

The Ordovician of the Sauerland (western Germany) revisited

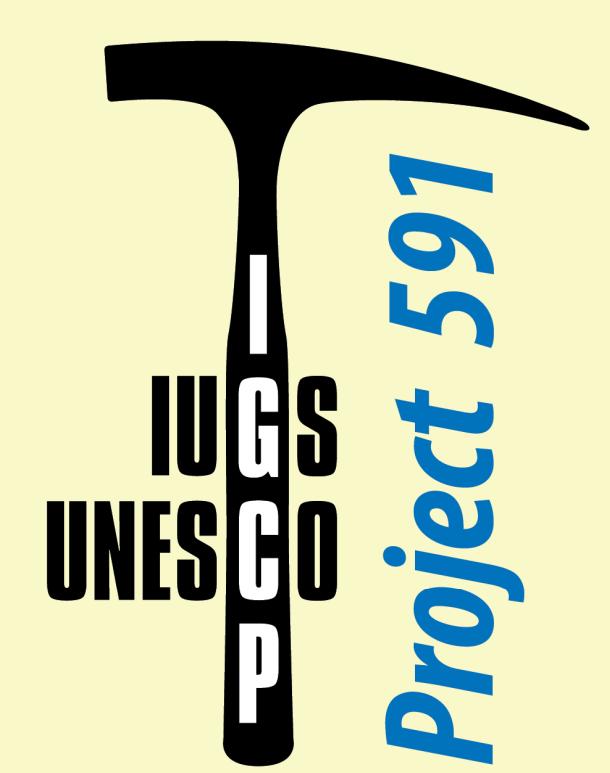
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Abstract: Ordovician sediments in western Germany are very rare.

In the Ebbe Inlier (Rhenish Massif) strongly tectonized, mostly fine-grained detrital Middle to Upper Ordovician rocks have been described since the 1910's.

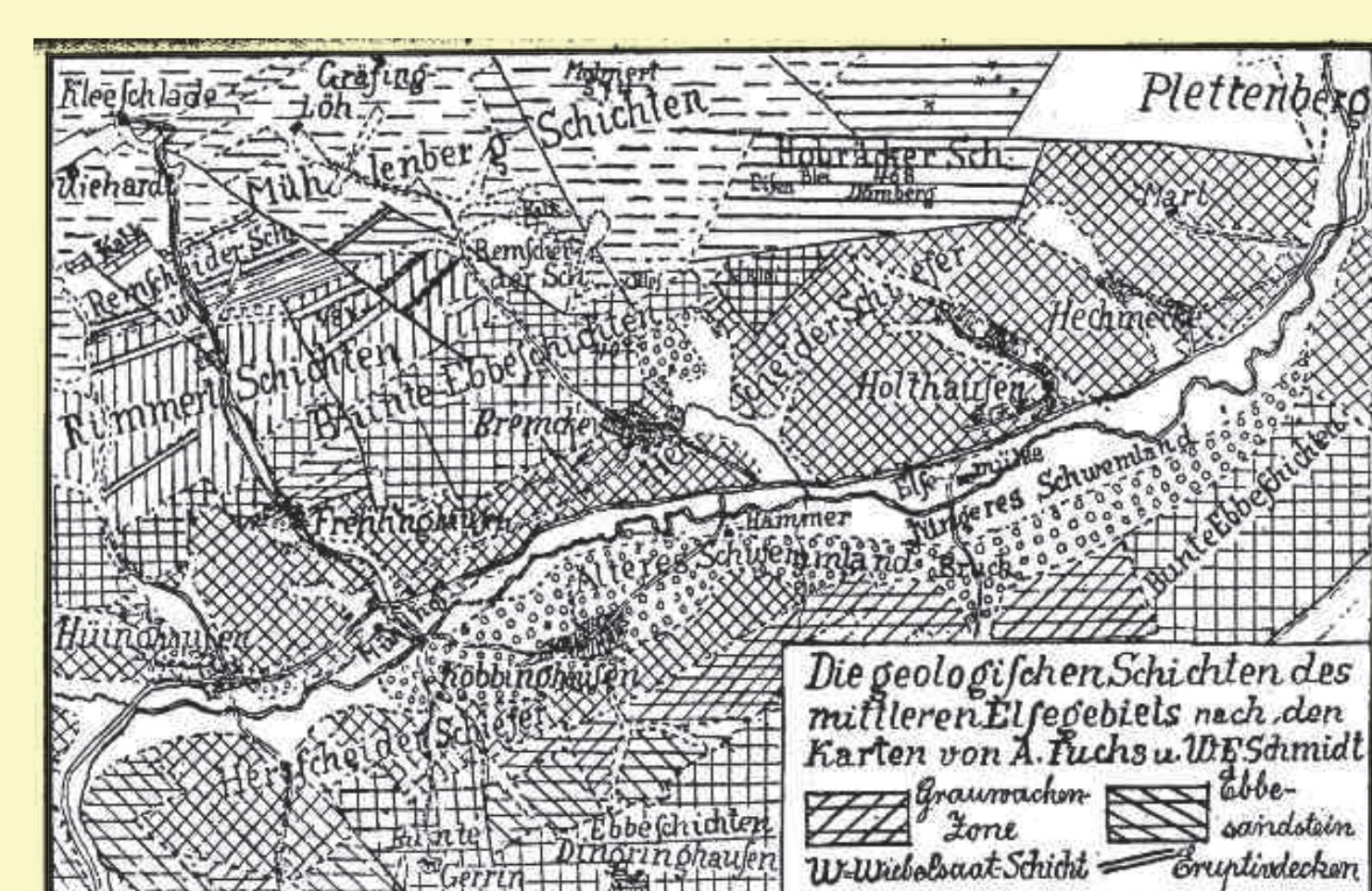
These sediments underwent a careful revision in the last twenty years.

Four formations, attributed to the Herscheid Group, yielded diverse fossil assemblages (including trilobites, graptolites, ostracods, chitinozoans, acritarchs and other groups) that allow attribution to age intervals between the Abereiddian (Darriwilian) and the Streffordian (early Katian). The sedimentary facies show greatest resemblance to the successions of the Condroz Inlier in Belgium.

Palaeogeographically, they constitute the southeasternmost part of Eastern Avalonia.



Location of the Sauerland. The Ebbe and Remscheid-Solingen inliers are the most complete Ordovician successions of western Germany.

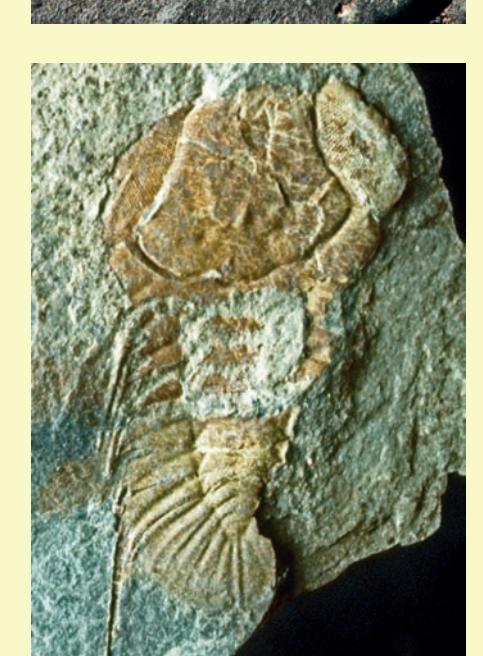


The Herscheid Group, first described in the early part of the 20th century, and attributed since 1937 to the Ordovician. Historical geological map of the Ebbe Inlier («Ebbe Anticline»).



Trilobites of the Ebbe Inlier

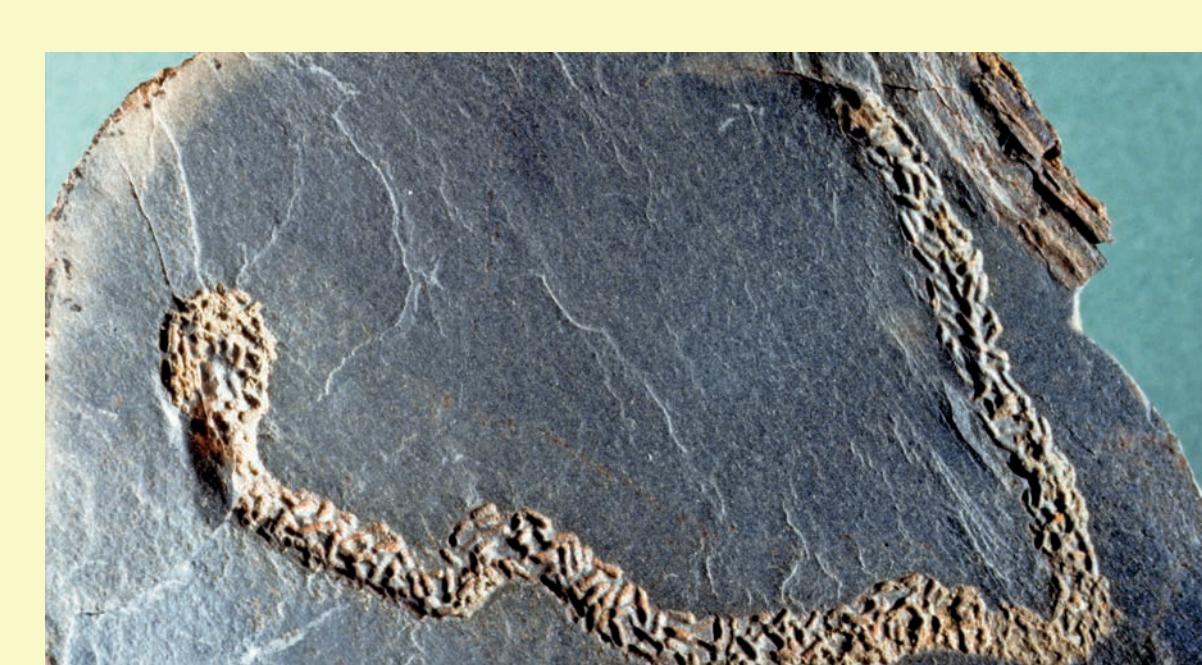
Corrugatagnostus magnodus KOCH & LEMKE 1995, Ordovician, Sauerland
Degamella praecedens (KLOUČEK 1916), Ordovician, Bergisches Land
Cyclopyge (Cyclopyge) bohemica MAREK 1961, Ordovician, Sauerland
Eoharpes primus herscheidensis KOCH & LEMKE 1995, Ordovician, Sauerland
Ellipsotaphrus monophthalmus (KLOUČEK 1916), Ordovician, Sauerland
Selenopeltis macrophthalmus ebbensis KOCH & LEMKE 1995, Ordovician, Sauerland
Waldminia spinigera KOCH & LEMKE 1994, Ordovician, Sauerland



Ma	Epoch/Series	Age/Stage	s.s.	British Regional Series	Ebbe Lithostratigraphy
445 - 470	Late (Upper)	Hirnantian	Hn2 Hn1	Hirnantian	
		Katian	Ka4 Ka3 Ka2 Ka1	Ashgill	
		Sandbian	Sa2 Sa1	Caradoc	Solingen Tonschiefer Fm.
		Darriwilian	Dw3 Dw2 Dw1	Rahlenberg Grauwackenschief Fm.	
		Dapingian	Dp3 Dp2 Dp1	Llanvirn	Kiesbert Tonschiefer Fm. Plettenberg Bänderschiefer Fm.
				Arenig	
					Herscheid Group ↑
					↓

Revised chronostratigraphy of the four formations of the Herscheid Group. s.s. = stage slices, after Bergström et al. (2009). Calibration with the British chronostratigraphy after Cocks et al. (2010).

Tomaculum problematicum

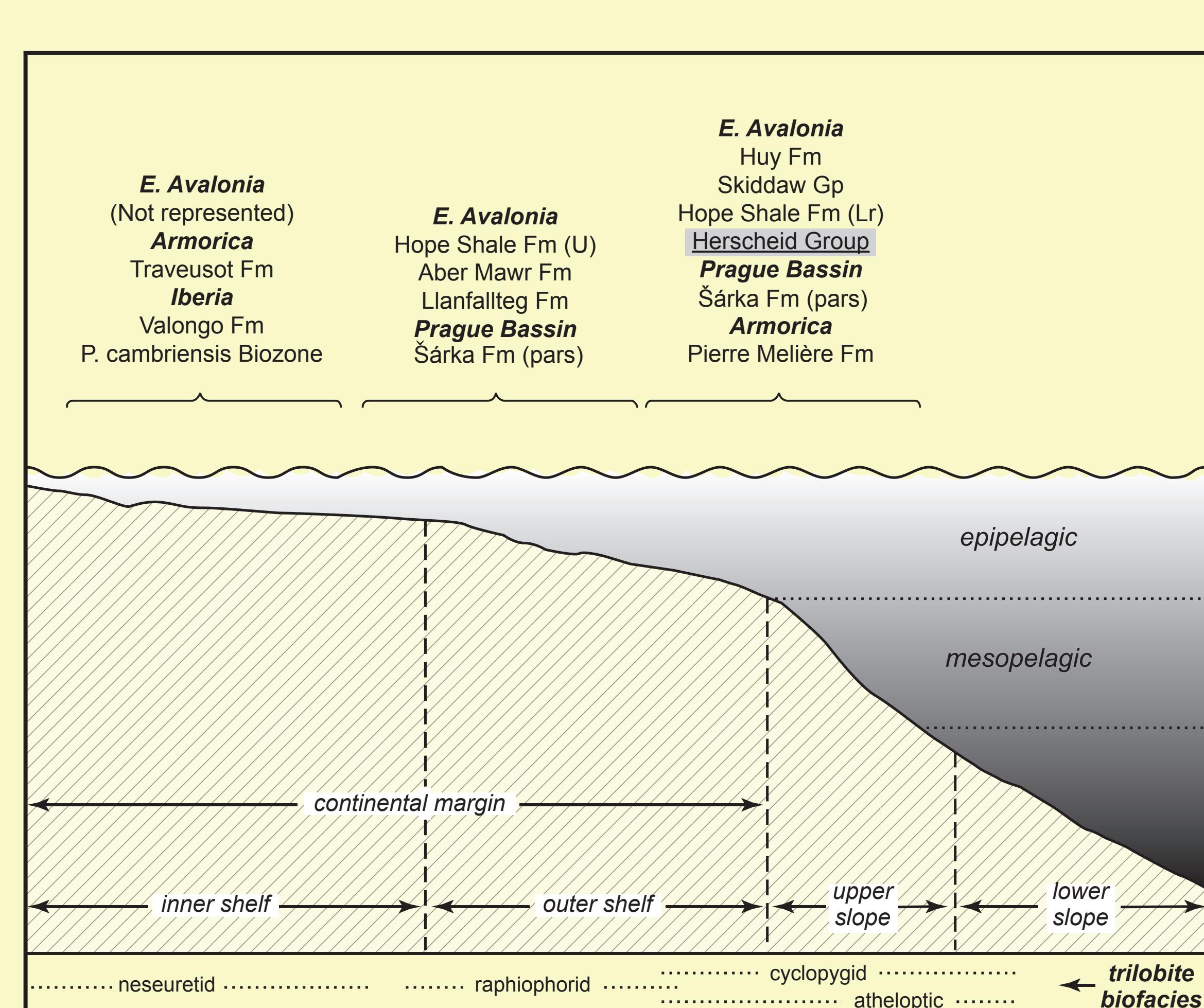


Tomaculum problematicum Groom 1902.
Ebbe Inlier
locality Kiesbert
(Sammlung Lemke)

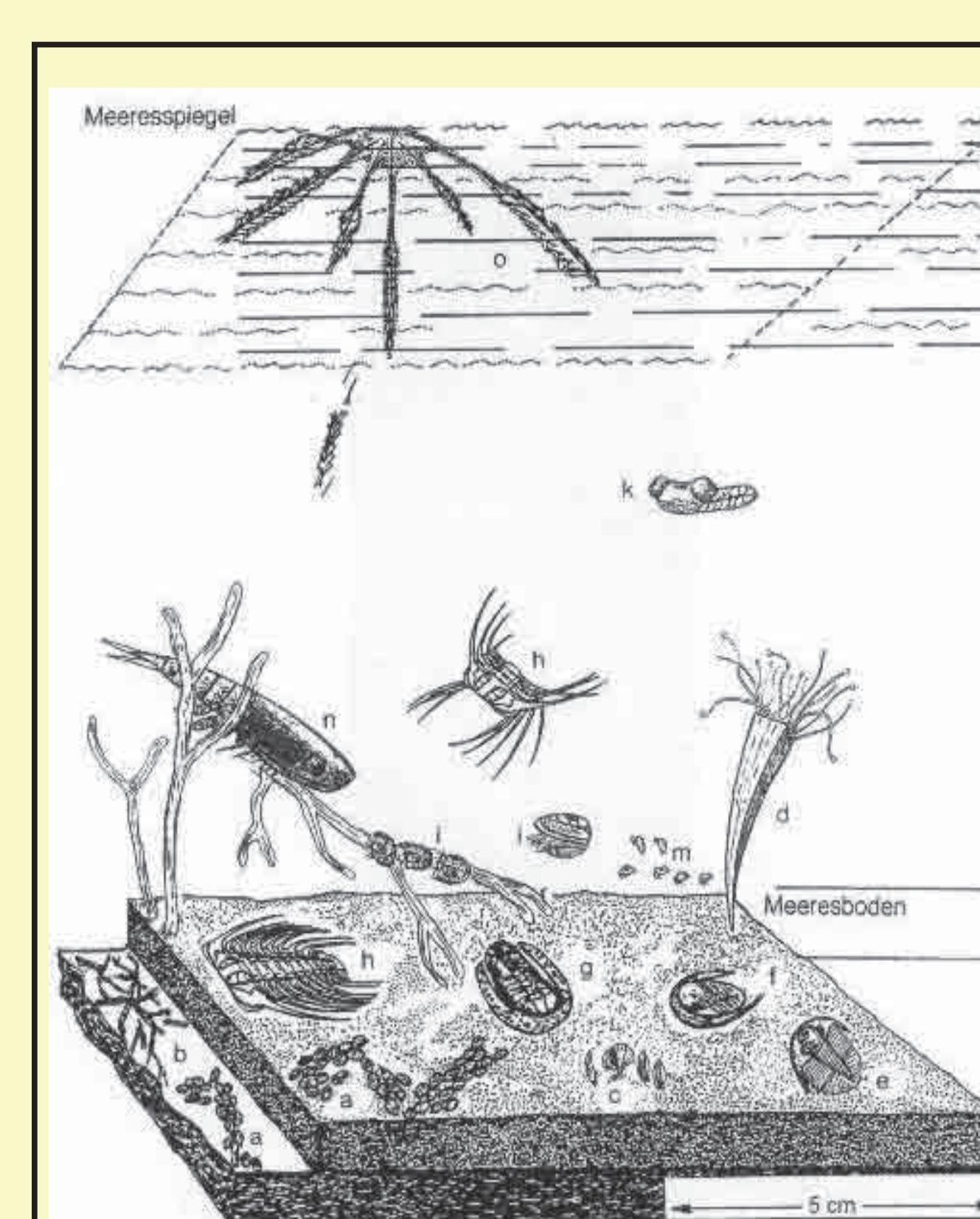


Tomaculum problematicum Groom 1902.
Montes de Toledo, Spain
(<http://www.paleontologia.co.uk/www/mediaGalery.php?accion=getHighlight&id=18>)

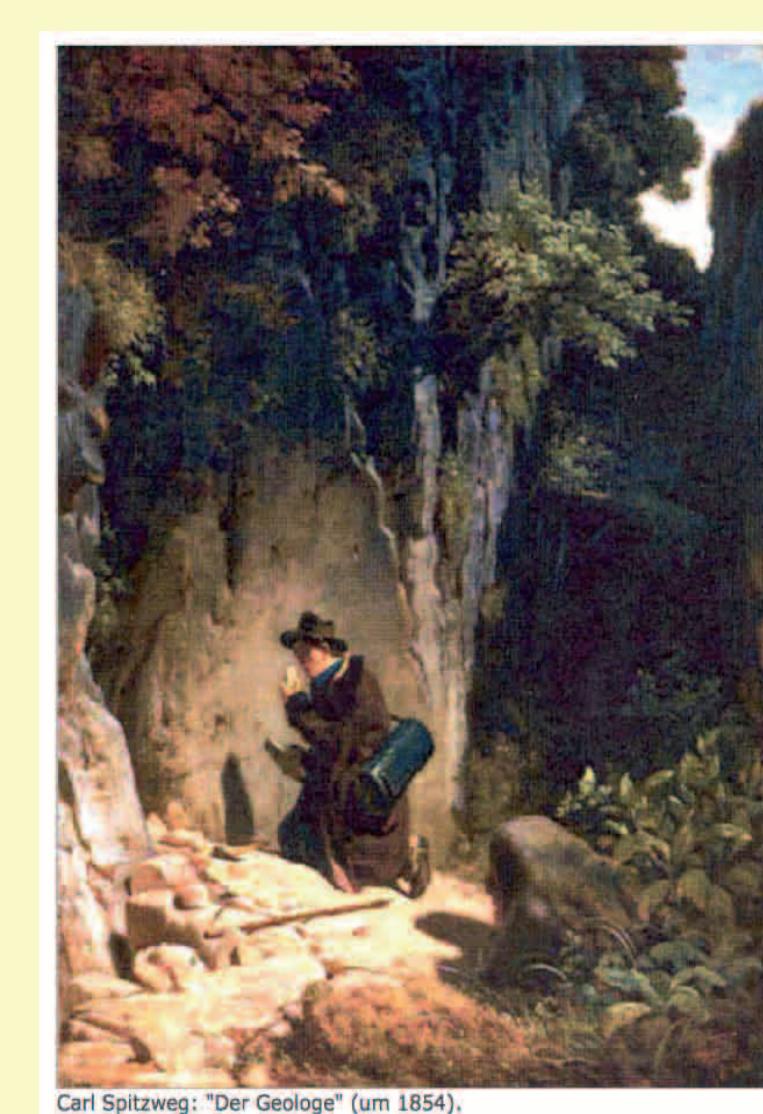
Tomaculum may represent the excrements of an epibenthic animal comparable to gastropods



Biofacies of the Herscheid Group, modified after Owens & Servais (2007), and comparison with other units from Avalonia (United Kingdom; Belgium) and the Gondwanan margin (Brittany, France; Spain; Prague Basin, Czech Republic).



Reconstruction of the palaeoenvironment of the Herscheid Group (from Koch et al. 2011)



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For further information, please visit:
<http://www.l-koch.de>