

**Abstract:**

The middle part of the Kaub Formation is redefined with the help of borehole data and has been subdivided into five members. This formation is characterized by laminated clayey slates with the ichnofossil *Chondrites* and the well known Hunsrück Slate fossils. Sandstone beds with rare brachiopods are intercalated with these rocks. Biostratigraphic data imply that these slates correlate with the Lower Zlichovian of the Bohemian and the upper Ulmen of Rhenish stratigraphic schemes. The Kaub Formation was deposited in the Central Hunrück Basin that represents an intrashelf basin on the passive continental margin of the Rhenohercynian Zone. The Kaub Formation was deposited during the second transgression associated with the Lower Devonian eustatic cycle 1b. The source area for sediment was probably from intrabasin-highs that were slightly eroded during storm events. At least three shallowing-upward periods developed during the deposition of the Kaub Formation. The relative sea-level rise at the base of each of these periods is associated with subsidence of the basin and/or minor cycles of eustatic change.