

# The effects of the recent El Niño on pearl culture operations at Bahia de La Paz, South Baja California, Mexico

by Mario Monteforte

We registered nearly 4°C over the normal maximum temperature we usually read in the Bay, but this was only registered between the surface and 4 m depth. This acted to our advantage because we moved the whole installation to deeper waters. The cumulative average mortality was very similar to the normal average registered during the same season and within the same size and age of pearl oysters, this is very low (2.5 to 3.5%) .

On the contrary, we observed an extremely high natural recruitment. Our spat collectors (even the fact that we were not using 'the good ones') had averages of 150 spat per unit, when for those kind of collectors we usually had not more than 10 per unit previously.

Among the other species associated with collectors of *Pinctada mazatlanica* (spat-fall of this pearl oyster in Bahia de La Paz is in summer), we observed a completely different composition to that we consider as standard. Many species were absent and many others were new. Vertical distribution was also all messed up both on the associated species and in *P. mazatlanica*. The maximum spatfall of *P. mazatlanica* takes place between 2 and 6 m depth and

is very rare below 8 m. This time the maximum spatfall was obtained between 5 and 12 m depth.

Every object on the bottom (old tires, ropes, the galvanised pipe structures used for bottom culture) was covered with spat of *P. mazatlanica*.

We believe that this event was a very important factor for the recovery of wild pearl oyster beds. We will follow some of these wild juveniles to see how they behave. Maybe in a couple of years the low density of natural beds will change for the better.

*Note from the Editor: Mario Monteforte, of CIBNOR, La Paz, gives us below a recent update (20 January 98):*

The temperature was 23.5°C today from surface to 30 m depth, against 19–20°C at the surface and the clear thermocline of 17–18°C between 9 and 12 m depth that we should expect at this time in a normal year. *Pinctada mazatlanica* is growing wildly. On the other hand, a good proportion of *Pteria sterna* should be mature and about to spawn, but less than 15 per cent of adult cultured specimens were found to be in stage two (that is almost ripe). In normal years, spat-fall of this species would be starting right now.

