

# A MID-CARBONIFEROUS (NAMURIAN) BASIN IN PARTS OF THE COUNTIES OF LIMERICK AND CLARE, IRELAND

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## Abstract

The goniatite-bearing black marine shales at the base of the Namurian in County Clare and County Limerick, described by Hodson in north Clare and at Foynes Island (1954a, 1954b) are redefined as a litho-stratigraphic unit, the Clare Shales, to exclude an upper sandy division. The outcrop of the Clare Shales has been mapped in detail for a distance of about 50 miles from the Atlantic coast of north-west County Clare southwards to the Limerick-Cork border. Wherever possible the faunal succession and the thickness of the goniatite zones have been determined. It is shown that the junction of the Carboniferous Limestone and the overlying Namurian is, over the greater part of the outcrop, and probably the whole of it, non-sequential. The basal beds of the Clare Shales vary from Lower *Eumorphoceras* age (E<sub>1</sub>) immediately north of the Shannon estuary to *Homoceras* age (H) at the northern and probably at the southern limits of the area investigated. It is demonstrated that a mid-Carboniferous trough of sedimentation exists in County Clare and County Limerick, with its axis roughly along the line of the present-day Shannon estuary. The regularity of the overlap of the lower zones of the Namurian is disturbed north of the Shannon by thinning due to a ridge of Carboniferous Limestone at Carrowkilla, north of Ballynaeally, and by the presence of beds of basal Namurian age containing *Cravenoceras leion* in the area around Shallee Castle, west of Ennis. Apart from these irregularities, there is a steady overlap of the lower zones by the upper as one proceeds away from the Shannon. By the correlation of accurately measured sections it is possible to reconstruct the form of trough along the line of section examined.