

# yellowfin tuna

*Thunnus albacares*

## BIOLOGY FACT SHEET

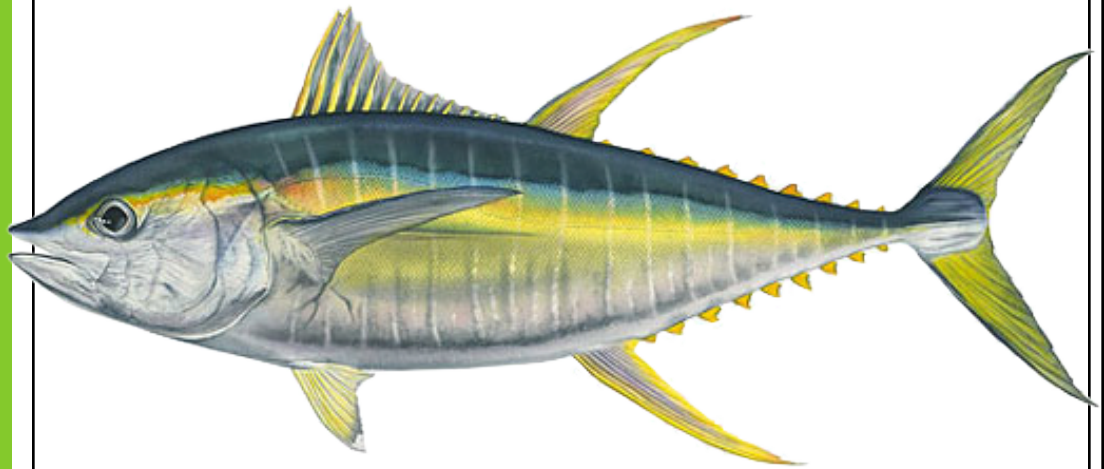


Photo: <http://www.njsaltwaterfisherman.com>

## San Diego seafood profiles

### Taxonomic description

- Sleek torpedo-shaped body for fast movement.
- Coloration: dark blue on the back, changes from yellow to silver down to the belly.
- Dorsal and anal fins are bright yellow giving the fish its name.
- Difficult to distinguish from other tuna species except for the elongated, sickle-shaped dorsal and anal fins found on large adults [2]
- Can grow to be 1.8 m (6 feet) long and over 180 kg (400 lbs) [1]

### Distribution

- Highly migratory fish and are found in warm seas all over the world except the Mediterranean [2].
- Can travel across the entire ocean basin. [1]

### Life history

- Fast growing fish with a somewhat short life span of 6 to 7 years. [1]

- Live 8 yrs, but most are mature enough to reproduce around age 2 or 3 [2].
- Spawn at sea throughout the year in tropical waters, and in spring –summer in cooler waters. [1,2]
- 24° C (75° F) is thought to be the lowest temperature limit for spawning. [2]
- Can produce two to seven million eggs per spawn. [2]

### Habitat

- Travel in schools of similarly sized fish [??wiki]
- Mostly found in the surface layer ( $\leq 100$  m or 330 ft) of the open ocean above the thermocline, but capable of diving over 1000 m (3300 ft) [1]
- Typically found in water temperatures between 15° – 31° C (59° - 88° F). [3]
- Known to make migratory trips to higher latitudes as the temperature of the water increases. [1]
- Gather in areas with high productivity where smaller prey is available.

- Feed opportunistically in open ocean on small fish, squid and invertebrates such as pelagic crabs [2,3]
- Predators include sharks, billfish and large marine mammals.

### References

- [1] FishWatch. 2013. Yellowfin Tuna. National Oceanic and Atmospheric Administration (NOAA) Fish Watch & Seafood Profiles. [www.fishwatch.gov/seafood\\_profiles/species/tuna/species\\_pages/pacific\\_yellowfin\\_tuna.htm](http://www.fishwatch.gov/seafood_profiles/species/tuna/species_pages/pacific_yellowfin_tuna.htm)
- [2] South Atlantic Fishery Management Council. 2013. Yellowfin Tuna. [www.safmc.net/fishidandregs/fishgallery/yellowfintuna/tabid/257/default.aspx](http://www.safmc.net/fishidandregs/fishgallery/yellowfintuna/tabid/257/default.aspx)
- [3] Froese, R., Pauly, D., eds. 2008. "Thunnus albacares" in FishBase. [www.fishbase.org/summary/SpeciesSummary.php?genusname=Thunnus&speciesname=albacares](http://www.fishbase.org/summary/SpeciesSummary.php?genusname=Thunnus&speciesname=albacares)
- [4] Horst, J. 2013. Yellowfin! Louisiana Fisheries. [www.seagrantfish.lsu.edu/resources/factsheets/yellowfin.htm](http://www.seagrantfish.lsu.edu/resources/factsheets/yellowfin.htm)

### Did you know?

No other fish can swim as fast or far as tuna; its fins help reduce turbulence and drag as it swims through the water [4].

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## FISHERY FACT SHEET



Photo: Point Loma Sportfishing

## San Diego seafood profiles

### Seasonal availability

- Fishery open year-round, mostly recreational off San Diego in August & September

### Managing authority

- Managed federally under the Highly Migratory Species Fisheries Management Plan where NOAA & the Pacific Fishery Management Council establish permit & operational requirements, gear restrictions, & mandatory workshops for fishers [i].
- As a member of the Inter-American Tropical Tuna Commission (IATTC), the U.S. has implemented purse seine fishery closure & catch retainment requirements to limit illegal discarding of undersized tuna [i]
- International Dolphin Conservation Program sets guidelines to reduce bycatch of dolphins & undersized tuna [i]

### Gear type

- Mostly purse seines, but troll, hook-and-line, & pelagic longlines are also used. Hook and line is used recreationally.

### Status of the fishery

- NOAA defines population as “abundant” and fishing rate as “sustainable” [i]
- Monterey Bay Aquarium’s “Fish Watch” lists hook-and-line tuna as “Best Choice” [ii]
- Most regulations focus on reducing the catch and mortality of non-target species.
- U.S. fishermen responsibly harvest tuna by following strict international and domestic regulations aimed at reducing fishery impacts on other species (e.g., longliners use special hooks and bait that reduce bycatch; fishers train in the safe release of non-target species; vessels are regularly monitored by scientists & managers who reassess management actions as needed [i])

### Potential ecosystem impacts

- Species is fairly resistant to fishing pressure given early maturing, high fecundity, moderate life span, & wide distribution [iii]
- Troll & hook-and-line have relatively low bycatch [i] whereas purse seines and long lines potentially result in moderate to high bycatch of species associated with yellowfin

schools if actions are not taken to reduce bycatch and mortality rates [i]

- Purse seiners using fish aggregating devices (FADs, manmade floating objects) to attract yellowfin must take precautions to avoid bycatch of juvenile yellowfin & non-target pelagic species.

### References

- [i] FishWatch: 2013. Pacific Yellowfin Tuna. NOAA. [www.fishwatch.gov/seafood\\_profiles/species/tuna/species\\_pages/pacific\\_yellowfin\\_tuna.htm](http://www.fishwatch.gov/seafood_profiles/species/tuna/species_pages/pacific_yellowfin_tuna.htm).
- [ii] Seafood Watch: 2013. Yellowfin Tuna. Monterey Bay Aquarium. [www.montereybayaquarium.org/cr/seafoodwatch/web/sfw\\_factsheet.aspx?fid=219](http://www.montereybayaquarium.org/cr/seafoodwatch/web/sfw_factsheet.aspx?fid=219).
- [iii] Roberts, S. 2010. Seafood Watch Yellowfin Tuna Report. Monterey Bay Aquarium. Monterey Bay Aquarium. [www.montereybayaquarium.org/cr/cr\\_seafoodwatch/content/media/mba\\_seafoodwatch\\_yellowfintunareport.pdf](http://www.montereybayaquarium.org/cr/cr_seafoodwatch/content/media/mba_seafoodwatch_yellowfintunareport.pdf).
- [iv] “Highly Migratory Species: Background.” Pacific Fishery Management Council. Pacific Fishery Management Council, 20 Nov. 2012. Web. 10 Aug. 2013. [www.pccouncil.org/highly-migratory-species/background/](http://www.pccouncil.org/highly-migratory-species/background/)

### Did you know?

Yellowfin tuna, like other tuna species, is highly migratory. It can travel across entire ocean basins and therefore requires cooperative international management to ensure its abundance and sustainability [i].

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## NUTRITION FACT SHEET



tuna poke- recipe from norecipes.com

## San Diego seafood profiles

### Edible portions

- Usually sold as rounds, loins, or steaks

### Description of meat

- Mild, meaty flavor; firm texture
- The flesh has a deep red color when raw

### Culinary uses

- Eaten raw or cooked, but this fish loses its flavor & dries out when well-done [5].
- May be frozen, but tightly wrap in plastic & keep it out of direct contact with ice or water to ensure a longer shelf-life
- Common preparations are to grill or sear the outside leaving the center rare [6].
- Before cooking, season the steaks (this can be as simple as salt & pepper)
- Searing is easy- heat oil in pan over medium-heat, then place & cook the seasoned steak to desired temperature
- Common recipes include seared ahi, ahi burgers, ahi tacos, ahi salads, sesame crusted tuna, ahi tuna steak,

### Nutritional information

Raw (3 oz, 85 g) [1]

Nutrition Facts	
Serving Size 85 g	
Amount Per Serving	
Calories 92	Calories from Fat 7
% Daily Value*	
Total Fat 1g	1%
Saturated Fat 0g	1%
Trans Fat	
Cholesterol 38mg	13%
Sodium 31mg	1%
Total Carbohydrate 0g	0%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 20g	
Vitamin A 1%	Vitamin C 1%
Calcium 1%	Iron 3%
*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	

### Toxicity report

- No consumption advisories are listed for troll or pole-caught yellowfin as these methods catch younger tuna with lower mercury levels [3]

- Potential for mercury accumulation in larger tuna only (caught by seine or longline). Recommended servings that can safely be eaten per month are 4 or more for adults, 3 for kids 6-12 yr old, 3 for kids 0-5 yr old [4]

### Seasonal availability

- Fresh in San Diego August–September [2]

### References

- [1] SELF Nutrition Data: Know What You Eat. 2013. Fish, tuna, fresh, yellowfin, raw-. <http://nutritiondata.self.com/facts/finfish-and-shellfish-products/4150/2>.
- [2] California Dept. of Fish & Wildlife. 2013. Marine Sportfish Identification: Tunas & Mackerels.. [www.dfg.ca.gov/marine/mspcont1.asp](http://www.dfg.ca.gov/marine/mspcont1.asp).
- [3] Monterey Bay Aquarium. 2013. "Yellowfin tuna." Seafood Watch. [www.montereybayaquarium.org/cr/SeafoodWatch/web/sfw\\_factsheet.aspx?fid=219](http://www.montereybayaquarium.org/cr/SeafoodWatch/web/sfw_factsheet.aspx?fid=219).
- [4] EDF Seafood Selector. 2013. Tuna. Environmental Defense Fund. <http://seafood.edf.org/tuna>.
- [5] Riches, D.. 2013. Grilling Tuna: Rare or well you need to know the best method for grilling tuna. About.com. <http://bbq.about.com/od/fishandseafood/a/qa103004a.htm>
- [6] Bauer, E.. 2006. Seared Ahi Tuna. Simply Recipes. [http://www.simplyrecipes.com/recipes/seared\\_ahi\\_tuna/](http://www.simplyrecipes.com/recipes/seared_ahi_tuna/)

### Did you know?

Yellowfin is sold as "light tuna" when canned, is called "ahi" when sold fresh or frozen, and called "maguro" when in sushi [3].

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## CULINARY INFO SHEET

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## STEP 1: CLEAN

### Tools:

- Cutting Board
- Fillet Knife

### Method:

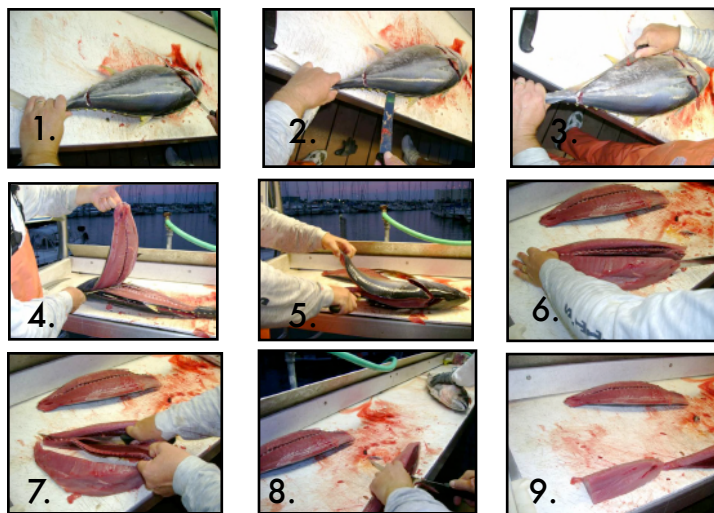


Photo Credit: bdoutdoors.com

1. **CUT** Slice downward, just behind the gills, until knife reach the spine. Leaving knife an inch deep, slice towards the tail. Once at tail, slice along the belly up to the gills. Repeat this 360° cut until fillet is sliced just above the spine. At this point, flip to the other side, still leaving fillet intact (Photos 1-3).
2. **FILLET** On both sides, continue the cut immediately above the bone to create two fillets connected right on top of the spine (Photos 4-5).
3. **SEPARATE** Slice beneath each fillet towards the head to disconnect. Flesh above the spine may be used for sushi (Photo 6).
4. **DEBONE** Slicing at an angle, cut out the rib section on each fillet.
5. **SCALE** Remove the skin off of each fillet, only doing a small portion per cut for larger fish (Photo 7).
6. **TRIM** Slice off the concave piece of very dark meat (Photo 8).
7. **PORTION** Slice into desired size for cooking.

## STEP 2: PREPARE

**TIP:** Avoid overcooking tuna given that it hardens as it cooks. Take it off heat when the center is still red/pink.

### Entrée | Tuscan-Style Grilled Tuna Steaks

Adapted from [rachelraey.com](http://rachelraey.com) [2]

#### Ingredients (serves 4):

- 4 (8 oz., 1 inch thick) tuna steaks
- 1 lemon, zested
- 3 (2 tbsp) fresh rosemary, only leaves
- Handful flat leaf parsley
- 3 cloves garlic, crushed
- Salt and pepper, to taste
- Extra virgin olive oil

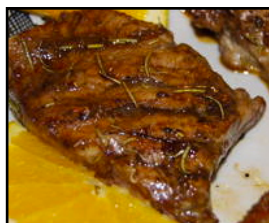


Photo Credit: rachaelray.com

#### Method:

1. Rinse tuna steaks and pat dry.
2. On a cutting board, chop lemon zest, rosemary, parsley and garlic together. Once chopped, mix in salt and pepper.
3. Drizzle olive oil over both sides of each steak.
4. Rub herb and garlic mixture evenly into fish and let stand 10 mins.
5. Grill tuna steaks for 4-6 mins on each side (on high heat on indoor electric grill; medium-high heat on outdoor gas grill; 6 inches from hot charcoal).

### Entrée | Sesame Crusted Tuna with Wasabi-Ponzu Sauce

Adapted from [yummly.com](http://yummly.com) [4]

#### Ingredients (serves 4):

##### SAUCE

- 1 tbsp. green onions, chopped
- 2 tbsp. low sodium soy sauce
- 2 tbsp. orange juice
- 1 tbsp. rice vinegar
- 1 tsp. brown sugar
- 1 tsp. lemon rind, grated
- 2 tsp. lemon juice
- 2 tsp. honey
- 1 1/4 tsp. prepared wasabi paste
- 1 tsp. fresh peeled ginger, grated
- 2 tsp. vegetable oil

##### FISH

- 4 (6 oz., 3/4 inch thick) tuna steaks
- 1/4 tsp. salt
- 3 tbsp. sesame seeds\*
- 2 tbsp. black sesame seeds\*
- (Optional) green onions, sliced

#### Method:

1. In a bowl, whisk together all sauce ingredients.
2. Heat oil in a nonstick skillet over medium-high heat.
3. Sprinkle salt on tuna.
4. In a shallow dish, combine sesame seeds and dredge both side of tuna in them.
5. Add tuna to pan. Cook 3 minutes or as well done as preferred. Be cautious of hot sesame seeds popping from pan.
6. If desired, garnish with green onions. Serve with sauce.

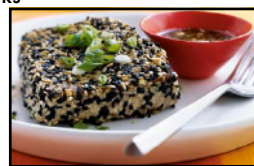


Photo Credit:  
[yummly.com](http://yummly.com)

#### SERVING SUGGESTIONS:

Yellowfin tuna is best served raw, grilled, pan seared, fried, broiled, or baked.

#### OTHER RECIPE IDEAS:

Sashimi; ceviche; poke; yellowfin burgers; tuna confit; marmitako; grilled over citrus; tuna salad.

Search for recipes online under the name, "ahi".



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#### References

- [1] Goodwin, Scott. 2012. A Better Way to Fillet Tuna. BD Outdoors. [www.bdoutdoors.com/article/how-to-fillet-tuna/](http://www.bdoutdoors.com/article/how-to-fillet-tuna/)
- [2] Ray, Rachael. 2007. Tuscan-Style Grilled Tuna Steaks. Rachael Ray. [www.rachaelray.com/recipe.php?recipe\\_id=275](http://www.rachaelray.com/recipe.php?recipe_id=275)
- [3] Bonom, David. 2004. Sesame Crusted Tuna with Wasabi-Ponzu Sauce. Yummly. [www.yummly.com/recipe/external/Sesame\\_crusted-Tuna-With-Wasabi-ponzu-Sauce-My-Recipes](http://www.yummly.com/recipe/external/Sesame_crusted-Tuna-With-Wasabi-ponzu-Sauce-My-Recipes)