

OYSTERS *for the* FUTURE

Proper Oyster Culling Techniques Matter¹

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The eastern oyster (*Crassostrea virginica*) provides many important functions in coastal environments, from serving a crucial role in the estuary's food web to improving water quality for beachgoers and wildlife. Oysters are also a popular food choice for people—at times the commercial industry landings value has topped \$8 million annually in Florida. This publication is one in a series that highlights some of the key ecological and human factors important to the long-term sustainability of this valuable fishery.

There are right and wrong ways to separate “burr” oysters

The basic idea is simple—break apart clusters of oysters, called burrs, so the ones of legal size can be harvested. Done incorrectly, this seemingly inconsequential process can have profoundly destructive effects on the reef and the industry. Done correctly, it can help maintain a healthy oyster reef and a thriving oyster industry.

Culling tools take many forms, but they are all used to strike oyster shells and separate them. The location of the strike, the angle of the tool, and the amount of force applied all determine the likelihood of survival for the shell stock.

Location of strike: Always avoid hitting the thin “bill” of the shell. Rather, contact the shell farther back toward

the “heel” where it is thicker. Broken bills, cracked shells and large nicks make a difference for the oysters returned to the bay, as well as those harvested for market. Damaged shells allow predators access to returned shell stock, increasing mortality. Broken bills also shorten the shelf life of harvested oysters because oysters with broken bills are unable to hold in moisture.

Angle of the culling iron: Avoid using the sharp corners on the culling iron. This will spread the force of the blow over a larger surface area and reduce damage to the shell.

Striking force: Experience is the best teacher for knowing what force will separate oysters without fracturing their shell. Avoid hitting stubborn shells harder to separate them. Look for a better angle or open new access points by working on other parts of the cluster first.



Oyster larvae cluster together on older shell substrate to form burrs, which must be separated for marketable product. Photo by Erik Lovestrاند, UF/IFAS Extension/Florida Sea Grant

A knowledgeable and skilled culler can save the lives of thousands of oysters for the market and improve the reef habitat over the duration of even a single season. Take the time to “pay it forward” by treating your treasured natural resource and your future generations of harvesters with the respect that they deserve.

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Avoid striking oysters with the sharp corners of the culling iron to minimize damage to the shell. Photo by Erik Lovestrand, UF/IFAS Extension/ Florida Sea Grant



Enforcement of size and bag limits is key to the successful management of any natural resource. Photo by Florida Fish and Wildlife Conservation Commission

Remember two key reef-preservation strategies

Two important components of the oyster bar are the physical structure of the reef and the biological structure of the living organisms present. The stability of both of these factors is important to the oyster bar's long-term health.

Cultivate the reef: Experience has shown that breaking up or “working” the surface layer of living oysters on the bar actually improves the surface area available for new oyster spat attachment and the eventual development of nicer, cup-shaped oysters as opposed to long “scissor-bills.” However, overworking to the point of breaking down the dead, underlying shell matrix will degrade the substrate over time and harm the reef by resulting in a fine, crumbly surface with few suitable locations for baby oysters to grow.

Similarly, culling needs to be done on-site so that juvenile oysters are returned to suitable growing habitat where they can mature and add to the reef's population during spawning events. Resist the temptation of moving to a shady spot under the bridge while culling.

Let 'em grow: There are three primary reasons that oysters smaller than the 3-inch legal size should be culled back onto the bars rather than harvested.

1. Larger, mature oysters are important spawners for replenishing the population. They also provide for a quicker recovery after population declines due to natural or human-caused factors.
2. The oyster industry's reputation for quality and trustworthiness is an important factor in the success of marketing oysters to consumers.
3. The penalties for harvester violations can result in confiscation of oysters, fines of up to \$500 and imprisonment of up to 60 days for a first offense. Licenses and permits may also be revoked (FS 379.407).

Responsible culling benefits everyone in the long run. For additional titles in this series, visit: <http://franklin.ifas.ufl.edu/>

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Careful culling to minimize shell damage saves oyster stocks. Photo by Erik Lovestrand, UF/IFAS Extension/Florida Sea Grant



Size and quality of raw oysters make a difference to consumers and therefore to pricing points. Photo by Florida Sea Grant