

## **HOW TO RELEASE RED STEENBRAS AND SEVENTY-FOUR TO MAXIMIZE THEIR CHANCE OF SURVIVAL**

Bruce Mann and Stuart Dunlop  
Oceanographic Research Institute (ORI)

Whether you agree with the legislation or not, the fact remains that red steenbras has now joined the seventy-four on the “Prohibited List” for both recreational and commercial skiboat fishermen. In essence this means that no person/fishermen shall engage in fishing, collecting, landing or selling of, or be in possession of either seventy-four or red steenbras. The primary aim of this legislation is to try and enable stocks of both of these species to recover to a level where hopefully in the future we can again catch (and keep) them on a more sustainable basis. However, it is likely that both of these species will continue to be caught incidentally by skiboat fishermen when bottom fishing for other reef fish species on reefs where seventy-four and red steenbras still occur. In order to be able to release these fish successfully to ensure their maximum chance of survival, it is important to take note of the following few points.

Deep water bottom-fish species such as red steenbras and seventy-four suffer pressure related injuries called barotrauma (more commonly referred to as being “blown”) when they are brought to the surface from depth. These injuries are a result of the expansion of gases in the swim bladder and other organs when fish do not have time to adjust to the rapid changes in water pressure as they are pulled to the surface. The physical effects of barotrauma are easily identified and can be seen in the form of an inflated abdomen, bulging eyes, inverted stomach pushed into the mouth, intestines protruding from the cloaca (anus) and even air bubbles escaping from under the scales. Many fish suffering from barotrauma cannot swim back down to the bottom and often just float away on the surface when released. Successfully returning a fish in this condition is easier said than done as the large volume of gas in the swim-bladder creates substantial buoyancy which prohibits the fish from swimming down again on its own. A lot of people mistakenly think that by puncturing the inverted stomach with a hook or bait knife and releasing the gas, they are saving the fish and enabling it to swim back down on its own. However, this is unfortunately far from the truth, and instead they are more likely condemning the fish to a slow death by secondary infection.

One of the best methods for returning a “blown” fish to depth is known as the “reverse hook method” or “down-rigger release weight system”. A large hook is required (6/0 to 12/0) and the barb must be completely squashed or filed off. A large weight (>1kg- a few sinkers tied together also works well) is attached by a short length of line or rope to the eye of the hook (a down-rigger ball is ideal) and strong fishing line or a thin rope (must be of sufficient length to get the fish back down to the bottom) is tied to the bend of the hook (*see* Figures 1 and 2). It is essential that the weight used to get the fish down is heavy enough to overcome the fish’s buoyancy. Once the hooks have been removed from the fish’s mouth (if possible this should be done without removing the fish from the water), the procedure involves gently placing the reversed hook in the top lip of the fish (hook pointing downwards) and allowing the weight to carry the fish down (*see* Figures 1

and 2). Just be careful that the hook is firmly in the lip and clear of your hand before you let go the weight! The first 10 m are the most critical but you should try and get your fish all the way back down to the bottom if you can as this will ensure that all the excess gas in the swim bladder is recompressed. It is important to let the fish down as smoothly as possible and avoid sudden jerks on the line while the fish and weight are descending, as this will dislodge the hook too soon resulting in the fish floating back up to the surface. Once at the bottom the line or rope is given a sharp tug to remove the hook from the top lip allowing the fish to swim off and the weight can be recovered. ORI scientists have successfully used this method while tagging and releasing fish on reefs off the Transkei and the fact that they have had a large number of recaptures proves that this system works!

Keeping the release weight rigged up on a spare rod and/or a large bottom reel, allows for quick retrieve and easy stowage on the boat. It is important to always have a down-rigger system ready if you intend bottom fishing in depths greater than 30m, especially where you have encountered these fish before. In situations where a down-rigger system is not available or not made up, the boat's anchor can be used in the place of the weight and the barbless hook can be secured onto the rope just above the anchor so as to operate in the same way. It is also a good idea to carry a spare weight on the boat in the off chance that you catch a really big 'copper' that has too much air to be taken down by a single weight or in case you lose a weight. The American's have refined this basic design and there are a number of such mechanisms commercially available over the internet (e.g. SeaQualizer™ – [www.theseaqualizer.com](http://www.theseaqualizer.com) and Penn-Fathom Master Downriggers - [www.pennfishingstore.com/penn-downriggers.html](http://www.pennfishingstore.com/penn-downriggers.html)).

If you are a regular skiboat fisherman in the former Transkei or Border region of the Eastern Cape, where both red steenbras and seventy-four are still reasonably abundant, you might consider joining the ORI Tagging Project and getting yourself a tagging kit which you can keep on your boat. In this way when you do happen to catch the incidental 'copper' or 'sev', you can carefully measure and tag it before releasing it on your down-rigger system. In this way you will be contributing vital data on the growth rate and movement patterns of these important linefish species and ultimately help fishery scientists to make informed decisions regarding their future management.

If you have any further queries on how to make up the down-rigger system, or are interested in joining the ORI Tagging Project, please contact Gareth Jordaan (ORI Tagging Officer) on 031-328 8159 / 079-5290711 or email: [oritag@ori.org.za](mailto:oritag@ori.org.za) and he will be happy to be of assistance.



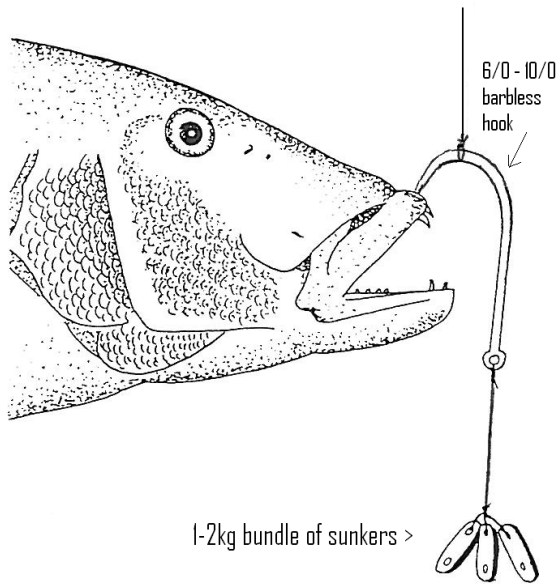
**A West-Australian Dhufish being released using the down-rigger release weight system (Photo: Dr Jill St John)**



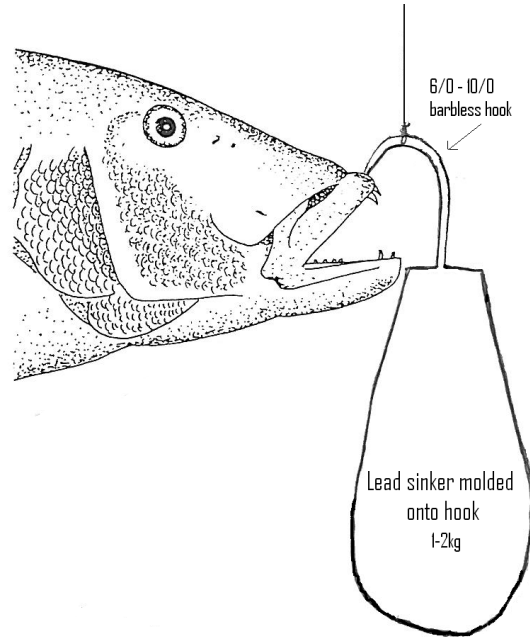
**A down rigger ball with a snap-swivel (note the filed barb).**



**A tagged red steenbras about to be released using the down rigger system (Photo: Kirk Webber)**



**Figure 1**



**Figure 2**



**A released red steenbras suffering from barotrauma (Photo: Clint Lentz)**