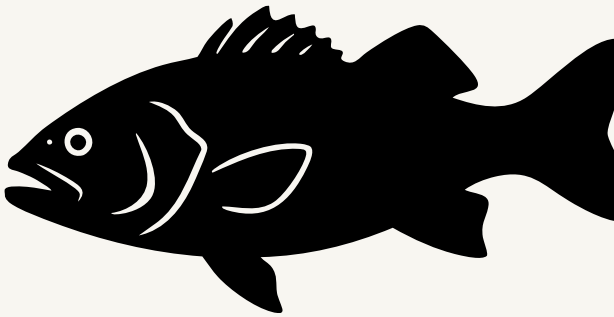
10-17-2025 KELP FOREST TIMES Ella Engel

Citizen Scienists Spotting Sea Bass: A win-win-win situation

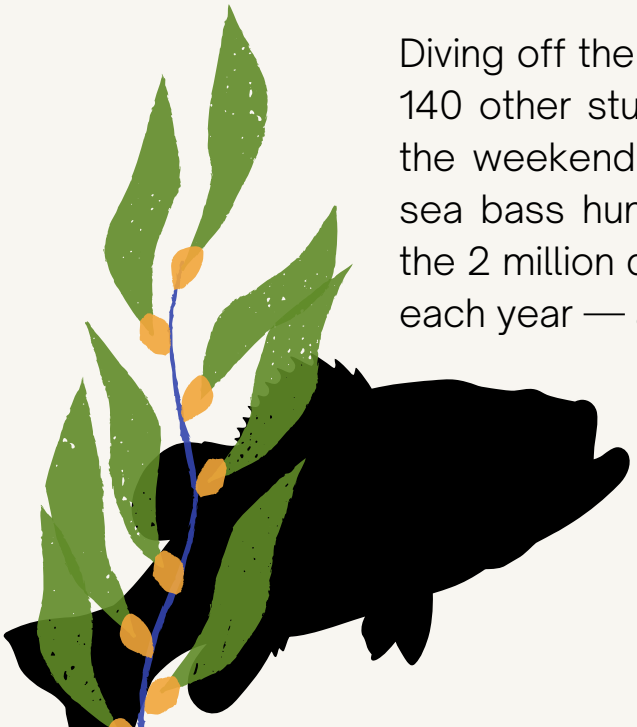
THE FIRST TIME I SAW A GIANT SEA BASS, I ALMOST STOPPED BREATHING IN MY REGULATOR.

Subtly hiding amongst the lush kelp forests, its massive black figure cast a shadow over the rocky ocean floor. The nearly 600-pound giant was frozen in space (or more accurately frozen in water) just a few feet higher than where I peered up at it from — roughly 55 feet below the surface.



With giant sea bass, where there is one, there are several. So by the time I surfaced from what was one of my all-time most memorable dives, I had seen 9 giant sea bass, or “GSBs” as my dive buddies and I lovingly refer to them.

Their population is scarce — upon surfacing, I recalled my ecology teacher's pessimistic estimate: less than 1000 total. I did some quick mental math. Had I just seen like 1% of the entire Giant Black Sea Bass population in Southern California?



Diving off the coast of Santa Catalina Island for the weekend with 140 other students from UCSB’s scuba club, our motivations for the weekend could be described clear-cut: we were on a giant sea bass hunt. This group trip was a shameless contribution to the 2 million dollars GSB’s bring to the recreational diving industry each year — a crucial part of their conservation story.

The tale of these fish's designation on the endangered species list is all too familiar; they were fished to near extinction from the late 1800s to the early 1980s, and earned their spot on the critically endangered list in 1996.

Since receiving this unfortunate status, California has banned the use of set gillnets (massive nets used for commercial fishing, notorious for scooping up unintended victims) within three nautical miles of the mainland and one nautical mile of the Channel Islands. The state has also since cracked down on the rules regarding bycatch, limiting boats in California to keeping one “accidental” GSB per trip.

Gill net on a commerical fishing boat

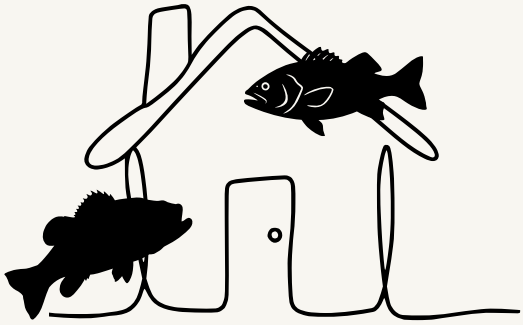
Unfortunately though, a limit is not, in practice, equivalent to a ban. There have been an average of over 125 giant sea bass caught in gillnets every year since 1944, and an upward trend is underway. In 2022, it is estimated that 180 of the fish were killed and sold through this loophole, which allows them to stay on the market. With their numbers at an all-time low and on the decline, it’s more important than ever to protect them.

Back in the water on that spectacular-seabass-sighting dive, what my friends and I hadn’t realized was that just by having a GoPro with us, we were playing an active role in the conservation of these great creatures. My roommate managed to snap the money shot, several of the beasts in one frame, and submitted her photos to the Spotting Giant Black Sea Bass project, a UCSB-born initiative to monitor giant sea bass populations. In doing so, she became a citizen scientist (and just as importantly, won a cool free hoodie.)

Giant Sea Bass showing off it’s unique spot pattern

Much like humans have unique fingerprints, every giant sea bass has a unique spot pattern, a crucial element to the framework of picture-based identification. Since the project’s conception in 2016, divers and fishermen have submitted over 1500 photos to Spotting Giant Sea Bass, supplying researchers with ample data to perform population estimates.

Besides their distinctive spot pattern, the fish's tendency to claim residency in one area, not known for venturing more than 30 miles away from their home base, also makes them a great candidate for picture identification. Tourists run up the same dive sites, fish don't go too far, so there is no need for advanced tracking methods or the hassle of catch-and-release identification. Though this double-edged sword also means researchers have been forced to account for a possible undersampling of areas that are not popularly frequented by recreational divers.



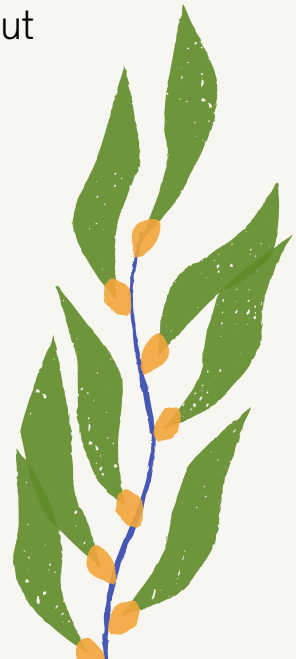
It also means that researchers can't completely rely on the free labor of enthusiastic divers.

In partnership with the submissions from the public, scientists have also set up baited underwater cameras and utilize skilled research divers, both tools that can go deeper than the regular-joe recreational diver.

Between 2015 and 2022, with the help of these scuba-pseudo-scientists, a population estimate found there to be just over 1200 adult giant sea bass in Southern California.

Reaching this population estimate is a testament to the power of community-compelled conservation, an effort that is truly a win-win-win. Giant sea bass don't undergo disruptive and potentially harmful catch-and-release tagging programs; scientists receive a plethora of data with comparatively little equipment, and the community is engaged and excited about marine conservation efforts.

While the giant sea bass population still has a long way to go before earning a dismissal from the critically endangered list, citizen scientists (some even without knowing) have put their population on a path to success.



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