NEW GENERA AND SUBGENERA OF AMMONITES OF FAMILY BERRIASELLIDAE

T. Nikolov

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The investigation of an exceptionally rich ammonite collection collected by the author in recent years from the sediments of the Tithonian, Berriasian, and Valanginian of Northern Bulgaria, and the taxonomic revisions carried out in this connection of certain earlier determinations of ammonites from various sections of these levels in the Mediterranean region, served as the basis of defining a number of new genera and subgenera. The latter's basic characteristics do not make it possible to include them in the familiar ammonite taxones of the generic group. Their brief characterization is the subject of the present report.

Family BERRIASELLIDAE SPATH, 1922

Subfamily BERRIASELLINAE SPATH, 1922

Genus Berriasella Uhlig, 1905

Subgenus Tirnovella subg. nov.

Type-species. Berriasella alpillensis Mazenot, 1939 (pl. VI, fig. 22)* Berriasian, S. France.

Description. Compressed ammonites, with elliptically coiled and relatively narrow umbilicus. The whorls grow very rapidly in height. Rounded ventral region with a thin narrow band gradually disappearing with development. Involution about 1/3. The ribs are rather fine, prorsiradiate to slightly sinusoidal. They bifurcate between 1/2 and the outer 1/3 of the walls, ending in the ventral region. There are also simple and intercalated ribs which start together with the main ones from the rounded umbilical edge and contact them at various levels on the walls. Slight constrictions and individual moderately thickened ribs are to be seen. Upper Tithonian — Berriasian, Mediterranean region.

* The Figures refer to the type-specimens of the species.
Subgenus *Elenella* subgen. nov.

**Type-species.** *Berriasella calutrensis* Mazenot, 1939 (pl. VIII, fig. 1), Tithonian, S. France.

**Description.** Discoidal compressed ammonites, with rounded ventral region, moderately large and somewhat deep umbilicus. The whorls increase very rapidly in height. Involution 1/3. The siphonal groove in the young whorls gradually passes over into a smooth band. In the inner whorls Berriasella-like ornamentation. The ribs are fine, rectiradiate to slightly prosiradiate, starting in an isolated manner or in pairs from the umbilical edge. Part of the ribs bifurcate in the outer 1/3 of the walls, while the other part remain simple. With development, in the umbilical ridge appears a row of tubercles slightly elongated in a radial direction. The latter and the moderate smoothing of the ribs around the siphonal groove are the basic characteristics of this subgenus. Upper Tithonian — Berriasian, Mediterranean region.

Subgenus *Strambergella* subgen. nov.

**Type-species.** *Ammonites carpathicus* Zittel, 1868 (pl. XVIII, fig. 4), Upper Tithonian, Konikau, Germany.

**Description.** Compressed, medium-sized to large ammonites, with medium-sized and elliptically coiled umbilicus. Rounded ventral region, with siphonal groove. Involution about 1/3. Fine ribs, mostly bifurcating around the middle of the walls, a small part remaining simple. The fascicles of ribs and the siphonal groove are the basic characteristics of this subgenus. Upper Tithonian — Berriasian, Mediterranean region.

Subgenus *Fauriella* subgen. nov.

**Type-species.** *Berriasella gallica* Mazenot, 1939 (pl. XXIII, fig. 3), Berriasian, S. France.

**Description.** Compressed planulates, with elliptically coiled umbilicus. Rounded ventral region without siphonal band or groove. Involution about 1/4. Fine, sinusoidal to prosiradiate, bifurcating or simple ribs. All start from the umbilical edge and show a growing tendency to join into couples in a small umbilical tubercle. Fine rib-formation and the absence of siphonal band or groove are the basic characteristics of this subgenus. Upper Tithonian — Berriasian, Mediterranean region.

Genus *Jabronella* gen. nov.

**Type-species.** *Berriasella jabronensis* Mazenot, 1939 (pl. XVIII, fig. 1), Berriasian, S. France.

**Description.** Moderately compressed ammonites, with elliptical and medium-sized umbilicus. The umbilical edge is well defined and slightly rounded. The ventral region has a groove which gradually passes into a smooth band. Involution 1/3—1/6. The ornamentation changes rapidly in the course of development. In the inner whorls the ribs are strong, rectiradiate to slightly sinusoidal or moderately prosiradiate. Most of them are in fascicles. Part of them remain simple, the others bifurcate around the middle of the walls. Trifurcation is to be seen on the same level as well. Two rows of tubercles: umbilical and mediolateral. The ribs are interrupted in the ventral region and form a slight tubercular thickening. Upper Tithonian — Berriasian, Mediterranean region.

Genus *Mazenoticeras* gen. nov.

**Type-species.** *Berriasella broussei* Mazenot, 1939 (pl. XII, fig. 5), Berriasian, S. France.

**Description.** Moderately large to large compressed ammonites with rather open umbilicus. The whorls increase rather rapidly in height. The ventral region is with a groove gradually passing into a smooth strip which disappears with age. Involution 1/4—1/3. Strong ribs, mostly branching off, bifurcating or slightly prosiradiate. Two rows of tubercles: umbilical in the basis of the ribs and lateral at the spot of their branching off. There are main, secondary, and intercalated ribs. Upper Tithonian — Berriasian, Mediterranean region.

Genus *Boncheviceras* gen. nov.

**Type-species.** *Berriasella ardescensis* Mazenot, 1939 (pl. XXIII, fig. 6), Berriasian, S. France.

**Description.** Medium-sized to large ammonites, with moderately large umbilicus. Isodiametric section. Rounded ventral region, without groove or band. Strong ribs, dense in the beginning, then more sparse, prosiradiate to slightly sinusoidal, rapidly growing in thickness. All of them bifurcate at about the middle of the walls. Intercalated ribs are to be observed. Upper Tithonian — Berriasian, Mediterranean region.

Genus *Retowskiceras* gen. nov.

**Type-species.** *Perisphinctes Andrussowi* Retowski, 1893 (pl. II, fig. 10), Berriasian, USSR.

**Description.** Compressed ammonites of medium-sized umbilicus. Rounded ventral region, without groove or band. Strong ribs, dense in the beginning, then more sparse, prosiradiate to slightly sinusoidal, rapidly growing in thickness. All of them bifurcate at about the middle of the walls. Intercalated ribs are to be observed. Upper Tithonian — Berriasian, Mediterranean region.

Subfamily *NEOCOMITINAE* SPATH, 1924

Genus *Neocomites* Uhlig, 1905

Subgenus *Eristavites* subgen. nov.

**Type-species.** *Neocomites platycostatus* Sayn, 1907 (pl. III, 1—lectotype here designated), Valanginian, S. France.

**Description.** Moderately compressed, Neocomites-like forms, with relatively open umbilicus. In the beginning the ribs are finer, then they gra-
dually become more sparse and thicker. They start singly from the umbilical edge or in couples from a small umbilical tubercle. Very rarely there are separate ribs bifurcating in the outer 1/3 of the wall. Slight umbilical tubercles and a tendency toward bullate swellings of the ribs in the outer region. The ribs are interrupted in the venter. Valanginian, Mediterranean region

Genus **Busnardoités** gen. nov.

**Type-species.** *Ammonites desori* Pictet et Campiche, 1858—1860 (pl. 33, fig. 4), Valanginian, Switzerland.

**Description.** Moderately compressed ammonites with medium-sized umbilicus. Well defined row of strong umbilical tubercles which are the points of departure of fascicles of 2—3 ribs each. Some bifurcate at about the middle of the sides, while others remain simple. Many intercalated ribs. The absence of mediolateral tubercles and the rather compressed section distinguish it from *Sarasinella*. Valanginian, Mediterranean region.

Genus **Luppovella** gen. nov.

**Type-species.** *Thurmannia (Kilianella) superba* Sayn, 1907 (pl. IV, fig. 18 — lectotype here designated), Valanginian, S. France.

**Description.** Compressed ammonites with a rather open umbilicus. Well defined syphonal groove. Strong ribs: main and simple. The main ones bifurcate slightly above the middle of the walls. The simple ones are thinner. Two rows of strong tubercles: umbilical in the beginning of the main ribs, and lateral at the point of their bifurcation. Slight tubercular thickening of the ribs in the ventrolateral region. Valanginian, Mediterranean region.

Institute of Geology
Bulgarian Academy of Science

REFERENCES