

Handling Offshore Catch On Board

by Jon W. Bell

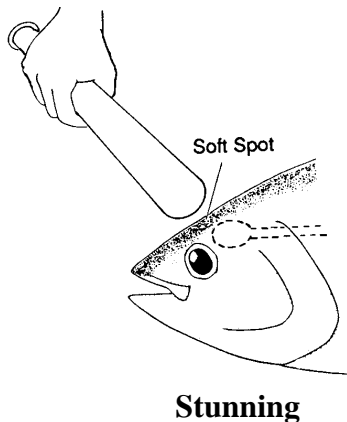
Offshore fishing in the Gulf of Mexico can require a good deal of effort and resources from the Louisiana sports fisherman. However, the rewards of hooking and bringing on board a highly prized fish such as tuna, amberjack, mahi mahi, marlin, and others are greatly increased by the superior eating quality of the meat. Proper onboard handling practices are important for maintaining the good eating quality **critical to producing excellent, “just-caught” flavor.**

Decomposition or spoilage of fish is caused by breakdown of the flesh by naturally occurring enzymes or bacteria. The rate or speed of decomposition is increased by high temperatures, similar to those encountered during prolonged struggle in warm Gulf waters.

Controlling and maintaining good quality of the fish requires proper chilling. Taking enough ice to chill and store the catch is a **MUST** to prolong good quality. No matter how you handle the fish, you must properly chill and store the fish to control decomposition and quality loss. **Two pounds of ice for each pound of fish** is recommended for icing and storage. Line the bottom of the cooler with a layer of ice, and then surround the entire fish with more ice.

Additional recommended handling practices accomplished before iced storage can delay the loss of freshness and quality and produce meat of high, “sushi”, quality.

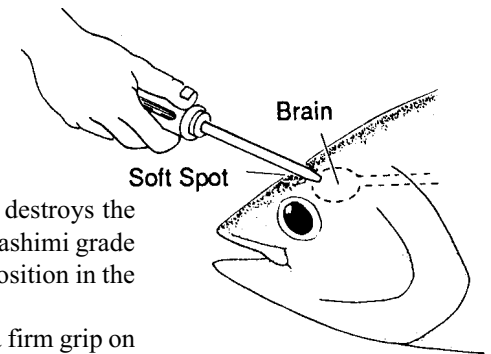
- **Landing** – Bring the fish on board as quickly as possible. Gaff the fish in the head, or the tail region if necessary.
- **Stunning** – Stun the fish immediately after it comes on board to eliminate bruising. It is best to club the fish with a metal bar or wooden bat while the fish is still on the gaff.



Stunning

- **Brain Spiking** – Spiking, immediately after stunning, is an option that destroys the fish's brain. (This is a required procedure for production of commercial, sashimi grade tuna). Spiking can significantly reduce the rate of early chemical decomposition in the muscle.

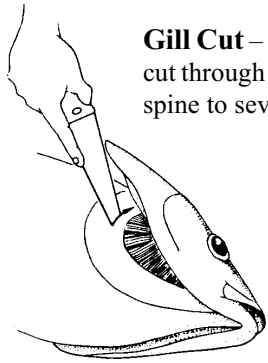
Before spiking a fish, make sure that you are well balanced and have a firm grip on the fish. Place the tip of the spiking tool (I prefer a ground-down philips screwdriver, but an ice pick will also work) on the soft spot of the fish's head above the eyes. Push the spike at a 30 degree angle into the skull, and move from side to side to destroy the brain. Successful spiking will cause the fish to shudder, muscles to flex, and then go limp in a couple of seconds. This may require some practice, and may not be possible under all conditions. Above all, be careful not to injure yourself or fellow anglers!



Brain Spiking

- **Bleeding** – Bleeding improves the muscle appearance and flavor and may aid in rapid chilling. It is also essential for sashimi grade fish. Bleed the fish on the deck, immediately after stunning or spiking, while the heart is still intact and pumping. Use the method which seems easier for you, or try a combination of cuts.

Bleeding Techniques

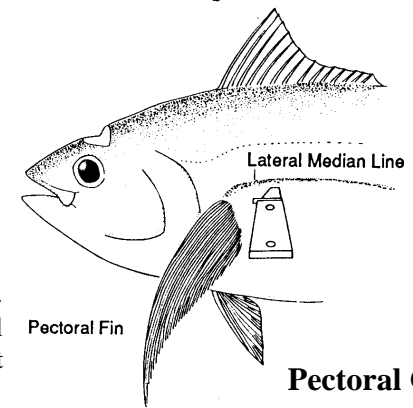


Gill Cut

Gill Cut – Slice through the blood vessels that supply oxygen to the gills. Lift the gill cover and cut through the gill arch, and then put the knife through the gill membrane and cut up towards the spine to sever the blood vessels at the top of the gills.

Throat Cut – Cut the blood vessels between the heart and gills. Be careful not to cut up the heart. Slice through the V-shaped nape of flesh between the gill covers and the body of the fish, and sever the major artery that is just below the skin surface.

Pectoral Cut – (for tunas) Cut the shallow blood vessels that run near the lateral line. Make a shallow cut with a sharp knife about the width of two fingers below the pectoral fin, cutting through the raised ridge of the skin. You'll know when you've done it right when the blood flows out of the cut. Repeat on the other side.



Pectoral Cut

- **Gutting** — After allowing 5 – 10 minutes for bleeding, or until blood flow stops, removing the guts or viscera from the fish provides two advantages for maintaining good quality. First, you remove a source of bacteria and enzymes. Second, chilling is improved by removing a significant amount of warm body weight, especially if the fish has been feeding. Cut the belly from the anal opening forward, open the belly cavity and remove the guts. To completely remove them, slice the entrails as close as you can to the gill area. Be careful not to slice through the belly wall and into the meat. This technique will allow the chilling medium, either slush or ice, to closely contact the muscle both inside and out. Be sure to firmly pack ice into the belly cavity during iced storage.
- **Rapid Chilling (Slush Icing)** – Bring along an extra cooler or use the boat's bait tank if possible. This extra effort may be the most important technique for retaining the excellent, or "just-caught" quality of the meat. Fish will cool **4 to 5 times faster in slush ice** because the fish will be completely surrounded by the 32°F slush water. This requires bringing extra ice, above the amount for storing the fish. The recommendation is for **2 parts ice to 1 part seawater**, but more may be necessary with the warm Gulf waters. Make sure that ice is always present and covering the surface of the slush. Add more ice as it melts.
Transferring the fish to iced storage is recommended when the fish reaches a backbone temperature of 50°F. For large fish, this can take up to 8 hours, or even longer. However, even an hour or less in the slush ice can dramatically lower the high, initial fish temperature. Slush icing should not hurt properly gutted fish. Transferring the fish to iced storage will depend on when the next fish is caught, the amount of ice left on board, time left before returning to shore, etc. Leaving fish in the slush tank for over 2 hours is not recommended, except for large fish.

Make sure that you bring plenty of ice and coolers to preserve good food quality of your catch. Performing some or all of these additional recommended handling practices can produce high quality, just-caught freshness for you and your friends to enjoy once you return to shore!

References

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