Ber. Inst. Geol. Paläont. K.-F.-Univ. Graz	ISSN 1608-8166	Volume 7	Graz 2003

SILURIAN TABULATOIDEA AND HELIOLITOIDEA OF MONGOLIA

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12 localities of Silurian corals (Tabulatoidea and Heliolitiodea) were discovered and studied in Mongolia. B.B. Chemyshev (1937) first described Silurian corals from western Mongolia. After his description many other localities and sections of Silurian corals were discovered (Geology of MPR, 1973.v.l). O.B. Bondarenko and L.M. Ulitina (1976) published an article on Mongolian Paleozoic coral taxonomy, including 28 species and 10 genera of Tabulatoidea and 13 species and 9 genera of Heliolitoidea of the Silurian. T .T. Sharkova (1981) was the first to publish a monograph on Silurian and Devonian Tabulatoidea of Mongolia and described herein 22 Silurian species belonging to 10 genera from 5 localities of Mongolia. O.B..Bondarenko (1986) first described Silurian heliolitoidea from Mongolia. Starting in 1974 Ch. Minjin had continued collecting and studying Ordovician and Silurian Tabulatoidea and Heliolitoidea. This abstract summerizes research work on Silurian Tabulatoidea and Heliolitoidea of Monogolia.

Silurian Tabulatoidea in Mongolia are divided into 3 orders, 17 families, 23 genera and 151 species; Heliolitoidea are divided into 4 orders, 9 families, 25 genera and more than 35 species. Within Tabulatoidea the genus *Favosites* (40 species), *Paleofavosites* (28), *Mesofavosites* (21), *Syringopora* (12), *Halysites* (13), *Catenipora* (8), *Multisolenia* (6) have many species, contrary *Squameofavosites* (2), *Axiolites* (3), and *Hexisma* (2) are known by only a few numbers of species. *Taxopora*, *Striatopora*, *Riphaeolites*, *Barrondolites*, *Tuvaelites*, *Thecia*, *Agnopora*, *Syringoporinus*, *Shedohalysites* and *Syringolites* are only known by one species.

Heliolitoidea represented by order Coccoseridida-3 genus (*Sytovaelites*, *Eumiklites* and *Luvsanilites*); order Propora-1 genus (*Helenolites*), order Khangailitida-9 genus (*Mcleodea*, *Hemiplasma*, *Helioplasmolites*, *Barunolites*, *Minzhinites*, *Rozmanites*, *Farabites*, *Squameolites* and *Diploepora*); order Heliolitida-11 genus (*Cryptolites*, *Cromyolites*, *Paraheliolites*, *Lidaelites*, *Cosmolithus*, *Stelliporella*, *Podolites*, *Heliolites* s.l. *Bogimbailites*, *Sibiriolites* and *Pseudoplasmopora*).

These corals reached their greatest diversity during late Llandoverian to Wenlokian age. Tabulatoidea are predominated by cosmopolitan genera and species and contrary to it, within Heliolitoidea many new genera and species are possibly endemic for this region.

The oldest known Silurian Tabulatoidea in Mongolia are early-middle Llandoverian in age, while Heliolitoidea are known from the late Llandoverian. Both taxa were distributed throughout Wenlockian, Ludlovian and Pridolian ages.

The Tabulatoidea are biostratigraphically divided into 6 Assemblage Zones. They are listed below:

1. Assemblage Zone: *Paleofavosites alveolaeris-Mesofavosites teximurinus* (early-middle Llandoverian) includes 6 genera: *Paleofavosites* (15 species), *Favosites* (7), *Mesofavosites* (6), *Subalveolites* (2) and *Catenipora* (2)
2. Assemblage Zone *Multisolenia tortousa-Catenipora exilis* (late Llandloverian) consists of 11 genera: *Favosites* (11 genus), *Mesofavosites* (11), *Paleofavosites* (10), *Multisolenia* (4), *Halysites* (6), *Catenipora* (4), *Angopora* (2), *Subalveolites* (3), *Syringopora* (2), *Syringoporinus* (1) and *Thecia* (1).
3. Assemblage Zone: *Mesofavosites diramptus-Hexisma mongolica* (early Wenlocian) is represented by 11 genera: *Favosites* (10 species), *Mesofavosites* (13), *Paleofavosites* (9),

Halysites (7), *Syringopora* (5), *Hexisma* (2), *Multisolenia* (2), *Taxopora* (1), *Thecia* (1) and *Tuvaelites* (1).
4. Assemblage Zone: *Paleofavosites asper-Syringopora gorskyi* (Late Wenlockian) is characterized by 11 genera: *Favosites* (13 species), *Syringopora* (8), *Halysites* (8), *Paleofavosites* (4), *Mesofavosites* (5), *Multisolena* (1), *Tuvealites* (1), *Barrandeolites* (1), *Subalveolites* (1), *Thecia* (1) and *Metafavosites* gen. nom. nud.
5. Assemblage Zone: *Favosites rectus* (Ludlovian) including 4 genera: *Favosites* (5 species), *Syringopora* (4), *Halysites* (2), *Taxopora* (1).
6. Assemblage Zone *Favosites multiferporata-F.muratsiensis* (Pridolian), is composed of 7 genera: *Favosites* (13 species), *Axiolites* (2), *Squameofavosites* (2), *Adaverina* (2), *Rephaeolites* (1), *Striatopora* (1) and *Syringopora* (2).

For Heliolitoidea 6 coral assemblages have been established:
1. Late Llandoverian Assemblage with more than 5 species and 5 genera: *Pseudoplasmopora*, *Rozmanites*, *Minzhinites*, *Hemiplasmopora* and *Mcleodea*.
2. Early Wenlockian Assemblage: consists of 14 species and 9 genera such as *Diploepora*, *Helioplasmolites*, *Stellipora*, *Cromyolites*, *Cryptolites*, *Cosmolithus*, *Paraheliolites*, *Helenolites* and *Farabites*.
3. Late Wenlockian Assemblage: composed by 13 species and 10 genera: *Stelliporella*, *Sytovaelites*, *Diplopota*, *Cromyolites*, *Pseudoplasmopora*, *Podollites*, *Farabites*, *Helenolites*, *Paraheliolites* and probably *Helioplasmolites*.
4. Early Ludlovian Assemblage:characterized by 6 species and 6 genera: *Lidaelites*, *Luvsanites*, *Paraheliolites*, *Cromyolites*, *Eumiklites*, Heliolitidea gen indet.
5. Ludlovian-Predolian Assemblage: includes 4 species and 3 genus: *Siberiolites*, *Barunolites* and Heliolitoidea gen.indet.
6. Pridolian Assemblage: consists 6 species and 4 genera: *Bogimbailites*? *Squameolites*, *Heliolites* s.l. and Heliolitoidea gen indet.
The majority of Mongolian occurences are known from the southern part of the country in a carbonate facies forming bioherms and reef buildings during upper Llandoverian to Wenlockian. In this region Ludlowian to Pridolian Tabulatoidea and Heliolitoidea occur in open shelf carbonate facies. In west Mongolia these corals were collected from limestone lenses and beds within terrigenic sediments. The first Silurian corals, such as Tabulatoidea probably appeared in the early-middle Llandoverian. Heliolitoidea are known from the Llandoverian. Mongolian Tabulatoidea and Heliolitoidea reached their maximum diversity and distribution during the time span of upper Llandloverian through Wenlockian to lower Ludlowian. In upper Ludlowian-Pridolian times the diversity of these corals was moderate. From the period of global regression at the Ordovician-Silurian boundary corals are not known or very rare in Mongolia. During the Silurian period the territory of Mongolia was located in a tropic and subtropic belt on the northern hemisphere. Systematical composition of Tabulatoidea and Heliolitoidea suggests that these taxa are more similar to the coral assemblages known from Altai, Tuva and Kazakhstan regions.