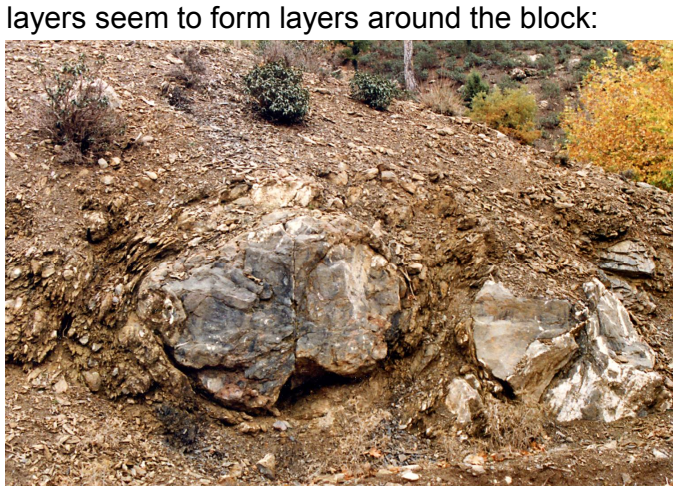
Cipits - Triassic Reef Boulders from Anatolia (Turkey)

Michael Link
GeoZentrum Nordbayern, Friedrich-Alexander Universität Erlangen-Nürnberg, Loewenichstr. 28, D-91054 Erlangen

Most Norian reef carbonates in Southwestern Turkey are represented by re-deposited reef talus. This reef boulders (cipits) occur as debris flows, sometimes as single boulders, but more often as reef boulder accumulations which probably represent submarine canyon fillings or local troughs. In these outcrops the boulder accumulations ("cipit fields") typically reach lateral dimensions between 3 and 20 m. The single boulders vary normally in size from 0.5 to 3 m. The smallest isolated found cipit measures 0.1 m in diameter, the biggest ones reach sizes up to 20 m. Cipit boulders usually have a round to subangular shape, so they can be displaced easily by recent erosion processes:

The best proof for an in situ position of cipits however is given by slumping-like structures in the surrounding shales. Because of unequal compaction of the massive reefal limestone and the softer siliciclastic sediments the adjacent shale layers seem to form layers around the block:



The reefal fauna in this cipit boulders can be dominated by sponges or corals. In some large blocks a succession is developed with usually a coral dominated facies at the base and a sponge dominated facies at the top of the boulder:

(Rahatalana Yay.: dendroid corals marked with yellow wax crayon)

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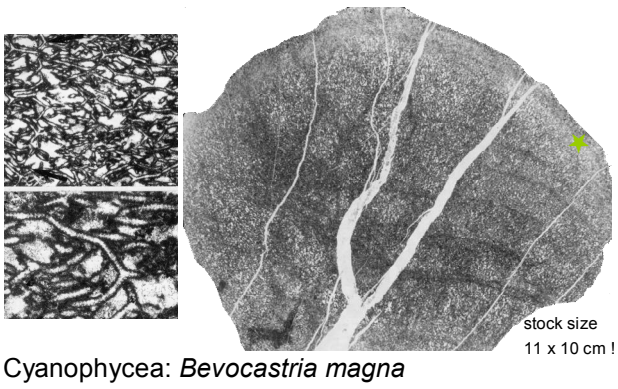
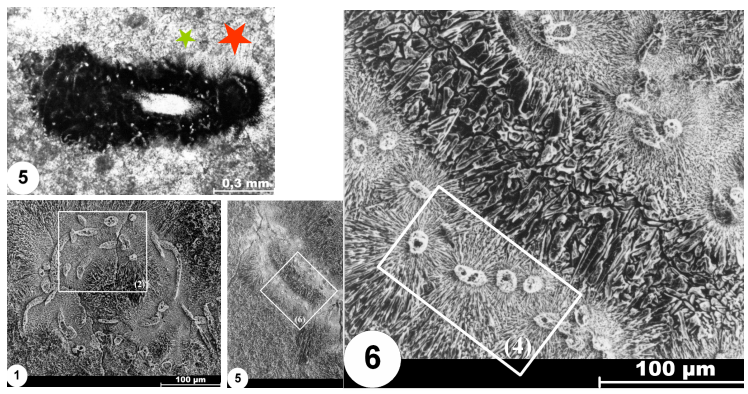
Flora & Fauna

Some examples for new species ✶ and new genera ✶ described from Norian cipit carbonates

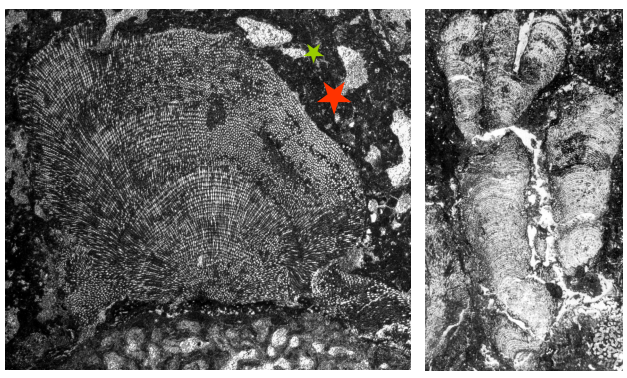


Cyanophycea: *Bevocastria magna*

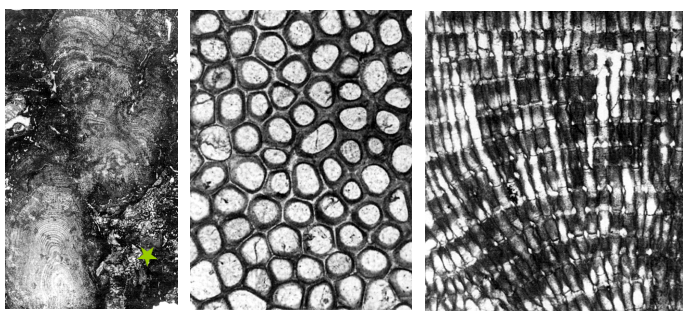


Cyanophycea (?):
Desmekalamos fuersichi [macrotubus composed of microtubi]

SEM & electron microprobe prove:
no bioerosion, but a constructive organism



Solenoporaceans - red algae: *Parachaetetes riedeli..*

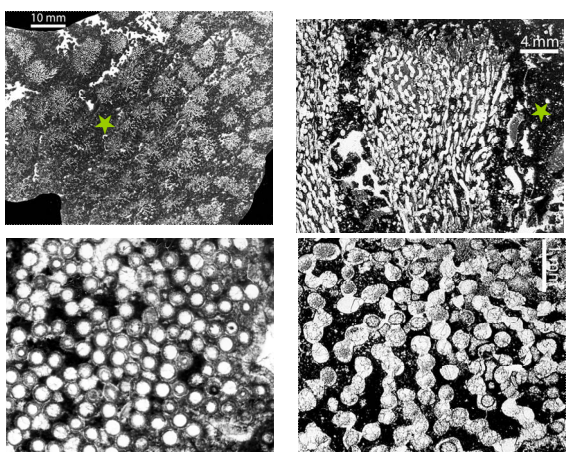


..and *Parachaetetes clatratus*

Sphinctozoa:
Discosiphonella minima

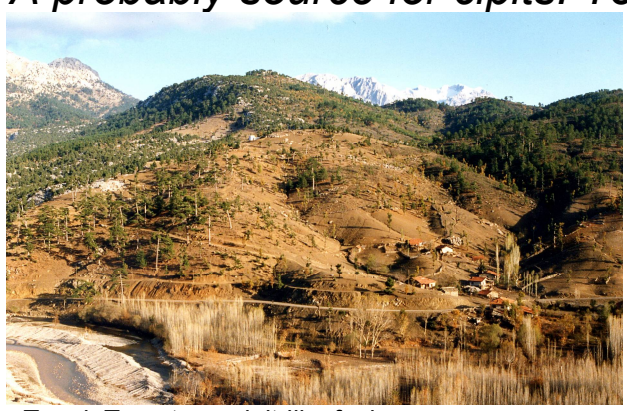
..*Calabrisiphonella sphaerica*

..*Amblysiphonella taurica*

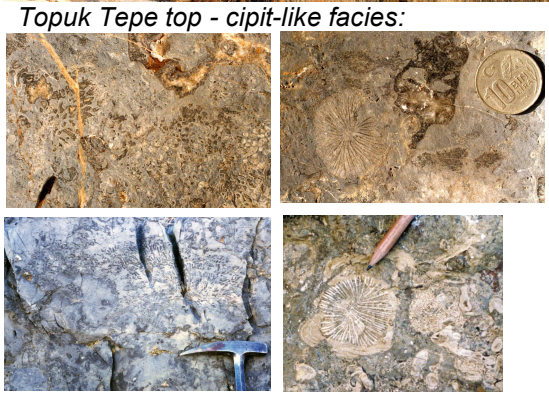


Serpulids: *Filograna taurica & Filograna serialis*

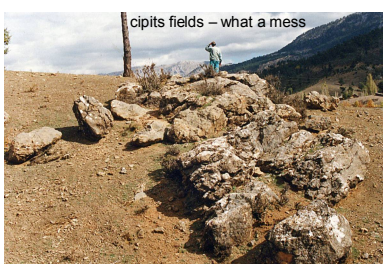
A probably source for cipits: Topuk Tepe, Dachstein-like carbonates



Topuk Tepe top - cipit-like facies:



compare: close-ups of genuine cipits from Rahatalana Yaylasi and Dereköy



References

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