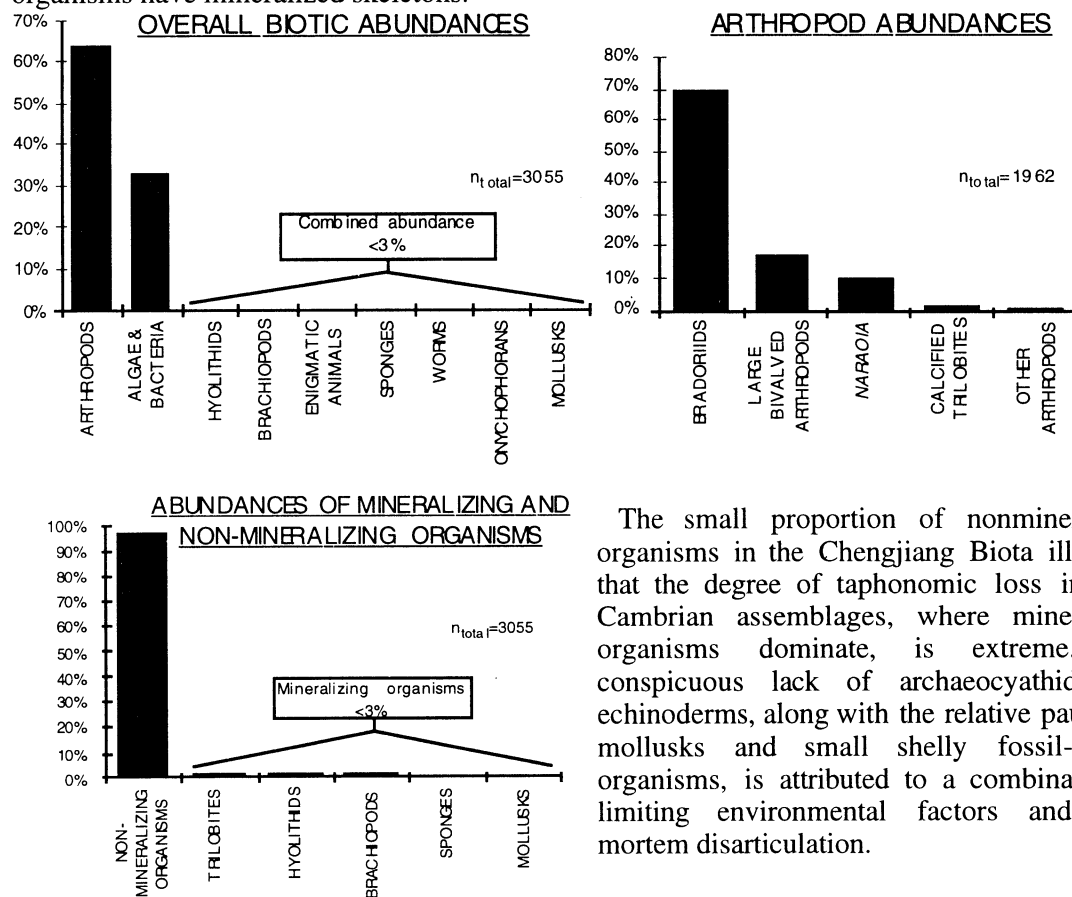


COMMUNITY COMPOSITION AND TAPHONOMIC OVERPRINT OF THE CHENGJIANG BIOTA (EARLY CAMBRIAN, CHINA)

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The Chengjiang Biota (Yunnan, China) is an Early Cambrian Burgess Shale-type deposit from Gondwana. A collection of >3000 specimens allows us to estimate the relative proportions of organisms preserved in the Chengjiang Lagerstätte, to interpret some aspects of the original community composition, and to interpret the taphonomic overprint. Relative abundances of all preserved organisms, arthropods, and organisms having mineralized or nonmineralized skeletons are shown in bar graphs (below). Algae and bacteria were counted as aggregations rather than individual specimens. As a whole, the biota is interpreted as parautochthonous. Some organisms were buried intact soon after death, but others are in advanced stages of disarticulation. Overall, arthropods dominate the sample. Arthropod remains may be higher than the number of once-living individuals because many remains are probably molts. Among arthropods, bradoriids dominate and are commonly in inferred coprolitic associations. Naraoiid trilobitomorphs and large bivalved arthropods together comprise about one-quarter of the preserved arthropods. Fewer than 3% of the sampled organisms have mineralized skeletons.



The small proportion of nonmineralizing organisms in the Chengjiang Biota illustrates that the degree of taphonomic loss in most Cambrian assemblages, where mineralizing organisms dominate, is extreme. The conspicuous lack of archaeocyathids and echinoderms, along with the relative paucity of mollusks and small shelly fossil-bearing organisms, is attributed to a combination of limiting environmental factors and post-mortem disarticulation.