

# Mole crabs: Local populations appear to be robust

Continued from Page A1

## Familiar sight

The crabs are a familiar sight to any beachcomber in Clatsop County. But with many popular beaches considered “sinks” for microplastics — surveys of beaches in Fort Stevens State Park estimate as many as 11,000 pieces of plastic per square meter, compared to other Oregon Coast beaches that sit at roughly 800 per square meter — plastic pollution has been a part of the crabs’ environment for a long time.

Mole crabs live for only a year or two. With such short life spans, quick adaptation may be possible. Studies of other animals have found certain fish species are more likely to ingest plastic when in different life stages, and some creatures seem to be unfazed by plastic, eating it and passing it without issues.

“We’re looking at things now, but maybe they’ve adapted in some way and we just missed that part,” Horn said.

And there are other issues besides plastic pollution that could take a toll on the crabs, the organisms they eat and the animals that, in turn, eat them.

Along with other shelled organisms in oceans and coastal estuaries around the world, mole crabs face the threat of ocean acidification, a change in ocean chemistry tied to increased carbon dioxide levels that makes it difficult for creatures like clams, crabs and oysters to build or maintain shells.

Ocean temperatures and salinity — factors that affect how quickly animals like mole crabs grow — are also in flux.

For now, local populations of mole crabs appear to be robust.

Every year, Matt Hunter, shellfish project leader with the Oregon Department of Fish and Wildlife, conducts razor clam population assessments on Clatsop beaches ahead of the popular digging season.

As he and his team pump the sand for clams, they also pull up mole crabs. In 2006, they decided to begin tracking the crab population as well — a kind of sidebar of data.

“In 2006, we had what we thought at the time were huge populations,” Hunter said.

They found roughly 13 mole crabs per square meter. However, they noted significant decreases in following years. Thirteen crabs per square meter became nine the next



Brenna Visser/The Astorian

**Heidi Perez scoops sand through a microplastic filter during a beach cleanup event in Cannon Beach in 2018 with her Acumed co-workers Rick Lauricella and Karen Krueger.**

year and then fewer and fewer each year until state biologists were recording as little as several tenths of a crab per square meter.

The numbers began to climb back up again in 2015, peaking at a high of 16.5 mole crabs per square meter in 2016.

In 2018, the numbers were back down to a mere four crabs per square meter. Last year, they recorded only 1.5 crabs per square meter.

“We’re really in the northern range for the mole crab so it’s certainly not alarming by any stretch of the imagination,” Hunter said of these numbers.

What he wants to know is if these cyclical ups and downs in the mole crab population can reveal anything about razor clam

abundance. He wondered if large numbers of crabs burrowing in an area could displace young clams. The clams, unlike the mole crabs, have a commercial and recreational value.

Though, Hunter added, “ecologically, they all have value.”

## Environmental conditions

While large pulses of crab numbers do seem to correspond with El Nino weather patterns, there doesn’t seem to be a clear link between the number of crabs and the number of clams.

“I’d wager, overall, environmental conditions play a much, much larger role than anything they might do upon each other,” Hunter

said.

If it isn’t clear what happens to mole crabs in a plastic world, it is equally mysterious what happens to everything else if the mole crab population decreases or disappears. Mole crabs are an important source of food for seabirds, fish like surf perch and marine mammals, Horn noted.

She says the natural world can be a bit like the game Jenga, where players create a tower of stacked blocks and then take turns trying to remove as many blocks as they can without causing the tower to collapse.

“Sometimes you can pull a couple of pieces out and it seems like it’s OK,” Horn said. “But then you pull one more and the whole thing falls down.”



Hailey Hoffman/The Astorian

**After hours of work, Pass can turn two simple blocks of wood into lifelike sculpted ducks.**

## Pass: Takes a minimum of 100 hours to make a duck

Continued from Page A1

Over the years, he has shared his work with mentors and made improvements.

Pass said it took years to get over the frustration of the learning curve.

“I don’t know if I’m completely over it,” he said. “But working with the best in the world and knowing I can send them an email or call them on the phone and that they are willing to help has been helpful.”

Pass has made 73 ducks, but he only started counting once he felt they were good enough to give away.

He said it takes a minimum of 100 hours to make a duck. As difficult as it is to master the carving, he said, painting is more difficult.

As he became more skilled, Pass began

competing at shows across the U.S. and Canada. The competition categories include novice, intermediate, open and championship — which are the best in the world.

Pass competes at the open level and hopes to eventually compete at the championship perch.

“When I first started carving, a ribbon was important. But now what’s important is going and meeting with the other carvers,” Pass said. “I always ask ... what would you do differently on mine?”

Pass’ friend, Harold Brown, joins him in his studio several times a week to work together and prepare for competitions.

Brown, the former attorney general of Alaska, moved to the North Coast in 2010. He was connected to Pass by a mutual friend after he expressed interest in want-

ing to learn how to carve duck hunting decoys.

“Rick is a teacher, so he has patience for (people) trying to learn,” Brown said. “The big problem with carving is doing it alone can be pretty lonely.”

He said it has been easier having Pass show him how to get over the hurdles that come with learning.

“Because he has trod the same path that I was along before me,” Brown said.

Every year, they travel together to competitions and the world championships in Maryland.

“There’s something that keeps both of us coming back,” Pass said. “It’s like you get beat in the head, but you keep coming back. So, I don’t know what it is, stupidity or just that we love it.”



Edward Stratton/The Astorian

**A family of Domino’s franchise owners recently purchased the former Life in the Slow Lane building, where they are planning to turn part of the lower level into a new branch of the pizza chain.**

## Domino’s: Store will be family’s 29th location

Continued from Page A1

The family is planning a 1,500-square-foot restaurant occupying most of the downstairs and about one-third of the building, zoned for retail and restaurants. The Astoria location will focus on carry-outs and deliveries rather than dining in, Pat Farmer said. The rest of the building will be leased out.

The Farmers’ expansion into Astoria comes as the city is exploring a prohibition on additional chain restaurants, such as Domino’s, to prevent them from squeezing out smaller, locally based competitors.

But Pat Farmer argued he and his family are independent operators who have worked their way up from pizza-makers and drivers to managers and owners.

Jeff Farmer started the family’s collection with his first franchise in Coos Bay in 1987 and another in Hoquiam in 1988, according to a profile in The Daily World, an Aberdeen newspaper. His sons helped expand the family’s territory across much of western Washington and into Oregon. Astoria will be the family’s 29th location, Pat Farmer said.

“It’s still Pat, Jeff and Chris — a dad and two sons — trying to provide opportunities to their employees,” Pat Farmer said.

## Samuelson: Claims improper action was taken against him

Continued from Page A1

Samuelson’s attorney wants to subpoena the student’s cellphone and other cellphone records for evidence.

A trial on the harassment charge is scheduled for April.

Samuelson’s attorney and the woman could not be reached for comment.

Stephen Phillips, the Jewell School superintendent, declined to comment.

The woman resigned as the middle school’s girls basketball coach in an email to school officials in early January, saying she has accepted a new job in Seaside that conflicts with the coaching schedule.

In court filings, Samuelson claims he and the woman used to have a close relationship and that she has touched him in a similar manner in the past.

Samuelson claims improper action was taken against him for engaging in a “mutu-

ally consensual relationship between adults,” which he says took place separately and apart from school activities.

Samuelson wants the Circuit Court to reverse the school district’s finding that he engaged in sexual harassment relevant to his position as basketball coach and allow him to be eligible to coach basketball again.

Samuelson and his wife, Ann, both used to serve on the Jewell School Board.