87. *Toweius brusselensis* Steurbaut (2011)
Figs. 15, 16. Composite drawings of the holotype (Fig. 15, distal view) (IRSNB b6402); and one paratype (Fig. 16, proximal view) (IRSNB t>6405) of *Toweius brusselensis* sp. nov from respectively samples AK71 and AK.96 at Aktulagay.

Pl. 1, figs. 20-22

Pl.1, figs. 20-22. *Toweius brusselensis* sp. nov. 20: Knokke BH, 71.95 m, paratype, m-NP14, c. p., L = 7.6 µm, (IRSNB b6403); 21: Nederokkerzeel, level A, paratype, m-NP14, c. p., L = 6.8 µm, (IRSNB b6404); 22: AK91, paratype, U-NP13, c. p., L = 7.2 µm, (IRSNB b6405).

*Toweius* sp. - STEURBAUT, 1990, p. 55, pl. 3, fig. 11.
*Toweius* n. sp. - DAMBLON & STEURBAUT, 2000, p. 28, fig. 7.
Derivatio nominis: The name refers to Brussel, capital of Belgium, which is the type locality of the Brussel Formation (Upper Ypresian-Lower Lutetian), in which this new species has been discovered.

Holotype: Fig. 15 (IRScNB b6402).

Locus typicus: 71.95 m depth in Knokke borehole, NW Belgium; topographic map 5/6; x = 78.776, y = 226.370.

Stratum typicum: Brussel Formation, lithostratigraphic equivalent of the obsolete stage name Bruxellian (see STEURBAUT & HERMAN, 2006), middle part of NP14, traditionally included in the Early Lutetian (STEURBAUT, 2006). In view of the newly proposed GSSP for the Lutetian boundary, which is based on the lowest occurrence (= LO) of Blackites inflatus as the boundary criterion (MOLINA et al., 2011), this unit should be transferred to the Late Ypresian.

Paratype: Three figured specimens (negatives stored in the collections of the RBINS): one from the same level as the holotype (Pl. 1, Fig. 20) (IRScNB b6403), a second from Nederokkerzeel (Pl. 1, Fig. 21) (IRScNB b6404) and a third from AK91 at Aktulagay (Fig. 16; Pl. 1, Fig. 22) (IRScNB b6405).

Diagnosis: Subcircular, slightly raised placoliths, marked distally by 2 walls and a large central network, subrectangular to rhombic in certain orientations, containing up to 60 irregularly distributed perforations, clearly visible in proximal view.

Dimension: Length (x) = 6.8 to 8.0 µm, width (y) = 5.6 to 6.0 µm (holotype: L = 6.8 µm, W = 5.6 µm).

Description: These subcircular, slightly raised placoliths consist of a distal shield, marked by two walls and a smaller proximal shield. Both shields are built up by a ring of numerous small elements (probably over 50 in the proximal shield), barely visible with the light microscope. These from the proximal shield are slightly curved in anticlockwise direction in proximal view. The inner wall is steep, and clearly sticks out above the central network. The latter is subrectangular to slightly rhombic in outline (see Pl. 1, Fig. 22) and consists of up to 60 irregularly distributed perforations, clearly visible in proximal view. Especially the inner wall is strongly birefringent in cross-polarized light. The proximal shield is also bright under crossed nicols whereas the distal shield is rather faint. The extinction lines present a very irregular pattern (see Fig 15-16), and are dextrogyre in distal view.

Discussion: The presence of a double wall in the distal shield the single central network and the typical interference figure in cross-polarized light (very bright inner walls, bright proximal shield, rather faint distal shield and the very complex extinction lines) allows this new taxon to be included in the genus Toweius. It is distinguished
from all up to now described species by its large, subrectangular to slightly rhombic central network reaching around 45% of the total placolith length, and consisting of around 60 small openings.

**Distribution:** Known from several boreholes (e.g. Knokke: STEURBAUT, 1990; Vlakte van de Raan) and outcrop (e.g. Gobertange: DAMBLON & STEURBAUT 2000; Nederokkerzeel), in Belgium, where it seems to be restricted to the Brussel Formation (lower NP14). Rarely represented at Aktulagay in the upper part of the Tolagaysor Formation (sample AK91) dated as uppermost NP13.