

CHONETES MESOLOBUS NORWOOD & PRATTEN, 1854
(BRACHIOPODA, ARTICULATA): DESIGNATION OF NEOTYPE AND
PROPOSED ADDITION TO THE OFFICIAL LIST. Z.N.(S.) 1635

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The purpose of this application is to ask the International Commission on Zoological Nomenclature to place on the Official List of Specific Names the name of the Carboniferous (Pennsylvanian) brachiopod *Mesolobus mesolobus* (Norwood & Pratten), 1854, as interpreted by a neotype specimen. This genus and species is an important element in the Lower and Middle Pennsylvanian faunas of North America and in other regions of the world and assumes stratigraphic importance in delineating group and subgroup divisions in North America. Since the original specimens have been found missing and a misinterpretation of external ornamentation by the original authors seems likely, it is necessary to select a neotype to stabilize this species to avoid further taxonomic confusion. The original designation of a type-species for the genus *Mesolobus* Dunbar & Condra (1932) was *Chonetes mesolobus* Norwood & Pratten (1854) by Dunbar & Condra (1932). This designation was based on the assumption that this species was lirate as described by Norwood & Pratten (1854). Numerous collections by several workers in the regions of Belleville, Illinois, and Charboniere, Missouri, from where Norwood and Pratten made their collections, has shown the non-existence of lirate or striate forms of *Mesolobus* in the Pennsylvanian strata exposed there.

2. Girty (1899, 1903, 1911, 1915) recognized *Chonetes mesolobus* as a striate form and in 1911 proposed two non-striate varieties *decipiens* and *euampygus* of this species. The description of the variety *decipiens* by Girty (1915) states, "This variety has the characteristic configuration of *C. mesolobus*, but the surface is entirely without radiating sculpture —".

3. In 1932 Dunbar & Condra erected the genus *Mesolobus* with *Chonetes mesolobus* Norwood & Pratten as type-species. They believed this species to have radial striation. In this publication a third non-striate variety, *lioderma*, was erected.

4. Weller & McGehee (1933) note that the portion of the Pennsylvanian section in the Belleville, Illinois, and Charboniere, Missouri, areas is above that portion of the Pennsylvanian System which contains the striated form of *Mesolobus* in Illinois and Missouri and conclude that a misinterpretation of surface sculpture was made by the original authors. Subsequent collecting by several other workers have substantiated this fact. Weller & McGehee (1933) proposed a new specific name for the striate form, *Mesolobus striatus*, and state that the variety *lioderma* Dunbar & Condra (1932) should serve as the type species of *Mesolobus mesolobus* s.s.

5. A careful comparison of the type specimens of Girty (1915), of Dunbar & Condra (1932), fifteen other collections from the Wewoka Formation of Oklahoma, eight collections from various horizons in the Pennsylvanian section exposed in and around Belleville, Illinois, and numerous Pennsylvanian collections from Missouri and Ohio with the illustrations of *Chonetes mesolobus* of

Norwood & Pratten (1854) indicates that the specimens described by Norwood & Pratten are the same as the variety *decipiens* Girty (1911, 1915) and not the strongly lobate and more transverse variety *lioderma* Dunbar & Condra (1932) as thought by Weller & McGehee (1933).

6. It is well known that specimens of the genus *Mesolobus* show a pseudo-striation or pseudoliration as the shell becomes exfoliated and the pseudo-punctae or internal endospine structures show through. Coating of the shells with magnesium oxide easily proves the presence or lack of the true ornamentation. However, without coating, the appearance is quite deceiving and can be easily misinterpreted.

7. The specimen selected to serve as the neotype is well preserved, uncrushed, with both valves present (pl. 2, figs. 1–3). There is a slight crack running through the beaks and cardinal process areas. The shell is moderately concavo-convex with the greatest width at the hinge-line where the extremities are slightly produced. The lateral margins are nearly parallel rounding smoothly into a slightly sinuate anterior margin. Seven spines border the hinge-line on each side of the pedicle beak, diverging from the hinge-line at an angle of 35°. The shell surfaces are marked only by growth lines which are stronger in development near the anterior margin. Spinule bases are not evident. The specimen is 11.2 mm wide, 7.4 mm long and 3.2 mm thick.

The pedicle valve has a median lobe, not strongly developed, bordered by lateral lobes of approximately the same height as the median lobe and which slope with a uniform convexity to the lateral margins. A small pseudo-deltidium is present.

The brachial valve is reflexed. A median sulcus bordered by a pair of low rounded ridges corresponds to the fold on the pedicle valve.

The neotype and 62 associated specimens were collected from the shale between the No. 6 caprock and limestone in the Solar Coal Co. strip pit. SW $\frac{1}{4}$ sec. 4, T. 2 S., R. 7 W., St. Clair County, Illinois, by L. G. Henbest in 1927. This locality will therefore become the type-locality. The specimens are in the repository of the Illinois State Geological Survey, Urbana, Illinois, IGS 34P. The neotype is no. IGS 34P-1 and associated specimens are nos. IGS 34P-2 to 34P-6.

8. In view of the facts set out in the preceding paragraphs, I now request the International Commission on Zoological Nomenclature:

(1) to place the following name on the Official List of Generic Names in Zoology: *Mesolobus* Dunbar & Condra, 1932 (gender: masculine) (type-species by original designation, *Chonetes mesolobus* Norwood & Pratten, 1854);

(2) to place the following name on the Official List of Specific Names in Zoology: *mesolobus* Norwood & Pratten, 1854, as published in the combination *Chonetes mesolobus* as defined by the neotype designated in para 7 above by R. D. Hoare, 1964 (type-species of *Mesolobus* Dunbar & Condra, 1932).



Figs. 1-3 Pedicle, anterior and brachial views of the specimen selected as the neotype of *Mesolobus mesolobus* Norwood & Pratten, x2.5.



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