



Word on the Waves

a publication of the Fisheries Observation Science Program at the Northwest Fisheries Science Center

Observer Spotlight: Isaac Davidson

Observing since 2016
Currently stationed in Eureka

For a mid-west boy, Isaac Davidson is taking to coastal life like a fish to water. He's enjoying the observer experience at sea and on land.

Isaac Davidson likes the great outdoors. Stationed in Eureka, California for the past year, he's enjoying all Humboldt County has to offer: hiking, cycling, swimming, and, when the opportunity arises, cliff jumping. Oh yeah, and observing!

Born and raised in Cincinnati, Ohio, Isaac made his way to the west coast to attend the University of San Di-

ego where he earned his marine science degree. Before graduating,



his Fish Biology professor pointed him to the [American Fisheries Society](#) website, where he found a job posting for observing. The rest is history. He says: "Observing is a great start to my career. The pay is great and it allows me to travel up and down the west coast and experience new things."

Eventually, Isaac plans to return to school to earn his master's degree. He's using his time as an observer to garner new skills and experiences while determining his field of focus. His most recent trip afforded him a few spectacular sights. He recounts, "This trip was amazing. There were an abundance of dolphins and whales off the San Francisco coast. I also got to see the Golden Gate Bridge from below, which was pretty spectacular."

As is true of many observers, Isaac enjoys traveling almost as much as he loves fish. He's traveled to Costa Rica, Great Britain, France, Germany and much of the United States. He's not finished however. "There's still a lot of world out there to explore!" he says.

Isaac's also an avid motorcyclist. He's been riding since high school and is quite skilled in the sport. He's equally comfortable navigating winding mountain roads as he is participating in organized endurance (a.k.a. "enduro") events. He's put 50,000 miles on his current bike and plans to keep that number growing.



From the Program

Jon McVeigh,
Program Manager

Hello Observers!

I hope you're enjoying the summer and staying busy. The Program is in full swing this time of year. Not only are the number of sea days up, but we're also busy preparing our two biggest annual data products: the Groundfish Mortality report and the Pacific Halibut Bycatch report. Both will be submitted to the briefing book for the September Pacific Fisheries Management Council (PFMC) meeting. They will also be available [here](#).

In July, we had our annual Observer Program All-Hands meeting in Newport, OR. Working with staff face-to-face and having engaging discussions for an entire week was both productive and refreshing. We included two sessions that were relevant to observers, which we made available as online video meetings. It was great to engage with observers directly, get their insights, and answer their questions. We hosted a similar session on the new CA ridgeback prawn and cucumber fisheries, which included CA Fish and Wildlife biologists, program staff, and observers. I hope to have more events like this in the future. Please tune in if you can.

Speaking of newly observed fisheries, we have had good success in the Pacific halibut derby fishery this year and have observed the three openers thus far. Thanks to our coordinators, debriefers, and all the observers who have worked hard to make this a success. We'll have more to report once we crunch the data.

Thanks again for your hard work. It is greatly appreciated and valued.

As always, stay safe out there!

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Pyrozome Bloom off the West Coast

John Bieraugel, Crescent City debriefer

Have you noticed a plethora of odd pickle-shaped creatures on the beach? How about in the nets? Wondering what they are? Turns out they're pyrosomes.

Stemming from the Greek *pyro* for fire and *soma* for body, these bioluminescent zooid colonies flash a pale blue-green in the dark. Technically tunicates, they feed off plankton. Their oblong shape is responsible for their catchy moniker, "sea pickles" or "sea tongues."

Pyrosomes usually inhabit warmer seas around the world but are showing up in unprecedented numbers from California to Alaska — and no one knows why.

Their sheer numbers are staggering. A NOAA research vessel netted an

estimated 60,000 in a five minute tow off Oregon in late May. A scientist studying similar creatures for the last 30 years said, "It's just unbelievable how many of them there are". He had not encountered one off our coast until 2014.

One possible reason for their explosive numbers may be the last three years of unusually warm sea water in the California Current, but that hasn't been confirmed.

It's unknown what impact their high density may have on offshore ecology or if any long-term effects will result. For now, they're clogging up trawl nets and salmon trolling hooks in the commercial fleet.

Observers and survey staff have also encountered organisms living inside

pyrosomes (e.g., small medusafish and invertebrates). According to our resident expert, Rick Brodeur (NOAA), "a lot of fish are commensal with jellies at some stage of their life. There may be a commensal relationship with pyrosomes and juvenile medusafish". If you encounter something like this, please snap a picture to share with your debriefer.

Want to know more? Here's an [in-depth article](#) on the creatures. This [National Geographic article](#) includes video footage.



Photo by Jeff Roth, At-Sea Hake Observer

Featured Observer - continued



Isaac is equally enthusiastic and motivated about observing as he is about his other activities. Known for submitting clean data in a timely fashion as well as for his stellar can-do attitude, Isaac is a true asset to the West Coast Groundfish Observer Program. We greatly appreciate his work and efforts. Thank you, Isaac!

Contact Us

Word on the Waves is published quarterly by the [Fisheries Observation Science Program](#) at the Northwest Fisheries Science Center to maintain communications with current observers. We want to hear from you! Please send submissions, suggestions and questions to our newsletter editor, Rebecca Hoch, at rebecca.hoch@noaa.gov. You can also contact your debriefer.



Congratulations Jen Cramer!

We're happy to share that debriefer/trainer, Jen Cramer, was named a 2016 NMFS Team Member of the Year recipient in June. This is an annual award recognizing team members' efforts from all NMFS programs.

Jen started with the the program in 2001 as one of its first observers. She attended the first training in August 2001 and observed out of Astoria, OR from September 2001 to November 2002. In November 2002, she was hired as the first debriefer-only staff member (the other debriefers were the coordinators) working in Newport. She's been debriefing and training ever since.

Congratulations, Jen!



From the Galley

John LaFargue, CA Coordinator

Hand pie, empanada, pasty, Hot Pocket... Who doesn't love a warm, savory meal you can eat on the go? Hand pies have found quite the following worldwide. Be it a smoked marlin empanada in a Mexican beach town or a buffalo chicken hand pie in a northern California college town, there's something very comforting and satisfying about hot fillings wrapped in flaky crusts.

The possibilities for these creations are endless. My favorite empanada shop in Sayulita, Mexico has a huge variety of combinations from sweet corn, chili and cheese to spicy shrimp and chilies. That shop made me realize you can put almost anything in your hand pies.

I started making them as an easy meal to have on hand in the freezer, kind of like Hot Pocket only delicious. I started with traditional fillings like the one below, but have moved on to more experimental fillings. I usually use leftover braised meats: lamb stew, duck curries, whatever's

Empanadas

2 hard-boiled large eggs, chopped
 1 medium onion, finely chopped
 2 tablespoon olive oil
 3 garlic clove, finely chopped
 1 teaspoon ground cumin
 3/4 teaspoon dried oregano
 3/4 teaspoon paprika or other mild chili powder
 1/4 teaspoon chili flake
 3/4 pound ground beef
 2 tablespoons raisins (optional)
 1 1/2 tablespoons chopped pimiento-stuffed green olives
 1 (14-ounce) can whole tomatoes in juice, drained, reserving 2 tablespoons juice, and chopped
 Frozen empanada or pie crusts, better yet homemade.
 1 egg beaten with 2 teaspoons water

Makes approximately one dozen 6-inch empanadas.

Empanada Dough

4 1/2 cups unbleached all-purpose flour
 3 teaspoons salt
 2 sticks cold unsalted butter, cut into 1/2-inch cubes
 2 large eggs
 2/3 cup ice water
 2 tablespoons distilled white vinegar

Sift flour and salt into a large bowl. Blend in butter with your fingertips until mixture resembles coarse meal. Beat egg, water, and vinegar in a small bowl with a fork. Add to flour mixture, stirring until just incorporated. Don't over mix it.

Turn out mixture onto a lightly floured surface. Knead gently with heel of your hand a few times, just enough to bring dough together. Form dough into two flat rectangles. Wrap each in plastic wrap. Chill at least 1 hour but no longer than 6 hours. Form balls of dough a little smaller than a golf ball and let rest for 5 min.

on hand. Other times I'll brown ground meat, add cooked, diced potatoes, carrots, onions, peas and a little Jamaican Jerk sauce.

To freeze them, don't bake them. Put them on a cookie sheet in the freezer and bag once they're frozen. No need to defrost before cooking. Just bake them a few minutes longer to get the crust golden brown.

Try the recipe below, pull some others off the web, or just wrap some leftovers in crust and bake away. Let me know what you come up with.

Cheers!



Filling

Sauté onion in olive oil over medium heat, until softened. Add garlic, cumin, oregano, paprika, and chili flake. Cook, stirring, 1 minute. Stir in beef and cook, breaking up any lumps for 4 or 5 min.

Add raisins, olives, and tomatoes with reserved juice. Cook, stirring occasionally, until liquid is reduced but mixture is still moist, about 5 minutes. Stir in hardboiled egg, season with salt and pepper to taste. Spread the mixture on a plate to cool.

Roll out an empanada disk on a floured surface to measure about 6 inches. Place 3 tablespoons meat mixture on dough. Slightly moisten edges of dough with water and fold over to form a semicircle, then crimp with a fork. Repeat.

Baking instructions

Preheat oven to 400F. Lightly brush empanadas with egg wash and bake until golden brown, about 25-30 minutes. Let cool at least 5 minutes. Serve with favorite hot sauce, warm or at room temperature.

Doings on Land: From Past Time to Published

Every observer has a go-to way of using down time on a trip. Most sleep, many read, some work on their data. Morgan Golding likes to bring knitting. This may not seem unusual, but her needles and yarn are just the tip of the artistic iceberg. On land, her creative endeavors include drawing, painting, mixed media arts, and a number of handcrafts.

Morgan isn't the only observer with artistic proclivities. However, she's recently taken her art to a new level by publishing her first adult coloring book, *COLOR*.

Morgan is a self-taught artist and craftswoman who continually challenges herself with projects that improve her skill set and expand her creative eye. Last summer she challenged herself to draw in pen versus pencil. As she became more comfortable with this process, she noticed adult coloring books. She says, "I started the end of last summer as an experiment, drawing the pages at home and at sea. You know the, "I draw, I can do that," kind of project."

She spent the fall and winter months drawing the pages, computer editing the artwork, designing the cover, and compiling the full document. It's been a long haul. "Beyond the art I didn't know where to start. I don't have a back-

ground in such things. Every aspect of creating the book, post draw, was a learning curve. I had to learn new software programs, like Illustrator and Corel. I had to learn a new language (graphic design), which was unexpected. Now I know why graphic design is a highly skilled field."

The final product was finished in May. She worked with an independent publisher who helped her get it onto a purchasing platform. "Achieving the technical aspects with little to no help was the most satisfying when I finally had a book in my hand," she says.

Morgan's currently working on a fish coloring book. It's only proper, right? Fingers crossed, it'll be ready next spring. If you're interested in viewing Morgan's book, it can be found [here](#).



Fisheries News

Rockfish are long-lived and slow-maturing. This makes managing them as a fishery tricky. NOAA Fisheries scientist Christina Conrath of the Alaska Fisheries Science Center is doing research on their maturity and reproductive cycles to improve stock assessments. You can learn more about her work [here](#).

We're happy to share news of another [whale rescue](#) off the California coast, near Crescent City. Please remember these incidents need to be handled by NOAA's [West Coast Marine Mammal Stranding Network](#). Their hotline number is 1-877-767-9425.

Seasickness can be debilitating and is a common hurdle for observers and fishermen alike. It's a mystery east coast scientists are trying to solve. Here's an article on [their research](#).

Interested in learning what a survey deployment is like? Follow the [2017 West Coast Bottom Trawl Survey's blog](#) for an inside look. If you're interested in participating in a survey, please talk to your debriefer.

We know summertime traffic on Highway 101 can get crazy. However, [this hagfish incident](#) outside Depoe Bay, Oregon upped the ante. What a mess!

News of the incident went viral and received worldwide coverage.



Photo by Oregon Department of Transportation



Ask an Analyst: EM Data and Data Security

Kayleigh Somers, PhD and Jason Jannot, PhD, Analyst Team

Thanks to David Berklund in the NWSC IT Department for asking three great questions to kick off our first Ask an Analyst column. Thanks for participating David! Here are your answers.

1. Is data from the electronic monitoring [program] making its way into the observer database? If so, how is it happening and what steps are needed to make it useable?

The Electronic Monitoring (EM) program is an alternative to observers for quota monitoring in the Catch Shares/IFQ program. Vessels in the EM program must carry electronic monitoring equipment, comply with its use, and follow special discarding and retention rules, as defined in their Vessel Monitoring Plans (VMP). The vessels must carry an observer when requested. Currently, the West Coast Groundfish Observer Program (WCGOP) randomly selects approximately 30% of EM trips using bottom trawl or fixed gear for scientific observation to collect data that EM cannot obtain, such as biological samples. The data from the observed trips is recorded directly into the Fisheries Observation Science (FOS) program's database and undergoes our quality control and quality assurance process.

What happens to the unobserved EM trip data? Our partner, Pacific States Marine Fisheries Commission (PSMFC) supports and maintains the video footage and other data collected by EM vessels. We request those data from PSMFC each year to use in our annual mortality reports and other data products.

During EM's first year (2015), we worked closely with PSMFC to ensure the EM data is as useable as possible. We do a small amount of processing and quality control each year before we use it in our products.

Our biggest challenge is understanding how non-IFQ species are handled and reported. The FOS is committed to reporting the mortality of all species, not just IFQ or managed species. However, the PSMFC EM video reviewers focus on estimating IFQ species discard for quota tracking purposes and non-IFQ protected species for management. Therefore, we use other information sources (e.g., observers, landing receipts) to summarize the catch of non-protected, non-IFQ species. Determining how best to use these other sources is a challenging task. Thanks to observer data, we're better able to provide information about the full environmental impact and efficacy of the EM fleet beyond simple quota management.

For a complete description of the methods used to quantify catch and discards in the EM fleet, see the [Annual Groundfish Mortality Report](#). The 2016 report will be available on the [FOS website](#) in September.

2. Can vessel owners request a summary of an entire year's data?

We collect and maintain confidential and non-confidential data. Confidential data includes business proprietary information, such as fishing locations and amount of target species caught and landed by a single vessel. Vessel and permit owners can request copies of their confidential-level fishing activity for any time period that the fishery has been observed. Available WCGOP data goes back to 2002; At-Sea Hake Observer Program (A-SHOP) data goes back to the 1990's.

Members of the public can't obtain confidential fishing activity for vessels or permits that they don't own. However, non-confidential data describing fishing activity can be requested by any member of the public. To create non-confidential data, we aggregate the data prior to release. Aggregation combines the information from at least three business entities to maintain confidentiality. Specific details of a request might require more entities to be aggregated.

3. How is sensitive information safeguarded from accidental public release?

The FOS is committed to maintaining our data's confidentiality and integrity. Personally Identifiable Information (PII) can't be released to anyone, unless the FOS is legally bound to. PII lives on encrypted, password protected servers and is never released.

Only authorized personnel can obtain Business Proprietary Information (BPI), such as fishing locations or amounts of catch or landings for a single vessel. There are strict guidelines for releasing BPI. We only provide confidential data to requesters via an encrypted, password protected, web application administered by the Department of Commerce. In addition, we aggregate all non-confidential data products and reports to a level that masks any BPI.

Annual FOS All-Hands Retreat: The Recap

The Observer Program's Annual All-Hands Retreat took place in Newport, OR this year. This gave us good weather, the roaring sea and the Hatfield Marine Science Center (HMSC). One of our teambuilding exercises was a photo scavenger hunt around the HMSC. Hence the photos.

Our annual meeting is an opportunity to reconnect, catch up, and have a little fun. This year, we met new OLE officials, talked about database upgrades, and brainstormed about how to make trainings more effective. As with all our retreats, our primary focus is strengthening our connections with each other and improving our ability to support observers and produce high quality data.



Vanessa Tuttle, Ryan Shama
Eli Coplan, Jon McVeigh



Christa Colway, Toby Mitchell
Kayleigh Sommers
John LaFargue



Tim Perritti, Jen Cramer
Jim Benarie, Tom Holland



Jason Jannot, Jason Eibner,
Rebecca Hoch, Taylor Howe



Jason Vestre, Scott Leach
Kate Guthrie, Phillip Bissell



Eric Brasseur, John Bieraugel
Cassandra Donovan, Neil Riley

The Fisheries Observation Science Team

