SOFT CRABS -- AND HARD

by

Steve Benedict

Leave every man to his trade. That's the way I'll start my story. If you think that you could skip away from your office desk for half a day's fun, once every other week, and compete catching crabs with someone to whom each crab means just that much bread in the family larder—well, then, pal, you're all wrong, just like a two-foot yardstick. I remark this because so many "sports" are just that way. They don't expect to repair their V-B's as good as the local mechanic, they don't expect to paint their houses as well as a professional painter, but they do expect to catch crabs as well as the professional crab-fisherman. Oh, don't tell me. I've run into more than one. And then when they're fooled, they blame it on—well, on anything but their lack of experience and common sense. Let's hope, however, that you're not of that kind, pal.

Then I'll just take it for granted that you're a regular guy—a "sport". You don't want to "hog" all the crabs along the lakeshore. All you ask for is a bit of fun, some country air, a balogna sandwich or two, a couple of bottles of beer and about half a hamper of hard crabs to take home for to-morrow's gumbo. If you get them it's O. K., and if they just didn't bite where you were, you aren't sore about that either. That's why I'm talking to you in the first place. We, who have dragged the lakeshore for a living, don't care so much about the other kind of "sport".

So let's go. I'll start off with the fish-herds, and we'll begin school at the beginning. You take it into your head to go fishing crabs. Let's say you never did such a thing before in your life. You saw others do it and you heard tell of a good place or two; but that is all. In other words, you're virgin soil. That's the best material for scholars. People who have a slight, and often a wrong, knowledge of something learn as dim sight slower than those who know nothing and admit the same.

"Ike tells me that there's a new road goes down to Such-and-such Bayou, on The Lake," you remark to the wife, talking aloud your dreams. "He says old Schnitzlebloomer brought home four baskets of crabs from some place down that way. I always wanted to crab. What say we go in the morning? Pack the kids and the lunch and I'll get the beer to-night.'

The Mrs. looks up quietly, as all wives do in these cases.

"You'll need bait," she burst your pretty balloon.

You're entirely green at the game (let's assume so anyway). You straighten up in your easy chair and make a wry face at grandpa's picture on the opposite wall. "Huh!" you grunt. "Ike never said nothin' about bait. What'll we take?"

Out of her culinary wisdom your wife says simply: "Meat."

ADVICE FROM IKE

There are a few more words then a trip to the butcher shop and the Dutchman's on the corner. On the way home you drop into see Ike. He isn't such a hot crab-fisherman himself, but he's been there a time or two and that's a time or two more than you have. Ike talks a long time. You open a couple of the bottles. Together you weigh, argue and ponder the bait question, the "bait-al" values of liver, of pork, of fish, of hoofs and horns and odds and ends. Ike advises you sagely to buy some nets. "It's best," he says. "It's too late," you answer.
"Strings will have to do." By eleven P. M. you say good-night to both of you knowing deep in your hearts that neither one nor the other knew much of what he was talking about. And that is why I want to give you, Mr. Starter, some hard-earned good advice.

Bait! Lord, how often I've heard the most old-time pro's argue about that. Some say the rottener it is the more they'll go for it. Others, just as good, tell you that's the bunk. All agree on one thing, however. The bait better be tough or there better be a helluva lot of it. A hungry crab is a veritable mangling machine. Fish is fine, but it's too soft. Chunks of gar attract them like free lunch attracts the bar-fly, but it doesn't last. If you must use fish, then get the small, tough, boney kind; mullet or croaker. Or better yet, stingaree—if you could (which I doubt). I've seen "sports" using even shrimp. Ouch! It's gone before the crab is on the surface of the water. Raw meat is excellent.

Get tough, gristly stuff; skins, bones of the fish. So take your lift line, with not too much slack. Use light scoop net with meshes about one inch square and a handle that's not too long. Let the wire rim (nothing less than 3/8 inch rod is strong enough) be about twelve or fourteen inches in diameter. Buy one in your local hardware store. Scoop swiftly as soon as he's on the surface. Use a twist of the wrist and an upward movement of the arm; never downward, over the crab. Always under him. Slowly at first, then when the net's under the sonuvagun, quick, and he's all yours. Don't be stingy. Use a hard or medium laid #20 or #24 for your line. You can get all you want in the fisherman's supply stores around the French Market district. Don't save the grocery strings. It doesn't pay.

THE NET PREFERRED

But the string method of crab fishing never did appeal to me. No professional will ever dream of using it. The crabs seem to take an especially great delight in nipping the strings and running away from the bait. Nets are better; cheaper in the long run. Besides you could use nets off heights, like bridges or high wharves, whereas strings are good only off the shore or some very low place.

A crab will never hang on long while traveling through thin air. About the best place for the string method is off the sides of a skiff, where you could shift around if they do not bite.

Here too do not ape the professional, who makes his living the way you play and to whom practice has given all the sleights and tricks of the game. Get yourself a dozen or so of those amateurish two wire-loop nets (thick wire), with a larger wire three or four inches above the other. Tie a piece of stout string (nothing thin; it won't last three crabs) across the top wire-loop for a bait line. Never tie your bait direct to your net. Tie a piece of stout string (nothing thin; it won't last three crabs) across the top wire-loop for a bait line. Never tie your bait direct to your net. The crabs will tear all your webbing to get at his dinner. Be fast when you lift. Don't give the crab a chance. Use the old gambler's adage: "Never give a sucker an even break." No crab'll ever give you one. So lift swiftly and steadily; don't jerk. Use a strong #60 twine for your lift line, with not too much slack. The moment Mr. Crab feels the least movement of your net he's off; no bait will hold him or make him linger. You oughtn't find it hard to get hold of these sportsmen's nets. Decatur Street, around the French Market, is full of them.

Don't mess around with those big thick wire (single loop), shallow nets the professional fishermen use. These are made for them, not for you. What would you think if your wife bought a ten gallon restaurant stew-pot to cook the dinner in? It takes training to use such nets. You'll be more in the water than out of it. Take it from me, who knows.

And if you should feel like knitting your own webbing, that's O. K. with me.

WHEN CRABS ARE VERY YOUNG

This is the "megalops" stage of the crab, shown left in dorsal and right in lateral view. The crab is still only one-twentieth of an inch wide. The following are the parts named: a. Compound eye; b. Antenna; c. Rostrum; d. Antennule; e. Carapace; f. Cheliped; g. Walking leg; h. "Paddle" or swimming leg; i. Corru; j. Swimmerettes; k. Abdominal segments; l. Telson.

(IS THE CRAB A LADY OR A GENTLEMAN?)

Here are shown ventral views of: A. A male crab; B. An immature female; C. A female. The lettering indicates: a. Abdomen; b. to f. Segments of the plastron or hard "under shell" of the crab.

(Courtesy of Dr. R. V. Tuillt.)
They aren't any good—skeletons, hollow, fine, providing you can boil them almost of coaxing than of dragging along. And barnacles on their backs. I used to catch big crusty-looking grandpas, often with them some other trip—maybe. And those awhile and fatten up. You may catch skinny, freshly shed. Let them feast don't forget to be fast with your scoop. It's more of a matter course, you'll have to take it slower and pressure holds your crab to the net he is indeed your crab. With lines, of course, you'll have to take it slower and easier. That way it's more of a matter of coaxing than of dragging along. And don't forget to be fast with your scoop.

**WHAT TO THROW BACK**

Throw back all those light, clear crabs. They aren't any good—skeletons, hollow, skinny, freshly shed. Let them feast awhile and fatten up. You may catch them some other trip—maybe. And those big crusty-looking grandpas, often with barnacles on their backs. I used to catch lots of them down the Gulf. They're fine, providing you can boil them almost then and there. But the trouble is that they just don't care to live out of water long enough. They'll die in your basket on the way home. Throw them back. However, if you don't believe me, then take them home—and throw them away. And be a real "sport", please. Give all those little fellows another chance. We, who make our living at it, do so. They're so small. But they'll grow—and breed. So back with 'em and be a "sport". Don't be greedy. Let's fish for crabs in these waters ten years, fifteen years from now too.

Don't jumble your crabs in your basket (use a basket or shallow hamper, not a sack). Never lay a crab on his back. You sign his death-warrant when you do so. Don't throw him. He's got sharp points that will stick some other crab. Lay him down gently. That way he won't fight and there'll be no arms and legs and claws and paws in the bottom of your basket when you dump it out at home. Put a layer of wet moss or grass on the bottom of your basket; then some crabs; then more wet grass; and so on. It's the best way, though it does take more time than otherwise. Sprinkle your catch before you put it in the car, ready and homeward bound. It helps. Crabs are aqueous creatures, with gills, like fish. But don't give them a deluge. Keep your basket out of the sun. Those vitamins that the ads tell us about are all right in sun-ray lamps and breakfast foods but crabs have, for eons and eons, done fairly well and prospered and multiplied without them. So put your basket in the shade.

**THE TROT-LINE METHOD**

Another good way of fishing hard crabs is the trot-line or palanga method. It's the nearest you'll ever come to being pro. Get some long poles. Next get some quarter inch rope, tarred rope preferably. Then some #20, soft or medium; not hard this time. Cut this latter into two or two and a half foot lengths. Make about fifty or more such pieces. Find a good spot over shell or oyster reefs or at the mouth of some bayou, where the lake bottom is soft. Stick your poles into the mud about twenty five to fifty feet apart, depending on how long a line you want to use. Weight your line lightly with sinkers, if there is a current, otherwise it will rise, and the crabs are mostly bottom-feeders (like catfish; an offhand bit of information). Bait your twine and tie it to your rope, each piece about five feet from the other. Let it all sink to the bottom. Wait. Smoke a cigarette.

O. K. You've waited. So now take your skiff and pull yourself gently along your palanga, using your short-handed scoop net as you go. But take it easy. Don't get excited. And don't pull Mr. Crab out of the water. He'll let go. It's

**SOME CRAB INTERNAL ARCHITECTURE**

- Parts of a crab's "insides." Here the "back shell" of the crab is removed so that the spectator views it in reverse position from a person eating crabs. The "back shell" (carapace), the heart and the reproductive organs were removed before this drawing was made. a. Pterocardiac ossicle; b. Cardiac pouch of stomach; c. Anterior gastric muscle; d. Middle gastric muscle; e. Pyloric ossicle; f. Liver; g. Intestine; h. Liver duct; i. Pyloric caecum; j. Intestinal caecum.
great fun, all right—if you don’t have to do it for a living.

And don’t forget to dry your lines when you get home. That’s the way they’ll keep.

If the crabs don’t bite, leave. Don’t wait for them. It’s a safer bet that you’ll do better some other place, farther away. So try another spot.

Some “experts” say that tides have a lot to do with it. Some say tides don’t. Take your choice. Me—I say nothing. I’ve caught ’em at incoming tide and at outgoing tide. And I didn’t catch ’em at either incoming or outgoing tide.

Then, if you’re pretty fast and good at holding your foothold, try a long-handed scoop (say about eight feet of handle) and go snoop ing around bridge pilings and logs. Crabs like to hang out on these. You may even catch a soft one. The railroad bridge out at Irish Bayou (eighteen miles from New Orleans) is a good spot.

And if you should ever grow tired of fishing redfish and trout and not catching any; if you’ve lost bait after bait with hardly a tug or a jerk at your line—well, then, you’re just forget the fish. Draw your hook close down to your hook. Stick on a small croaker. Set your scoop close to hand. Go after crabs. They’re there.

THE SOFT CRAB TECHNIQUE

Soft crabs are another story. Some old timers consider it a profession. Others swear it’s an art. I call it lots of hard work. And I’ll tell you this much about it in advance: “You’ll never “make” enough soft crabs for a good-sized sandwich by merely coming down to the lake-shore a-Sundays and monkeying around. To “make” them requires several days. Ninety-five percent of all soft crabs are caught hard (“green” or “busters”, as we say). They are put into boxes in the water, tended, cursed at, and then taken out soft. You could depend on one-third of your catch dying in the boxes. And besides it takes time to “learn” the crabs. An entire season will hardly do. Take it from me. I’ve been there.

And here is their story: Crabs shed their shells just as snakes shed their skins. It’s their only way to grow. Their skeletons are on the outside. A soft, velvety skin forms (oftener per year as the crab is smaller) underneath the hard shell. This hard shell eventually parts and then falls off. A soft, wrinkled, puffy crab emerges, slowly working its way out. A few hours later (according to the warmth of the water, the wrinkles are gone. The crab has “stretched”; it has grown. A small crab will grow twice its original size; larger ones grow in proportion. The bigger they are the less bigger they’ll get. And the bigger they are, the longer it takes them to shed.

For this shedding—growing—process takes a bit of time. In boxes it takes much longer than it does in the open water. I guess a crab must feel it coming on. Too, he knows (as far as a crab can “know”) that he is helpless during this stage of his life. Fish like soft crabs as well as you do. Even their fellow crabs consider them fair prey during this time. So our crab does the only thing left for him to do. He hides.

RETREAT OF THE SOFT SHELL

Along the southern shores of Lake Borgne is miles of soft, viney sea grass. It’s the ideal place for a crab to pass his helpless shedding stage. He enters this morass as a “green” crab, several days before he sheds; he stays there as a fluffy, pinkish “buster”; as a “cracked” crab, already open, he is still there; he is a soft crab there, safe in the thick sea grass; then a “paper-shell”. And it is only after this final stage, as a hard “clear” crab, that he dares venture out into the open, confident in his ability to cope with his watery world.

But I must tell you in advance, before you even think of starting to “make” soft crabs as a vacation sport, that this is one angle of crabbing that is no place for the amateur or the “sport”. To “make” crabs takes time, patience, experience, equipment, lots of hard work, a special appetite for soggy luncheon meat sandwiches and a special array of cuss words. Better leave all these to the pro. Paying for them with your hard-earned cash is safer, easier and cheaper. Besides you’ll have no blisters on your hands.

And yet here are a few words as to how the pros do it. We take a small but deep and heavily laden seine with fairly large meshes, a bag in the center and a pole at each end. Each man takes one of the said poles and stretches out the seine, into a sort of shallow half-moon. Then each man turns into a mule. We drag and we drag, barefooted, and we never stop for mud or grass or clam shells. We do this when the sun is still past noon when one of us pants: “Let’s go home.”

We pack our seine on our skiff and go in. Once in, we start to work. We have our “greens” in one box and our “busters” in the well of our skiff. That’s our day’s catch. Once home, we take our “busters” and put them into our “buster” boxes, gently, for they are tender fellows and bruise easily, and die. We overhaul all our other “green” boxes, those of yesterday and the day before and the day before that. We take out those “greens” who, since the last overhauling, have turned into “busters”. We look into our other “buster” boxes and remove all crabs that have shed and become soft crabs while we were fishing on the lakeshore with our seine. Soft crabs become hard quickly in warm weather, and are very liable to injure those soft ones which mature later. It’s around four P. M. now, maybe later. At eleven P. M. we’ll have to look into our “buster” boxes again for more soft ones; at two in the morning ditto; and at two-thirty we set out to fish.

Now go ahead if you care to try it. Make soft crabs.

Sorting crabs, or as the local argot has it “telling” them, is almost a sort of sixth sense, once you get used to it. It takes time, however, and patience. Some never learn it. Color, touch, weight, all have something to do with it. You can’t make too many mistakes. A voracious hard crab or “green” thrown accidentally into a “buster” box can raise hell with the helpless shedding or soft ones, and incidentally with your slender pocketbook. But then, as I’ve remarked at the start: every man to his trade. Maybe you’ve watched some sun- scorched, bewhiskered crab fisherman sorting his boxes. He seems hardly to notice his crabs, throwing them here or there, two to the second, jabbering away at his companions all the while. Now and then, in doubt, he’ll pause a brief second or two, pinch off a joint of a leg or squeeze a flapper to see how far the soft skin underneath the shell has advanced, then zip!, a twist of the pinchers, and he’s off again. Then he may doubt a crab; it may shed soon and then again it may not. It may raise hell among the “busters”. So off comes a nipper off each claw, and the doubtfull one finds its way into a “buster” box. It’s all in the technique, folks; all in the technique.

Some fishermen use “tapederos” or covers. The seine’s lid (about one hundred feet long) is stretched loosely across the mouth of some bayou when the tide is coming in. Crabs following the lakeshore drift in with this running water and cling (for crabs just love to cling) to the webbing. The fisherman goes along the seine, afoot or in his skiff, and picks off each crab with his short-handed scoop net. As a rule, though, these “tapadero” crabs are hard shedders and die easily in captivity. But all this is pro stuff to you, Mr. Amateur, my friend.

But don’t worry. You still have a chance to compete a bit with us and have your little fun, even though it’s about your only chance as far as soft crabs go. I refer to the long-handed scoop net, with the metal rim flattened out in front, so that it almost resembles
you to create new forests for a continuous operation in the future."

This conversation with my "Old-Timer" friend is typical of the expressions of many of the citizens in the forested areas.

The Division of Forestry up to the present time has done what I believe to be a remarkable piece of work rehabilitating the cut-over lands to grow forests for the future. Approximately 10,000,000 acres of land are in a productive condition with proper supervision. Seven million acres are left to be supervised and these lands are in a fair growing condition and from every indication will be under protection and forestry practice within the next four years.

The tax assessments in the forested parishes are all showing an increase. New paper mills have been constructed, creosote plants have expanded, and new sawmills have moved in. Not only are they paying their share of taxes, but are issuing large cash payrolls which have alleviated the mercantile and professional financial interests with cash incomes, thereby increasing the taxable assets.

The programs of forestry has passed its hardest points, and is now on the road to successful perpetual operations. The financial condition in the protected forest areas has improved materially and the farmers are self-supporting. However, the one issue we have overlooked is the fact that it takes fifteen years of intensive forest fire protection work to grow a forest to the age of safety as well as the beginning of liquidation. The factor we had overlooked is the forgotten farmer in the piney woods region. He is assured that the taxable values will be increased by the new timber crops, but he is not taken care of while he is waiting for the timber crops to mature and he has become destitute because he is only able to exist on his small farm and has no cash income because there are no public works available.

The State of Louisiana, through its Division of Forestry funds and Federal funds, gives steady employment the entire year to approximately five hundred forest fire wardens and patrolmen, who reside on the small farms in the piney woods and whose duties are to protect the forests against fires and suppress any and all fires that may occur. For this service a fire warden is paid $250.00 per year, payable $20.00 per month for eleven months and $30.00 for the month of December. Although this money does not seem to be a large salary, it has been the means of alleviating a great deal of destitution in a financial way. This small sum of money has been the means of furnishing the farmers with manufactured commodities, such as hosiery, shoes, medicines and other items that have to be purchased.

The landowners of the state have assisted materially in aiding the small farmers in the forests by giving them work in cutting and hauling pulpwood.

The United States Government, through the Civilian Conservation Corps, has operated over twenty CCC forestry camps with the Division of Forestry. In the majority these boys were enrolled from the small farms throughout the state. These boys received $8.00 per month for their spending money, and $22.00 per month was sent to their parents. This forest labor again has relieved the acute financial condition existing.

During the period 1939 and 1940, the Division of Forestry, through state appropriations, has maintained a vast amount of CCC projects which were constructed and turned over to the state. Between the farming seasons, the Divisions of Forestry employs the farmers in the forested areas on road work, repairing bridges and culverts, and maintaining the CCC projects. These citizens are...
employed with a rate pay of thirty cents per hour for a forty-hour week.

Forest maintenance and fire protection reaches the highest peaks from October 15 to March 15 which is the idle time of the year for farmers, and we are proud to state that we have employed a large number of these individuals who have averaged from $48.00 to as high as $150.00 each during this idle period.

The problem of forestry is a two-fold one. First, to rehabilitate the cut-over lands to a new stand of timber perpetuating the forests for the future. Second, to take care of the citizens in these forested areas. The Federal Government has started the Resettlement Administration, buying out small farmers and moving them to more fertile lands with the hope that they can rehabilitate themselves with the new conditions. Unfortunately, this program has not developed in step with the theories advanced. The people of the piney woods in particular, and in the forested areas of the state in general, love their homes and farms. They cannot be removed to strange settlements as their sentiments are wrapped up in their homeplaces and this dates back to their forefathers who first settled these lands.

In my humble opinion, our objective should be to rehabilitate the farmer on his own place by giving him public work, that is, a cash income, and helping him to work and produce the right crops under the best agricultural methods.

"Old-Timer" expressed himself freely and gave a very good solution when he said, "Keep all of the non-agricultural lands in full productivity with forest products. Have all of the forest lands create public works or cash incomes for the farmers who live in these areas and who can work between the crop seasons. Help the farmer with his problems; show him the best ways to produce a crop on his lands where he will at least break even or make a small profit."

I can agree with "Old-Timer", and in my opinion I believe with all of our development and with all of our forest projects, we have overlooked the forgotten man of the forest and he needs a new forest to work on so that he can get additional cash revenue, and he needs agricultural advice and help to bring his homestead to a place where he can have three good meals a day, a place to sleep, and a cash income to maintain himself with the necessities of life. When this is done the destitute rolls will shrink. Not only will the number of destitute be reduced, but the forest industrial activities of the state will be increased.

Louisiana is assured of a continuous timber crop for the future. Louisiana has room for many manufacturers for refabrication of forest products materials. We can supply lumber, pulp and paper, Spanish moss and other by-products of the forest that exist.

Continuous forest products production, continuous forest products industrial payrolls, will give the citizens of our forested area prosperity, health and contented homes.

---

Soft Crabs

[Continued from Page 14]

a regular coalmans scoop. Buy one. I believe they're for sale made that way. Go down to the lakeshore. Push it along in front of you in the thick grass, in shallow water. Sooner or later you'll hit a crab. He'll dart out. The "greener" he is the faster he'll dart. Grab him. But you've got to be fast—or tricky, for Mr. Crab has his little bag plenty full of tricks himself. It takes some time, but you'll learn.

Keep all but the "clears", "paper-shells" and "busters." The first two are no good to eat; the last don't keep alive out of water. It's a waste to keep them.

"SCOOPING" AT NIGHT

And if your eyes are good and your skin mosquito-proof, you could try scooping at night, with a torch. That takes two men; one carries the torch. Tightly wrapped rags soaked in a mixture of lube oil and kerosene and wired to a stout rod make first class torches for this kind of sport. Take a half dozen or so along. Sometimes you'll see only the crabs eyes, for at night they often bury in mud. Poke them out of the grass. You'll catch soft crabs at night. But try hard not to step on a stingaree. It's solid; no water in it even by the professional crabbers. That's no place for a fellow. You may catch one as "double" in your drop net. But don't put him (her, rather) in the basket with the other crabs. That's no place for a lady "buster". Take a pot, fill it with lake or bayou water. Put the crab in that and take her home that way. A soft crab just out of the shell and still wrinkled is the best for frying. It hasn't stretched yet. It's solid; no water in it at all. Hang around some fisherman while he's overhauling his boxes and ask him to sell you one. You may hit him at the right time.

So drive down to the lake some nice summer's day. Don't choose a hurricane. I've known "sports" to do just that. Along the bayou edges, in the lagoons, in the lake. Try your luck.

The most highly poisonous fishes are certain tropical toadfishes. They have hollow, syringe-needlelike spines, on the operculae and back, at the base of which poison glands are located. The spines take the place of fangs in poisonous snakes. While the venom from these fish apparently has never proved fatal to man, it has made some persons quite sick.

No real substitute has yet been found for asbestos, according to the Bureau of Mines. In the heat-insulation field, glass wool and other products afford competition, but asbestos still is deemed indispensable for automobile brake-bands and clutch facings.

Bell-benders which in the water resemble nothing so much as an old sock filled with mud, have lungs but rely chiefly on their skin for respiration.
SOME folks say "money for research is wasted."

And if those folks are on appropriation committees you'd better get them posted on the right answers.

Sure we snicker at grown folks swinging butterfly nets; we don't take much notice of the whiskered gent stooped over a microscope, and maybe it seems foolish to study the love-life of an armadillo. But wait! Here's the prize one of all.

A fellow spends your tax dollars to find out if rats are colorblind. No foolin'. Does that rile your temper? Well, don't let it. Calm down. The answer he got was one of the most important wildlife discoveries in recent times. It's saving more birds than all the feeding programs us Ikes could put on the winter through. Here's the lowdown:

Prairie dogs and gophers eat range and farm crops, so they have to be killed off with poisoned grain—least that's the way it happens. And if a bird got the poison ahead of the rodents, as a lot of them did, it meant dead birds. Probably thousands of birds, the country over.

Now comes the researcher and finds that rodents don't give a hoot whether grain is painted any color of the rainbow, just so it tastes and smells like grain. Why? Well, they're just the same as colorblind. But, take a bird. He sizes up some off-natural, maybe yellow-colored grain; shakes his head; leaves it for the rodents. Course he doesn't know it's poisoned, but he savvies color, and wants his feed the way nature grew it.

So nowadays the poisoned grain they spread is colored. Birds leave it alone while the "range destroying" rodents lap it up—and then turn up their toes. Simple. Cheap. Effective.

Yet, suppose this guy had asked Congress for $1000 to find out if grouse could tell red and white from blue. You know durn well he'd have been thrown out. They've made bigger laughs of things that sounded less far-fetched. And thousands of game and song birds would be dying while Congressmen raved and ranted.

Industry figures that if 10 per cent of their research pays off they're making money. Let's support our wildlife researchers. It'll be the best money you ever invested for better hunting and fishing.

This article appears through the courtesy of "OUTDOOR AMERICA," official publication of the Izaak Walton League of America, Inc. It was originally published as part of an anonymous series entitled "Some Folks Say."

Kangaroo rats, pocket mice, prairie dogs, gazelles and dozens of other desert animals, pass their whole lives without touching a drop of water. The liquid necessary for their bodily needs is obtained through chemical action in their digestive tracts whereby some of the starchy parts of their food are changed into water.
THE LOUISIANA CRAB FISHERY

By James Nelson Gowanloch
(Late chief biologist for the Louisiana Department of Wildlife and Fisheries)

BROAD changes that have occurred in the Louisiana coastal areas have had a heavy and damaging impact upon some of our valuable aquatic and seafood resources. These arise for example, from the constant lowering of the level of the water table through drainage operations, operations involving flood control and the influence of constantly rising demands for water supply with increasing population and industrial developments.

Many of these activities are inevitable, but the fact remains they have often resulted in a decrease either of available fishing areas or of available food crops.

Such an operation as the construction of the Atchafalaya Floodway, leading from the Morganza Spillway to the Gulf of Mexico, completely alters the pattern of many forms of fresh water and seafood habitat.

Coincidentally with the blocking off of natural drainage, severe and sometimes completely disastrous decrease has been found in the availability of formerly abundant local fisheries. The chain of events whereby the changes in drainage finally express themselves in the fishermen's yield is complicated and sometimes obscure, but the interference with drainage and the loss in fisheries do occur concurrently in time and space. Sometimes the decline in a local fishery may be catastrophic. The writer has had brought to his attention such an example in the case of the crab fisheries of the area above Morgan City. Some idea of the disastrous degree of decline may be indicated by the fact that one local company which produced 8,849 pounds of crabs in August, 1950, produced only 941 pounds in July, 1951, and only 32 pounds in August, 1951.

Crab production is enormous in Louisiana, rising in a period of fifty years from one-half million to over ten million pounds per annum. It is obvious that any improvement in the method of catching crabs becomes correspondingly the more valuable as the available stock declines, provided such methods are in accord with good conservation policy.

It is for this reason that there is here given a more extended account of certain crab-fishing methods used elsewhere in the United States but unknown in Louisiana, which methods not only are more efficient and capture larger quantities of crabs of legal size, but also have the merit of conserving both the crab stock and inflicting the least possible damage on the crab environment. Previous mention which had been made by the writer of these methods have evoked a flood of inquiry for specifications and it is for this reason that there is here given a compact account of the equipment employed.

The three categories of crab-catching equipment highly desirable for use in Louisiana are: first, a crab pot; second, a more or less automatic method of running a trotline; and, third, the use of a "crab scraper" to harvest soft shell crabs.

Descriptions of each of these herewith follows:

Crab Pot

The crab pot is essentially the modification of the traditional lobster pot used for centuries in capturing the northern lobster. It has been used with extreme success on the East Coast, where it is standard gear, but has never been used in any
Crabs are extremely energetic bottom feeders. Once they locate food, they are extremely persistent in their activities directed toward reaching that food. Crabs in this area are broadly unlike finfish for the capture of which in traps such as pound traps, long directing baffles are necessary to guide the prey into the definitive enclosure. The crab pot offers the crabs only two relatively small entrance apertures, but experience shows that these are adequate. Once the crabs have passed the funnel and have found their efforts to close in on the bait are not successful, they follow their normal reaction of rising. Here they encounter this time a single small apertures and emerge into the upper chamber of the trap which is provided with a gabled floor. There, unharmed, they remain and can easily be removed. The specifications of construction of the trap are here given since the measurements indicated have been arrived at as the result of long practical experience. The degree of reinforcement of the trap by incorporating a heavy wire frame into the construction of the bottom of the trap or of the whole trap depends upon the load of catch to be lifted, which in turn depends upon the frequency with which the trap is serviced and the abundance of crabs present.

The crab pot is a cube 2 feet by 2 feet by 2 feet, constructed of 1 ½ inch mesh chicken wire. There are two entrances opposite each other, each at one end of the tentlike internal partition that separates the lower chamber of the pot from the upper chamber. Each entrance is 1 ½ inches above the base of the trap and measures 11 inches horizontally and 6 ½ inches vertically. Inside each entrance is a funnel of the same chicken wire 5 inches long and decreasing in size from the 11 x 6 ½ inch entrance dimensions to an inside funnel exit 5 ½ x 2 ½ inches.

The bait compartment, which is attached in the center of the crab pot floor, is a vertical cylinder 4 ½ inches in diameter, 5 ½ inches high and having a rounded top. Access to the bait compartment is afforded by cutting a wire flap in the floor of the pot, which serves as an easily closed door. The internal partition of the pot follows the form of a gabled tent. It is attached to the pot walls 6 inches from the base of the pot, then forms a horizontal 4 ½ inch shelf from which it proceeds at an angle of 45°, 15 ½ inches on each side, but the two sides do not meet at an angle but meet in such a manner that they form a cut-off 1 inch wide forming a horizontal crest. This crest carries the exit into the upper pot chamber. This exit, which is centrally placed, measures 8 inches longitudinally and 3 inches laterally, thus leaving on each side of it a closed flat 8 inch section of crest. Through this aperture, the crabs pass into the holding chamber.

Access to the pot is provided by a simple construction whereby one of the lateral edges of the trap, an edge parallel to the axis of the internal partition, is not fastened but is finished off so that it can be pressed aside and provide for the removal of the catch. The pots must be provided with necessary line and cork buoys so that they may be readily recovered. The lifting line can be attached singly (or as is usually necessary) briddled to the corners of the pot to prevent damage when the weight of the catch is such that the structure would otherwise be distorted.

The second crab fishing technique concerns the method of making the removal of the crabs from the trotline practically automatic. A legal construction is illus-

---

Two-Entrance Crab Pot. Elevation from one of the entrance sides showing the path followed by trapped crabs. The ringlike structure indicated represents the entrance funnel beyond which can be seen the big compartment containing a bait, menhaden. When in the upper chamber, the crab, unable to escape, awaits removal.

Crab Pot. Elevation of two-entrance model from one of the closed sides showing dimensions of upper compartment floor and central exit from lower to upper chamber, lateral funnel entrances and central bait compartment.

Crab Pot. This is two-entrance model crab pot showing details of construction. The modification into a four-entrance type is indicated in another illustration. (Original drawing by Harry E. Schafer, Jr., Louisiana Department of Wild Life and Fisheries.)
The roller and bracket type of crab trotline apparatus. The line is threaded over a horizontal and two vertical rollers. As the crabs clinging to the bait strike the roller, they drop into the funnel section of the "automatic dip net" and pass backward into the bag section. (After McHugh.)

Automatic Crab Trotline Dip Net—Here are shown in detail the single horizontal and double vertical rollers. The crab trotline passes first over the horizontal roller and then between the vertical rollers. The crabs drop into the square basket-like funnel shown below the rollers. (After McHugh.)

A Crab Scraper or Dredge utilized for capturing soft shell crabs in typical grassy "shedding" areas. The gear rolls the crabs up unharmed in the dead grass, thereby also cultivating and improving the growth of the necessary underwater plant life. (After McHugh.)

trated in one of the accompanying figures, in the use of which the trotline is passed over a roller between two vertical posts and the crabs which have attached themselves to the bait are knocked off into the indicated apparatus so that they are caught in the mouth of a rectangular funnel-shaped net and are swept backward by the motion of the boat into an attached long, cylindrical following net, from which they are recovered at appropriate intervals. General arrangements can be then understood from the illustrated diagram.

The third special apparatus is designed for the capture of soft-shell crabs on a more productive basis than the usual methods employed in most localities in Louisiana. Responding to the changes that occur preliminary to shedding, the crabs instinctively move into shelter, which may consist of beds of turtle grass or other subaquatic vegetation, where they moult and remain until the new shell secreted in fluid form has had time to harden. The crabs at the same time imbibe water and within a matter of only several minutes may increase their width by as much as 20 per cent. It is by taking advantage of this that the Louisiana crab fisherman invented an ingenious and highly efficient method of catching soft shell crabs. This consisted simply of tying together bundles of brush which were then submerged in appropriate crab waters, visited at intervals, and the crabs which had sought shelter in them for the purpose of shedding were captured, examined, sorted and marketed. The method for the casual and amateur soft shell crabber was a search of turtle grass beds, the shedding crabs being taken with a dip net.

The use of the crab scraper has the tremendous advantage of, first, its efficiency in capturing the crabs; second, lack of damage to the crabs themselves since by
its operation they are rolled up in the turtle grass and the undersized individuals can be released unharmed; and third, the fact that the scraper in passing over the beds of vegetation automatically removes the dead plants and thus cultivates the beds.

The fishermen have further modified the crab pot by constructing four instead of two entrances, each entrance being placed in the similar position on each side of the pot.

Fishermen operating crab pots either set them individually in a long line or in a series of short lines parallel to each other about 100 feet apart. The crab pots are successful in depth of 1 to 10 fathoms. Fishermen usually operate crab pot lines as a crew of two, using a 35 to 40 foot boat, but the fishing could be carried out by one man. Some states where crab pots are used impose a limit of 50 crab pots for each fishing unit but, as a matter of fact, 75 pots could be easily handled where such restrictions are unnecessary for conservation reasons. The operators usually fish their crab pots once a day, early in the morning, and ordinarily finish their work shortly after daybreak, since lifting the crab pots occupies only 2 to 3 hours. The crab pots must be re-baited every day. One 150-foot roll of 24-inch wide chicken wire will make 9 crab pots. Further additional remarks are of value in indicating the details of this type of crab catching operation. Iron rod frames are sometimes used, extended around all the edges of the pot to insure preserving the shape. These, however, may be entirely omitted. Frequently, some concrete pourings, concrete or incidental section of pipe are tied to opposite corners of the bottom of the pot to prevent its being overturned by currents. It has been found that the type illustrated with the partitioned floor above the base of the pot, thus providing place for four instead of two entrances, is, as would be expected, greatly more efficient. The fishermen also find that the crab pot frequently catches its own bait in the form of so-called "sardines," various types of herringlike fishes, such as menhaden, which wander into the funnel entrances. Where pots are set in areas of heavy current, fishermen have found it necessary to reduce the height from 24 to 20 inches to prevent them being overturned. Where this construction is used, the opening for removing the crabs is placed at the side of the pot, since only the sides have the double selvage.

The usual method employed by fishermen is to tie the end of the front line directly to the rope bridle attached to two opposite corners of the top of the pot. Where the crab pot is heavily reinforced in its construction, the front line is ordinarily attached simply to one corner.

Details of construction are shown in the accompanying illustrations. This type of crab scrape consists essentially of a welded iron frame. The thickness of the components of the iron used is indicated in the underline to the illustration. The construction is illustrated as viewed from the side in Figure 1, from the front in Figure 2, from the front again but with the net attachment indicated in Figure 3, and the general shape of the net as viewed simply as a flat object in Figure 4. The actual measurements are here given for clarity as indicated from the lettering shown in Figures 1 and 2, and are as follows: internal diameter of ring at a — 1 inch; length a to b — 3½ inches; b to c — 20½ inches; c to d — 33½ inches; e to e — 22½ inches; separation between e and h — 1½ inches; d to f — 13½ inches; e to g — 17 inches; f to g — 12 inches; i to f — 40 inches. The net laid out as placed in Figure 4 measures 40 inches at the front edge, 62 inches in depth and 15 inches across at the base.

Albino Blue Crab. This is a photograph of the rarest blue crab that has ever been known. It is a unique individual taken by a Department of Wild Life and Fisheries agent, Willie Schaubhut, Bayou Des Allemands, in June, 1950. It was completely white and would have been dangerously conspicuous to all of its enemies. Although the blue crab fishery has been under investigation for the last eighty years, throughout the entire Atlantic and Gulf Coasts, all the way from Nova Scotia to the Mexican border, of the untold billions of crabs that have come under scientific observation in the course of these researches, this is the only albino that has ever been discovered.
CENTRAL Louisiana contains Catahoula Lake and is therefore blessed with one of the most unique natural areas in the country. It provides excellent public duck shooting during the winter, good grazing for hogs and cattle in the late summer, and fine sport and commercial fishing during the remainder of the year. Louisiana contains many areas that possess one or perhaps two of the above qualities but Catahoula Lake is the only one that may boast of all three.

The 21,000-acre lake bottom is very flat and if the water stands at a depth of 3 feet in the middle, the entire lake bed is flooded out. The area is completely open except for a few oil derricks, and is surrounded by a fringe of water elm (Ulmus aquatica) and swamp privet (Forestiera acuminata) that varies in width to one-half mile.

The characteristic that brings about the duck hunting, fishing, and grazing combination is the manner in which water levels naturally fluctuate over the lake bed. Water levels stand over the lake bottom to a depth of five to 30 feet from late December to late August and the lake then goes almost dry. During the late spring and summer when water levels are falling, excellent sport fishing for bass, bream, barfish, and white perch is to be had in the lake and its tributaries. Commercial fishing is principally for buffalo and catfish.

Catahoula Lake is most widely known for its fall and winter waterfowl concentrations. Sportsmen from throughout this section of the south visit the area during the winter to hunt and view the legions of waterfowl. According to one of the most famous flyway biologists who has looked over most of the waterfowl areas in North America, Catahoula Lake is perhaps one of the most important single areas of its size to waterfowl on the continent. It has been known to harbor as many as two million ducks at one time although the normal winter population usually fluctuates around 50,000. It is important not only to waterfowl, but to duck hunters as well. Anyone who has the stamina and desire to duck hunt can feel completely free to come and go as he pleases here. The only rules necessary to follow are those migratory waterfowl laws set forth by the Federal Government.

The reason that Catahoula Lake is such a great waterfowl area is that it generally goes almost dry during the late summer. Usually about one-half of the lake bottom is exposed in the form of open mud flats as the water drains out through Old River and French Fork during August. These mud flats present an excellent seed bed and the past year's crop of seeds or tubers that have remained viable beneath the water for nine months, begins to germinate as the soil is exposed to the air.

As water levels recede to the center of the lake bed, hogs move in and turn the soil in search of chufa tubers and other forms of food. This turning of the soil acts in much the same fashion as a plow or disc and is probably beneficial in the production of healthy waterfowl food plants. Within a few days after exposure to air, the mud flats begin to resemble a giant pasture. Chufa, wild millet, spikerush, and other plants important to ducks, grow in profusion and produce a terrific crop of seed and tubers. After the seed crop matures during September, October, and early November, water levels begin to slowly rise again and flood out the food producing mud flats to a depth of a few inches. As this condition occurs, the fall flights of waterfowl arrive and they immediately flock in to feed upon the food supply that has become available through flooding.

After the duck season opens, hunting pressure forces the waterfowl concentrations to disperse into the state refuge, located in the south central part of the lake bed, and other waterfowl areas within 50 miles of the lake. For this reason, Catahoula Lake is directly important to