Abstract

We performed fertilization experiments with Acropora digitifera, which is one of the dominant scleractinian corals in the Ryukyu Archipelago, Japan, to determine optimal conditions for in vitro manipulations. Our result suggests that conspecific fertilization is essentially complete within 30 min under the experimental conditions used in usual fertilization experiments in corals. Previous in vitro experiments (1 × 105–106 sperm/ml, 4–8 h) are likely to have overestimated the efficiency of fertilization of Acropora spp. in the field. Therefore, we suggest that incubation periods shorter than those used to date (i.e. complete exclusion of sperm 1 h after their addition) would be more appropriate for the estimation of fertilization rates in corals.