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KONINCKOCARINIIDAE DOBROLYUBOVA 1962 (RUGOSE CORAL)

by

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Koninckocariniidae was established by T. A. Dobrolyubova 1962 in which two genera, *Koninckocarinia* Dobrolyubova 1937 and *Amygdalophylloides* Dobrolyubova and Kabakovich 1948 were included by her. According to our view, the latter genus of them, however, would be better placed in the family Geyerophyllidae Minato from the basis fully stated in the preceding paper (1975). Thus, *Koninckocarinia* may be a single recorded genus belonging to the family Koninckocariniidae at the present.

The diagnosis of the genus will be described below:

Genus *Koninckocarinia* Dobrolyubova 1937

Type species: *Koninckophyllum (Koninckocarinia) flexuosa* Dobrolyubova, 1937. The Podolskian of the Moscow basin.

Diagnosis: Corallum is solitary, cylindrical in form. Columella is rather thin throughout all the growth stage. Septa are of two orders; major ones of which are generally long enough reaching the axial area. Columella unites with cardinal septum. Lonsdaleoid dissepiments are rather well developed. Clinotabulae are present.

Remarks: The present genus closely resembles the corals belonging to Geyerophyllidae in many points, but is distinct with certainty from the genera of the family Geyerophyllidae in having simple axial structure in the mature stage, which is composed of mere thin prolongation of cardinal septum.

In contrast to the corals belonging to Geyerophyllidae, which have normally very large, swollen columella at least in the earlier phase of ontogeny, *Koninckocarinia* possesses only thin plate in its axial part of corallite through all growth stages.

Carinae are said to develop in certain part of septa of the type species, but this structure is not well discernible in most species of the present genus hitherto described.

Species included into this genus will be listed below:

Moscow basin: Upper Moscovian (Podolsk horizon)

Koninckocarinia flexuosa Dobrolyubova, 1937, p.52 (p.77 in English Summary), pl.11, figs.11-15.

Spain: Moscovian

Koninckocarinia concinna De Groot, 1963, p.93, pl.23, fig.1.

Iowa: Missourian, Upper Carboniferous

Koninckocarinia rude (White and St. John) = *Geyerophyllum rude* (White and St. John) of Cocke and Cocke, 1969, p.943, pl.114, figs.1-5.

China, Maping limestone: Upper Carboniferous

Koninckocarinia yishanensis Wu, 1962, p.330 (p.337 in English), pl.1, figs.10-11.

Now, there are two Japanese forms described by Igo 1958 under the generic name of *Koninckocarinia* (sic): *Koninckocarinia flexuosa ogurai* Igo and *Koninckocarinia flexuosa sugiyamai* Igo. They were found at the middle course of the Ichinotani Creek, Fukuji, Kamitakara village, Gifu prefecture, Central Japan. The horizon is the upper part of the Middle Ichinotani formation and probably the *Fusulina* (= *Beedeina*) zone.

These two forms may resemble the type species of the genus *Koninckocarinia* in many points. For instance, presence of clinotabulae is proved in *sugiyamai*, although it is unknown in *ogurai*. Carinae seem to be more pronounced on septa of *ogurai*. Further, an axial structure of both forms may be rather simply constructed.

However Igo's specimens cannot be solitary, but compound in form. A taxonomic importance for growth forms, we already discussed in the previous paper (Minato and Kato, 1965). Therefore a compound form of "*Koninckocarinia*", if present, must be generically separated from *Koninckocarinia*, which is originally defined as a solitary coral.

To the second, an axial structure of Igo's specimens must be taken into consideration. Although it is rather simply constructed, it is still somewhat complicate than the type species of *Koninckocarinia*. As it is clearly shown in Igo's paper, especially in figs.1g, 1f, 3, 4, 1j of page 213; figs.7, 8 of pl.15; figs.3b, c, 4 of pl.16, axial structure of *sugiyamai* is composed of not only distal end of cardinal septum, but also irregularly disposed lamellae and tabellae. Hence it may be eventually more advanced or complicate than the axial structure of the type species *Koninckocarinia*. As a matter of fact, in the type species of this genus, an axial structure is composed of only thin plate, which is a mere prolongation of cardinal septum.

To sum up above description two forms described by Igo under the name of *Koninckocarinia* may be specifically distinct with each other as Igo held a view, but both of them must be transferred from the genus *Koninckocarinia*, because of compound form of corallum, and a little advanced axial structure.

Thus, these two forms may need their own genus, although it may be not wise to propose a new generic name for them, until the time when Igo's coral would be examined more in detail based on more numerous material.

Under such circumstances, *Koninckocarinia* is now known to distribute in the Moscow basin, Northern Palencia (Spain), Iowa and South China; the age is ranging from the Late Moscovian to the Latest Carboniferous.

In all probability, Koninckocariniidae may have a common ancestor with Geyerophyllidae and Waagenophyllidae; Geyerophyllidae and Koninckocariniidae may form one stock, while Waagenophyllidae, the other. In the former, clinotabulae are not well developed, although its presence is far from doubtful, while in Waagenophyllidae clinotabulae are prominent. Branching of these families from the imaginary ancestor may have occurred some time during the early Upper Carboniferous (s.l.).

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