

2. SAMPLING LOCATIONS

Fifty-three hydrographic stations (SHL02-SHL54) were occupied within the study area between 5 and 13 February 1990 (figure 1). Two additional stations (SHL01, SHL55) were occupied in the Great Barrier Reef lagoon between 14 and 15°S while the ship was in transit to and from the study area. The cruise track was laid out to cover inshore, outer-shelf and Coral Sea waters within and seaward of the three major coastal embayments in the latitude band sampled; Lloyd Bay, Temple Bay and Shelburne Bay.

A more extensive grid of stations (SHL46-SHL54) was sampled within Temple Bay on a single day (figure 2). Inshore stations in Lloyd and Shelburne Bays (stations 6, 7, 8, 33, 34, 35, 36) are used for comparison to see whether gross between-bay differences might exist. No attempt was made to sample the three bays in a statistically rigorous fashion as no information is currently available regarding oceanographic differences between the bays and water residence times within each of the bays. In the absence of such information, the interpretations of more detailed water sampling designs would be unwarranted.

A series of closely spaced stations (16-23) were occupied both inside and outside of the outer barrier reefs in the vicinity of Mantis Reef (12° 20'S), along with three 'oceanic' control stations (24-26) to assess whether nutrient enrichment of the reef-ocean boundary zone was associated with mixing through reef passes. In all, twelve stations were occupied seaward of the reef.

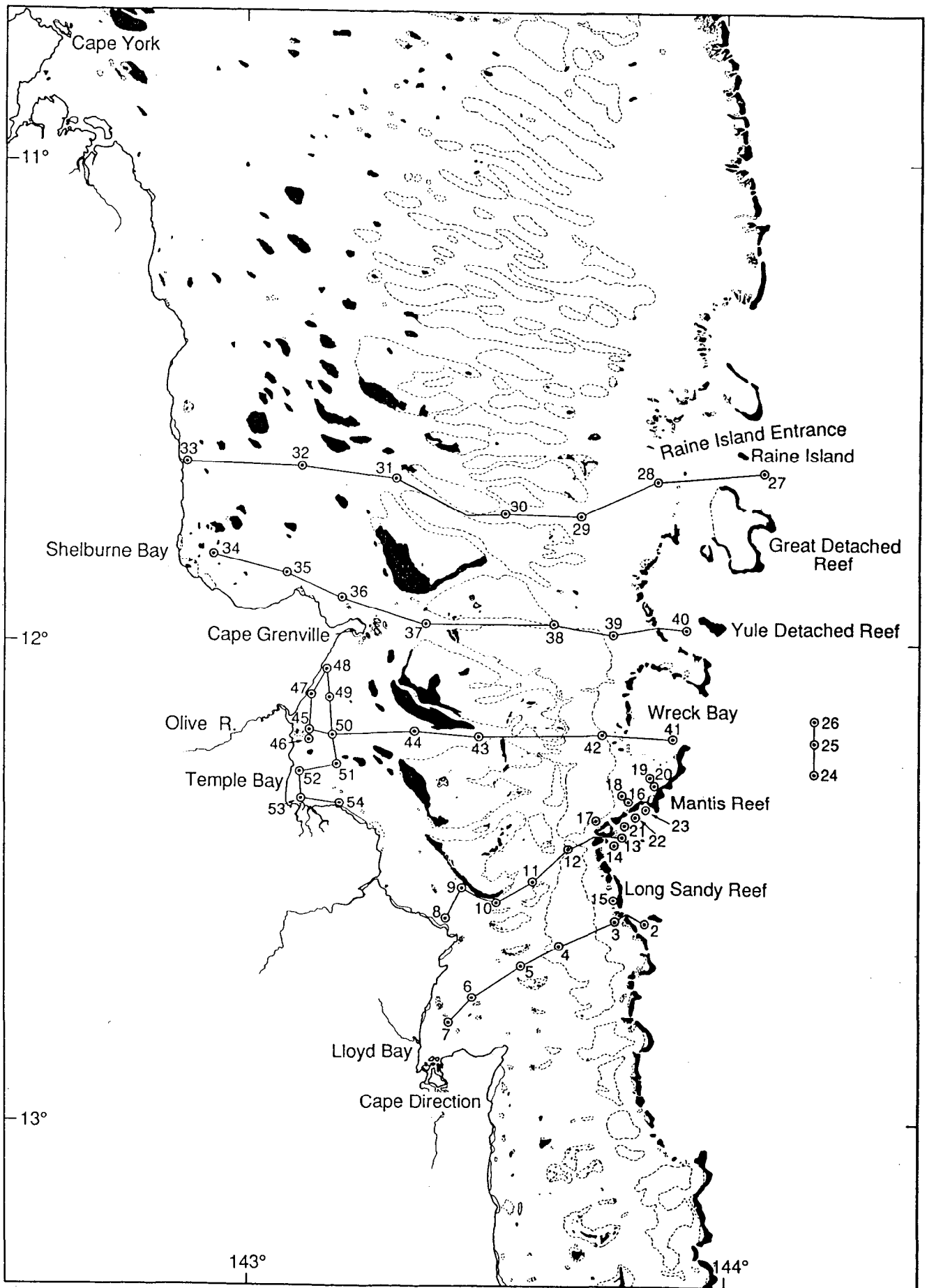


Figure 1. Hydrographic station locations in the far northern Great Barrier Reef

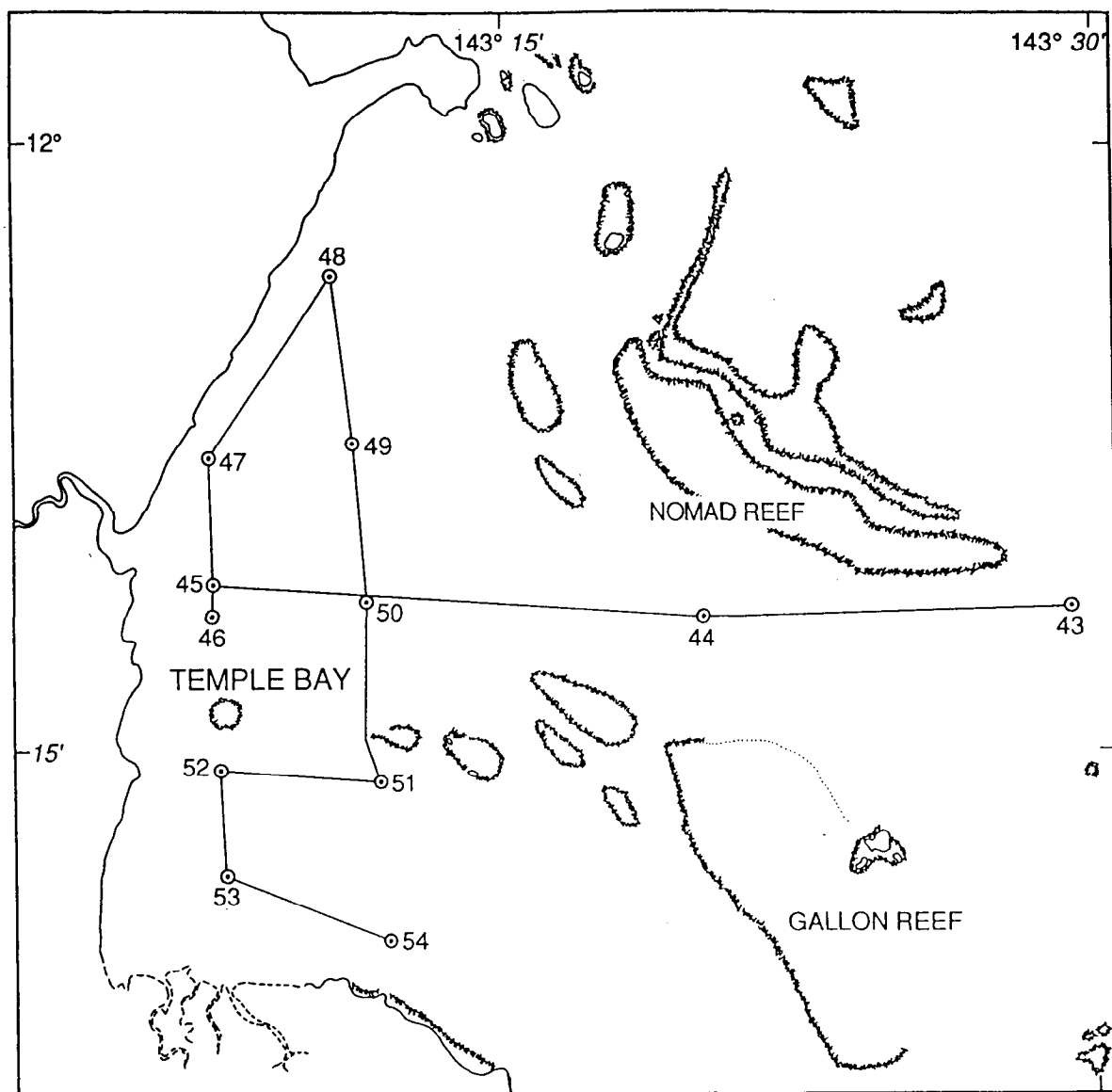


Figure 2. Hydrographic station locations in Temple Bay