

12 STEPS TO MORE GIANT CLAMS

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TO MORE GIANT CLAMS**



**COMMUNITY GIANT CLAM
SANCTUARIES WORK**

In 1988, to improve the stocks of giant clams, the people of Vava'u, in the Kingdom of Tonga, set up The Falevai Community Giant Clam Sanctuary. It was located in the central island group of Vava'u and had 70 Smooth Giant Clams (*Tokanoa molemole*) and 70 Rough Giant Clams (*Matahele*).

Eighteen months later, large numbers of young Giant Clams were found on the reefs. In 1990, even more young clams were found on reefs of the Central Island Group.

His Royal Majesty King Taufa'ahau Tupou IV presented the village of Falevai with an award for the Best Community Giant Clam Sanctuary during the September 1990 Vava'u Agriculture Show.

Encouraged by Falevai's success, ten other Vava'u villages requested assistance from the Fisheries Department. They wanted to set up their own Community Giant Clam Sanctuaries. In 1990, three more villages joined Falevai in this new approach to improving the production of the sea.

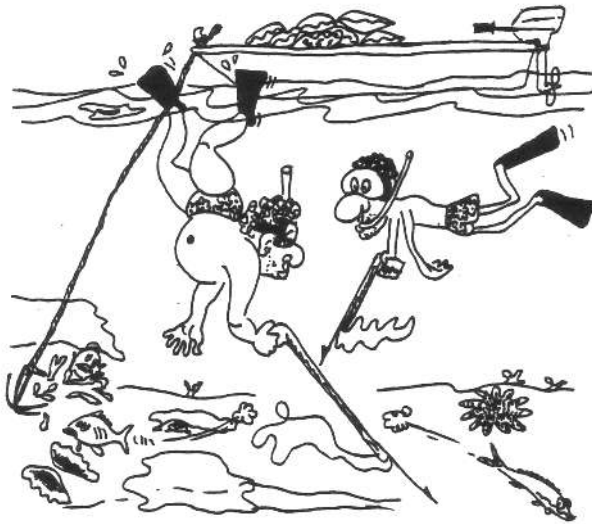


In the old days, people lived in harmony with the sea. There were plenty of large giant clams to make young ones.



WHY COMMUNITY GIANT CLAM SANCTUARIES ARE NEEDED

Giant Clams must have somewhere in shallow water where a reasonably large group of adult clams live close enough together so they can reproduce. In recent years, fishermen have taken so many large clams from the shallow water there are not enough left to reproduce.



Today, divers have taken too many of the large giant clams. There are not enough left to make young.

GIANT CLAM SANCTUARIES REPLACE THE NATURAL BREEDING STOCK



A Community Giant Clam Sanctuary is a sacred place where the Giant Clams live unharmed to reproduce and supply the reefs with young.

Giant Clams in the Sanctuary belong to God. Nobody can harm them or take them. People can easily protect the Giant Clams in a Sanctuary but nobody can protect Giant Clams scattered out on the reefs where everyone fishes. Without Giant Clam Sanctuaries, the species might die out from overfishing.

Giant Clams live a long time, perhaps more than 80 years. Once they reach adult size only people harm them. If people leave them alone, the Giant Clams in the sanctuary will serve the 'community for many years.

By placing the Giant Clams together in shallow water, they are much more' fertile than clams widely scattered in the wild.

Fertilized eggs become small swimming larvae in about 48 hours. These swim four to five days before they settle down onto the reefs. When they find a good place, they attach permanently to the coral rock. They grow about two inches per year.



STARTING A NEW GIANT CLAM SANCTUARY



1. Hold a Town Meeting with Representatives from the Ministry of Fisheries.

Before the project begins, everyone in the village must truly understand the project and agree to do it.



2. Elect a Sanctuary Supervisor and two assistants

Elect a voluntary overseer and two assistants to coordinate supervision and maintenance of the program.



3. Select a Place for the Sanctuary and Register it with the Ministry of Fisheries.

The best site for a Giant Clam Sanctuary is:

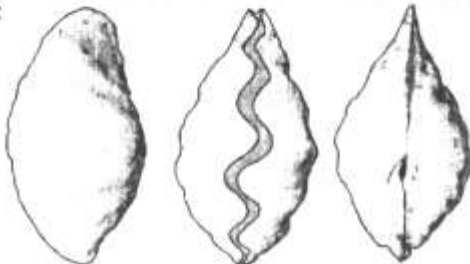
- Easy to see from the village.
- Where boats do not anchor.
- Far enough away to discourage irresponsible people.
- In clear, clean water.
- Sheltered from big waves.
- With good tidal flushing.
- Upcurrent of the reefs or centrally located so currents do not wash the young out to sea.
- Two to 15 meters deep.
- Where the bottom is hard coral or sand and rubble.



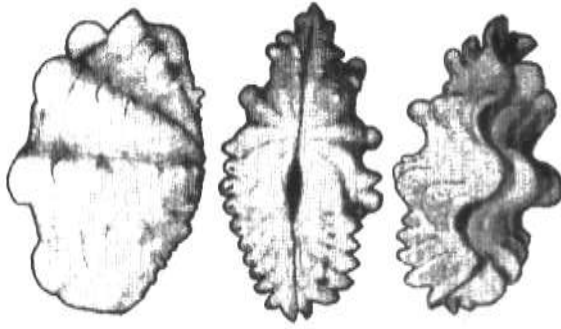
4. Gather the clams

There are four different kinds of Giant Clams in

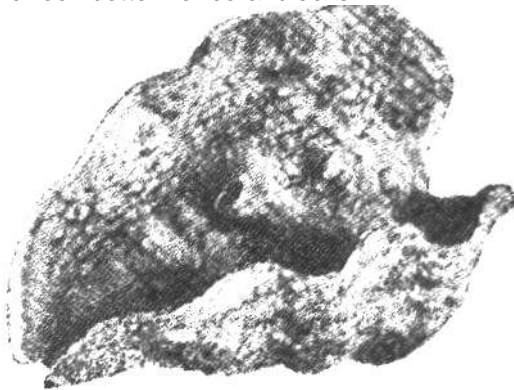
Tonga:



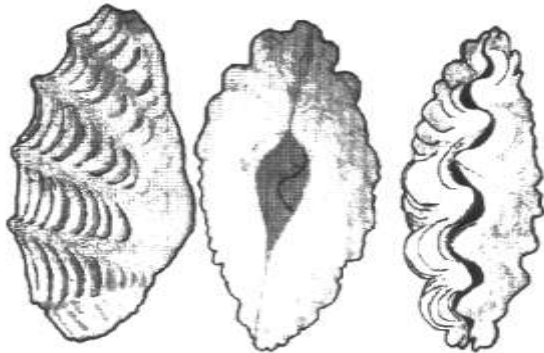
Tridacna derass, the Smooth Giant Clam, *Tokanoa molemole* is best for the Giant Clam brood stock in most reef areas. Large adults can be placed on hard sand and rubble near live coral.



Tridacna sguamosa the Rough Giant Clam, Matahele is the fastest growing giant clam. Put them on a hard rock bottom or coral blocks.



Tridacna tevoroa, the Devil Clam, Toki, is very rare and would be excellent for sanctuaries where the water is clear and clean ocean water. Keep them on sand and rubble in depths over 5 meters (16 feet).



The best *Tridacna maxima*, the Common Giant Clam, Kukukuku for a sanctuary have a black mantle with brown or green spots. These grow much faster than other color varieties of the Common Giant Clams.

Use at least fifty clams of each species for a good breeding stock.

Be sure the fishermen cover the clams in the boat so they are not too hot and keep the clams in a shallow water holding area until they are counted and paid for. When the fishermen have been paid, the clams are community property.



5. Pay for the Giant Clams

Fishermen should be paid more than the usual market price to be sure the clams are taken carefully and delivered unharmed and alive to the Sanctuary.

Nobody can ever take them from the sanctuary.



Pay the fishermen so they can get the biggest clams and bring them in without harming them.



6. Place the Giant Clams in the Sanctuary.

Arrange the Giant Clams in circles with nine around the edge and one in the center. Put the Giant Clams at least two meters (6 feet) from each other. Arrange them neatly on the bottom so the circles are easy to see and each clam can be quickly counted.

Each circle should have only one kind of Giant Clam in it. The circles of different Giant Clams should be separated from each other.



Save the biggest giant clams for the center of each circle. They make the most eggs.



7. Keeping the Giant Clams

The Giant Clams are protected by everyone's respect for social obligations. If people let the Smooth Giant Clam become extinct it would be an unforgivable failure of this generation of Tongans to give proper respect to future generations of Tongans. Anyone who harms the Giant Clams in the Sanctuary is failing to give proper respect to his family and community.

Each clam is a very special asset for the community because it will produce thousands of new clams over the years of its life. Stealing even one is the same as stealing thousands of clams from the families of everyone in the community.



8. Community Protection

There are not enough police or fisheries officers to protect the clams in the sanctuary if the people themselves do not do so. The clams benefit the people and the people must watch over them. The Sanctuary is like the Church, everyone helps to build it, everyone values what it stands for.



9. Restricted access

Only those responsible for the maintenance of the Sanctuary should go into the immediate area of the Giant Clams. Everyone else should stay away.



10. Maintaining the Stock.

Once a month the person(s) looking after the Giant Clams should go out and count the clams in the circles to make sure they are OK. If someone else was seen swimming in the area, the Giant Clams should be checked right away.

Once a year, any dead clams must be replaced by wild stock. Remember to keep each circle pure with one kind of Giant Clam.



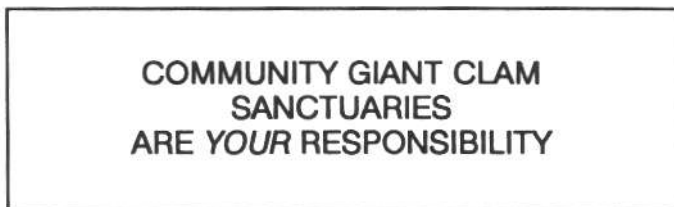
11. Take Only the Young Giant Clams Outside the Sanctuary.

People can take young clams settling anywhere outside the Sanctuary.



12. Teach the Message

Teachers should tell each new group of school children about the giant clam sanctuaries and why they are important. Visitors (especially those on boats) should be told about the Giant Clam Sanctuaries and informed of the rules of no anchoring or swimming in the area.



If your village follows these 12 steps, you can expect to see a real improvement in the numbers of young giant clams on reefs near your village within two to three years.

Remember, the Community Giant Clam Sanctuary is a village asset and a community responsibility. Starting, maintaining and protecting an ocean sanctuary begins a path toward future improvements in helping the sea produce a greater harvest for everyone. There are other new ways to improve fishing but they depend on community participation and understanding. Each person must show respect for the community needs if such environmental improvement projects are to succeed.

The personnel of the Ministry of Fisheries are happy to work with every community to improve food production from the sea. Please call on them whenever you have questions or need assistance.

This public awareness document was prepared during the course of the project identified on the inside front cover. The conclusions and recommendations given in the document are those considered appropriate at the time of its preparation. They may be modified in the light of further knowledge gained at subsequent stages of the project.

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