

The following is taken from the book "A Geography of Oysters" by Rowan Jacobsen

BEING AN OYSTER

Say you are an oyster. You and your kin have managed to thrive for several million years with no help from mankind, thank you very much. And, if left to your own devices, that's what you'd keep doing. Here's how you'd do it.

For starters, you wouldn't grow just anywhere. No open sea for you. No, you are a creature of the estuaries, of coves, and bays, where fresh river water mixes with the salty ocean, creating a salinity between 2 and 3 percent, and ideally where offshore reefs or barrier islands of peninsulas prevent ocean waters and storms from sweeping you off your perch. Name a protected river mouth in the United States or Canada and you have named a great spot for oysters (pollution aside).

Now, say you are a baby oyster larva, recently ejected from you mother along with a million of you siblings. (At least, if you are a European Flat or an Olympia oyster. If you are an Eastern or Pacific oyster you were launched from mom and dad as separate sperm and egg that hooked up in the water.) As a larva, you have a few things going for you, along with some serious problems. Your main problem is that you are very small and pretty tasty, so more likely that not you are going to end your very brief life as lunch. Among the things in your favor are a sticky foot, cilia for swimming, and a rudimentary eye that can sense light and dark. All these things seem very unoysterlike, but as a larva you need them all as you swim about, dodging predators, gobbling infinitesimal plankton, sticking close to the surface (hence the eye, for detecting sunlight), and surfing the currents.

After twelve days or so, if all goes well and the planktonic gods are kind, you have grown into a big fat larva, with the beginnings of a shell. Eventually, down you go. Now's the one and only time for your foot to do its thing. As you head for the bottom, bouncing along in the tides, you have a few chances to attach to something with that sticky foot. This is where so many of your siblings go wrong. Only one in ten thousand will find something solid to attach to, or "set", as it's called. The rest will get buried in mud or swept out to sea and end up in any of a thousand hopeless places.

But you are a lucky oyster. You find your favorite substrate: another oyster shell. Rocks and packed bottoms are fine, but nothing attracts you like shell, occupied or not. It's a good indicator that somebody before you did well in that spot. That's why the first sailors to the New World encountered unfathomable oyster reefs in Chesapeake Bay, New York harbor and other estuaries: Generations of oyster had paved the bottom, each generation piling on top of its parents, until the reef rose to the surface and even broke it at low tide.

Once settled in your new home, off go the eye, the foot, the cilia. You will never travel or see again. As mammals, we have trouble with the concept of jettisoning useful tools as we develop. For us, it's all progress from infancy to adulthood - language, walking, winking, sex. It's hard to comprehend a creature that voluntarily ditches vision and locomotion. We place a premium on them, but evolution decided such trifles were useless to oyster, and made the cuts. It's a bit like being a Hindu mystic. Your life path involves paring down to the bare essentials, making do with less. You find a nice spot, settle into the lotus posture, and do nothing but eat, breathe, and periodically blow off a third of body mass in one titanic ejaculation.

Once you've reached adulthood, there you sit, merrily sucking seawater — as much as 50 gallons a day— through your slightly parted shells. As it crosses your gills, you strain out the

plankton (algae and other microorganisms) and eat it. If a larger particle hits your gills, you automatically spit it out by clapping your shell shut.

Other than eating and not being eaten you have only two concerns as an adult oyster; sex and winter survival. Your metabolism has everything to do with water temperature. If you live in the temperate waters of Europe, the Northeast, or the Pacific Northwest, sex begins to cross your mind as the water warms up in late spring. Through May and June, you eat like crazy, generating prodigious quantities of sperm or eggs. With all that gamete in you, you taste pretty gamey. This doesn't stop starfish, but it does dissuade most humans. As the water temperature peaks in late June or July, you shoot your wad. Afterward you are smaller, flabby, tasteless, and tired. Food is your only solace. It takes you about a month after spawning to get your life back together. Then, as water temperatures tick downward, you eat like mad, start to taste really good, plump and sweet. When the water temperature hits 40 degrees or so (45 in the Chesapeake), you go dormant and don't feed again until the temperature climbs back to 40. (Your digestive enzymes don't work below 40.) In northern waters, that means that from November or December until sometime in April, five months or so, you don't eat. Even with your slowed metabolism, you need considerable energy reserves to survive that stretch — hence the urgency to get as fat as possible in the fall. It is no coincidence that oysters are traditional food for Christmas and New Year's Eve, at least. The Northwest doesn't experience the same brutal winters. Its oysters have shorter dormancy periods and taste best after two big algae blooms in the spring and fall. Gulf coast oysters never go dormant. Their flavor depends more on spawning (which they do three or four times a year) than on season.

During those cold winter months, your heartbeat slows to just a few beats an hour. You endure the winter with your shell shut tight, parting it for just a few minutes a day to get a bit of oxygen. the rest is darkness.

Until spring. You feel that first warmth on your shell — particularly if you are growing in shallow waters. You open up, start to feed, and naturally, you consider a sex change. Crassostrea oysters begin life as males but many convert to females when they are a year old. Ostrea oysters are true switch hitters, changing sexes on a whim many times throughout their lives.