

A NEW METHOD OF REARING GREEN
SEA TURTLES (CHELONIA MYDAS)
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We have at Sea Life Park a very active breeding colony of green sea turtles which we maintain for exhibition purposes and to enhance the local population. The colony consists of 18 females and 5 males and to date have produced 527 hatchlings. In the past we released the newly born hatchlings within 48 hours to the wild in simulation of a noncaptive birth. To give the young turtles a better chance of survival it was decided to maintain the hatchlings in captivity for 9 months to a year to increase their size and thereby decrease their predation.

In August of 1981 in a joint project with National Marine Fisheries Service, newly hatched turtles were placed in 8 rectangular tanks measuring 250 cm. x 80 cm. with a water depth of 30 cm. We soon found that all the turtles in each tank would bunch up into one corner and start nipping and biting one another. Some of the turtles would then show white scar tissue around their flippers, eyes and necks. This white tissue would stimulate even more biting behavior as it resembles food. In some of the worst cases 50-60% of the hind flippers were lost and their eyes had swollen shut. Initially we dyed these areas with a malachite green alcohol solution. However, dyeing a hundred or more turtles individually every day was very time consuming and staff had to be added just to handle this task.

The biting behavior was traced back to the original problem of bunching up into one corner. A circular tank was made with a diameter of 6 meters. Dividers were made in the shape of concentric rings spaced evenly 60 cm. apart made of P.V.C. pipe and plastic netting (vexar) and bolted to the bottom of the tank. A 250 liter per minute water flow induced a strong circular current with a stand pipe drain located in the middle of the tank. Water height was set at 25 cm. with the dividers height at 75 cm.

This design reduced biting by 75%. Added bonuses were:

1. Cleaner tanks due to the circular water flow.
2. As the hatchlings grew every other ring was removed and placed in a similar tank with the water depth raised to 65 cm. Half the turtles were then transferred over expanding the facilities and giving all the turtles a larger swimming area. In six months the turtles increased in size from an average 5 cm. at birth to 21 cm.

3. Less undersized or runted turtles were observed possibly as a result of reduced competition. Larger more aggressive individuals were placed with like kind reducing stress on smaller less aggressive turtles. At release at an age of 12 months, average size was 30 cm.