Southcentral Region
Department of Fish and Game

Cook Inlet Razor Clams

Razor Clams

Razor clamming can be enjoyed by people of all ages. It is also fairly inexpensive — all you need are water- and mud-proof boots and clothing, a clam shovel or "clam gun", a bucket, and your current sport fishing license

There are several locations on the road system along eastside Cook Inlet and there are remote locations on westside Cook Inlet accessible by plane or boat where people dig razor clams.

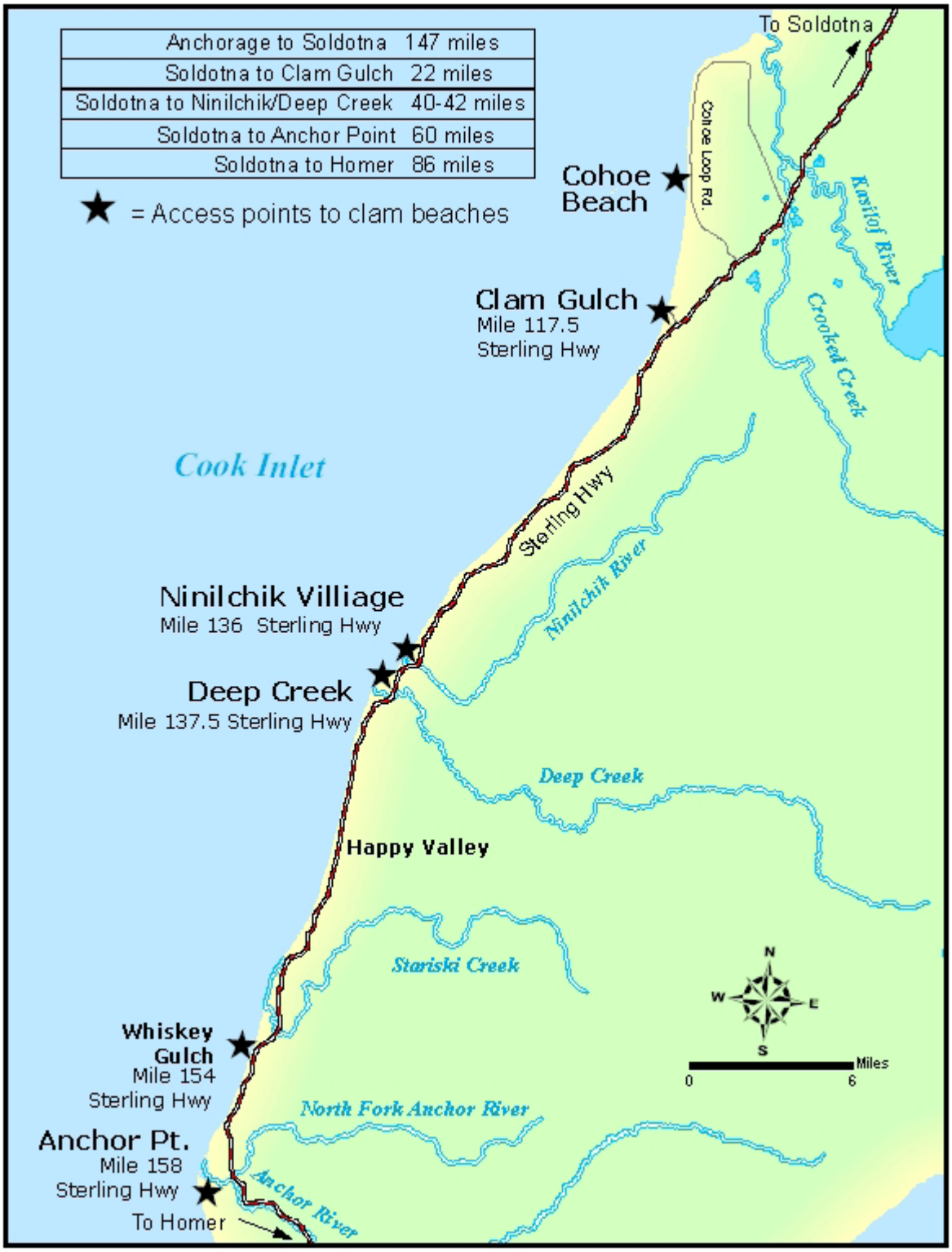
Razor Clam Management

Cook Inlet razor clams are managed by the Alaska Department of Fish and Game (ADF&G), Division of Sport Fish, Homer office at 3298 Douglas Place, Homer, Alaska 99603, phone (907) 235-8191.

On March 27, 1964, Southcentral Alaska was devastated by a magnitude 9.2 earthquake. A 68,310 square-mile area was affected, including the Kenai Peninsula razor clam beaches. In 1965, ADF&G initiated a study to evaluate the effects of both the earthquake and the increase in razor clam diggers. This program is still in effect today, and is administered from the Homer ADF&G office.

Razor clams studies are focused on monitoring population trends for the purpose of fishery management. ADF&G uses the following long term data sets to track fishery and population trends: 1) harvest and effort (digger-days) since 1969 for specific beaches in eastern Cook Inlet; 2) distribution of diggers among specific beaches, assessed through aerial surveys since 1970; 3) since 1969, harvest for most beaches; 5) since 1989, periodic surveys of the abundances are estimated of mature (›80mm shell length) and juvenile (‹80 mm) size clams on beaches on the two most heavily harvested beaches (Clam Gulch and Ninilchik beaches) and one lightly harvested beach (Oil Pad Access).

The razor clam harvest and effort is estimated from a



You Can Help Maintain Healthy Populations

1. Purchase a current Alaska sport fishing license to dig razor clams. Residents and non-residents may participate in the fishery.

2. Review the current shellfish regulations for the Cook Inlet Area in the Southcentral Alaska Sport Fish Regulations Summary booklet.

3. There ARE daily limits for clams on eastside Cook Inlet beaches. Keep count of the clams as you dig so you don't take too many. The fine for overlimit is $100, plus $2 per clam. On the west side of Cook Inlet, there are no limits.

4. On eastside Cook Inlet beaches, you must keep and count ALL razor clams you dig, regardless of size or shell damage.

5. This resource is for the use and enjoyment of all. Use common sense when you dig, and extend courtesy to fellow diggers. This way everyone has a good time, and this valuable resource will last for future generations.

General area map of eastern Kenai Peninsula beaches (not to scale). For topographical maps, go to the United States Geological Survey website at http://.topomaps.usgs.gov . For nautical charts, go to the National Oceanographic and Atmospheric Administration chart website at http://nauticalcharts.noaa.gov .

SPORT FISH RESTORATION

These opportunities funded in part by Federal Aid in Sport Fish and Wildlife Restoration.

survey mailed to a random sample of Alaska sport fishing license buyers. The harvest from different beaches is estimated by counting the diggers at each beach from an airplane on randomly-selected days during the summer season. If you receive a Division of Sport Fish Statewide Harvest Survey in the mail, your response is helping to manage the clam fishery. If you see an airplane, wave!

The razor clam studies compares the age and size range of clams from heavily-harvested beaches to clams from less-popular beaches, to ensure that overharvest is not occurring. A lack of large clams for several years could mean that all large clams are being taken. No small clams could mean that clam reproduction has not been successful. Sometimes, there are so many small clams on beaches that it seems like there are no big clams. This situation can be the result of a very successful spawning event and/or good survival of the young clams.

To estimate the total number (abundance) of razor clams on a given beach, it is necessary to know the total area of the beach (number of square meters) and the average density of razor clams in a square meter. Surveyor equipment is used to estimate the beach areas. To estimate the density of razor clams in a square meter of the beach, the beach is systematically sampled using a water pump to loosen clams within small sampling areas. The average number of clams in each sample area is expanded to the total area to provide an estimate of the total number of clams on the entire beach.

In some years, large number of small, young razor clams may be found on beaches. These will dominate the catch, growing larger for the next several years. This large new crop of razor clams is a sign the population is reproducing and the juveniles are settling successfully on the beach. The small clams swamp the beaches making it difficult to find large clams, so diggers may want to go elsewhere, for easier digging of large clams. Remember that all razor clams dug must be retained , regardless of size. Check through the sand removed from your hole for any additional clams prior to digging a new hole.

Razor Clam Lifecycle

There are male and female razor clams. Spawning occurs in late July/early August and is believed to be triggered by water temperature, which must be about 55° F. The eggs and sperm are expelled at the same time into the surf, where fertilization occurs. Fertilization depends on the location of the clam and the vagaries of the winds and tide.

Although the razor clams' reproductive cycle lacks efficiency, it compensates with numbers. Some researchers have estimated that female razor clams produce between 300,000 and 118.5 million eggs. The survival rate for an individual egg is very low. The fertilized egg (called the "zygote") drifts in the near-shore waters of Cook Inlet and develops into two larval stages before settling down. In many cases, the tides have carried the larvae far from their original site. At less than one millimeter long (the size of a pinpoint), the young razor clam settles to the sand. It will spend the remainder of its life in the sand, but may be washed around by tides and storms until it reaches a size that can burrow more deeply. If the clam can avoid being washed out by storms or being eaten, it should have a long life. Razor clams on Kenai Peninsula beaches can live as long as 18 years. Since mature razor clams move only up and down, and not side-to-side, the clam will likely stay in its original location throughout its life.

Growth Rate

Generally, growth is slower on the northern beaches of Cohoe and Clam Gulch and faster in the Deep Creek, Ninilchik, and Happy Valley areas. Growth is rapid during the early years at all beaches. At Clam Gulch, a razor clam is about 2.6 inches long by its third winter, 3.4 inches by the fourth winter, and 3.9 and 4.3 inches by the fifth and sixth winters, respectively. After its sixth year of life, growth significantly decreases. By its twelfth winter, the average clam at Clam Gulch is about 5.3 inches.

In contrast, clams on the southern beach of Ninilchik grow much faster than at Clam Gulch, perhaps due to the milder winters and clearer water, which results in more available plankton, their primary food source. By the second winter, a razor clam at Ninilchik is 1.9 inches; by the third winter 3.6 inches; in its fourth winter, 4.5 inches, and 4.9 inches when growth ceases during its fifth winter. After its sixth year, growth dramatically decreases, but not as much as razor clams at northern beaches. Razor clams on southern beaches may be 6 inches long by its ninth year.

Sexual maturity occurs according to size rather than age. Clam Gulch razor clams usually spawn for the first time when they are in

their fifth year, while razor clams at Ninilchik and other southern beaches will spawn in their fourth year.

Where to Dig

Razor clams on the Kenai Peninsula are found on most sandy beaches between the Kasilof and Anchor rivers. This 50-mile area can be further divided into northern beach areas—Cohoe, Clam Gulch, Oil Pad Access—and southern beach areas—Ninilchik, Deep Creek, Happy Valley and Whiskey Gulch . The most popular area on the northern beaches is Clam Gulch, located at Mile 117.5 of the Sterling Highway. This area is popular with families, since there is easy road access to the beach. There's also a state campground maintained by the Department of Natural Resources Division of Parks, with picnic tables, fireplaces, water, and sanitary facilities. For more information, visit the DNR - State Parks website www.dnr.alaska.gov/parks.

All-terrain vehicles can reach the beaches of Cohoe (turn right on entering the beach) or Oil Pad Access (turn left at the beach and drive four miles south). Cohoe Beach may be accessed off Cohoe Loop Road. Good clam digging is available in either direction, with clams becoming progressively larger to the south.

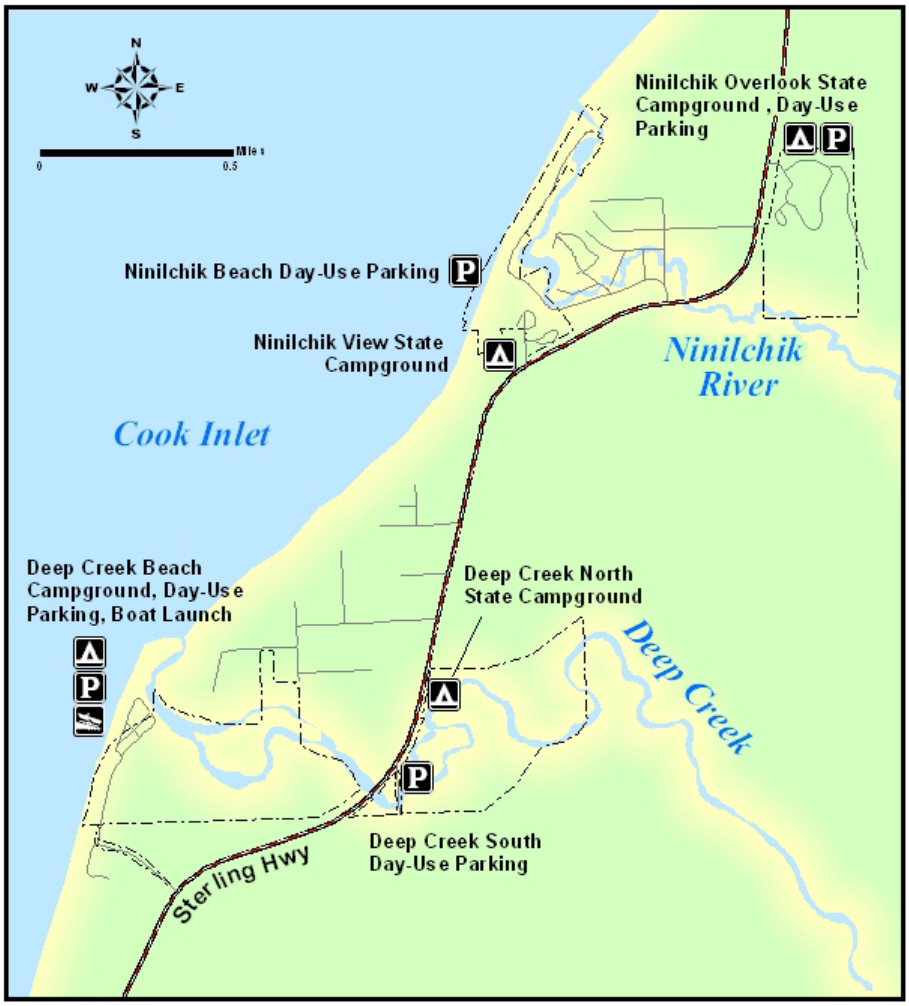
The southern beaches are separated from the Sterling Highway by large bluffs, limiting access to the beach. These beaches also have steeper gradients than the northern beaches, limiting the amount of time available to dig clams. Public access is available at Ninilchik River (Mile 135.6) and Deep Creek (Mile 137.5). Good digging is found north and south of the Ninilchik River. Since the beach is within close walking distance from the parking area, the south area is good for clammers without 4-wheel drive or all-terrain vehicles. State Parks maintains a camping area and public parking next to the beach. The best digging at Deep Creek is about a mile south of the stream and continuing south to the Happy Valley area.

The beaches at Whiskey Gulch are exceptionally steep and a minimum of a -4.0 ft tide is recommended here. The access road is not well-maintained and caution is advised. Most people park their vehicles in the parking area in front of the beach and either walk or drive all-terrain vehicles on the beach to avoid the soft sand. Use extreme caution when driving 4-wheel drive vehicles.

The only offshore sand bar of interest to clam diggers is located between Deep Creek and Ninilchik. The bar is exposed during minus tides and supports a good population of clams. REMEMBER: As the tide goes out to expose the bar, it will come in again to completely cover the area. Watch closely for the tide to turn. If you don't have a boat, do not delay your departure or you could be stranded!

Driving on the Beach

Vehicles are permitted on all areas of the beach.



However, experienced diggers know the limitations of their vehicles. Two-wheel drive vehicles cannot be safely run on Kenai Peninsula beaches. Sooner or later they will get stuck, and probably be engulfed by the tide – a total loss.

All-terrain vehicles, or those equipped with 4-wheel drive generally do not encounter problems. However, these vehicles should be kept as high on the beach as possible. The lower beach areas, especially around the larger rocks, contain pockets of glacial silt, i.e. MUD. These areas can stop the best of vehicles. Include a good measure of common sense with your clam digging equipment when you take your vehicle on the beach.

When to Dig: Tides

Razor clams may be legally dug throughout the year. However, most digging occurs from April through September. The "table quality" of the clam is generally considered best in early summer, just prior to the July-August spawning.

On the northern beaches, razor clam beds are exposed on any minus tide. However, tides of -2.0 ft or lower are suggested.

Be sure to review the tide table for the area you intent to dig for clams before heading out. Table books are available at local vendors and an online tide table is available by visiting the National Oceanic & Atmospheric Administration's (NOAA) webpage at www.noaa.gov.

Shellfish Poisoning

Razor clams are filter feeders and may filter the organ¬ism that causes Paralytic Shellfish Poisoning (PSP) or Domoic Acid (DA). The State of Alaska Department of Environmental Conservation does not test razor clams on eastside beaches, but there has been no documented case of PSP or DA from eating properly-cleaned razor clams dug from Kenai Peninsula beaches.

If PSP is a concern, call the PSP Info Hotline at 1-800-731-1312. For more information visit the DHSS Shellfish Poisoning Resources webpage http://dhss.alaska.gov/dph/Epi/id/Pages/dod/psp/default.aspx.

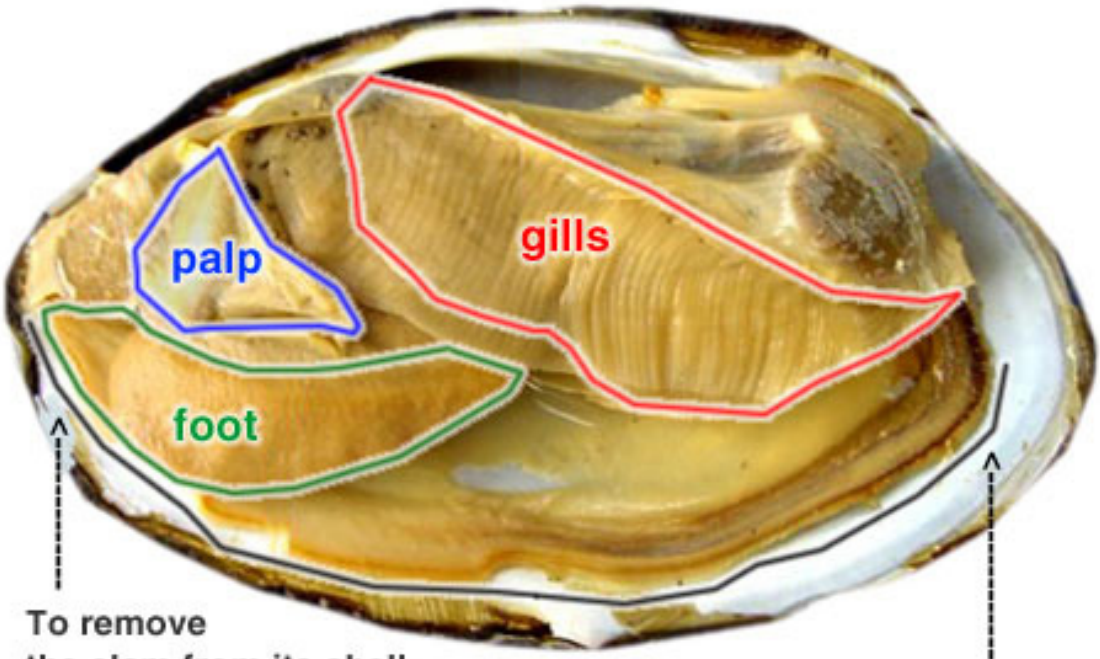
How to Dig Razor Clams

Razor clams are found by the depression left on the sand surface as the clam's neck is withdrawn. When this dimple, or "show," is found, a scoop or two of sand is dug away beside the dimple and the clam is found by reaching into the sand in the side of the hole. Be careful not to dig too close to the dimple or the clam will be damaged.

Almost all clams with broken shells will die; therefore, diggers are required to retain all razor clams regard¬less of size. Clams with broken shells are slightly harder to clean, but their eating quality is not affected.

Most clams are dug with narrow-bladed clam shovels. These are available in hard¬ware and sporting goods stores. Clams can also be dug with "clam guns" or "tubes." These are 4- to 6-inch-diameter pipes or tubes with a handle and a small air vent at the closed upper end. Digging is done by pushing the tube down

The State of Alaska does not recommend consuming recreationally harvested shellfish from any beach. Anyone consuming shellfish gathered in this way does so at their own risk.



over the clam dimple with a rocking motion. The air vent is then blocked with a finger or thumb and the core of sand, with the clam enclosed, is pulled up and dropped on the beach. Guns do not work well on beaches containing significant amounts of gravel or rock.

Rate of Descent and Mobility

The speed at which a razor clam reburies itself is very important to the clam digger. The faster the clam descends, the harder the clam digger has to work. Speed depends on many things, including temperature, consistency of the sand, and clam size. Razor clams are "cold¬blooded." Low temperatures make clams sluggish; warmer temperatures make them faster. In March and April, razor clams near the surface tend to slow down due to cool spring temperatures. Mobility increases during July and August. Size plays a part, too. One investigator found that a young, small clam could rebury itself in seven seconds.

Another researcher found that the razor clams they studied could dig several feet deep at nine inches per minute. One of the fastest rates of descent reported was one inch per second (but the clam could not sustain this rate for an extended period of time.)

Helpful Hints

Razor clams can be found near the surface or up to several feet deep. If you are not finding clams when digging good shows, then try digging deeper. If using a clam gun and the clam is not in the core of sand, check the hole.

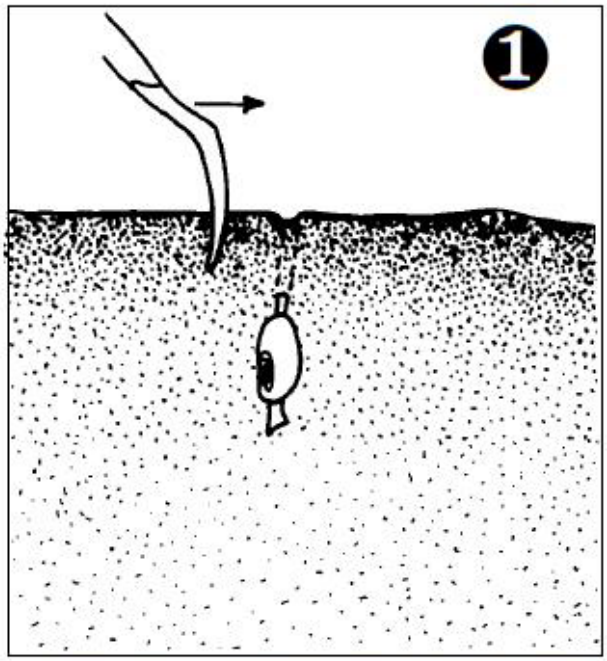
After digging a clam, place it in a bucket with some cool salt water. This will clean the shell of the clam of any sand and keep the clam alive. You can flush the water in the bucket several times before leaving the beach to reduce the amount of rinsing you need when cleaning. It is also helpful for each digger to have their own bucket to help track the number of clams being harvested.

For easier digging, look for shows in slightly higher spots which tend to be drier with less mud. Digging near the water line is usually in soft wet sand which tends to collapse your hole faster and allows the clams to dig faster.

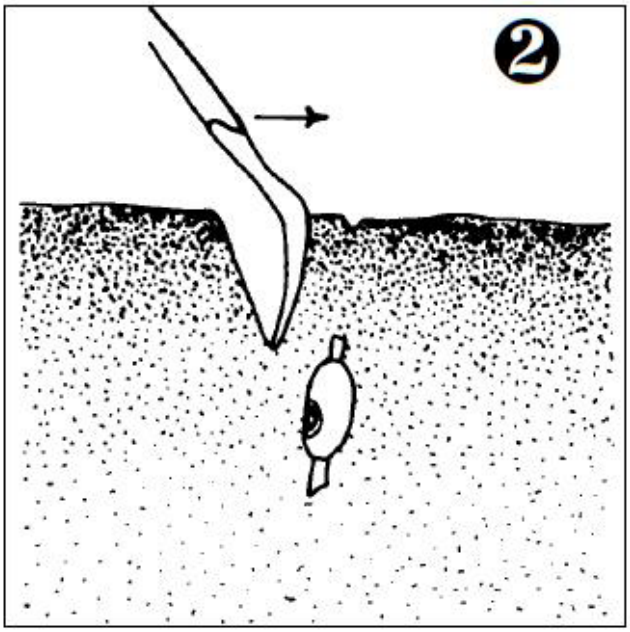
When you are cleaning clams, rinse them in not quite boiling water and then rinse in cold water. This will allow you to easily remove the meat from the shell. Scissors are the all that you need to clean your clams.

***REMEMBER:* As the tide goes out to expose the bar, it will come in again to completely cover the area. Watch closely for the tide to turn. If you don't have a boat, do not delay your departure or you could be stranded!**

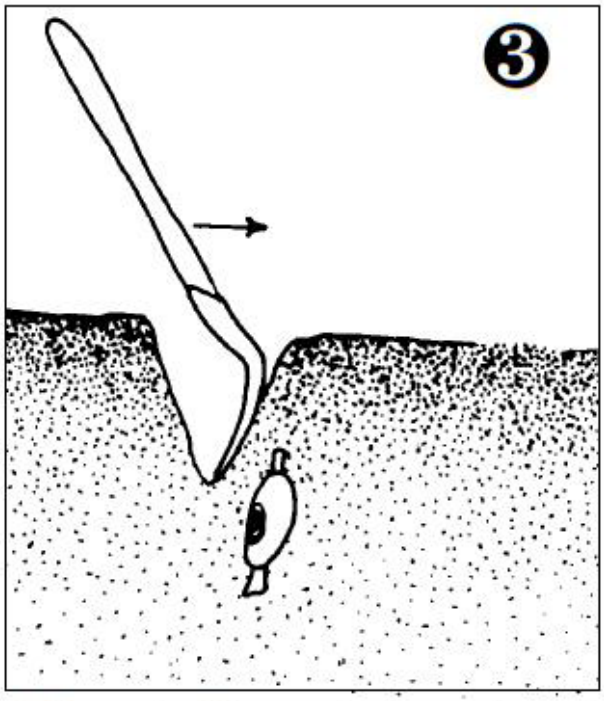
Using a Clam Shovel



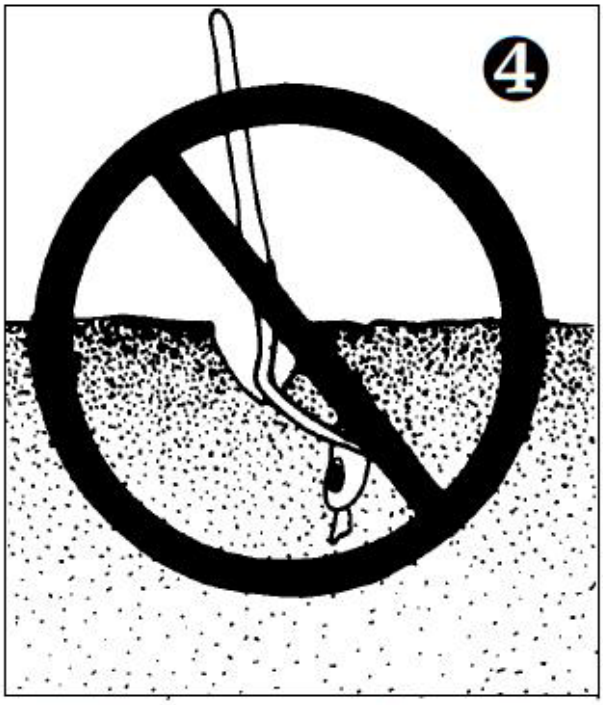
1. Insert shovel 3 to 6 inches from the "show," depending on the length of the blade and the amount of curve in the blade. Longer, more curved blades are started farther from the show.



2. Remove sand with a lifting motion. Try twisting the shovel at the same time. Note that the blade remains nearly vertical.



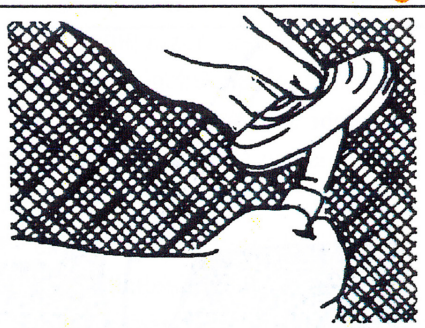
3. The next shovelfuls expose the clam enough to reach down and remove it by grasping the neck or shell. Note that the shovel and the hole to the side of the clam, not on top of the clam.



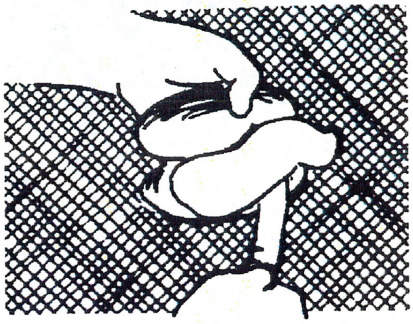
4. DON'T pry back on the handle. This cuts off the neck or smashes the clam. Also, don't try to dig too fast. Broken clams still count toward your bag limit, and may even cut your hand.

Cleaning Razor Clams

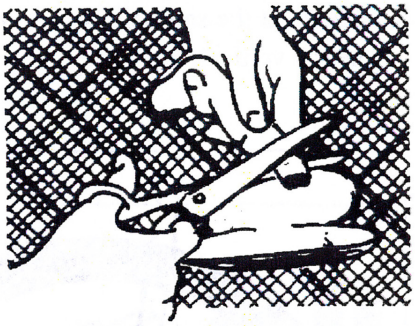
1 The clam meat is "shucked" with a sharp knife by cutting the connecting muscle to each shell.



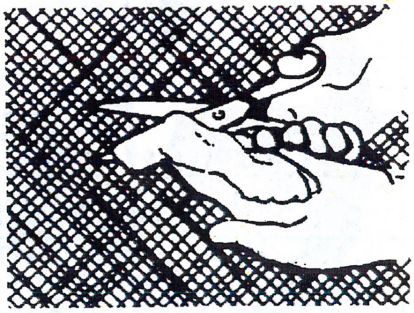
2 The entire clam is removed from the shell.



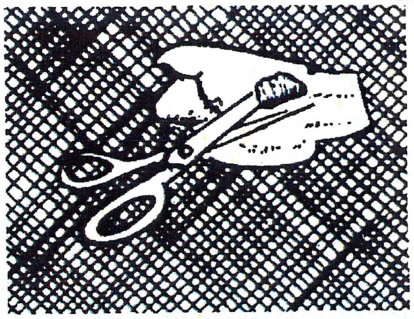
3 The black tip of the siphon, or "neck," is removed and discarded.



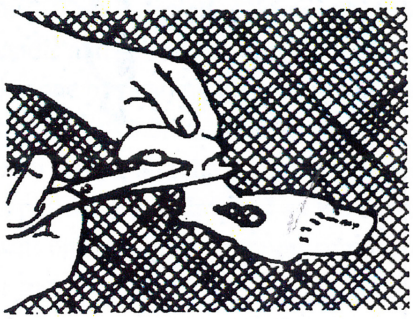
4 The scissor blade is inserted through the siphon to split open the siphon.



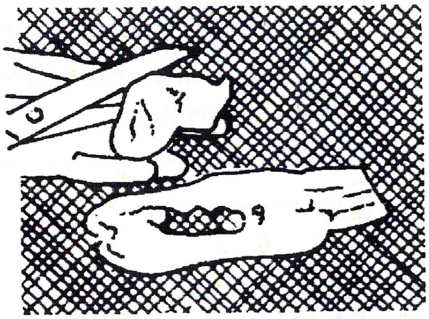
5 The two gills and two palps are removed.



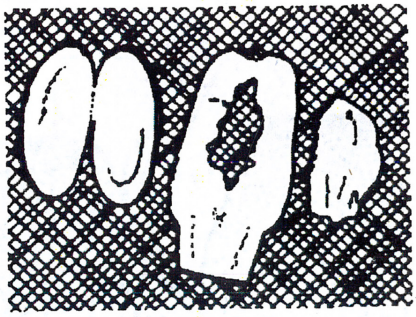
6 The muscular digging "foot" is removed.



7 The foot is split



8 Here are the finished clam "steaks."



For information about camping, accommodations, fishing guides, and other visitor services, contact the agencies listed in this publication, or the Alaska Travel Industry Association at 2600 Cordova Street, Suite 201, Anchorage, Alaska, 99503.
web: www.travelalaska.com email: info@AlaskaTIA.org

Recreational Fishing Series produced by:

Southcentral Region
Alaska Department of Fish and Game
Division of Sport Fish

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Anchorage, Alaska 99518
Sport Fish Info. Center

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M-F 8 a.m. - 5 p.m.
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06/2017

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