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# Framing the Issue in the Gulf of Mexico and SE Atlantic: Developing Practical, Effective Methods for Reducing Barotrauma Mortality in Fish

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## A Fish is a Terrible Resource to Waste



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## Worldwide Issue

### Brazil



Capt. Antonio Luiz Amaral  
Ilhabela, Brazil  
ballyhoo@ballyhoo.com.br

### Deep Release

When I began targeting dusky grouper in 60- to 100-foot depths, I had problems releasing fish in good condition. Deflating the grouper's gas bladder with a needle works, but the fish still has to descend under its own power. Tired from the fight, with a hole in its belly, a grouper has to make a great effort to get back to the bottom. Lowering fish with a weight recompresses fish rapidly, with no incisions, and the fish doesn't have to expend energy to return to its comfortable depth. I believe this technique helps released bottomfish recover more rapidly.

Grouper in my area average 30 pounds or more, so I had to make a release weight heavy enough for the job. Here's how: File the barb off a 12/0 hook, and hang it out of the opening on top of an empty beverage can so that the curve of the hook and the point protrude from the can (point down). Fill the can with melted lead, then add a metal loop on top to serve as a line tie. Cover the weight with plastic coating (shrink-wrap) to protect the boat's finish. I insert the barbless hook in the grouper's upper jaw and send it toward bottom on the downrigger line. Reel up the weight after releasing the fish with a sharp tug.

### Australia

## Send them back alive!

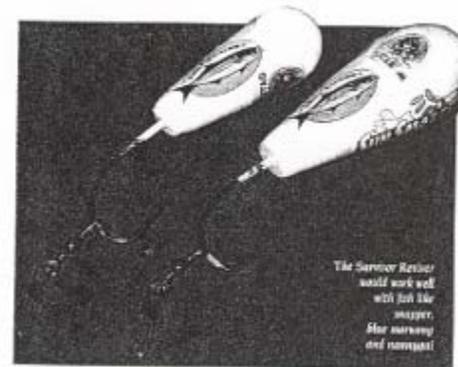
**F**ish that have been lifted quickly from deep water do not cope well with the change in pressure.

Many fishes have been introduced as ornamental fish to the water supply, but their flat body helps only in the current. They have been unable to regulate volume and get below the surface due to an over-inflated swim bladder.

These fish are left in the darkness and suffocating tanks, and their chances of survival is minimal.

In search of the solution, the method must widely promote in the past to avoid inflated fish to get back below the waves is to puncture the swollen swim bladder with a sharp instrument, such as a needle. Although effective in deflating the bladder, this invasive procedure has serious repercussions.

For some time, the fish is left with a non-reflective swim bladder and it endures the risk of release from its deep wound. The so-called attempt at the surgical procedure leads to internal organ damage and the eventual death of the fish.



The Survivor Releaser would work well with fish like snappers, flat surffish and nassangs.

A new device has been developed to overcome this problem. Known as the Survivor Releaser, it is a depth release device created in Western Australia by Gary Liley of Neerag in cooperation

with Richard and Chris Steele of Seaside Lure.

This unorthodox device consists of a barbless, stainless hook mounted onto a large lead weight, and fixed with a steel ball on the hook. To send a fish down into the water, the clip is attached to your rig, or have another line available attached solely to releasing fish.

The idea is to pass the hook through the upper lip of the fish. It is then quickly lowered to the depth from which it was taken. It will usually release itself soon after or alternatively, the barbless hook will slide out of its lip when the rig is retrieved.

The procedure usually takes less than a minute. A slow retrieval of hooked fish from deep water is always recommended, especially if they're small, as this will reduce stress.

The Survivor Releaser was developed from the need to release Western Australian chub following trapping. It would work well in South Australia for species like snappers, blue morwongs and snappers.

If you want more details on the Survivor Releaser contact Frank Prough at Neerag on (08) 9387 7364 or AUSTRALIA on 1800 692 500.

### THE SCHOOL OF FISH Educational Fishing Services

#### FISHING SEMINARS

Our seminars are held at the Australian Fisheries Academy, Port Adelaide on Saturdays and Sundays. Learn about local species, methods, fishing techniques, knots, rigs, lures and bait presentation. A video will show responsible live bait collecting, weigh, catch and release fishing of mullet and bream.

You will receive a seminar journal including all topics covered, Fish Magic Baiter, an SA Angler Magazine with soft drinks and water provided. Win one of 48 great prizes from our sponsors in our end of year draw. (701/274)

#### OTHER SCHOOL OF FISH SERVICES:

**Royal Charter:** Our custom built 8.5 metre vessel will allow you to fish in comfort from North Haven and the Port River to Port Augusta.

**Land based fishing sessions:** Let The School of Fish guide your group on your next fishing trip. Many local and country venues to choose from. All rods, reels, bait and tackle supplied and advice for the most fish released.

#### THE SCHOOL OF FISH

www.thechooloffish.com  
PO Box 3178 Port Adelaide  
Telephone/Facsimile: (08) 8250 9592



## Why Release Reef Fish?

Minimum size limits to protect breeders

Increasing number of undersized reef fish being released due to more anglers, larger size limit, more restrictive bag limits

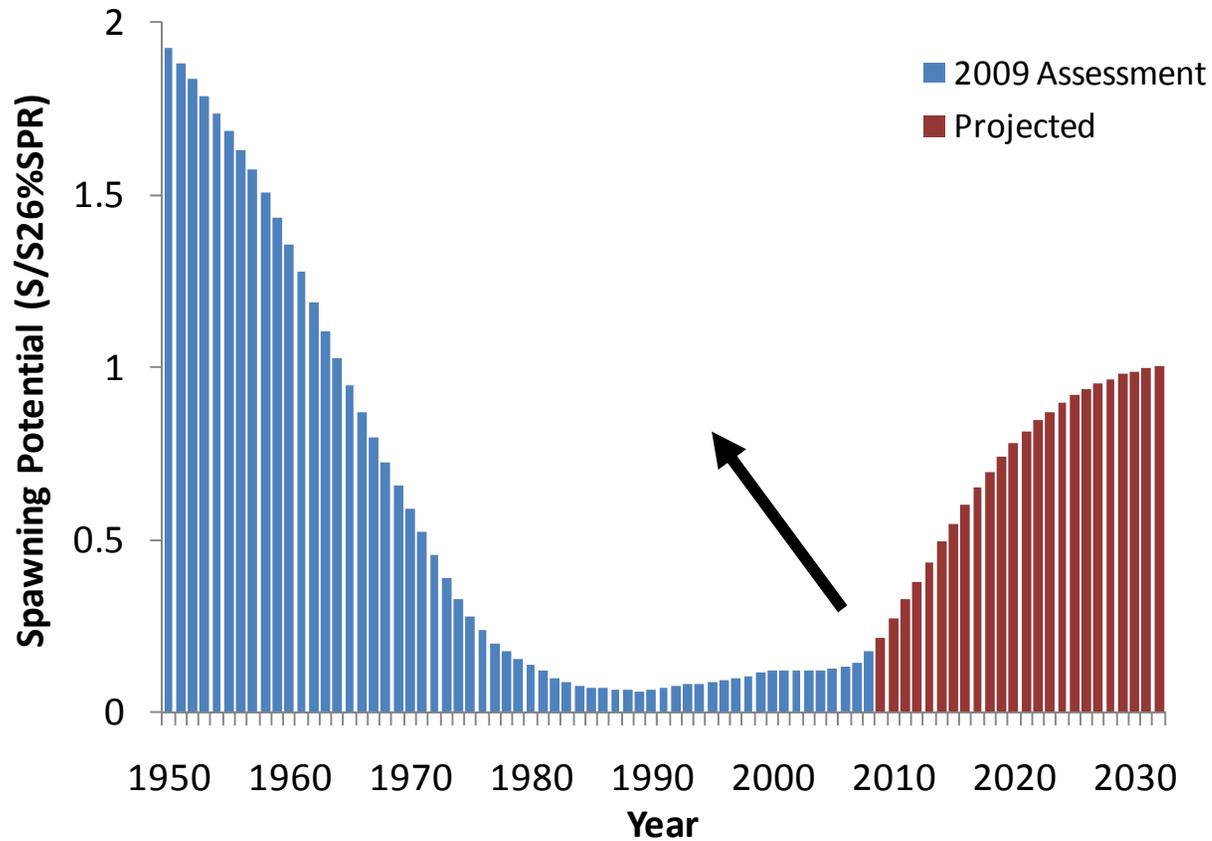
Some species are rebuilding and have limited or no fishing allowed; “Choke Species”

Reef fisheries are mixed species complexes; some stocks doing well, some not



# Red Snapper Stock Status (GOM)

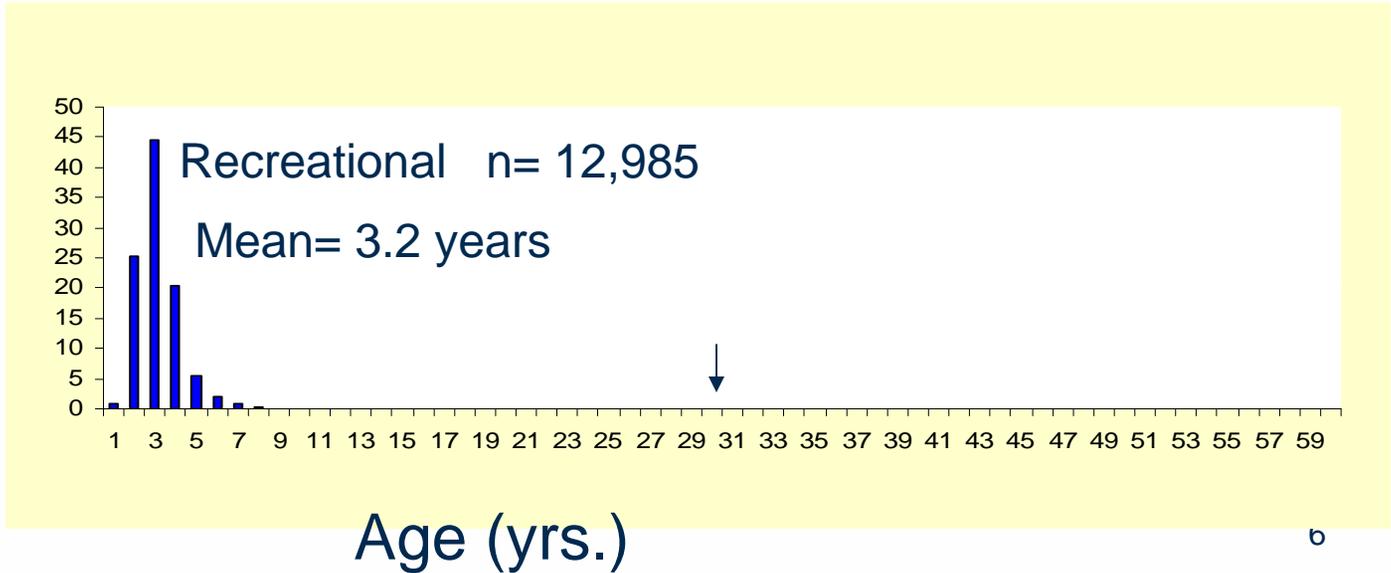
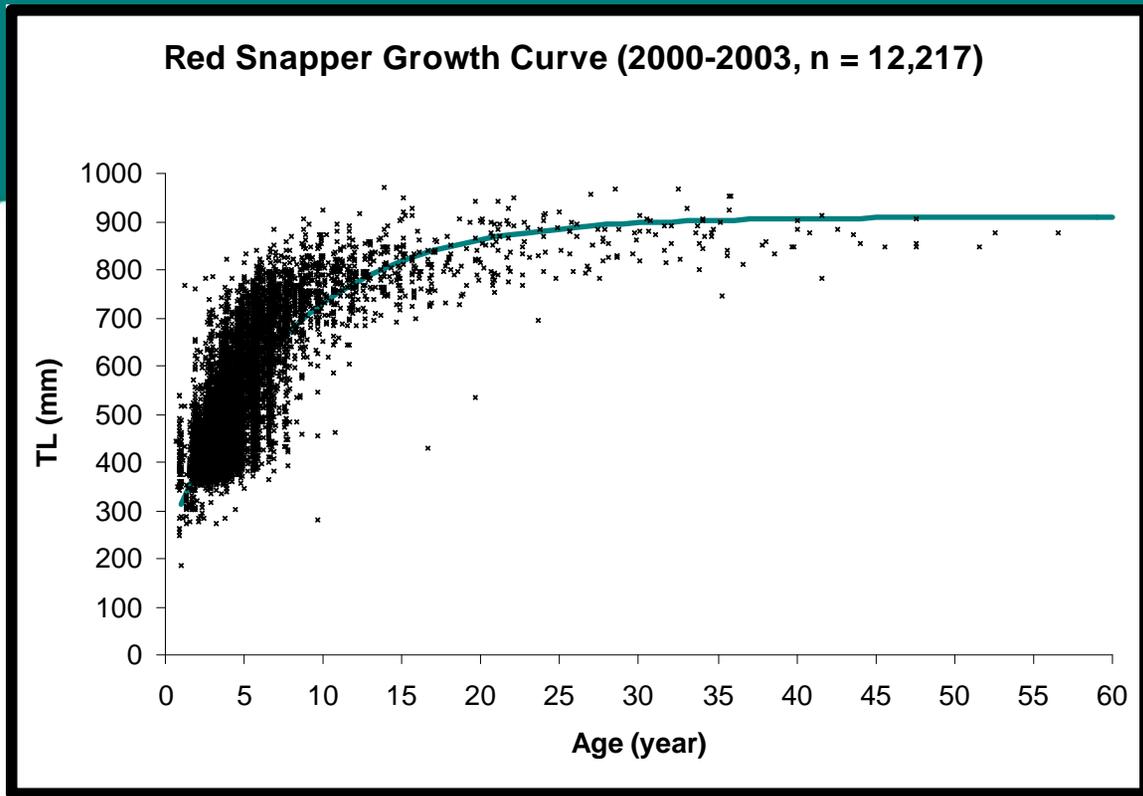
(Andrew Strelcheck, NOAA Fisheries Service)



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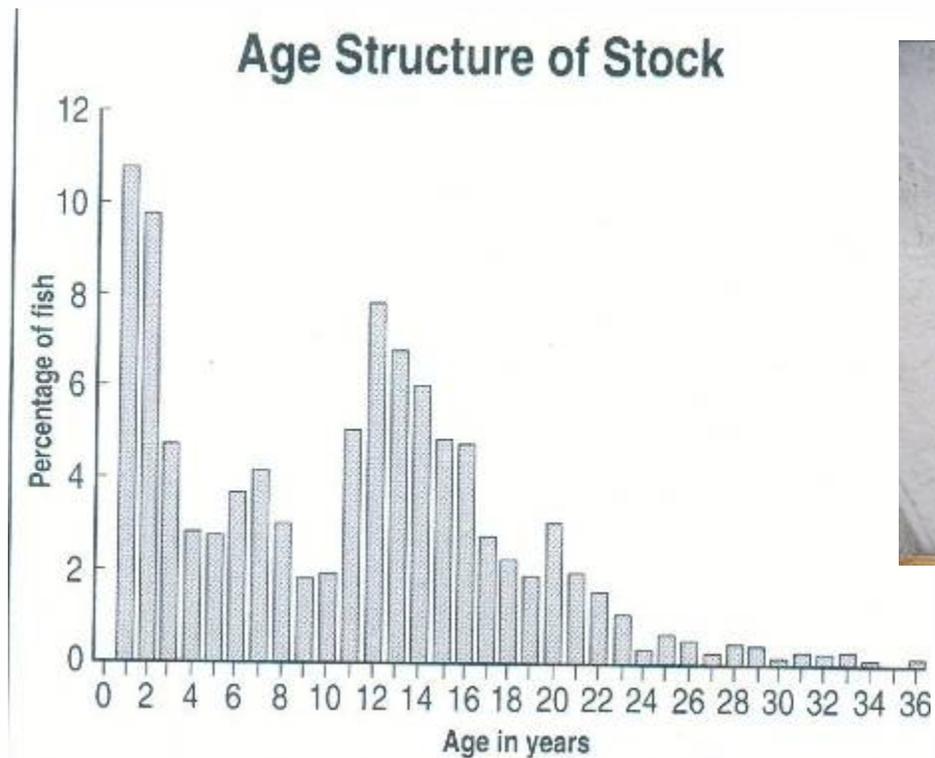
Percent frequency





## Stock Structure and BOFFF's or BODD's ?

Source: Gulf of Mexico Fishery Management Council





## A Tale of Different Fishes: Critical Species: West versus East



Rockfish (Yelloweye)



Red Snapper



Gag Grouper

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## Slot Size Limits: Releasing Big Breeders





## How Can We Reduce Barotrauma Mortality in Fish?

Develop methods for releasing or avoiding fish that will reduce mortality but still allow fishing

Test effectiveness and practicality of methods

Get information out to fishers (education and outreach)

Fishers use methods to reduce mortality in barotrauma impacted fish

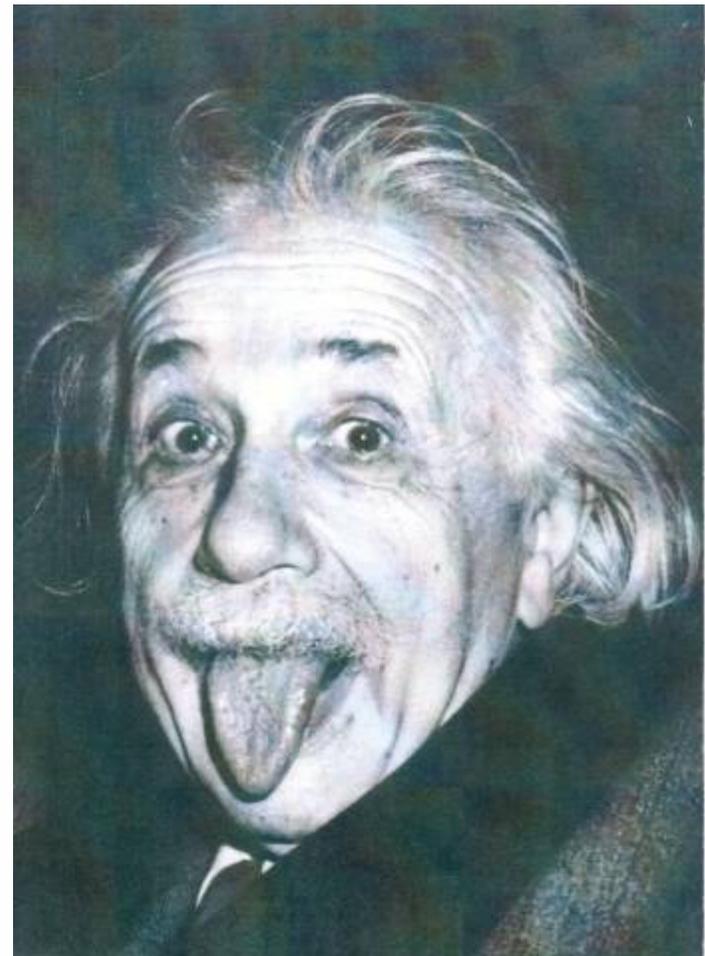




“It would not be research if we know what we were doing”

Research needs:

How effective are the different release practices/devices for the different reef fishes





## Lab Research Versus Field: Confounding Variables

Handling  
Sanitation  
Temperature  
Stress  
Predation

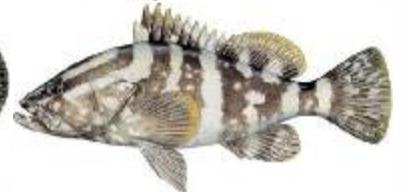
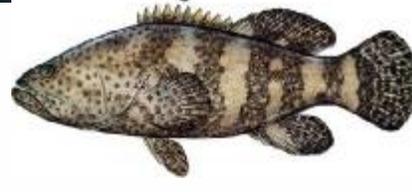
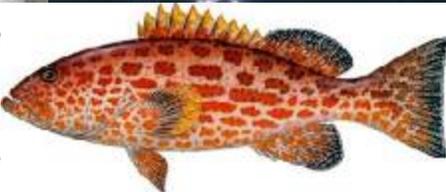
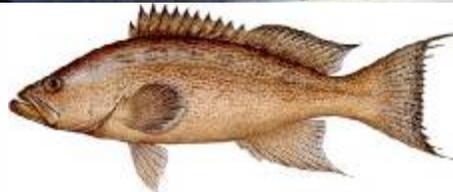
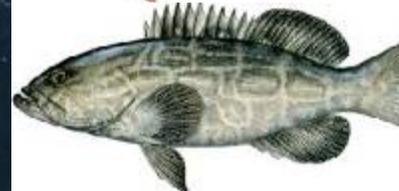
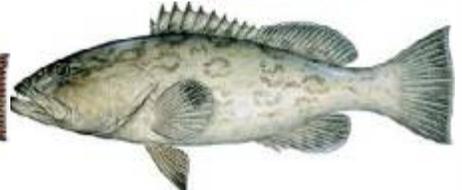
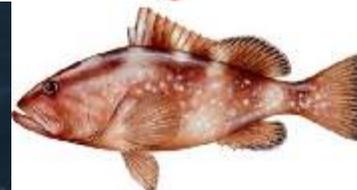




## Many Different Species, Needs

Different swim bladder structures

Different responses to handling stress





## Does Size Matter?

- How well the fish responds to barotrauma impacts
- Choice of release methods
- Reproductive importance to recovery of stock





## More(South) East Versus West Coast

- Temperature Issues
- Number and impact of Predators
- Fecundity and life history of weak stocks
- Barotrauma impacts (How sensitive, how much we know, how clear the information is)





## Barotrauma Symptoms

Photographs by Oregon Dept. of Fish & Wildlife



How do you quickly decide if you need to vent or recompress?

- Sometimes getting a fish quickly back in the water may be the best choice.



## Release Methods for Dealing with Barotrauma

Venting body cavity (Puncture Method)

Recompressing fish using containers or hooks  
and weights (Hook and Drop/Zing)

Combination of both (Vent and Zing)

- Some vented fish still may float

Avoiding fish that cannot be harvested

- Avoiding hot spots/Area Management
- Using selective gear



# Venting: Puncturing Body Cavity with Needle



its co-founders Mr. Novak who recently passed away. Every the fishery as a whole and will be a testament of Mr. Novak and commitment to fisheries conservation and sustainabilit



**VENTING**

### Venting Procedure

It is best to vent the fish as quickly as possible with a minimum of handling. If the fish is held in a bucket of water, expelling the swim bladder gases will allow the stomach to relax and insert the venting tool at a 45-degree angle approximately one to two inch release the gases — do not skewer the fish. The sound of the escaping gas is audible exert gentle pressure on the fish's abdomen to aid deflation. The fish's everted stomach If necessary, revive it by holding the fish with the head pointed downward and mov swim unassisted.



**HOW THE VENTIN**





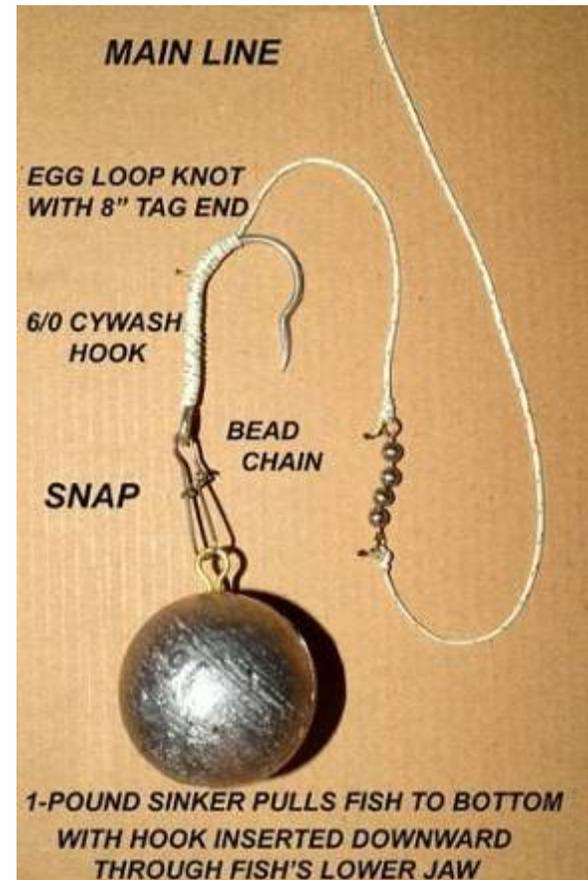
## Advantages and Disadvantages: "To Vent or Not to Vent?"



- Fast, cheap; equipment requires little space
- Possible to vent large numbers of fish coming in quickly
- **Infection concern**
- **Going too deep or in wrong place and puncturing other organs**
- **Improper handling and venting**



## Recompression: Hook and Drop (Zing) Some West Coast Devices



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## Bill Shelton and his Shelton's Fish Descender (SFD)





## Pros and Cons of Hook and Drop



### Pro:

- No possible damage to viscera from a needle
- Less infection risk
- Equipment is small, inexpensive

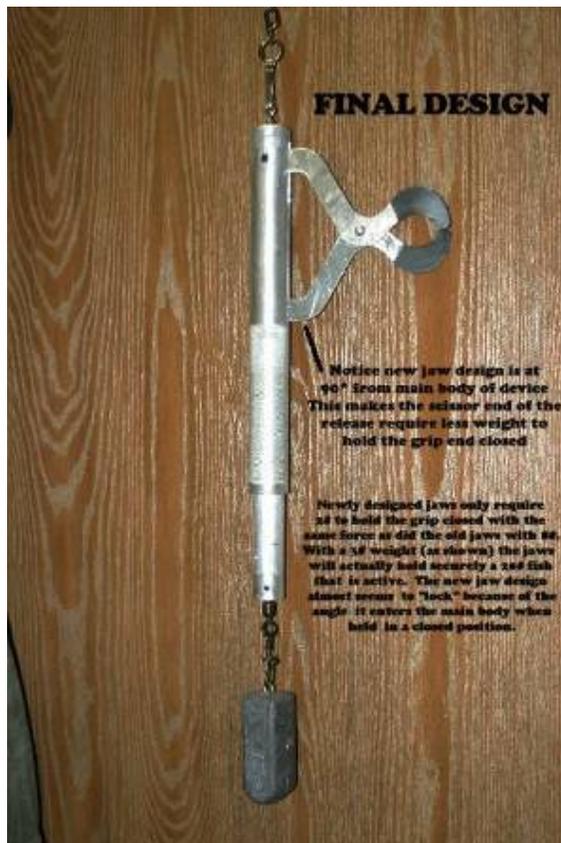
### Con:

- If not done correctly fish may fall off hook before getting in water (especially in rough weather with high sided boats)
- Requires dedicated rod
- Takes more time from fishing



## Fish grippers

### Blacktip Catch and Release Recompression Tool (Ace Calloway)



### Cabela's fish gripper

Developed by angler Don Hester, modified by  
Capt. Joe Ockenfels (Oregon)





# The Seaqualizer

Jeffery Liederman, Patrick Brown, Jeffery Brown



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Milk Crate or Container Recompression Device



Used in Southern California for at least the past 15-20 Years



Inverted Dungeness Crab Ring

➤ Potential to reduce predation impact?

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## Other Mortality Factors

Predation (“Barotrauma vs. Barracuda”  
or lingcod, sharks, **dolphins!**)

Handling

Bleeding

Temperature





## Dolphin Predation: Bad for Dolphin, bad for fish, bad for fishermen





## Avoiding Fish You Cannot Keep

- Size, type of hooks
- Placement of hooks
- Weak leaders
- Type of lures
- Area avoidance (hot spot management)





## Triage in Difficult Fishing Situations

Dealing with many fish coming in at once





## Floaters versus Sinkers or Out of Sight, Out of Mind?





## CPR/First Aid for Fish?

“ Are you okay, are you okay?”

1. Check BTI (Barotrauma Indicators)
2. Call Fish Smart





## Releasing Barotrauma Impacted Fish

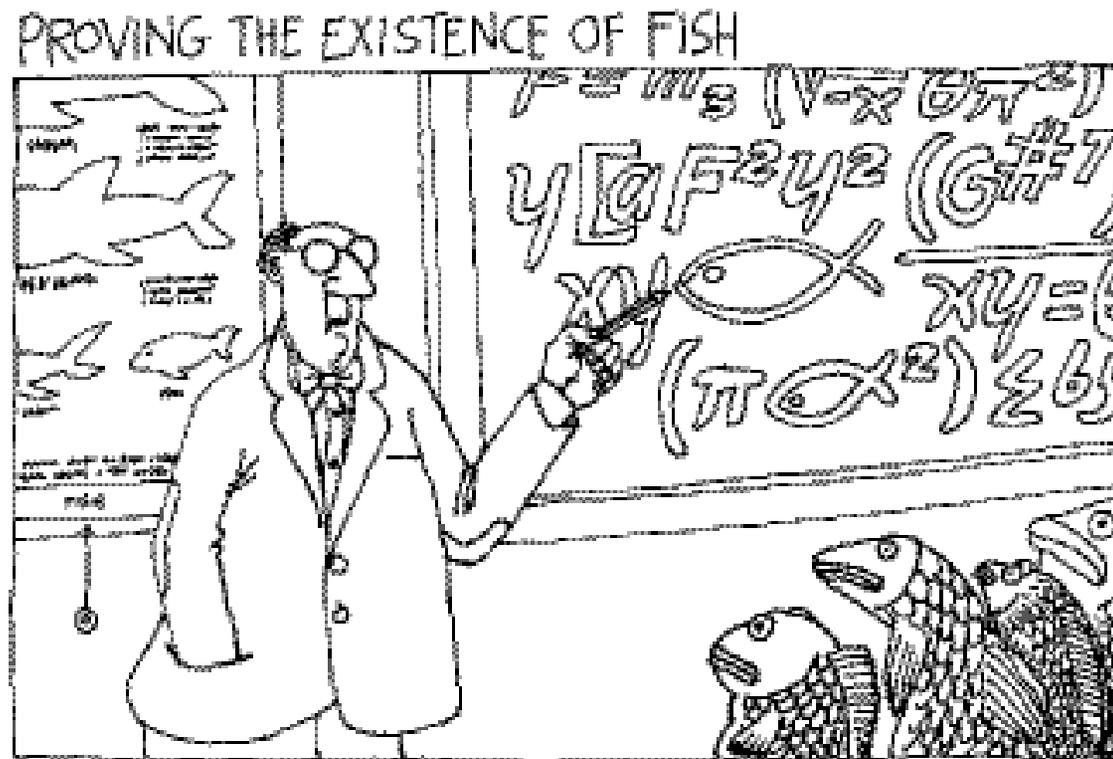
### Creating the right incentives?

Anglers should not high grade fish caught in deep water but we have created powerful incentives to high grade by reducing limits. What can we do to reduce high grading?





## Comparing Alternatives: Balancing convenience, effectiveness, and unknown or inconclusive survival information



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## Easy to Confuse Fishermen with Conflicting Messages about How to Release Fish

### Oregon:

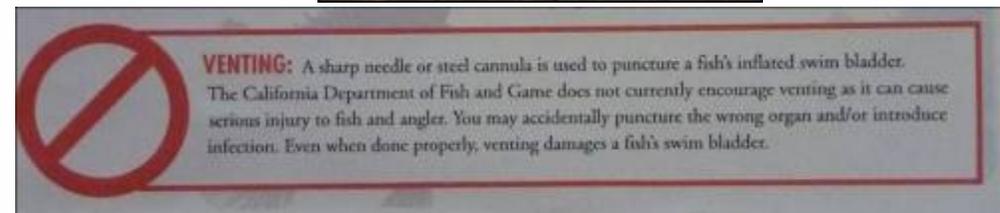
Avoidance first choice then decompression methods; venting third option.

### California:

Anglers are encouraged to decompress but not to vent.

### Gulf of Mexico:

Fishermen required to carry and use venting tools.

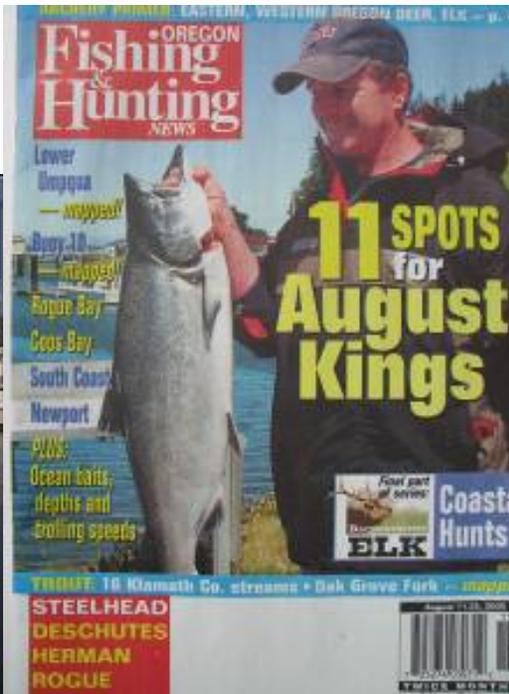


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# Getting Information out to Fishers

## Community Outreach: Fishing Groups and Organizations Influential Fishers



**ENGLUND MARINE SUPPLY** **NORTHWEST STEELHEADERS** **THE S. Sentinel**

**A FUN FILLED BAY AREA**

# SALTWATER SPORT FISHING OUTDOOR SEMINAR

**THIS IS A FREE ADMISSION EVENT !!!!**  
EXPERTS FROM AROUND THE LOCAL AREA AND STATE WILL BE ON HAND TO SHOW THEIR TECHNIQUES AND SECRETS ON HOW THEY SUCCESSFULLY CATCH FISH EACH TIME THEY GO OUT. LEARN ABOUT ALL ASPECTS OF CATCHING FISH IN OUR LOCAL COASTAL AREAS.

**TOPICS and PRESENTERS**

- "Modern Electronics for the Oregon Coast Fisherman" - Steve Rich, Electronics Specialist-Englund Marine
- "Ocean and Lake Downrigger Trolling" - Terry Bennett-Society Downriggers
- "Local River Trolling Techniques" - Rick Stewart, Professional Guide
- "Ocean Salmon Techniques and Tactics" - Paul Schultz, OES Salt Steel Fishermen Agent - Charleston
- "BANDOLIERA" Releasing Rockfish Safely - Steve Shallege
- "New Rules and Regulations" - Dave Clifford, Oregon State Police
- "Bait Rigging Techniques" - Wayne Butler, Charter Boat Captain
- "Underwater Video Footage and New Products" - Bill Leitch of Southern Fishing Products
- "Fishing for Tuna and Halibut" - Mark Luffin, 5-Star Charters

**OTHERS PRESENT:** Mike Morphy - SHIMANO, Douglas Dept. Fish & Wildlife Regulation, Mike Warden - LAMIGLAS RODS, United States Coast Guard Auxiliary Representative, Tom & Tracie Stewart - T & H SIGNS

**Concessions available on seminar site**  
HUNDREDS OF DOOR PRIZES THROUGHOUT THE DAY

## SATURDAY, APRIL 23rd, 2005

**9:00 am - 3:00 pm**  
**ENGLUND MARINE** Parking Lot, Charleston  
**COOS BAY, OREGON**

**FREE ADMISSION** **FREE ADMISSION**

**BOAT DISPLAYS** **PRODUCT DISPLAYS**

**FACTORY REPS** **EXPERT ADVICE**

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## Collaborating with Fishermen Essential

Help to refine and develop best release methods  
Judge practicality





# Getting Angler Buy-in



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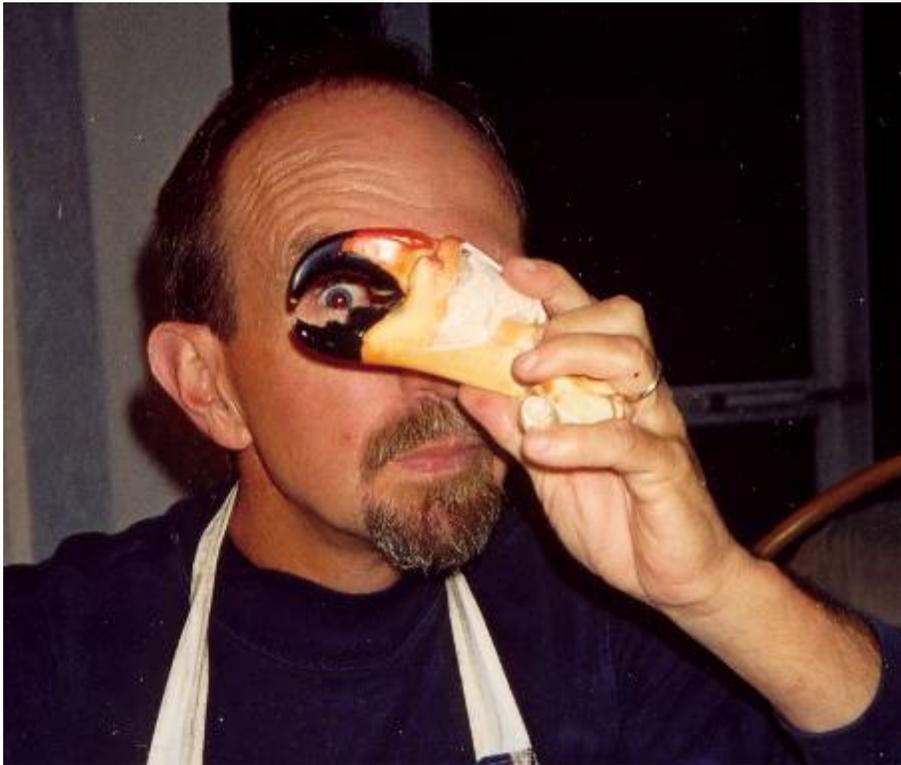


Remember that fishermen just wanna  
have fun!





## Conclusions: Looking into the Future



One size may not fit all; different methods may be appropriate for different situations.

Fishermen input and buy-in are critical; include them in the decision-making process.

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*There is No Free Lunch*