

POST-LARVAL CAPTURE AND CULTURE (PCC) TECHNOLOGY: A SUSTAINABLE ALTERNATIVE FOR THE MARINE AQUARIUM TRADE AND THE CONSERVATION OF BIODIVERSITY AT REUNION ISLAND (SW INDIAN OCEAN)

S. VERMOND^{1,2,a}, J-N. FABRE^{3,b}, G. LECAILLON^{4,c}, P. BOSCH^{1,d} & P. CHABANET^{2,e}

a- sophievermond@hotmail.com

b- jeannoelfabre@hemispheresud.eu

c- ecocean_label@yahoo.com

d- bosc.arda@wanadoo.fr

e- pascale.chabanet@ird.fr

1- ARDA, Z.I. Les sables, BP 16, 97427 Etang-Salé, La Réunion (France)

2 - IRD, BP 172, 97492 Ste Clotilde cedex, La Réunion (France)

3 - SCEA Hemisphere sud, Magasin 10, Port Ouest, 97420 Le Port, La Réunion (France)

4 - ECOCEAN, Immeuble Emeline 1, 1 avenue Saint Sauveur, 34980 St Clément de rivièrè

Between 1.5 and 2 million people worldwide are believed to keep marine aquaria. The trade which supplies this hobby is a global multi-million dollar industry. Nearly all tropical marine aquarium fish and invertebrates in trade are wild adults taken directly from coral reefs and adjacent habitats mainly in developing countries. At the same time, coral reefs worldwide are threatened and the marine aquarium trade has been blamed for being one of the pressures faced by reefs. Such a situation requires measures aimed at the preservation of the biodiversity and the Post-larval Capture and Culture (PCC) could be a solution as this technology reconciles the objectives of conservation and development of coral ecosystems.

Extremely high natural mortality (> 95%) of reef fishes occurs during the colonization from the planktonic larval phase to their juvenile benthic phase. As the PCC collects the post-larvae prior to the high natural mortality, this technique has a minimal impact on the overall biomass of plankton through collection. The post-larvae captured are then reared in an inland farm. After an overall period of 3 months, eco-friendly tank-raised marine fish are obtained and can supply the ornamental aquarium trade.

In Reunion Island, a first experimentation has been conducted for 15 months. Almost 200 different species were caught belonging to 43 fish families. An overall 75% of the caught post-larvae were interesting for the marine aquarium trade (Pomacentridae, Acanthuridae, Chaetodontidae...). More than 2000 fish were successfully exported to Europe.

This first successful experiment of PCC at Reunion Island opens perspectives for the future as the post-larvae caught could be also reared as food-fish and/or for restocking artificial reefs developed actually at Reunion Island.

