

Stocking effectiveness of coral farms on natural population in Okinawa

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Both commercial and governmental projects for coral transplantation have been conducted in Okinawa. The local fishermen of the Onna Village Fisheries Cooperative, Okinawa, also started coral farming after a mass bleaching event in 1998. However, there have been concerns about a possible loss of genetic diversity within nurseries. Therefore, we investigated the population genetic structure of one of the focal species, *Acropora tenuis*, through the Nansei Islands. Then, we compared the genetic diversity of two farms (Maeganeku, Onna) in Onna Village and wild corals. Farmed corals have a similar level of genetic diversity as wild corals, and they comprise the same genetic population that occupies the surrounding natural area. Moreover, massive and synchronized spawning has been reported in nurseries. In this presentation, we will present the genetic impacts of nurseries on adjacent wild coral assemblages in Onna. To estimate kinship, we obtained data of Single nucleotide polymorphisms (SNPs) for *A. tenuis* using a comparatively economical technique, Multiplexed ISSR Genotyping by sequencing (MIG-seq). Understanding the impacts of coral nurseries on wild populations is becoming more important since active coral restoration is being undertaken worldwide.

