

white seabass

Atractoscion nobilis

BIOLOGY FACT SHEET

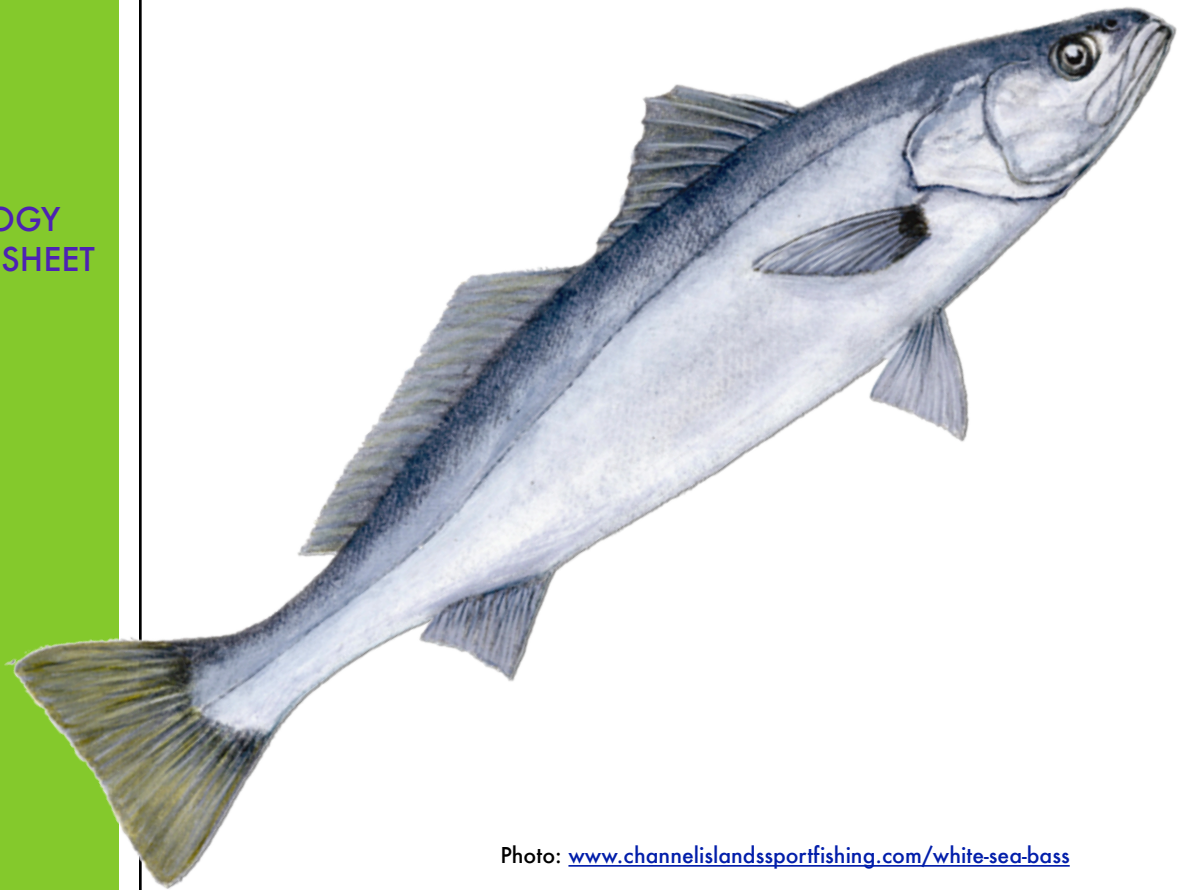


Photo: www.channelislandssportfishing.com/white-sea-bass

San Diego seafood profiles

Taxonomic description

- Largest species of croaker (family: Sciaenidae)
- Emit croaking sounds by hitting the abdominal muscle against the swim bladder [2].
- Large, mobile fish with average size of 9 kg (20 lbs) and just over 1 m (3 ft), but the largest recorded in California was 42 kg (93 lbs) and 1.5 m (5 ft) long [1,2]
- Blue to gray in color on the back, with a silver belly; Juveniles have dark vertical stripes on their back.

Distribution

- Ranges from Magdalena Bay, Baja California, Mexico to the San Francisco area, and in the northern Gulf of California [1,2].
- During the strong El Niño of 1957-1959 (i.e., warm waters), it was found as far north as Juneau, Alaska [2]
- The center of the population seems to be off central Baja California [2].

Life history

- Spawning usually occurs from April to August with a peak in late spring – early summer [1].
- Broadcast spawns: releases gametes in the water for fertilization. Release is usually at night to reduce predation on the eggs, which are the largest (1.3 mm or 0.5" diameter) of any croaker on the west coast [1,2].
- Age of maturity is uncertain, but all have probably spawned at least once by age 6 (81 cm or 32' long) and can live to 20 yrs [2].

Habitat

- Newly hatched seabass inhabit open, shallow coastal waters (4-8 m or 12-30 ft deep) sometimes hanging out in drifting seaweed.
- Juveniles (ages 1-3 yr) may move into protected bays where they use eelgrass beds for cover and feeding grounds; older juveniles are found near piers and jetties with kelp beds nearby.
- Adults use many habitats: rocky reefs, kelp beds, offshore banks or the open ocean. [1]

- Found in schools or as solitary individuals
- Adults prey on Pacific mackerel, Pacific anchovies, Pacific herring, Pacific sardines, market squid and pelagic red crabs. [1,2]
- A mix of human activities (pollution, overfishing and habitat destruction) and natural environmental conditions contributed to the long term decline of this species but spawning in captivity and release of seabass has enhanced populations [1].

References

- [1] Crooke, S., A. Louie. 2006. White Seabass. Status of the Fisheries Report. California Dept. Fish & Wildlife, Available: <http://www.dfg.ca.gov/marine/status/>
- [2] Seafood Watch. 2013. White Seabass. Monterey Bay Aquarium. Available: http://www.montereybayaquarium.org/cr/cr_seafoodwatch

Did you know?

White seabass is not a seabass, it is a member of the Croaker family so named because the males make croaking noises [2].

white seabass

Atractoscion nobilis

FISHERY FACT SHEET



Photo: Hubbs-Sea World Research Institute

San Diego seafood profiles

Seasonal availability

- June–March if the optimum yield remains below 1.2 million lbs for the season

Managing authority

- The Fish & Game Commission partners stakeholders, evaluates stocks, & determines regulations.
- In 2002, the Commission adopted the White Seabass Fishery Management Plan, part of the State Finfish Management Project, requiring annual stock assessment, report & stakeholder meeting. [i,v]
- California Department of Fish & Wildlife enforces regulations, maintains catch records and monitors stocks.

Gear type

- Most drift gillnets, some hook-and-line.
- Gear regulations limit bycatch of non-target species & damage to environment (e.g., set

gillnets were banned in state waters in 1994) [ii, v].

Status of the fishery

- Stocks are recovering off our coast after declines in the mid to late 1900s [i]
- Through Hubbs-Sea World Research Institute in Carlsbad, the Ocean Resources Enhancement & Hatchery Program provides juveniles to 13 grow-out facilities, which release the fish to replenish wild stocks.
- Relatively resilient to fishing pressure given young maturity age, high fecundity, & a fishing season sensitive to breeding season when fish aggregates to spawn
- The 2009-2010 White Seabass Fishery Management Plan Annual Assessment reported no overfishing [iii].
- Monterey Bay Aquarium's "Fish Watch" classification of "Best Choice" when caught by hook-and-line and "Good Alternative" when caught via gillnets [iv]

Potential ecosystem impacts

- Hook-and-line & drift gillnets don't contact the seafloor, but weighted set gillnets can damage seafloor.
- Bycatch of non-target species is minimal due to gear regulations.

References

- [i] Dept of Fish and Game. 2002. Final White Seabass Fishery Management Plan. State of California,.
- [ii] "White Seabass." State Finfish Management Project. California Department of Fish and Wildlife, 2013.
- [iii] Dept of Fish and Game. 2011. White Seabass Fishery Management Plan 2009-2010 Annual Review.
- [iv] Seafood Watch. 2013. "White Seabass." Monterey Bay Aquarium. www.montereybayaquarium.org/cr/cr-seafoodwatch
- [v] Crooke, S., ALouie. 2006. White Seabass. Status of the Fisheries Report. California Dept. Fish & Wildlife, www.dfg.ca.gov/marine/status/
- [vi] Hubbs Sea World Research Inst. 2013. http://www.hswri.org/Save_Your_White_Seabass_Heads.php

Did you know?

Since 1986, over 1.5 million juvenile white seabass have been released along our coast to enhance natural populations. Hubbs-Sea World Research Institute asks fishers to save their seabass heads which, if part of the program, contain a microchip used to track the fish [vi].

white seabass

Atractoscion nobilis

NUTRITION FACT SHEET



Photo: Iain Bagwell; Styling: Mary Clayton Carl

White Sea Bass with Orange-Fennel Relish on www.myrecipes.com

San Diego seafood profiles

Edible portions

- Sold fresh as steaks, fillets, or whole

Culinary uses

- To prepare fresh filets for cooking, cut the fillet down the middle and trim off the dark “blood line” [e.g., 5]
- May be kept frozen
- Typical cooking methods include grill, sear, bake, broil, or sauté, may also be steamed or poached but is firm enough where these methods aren’t necessary.
- Simple recipes are best for this delicious fish- sear skin-on with olive or grapeseed oil and lemon [5].
- Other recipe ideas include: white seabass with orange-fennel relish, miso-glazed with asparagus, Cuban style, and prepared with confetti vegetables with lemon-butter [4]
- Also great cold as a salad topper: slowly simmer the fish in olive oil and then wait until it cools and top salad.

Nutritional information

Mixed species, raw (4.5 oz) [1]

| Nutrition Facts | |
|-----------------------|----------------------|
| Serving Size 129 g | |
| Amount Per Serving | |
| Calories 125 | Calories from Fat 23 |
| % Daily Value* | |
| Total Fat 3g | 4% |
| Saturated Fat 1g | 3% |
| Trans Fat | |
| Cholesterol 53mg | 18% |
| Sodium 88mg | 4% |
| Total Carbohydrate 0g | 0% |
| Dietary Fiber 0g | 0% |
| Sugars 0g | |
| Protein 24g | |
| Vitamin A 5% | Vitamin C 0% |
| Calcium 1% | Iron 2% |

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

NutritionData.com

Description of meat

- Low-fat fish with a mild flavor
- Known for its firm, meaty texture
- Meat has thick, large, white flakes

Toxicity report

- No known contaminants, voted “Best Choice” by Monterey Bay Aquarium [3]

Seasonal availability

- Available in San Diego June–March [2]

References

- [1] “Fish, sea bass, mixed species, raw.” SELF Nutrition Data: Know What You Eat. USDA SR-21. <http://nutritiondata.self.com/facts/finfish-and-shellfish-products/4117/2>.
- [2] Crooke, S. A. Louie.. 2006. White Seabass, *Atractoscion nobilis*. Status of the Fisheries Report 2006. California Department of Fish and Wildlife. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=34417&inline=true>.
- [3] “White Seabass.” Seafood Watch. Monterey Bay Aquarium, n.d. Web. 10 Aug 2013. www.montereybayaquarium.org/cr/seafoodwatch/web/sfw_factsheet.aspx?gid=83.
- [4] This is a great source for all different types of recipes. Yummly, White Seabass Recipes. www.yummly.com/recipes/white-sea-bass
- [5] “Cooking Tips White Seabass: Farmers Market Bag, Catalina Offshore Products.” www.youtube.com/watch?

Did you know?

Because white seabass is so firm, it adapts well to almost any cooking method. In particular, recipes for true sea bass or grouper can be used for this fish.

white sea bass

Atractoscion nobilis

CULINARY INFO SHEET

STEP 1: CLEAN

Tools:

- Cutting Board
- Paring Knife

Method:

1. **SCALE*** Lay fish on cutting board. With one hand, secure tail and with the other, use a knife to scrape off the scales, moving from the tail towards the head. Rinse with cold running water.



Photo Credit: academiabarilla.com [1]

*Depending on the preparation, skin may be left on.

2. **CUT** Beginning towards the tail, make a slice along the belly.
3. **REMOVE** Extract and dispose of the innards.
4. **REMOVE** Insert an index finger into the gill and pull strongly to extract completely. Rinse both the inside and outside of the fish under cold running water.
5. **CUT** Make a slice behind the head down to the bone.
6. **UPPER FILLET** From this cut, move the knife parallel to the cutting board in a saw-like motion, remove the skin with as little flesh as possible. Complete by detaching the skinless fillet.
7. **LOWER FILLET** Use same technique on lower portion of fish, leaving behind the bone.
8. **TRIM** Even out the fillets by slicing off the membrane and portions with blood.
9. **DEBONE** Using the knife, remove any bones remaining from the back of the fillets.

San Diego seafood

STEP 2: PREPARE

TIP: To prevent curling, score raw fish diagonally two-three times and press with a metal spatula while cooking.

Entrée | Pan Seared Sea Bass

Inspired by fisherman Zack Roach; *The Fish Addiction* [2]

Ingredients (serves 4):

- Salt and pepper, to taste
- 2-3 tbsp. flour
- 4 sea bass fillets (skin may remain intact)
- Grape seed OR olive oil, to coat pan
- 1 lemon, quartered



Photo Credit: divaeatsworld.com [3]

Method:

1. Season fillets with salt and pepper. Lightly dust each side with flour.
 2. In a skillet over medium-high, heat enough oil to shallowly coat the bottom of the pan.
 3. Add fillets and cook 3-5 minutes per side, depending on thickness.
 4. Serve with a squeeze of lemon juice.
- If desired, serve with white rice and favorite vegetable.

TIP: When cooking sea bass, flip turns opaque in color 1/4 of the way up fillet. Fish is done cooking when easily flakes with fork.

Entrée | Pan Roasted Sea Bass with Citrus-Heirloom Tomato Vinaigrette

Adapted from *brainfoodblog.wordpress.com* [4]

Ingredients (serves 4):

VINAIGRETTE

- 1 c. heirloom tomatoes, chopped
- 1/4 c. red wine vinegar
- 1 tbsp. Italian parsley, chopped
- 1 tsp. fresh thyme, chopped
- 1 1/2 tbsp. lemon rind, grated
- 1 tbsp. fresh lemon juice
- 1/2 tsp. sea salt
- 1/4 tsp. black pepper
- 1/3 c. extra virgin olive oil or coconut oil (melted)

FISH

- 1 lb. sea bass fillets, with skin
- Salt and pepper, to taste
- 1 tsp. olive oil



Photo Credit: brainfoodblog.wordpress.com [4]

Method:

1. Combine tomatoes and vinegar in saucepan over medium heat and cook for 3 mins.
2. Stir in remaining vinaigrette ingredients.
3. Sprinkle fish with salt and pepper.
4. Add 1 tsp. oil to a cast iron skillet over medium-high heat. Add fillets, skin-side down, and cook for 2 mins.
5. Move skillet to oven and bake at 450° for 5 mins.
6. Serve fillets skin-side up, topped with sauce.

SERVING SUGGESTIONS:

Sea bass is versatile and is best served baked, broiled, fried, sautéed, steamed, smoked or grilled.

OTHER RECIPE IDEAS:

Honey glazed white sea bass; sea bass amandine; cioppino; miso-marinated sea bass.



UC San Diego

References

- [1] Barilla Group. How to Fillet a Sea Bass. Academia Barilla. www.academiabarilla.com/italian-recipes/how-to/filleting-bass.aspx
- [2] Roach, Zack. 2013. *The Fish Addiction*.
- [3] Diva Eats World. Pan Seared Bass W/ Barley-Corn Salsa. www.divaeatsworld.com/?page_id=2146
- [4] H & H Fresh Fish Co. 2012. Cal White Sea Bass. <http://brainfoodblog.wordpress.com/2012/06/12/cal-white-seabass-with-love/>