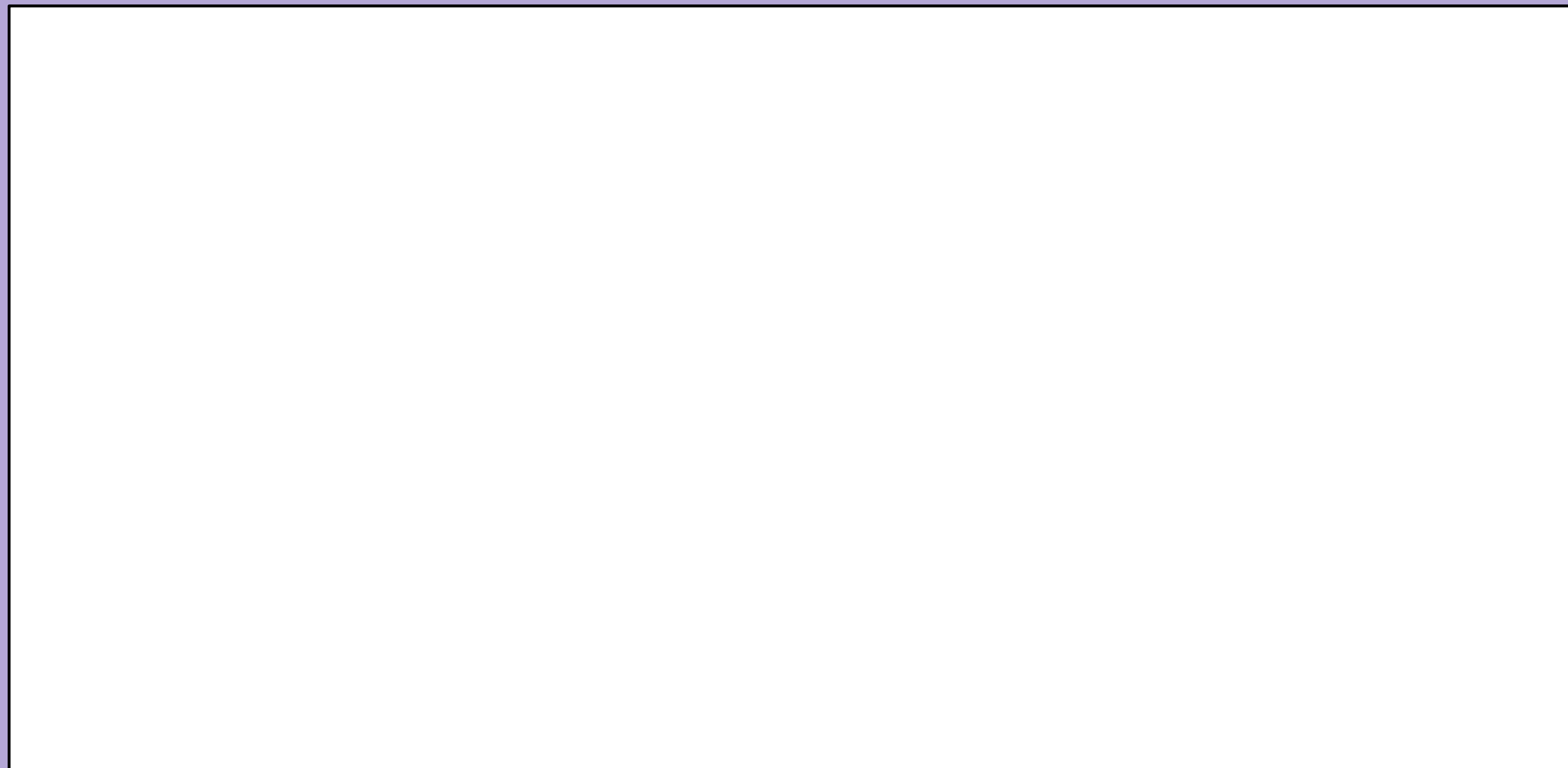


Cambrian Substrate Revolution/Agronomic Revolution

GEOL 204 The Fossil Record

Spring 2020 Section 0103

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C. A wide variety of trace fossils occur in direct association with the MISS at the top of sandstone beds typically covered by a thin veneer of siltstone. The trace fossils are restricted to bedding planes, typically cross-cut wrinkle marks, and do not produce significant disruption of the primary sedimentary fabric.

D. “The western Mediterranean region underwent a southward drift during Cambrian times, which drove a switch from subtropical carbonates to temperate siliciclastic substrates with short-term episodes of temperate carbonate productivity. As a result, microbial and shelly carbonates disappeared diachronously in a stepwise manner across the lower–middle Cambrian boundary interval.” This essentially means that because of changes in the water, organisms became more benthic.

B. This image shows the before and after effect of the Cambrian Substrate Revolution. Animals began to burrow vertically as a means of survival. Before the revolution, bottom-dwelling animals mainly grazed on the **microbial mats** that lined the surface, crawling above or burrowing just below them. Around the start of the Cambrian, organisms began to burrow vertically, forming a great diversity of different **fossilisable** burrow forms as they penetrated the sediment for protection or to feed.] These burrowing animals broke down the microbial mats, and thus allowed water and oxygen to penetrate a considerable distance below the surface. By burrowing vertically, animals had a way of feeding, and protecting themselves.

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