the centre and at the lateral angles these scale-markings become much larger, more acutely pointed in shape, and more irregularly distributed.

These scale-markings agree exactly with those of *Eurypterus Mansfieldi* (Hall), as represented by Prof. Hall on an enlarged scale (see plate v. fig. 6, *op. cit.* p. 38), but the margins of the segments of the Radstock specimen are hardly so pointed at their latero-posterior angles as the American species above quoted. The proportions are about equal to the largest example recorded by Prof. Hall.

In the absence of the rest of the organism, it would be premature to speak confidently; but, as it will probably prove to be a distinct British species, but near to *E. Mansfieldi* of Hall, I would propose to name it provisionally *Eurypterus Wilsoni*, after its discoverer.

NOTICES OF MEMOIRS.

Cambrian Fauna in Estland.

Ueber eine neuentdeckte untercambrische Fauna in Estland. Von F. Schmidt. Mit zwei Tafeln. (Mem. de l'Acad. des Sciences St.-Pétersbourg, vii^{e} série, tome 36, 1888, pp. 1–28, pls. i. ii.)

HITHERTO the Cambrian strata of the Russian Baltic provinces have proved so exceedingly poor in fossils, that it has not been possible to make a satisfactory comparison between them and the relative beds in Sweden and elsewhere. Below the *Dictyonema* shales, which are analogous to the beds of the same name in Norway and Sweden, there occurs the *Unguliten* or *Obolus* sandstones; and beneath these are beds of blue clay with subordinate layers of sandstone, which rest upon Finland granite, and have been proved by borings to reach 600 feet in thickness. The upper portions of the blue clay series in Estland were regarded by Linnarsson in 1872 as equivalent to the *Eophyton* sandstone of Sweden, and the main mass of the *Unguliten* sandstone as representing the Fucoid sandstone of the same country; but at that time no fossils were known which could substantiate these views. Lately, however, thanks to the persevering efforts of M. Mickwitz, an engineer of Reval, the fragmentary remains of a characteristic fauna have been discovered in the upper beds of the blue clay series at Reval and the neighbourhood, which fully confirm Linnarsson's opinions. The fossils which have been carefully described and figured by F. Schmidt in the present paper are *Olenellus Mickwitzi*, n. sp., *Scenella discinoides*, n.sp., *S.*? *tuberculata*, n.sp., *Mickwitizia* (*Obolus*?) *monilifera*, Linnars. sp., *Obolella* (?) sp., *Discina* (?) sp., *Volborthella tenuis*, n. gen. et sp., *Platysolenites antiquissimus*, Eichw. sp., *Medusites Lindstrœmi*, Linnars. sp., *Primitia*?, *Cruziana*, and *Fræna tenella*, Linnars.

The *Olenellus Mickwitzi* comes in at a lower stage than the *O. Kjerulfi*, and is thus the oldest Trilobite known in Europe. Its occurrence at this horizon confirms the views of Linnarsson, Holm, and Brögger, that the *Olenellus* zone is distinctly older than that of *Paradoxides*.

The following table is given by the author to show the equivalents of the Cambrian strata of the Baltic provinces with those of Norway and Sweden.

Baltic.	Sweden.	Norway.
Dictyonema-shale	*Dictyonema*-shale	*Dictyonema*-shale.—2e
Unguliten-sand		
	Olenus-zone	*Olenus*-zone 2d, 2c, 2b, 2a
	Paradoxides-zone	*Paradoxides*-zone 1d, 1c
	Olenellus-zone.	
	Zone of *O. Kjerulfi*	Zone of *O. Kjerulfi*.—1b
Fucoid-sand	Fucoid-sandstone.	
Zone of *Olen. Mickwitzi*	*Eophyton*-sandstone	Sparagmit-stage 1a
Blue Clay		
Lower Sandstone		

Fr. Schmidt thinks that the Baltic *Olenellus* zone is equivalent to the lower part of the St. John's group in North America, and to the lowest stages of our Harlech and Longmynd groups, in which no Trilobites have as yet been found, whilst the *Dictyonema* shales and the *Unguliten* sand may be paralleled with the Lingula Flags.

REVIEWS.

I.—M. Charles Brongniart on *Pleuracanthus*.[1]

THE precise characters of the extinct cartilaginous fishes, whose detached teeth and spines have long been known under provisional names, are now becoming gradually revealed through the progress of research; and no more interesting and important discovery has been made of late than that of the complete trunk of *Pleuracanthus*, described last April by M. Charles Brongniart, of the Paris Museum of Natural History. Through the kindness of M. Brongniart we are enabled to present the accompanying woodcut, which is a restoration of the skeleton of the fish, based upon no less than twenty-three examples of a new species (*Pleuracanthus Gaudryi*), from the Coal-measures of Commentry, Allier, France. The known individuals vary in length from 0·45 m. to 1 m., presumably owing only to their differences in age; the skeleton is always well displayed, being calcified as in Selachians, while the skin is destitute of shagreen. The body is elongate in form, and the snout obtuse. The notochord is persistent, and the bases of the neural and hæmal arches expanded; the slender neural spines bifurcate distally in the greater part of the abdominal, and the anterior half of the caudal, region. The pectoral fin, as already pointed out by Goldfuss and Anton Fritsch, is a biserial archipterygium; and each of the pelvic fins in the male is provided with a robust clasper, as in Chimæroids and Selachians. The barbed spine is placed upon the head, and forms the anterior border of a small "cephalic" fin; and a long dorsal fin commences almost

[1] "Sur un nouveau Poisson fossile du terrain houiller de Commentry (Allier)," Comptes Rendus, April 23rd, 1888.