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Abstract box:

PRESENCE OF REPRODUCTIVE STRUCTURES IN DETACHED MACROALGAE: *MACROCYSTIS* SPP. FLOATING ALONG THE PACIFIC COAST OF CHILE

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Many species of macroalgae continue to live for extended time periods after detachment from the primary substratum. Detached macroalgae may also reproduce and release spores, yet very little is known about this process. Here, we describe the reproductive status of floating plants of giant kelp *Macrocystis* spp. along the Pacific coast of Chile. Floating kelp were collected at seven sites (22-50°S) during austral summer (January - March 2002), and we evaluated the proportion of reproductive plants (n = 78 kelp samples). Twelve (15.4%) of these samples presented sporophylls, indicating reproductive effort (maintenance or production of sporophylls) after detachment. Algae that had been afloat for long time periods (indicated by the large size of stalked barnacles) were also found to contain reproductive blades. Experiments showed that some of these floating algae also released viable zoospores. A literature revision indicated that some macroalgal species may liberate spores while floating. This appears particular common in algae from the families Sargassaceae, Lessoniaceae and possibly Fucaceae. Observational reports indicate that some macroalgal species are fertile and probably release spores "en route", i.e. while floating or drifting at the mercy of ocean currents. Since dispersal distances of spores are limited, en route release of spores from floating plants may be an important dispersal mechanism for floating macroalgae.