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Agglutinated foraminifera from inner neritic sand and mud facies of the Papuan Lagoon, New Guinea

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Fifty eight species of agglutinated foraminifera are recorded from 125 samples collected from the Papuan Lagoon, on southeast coast of New Guinea. The samples come from five different physiographic settings:

- back-reef flat of Motupore Island (medium-coarse sand; <1.5 m water depth);
- eastern channel between Motupore Island and mainland (medium-coarse sand; 10 m water depth);
- fore-reef slope of the fringing reef along the western side of Motupore Island (sand to mud downslope; 10-20 m);
- lagoon basin to the north and west of Motupore Island (mud; 15-38 m);
- and the northwest slope of Horseshoe Reef which forms part of the Papuan Lagoon (medium-coarse sand; 16-53 m).

Agglutinated taxa comprise only a small percentage of the fauna, rarely making up more than 1% of the total assemblage. Only on the northwest slope of Horseshoe Reef does the relative abundance rise in excess of this, reaching values of up to 17%. This overall low level of agglutinated foraminifer abundance is typical of tropical foraminiferal faunas, which are commonly dominated by calcareous taxa.

With one exception, all recovered taxa are calcareous-cemented. The greatest diversity of agglutinated taxa is concentrated in the lagoon basin to the north and west of Motupore Island, and on the northwest slope of Horseshoe reef. No-one species is dominant, although taxa belonging to the Textulariidae are well represented. The lowest diversities are recorded at samples sites on the back-reef flat of Motupore Island.

The distribution of more common species is examined and links between species distribution and the bathymetry and mud content of the sediment at the sample sites is explored. Taxonomy of recovered taxa is discussed and, if necessary, classification is revised in line with the latest classification of the group. This study compliments previous studies which documented miliolid and buliminid foraminiferal taxa respectively from the same area.