On Lower Kimmeridgian Ammonites from Ilża (NE Margin of the Holy Cross Mts)

by

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Summary. First identifiable ammonites are reported from Upper Jurassic localities at Ilża near Radom (NE margin of the Holy Cross Mts), known since the 1830's. Rasenia (Eurasenia) gothica (Schneid) and R. (E.) engeli Geyer. The ammonites are known from the zone V1, i.e. the so-called Sutneria Schichten in Swabia and Franconia, corresponding to the Sutneria platynota zone in western Europe and the Pictonia baylei zone in England. The findings show that Oxfordian strata are here overlain by the lowest Kimmeridgian in stratigraphic continuity.

Beautiful exposures of Upper Jurassic strata in the vicinities of Ilża, NE margin of the Holy Cross Mts, focused attention of geologists from the beginning of geological studies in Poland, on account of their interesting and variable lithology and wealth of fauna. The exposures have been the source of material for studies since the times of Pusch [9]. However, stratigraphic position of the strata exposed there remains the subject of discussions as the lack of ammonites precludes accurate datings and correlations. When this is the case, any findings of ammonites are of marked importance. It should be noted that Michalski found moulds of large perisphinctids with ribbing of the polygyrate type at the foot of the Góra Zamkowa hill at Ilża at the beginning of the 20th c. [10] but nothing more can be said about the specimens. In the course of my studies on the Góra Zamkowa section [2], I found an unidentifiable fragment of ammonite only. In turn, an incomplete specimen identified as Proplankulites cf. mutabilis Sowerby has been found in the course of these studies in basal part of the Kimmeridgian, cropping out somewhat further to the south (locality No. 1 in [2]). This specimen was subsequently cited as Rasenia cf. mutabilis (Sowerby) by Malinowska [7].

This paper presents an attempt to revise systematic position of the above
specimen along with description of another one, found in the same locality and kindly made available by Dr. E. Woźni. Both specimens belong to the same subgenus *Eurasenia* Geyer, 1961 of the genus *Rasenia* Salfeld, 1913. The findings make possible for the first time to draw the Oxfordian-Kimmeridgian boundary on biostratigraphic premises in areas at NE margin of the Holy Cross Mts. At the same time, they give the basis for establishing "Ilża Formation" in accordance with a general trend to formalize lithostratigraphic subdivisions. This formation, comprising Kimmeridgian strata, may be recognized at NE margin of the Holy Cross Mts as well as in areas east and north of it, in the Lublin region and adjoining parts of central Poland.

Genus *Rasenia* Salfeld, 1913  
Subgenus *Eurasenia* Geyer, 1961  
*Rasenia (Eurasenia) gothica* (Schneid, 1940)  
(Plate I, Figs 1-3)

1940. *Pictonia (Rigsteadia? Involuciteras?) devia* Schneid, p. 113, pl. 16 (12), fig. 6.  

**Description.** The available specimen represents almost a half of whorl of an individual about 115 mm in size. Whorl 45 mm high and 28 mm thick (H/D 0.39, T/D 0.24). Umbilicus 35 mm in diameter (U/D -0.31). Primary ribs fairly strong and sharp-crested, slightly bent forward. Point of furcation low, situated below a third of whorl height; ratio of secondaries to primaries close to 3. Whorl section ovate, high, with a trend to a marked increase in height in the body chamber.

**Remarks.** As it was mentioned above, the specimen was initially identified as *Proplanulites cf. mutabilis* Sowerby [2]. This identification requires some comments. It was made with references to the work of R. Douvillé ([4] p. 254, pl. 9, pl. 7, fig. 1 and pl. 9, pl. 8, figs 1-2). The genus *Proplanulites* is usually found in the Callovian and Lower Oxfordian but Douvillé reported *Proplanulites mutabilis* Sowerby (= *Amm. mutabilis* Sowerby) from the Lower Kimmeridgian. The specimen, to which I compared the Polish one, was derived from the beds with *Pictonia baylei*, Lower Kimmeridgian, in the vicinities of Le Havre. Douvillé also figured [4] two smaller specimens from coeval strata in other parts of France (Chatelaillon and Colombey in Haute-Marne). According to that author, changes in suture line show that *Ammonites mutabilis* Sowerby represents a descendant of Callovian *Proplanulites koenigi* (Sowerby)*) group and that

*) This point of view is nowadays questioned by some authors studying the *Proplanulites* group.
PLATE 1

Rasenia (Eurasenia) gothica Schneid. Sutneria platynota zone. Lower Kimmeridgian. Ilza, locality No. 1 (in [2]). nat. size, lateral and ventral views
PLATE II

Rasenia (Eurasenia) engeli Geyer. Sutneria platynota zone. Lower Kimmeridgian, Ilza, locality No. 1 (in [2]), nat. size, lateral and ventral views, coll. by E. Woźny
Ammonites orbignyi Tornquist ( = Amm. cymodoce d'Orbigny) is very closely related to the genus Pictonia.

My specimen is also somewhat similar to that figured as Pictonia (Ringsteadia? Involuciceras?) devia Schneid, 1940 by Schneid ([11] pl. 16 (12). fig. 6). It should be noted that Schneid ([11]. p. 113) gave the subgeneric name Ringsteadia? in description of the latter and the name Involuciceras? in explanations to figures.

It should also be noted that my specimen somewhat resembles Pictonia (Ringsteadia?) ascita Schneid. 1940 ([11] pl. 16 (12). fig. 3), differing in quicker growth of the body chamber in height.

A representative of the genus Pictonia has been described from the Kedră locality in the Holy Cross Mts region by Kutek [6]. That specimen, identified as P. (Pictonia) constricta Schneid, 1940, differs from the Ilźa specimen in better marked ribbing and almost two times longer primary ribs. According to Schneid [11], both Pictonia (Ringsteadia? Involuciceras?) devia and P. (Ringsteadia?) constricta occur throughout the zone.

The group of Rasenia-like Pictonia was identified with Rasenia and assigned to that genus by Geyer [5] (see full synonymy in [5], p. 97). This point of view is accepted here and the Ilźa specimen is allocated in the species Rasenia (Eurasenia) gothica (Schneid).

Occurrence. According to Geyer [5], this species is common in lower, middle and possibly upper part of the zone in Franconia and Swabia. In Poland, it was found in the Lower Kimmeridgian at Ilźa (locality No. 1 in [2]).

Rasenia (Eurasenia) engeli Geyer, 1951
(Plate II, Figs 1-3)

1961. Rasenia (Eurasenia) engeli Geyer, p. 101, pl. 21, figs 1, la.

Description. A fragment (85 mm in size) of large form. Whorl 30 mm high (H/D = 0.37), ovate in cross-section, with steep umbilical wall. Ribbing typical Rasenia-like: ribs bundled, passing into ridge-like, usually poorly marked but not broken at the venter. Outer ribs rather innumerous but the available material is insufficient for calculating their number in a half of the whorl.

Remarks. The specimen from Ilźa appears very close to those described as Rasenia (Eurasenia) engeli Geyer, 1961, by Geyer [5] in dimensions and ornamentation. It is also somewhat similar to those described as R. (E.) rolandi by that author [5], differing in less strong outer ribs. The latter species was reported from SW margin of the Holy Cross Mts by Kutek [6] but his specimens were much larger and coarser that described above.

According to Geyer [5], R. (E.) rolandi is most common in the "mittel-\(\)", being rarer in in "unter-\(\)" and "ober-\(\)" whereas R. (E.) engeli in "unter-\(\)" and "mittel-\(\)".
Occurrence. As it was noted above, this species is known from lower and middle parts of the zone in FRG. In Poland, it has been found in the Lower Kimmeridgian at Ilża (locality No. 1 in [1]).

Summing up it may be stated that the above specimens from Ilża belong to the subgenus *Eurasenia* Geyer, 1961 of the genus *Rasenia* Salfeld, 1913. They are known from the zone (most possibly lower ;), i.e. the so-called Sutneria Schichten [5] in Swabia and Franconia, which correspond to the Sutneria platynota zone in western Europe [12] and the *Pictonia baylei* zone in England [1].

In the stratigraphic subdivision accepted in Poland [8], the Sutnera platynota zone is the basal zone of the Kimmeridgian. In this way it is shown that Kimmeridgian rocks rest in continuity on the Oxfordian as they begin with layers referable to the Sutneria platynota zone, exposed at Ilża (locality No. 1 in [2]).

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