

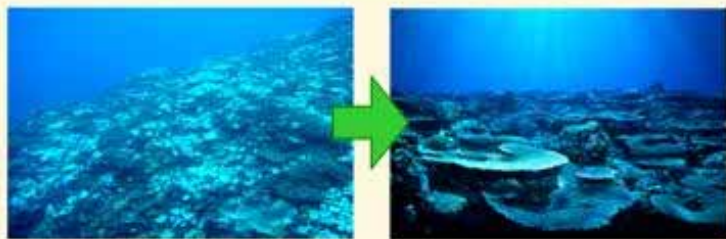
# The World's First Successful Techniques!

From Egg to Colony : Mass Culture of Reef Building Corals in Open Water

## Akajima Marine Science Laboratory

179 Aka Zamami-sen, Shimajiri-gun, Okinawa, Japan 901-3311  
 Email: amsl@ryukyu.ne.jp URL: www.amsl.or.jp

### Target of our Coral Culture



### Overcome Five Hurdles

#### 1. Prediction of Spawning

Many *Acropora* corals spawn around full-moon night in May or June in Okinawa.



A Bundle of Eggs and Sperms



#### 2. Collection of or Fertilization in the Lab

The next morning of spawning, numerous fertilized eggs and embryos aggregate and drift in a slick on the sea surface. They can be skimmed from the surface for culture. The eggs can also be fertilized in the lab.



Embryos



#### 3. Mass Culture of Planula Larvae

Planula larvae need 4 to 5 days to obtain settlement ability. Over one million larvae can be reared using floating ponds.



Planula Larvae



#### 4. Introduction of Larvae to Substrate

Planula larvae may well settle on to well-prepared artificial substrate with the density more than 2 inds per cm<sup>2</sup>.

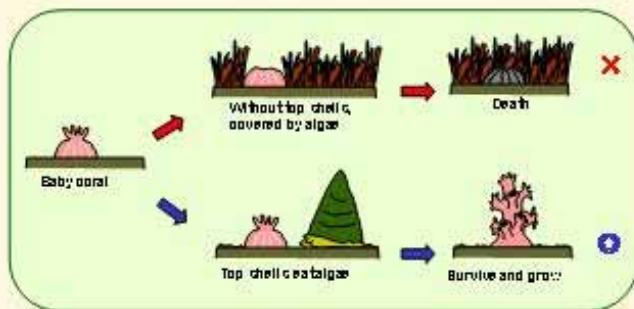


Polyp (Coral Baby)



#### 5. Cultivation of Polyps (Baby Corals) with Top-Shell Snails

The baby corals are kept for rearing in floating cages with top-shell snails that are known as effective grazer.



\*1

1.5 years old colonies (5-10mm) on substrates



### Transplantation

The colonies are planted on degraded reef.



\*2

