

Subject: Rehabilitating Sea Turtles  
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Facility Location: Broome WA Facility Established: 2001

Chelonia Wildlife Rehabilitation & Release was formally set up in 2001, although I had been working in sea turtle rehabilitation for a year or so prior.

There are other facilities in Australia taking sea turtles into rehab, such as commercial aquaria and wildlife parks. There are also other voluntary facilities on the east coast of Australia which rehabilitate sea turtles. Chelonia provides the only non-commercial, permanent, salt water facility available for the rehabilitation of sea turtles, and other air breathing marine fauna, in Western Australia.

There are many variations of facility set ups, systems employed, equipment used, and treatment protocols adopted in these facilities. In this presentation I am simply discussing the set up and methods of treatment used at Chelonia. I am not suggesting that Chelonia's model is the only successful one; I am simply discussing what works for me.

The subject of setting up a salt water facility, and diagnosis and treatment of sea turtles, really warrants a two day workshop, rather than a one hour presentation, therefore, the material presented today will simply present the basics. It is my intention to provide a picture of what the Chelonia facility looks like, discuss the systems employed and why they were decided upon, and briefly cover the basics of accepting sea turtles into care.

The treatment of sea turtles is time consuming and costly. The golden rule of wildlife rehabilitation is 'DO NO HARM'; therefore, it is vital that a healthy facility is set up to hold patients whilst in rehab. If you, or your organization, are not prepared to invest in such a facility you should not be thinking about rehabilitating sea turtles.

This presentation is presented in two parts, I - Setting up a Salt Water Facility, and II – Initial Diagnosis and Treatment of Sea Turtles.

#### PART I – Setting up a Salt Water Facility

##### The Equipment

- Tanks
- Filtration system
- Water
- Heaters & coolers
- Gantry/winch
- Miscellaneous items

#### PART II – Initial Diagnosis and Treatment of Sea Turtles

##### Induction Protocol

- Rehydrate
- Treat for parasites
- Clean
- X-ray

Many sea turtles which come into rehab are suffering from floating syndrome. Floating syndrome is, by its name, not a disease in itself but a syndrome developed as a result of some other cause or causes. Syndrome means '*a number of characteristic symptoms occurring together*'.

Floating syndrome presents as a buoyant patient. For one reason or another gas accumulates in the gut and body cavity of a sea turtle rendering it unable to dive. Sea turtles eat underwater, if a sea turtle cannot dive it cannot eat, if it does not eat for long enough it will die.

In patients presenting with floating syndrome we have to treat two situations, one, the most obvious, the floating, and two, the cause of the floating.

An accumulation of gas can be caused by a patient ingesting a foreign object such as a hook, fishing line, plastics, other garbage items; or pollution caused bacterial infections.

Most 'floaters' are dehydrated, some severely, when admitted. Many carry heavy loads of barnacles and algae. Many are chronically anorexic and have entered full stasis. Feeding these patients solid foods will kill them; fortunately most which have reached this stage are too ill to want to eat.

People imagine that because they live under water that sea turtles drink a lot. This is not so, they do not drink any more than you or me. When they are eating they hold food in their esophagus, expel water, and then swallow the food.

When they stop eating, for whatever reason, they become dehydrated. Water is drawn back from GI contents, faeces become dry and rock hard, and the gut shuts down. This condition is called stasis. Stasis is '*stagnation in the flow of any of the fluids of the body ... the intestinal contents proximal to a blockage*'.

If you introduce new food into the system once it has gone into stasis, the new material will simply build up behind the old concreted material, and eventually you will kill the patient.

So, when a floating sea turtle is brought into rehab the first step is to rehydrate it, the second is to get the GI working again, the third is to nourish the patient, but only after the gut starts working again and faeces are being passed.

If the patient is in a chronic state of stasis it may be necessary to bring out some big guns and use some chemical inducements to the GI system to start working again. These drugs must never be used until you are sure that there is no intestinal obstruction present. X-rays will help to determine this. However, there is no point in x-raying a patient which is heavily covered with barnacles. After a few days in rehab barnacles and other external parasites will die. They can then be gently prized off with a screwdriver, many will simply slide off.

Sea turtles are subject to infestation with blood fluke. Chelonia's induction protocol includes treatment with Praziquantel. Blood fluke are present in most sea turtles, but in times of stress and illness they may become overwhelming. They invade all major organs including the brain. There is not much point in treating a patient which is literally being consumed from within by parasites. The prazi treatment should be administered within the first 72 hours of admission.

Anyone who is seriously considering setting up a permanent salt water facility, and wanting to treat sick and injured sea turtles, can contact Chelonia for more information.

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