonian) arthropods of the Rhenish Slate Mountains: 4. The eurypterids *Alkenopterus* and *Vinetopterus* n. gen. (Arthropoda: Chelicerata). – *Senckenbergiana lethaea*, 84(1/2): 173-193, 13 figs.; Frankfurt am Main.

Abstract: Recently collected material of Early Devonian eurypterids (Chelicerata: Eurypterida) from the Rhenish Slate Mountains is described and compared to the reexamined type material of *Drepanopterus struvei* STÖRMER, 1974 and *Alkenopterus brevitelson* STÖRMER, 1974, both from the Emsian of Alken an der Mosel. *Vinetopterus martini* n. gen., n. sp., from Siegenian strata of the newly detected eurypterid localities Burglahr and Hombach in the Westerwald, is described. *D. struvei* is transferred to *Vinetopterus* n. gen. *Vinetopterus* n. gen. is diagnosed as having short prosomal appendage VI of *Drepanopterus*-type A, and a first order opisthosomal differentiation. A second species from the Siegenian of Burglahr is described as *Alkenopterus burglahrensis* n. sp. The new family Alkenopteridae, diagnosed by possessing at least two pairs of non-spiniferous legs, V of *Drepanopterus*-type B and VI of *Alkenopterus*-type, is proposed to accommodate *Alkenopterus*. The palaeoecology of Burglahr and Hombach is briefly discussed and the habitat of these eurypterids is interpreted as representing a shallow water environment in a deltaic setting with marine or brackish influence.

Key words: Eurypterida, Stylonuroidea, Drepanopteridae, Alkenopteridae, morphology, taxonomy, palaeoecology, deltaic setting, Early Devonian, Rhenish Slate Mountains, Germany.