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Palaeoecology of free-lying domal bryozoan colonies from the Upper Eocene of southeastern USA

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Dome-shaped cheilostome bryozoan colonies, most commonly about 2 cm in diameter, are common in Upper Eocene offshore deposits of southeastern North Carolina, USA. This colony-form is anachronistic in the Eocene, being more typical of Palaeozoic bryozoans. There are three types of domes: individual colonies of *Parasmittina collum* (Canu and Bassler), individual colonies of *Osthimosia glomerata* (Gabb and Horn) and multispecies intergrowths. The bryozoans grew laterally beyond initial shell substrata to become free-lying. *P. collum* colonies grew by local eruptive budding, forming subcolonies that extended radially over the underlying layer of zooids. Undersides of subcolonies that extended beyond the original substratum have basal exterior walls that are more commonly fouled by encrusters than is the upper side of the colony. By contrast, lateral growth of *O. glomerata* colonies was limited by size of the original substratum, subcolonies were not developed, and colony growth occurred by prolific frontal budding over the entire upper surface of the colony. Undersides of colonies beyond the substratum consist of the lateral interior walls of marginal zooids and are much less commonly fouled than are undersurfaces of *P. collum*. The upper surfaces of multispecies domes by definition are always fouled, and their undersurfaces are also commonly fouled.

Key words: Bryozoa, colony morphology, fouling, Eocene, Castle Hayne Formation.

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