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Autor(en): **Avram, Emil / Gràdinaru, Eugen**

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## ***Sabbaiceras stefanescui* n. gen., n. sp. (Ammonitina) in the Late Valanginian of the Codlea town area (W Brasov, Romania)**

by

*Emil AVRAM*<sup>1</sup> and *Eugen GRĂDINARU*<sup>2</sup>

**Résumé.**—AVRAM E. et GRĂDINARU E., 1993. *Sabbaiceras stefanescui* n. gen., n. sp. (Ammonitina): Valanginien supérieur de la région de Codlea (W Brasov, Roumanie). *Bull. Soc. vaud. Sc. nat.* 82.3: 201-207.

Un nouveau genre d'ammonite du Valanginien supérieur est proposé ici: *Sabbaiceras* n. gen. Ce genre est caractérisé par une ornementation de type *Neocomites* dans son stade juvénile et par une ornementation de type *Distoloceras* dans son stade adulte. Il comprend deux espèces, *Sabbaiceras stefanescui* n. sp., et *S. beaumugnense* (SAYN), qui se distinguent par la robustesse, la densité et la flexuosité de leur ornementation adulte.

**Abstract.**—AVRAM E. and GRĂDINARU E., 1993. *Sabbaiceras stefanescui* n. gen., n. sp. (Ammonitina) in the Late Valanginian of the Codlea town area (W Brasov, Romania). *Bull. Soc. vaud. Sc. nat.* 82.3: 201-207.

A new Upper Valanginian genus is proposed: *Sabbaiceras* n. gen.; it is characterised by a *Neocomites*-like ornamentation in young stage and by a *Distoloceras*-like one in maturity. This genus includes until now two species: *Sabbaiceras stefanescui* n. sp., and *S. beaumugnense* (Sayn), differentiated one another by the strength, density and flexuosity of mature ornamentation.

### 1. INTRODUCTION

Since UHLIG (1905) proposed his genus *Neocomites* (type species: *Ammonites neocomiensis* d'Orbigny, 1841), several other genera and subgenera were detached from the same stock: *Odontodiscoceras*, Spath, 1924; *Callyptychoceras*, Spath, 1924; *Busnardoites*, Nikolov, 1966; *Eristavites*, Nikolow,

<sup>1</sup>Institute of Geology and Geophysics, 1 Caransebes str., Bucharest, 78344 Romania.

<sup>2</sup>University of Bucharest, Faculty of Geology and Geophysics, 1 Bălcescu Av., Bucharest, 70111 Romania.

1966; *Eleniceras*, Breskovski, 1967; *Neocomites* (*Teschenites*), Thieuloy, 1971; *Varlhaideites*, Rawson & Kemper, 1978; and *Rodighieroites*, Company, 1987, all of them characteristic of the Valanginian or the Valanginian-Earliest Hauterivian interval.

A new genus could be added to the above listed taxa, which rounds the picture of the typologic diversity of the *Neocomitinae* within the Valanginian time span, namely: *Sabbaiceras* n. gen., dedicated to the great Romanian geologist and paleontologist Sabba Ștefănescu (1857-1931), first professor of the Chair of Paleontology at the University of Bucharest.

The only species of this new genus known from the paleontological literature is «*Neocomites*» *beaumugnensis* SAYN (1907), Late Valanginian (Verrucosum Zone) in age, a species considered as belonging to the genus *Neocomites* by some recent studies (COMPANY 1987), but different from the type species of this genus by its mature trituberculate ribbing.

The Romanian species of the genus, namely *Sabbaiceras stefanescui* n. sp., was recorded in the basal bed of the calcareous-marly Brasov Formation (latest Early Valanginian - ? Early Aptian in age), developed in the inner part of the Carpathian Bend, near the Brasov town. This basal bed includes, in the «Piatra Mare» quarry, SW of the Codlea town, a lower layer, 10-20 cm thick, of ferruginous, nodular limestone, and an upper layer, of almost 10-15 cm in thickness marly limestone. The ferruginous layer contains a rich condensed fauna of ammonites, belemnites, gastropods, brachiopods, etc., proving its latest Early Valanginian-Late Valanginian age, as follows: *Kilialla* sp. (fragmentary individual of *K. pexiptycha* Uhlig group) proves the latest Valanginian age; *Paquiericeras* (*Julianites*) *mourrei* Vermeulen (here figured on the pl. II, p. 207, fig. 2a, 2b), *Subastieria balkanica* (Tzankov) (pl. II, fig. 3a, 3b), *S. inordinata* (Tzankov), and *Rodighieroites? lamberti* (Sayn) are restricted to the Verrucosum Zone; *Himantoceras cf. trinodosum* Thieuloy is the index species of the Trinodosum Zone; and *Sarasinella cf. sakalavensis* (Besairie), *Criosarasinella cf. furcillata* Thieuloy (pl. II, fig. 5) and *Rodighieroites cardulus* Company, characterize the latest Valanginian. The older position than the top of Valanginian age of this assemblage is also proved by the occurrence in the upper layer of the basal bed, of *Eleniceras transylvanicum* (Jekelius) (here, pl. II, fig. 6), a species characteristic of the Callidiscus Zone, according to THIEULOY (1977).

## 2. SYSTEMATIC PALEONTOLOGY

### Subfamily *Neocomitinae* Spath, 1924 Genus *Sabbaiceras* n. gen.

*Type species: Sabbaiceras stefanescui* n.gen., n. sp.; Late Valanginian, Romania Diagnosis. Typical *Neocomites*-like in youth, but coarser ribbed, with high-octagonal whorl-section and trituberculate primary ribs, beside a few single or divided intercalatories, and some short secondary ribs branching from the lateral tubercles, in mature stage. All the intercalatory and secondary ribs sharpen in small ventrolateral tubercles alongside a smooth ventral band. No constriction is obvious in any growth stage. Suture line is of *Neocomites neocomiensis* (d'Orbigny) type.

*Remarks:* the new genus proposed here is more or less similar by its ontogenetic evolution to some Tethyan and Boreal neocomitid genera, such as *Eleniceras*, *Varlheideites*, *Distoloceras* and *Rodighieroides*.

The Upper Valanginian-Lower Hauterivian genus *Eleniceras* (type species: *E. stevrecense* Breskovski, 1967, here figured on the pl. I, p. 205, fig.6) is very close to *Neocomites* in its young stage, and bears trituberculate ribs in mature stage, but the latter has deep and broad constrictions which are not present in *Sabbaiceras*.

The Late Valanginian Boreal genus *Varlheideites* (type species *V. peregrinus* Rawson & Kemper, 1978) is different from *Sabbaiceras* in having an *Eristavites*-like young stage, namely primary ribs which become progressively broader towards the ventrolateral margin.

The Early Hauterivian Boreal genus *Distoloceras* (type species: *Ammonites histrix* Phillips, 1829), even very similar by ontogenetic evolution to *Sabbaiceras*, suggesting a possible phylogenetic relationship in between, displays coarser ribbed inner whorls, the ribs starting in bunches of three (dominant) from larger than in true *Neocomites* periumbilical tubercles (see plate I, fig 1a and 5).

At the last, the new genus *Sabbaiceras* is somewhat comparable to *Rodighieroides* (type species: *R. cardulus* Company, 1987, here figured in pl. I, fig. 4), of which loose whorls, very short *Neocomites*-like stage and mature stage displaying trituberculate intercalatory ribs are very distinctive features.

*Sabbaiceras stefanescui* n. gen., n. sp.  
pl. I, figs. 1a-c; pl. II, fig. 1

*References:* *Neocomites beaumugnensis* Sayn, Company, 1987, p. 134, pl. 11, fig. 2-4, pl.19, fig.7.

*Holotypus:* the specimen figured on Pl. I, fig. 1 and Pl. II, fig. 1, n° 00634.

*Derivatio nominis:* in the memory of Sabba Ștefănescu, the first professor of paleontology at the University of Bucharest, between 1905-1929.

*Stratum typicum:* Late Valanginian (in a condensed bed below the beds with *Eleniceras transsylvanicum* (Jekelius)).

*Locus typicus:* the «Piatra Mare» quarry, SW of the Codlea Town, Inner Carpathian Bend, Romania.

*Material:* only the holotype, recorded in the basal ferruginous layer (a) of the Brasov Formation, preserved in the University of Bucharest repository, n° 00634.

*Description:* the holotype is a mature, but not gerontic individual (with constantly spaced last sutures). Its whorls, rounding a middle-sized umbilicus, are compressed, with high-oval in youth and high-octagonal whorl-section in maturity. The *Neocomites*-like ornamentation changes at a diameter of 30 mm, where the first small lateral tubercle appears, at 2/3 of the whorl-height. Then, the primary ribs strengthen progressively, as the lateral and outer tubercles do; in places, a secondary rib branches forward from the lateral tubercle. On the mature half of the last whorl, 1 or 2 intercalatory ribs rise from the umbilical shoulder and immediately below the middle of the sides, respectively, on every interspace between 2 primaries. All the secondary and intercalatory ribs

bear a minute ventrolateral tubercle alongside a smooth ventral band. There are 10 peri-umbilical primary ribs and 29 ribs, in all at the periphery, on the last half-whorl. Suture line is similar to that of *Neocomites neocomiensis* (d'Orbigny).

*Measurements:* Diameter = 45 mm, Umbilicus = 13.8 (0.30), Height = 19 (0.42), Width = 18.2 (0.43)

*Remarks:* *Sabbaiceras stefanescui* is very close to *S. beaumugnense* (Sayn) by its young ontogenetic stages (the *Neocomites*-like first one and a second, with bifurcate primary ribs from the lateral tubercle); but it differs in having stronger differentiated primary and intercalatory ribs, fewer sinuous and denser mature ornamentation. On this ground, the individuals described and figured by COMPANY (1987) as *Neocomites beaumugnensis* Sayn seem to belong to our species.

The mature stage of *S. stefanescui* is also very close to that of *Rodighieroites belimelensis* (Mandov), but these species are different in youth, as the genera *Sabbaiceras* and *Rodighieroites* are.

*Occurrence:* the holotype is tentatively assigned to the Late Valanginian (see chapter 1). The Spanish members of the species are Early to Late Valanginian in age (Verrucosum Zone).

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Plate I →

Comparison of the ornamentation of the genera *Sabbaiceras*, *Neocomites*, *Rodighieroites*, *Distoloceras* and *Eleniceras*.

All the specimens are figured in natural size.

Figures 1a-c.–*Sabbaiceras stefanescui* n. gen., n. sp., holotype.

Figures 2a,b.–*Sabbaiceras beaumugnense* (Sayn.), holotype

Figures 3a,b.–*Neocomites neocomiensis* (d'Orbigny), holotype.

Figure 4.–*Rodighieroites cardulus* Company, holotype.

Figure 5.–*Distoloceras histrix* (Phillips), holotype (after ROMAN 1938).

Figure 6.–*Eleniceras stevrecense* Breskovski, holotype.

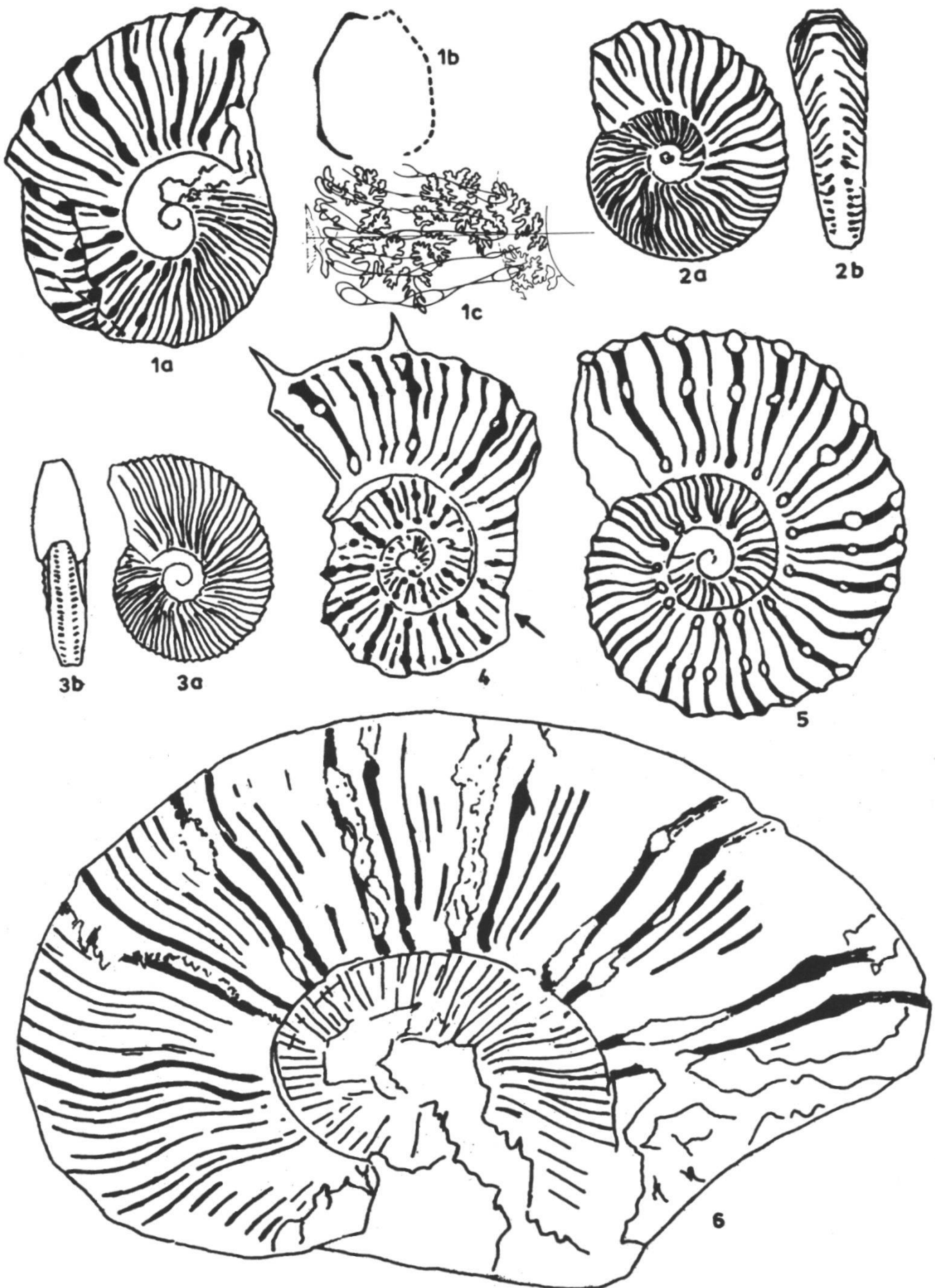


Plate II 

Characteristic ammonite species from the basal bed of the Brasov Formation in the «Piatra Mare» quarry, SW of the Codlea town.

All the specimens are figured in natural size.

Figure 1.—*Sabbaiceras stefanescui* n. gen., n. sp., holotype (University of Bucharest, Laboratory of Geology; coll. E. Grădinaru, n° 00634).

Figures 2a,b.—*Paquiericeras (Julianites) mourrei* Vermeulen (same repository n° 00618).

Figures 3a,b.—*Subastieria balkanica* (Tzankov), (same repository, n° 00621).

Figure 4.—*Himantoceras cf. trinodosum* Thieuloy (same repository, n° 00607).

Figure 5.—*Crisarasinella cf. furcillata* Thieuloy (same repository, n° 00632).

Figure 6.—*Eleniceras transsylvanicum* (Jekelius) (same repository, n° 00627).

