**Barringtonella bulmanii** Black, 1973

1972 *Pontilithus flabellosus* (Stradner, Adamiker & Maresch), Forchheimer. Sver. geol. Unders. Afh., ser. C, no 668, Arsbok 65 (14) p. 59; pl. 10, figs. 1, 2; pl. 11, figs. 5, 6.

Figs. 6, 7 — *Barringtonella bulmanii* sp. nov., x 6,000. 6) Holotype, proximal view. Cambridge Greensand, Hockwold (H.961). SM 23503. 7) Proximal view. Cambridge Greensand, Hockwold (H.961). SM 25526.

**Description:**

Diagnosis: A species of *Barringtonella* with a central structure on the proximal side consisting of randomly arranged granules and joined to the outer wall by radiating spokes.

Description: On the proximal side there is a partial floor surrounding the central area. It consists of radially arranged elements with curved sutures, often with smaller units inserted between the larger, as in the living *Pontosphaera Lohmann*, 1902. The centrie is occupied by a large and irregularly-shaped plate constructed of minute equi-dimensional granules; there is often a small hole at the exact centre. Along the minor diameter of the coccolith, this central plate spans the central area and is thus in contact with the partial floor. Along the major diameter, however, it does not extend as far as the floor, but leaves a semicircular gap at each narrow end, across which short multi-granular bars radiate, forming a grid which joins the two structures together. On the distal surface there is a massive transverse bridge, which in some specimens supports a hollow spine; other specimens show no trace of a spine.
Measurements (in microns):

<table>
<thead>
<tr>
<th></th>
<th>Holotype: H.961 25503 proximal view</th>
<th>d</th>
<th>d'</th>
<th>p</th>
<th>p'</th>
<th>c</th>
<th>c'</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.610</td>
<td>10527</td>
<td>6.0</td>
<td>4.4</td>
<td>5.1</td>
<td>3.5</td>
<td>3.8</td>
<td>2.2</td>
<td>42</td>
</tr>
<tr>
<td>H.961</td>
<td>25501</td>
<td>7.8</td>
<td>5.7</td>
<td>6.7</td>
<td>4.5</td>
<td>4.7</td>
<td>2.8</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>25526</td>
<td>7.0</td>
<td>5.8</td>
<td>6.0</td>
<td>4.2</td>
<td>4.2</td>
<td>3.0</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>25536</td>
<td>9.0</td>
<td>5.8</td>
<td>7.2</td>
<td>5.3</td>
<td>5.2</td>
<td>3.2</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>25614 distal</td>
<td>7.0</td>
<td>5.0</td>
<td>—</td>
<td>—</td>
<td>4.0</td>
<td>2.8</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>25657 proximal</td>
<td>7.2</td>
<td>5.3</td>
<td>6.0</td>
<td>4.7</td>
<td>4.9</td>
<td>3.2</td>
<td>—</td>
</tr>
</tbody>
</table>

\(d, d'\) = major and minor diameters respectively of the distal shield or distal surface.

\(p, p'\) = major and minor diameters of the proximal shield or proximal surface.

\(c, c'\) = major and minor diameters of the central area.

\(n\) = number of component elements in the distal shield, loxolith-ring or other marginal structure.

**Remarks:**

This species is evidently very close to the form named *Pontilithus complexus* by Bukry (1969). The proximal side of *P. complexus*, however, is described as being dominated by a complex cross-bar composed of numerous coalesced monoserial bars (Bukry 1969). In *Barringtonella bulmanii* there is no cross-bar on the proximal side, the grid-bars radiating from a central plate built of randomly oriented granules.

**Type level:**

Lower Cenomanian.

Occurrence: Cenomanian. In England known only from the Cambridge Greensand at Hockwold (H.961) and Barrington (H.610).

Forchheimer (1972, pp. 106, 108) has figured specimens from samples dated as Aptian and Albian from SE Sweden.

**Type locality:**

Cambridge Greensand of Hockwold (Southeastern England).

**Depository:**

Collection of electron micrograph at the Sedgwick Museum, Cambridge.

Holotype: SM 25503; pl. 30, fig. 6; from the Cambridge Greensand (Lower Cenomanian) of Hockwold (H.961).

**Author:**

Black M., 1973, p. 108; pl. 30, figs. 6, 7.

**Reference:**