**EARLY JURASSIC STYLOPHYLLIDS (SCLERACTINIA) FROM NORTHEASTERN SICILY**

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STYLOPHYLLIDS

Stylophyllids are a distinct group of Mesozoic scleractinians with septa composed of spines. By overall morphology, they intriguingly resemble some Paleozoic rugoseans.

![Stylophyllid septa are composed of spines](image1)

Though stylophyllid-kunlunopterid similarity may be another example of pervasive convergence among corals, no data on early skeletal ontogeny or septal insertion pattern have been published that would falsify the hypothesis on their evolutionary relationships.

![Stylophyllid septa are composed of spines](image2)

SICILIAN CORALS

Early Jurassic carbonate deposits yielding corals illustrated herein crop out in northeast Sicily. They are a part of the Longi Nappe sedimentary sequence which consists of the series of marine deposits dated from the Lower Jurassic to Eocene. Corals have been collected from the marine Sinemurian Black Limestones, 1 overlying Helvetian transgressive, coastal-clinal Longi Sandstones, Sinemurian age of Black Limestones is supported by occurrence of the ammonites Acocenapecten spectabilis and Epiplophorinae carinatus that indicate an interval between the Corconceous belemnoid and the Aneurites obesus Zones.

![Helmichycyclus helmae (Chapuis & Dewalogue, 1853)](image3)

Sicilian collection consists of ca. 50 specimens of discoidal Helmichycyclus helmae (Chapuis & Dewalogue, 1853), 1 tricoic Stylophilopsis sp. cf. S. rugosa, and 11 cylindrical Stylophilopsis sp. A.

Helmichycyclus helmae (Chapuis & Dewalogue, 1853)

![Stylophilopsis sp. A](image4)

As judged by juveniles of Helmichycyclus helmae (Chapuis & Dewalogue, 1853) attached to the substrates and earliest ontogenetic portions of the adult corallite, early septal ontogeny follows a cyclic pattern recognized in typical scleractinians (conversely, in other supposed Paleozoic corals described as pachycalices, earliest ontogeny closely resembles a rugosean serial pattern). The skeleton is completely recrystallized (it has entirely calcolitic mineralogy as proven by X-ray diffraction).

![Helmichycyclus helmae (Chapuis & Dewalogue, 1853)](image5)

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![Stylophyllid septa are composed of spines](image9)

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![Helmichycyclus helmae (Chapuis & Dewalogue, 1853)](image10)

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Helmichycyclus helmae (Chapuis & Dewalogue, 1853)

![Stylophilopsis sp. A](image11)

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![Stylophyllid septa are composed of spines](image14)

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![Helmichycyclus helmae (Chapuis & Dewalogue, 1853)](image15)

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![Stylophilopsis sp. A](image16)

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![Helmichycyclus helmae (Chapuis & Dewalogue, 1853)](image17)

**CONCLUSIONS**

Stylophyllids were much more microstructurally diversified than is traditionally proposed. Also new observations on well preserved Triassic stylophyllids indicate diverse microstructural patterns.

Morphological and microstructural plasticity of the post-Triassic stylophyllids contribute to the hypothesis of their evolutionary relationships with other scleractinians i.e., the corynasterids (Stolarski & Cieni, see next poster).

Early ontogeny of Jurassic stylophyllids, do not provide any crucial arguments that would support the hypothesis of their rugosean ancestry.

![Stylophilopsis sp. A](image18)

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![Stylophilopsis sp. A](image19)