Abstract

This study examines scleractinian zooxanthellate coral recruitment patterns in the Florida Keys to determine if differences in density or community composition exist between regions. From July to September 2002, nine patch reefs, three in each of the upper, middle and lower Keys, were surveyed for coral recruits (colonies <5 cm in diameter) using randomly placed quadrats and transects. Coral recruits were enumerated, measured, and identified to genus. Fourteen genera of corals were observed across all sites and ranged from five to 13 per site. Densities ranged from 6.29 ± 1.92 (mean ± SE) to 39.08 ± 4.53 recruits m-2, and there were significant site and regional differences in recruit densities. The density of recruits in the upper Keys was significantly lower than in the middle and lower Keys. In addition, the upper Keys were less diverse and had a different recruit size-frequency distribution. The majority of recruits were non-massive scleractinian species that contribute relatively little to overall reef-building processes, a finding that is similar to previous studies. Fewer recruits of massive species were found in the upper Keys compared to the middle and lower Keys. The recruitment patterns of the reefs in the upper Keys could potentially hinder their ability to recover from stress and disturbances.

Keywords

Coral, recruitment, Florida Keys, community composition, scleractinians.