

it extends to the lateral angles, which it bisects on each side: *thorax* of thirteen rings, axis very convex, lateral lobes wider than the axis, bent down at their ends with large facets, each with a strong pleural groove angularly bent down and confluent at its end with the posterior margin; *pygidium* narrower than the buckler, semioval, with distinct seven, nine, or eleven joints, prominent axis, and broad, convex, lateral lobes, the segments of which are flat, about equal to the axial in number, and divided by a sulcus at their ends.

CALYMENE BAYLEI (*Barr.*) Pl. 1. F. fig. 8.

*Ref.*—Barrande, *Notice Prélim.* p. 51.

*Sp. Ch.*—*Glabella* about one-fifth longer than wide, not very prominent, front subtruncate, about half the width of the base, anterior lateral tubercle scarcely perceptible, two posterior pairs large, rounded; *neck-segment* and furrow small; margin in front of the glabella flat, truncated in front, parallel with the posterior margin, less than half the length of the glabella; *eyes* small, on a level with the anterior and middle tubercle of the glabella; *cheeks* convex, nearly as prominent as the glabella near it, gradually becoming depressed and produced backwards into short spines at the lateral angles; *surface* covered with a minute unequal granulation. Length of head about six lines.

This differs from the *C. brevicapitata* in the length of the glabella and the flat truncated margin in front of the glabella, while the shortness of this margin separates it from the *C. Tristani* and *C. parvifrons*, as well as the backward position of the eyes.

*Position and Locality.*—Common in the limestone of Golden Grove, Llandeilo; Sandy beds of Tre Gil, S. of Llandeilo.

*Explanation of Figures.*—Pl. 1. F. fig. 8. Cephalic shield, natural size, from Tre Gil (antennary punctures on each side near the front of the glabella).—Fig. 8 a. Profile of ditto.—Fig. 8 b. Granulation magnified from flat plate in front of head of a specimen from the limestone of Golden Grove.

CALYMENE BLUMENBACHI (*Brong.*)

*Ref.*—Murch. *Sil. Syst.* Pl. 7. f. 6. and 7.

*Sp. Ch.*—*Body* deep, compressed posteriorly, the pygidium and outer two-thirds of the pleuræ steeply inclined; *cephalic shield* minutely granulated, and with irregular small tubercles, semicircular, twice as wide as long, with the lateral angles obtusely rounded; *glabella* touching the narrow thickened anterior margin with its obtusely rounded front; three flattened, spheroidal tubercles on each side, anterior one small; *eyes* small, on a level with the second tubercle; *cheeks* triangular, a little longer than wide, slightly convex; *pleuræ* about one-fifth wider than the axis, the portions each side of the pleural furrow of nearly equal prominence; pleural grooves angularly bent down about their middle, towards the posterior margin; the ends of the axial segments very slightly thickened; *pygidium* having the lateral and posterior edges nearly horizontal (in one plane), anterior margin one-third larger than the posterior, length more than half the width of the posterior margin, and less than half the width of the anterior margin; axis convex of seven segments, lateral lobe flattened, of five flattened ribs separated by strong furrows, each divided by a mesial sulcus, extending almost half-way from the margin; *surface* of tail minutely and closely granulated, of head and body with small irregular tubercles among the granules.

*Position and Locality.*—Very common in the Wenlock limestone of Dudley, Staffordshire; Llanwddyn, in the Berwyn Mountains; schists of Drummuck.

CALYMENE BREVICAPITATA (*Portk.*) Pl. 1. F. fig. 4, 5, 6.

*Ref. and Syn.*—*C. Blumenbachii* (Port. not of Brong.) and *C. brevicapitata* id. *Geol. Rep.* t. 3. f. 1. 3.

*Sp. Ch.*—In size and form resembling *C. Blumenbachii*, but the body narrower and flatter; the *glabella* triangular, the narrow rounded front little more than half the width of the base, and having a concave space between it and the thickened anterior margin equal to the width of this latter, the two together being nearly equal to half the length of the glabella, excluding the neck-segment; *cheeks* triangular, about one-fifth longer