



COASTAL PHOTOGRAPH by Robert Brander

Andy Short, Director of the Coastal Studies Unit, University of Sydney, prepares for a rip float at Muriwai Beach, New Zealand, on 30 Nov. 1997. The rip float method involves tracking the rip floater with two theodolites and recording angles at set time intervals. This method provides lagrangian estimates of surface rip flow velocity as well as the trajectory of the rip flow. Muriwai Beach has an extremely high-energy surf zone with breaking wave heights typically between 2–3 m. The rip current monitored during this study was characterized by a 400 m long feeder channel and a 150 m wide rip-neck. On this float, Andy traveled at a mean velocity of  $0.7 \text{ ms}^{-1}$  over a cumulative distance of 650 m out to the rip-head. Andy's velocity peaked in the vicinity of the rip-neck at  $1.2 \text{ ms}^{-1}$ . (Photo: R. Brander.)



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Three low-energy rip currents are evident from simultaneous dye releases made at Palm Beach, NSW, Australia in May, 1994. The dye has been digitally enhanced for photoreproductive purposes and clearly shows the confined rip flow trajectory in the channels between pronounced transverse bars. Measurements of rip flow and water depth were made by ducted flow meters and pressure transducers mounted on instrument pods deployed in each rip-neck. Despite breaking wave heights of less than 0.5 m, the mean flow velocity of these rips, measured during 34 minute data runs, attained maximums on the order of  $0.6 \text{ ms}^{-1}$  at low tide. These rips existed during an extended period of calm conditions during a period of post-storm beach accretion and maintained their approximate configuration for several weeks. (Photo: R. Brander.)