



Sedimentary Environment Recorded by Microfossils from the Strata of the Taozhuang Neolithic Site in Xinghua, Jiangsu Province, China

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Abstract: Sediment samples were extracted from the 175–215 cm subsurface strata in a stratigraphic section of the Taozhuang Neolithic site in Xinghua, northern Jiangsu Province, China for quantitative analysis of foraminifera, ostracoda, and other microfossils. The results revealed the following. (1) The foraminifera and ostracoda oryctocoenosis in the Taozhuang Neolithic site are composed of shallow sea species, euryhaline species, brackish water species, and continental facies. (2) Among these 4 ecotypes, euryhaline species dominate in terms of the number of individuals, followed by shallow sea species. However, shallow sea species are the most abundant in terms of the number of species. (3) The planktonic foraminifera, benthic foraminifera, and ostracoda individuals of the shallow sea species are generally small, primarily composed of juvenile larvae or small adults. This indicates that these foraminifera are exotic members transported by tidal currents from the open sea. The foraminifera and ostracoda individuals from euryhaline and brackish water species are generally normal, mostly consisting of members either living locally or having been transported a short distance. (4) The sedimentary environment before 6.0 cal. ka BP (calendar kilo years before present) at the Taozhuang Neolithic site may have been the marginal bank of an estuary, or a tidal flat with lower salinity than that of normal seawater due to the influence of greatly fluctuating rivers, although there was an open connection with the shallow sea to the east. As a result, a large number of planktonic foraminifera, benthic foraminifera, and ostracoda of shallow sea species could have entered with the tidal currents and formed a mixed oryctocoenosis with the foraminifera and ostracoda of local euryhaline and brackish water species.

Key words: sedimentary environment, microfossil, Taozhuang Neolithic site, Jiangsu

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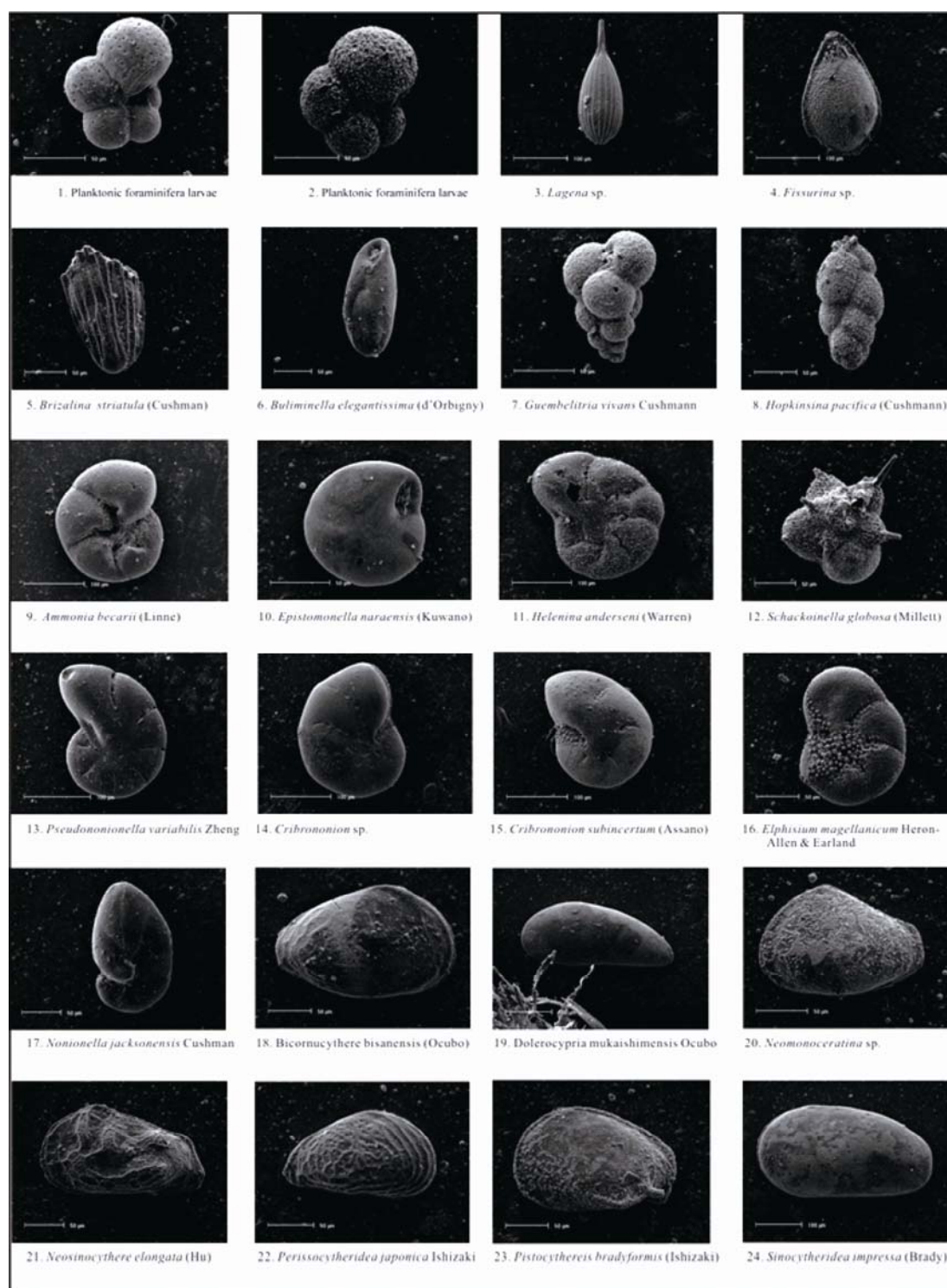


Fig. 1. Microfossils of planktonic foraminifera, benthic foraminifera and ostracoda oryctocoenosis identified from the strata of the Taozhuang Neolithic site in Xinghua, Jiangsu Province, China