

Abstract:

[Lithology and fossil content of some sections in the Siegen beds (Lower Devonian) of the Westerwald hills (Rheinisches Schiefergebirge)]. – Along the new ICE railway under construction from Köln to the Rhein-Main area, large temporary outcrops in the Westerwald Hills exposed Siegen beds (middle Lower Devonian = Siegenian). In this work, five sections are described, and their fossil content is listed.

Based on sedimentological and palaeontological information, all the strata are regarded as near-shore, shallow-water deposits. The successions in the two stratigraphically lowest sections Hombach I and II are attributed to a deltaic depositional environment with minor marine influence. Fine-grained layers in the section Hombach II reflect sheltered and probably lagoonal, quiet-water areas. These strata have yielded terrestrial arachnids, chasmataspids and arthropleurids, which are reported for the first time from the Siegenian of the Rhenish Slate Mountains. Both sections have a Siegenian age; due to their position, the youngest possible age is late Middle Siegenian.

The three stratigraphically higher sections Epgert, Krunkel and Grube Georg are built up of sediments which correspond to a certainly open marine, shallow-water environment. Diverse marine faunas are present which are composed of brachiopods, trilobites, bryozoans, corals, and bivalves. Based on the brachiopods, these sections are assigned to intervals of the Middle and Upper Siegenian.

Key words: fossils, arachnids, brachiopods, stratigraphy, environment, Lower Devonian, Rheinisches Schiefergebirge, Germany.