EGU2020-10354
https://doi.org/10.5194/egusphere-egu2020-10354
EGU General Assembly 2020

Distribution of Salt-marsh foraminifera in Jiaozhou Bay: Implications for sea-level reconstructions

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Salt-marsh foraminifera are routinely used as sea-level indicators since their vertical distribution is closely linked with elevation relative to the tidal frame. In this study, 106 surface sediment samples were collected across separate intertidal transects established at five micro-tidal salt-marsh situated along the coasts of the Jiaozhou Bay, western margin of the Yellow Sea, dead and live foraminifera were identified respectively. The dead population contains the mixture of both subtidal species and salt-marsh species, and all the live assemblages consist of salt-marsh species which can provide exact information of salt-marsh foraminiferal distribution. The agglutinated species present in the five marshes including *Trochammina inflata*, *Miliammina fusca* and *Jadammina macrecens* are all cosmopolitan species, however, the calcareous species contain numbers of endemic species, overall, dominant calcareous species included *Cribrononion porisuturalis*, *Pseudononionella variabilis*, *Elphidiella kiangsuensis* and *Pseudogyroidina sinensis*. Vertical foraminifera zonations have been recognized in Daguhe and Hongshiya marsh samples with some species occupying strict latitude range, which primarily related to elevation, however, no obvious assemblages zonations can be recognized in Nvgukou, Shanjiaodi and Yanghe marsh. We hypothesize that salt-marsh foraminifera in Jiaozhou Bay possesses potential in paleoenvironmental studies as the key indicators for monitoring Holocene sea-level and environmental changes.