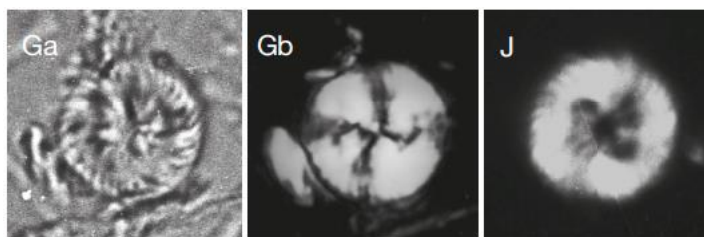


30. *Luminocanthus plenilutetiensis* Steurbaut & Nolf (2021)



figs 19G-J

Fig. 19. New or less known calcareous nannofossil taxa from the Eocene of the Mont-des-Récollets and other localities in Belgium. G-J, *Luminocanthus plenilutetiensis* n. gen., n. sp.; G, Mont-des-Récollets, 122.26-122.21 m, holotype, $d = 8.4 \mu\text{m}$ (IRSNB b7126); H, Vossem, otolith sample Nolf 1974, paratype, $d = 5.2 \mu\text{m}$ (IRSNB b7127); I, Prémontré, sample 12, paratype, $d = 9.6 \mu\text{m}$ (IRSNB b7128); J, Knokke BH, 71.95 m depth, paratype, $d = 6.7 \mu\text{m}$ (IRSNB b7129).

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Cyclococcolithus sp. – Steurbaut 1990: 187, pl. 1, figs 9, 10 (*non* figs 8, 11).

Cyclococcolithus sp. – Damblon & Steurbaut 2000: 28.

Holotype: Fig. 19G (IRSNB b7126) (negatives stored in the collections of the RBINS).

Paratypes: 2 figured specimens from the Brussel Sand Formation: 1 from from Vossem, Unit B3 (Fig. 19H) (IRSNB b7127) and 1 The Mont-des-Récollets section (N France): a key site for the Ypresian-Lutetian transition at mid-latitudes from the Knokke BH (Steurbaut 1990: pl. 1, fig. 9), 71.95 m depth (Fig. 19J) (IRSNB b7129); 1 from Prémontré (sample 12), Paris Basin, base of the ‘Glauconie Grossière s.s.’ (Fig. 19I) (IRSNB b7128).

Diagnosis: Circular coccoliths consisting of two closely appressed shields, including a central disk covered by a series of irregularly oriented calcite laths and a smaller outer rim with numerous conspicuous slightly curved elements. Both areas are highly birefringent in cross-polarized light.

Derivatio nominis: Refers to its position within the Lutetian, as its lowest occurrence is at the base of the coarse-grained sand facies of the Lutetian (base of Brussel Sand Formation in Belgium, base of ‘Glauconie grossière s.s.’ in the Paris Basin), which overlie the basal Lutetian fine-grained glauconitic sand facies, as identified in many outcrop and borehole sections in Belgium (Unit A4) and at Chaumont-en-Vexin (‘Chaumont-en-Vexin sands’) in the Paris Basin.

Locus typicus: Mont-des-Récollets, ‘Grande Carrière’, N France; $50^{\circ}48'02.74''\text{N}$, $2^{\circ}30'23.06''\text{E}$.

Stratum typicum: Brussel Sand Formation, base of Unit B3 (122.26-122.21 m); lower middle part of NP14.

Dimensions: Diameter = 5.0 to 9.6 μm (holotype: $d = 8.4 \mu\text{m}$).

Distribution: *Luminocanthus plenilutetiensis* n. gen., n. sp. is known from many Lutetian outcrop and borehole sections in the southern North Sea Basin, including the historical stratotype area (e.g. from the base and the upper part of the 'Glaucanie Grossière s.s.' at Prémontré (Fig. 19I) and Margival respectively). In Belgium it is consistently present from the base (Unit B1) up to the top of the Brussel Sand Formation (e.g. Isnes quarry) and seems to be restricted to it. At the Mont-des-Récollets there is a major influx (also the first occurring specimens) at the base of Unit B2b. It has been recorded in Unit C2 (sample 50.8 m) of the Aktulagay section, attributed to NP14, although in very low numbers (Sturbaut in King et al. 2013).

Description: These rather small (generally around 7 μm in diameter) and thick circular coccoliths consist of two closely appressed shields. The distal shield has a prominent outer rim including 32 to 38 elements, displaying laevogyre element curvature in distal view (Fig. 19G), and an inner concave area with less-well visible irregularly oriented elements. Both zones are not sharply delimited in distal view and show high birefringence under crossed nicols. The conspicuous swastika-like extinction cross has a laevogyre outline in the central area in distal view. It widens and is somewhat blurry in the outer rim.

Discussion: The extinction figure of the type species is quite similar to that of *L. hirsitus* (Müller, 1970) n. comb. from the lower Middle Oligocene of Belgium, suggesting a close relationship. However, coccoliths of the latter seem to have a much broader outer rim. The differences with *L. eolutetiensis* n. gen., n. sp. are discussed above.

Sturbaut E. & Nolf D., 2021. The Mont-des-Récollets section (N France): a key site for the Ypresian-Lutetian transition at mid-latitudes — reassessment of the boundary criterion for the base-Lutetian GSSP. *Geodiversitas*, **43(11)**: 311-363.

<https://doi.org/10.5252/geodiversitas2021v43a11>. <http://geodiversitas.com/43/11>