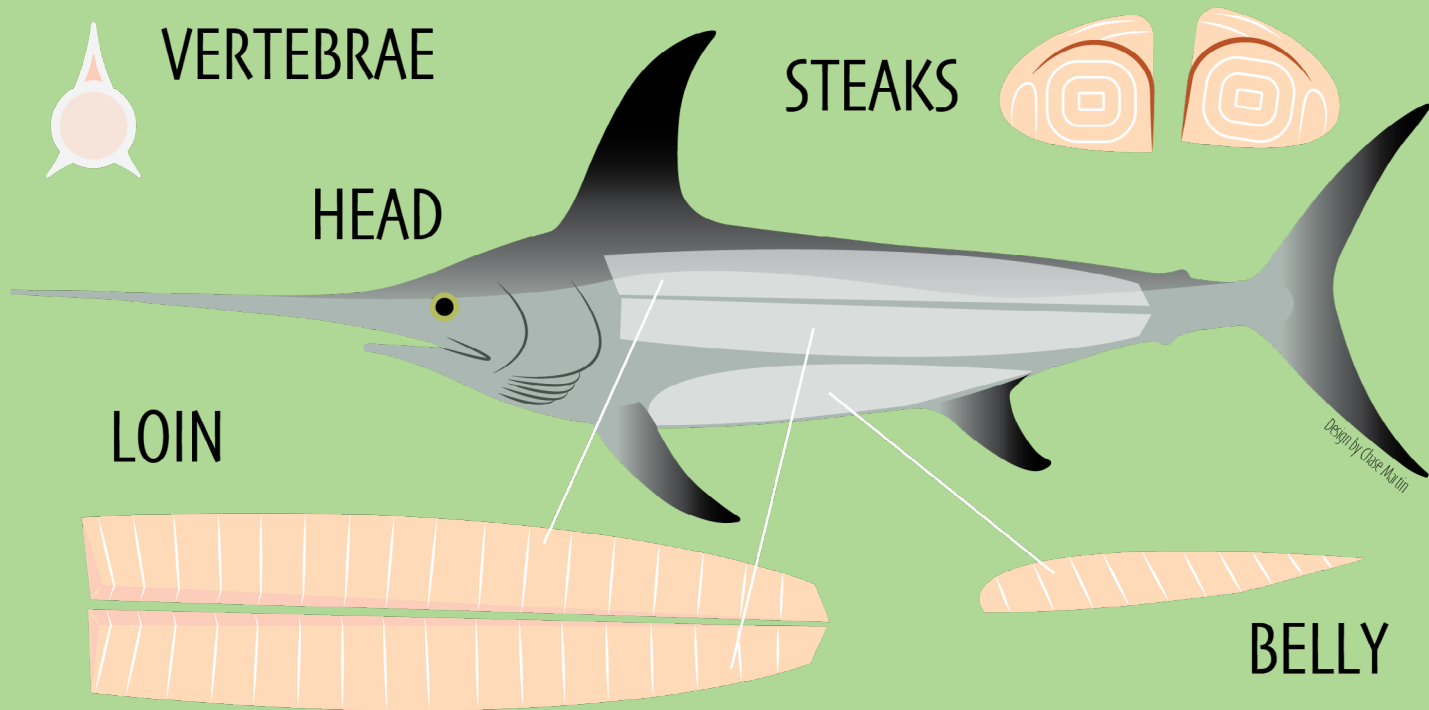


North Pacific Swordfish

Xiphias gladius



The California Swordfish Fishery: Domestic Source for an Often-Imported Product

Federally managed fisheries land valuable, sustainable swordfish with a small number of vessels.

Americans like to eat swordfish. The vast majority of the swordfish consumed in the United States, approximately 80%, is imported.^{1,3} Swordfish landed in California come from Hawaii-permitted longline vessels, and three relatively small local fleets: the drift gillnet fishery, the harpoon fishery, and experimental deep-set buoy gear. Of California's local fleets, the drift gillnet fleet landed nearly three times as much swordfish in 2017 (175 MT) as the other two local fleets combined (65.6 MT).²

The California swordfish fishery is scientifically managed, independently monitored, and low in bycatch relative to swordfish imported from foreign fleets. California vessels overlap with the Western & Central North Pacific stock, which is considered healthy.⁴ Other marketable species caught by these vessels include opah, common thresher shark, and shortfin mako. The fisheries comply with all relevant U.S. laws which protect and manage our ocean resources.⁵ The number of interactions with protected marine mammals, sea turtles, and seabirds in the drift gillnet fishery has dramatically declined from 1997-2017,⁶ as a result of a comprehensive suite of gear modifications, regulatory actions, and a reduction in fleet size. Today, bycatch rates are comparable to, or lower than, other U.S. swordfish fisheries in the Atlantic or Hawaii.⁷ Bycatch is monitored by observers on the vessels.

Transfer Effect: If U.S. swordfish vessels catch less, but consumers eat the same amount - we import more, and more turtles are killed. Closure of local fisheries does not solve bycatch issues in swordfish fisheries, but may exacerbate them. Most of the bycatch species of concern (seabirds, marine mammals, sea turtles) are highly migratory. Therefore, closing local fisheries does not ensure that interactions will not occur elsewhere. Rather, local closures have been shown to increase our reliance on foreign imports, which can come with higher rates of bycatch, resulting in more impacts on protected species.^{1,7} This shift of our ecological impacts is a *transfer effect*.



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Resources

NOAA Fisheries Species Directory: [North Pacific Swordfish](#)

NOAA Fishwatch: [U.S. Seafood Facts - North Pacific Swordfish](#)

Aquarium of the Pacific: [Storied Seafood - California Swordfish](#)

References

1. Helvey et al, 2017. Can the United States have its fish and eat it too? Marine Policy. 75. 62-67.
2. Pacific Fishery Management Council, Highly Migratory Species SAFE Report, Swordfish Landings, 2088-2017.
3. NOAA Fisheries Statistics and Economics Division. Annual Landings Tool.
4. Stock Assessment for Western and Central North Pacific Swordfish. ISC Billfish Working Group, 2017.
5. Marine Mammal Protection Act, Endangered Species Act, Magnuson-Stevens Act.
6. Carretta et al, 2019. NOAA Technical Memorandum NMFS-SWFSC-69.
7. Bartram et al, 2010. Sea turtle bycatch to fish catch ratios for differentiating Hawaii longline-caught seafood products. Marine Policy. 34(1), 145-149.



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SWORDFISH SKEWERS

Davin Waite, [Wrench & Rodent Seabasstropub](#)

Ingredients

- 1 lb **swordfish loin**
- 1 cup *mayonnaise*
- 1/2 cup *lemon juice*
- 1 tsp *salt*
- 2 tsp *black pepper*
- 2 tsp *chopped garlic*
- 1/2 cup *chopped flat leaf parsley*
- 8 *bamboo skewers*

Directions

1. Mix mayonnaise, lemon juice, salt, pepper and garlic in a medium mixing bowl. Set aside.
2. Cut swordfish into 2 ounce strips, marinate in the mayonnaise & lemon mixture overnight. Soak the bamboo skewers in beer or water overnight.
3. Chop the fresh flat leaf parsley. Skewer each strip and grill, bake or pan fry, about 2 minutes per side over medium heat.
4. Sprinkle with parsley and serve.



*Swordfish skewers on the BBQ.
Photo: Sam Wells, Chef Epic.*



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SWORDFISH MARROW & WINGS

Davin Waite, [Wrench & Rodent Seabasstropub](#)

Ingredients

- **swordfish vertebrae**
- *citrus oil*
- *sugar*

Korean chili wing sauce:

- *1 part butter*
- *1 part Korean chili paste*
- *1 part seasoned rice vinegar*

Directions

1. For Korean chili wing sauce: in a medium saucepan over medium heat, whisk butter, chili paste and rice vinegar together until butter melts and sauce becomes smooth. Set aside.
2. Take swordfish vertebrae and cut between each vertebrae (there is a sweet spot dead center). Scoop jelly disc of marrow into a chilled shot glass rimmed with sugar, add a dash of citrus oil. Save bones.
3. Fry bones (“wings”) for 4-6 minutes in a deep fryer. If you don’t have a fryer, you can pan fry over medium heat for 10-15 min, or season with salt & pepper, then bake at 425F for 20-25 min.
4. Toss in chili sauce. Garnish with cilantro or chopped celery leaves. Serve with bone marrow shots!



Swordfish wings.

Photo: Sam Wells, Chef Epic.



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SWORDFISH BELLY PASTRAMI

Davin Waite, [Wrench & Rodent Seabasstropub](#)

Ingredients

- **2 swordfish bellies**
- *1.5 cups brown sugar*
- *1 tbsp salt*
- *1 tbsp pepper*
- *2 cups applewood chips (soaked in water or vinegar)*
- *mesquite charcoal*

Directions

1. Cut bellies into 1/2 inch wide strips. Mix brown sugar with salt & pepper, then generously coat strips of belly. Place on a tray, refrigerate overnight.
2. Light up your BBQ. Mesquite charcoal is best. Keep charcoal to one side of BBQ so glowing coals are not directly under the fish. Aim for 150-180F, but don't stress - swordfish is forgiving.
3. When BBQ is ready, place fish as far from coals as possible. Add small handfuls of soaked wood chips directly into coals every 20-30 minutes to keep a continuous smoke going. Cover, cook for 45-120 min.
4. Let cool. Slice thinly and use in place of any lunch meat, or pan fry and eat with eggs for breakfast!



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BASIL MINT SWORDFISH STEAKS

Oriana Poindexter

Ingredients

- **4 swordfish steaks**
- *olive oil*
- *3 tbsp fresh mint leaves*
- *3 tbsp fresh basil leaves*
- *2 tbsp salted capers*
- *1 clove garlic*
- *1 lemon*
- *salt & pepper to taste*

Directions

1. Rinse salted capers in running water to remove salt. Finely chop capers, garlic, mint and basil leaves. Combine in a small bowl with olive oil to taste.
2. Heat a large skillet with olive oil over medium high. Pat steaks dry, season with salt and pepper to taste.
3. Cook steaks 3 minutes per side until just cooked through.
4. Plate steaks, drizzle with a generous amount of the mint-basil topping. Serve with a size of vegetables or rice, and a lemon wedge.



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