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Source: *Proceedings of the Royal Irish Academy. Section B: Biological, Geological, and Chemical Science*, Vol. 47 (1941/1942), pp. 275-278

Published by: [Royal Irish Academy](#)

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XI.

THOMONDIA, A NEW TRILOBITE GENUS FROM CO. CLARE.

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(PLATE IV.)

[Read 10 NOVEMBER, 1941. Published 15 JANUARY, 1942.]

WHILE surveying Slieve Bernagh, Co. Clare, Kinahan discovered a shelly fauna in the Ordovician at the south-western end of the range (Foot, Kinahan, and Baily, 1862, p. 10). The fossils were described by Baily in this publication, and later he published a further brief note on them (Baily, 1885, p. 29).

The trilobites listed in the fauna were *Agnostus trinodus*, *Trinucleus concentricus*, *Remopleurides* sp., *Dindymene haidingeri*, *Staurocephalus globiceps*, *Aeglina rediviva*, and a form referred to ?*Olenus* sp. and figured in the Geological Survey Memoir on the district (*op. cit.*, 1862, p. 10, text fig. 1). Baily was of opinion that the fossils indicated a Caradoc-Bala age (*op. cit.*, 1862, p. 16).

During the remapping of the south-western part of Slieve Bernagh¹ the author has had the opportunity of collecting from this trilobite locality (No. 1 of the Geological Survey Memoir), which lies in the stream forming the south-eastern boundary of the Townland of Ballyvorgal South, 800 yds. north-west of Ardcregan House. The latter is about 4½ miles south-west of the village of Broadford (see sketch map).

The fossiliferous beds occur in a small north-east-trending wedge of brown and blotchy grey mudstones with a general southerly dip, bounded

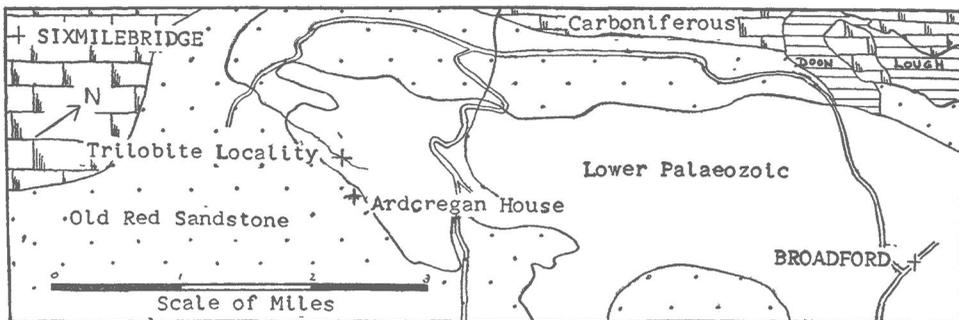


FIG. 1.—GEOLOGICAL SKETCH-MAP OF THE BROADFORD DISTRICT.

on the north-west by cherts and black mudstones with a *Nemagraptus gracilis* graptolite assemblage, and faulted on the south-east against

¹The author wishes to acknowledge the award of a grant from the Royal Society in connection with this research.

Silurian grits. The trilobite-bearing beds appear to lie on top of the *gracilis* mudstones, but the latter are much disturbed by earth movement, so that they are very highly folded, and their actual junction with the trilobite mudstones is obscured with vegetation.

The section in question lies on the south-east bank of the stream in a small cliff about 8 feet high. The beds are mainly blocky mudstones, light grey in colour when fresh, but usually completely weathered to a dull brown. Near the top are two thin bands of soft yellow-brown mudstone, strongly jointed so that they break into small blocks. About 18 inches below these is a thin layer of soft black shale containing graptolites, which have been identified as *Dicellograptus complanatus* (Harper, 1939, p. 303). The mudstones usually yield few fossil remains apart from occasional large trilobite eyes, but the two soft yellow-brown bands contain a number of small fossils which are fragmentary and consist mainly of trilobite cephalata and pygidia, together with cyprid-like ostracods.

The chief interest of the fauna, apart from its age, is the presence of what appears to be a new genus of trilobites—a blind form of which only cephalata have been found.

The fauna obtained by the author from the fossiliferous bands includes *Agnostus* cf. *perrugatus* Barr., *Cyclopyge* spp. nov., *Trinucleus* sp., *Dindymene haidingeri* Barr., and a new trilobite here referred to as *Thomondia globosa* gen. et sp. nov. The Irish Geological Survey Collections are not now accessible for examination, but the form referred to as ?*Olenus* sp. can be recognised from Baily's figure as *Bohemilla* sp.

The fauna has been regarded as being of Ashgillian (Whitehouse) age (Stubblefield, 1939, p. 61). This view is supported by the presence of *Dicellograptus complanatus* Lapworth.

Thomondia gen. nov.

(Pl. IV, Figs. 1, 2, 3, and 4.)

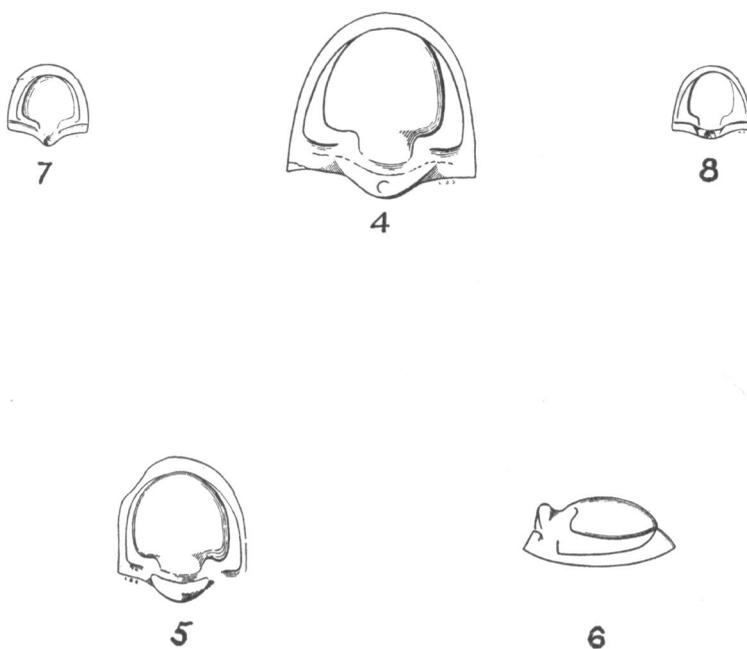
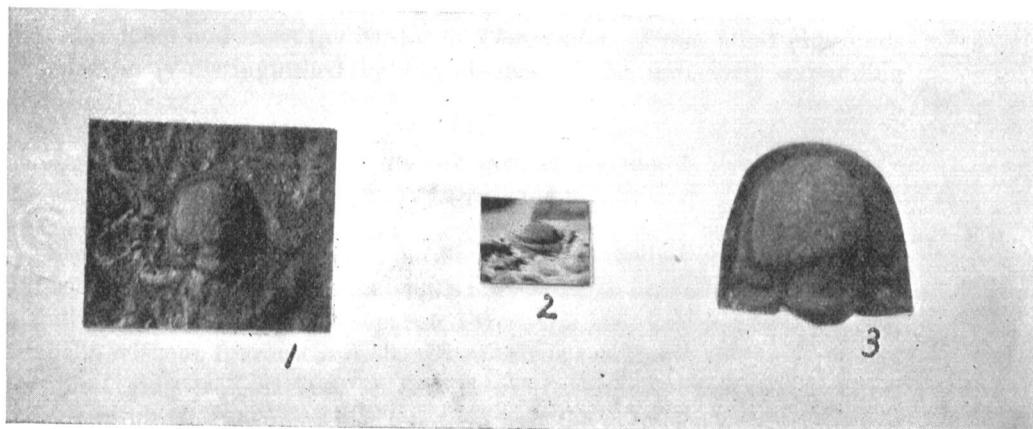
Diagnosis.—Glabella strongly convex and nearly parallel-sided, rounded anteriorly and drawn out in a short neck posteriorly. Glabellar furrows absent. Occipital ring strong. Cephalon with narrow but distinct continuous border, which slopes outwards and downwards, becoming somewhat flatter anteriorly. Cheeks inside border narrow and not meeting in front of glabella. Eyes and facial suture absent. No thorax or pygidium known.

Genotype.—*Thomondia globosa* sp. nov.

Geological Horizon and Locality.—Upper Ordovician mudstones (of Whitehouse age) of Ballyvorgal South, 800 yds. north-west of Ardregan House, near Broadford, Co. Clare.

Holotype.—National Museum of Ireland (18/1941).

Remarks.—This genus has been named from Thomond, the ancient name for Co. Clare. It has not been possible to refer this to any described



HARPER—THOMONDIA.

family, since no known genus, either with or without eyes, appears to resemble *Thomondia* closely. This genus has some likeness to *Shumardia* in the general shape of the cephalon, absence of eyes and lack of segmentation in the glabella. *Shumardia*, however, possesses marked anterior glabellar lobes and lacks the border of *Thomondia*. From blind phacopids *Thomondia* is distinguished by the absence of the anteriorly expanding glabella.

Thomondia globosa gen. et sp. nov.

(Pl. IV, Figs. 1–8.)

Strongly convex, nearly parallel-sided glabella, gently rounded anteriorly and at four-fifths its length narrowing to half its width, forming a stalk-like posterior portion separated from the occipital ring by a furrow. Glabella without furrows and about two-thirds the length of the cephalon. Occipital ring well-marked, with a short, backwardly projecting spine. The occipital ring occupies just less than half the posterior width. Narrow border to cephalon, plunging steeply outwards in the lateral portions of the cephalon, but less steep anteriorly. Cheeks narrow, not meeting in front of the glabella; marked off from the latter by sharp axial furrows. Genal angles sharp, but not produced into spines. Thorax and pygidium not known.

Geological Horizon and Locality.—As given above.

Holotype.—National Museum of Ireland (18/1941, Paratypes 19/1941, 20/1941).

Remarks.—Some of the material available gives information on the development of this species. Two external moulds of younger individuals, Pl. IV, Figs. 7, 8 (National Museum of Ireland, 21/1941, 22/1941), show that the stalk-like posterior part of the glabella is relatively shorter, and the main mass of the glabella appears to be more circular in outline and more convex, while the cheeks plunge more steeply. The occipital furrow is sharper and the occipital spine is relatively larger.

MEASUREMENTS IN MILLIMETRES.

(1) Length of head. (2) Length of glabella. (3) Width of head at posterior margin. (4) Maximum width of glabella. (5) Width of occipital ring. (6) Maximum height of glabella.

Figures in brackets are estimated, as the cephalon is imperfect.

	1	2	3	4	5	6
Holotype (N.M.I., 18/1941)	1·7	1·2	1·7	1·1	0·8	0·5
Paratypes N.M.I., 20/1941	1·1	0·8	—	0·7	—	0·4
and 19/1941	1·3	0·9	(1·3)	1·0	0·6	0·6
Young { N.M.I., 21/1941	0·9	0·6	(0·6)	0·4	0·2	—
Individuals { 22/1941	0·9	0·6	0·9	0·5	0·3	—

The author would like to express his sincere thanks to Professor L. B. Smyth for executing the drawings on Pl. IV.

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EXPLANATION OF PLATE IV.

Thomondia globosa gen. et sp. nov.

All the specimens figured below are from the type locality in the Ashgillian of Ballyvorgal South, Co. Clare. N.M.I. stands for National Museum of Ireland.

- FIG. 1.—Dorsal view showing glabella with narrow posterior neck, narrow cheeks dying out in front of glabella, and continuous border. Prominent occipital ring visible. Holotype (N.M.I., 18/1941) $\times 8$.
- FIG. 2.—Lateral view showing convex glabella, cheeks and occipital ring. Holotype (N.M.I., 18/1941) $\times 5$.
- FIG. 3.—Dorsal view showing glabella with narrow cheeks dying out in front of it. Holotype (N.M.I., 18/1941) $\times 14$.
- FIG. 4.—Outline drawing of holotype, showing continuous lateral border, cheeks, and occipital ring with spine base. (N.M.I., 18/1941) $\times 14$.
- FIG. 5.—Dorsal view of another specimen. Paratype (N.M.I., 19/1941) $\times 14$.
- FIG. 6.—Lateral view of the same, showing convexity of glabella and prominent occipital ring. Paratype (N.M.I., 19/1941) $\times 14$.
- FIG. 7.—Young individual showing more rounded glabella, sharp genal angles, and occipital spine. A natural external mould (N.M.I., 22/1941) $\times 14$.
- FIG. 8.—Another young individual showing occipital ring with spine. A natural external mould. The apparently greater width of the cheeks is probably due to flattening. (N.M.I., ~~21/1941~~) $\times 14$.