



For those citizen scientists lucky enough to find one or more of the species on their weekly Fish List, purchasing seafood was just the beginning. Taking it home, imagining what to do with it, and seeking a helping hand from a friend or the Internet were all parts of the adventure. Then, perhaps after some initial trepidation, citizen scientists headed to the kitchen or the grill, where they grabbed a knife, a skillet, an oven mitt, or any other necessary accouterments, and dove head-first into the challenge of preparing their research subjects for dinner. Their journey of discovery led to the production of valuable data on the ways that aspects such as prior familiarity, product form, availability of recipes and advice, and choice of cooking method play a role in how seafood consumers respond when trying new species. These journeys also highlighted the importance of practice, education, and mutual support in expanding consumers' seafood horizons.

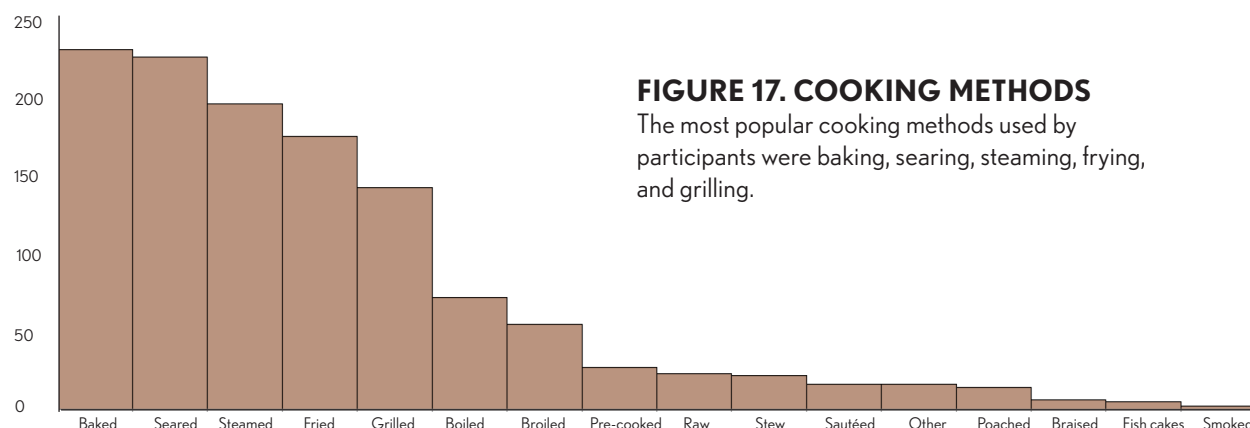


FIGURE 17. COOKING METHODS

The most popular cooking methods used by participants were baking, searing, steaming, frying, and grilling.

CULINARY PRACTICALITY

Participants reflected on their cooking experience by assigning each species a culinary practicality score of 1-5 (with 5 being the easiest to prepare and 1 being the hardest). The "Top 10" lists below are based on averaging all scores given to each species over the study period. Averages are given in parentheses, followed by the number of times each species was prepared. Since sample size varied widely due to the fact that some species were much harder to find in the market than others, the robustness of these averages can be highly variable.

Participants tended to give higher culinary practicality scores to fish that came in fillet form and/or were more familiar. Fish and shellfish that were small and often found whole or live tended to receive lower scores. Practicality was influenced not only by the species but also by the way participants chose to prepare them, so an individual participant may have given a single species different scores at different times during the study period.

"EASIEST TO PREPARE" SPECIES

(arranged from most extreme to more moderate)

1. John Dory (5.00, n=3)
2. Grey sole (4.90, n=10)
3. Herring (4.86, n=7)
4. White hake (4.83, n=18)
5. Tuna (4.80, n=41)
6. Summer flounder (4.80, n=20) and Tautog (4.80, n=5)
7. Haddock (4.78, n=81)
8. Peekytoe crab (4.77, n=13)
9. Swordfish (4.75, n=56)
10. Cod (4.73, n=76)

"HARDEST TO PREPARE" SPECIES

(arranged from most extreme to more moderate)

1. Whelks (3.00, n=6)
2. Sea robin (3.50, n=2)
3. Scup (3.53, n=15)
4. Tilefish (3.67, n=3)
5. Whiting (4.00, n=7) and Butterfish (4.00, n=4)
6. Jonah crab (4.07, n=28)
7. Monkfish (4.11, n=35)
8. Mackerel (4.14, n=14)
9. Squid (4.23, n=44)
10. Acadian redfish (4.27, n=11)

SEEKING ADVICE

The frequency with which participants sought advice on cooking their purchased species can be seen as an indicator of confidence in the kitchen. In their Fish Stories, many participants confirmed that they typically sought advice for species that were less familiar to them. However, participants also searched for advice on new ways to prepare well-known favorites.

Citizen scientists sought advice on preparing their seafood 27 percent of the time. Participants overwhelmingly took to the Internet to obtain advice about preparing their species. Many watched YouTube videos showing how to fillet a fish. Another popular source of cooking advice was the person standing on the opposite side of the seafood counter (or the fisherman, in the case of direct-from-the-boat seafood sales). As stated in the At the Market section of this report, participants really enjoyed interacting with some fishmongers, and they valued their advice. In fact, knowledgeable and friendly fishmongers proved themselves to be essential trail guides for many an adventurous but bewildered citizen scientist. Participants also sought advice from cookbooks, friends, and magazines.

Surprisingly, participants did not rely on retail handouts at all. It may be that there were no retail handouts available, or perhaps participants did not find them useful or appealing. Retail handouts may also have not been relevant to the species that the participants were purchasing.

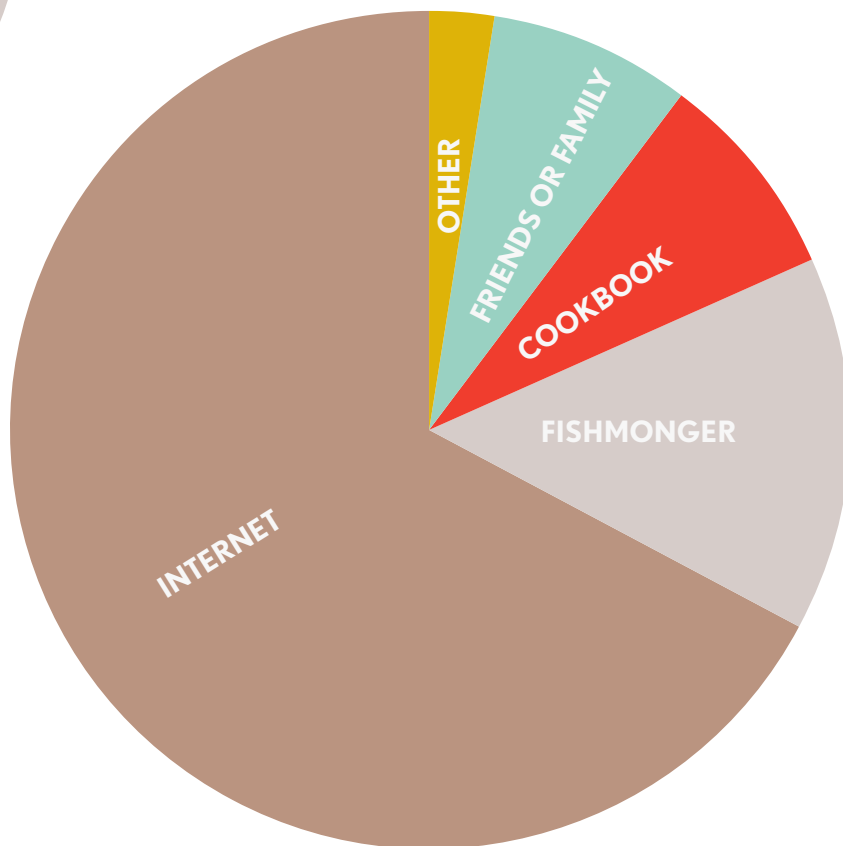


FIGURE 19. SOURCES OF ADVICE

This pie chart shows the sources of advice that participants used when preparing their seafood. The “other” category includes magazines, newspapers, and other members of the Eat Like a Fish Facebook group.

FIGURE 18. SEEKING ADVICE

Citizen scientist participants sought advice on preparing their purchased species 27 percent of the time.



COOKING TALES

Participants used the Fish Story entry form to recount their successes, failures, and surprises in the kitchen. Despite a few frustrations, their experiences were overwhelmingly positive. Of particular interest to this study, participants shared 158 stories about cooking new seafood species at home for the first time. While not every new species was a winner (some participants were put off by bones and small-bodied whole fish), the majority of first-time seafood experiments were deemed resounding successes! Over the course of the project, many participants found their groove in the kitchen and developed a lasting enthusiasm for pushing the boundaries of their seafood comfort zone.

THEME 1: COOKING WHOLE FISH IS EMPOWERING

Some local fish and shellfish are more commonly found whole in the marketplace, rather than processed. This can be due to their small size or a lack of processing infrastructure. Many citizen scientists had never cooked with whole fish before the project, and it was a notable event for them and their households. Reflecting this novelty, participants shared 73 stories about cooking with whole fish or shellfish. Some enjoyed expanding their culinary skills while others found dealing with a whole fish or shellfish at home to be difficult or messy.



SCUP, DEBORAH MAGER

"This was the first time I have ever eaten a scup and a whole fish. I was worried about the bones but they were very easy to see and pick out. I was surprised at how much I actually enjoyed it! It was fun to prepare and cook."

- LISA JAROSIK,
CONNECTICUT



SCUP, JEAN DAO



BUTTERFISH, CHRIS DODGE

"Whole butterfish were quite the interesting experience, and I really enjoyed my first attempt at cooking and eating whole fish and doing it with a brand new species for me. I expected these to be a lot fishier and honestly gross, but I was pleasantly surprised."

- CHRIS DODGE,
CONNECTICUT

"This was my first time cooking with a whole fish. They gutted it for me at the store, but I asked them to leave the head and fins on to see what it was like. Trimming the fins off wasn't difficult, and now I have fish heads for stock!"

- CATHY PEDTKE,
MASSACHUSETTS



JONAH CRAB, SAMANTHA BAASCH

"I wanted to try Jonah crab for the flavor, but I've never cooked a crustacean before, so it was a daunting prospect. I got my crab from the fish market and could hear him rustling around in the bag the whole ride home. The woman at the market told me that steaming was the proper cooking method. So I asked my best friend, Google, how to steam a Jonah crab. Unfortunately, most of Google's advice was for how to cook Jonah claws, not the whole crab. I followed the advice as best I could, kind of winging it. I then watched about four different YouTube videos of how to process the crab correctly. It was much more difficult than I had anticipated and I splattered my computer with crab juices multiple times. I don't think on the whole it was too bad for my first time. I had initially planned on putting the crab meat in another recipe, but I got hungry after all the processing. I ended up eating all the meat as I was going. Despite the difficulty, the meat was fantastic. I thought it was absolutely delicious."

- MAGGIE HEINICHEN, MASSACHUSETTS

"Armed with very little experience filleting fish, and no proper knife for the job, I did what most of us do. I took to the Internet. There, a YouTube video showed how to fillet an ocean perch [Acadian redfish], which is notoriously bony, and eliminate most of the bones. I managed to get two small boneless fillets out of the fish and baked them, skin side down. I created a dry mix of apple-smoked kelp flakes and panko, salt, and pepper, and dusted the tops of the fillets after a drizzle of olive oil. I baked them at 350 [degrees] for about 15 minutes and then hit them with the broiler for a few minutes. Served with julienne carrots, roasted cauliflower, and a garden salad. A very nice meal."

- PAUL ANDERSON, MAINE

"I was a bit intimidated by the idea of cleaning the squid, but it was really quite easy and quick. Though I had been instructed to wear rubber gloves, the black ink wasn't a problem. It just washed down the sink and didn't stain anywhere. I was thrilled with how the dish came out. I sautéed up the squid, in about two minutes, and served it with a lemon aioli sauce on a bed of lettuce. It was a big hit with my husband and me and our dinner guests!"

- ELLEN GRANT, MAINE



SQUID, ANDREA MCCARTHY

THEME 2: WHOLE FISH, SMALL SIZE A CHALLENGE

Although participants enjoyed cooking their seafood most of the time, not every species was an instant keeper. When meals met with rejection, it was usually due to a species being bony or small in size, both of which presented challenges in the kitchen and on the table. Additionally, whole fish were not for everyone; although many participants described a sense of excitement about learning to cook with whole fish, some preferred sticking to the relatively "safe" approach of having their fish scaled, gutted, and/or filleted by their fishmonger.



CHANNELED WHELK, CRAIG GOGAN

"The scup was tasty and my family enjoyed it deep fried as 'fish nuggets.' But I did not like having to scale, gut, and fillet the fish myself. I watched a couple of videos to help with this, but I still did not do a great job, which is why I am calling my dish 'fish nuggets....' I purchased four whole fish at \$0.99 per pound, weighing about six pounds total. I weighed the resulting filleted fish and found I had just under a pound. So the price of the usable fish was around \$6/pound. I would gladly pay \$6 a pound and not have my kitchen covered with fish scales and fish guts when I am done!"

- BARBARA ROTGER, MASSACHUSETTS

"I found the Acadian redfish. Not the prettiest fish in the sea, with its big, beady eyes looking up at me, and redish skin. From the look of it, one might think it was caught in some red sea and parts of that sea stuck to it even after trying to rinse it off. I struggled to pick some up based on these impressions. I thought to myself how I wouldn't buy this if it wasn't for the science project. I even automatically tilted backwards as I put the fish in my bag. Even now as I think about it, my face frowns, much like the big-lipped, frowny face of this fish. As I mentioned before, the folks at Harbor Fish cleaned and gutted the fish, offered to chop off the head, but I thought for presentation purposes I'd have them leave it. After working with this fish however, next time I would forget about the presentation and not only allow, but *insist*, they chop off its head."

- CHRISTINE DEVITO, MAINE

THEME 3: A BOOST IN SKILLS AND CONFIDENCE

Some participants had never cooked a lot of these seafood species before. If they had tasted some of them at all, it had been at a restaurant, prepared by a chef, away from view. Through the practice of cooking seafood at home and trying new recipes and techniques, participants expanded their culinary skills and gained new confidence and repertoires. By the end of the 26-week study period, their comfort level working with local seafood had greatly improved.



"I was excited to find grey sole in the market. I usually buy the whole fish, but they only had fillets available. I bought some Maine crab meat also, and prepared the fish by baking it with a crab meat stuffing. I am still amazed at how my cooking skills have developed over the course of this project. The more I handle different species and different cuts of fish, I am able to judge how the fish will respond and taste. It has been several weeks since I have used a recipe! When the project first started, I scoured the Internet for cooking processes and YouTube videos (what do I do with a whole squid?!)"

- RACHEL FECTEAU, MAINE



"Who wants to cook when it's 90 degrees outside? I've been making any fish I can into ceviche. Before this study, I would've been a little concerned about making ceviche safely at home, but I've learned a lot about the fish I've eaten through Internet research and recipe searches, and I'm more confident knowing the fish I'm buying now is local and very fresh."

- CATHY PEDTKE, MASSACHUSETTS



"I have eaten sea bass out in restaurants before and really enjoyed it, but have never cooked it at home before or even thought about purchasing it to cook at home. I definitely will be having black sea bass more often now that I will be cooking it at home."

- DEBORAH MAGER, CONNECTICUT



"I cooked ocean quahogs steamed in butter, white wine, a little bit of homemade vegetable broth, with green onions and parsley. Served with angel hair pasta and some Parmesan cheese. This is the third or fourth time I've cooked mollusks like this so far for the study. One great benefit of the study, besides getting to try all sorts of seafood, is that I've gotten lots of practice cooking seafood. I now feel super comfortable cooking this particular type of dish, and didn't need to look up a recipe."

- JACOB MATZ, MASSACHUSETTS



TAKEAWAY

For true seafood lovers, novelty is not a turnoff, but an attraction. Our band of eager eaters did not shy away from unfamiliar species, but embraced them head-on, discovering new flavors, skills, and interests in the process.

Fishmongers have an important role to play as a source of advice for preparing unfamiliar species. They can also lend a helping hand by removing a head or filleting a fish for squeamish customers. Without a doubt, the fishmonger interaction is a critical support for customers expanding their seafood horizons.