THE PRODUCTION OF MICROCOPEPODS IN
KANEHOE BAY, OAHU, HAWAII

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Paracalanus sp. nov., Oithona nana Giesbrecht and O. simplex Farran were found to be the most abundant microcopepods during the year in south Kaneohe Bay. Total microcopepod densities ranged from 220,000/m$^3$ during the warmer months to 16,000/m$^3$ during the colder months. The populations of these three species tended to fluctuate concurrently even while showing wide temporal variability over the study period.

Production of Paracalanus was measured as the rate that biomass is added to the population (growth) in terms of dry weight, carbon and nitrogen. Oithona species production was determined by multiplying its estimated biomass by the respective Paracalanus production/biomass (P/B) ratio.

Growth of Paracalanus from nauplius stage I to adult required 7 days in containers of Kaneohe Bay water incubated in situ. This growth rate gives a daily summer production of all three species as 181.83 mg dry weight/m², 61.27 mg C/m² and 14.63 mg N/m². Paracalanus production was 64, 65, and 69% of these values, respectively. These production estimates are somewhat conservative since only the upper 80% of the 14 m water column was sampled.

About half of the planktonic primary production in south Kaneohe Bay was consumed by Paracalanus, O. nana and O. simplex during the summer months.