

Loran History, Use, and System

Loran is an acronym for *LONG RANGE* Navigation, a positioning system developed by the United States during World War II. The current version of the system, loran-C, has been around since the 1950s. About half a million people are currently estimated to use loran equipment.

The benefits of loran to saltwater anglers are long established, but inland anglers stand to gain in safety and convenience as well. Even on some of the smaller inland reservoirs, the advantages of loran-C are clear when fishing at night, returning to port on a strange lake after getting turned around or lost, or perhaps just sharing locations of a particularly good piece of structure with a visiting friend and fellow fisherman by sharing the correct positioning information. (Generally speaking, an angler can expect a loran coordinate to put him within 100 yards or less of a given site.)

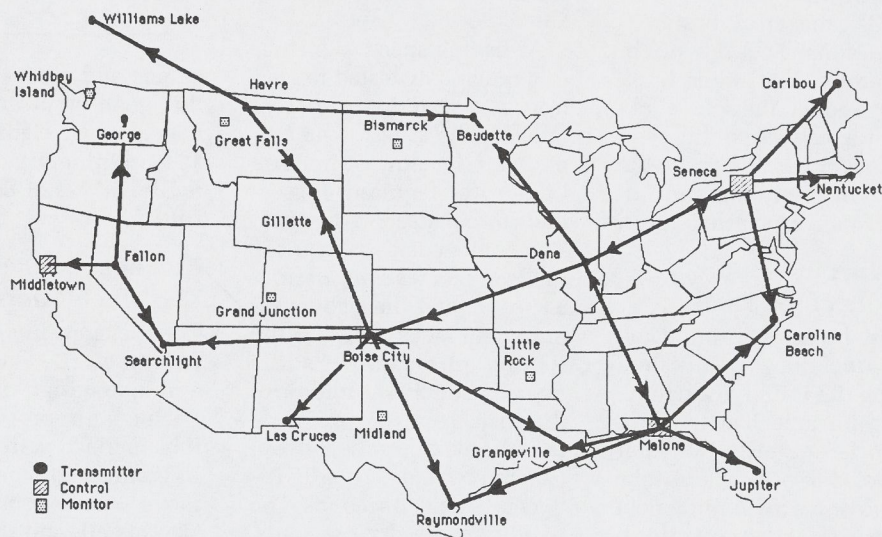
For loran-C to produce an accurate fix on your location, you must be able to receive signals transmitted from three different stations (LORSTAs). The unit calculates a line of position from Station A to Station B, then another line from either of those stations to a third one. Based upon where those lines intersect, the unit displays data revealing your location. After receiv-

ing and reading the transmitted signals, all the necessary computations are handled by the unit's software.

Unfortunately, that's where the problem occurs with the new stations. Existing software on the vast majority of loran units today cannot recognize and identify signals transmitted by either the NOCUS or SOCUS chain. While the principles used in both old and new loran-C chains are the same, marine units manufactured prior to the introduction of the Midconti-

nent Expansion Project do not have the proper programming to utilize the new coverage.

To build the new North Central U.S. (NOCUS) and South Central U.S. (SOCUS) chains, four transmitting stations were added to the system, which is shown on the accompanying map. The new stations are located at Havre, Montana; Boise City, Oklahoma; Gillette, Wyoming; and Las Cruces, New Mexico.



protection circuits make it virtually impossible to lose memory by starting the engine or from power transients caused by other onboard equipment.

The ML-8000 II has 250-waypoint memory, with 100 of them possible to lock secretly from view by using a personal security code. Nine routes with up to 20 waypoints each may be stored in memory. Six notch filters preset for North America are programmed to reduce interference. This unit has the same display characters, sensitivity, and navigational data output as the Explorer II, and comes with an antenna.

What We'd Buy

Based upon a comparison of features, advantages, and noise/interference filtering, we feel the Si-Tex XJ-2 clearly offers the best choice for trouble-

free, accurate reception and display of data for operation in the new NOCUS and SOCUS loran-C chains.

The central portion of the United States where the new system now is available is noted for its frequent thunderstorms during spring, summer, and fall fishing seasons. Lightning storms play havoc with loran-C signal reception (as do solar flares), and may occur anywhere between a transmitting station and your location, intensifying the need to have the maximum in filtering and amplifying circuitry.

We were not swayed by Micrologic's claims for greater simplicity in operation, but we did take very seri-

ous note of the Si-Tex XJ-2's increased filtering system and more advanced features. Micrologic also markets two other loran-C models that will perform under the new system, including one which is handheld and totally portable for use on land or water.

A final note: During the installation of any loran unit, take care to ensure the proper grounding of your receiver. Owners of large boats will find running a TV set definitely adversely affects loran-C performance. Fishermen using CRT depthfinders may encounter similar problems. To reduce those problems, have your dealer increase the shielding and/or reroute applicable wiring. ■

Contacts: **Si-Tex Marine**, P.O. Box 6700, Clearwater, FL 34618; 813/535-4681. **Micrologic**, 9610 DeSoto Ave., Chatsworth, CA 91311; 818/998-1216.

Update: Kickapoo Kanoe Float Tube And Kickapoo Kickers Fins Not Recommended

In the year since we published our first float-tube test (August 1990) and float tube-fin evaluation (December 1990), we've looked at two additional fin models and another tube.

We tried out fins from Caddis and a pair of Kickapoo Kickers, and the Caddis pair performed moderately well. In contrast, we think the Kickapoo Kickers are at best ineffective and may be downright dangerous. The other Kickapoo product, the solid Kickapoo Kanoe tube, didn't float our boat either. We prefer the Buck's Bag belly boat and other inflatables over the Kanoe.

Caddis Fin— Middle of the Pack

To test the fins, we duplicated the procedure established during the initial evaluation. Using the same float tube as in the original tests, a tester would kick-paddle the tube 25 yards in a swimming pool under each of two conditions: 1) paddling at fishing speed, and 2) paddling at maximum speed.

We recorded the time and the number of kicks required to travel 25 yards for each test condition, repeated the test, and then calculated the average time and number of kicks.

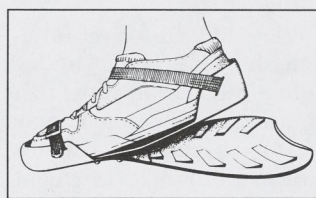
The Caddis fin accepts any type of footwear—stocking-foot waders, boot-foot wad-

ers, or tennis shoes, for example. One size fits all, and it has an easy-entry lacing system that feels secure and works well. The fin is lightweight, comfortable to use, and because of its flexibility, produces no undue fatigue down the front of the lower leg. Also, it floats to prevent loss should it come off the foot. A set of Caddis fins costs about \$36.

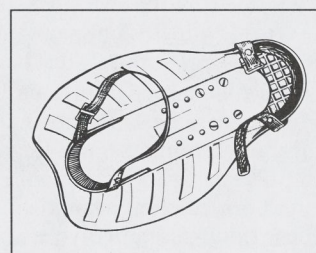
At fishing speed, the eight fins previously tested ranged from a 25-yard time of 29 seconds for the fastest to 45 seconds for the slowest fin. The Caddis fin required 40 seconds to traverse the distance. The number of kicks required in the earlier test ranged from 31 to 57, and the Caddis required 46 kicks. Thus, in the fishing phase, the Caddis ranked about in the middle of the pack.

In the maximum speed test, testers covered 25 yards between 19 and 28 seconds. The Caddis required 26 seconds. The previously tested fins required from 39 to 69 kicks to traverse 25 yards at top speed, and the Caddis required 56 kicks, which again put it in the middle of the fins tested.

In summary, the Caddis fin is a middle-of-the-road performer. It is moderately priced, comfortable to use, and may meet your needs if you don't require high perfor-



Above and right: The Kickapoo Kicker fins are awkward and fatiguing to use, in our opinion.



mance and great power. For the small-pond angler, they may be just right. (Caddis, 1040 Alpine Ave., McMinnville, OR 97128; 800/4-CADDIS).

Kickapoo Kickers— Too Much Effort

The Kickapoo fins, which sell for around \$24 a pair, feature a unique design that permits the angler to propel the float tube in the forward direction, in contrast to other fins that move the tube backward. One size fits all, and they are designed to be worn with any type of foot gear.

The first discovery that an angler makes when trying the Kickapoo fins is that they require a completely different leg motion and body position in the tube. The angler must assume an upright position and use a walking motion with the legs. The power stroke occurs during the backward movement of the fin, and no power is developed during the forward stroke.

The vertical position of the angler results in him or her being balanced at the crotch on the tube's seat strap—an extremely uncomfortable and unstable position to say the least. A float tube's backrest is of no value, since nothing is touching the angler from the rear as he balances on the seat strap. The fins are extremely awkward and fatiguing to use because of the body position required and the lack of body

support obtained from the tube itself.

However, the body position is the least of the problems with the Kickapoo fins. They generate absolutely no power, and even making headway with them is a problem. After practice, we found that we needed from seven to ten kicks to move the tube forward 5 feet. As a result of their poor performance, the test was suspended. The thought of trying to struggle the test distance of 25 yards in the Kickapoo fins had no appeal.

We think the Kickapoo fins could be extremely dangerous as a result of their total lack of power. If an angler should drift or be blown into open water, there may be little chance of returning to home base.

Kickapoo Kanoe— Thanks, But No Thanks

We were intrigued when we first heard about the Kickapoo Kanoe: a one-piece, solid float tube. Not that the idea of a non-inflating float tube is not new—some of the earliest belly boats were actually hollow rings of tin, wood, or galvanized steel. But while the current market is overwhelmingly dominated by inflatable models, there seemed to us some potential advantages in the tubeless tube, particularly using modern materials, which might revitalize the idea in some interesting ways.

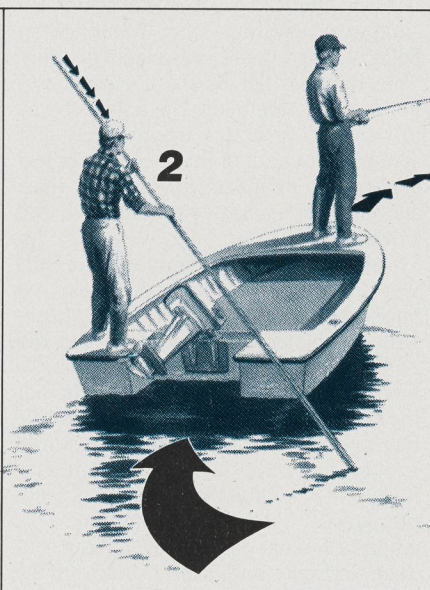
But when we evaluated the Kickapoo Kanoe, not enough of these potential advantages were realized. It lacks both the comfort and features found in



Left: In performance, the Caddis fins placed in the middle of the pack. We think they're suitable for small-pond angling.

BY BOB STEARNS

THE ART OF POLING



Put away your paddle and rediscover the all-season benefits of this age-old technique.



When poling your boat always remember that you're working to achieve a balance between the thrust of your pushpole and the effects of the wind and/or current. To pole straight ahead (1)—if the water is calm and there is little or no wind—just push the pole straight astern and the boat will move forward. If the thrust is essentially parallel to the centerline (keel) and straight astern, then the boat will move straight ahead regardless of whether the poler is positioned in the center or to one side. Usually, however, you must contend with the wind and/or current; this must be countered by "crabbing" the boat against those forces in a slightly right or left turning attitude. Turning Right (2): The pushpole is thrust against the bottom at an angle oblique to the boat's centerline, and to the right of the centerline. As long as thrusts are made in this fashion, the boat will continue to turn to the right. Keep in mind that the greater the pole's angle to one side or the other of the centerline, the quicker the turn. Turning Left (3): Follow the same procedure as in turning right, except thrust your pole against the bottom to the left of the centerline.

The pushpole is as old as boating and probably precedes the paddle as the principal means of small-craft propulsion. To this day it remains one of the world's greatest fishing and hunting tools. I've been using pushpoles of one sort or another for more than thirty-five years now. There are very few places that I would take my boat without one. Some of the finest marsh hen (clapper rail) hunting I've ever enjoyed was in the bow of a boat with a stiff northeaster providing some extra push to help my partner with the poling job and high water flooding the marsh grass so that only the tips were showing.

Almost any open boat under 20-feet long can be successfully powered by a single pushpole. From propelling a canoe

upstream against the current to gliding a skiff across a bonefish flat in the Florida Keys to guiding a bass boat through heavy weeds, the pushpole can help you move with less noise than the quietest electric.

Like anything else, easy poling is a matter of skill, and that's purely a function of practice. A south Florida flats guide can pole his 16- to 18-foot skiff all day for many miles without fatigue (some of these gents are retirement age, by the way), using finesse to get the job done rather than muscle. The weekend angler who sits at a desk all week can master the pushpole as well—provided he's in reasonable shape and learns the proper technique.

Poling has come a long way since it was first adopted by the sportsman for hunting and fishing. The early pushpoles were

simply long poles, usually 12 to 20 feet in length, depending upon depth of water and size of boat, and cut from whatever was handy, including saplings and bamboo. When I first fished the Florida Keys in the 1950's, poles were all of wood, usually round stock obtained from a lumberyard. In the mid-1960's some enterprising angler got the idea of making them out of the same hollow fiberglass tubing used for pole vaulting.

Today fiberglass still dominates, although graphite is showing some promise because of its extremely light weight. At least one company (Brell Mar Products) offers a 12-foot telescoping aluminum version. Wood pushpoles are still used in many parts of the country, but they just don't last long under heavy use, especially

ILLUSTRATED BY JOHN RICE

BUYING A PUSHPOLE

■ For more information on Moonlighter Product's fiberglass pushpoles and related accessories, contact Bill Marks, Dept. FS, P.O. Box 610717, North Miami, Fla. 33261, telephone (305) 895-6362. Moonlighter's two-piece fiberglass model retails for \$165 complete, plus \$20 to \$30 shipping anywhere in the U.S. (lower 48 states). One-piece poles run \$155 to \$165, depending upon length (up to 20 feet).

Future Enterprises also offers a fiberglass pushpole. The "Pole Cat" is available in sizes from 14 to 18 feet. It retails for \$149, plus shipping and handling. For more information, contact Future Enterprises, Dept. FS, 2641 W. 81 St., Hialeah, Fla. 33016, telephone (305) 556-9882.

The 12-foot telescoping aluminum pushpole from Brell Mar Products retails for \$39.95 to \$49.95. Different accessories are also available for these poles for \$9.95 each. Contact Brell Mar Products, Dept. FS, P.O. Box 46, Clinton, Miss. 39056, telephone (601) 922-9817, for more information.

For details on the various Gary Loomis pushpoles, contact G. Loomis Inc., Dept. FS, P.O. Box E, Woodland, Wash. 98674, telephone (206) 225-6516.

when the boater is trying to propel a relatively large craft in wind and/or current. Experience has taught me the hard way; that having a pole break in the middle of a wide expanse of water is almost as traumatic as losing your engine far from shore.

The last wooden pushpole I had (almost 20 years ago) left me stranded in the center of a huge, skinny Florida Bay flat. The pole sheared in the middle, diagonally like a sharp stake, embedding a few splinters in my hand in the process. The bottom of the flat was soft like pudding; it took me and my partner an hour of hard labor to drag the boat back to deeper water, while the ebbing tide threatened to leave us high and dry. I bought a new fiberglass pushpole the following week.

Several of the more recent innovations in fiberglass pushpole design have come from Bill Marks at Moonlighter Products

and Gary Loomis of G. Loomis Inc. Marks has designed an extremely tough nylon triangular foot, with a tapered nylon point for the other end of the pole. If his nylon foot needs a broader base for extremely soft bottoms, a set of wedges (called mud bars) can be quickly bolted in place. Marks makes one-piece poles up to 20 feet long; his latest offering is a two-piece snap-together pushpole, any length up to 20 feet. I tried one for quite a while and came to the conclusion that it's just as tough as the one-piece version. The two-piece pole can also be stored inside the boat instead of on the gunwale.

Nylon gunwale pushpole brackets are another innovation from Moonlighter. Bolted to the top of a reasonably flat gunwale, or atop flat blocks if elevation is needed, they are by far the handiest way to store a pole of any length. They cost about \$25 for a set of three. Similar brackets can also be made from suitably thick aluminum or stainless steel flat stock (see sidebar, "Build Your Own").

During the last few months a graphite version of the fiberglass pushpole has once again surfaced. Previous attempts with this material in that application did not fare well, but fishing rod and graphite blank builder Gary Loomis thinks he has the answer. I've been using a Loomis pole for a few months, and it sure seems sturdy enough to do the job. It's as light as a feather, a real plus that's very much appreciated by the end of a long day. Like graphite fishing rods, however, it can conduct electricity and has no place in the hands during a lightning storm. But, then again, it would take someone with a suicide wish to use any pushpole under such circumstances. Loomis expects his graphite version, complete with forked nylon foot and tip, and available in lengths up to 21 feet, to list in the \$400 to \$500 range. His graphite/fiberglass composite poles will sell for \$300 to \$355, and the all-fiberglass model will carry a \$220 to \$250 price tag.

The least expensive way to get a quality fiberglass or graphite pole is to buy the "blank" (hollow tube, open at both ends), then add your own foot and tip. At

present I know of only one source of pushpole blanks and other components (including forked foot and pointed tip): the G. Loomis company. Fiberglass, graphite/fiberglass composite, and all-graphite blanks are available in 6- and 7-foot lengths (shipable via UPS), at prices ranging from \$53 to \$145 for each section. Ferrules for joining two or more sections are also available at \$7.50 each.

Many anglers also use pushpoles to keep the boat stationary if the water is reasonably shallow and the bottom is soft enough. Some even carry a second, shorter "stake-out" pole so that the boat can be immobilized at both ends. The long pole is usually thrust into the bottom at an angle of 30 degrees or less (from the horizontal—as low as possible to reduce the stress of bending and to also reduce its likelihood of interfering with casting or shooting) before being bent over even a little further and tied to the boat. A strong pole will hold a boat in a surprising amount of wind and current, but if it is poorly made (or stressed too much via a sharp bend), that's the time when it will most likely fail. So, before you buy a ready-made pole or blank, make sure the manufacturer will stand behind his product under reasonable circumstances.



GOOSE

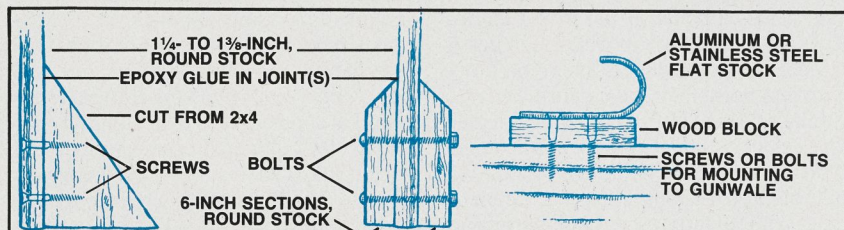
(Continued from page 47)

called snow geese. Adults that have white heads and mottled blue-gray bodies are still called blue geese, even though both often hatch from the same nest. Identifying birds of the year can confuse hunters. Young white geese show gray and black markings on back and wings. Juvenile blues, which lack the white head of adults, are dark to light slate-blue overall. Years ago on Munuscong Bay in northern Lake Huron I shot two juvenile blues and was worried because I wasn't certain what they were. Both were entirely gray-blue with only a scattering of darker markings on back and tail.

Originally the white snow geese were given a most romantic scientific name, *Chen hyperborea*, "goose from beyond the north wind," because of their remote far-north nesting habits. The blue goose was *Chen caerulescens*, "dark-blue goose." The discovery of nesting grounds of the blue, and suspicion that blues and snows might be more than relatives, was made in 1929 in the lightly explored territory west of Baffin Island. Nonetheless, scientists stuck with the two-species theory until 1961. That year a researcher named Cooch, working on the nesting grounds of both geese, proved without question that the two were simply color phases of the same goose.

Unfortunately, the romantic scientific name of the snow was dropped. Depending on which late waterfowl reference you read, both are now either *Chen*

BUILD YOUR OWN



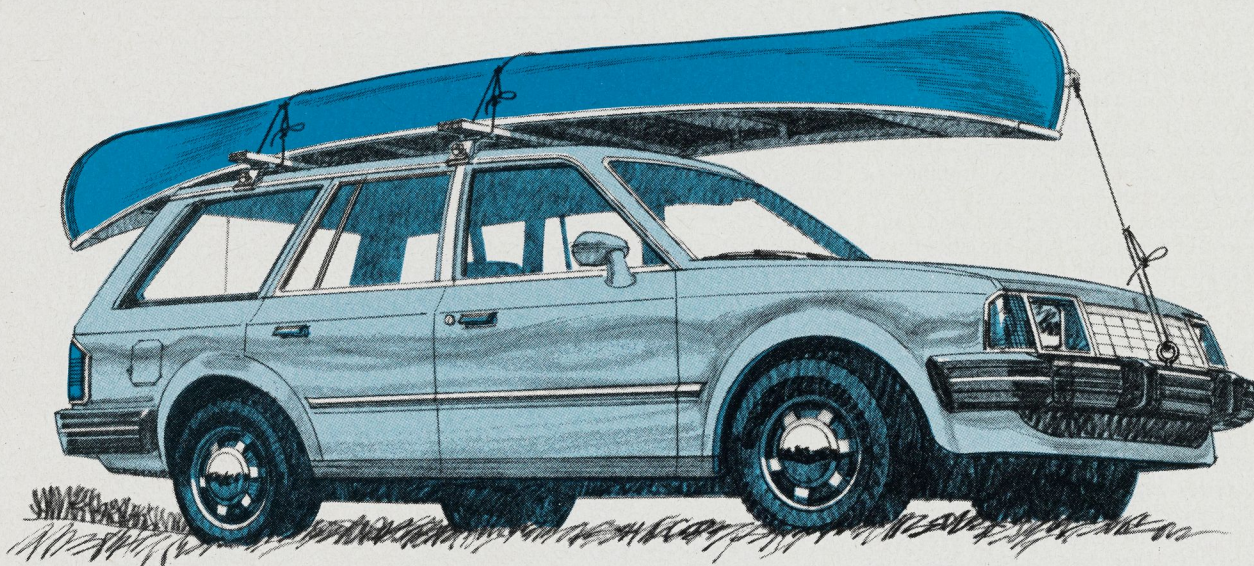
■ Though other materials such as fiberglass, graphite, or aluminum are generally more reliable, a wooden pushpole may be suitable for your needs. You can make a pole from 1 1/4- to 1 3/8-inch round stock. A foot, if needed, can be made from a triangular piece of 2x4 or by bolting a couple of 6-inch pieces of round stock side-by-side to one end of the pole.

■ Pushpole brackets mounted to the gunwale are a handy way to store a pole of any length. Though the brackets are commercially available, you can also build your own. Use suitably thick aluminum or stainless steel flat stock and bend it into the form of a "J," then bolt it horizontally to a block of wood (three brackets are required).

HOW IT'S DONE

A simple system of loops and knots can keep a load where it's supposed to be.

Lowdown on Tiedowns



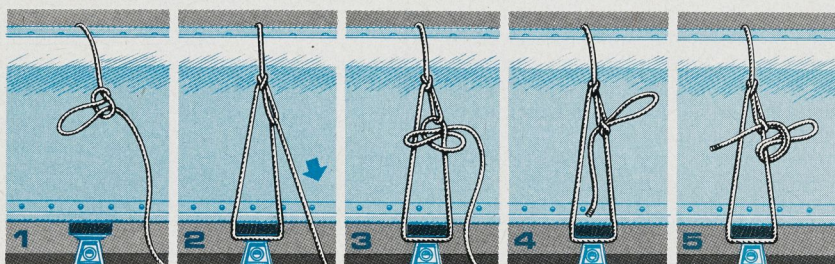
ONE OF the worst fears of any driver is having a load blow off the roof of a moving vehicle. Whether you're carrying a canoe or lumber, a series of simple loops and knots will enable you to tie down any load to your vehicle's roof quickly and safely.

For example, let's say you want to tie down a canoe. First, secure one end of the rope to the cartop carrier next to one gunnel. You can tie the rope directly to the carrier, but I prefer to tie a loop in one end of the rope and pass the rope around the carrier and back through the loop. By using the loop, I can easily adjust the position of the rope without untying a knot.

Now pass the rope over the canoe, and from the other side take up all slack. Reach 8 to 12 inches above the carrier and tie a slip knot in the rope (Fig. 1). Form the loop with the rope from below; otherwise, the loop will tighten rather than remaining a loop.

Pass the rope under the cartop carrier and then run it back up through the slip-knot loop. Pull down to cinch the rope around the canoe (Fig. 2). The slip knot and cartop carrier act as pulleys, and you can exert a great deal of pressure with relatively little effort to tighten the rope.

To finish, double the end of the rope and tie a half hitch (Fig. 3). With a few minutes of practice, you'll be able to



execute the entire tie-down in a matter of seconds.

To untie, pull the loose end (Fig. 4).

On longer trips, or for added security, you can finish with another half hitch with the doubled rope (Fig. 5).

In addition to the two ropes across the top of my car, I like to secure the bow and stern of the canoe as well. Eye bolts installed in the front and rear bumpers of the car facilitate this job. All that's required is the drilling of one small hole, and in some cases you may be able to utilize an existing hole. Just be sure the eye bolt runs through the bumper or frame. Use the tie-down method outlined above, passing the rope through the eye bolt as you did under the cartop carrier.

Your craft is now secure, assuming, of course, that your cartop carrier is properly installed. It pays to check and, if necessary, adjust all tiedowns periodi-

cally on longer trips—perhaps each time you stop for gas—or on very rough roads. But you'll travel secure in the knowledge that your boat won't be making an unscheduled departure from the roof of your car.

Finally, a suggestion for rope. I've found that #120 nylon seine twine, available from fishnet supply companies, works well. One source is Nichols Net and Twine Co., Dept. FS, R.R. 3, Bend Road, East St. Louis, Ill. 62201, telephone (618) 876-7700. A 1-pound spool costs \$3.95 plus shipping. The twine has about 3/8-inch diameter and a breaking strength of over 1,000 pounds. A 1-pound spool holds about 135 feet. Purchase the kind that's been treated with Net-Set, a preservative that stiffens and darkens the twine and makes it easier to work with. As with all nylon rope, melt the loose ends to prevent unraveling. —ROGER SCHOUMACHER

Illustrated by Tom Rost

vigor," an attribute of many crosses, which means it's tougher, more adaptable, more aggressive (read catchable), and grows faster than either parent.

An angler friend who had about given up on inland stripers told me, "At maximum size these hybrids aren't quite as large as striped bass, but I've seen 'em up to 12 pounds—plenty big enough—and I can catch these!"

Dave Bishop, who ramrodded the Tennessee introduction, says, "High survival, swift growth, and aggressiveness get this fish into creels in a hurry. Today that's important to fish managers. And in impoundments here and elsewhere where stripers have not been successful, the hybrids have provided excellent fishing. They're great fighters and fine eating."

In addition, the fact that hybrid stripers are open-water, schooling fish is exceedingly important to managers. The fish utilize the "dead" or only slightly used part of most lake environments, where they act as a biological control upon overpopulous gizzard shad, alewives, or sunfish. I like the stilted yet succinct statement of one biologist: "Large, aggressive hybrids like these are a perfect tool for changing an unutilized forage biomass into a useful sport-food biomass." In other words, the stripers catch otherwise unused shad, and we catch the stripers.

Large predatory fish do help control prolific small fish. They're also, obviously, prizes eagerly sought by anglers—a vital concern in today's management. But most pure-strain natives have not been successful when transplanted. Pike and muskies are classic examples; both are difficult to raise, and both must be fed live fish, an expensive, complicated procedure. In the West, pike have succeeded spottily, but numerous experiments with both pike and muskies outside their native ranges have failed.

Not until the tiger muskie, a pike-muskellunge hybrid, began to grab the attention of fish managers and the enthusiasm of anglers a few years ago did the predatory pike tribe find a wide-ranging place in modern management. At least a dozen states now culture the hybrid, and more are considering introducing it. Tiger muskies grow plenty large enough to suit everybody—the present New York state record is 29 pounds 3 ounces; the West Virginia record is 22 pounds 6 ounces; and Iowa's record is 24 pounds 1 ounce. To the delight of hatchery personnel, this hybrid can be reared on manufactured pellets, which makes its culture economical. The fish is aggressive, tolerates adverse habitat conditions better than either parent, and grows swiftly. Crosses are either sterile or of low fertility, so it can't cause trouble.

Most states with an active tiger muskie program admit the goal is to furnish a trophy fish for anglers in numerous waters where none occur, add diversity, and control rough fish populations. Some states—Minnesota and Iowa for example—place tiger muskies in small, high-use urban lakes. Intensive management of such waters is a new and most important theme (Continued on page 90)

HYBRID DISTRIBUTION GUIDE

The chart on this page and on page 90 details the distribution range of the most prominent hybrids developed to date. Each hybrid has been specifically designed by fisheries biologists with one exception—the rainbow-cutthroat hybrid which occurs naturally throughout Montana.



SPLAKE

Brook Trout and Lake Trout

Utah, Wyoming, Minnesota, Michigan, New York, New Hampshire, Maine.



PIKE and RUSSIAN AMUR (PIKE)

Pennsylvania.



TIGER MUSKIE

Pike and Muskie

Wyoming, Colorado, Nebraska, Texas, Minnesota, Iowa, Missouri, Arkansas, Michigan, Illinois, Indiana, Ohio, Kentucky, West Virginia, Pennsylvania, New York, Vermont, Massachusetts.



HYBRID STRIPER

White and Striped Bass

Oregon, Colorado, New Mexico, Nebraska, Kansas, Oklahoma, Texas, Iowa, Missouri, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, Kentucky, Indiana, Illinois, Ohio, West Virginia, North Carolina, South Carolina, Georgia, Florida, Delaware, Pennsylvania, New York.



VARIOUS SUNFISH CROSSES

Colorado, Kansas, Texas, Missouri, Alabama, Georgia, North Carolina, Michigan.



SAUGEYE

Sauger and Walleye

Ohio, Kentucky, Tennessee, Florida.



CROSSES of BROOK TROUT STRAINS

Michigan, New York, Maine.



PALOMINO TROUT

Rainbow Trout and Color Phase of Brown Trout

Pennsylvania.

CLIMBING THE POLE



Grasp the pole midway with your right hand, keeping your left lower, and put pole in the water close to the canoe



Applying a light backward pressure, swing into the pole with arms and shoulders. Arrows show movement forward



Climb the pole hand over hand, finishing up with a firm shove. Lift pole out and bring forward without dragging



POLE YOUR CANOE

By BILL RIVIERE

Upstream or down, shallow or rocky

water, it makes no difference to the man

with a settin' pole. A river is his highway

MYTHS die hard—for example, the belief that you must be a blood brother to an Ojibway Indian before you can learn to pole a canoe through fast water. Actually, it's not a difficult skill to acquire. I'm not referring to shooting the rapids hell-a-hoopin', but to the deliberate and calculated guiding of a canoe through rock-studded rips with a "settin' pole," either upstream or down. You must have a basic knowledge of canoeing, of course—at least the ability to paddle one with some ease and grace. For poling, all you need is a canoe, a pole, some moderately fast water on a neighborhood stream, and a slight inclination toward the daring. You'll discover that poling is not only easier than you thought, but highly rewarding in this day of dwindling hunting grounds and crowded fishing holes.

For too many years, on southern New Hampshire rivers, I had grudgingly turned around and gone home whenever I came to a set of rips. But there was always the nagging thought that beyond were deep holes harboring hungry trout; alder runs white-speckled by overcrowded woodcock; big bucks in hard-to-reach cedar swamps; or fancy squirrel shooting among treetops overhanging the water.

I'd tried portaging, naturally, but all too often I would end up in a tangle of impenetrable brush or against a ledge. Also, I'd dragged the canoe, but this invariably meant a boots or pants full of ice water.

Then, in 1941, I was assigned by the U.S. Border Patrol to Fort Kent, Maine. Here there are more canoes than automobiles, since Fort Kent is the terminus of the famed Allagash and St. John river trips. Willard Jalbert, who teathed on a canoe thwart, gave me a taste of white water, wielding his ash pole through the mile-long Big Rapids of the St. John in complete contempt for the boiling maelstrom, and pointing out basic poling technique to me.

He was convincing. I knew I would never match his skill, but I borrowed a 20-foot Skowhegan and a 12-foot pole and set to work learning the ways of flowing water. There's been a settin' pole in my canoe ever since.

Why Wait for Spinach?

By NED SMITH

Right on the heels of winter the
wild greens appear — and unlike supermarket
produce, they're free for the picking

A CERTAIN angling crony claims that my interest in edible wild plants is merely a subconscious dread of going home from a fishing trip empty-handed. That's ridiculous. Of course, a bag of young meadow mushrooms or a bundle of succulent poke shoots does take the sting out of a troutless Tuesday, but there's more to it than that. I happen to enjoy hunting for and sampling the plants of field and forest that Indians, pioneers, and resourceful immigrants used as food for a long time before supermarkets came into being. Furthermore, many wild plants are truly delicious, and they're free for the asking. To my way of thinking, that adds up to a pretty sensible outdoor hobby.

Of the hundreds of wild plants that can be safely eaten by humans, greens and salad herbs are the first to appear, coming right on the heels of winter, before spinach or asparagus have had time to grow. A complete list would fill a small book, but skunk cabbage, chicory, dandelion, thistle, bracken, pokeweed, purslane, watercress, milkweed, lamb's-quarters, nettle, marsh marigold, and fireweed are among the best known. Some of these are gathered by rural folk wherever they grow; others are locally popular.

It's a simple matter for any outdoorsman to bring home a mess of greens—the observant camper, hiker, or fisherman will find them growing everywhere. Naturally, it is imperative to know what you are picking, for the outdoors is full of look-alikes, and some of them are dangerously poisonous. If you have any doubt about the identity of a plant, positive identification should be made by means of a good plant field guide before you sample it.

Some wild green plants are best eaten as salad ingredients. Many, particularly the leafy species, may be



Before modern transportation and packing methods made fresh vegetables available all year, such early plants as the fiddlehead (above) were eagerly hunted

cooked and served like spinach, whereas those producing shoots are generally prepared like asparagus. As a rule it is best to change the water at least once while the plants are cooking, and some stronger-flavored species require two changes. Naturally, not all these greens will appeal to everyone; neither does spinach or asparagus. But with the right preparation a number of wild plants are as good as, or better than, their cultivated counterparts.

Dandelion, of course, is one of the old standbys. This immigrant from Europe has been naturalized over a large portion of the United States, and in some areas gathering the young plants in springtime has become almost a ritual. The rosettes of dark-green leaves are easily recognized, and can be found in profusion in meadows and roadsides. Only the young plants that have not yet borne their golden flower heads should be used, as the leaves become bitter and tough with age. Cut off the root well below the surface of the ground and peel off the soiled and withered outer leaves before placing the plant in your bag.

At home the leaves are separated by cutting off the base; then wash them in cold water. A common old-fashioned method of preparation consists of dressing the cooked and drained greens with a bacon, sugar, and vinegar mixture into which an egg has been stirred. Dandelion also makes a good salad. Simply pour a suitable salad dressing over cooked greens that have been thoroughly chilled and chopped.

Another well-known wild green is the marsh marigold, or cowslip. Growing in wet meadows and marshy places, the plant bears clumps of shiny round or kidney-shaped leaves that are readily recognized. Later in the season yellow flowers, resembling large buttercups, appear on the branched tops of the plant. These are among the very best of wild greens. Cut off the young leaves and boil for an hour or more, changing the cooking water at least once. The addition of hot lettuce dressing or a thin white sauce makes

(Continued on page 99)



Moving downstream, the canoeist sees a rock in his path. Reaching to midship, he prepares to place pole in water



Touching the river bottom lightly swings the bow into the channel, where the canoe now approaches another rock



Snubbing on opposite side avoids this obstacle. Without effort the poler then lets his craft down the rocky run



Poling is usually considered dangerous because we've been educated *never* to stand in a canoe. To pole effectively, however, you *must* stand, but since this white-water art is strictly for the shallows, the time-honored safety advice need not apply. Poling is as safe as the front pew in church!

Spruce and tamarack make the best poles to be cut at streamside, and if you can find a "stump-dried" tree you have a prize—light and tough. Peel the bark and smooth the knots, lest rough spots skin or blister your hands. The pole should be twelve to fourteen feet long, an inch thick at the top, about two inches at the butt. To the butt end attach a soft-iron "shoe" that will grip rocks without slipping; one can be obtained from makers of logging tools. Lacking such a shoe, point the lower end somewhat and then scorch it for a half hour over an open fire to "case-harden" it. This prevents splitting and fraying.

A logger's pickpole, usually of maple, ash, or hickory, will also do nicely; these woods are heavier than spruce or tamarack but tougher. Incidentally, don't paint or varnish a pole, or it'll blister your hands. If you want to protect it, rub it frequently with boiled linseed oil, but even this is unnecessary, since using the pole will give it a genuine "hand-rubbed" finish.

Almost any canoe will do, but you'll find poling easiest in a 17- or 18-foot guide's model with its low ends, wide beam, and flat bottom, the latter carried well into the sides and ends. Good dimensions include at least a 36-inch beam and 13-inch midship depth. The wide, flat-bottomed models have great stability, but round-bottom canoes are "fool killers," especially in rough water. Smaller craft in the 12-to-16-foot range are often poorly adapted to river work, since they are correspondingly narrower and less stable. Also, they draw more water.

Old pros among white-water men most often prefer the canvas canoe, but an aluminum craft is generally a better choice for beginners or for use in the turbulent welter of rocks and bouncing waves that make up an enticing set of rips. Fiber-glass canoes large enough for stream work are likely to be heavy, though fully as tough as aluminum and as maintenance-free.

One point on which there is no give and take, however, is the keel. Stream work calls for canoes to be set over sideways and diagonally—sometimes in a hurry—and a keel makes this maneuver difficult. Most aluminum and glass canoes have shallow keels that offer minimum resistance to this side motion. Canvas canoes are available with or without keels, the keeled models being sold to those who believe a keel protects the canvas against rocks. This protection is slight, actually, since a canoe only rarely drives head-on into a boulder. A shoe keel, $\frac{3}{8}$ to $\frac{1}{2}$ inch thick and 3 to 4 inches wide, offers greater protection without interfering seriously with "settin' over."

Soft-soled shoes, moccasins, or tennis shoes, which help the feet fit the contour of canoes, contribute greatly to good balance. Wear loose-fitting clothing, too, roomy in the back and shoulders, for here are the muscles that do the work in fast water.

For your first try at poling, seek out a lakeshore whose bottom is firm and drops off gradually, preferably in a sheltered cove where the wind won't buffet your canoe. If you're alone, place weight equal to your own in the craft so that the bow rides slightly higher than the stern when you're aboard—proper trim for a canoe in upstream travel.

With the canoe fully afloat and parallel to shore, step confidently into the craft. Poling isn't a tightrope act, so

ROCK TO ROCK



Leaving the shelter behind one boulder, the canoe poler takes advantage of another backwater to move upstream



The next step is to the protection offered by a small riffle, where he plots a course toward another backwater



In this eddy the current is still, and while the canoe glides forward the poler has time to plan his next move



you won't have to poise yourself gingerly over the keel line. Instead, place your left foot slightly off center, with the calf of your leg close to the stern thwart or seat. Your right foot should then be forward and to the right somewhat, so that you face about 45 degrees off the port bow. A relaxed, comfortable position, with some degree of give in your knees, helps to absorb or counteract any tendency of the canoe to rock.

Grasp the pole loosely midway of its length, right hand uppermost, left hand some eighteen inches below it. Drop the butt end just back of your left foot and as close to the canoe as possible. Be sure you've found firm footing, then apply a light backward pressure with both hands, swinging into the pole with your arms and shoulders. As the canoe moves forward "climb the pole" hand over hand, continuing the rearward thrust until you reach the top. Go into a slight crouch and give one final, firm, but not sudden shove.

Even with a gentle thrust of the pole be prepared for a spurt of speed you've never experienced with a paddle. A canoe is a lively craft when poled, hence the need for a relaxed semi-crouch. It'll keep you from shoving the canoe out from under yourself.

As you move forward, lift the pole completely out of water with a smart upward flip, using a reverse of the hand-over-hand motions. Never drag the pole through the water to its forward position, as this will turn your canoe off its course. Before you lose momentum take another bite with the pole and repeat, always striving for a smooth, rhythmic beat. Skilled poling, like skillful paddling, is always done from one side only. Shifting the pole from side to side will get you into trouble when you tackle fast water. Keep the canoe running parallel to shore, avoiding deep water, where the pole is useless. If the canoe tends to skid sideways or to turn, alter the thrust of your pole slightly to compensate. When you graduate to fast water, the current will help keep you on course.

Before trying stream poling, practice "snubbing" the canoe in the lakeshore shoals. Snubbing is a technique for stopping or slowing forward motion. While the canoe is moving, reach forward with the pole for a firm hold on the bottom at a point opposite the middle thwart and as close to the gunwale as possible. As the pole strikes bottom, lean into it, bracing your feet and knees slightly but not stiffly. The latter should always remain flexible. At slow speeds this will bring your canoe to an abrupt stop, although your first attempts may throw you off balance somewhat. At faster speeds or in a powerful current you may have to snub two or three times, possibly more, before you come to a standstill. Practice this snubbing technique until you can do it smoothly and confidently, and you will have acquired the basic skill for stream poling.

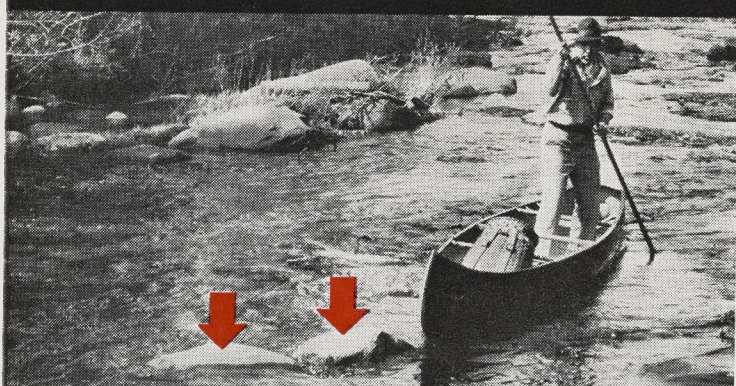
You now need only to find a shallow, slow-moving stream for further practice. This should be relatively free of rocks, snags or other obstructions. Devote your initial efforts to upstream poling, noting the effects of the current on your canoe's behavior. Observe that crosscurrents tend to swing the bow toward shore; this has to be countered by altering the thrust of the pole. You'll notice, too, that the current cuts the canoe's momentum. On the other hand, you'll find that stream pressure will steady it somewhat.

Apply the same technique you learned on the lakeshore, always being sure that your pole has a firm bite on the bottom. When you probe for this toehold, your pole may wedge itself between two rocks. If this happens,

SETTING OVER



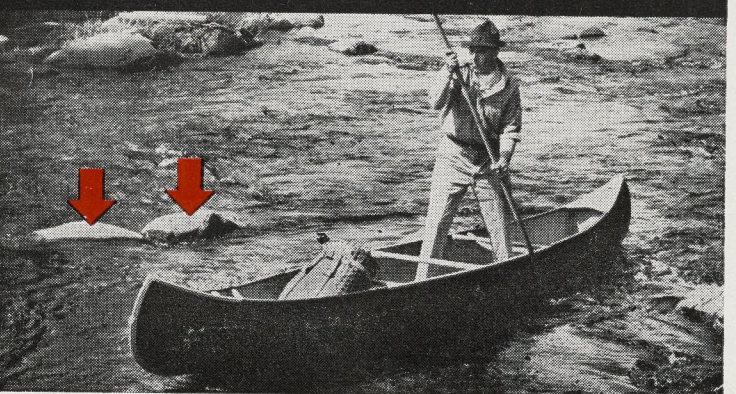
To leave a backwater and go upstream around a rock the canoeist pushes outward, sending the bow into the flow



The current working against the side of the canoe will move the craft out quickly and the poler must be ready



As soon as the canoe clears the obstruction the poler must pull the stern back in line with the stream's flow



snap it upward quickly. If this fails and you can't stop the canoe's motion without losing your balance, release the pole. You can always return with your paddle to retrieve it.

When your canoe gets diagonally across the current as you push upstream, the force of the water will drive the craft sideways toward shore. This is a useful gimmick used by experienced canoeists to "set over" or to work across stream. Use this with care, however, never underestimating the power of the current. Under no circumstance allow your canoe to get broadside to the current in a swiftly flowing, rock-littered stream. If this happens, it's easier to shove the stern into its proper downstream position than it is to swing the bow back into place. Failing this, move into slower water or nearer shore until you regain full control.

Once you've gotten the feel of running water, try a section of stream where nature has strewn a few boulders about. Before starting up through, however, drop your pole into thrust position and hold your canoe in place while you plot your upriver course. Failure to do this might lead you into a rock-littered dead end from which your retreat may be neither graceful nor easy!

Your first inclination will be to stick to the main channel, but this isn't necessarily the best course. Swift runs create backwaters and eddies that will actually carry you *upstream* for short distances. Smart canoeists take advantage of these, instead of bucking the full brunt of the current. Even in the midst of rushing water you'll find quiet stretches lying below obstructions—rocks, logs, or blowdowns. Plot your water trail to take advantage of these, too, stopping at each to determine your next move. This rock-to-rock system is an easy one to master and a labor-saver. Of course, there won't always be boulders conveniently deployed for your benefit. In that case you'll have to buck the current.

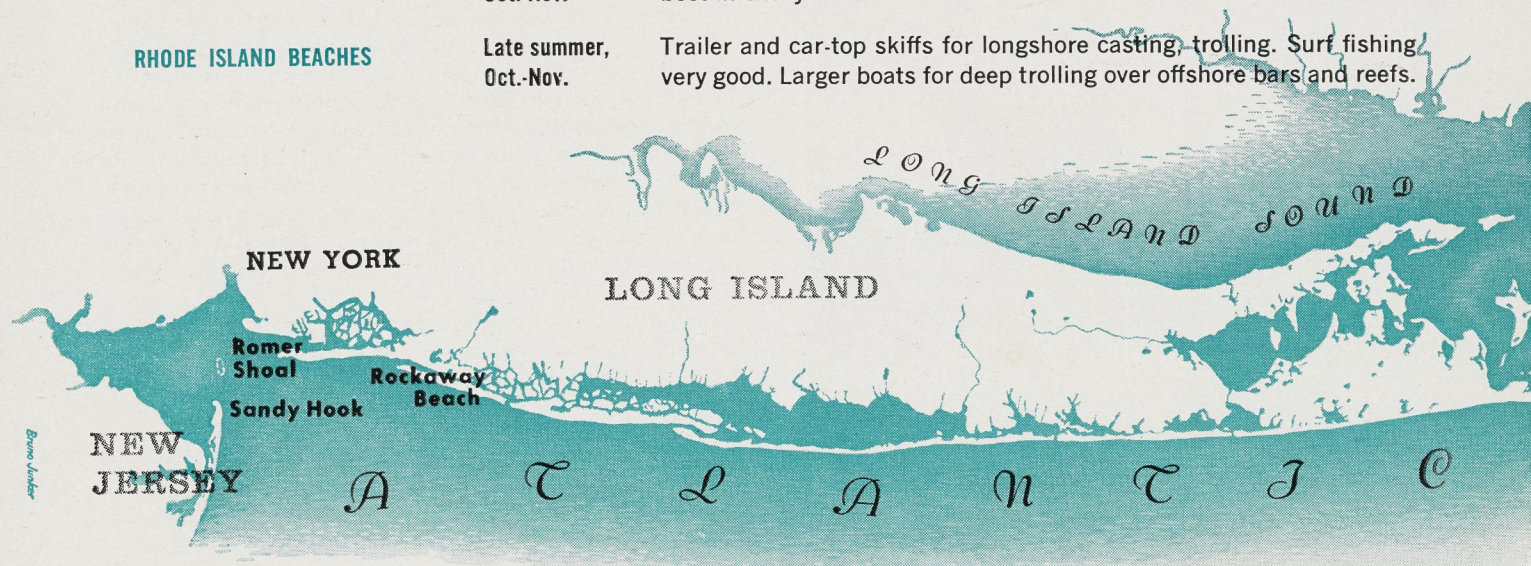
As you take on swifter water your pole must work at an increased pace with more powerful thrusts. However, because the canoe is the most perfectly streamlined of all small craft, the current can't get a strong grip on it as long as you keep your bow headed directly upstream. It follows, then, that as long as you exert greater pressure on the pole than that exerted by the current against the canoe, you'll make forward progress. A good canoeist, though, will recognize a superior force when he meets it. When you find yourself losing ground, or at a standstill despite brute strength and the tricks you've learned, you're in water too fast to handle and it's safest to give in gracefully.

Snubbing comes into its own during downstream work. Here, too, seek out a quiet stream for your initial trials. As before, study your proposed route, this time from the head of the rapids. If you can hear the roar of falls or the rumble of heavy water below, be sure you can make it to shore safely before reaching such water, lest you be sucked into a catastrophe. Choose a channel carefully so that you don't end up in a downstream dead end, far more difficult to work out of than the upstream variety.

Apply only enough pressure against the pole to start your canoe downstream. Downriver poling differs in that the current is used to propel the canoe and the pole to slow the craft and, of course, to guide it. Until you've acquired greater skill, don't allow the canoe to gain more momentum than you can handle easily. Complete control at all times is important. If your canoe doesn't do exactly what you intend it to do, you're out of control and in danger. Even when running an apparently clear channel, it's good insurance to go (Continued on page 98)


How To Catch Big Stripers

WHERE	WHEN	... AND HOW
SANDY HOOK, NEW JERSEY SHORE	May-June Sept.-Nov.	Deep trolling with spoons, eels, skins, plugs off Sandy Hook and Romer Shoal. Surf casting, surf trolling, and some deep trolling along Jersey beaches. All boat types, depending on technique.
ROCKAWAY BEACHES	May-June Oct.-Nov.	Surf casting, boat casting, and trolling near shore. Deep trolling offshore. Jersey skiffs, outboards best.
SHAGWONG REEF, MONTAUK	Oct.-Nov.	Deep trolling with eels, Jigits, big spoons. Outboards to cruisers, bigger boats best.
MONTAUK BEACHES	June-July	Surf casting, boat casting, and surf trolling with outboards, sea skiffs, cruisers. Plugs, eels, skins, Jigit lures best.
GANGWAY ROCK (WATCH HILL)	Late spring, Oct.-Nov.	Boat plug and eel casting, deep trolling. Outboards, Cuttyhunkers best in tricky water.
RHODE ISLAND BEACHES	Late summer, Oct.-Nov.	Trailer and car-top skiffs for longshore casting, trolling. Surf fishing, very good. Larger boats for deep trolling over offshore bars and reefs.



NARRAGANSETT BAY	Early summer, Sept.-Oct.	Shore casting, boat casting, deep trolling over offshore rocks and reefs. Cuttyhunkers and sport fishermen favored. Outboards for shore work.
BLOCK ISLAND	Early summer, Sept.-Nov.	Many good surf-fishing spots. Outboards good for casting near shore. Water generally too clear for daytime surface or deep trolling.
NANTUCKET ISLAND	Early summer, Sept.-Oct.	Surf casting, boat casting, and trolling near shore. Outboards can be brought via steamer. Fishing cruisers do well on offshore bars and reefs.
CUTTYHUNK & ELIZABETH IS.	Early summer, Sept.-Oct.	Boat plug and eel casting, deep trolling with spoons, eels. Some live-bait fishing. Cuttyhunkers, Jersey skiffs best boats.
MARTHA'S VINEYARD	Early summer, Sept.-Oct.	Surf casting. Boat casting and surf trolling near beaches. Deep trolling with eels, spoons on offshore reefs. Cuttyhunkers, outboards best.
CAPE COD CANAL	May-June Sept.-Oct.	Shore casting with plugs, rigged eels. Trolling and casting from boats near canal banks.
CAPE COD OUTER BEACHES	July-Aug.	Live bait fished from car-top skiffs, boat trolling and casting near shore, surf casting. Small outboards and Cuttyhunkers best boats.

that the rod returns to its starting position and stops abruptly. The weight of the lure will cause the rod tip to flex down and in toward your feet. As the rod recovers from its bend and starts upward, release your thumb pressure from the spool. The lure will snap outward in a low arc. Don't push the rod forward; the casting bend of the rod will throw the lure.


The key to proper bait-casting technique is good form. Keep your movements as smooth as possible without jerkiness and without changing the tempo of your strokes. Don't vary the speed of your casts or attempt to push the plug skyward with a forced arm motion. Once the rod is bent, nothing you can do will make the plug go over the horizon. 

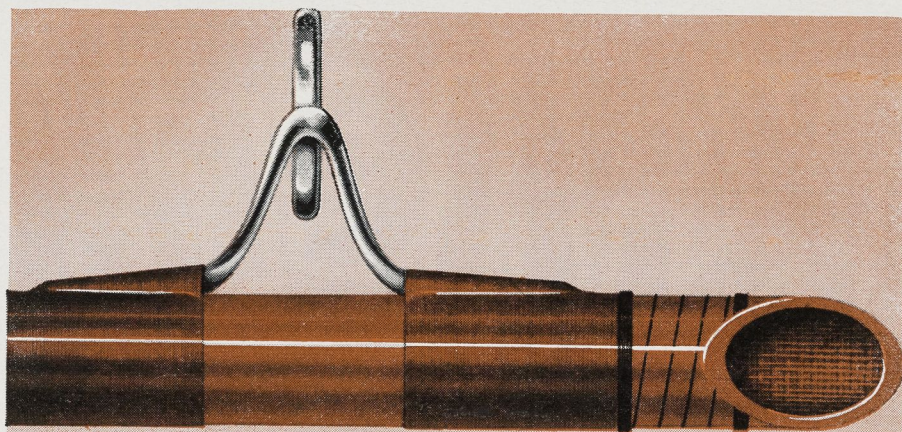
Exit, Laughing

(Continued from page 178)

Denver, Colorado. Mr. Murphy's translation, "*Semper siccus pulvis, salaris setae, et martinii vestri fiant,*" is not especially skillful, but he gets a prize because in order to produce it he used a Latin-English dictionary published by Ginn & Co.

Among a number of close contenders for the three prizes were high-school student William Bloxson of Riverhead, Long Island, who wrote, "This is the first time in two years I've had any use for my education"; Bill Laurent of Fishing Tackle Trade News, whose accompanying note was written in Latin; Miss Eleanor Adams of Albany, California, whose entry was on a postcard of the Christian Brothers wine cellars; and the Reverend Father E. T. of a seminary faculty who requested that his initials only be used, lest he be reassigned from the philosophy department to teaching Latin again.

Special Certificates of Merit go to Richard Wolters, because his wife's name is Olive; G. Norman Slade of White Bear Lake, Minnesota, whose entry was in an obscure Skoweegian dialect but who offered to put the writer into some good woodcock cover; and to Harvard student Walter Nichipor, to help offset the prize to a Yale teacher. And to all the others who entered, my thanks for your concern, effort, and (in a number of instances) scholarship. I've sent checks for fifteen, ten, and five dollars to the three prizewinners, and as this leaves me with a rather neat profit of ten dollars on the page, I think I'll trot on down to the corner tavern and have a martinus or two. 



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Pole Your Canoe

(Continued from page 53)

through the motions of snubbing as you descend, applying only enough pressure against the bottom to keep the canoe's speed within the limits of your skill.

Unless the current is too rough or too deep, take advantage of its power by running in the main channel. It will not only carry you but also help guide the canoe around rocks. Running at the same speed as the current, your bow will be guided gracefully by rocks, much like a matchstick running in a gutter stream, and a slight side thrust of the pole will clear the stern. If you run faster than the current, however, you'll likely leave paint on the rocks.

When your proposed route suddenly proves impassable, don't make a hair-trigger decision to change it. Snub the canoe to a stop and take your time in plotting a new path. When you've acquired more experience, you can make these reappraisals on the run, but in the meantime pause to be sure. It's even cricket to wedge the canoe against a smooth rock to help hold it while you search out another route.

Your stern should remain pointing upstream. If you travel diagonally, remember that the current will also carry you downstream and you may undershoot your mark. Setting the canoe over broadside with a side thrust is surer and safer, at least until you become familiar with the quirks of running water. In the meantime cut square corners.

Canoeists generally believe the craft should be light in the stern for downstream running so that the current can't get an effective grip. Hall Grant, who's been paddling and poling as a Maine guide for sixty-one years, doesn't agree. Hall prefers to keep the stern down a bit. This way, he says, the current will swing the bow into any passage he chooses. A heavy bow, he adds, is difficult to guide from the stern with either paddle or pole. I've tried his method and he has a valid claim. You can change the trim of your canoe by shifting your position backward or forward.

Being able to read "the set of the current" is even more important, however, than knowing how to trim. Common "trail signs" on the water include a sharp V, pointing upstream and riffling the surface. You'll find a rock or other obstruction, barely submerged, at the apex of this V. A more subtle danger is indicated by an upward bulge, not

unlike that of a bubbling spring. This is trickier because the obstruction may be anywhere from two inches to two feet underwater and up to ten feet *upstream* of the bulge, depending upon its size and the current's power. Sweep wide around these, lest you strike the snag while avoiding the harmless bulge! A V pointing downstream means the current is surging between *two* submerged obstructions, but if the V is wide enough you can probably run directly over it in safety.

All this doesn't mean, however, that you'll spend all your energy dodging boulders or appraising froth-capped rips. Often you'll come to a sluice, or chute, obviously clear of dangerous rocks, and gliding swiftly over gravel or sand. This kind of water doesn't grumble, roar, or threaten—it laughs. Head the bow into it, “put the ash to ’er,” and enjoy the ride, poling as hard as you like.

By this time you'll have found that poling is fun, practical, and not so difficult as you might have imagined. Paddling will now seem dull, and there'll be new avenues of canoeing adventure for you—upstream or down.

Why Wait for Spinach?

(Continued from page 49)

the marsh marigold extra special. In some parts of the country the unopened flower buds are pickled and used as a substitute for capers.

Two precautions should be exercised in using cowslips. First, be careful not to mistakenly collect such poisonous plants as the white hellebore and others that grow in identical situations. Second, never eat marsh marigolds raw. They contain a harmful ingredient that must be destroyed by cooking.

Another fine spinach substitute is the coarse weed variously known as curled dock, narrow-leaved dock, or yellow dock. It is not a difficult plant to identify. The leaves are long and narrow, with pale midribs and very wavy edges. Unlike many wild greens, this plant does not quickly become tough or strong-flavored, and for this reason it can be eaten when quite large. Cook the leaves like spinach, and change the water twice.

There is a much abused weed called lamb's-quarters, or goose-foot, that takes over the richest soil of gardens, barnyards, and cultivated fields. It is considered a pest in most of its range, but smart farmers, knowing it will provide many a meal long before more civilized greens are through the ground, put it to good



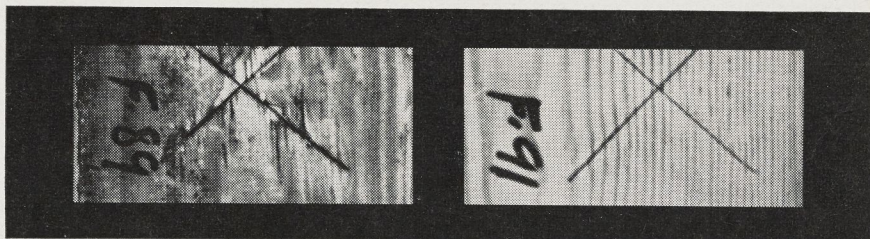
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use. The young plants are readily recognized by the goose-foot shape of their leaves, which are coated beneath with a sparkling powdery substance. Leaves and tender tips of young plants two to four inches high provide the best eating. Cook them a bit longer than spinach, and you'll wonder how anything so common can taste so good.

Each spring about the time the warbler migration hits its peak I have a look at my favorite fence row to see if the pokeweed shoots are ready for eating. In my estimation these are the best of all wild greens. Fortunately, they are easy to find. You can spot the pale broken remains of last year's stalks from a distance, and the young shoots will appear at their bases.

You might know the pokeweed by the name "inkberry." At maturity it is a tall branching perennial, often attaining a height of six or eight feet. The stout hollow stem is purple or red. In autumn it produces drooping bunches of purple-black berries. Strangely enough, the mature plants are poisonous, but the young ones, six to eight inches in height and free of the purple coloring that is characteristic of the older plant, are perfectly safe. The large root, though, is extremely poisonous, so be sure to leave it alone.

To prepare the shoots for the pot, merely strip them off, discarding the larger leaves. Cook them thoroughly, changing the water at least once. Served like asparagus, with or without a cream or cheese sauce, pokeweed shoots are delicious. In parts of the southern United States poke is a common garden green, but most northerners have yet to learn of its good qualities.

A very good asparagus substitute is the common milkweed, an erect unbranched plant of field, fence row, and roadside that attains a height of three to five feet. Its large oblong leaves are attached in pairs along the stem, and in summer it bears clusters of dull lavender flowers. Perhaps its best-known feature is the large pointed seed pod stuffed with silky down.

Young milkweed shoots can readily be located by finding last year's plants. Empty pods clinging to the withered stalks are conspicuous and unmistakable. The young shoots, with the larger leaves removed, are cooked like asparagus. You'll find their flavor excellent, particularly when served with a cream sauce.

Ferns would seem the most unlikely candidates for table use, yet a number of them are delicious. Of course, the mature fronds are not



Rowing Sea Trials

Recreational rowing is flourishing. Witness the variety of boats available for those who enjoy (or might like to enjoy) this energetic and satisfying pastime. Many such craft appeared last spring at the Small Boat Show in Newport, Rhode Island. Quite a few were on exhibit, and a good number entered the windy, wet, and downright wild Small Boat Rowing Race (see "Small Boat Show," *SBJ* #44).

The models for this year's Trials came in a wide variety of shapes, sizes, and materials.

- **Lapstrake Pulling Boat** — a graceful, low, 18-foot wood lapstrake design.
- **Dove** — a 17 1/2-foot strip-built St. Lawrence skiff.
- **Lowell Atlantic Rowing Skiff** — a 15-foot wood lapstrake dory.
- **Sea Ranger** — a 16-foot fiberglass touring shell with a marked Whitehall influence.
- **Bangor Packet** — Joel White's slender, decked 20-footer made of cold-molded red cedar.
- **Barnegat Bay Rowing Dory** — a 15-foot replica, in fiberglass, of a decked lapstrake boat from Scandinavia.
- **Appledore Pod** — a cold-molded, high-capacity double ender from the drawing board of Arthur Martin.
- **Fiord** — a 19-foot fiberglass touring boat from France.

The judges for the Trials were Ken Steinmetz, Ralph Notaristefano, and

SBJ Rounds up Eight Sliding-Seat Boats for Recreational Rowing

by Peter Raymond
photographs by Robert Hagan

myself. Steinmetz, of Ken's Boat Shop in Seaford, New York, brought 27 years of experience repairing fiberglass boats, and many years of experience building traditional small craft to his examination of the Sea Trials boats. Ken concentrated his attention on workmanship, materials, and construction, and deferred to his judge-colleagues in the somewhat sweaty and entirely splashy joy of rowing the boats around Newport Harbor.

Ralph Notaristefano of Northport, New York, offered another perspective. A long-time lover, builder, and professional restorer of traditional small craft (not to mention editor and publisher of the *Ash Breeze*, quarterly journal of the Traditional Small Craft Association), Ralph was new to the demands of sliding-seat rowing though he has been rowing fixed-seat boats for years. His observations thus combined an expert's sense of boat performance with a beginner's sensitivity to comfort and ease of use, aspects that a more experienced sliding-seat rower can easily overlook.

I was the third judge, with 23 years of experience in rowing sweep and sculling boats and coaching rowers. As editor of

Take Your Pick. *Touring boats come in a variety of shapes, sizes and materials to satisfy any rower.*

Rowing USA from 1975 to 1983, a time when recreational rowing was just awakening in this country, I was thrilled to witness the energy and commitment of the builders of recreational craft at the Small Boat Show. It was equally nice to be on the water in these very different boats and to have a chance at the oars again.

Weather for the three-day trials was vintage New England, with balmy calm and snarling squall. All the boats received a dose of rough and smooth water, with lots of random motor-launch wakes for spice. In fact, the erratic weather was our ally, in that it gave Ralph and me the chance to see different sides of each boat's character.

Like other watercraft, rowing boats that exhibit a particular strength in one area of performance have to compromise in other areas. For instance, boats that boast great speed almost always lack the stability needed by a beginner, or the seaworthiness demanded by an open-water rower. That's why we didn't rate any boat as "best in the Trials." What's "best" is a personal decision based on many factors: the level of your rowing skills, the water conditions where you'll be rowing, the purpose of your rowing, and even the size of your garage. Keeping these factors in mind as you read this year's Rowing Sea Trials report will help you determine which boat is "best" for you.

Sliding-Seat Rowing Sea Trials at at Glance

	Bangor Packet	Barnegat Bay Rowing Dory	Fiord	Appledore 16
Length	20'	15'2"	19'	16'
Beam on Deck	24"	36"	31"	35"
Waterline Beam	19"	24"	21"	33"
Rigged Weight	75 lbs.	100 lbs.	80 lbs.	118 lbs.
Hull Weight	—	—	—	95 lbs.
Price	\$2,750	\$1,700	\$3,000	\$3,265
Designer	Joel M. White	—	Stephen Mistrachi	Arthur E. Martin
Builder	Brooklin Boat Yard, Inc. PO Box 29 Brooklin, ME 04616 (207) 359-2236	William R. Feist Enterprises, Inc. 95 Beechwood Ave. West Long Branch, NJ 07764 (201) 229-2014	Sylk Co., Meriel, France Distributed by: Durham Boat Company RFD #2, Newmarket Rd. Durham, NH 03824 (603) 659-2548	Martin Marine Co. Inc. Box 251J0 Goodwin Road Kittery Point, ME 03905 (207) 439-1507
	Lapstrake Pulling Boat	Dove	Lowell Atlantic Rowing Skiff	Sea Ranger
Length	18'	17'6"	15'	16'
Beam on Deck	36"	40"	44"	36"
Waterline Beam	31"	—	30"	30"
Rigged Weight	—	93 lbs.	170 lbs.	100 lbs.
Hull Weight	70 lbs.	70 lbs.	140 lbs.	75 lbs.
Price	\$4,345 w/oars	\$2,395	\$2,700	\$1,595
Designer	Jon Persson	—	Jim Odell	Stuart Blu
Builder	Seth Persson Boat Builders 18 Riverside Ave. Old Saybrook, CT 06475 (203) 388-2343	Dove Industries, Inc. Tehkummah Manitoulin Island Ontario, Canada P0P 2C0 (705) 859-3973	Lowell's Boat Shop 459 Main St. Amesbury, MA 01913 (617) 388-0162	R.E. Graham Corp. Rt. 2, 2351 Hwy. 28 Quincy, WA 98848 (509) 787-1225

Lapstrake Pulling Boat

This long 18-foot, light, and open wooden boat reminds one a little of a low-slung Rangeley guideboat. My first impression and a subsequent outing recommend this as a good inland watercraft, ideal for long lake tours and flatwater river exploration with full camping equipment.

Designed by Jon Persson and built by Rick Persson, the craft's construction earned the respect of Ken Steinmetz's critical eye. The hull is 1/4-inch Bruynzeel plywood planking over steam-bent white oak frames. The strakes are glued and sealed with 3M 5200 sealant, creating a solid bond and a protective shield against leaks, but making plank replacement an arduous proposition. Copper rivets and bronze screws affix the frames, plank laps, keel, and stem rabbet. The keel is oak, while transom, stem, and rub rail are made of Honduras mahogany, which enhances the boat's appearance. Flotation is provided by the boat itself, leaving the entire open area free for stowage (500 pounds) and stowaways (two people rowing or one passenger).

Although the advertising pamphlet offers the Oarmaster rig, the test craft, belonging to builder Rick Persson, featured



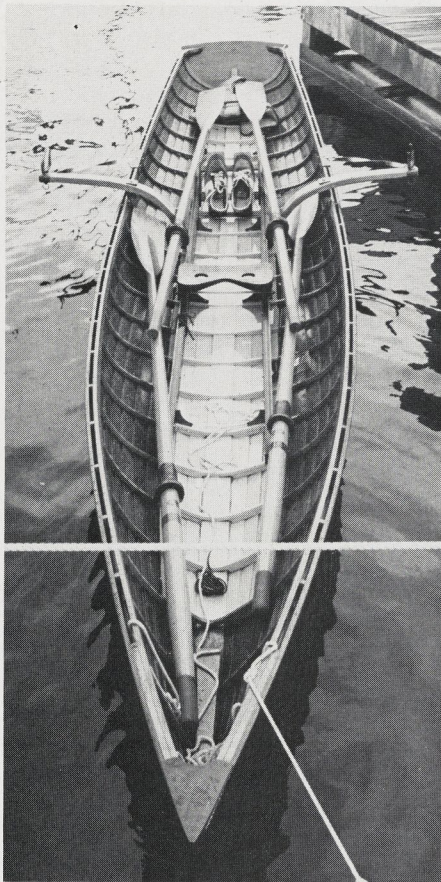
Touring Dream. *The Lapstrake Pulling Boat is an ideal watercraft for long lake tours and flatwater river explorations with full camping gear.*

a homemade sliding-seat unit with tracks the length of the craft to accommodate one or two rowers. Because the seat tended to stick and the tracks were sharp and very much in the middle of everything even when not being used, a drop-in rowing unit option makes good sense. Nevertheless, Persson's rig felt plenty stiff.

Relatively flat-bottomed, without a skeg or keel, the boat responded quickly and gently to steering in protected water. She also accelerated quickly, tracked well in calm water, and carried way easily.

Thanks to her length, she exhibited no noticeable pitching. In all conditions, whether still or underway, Ralph and I found her to be perhaps the most stable of all the boats tested.

Quarterming the considerable chop in the harbor, she had a definite but manageable pull toward the wind, whether headed upwind or down, which made for more work on one oar. Into the wind, she seemed heavy but held very steady on course, riding high and dry over oncoming waves. Weather abeam, however, was



Sleek Open Boat. Steam-bent oak ribs and keel form the backbone of Persson's plywood planked pulling boat.

troublesome both for the yaw and for the stern's failure to lift over side chop, which regularly slopped over the gunwales in small amounts despite the 6-inch freeboard at the riggers and a load of only one rower. Although it wasn't necessary in the test row, sponging seems to be the drainage of choice. Weep holes between the frames and keelson allow water to gather beneath the rower's station.

With this boat's rock-solid tracking, its gurgling bow wave, and its sufficient oarlock height to manage some good waves, running dead downwind was sheer fun. Overall speed, however, was moderate, due probably to the boat's great wetted surface. Although no passenger could be coaxed into the foul weather to test loaded handling, the overall design implies ample adjustability and responsiveness so long as trim is maintained.

In sum, the Lapstrake Pulling Boat is well suited for prolonged outings with passengers and cargo on relatively protected inland waters. While she won't set any course records, she handles very well. Being extremely well made and light (70 pounds, with rowing unit removed), she is strong and durable, as well as cartop-able and portageable. The \$4,345 base price with riggers and oars is steep but reflects this all-wood craft's workmanship.

Dove

Dove Boatworks of Manitoulin Island, Ontario, has produced a lightweight copy of an 1894 double-ended St. Lawrence River skiff. Built in Clayton, New York, the original was used to ferry people among the fishing grounds in the Thousand Islands area. The modern craft is relatively big, with a 17-foot-8-inch length and a 41-inch beam, on a flyweight 70-pound hull, and it is adaptable for either the Oarmaster rowing rig or a 55-square-foot spritsail. Also available from this semi-custom builder is an even lighter but more fragile 50-pound version strictly for rowing.

Constructed of 3/16-inch strip-planked Manitoulin white cedar, Weldwood glued and covered with 6-ounce glass cloth and West System epoxy in and out, the thin hull is sound and rigid. Interior and exterior are finished bright with ultraviolet filter polyurethane varnish. The test boat featured sailing fixtures with a mast thwart in the bow, a plywood bulkhead, and a daggerboard case. A flat mahogany plywood panel, epoxy glued into place, serves as a floorboard and the base for the sliding-seat assembly. Permanent seating

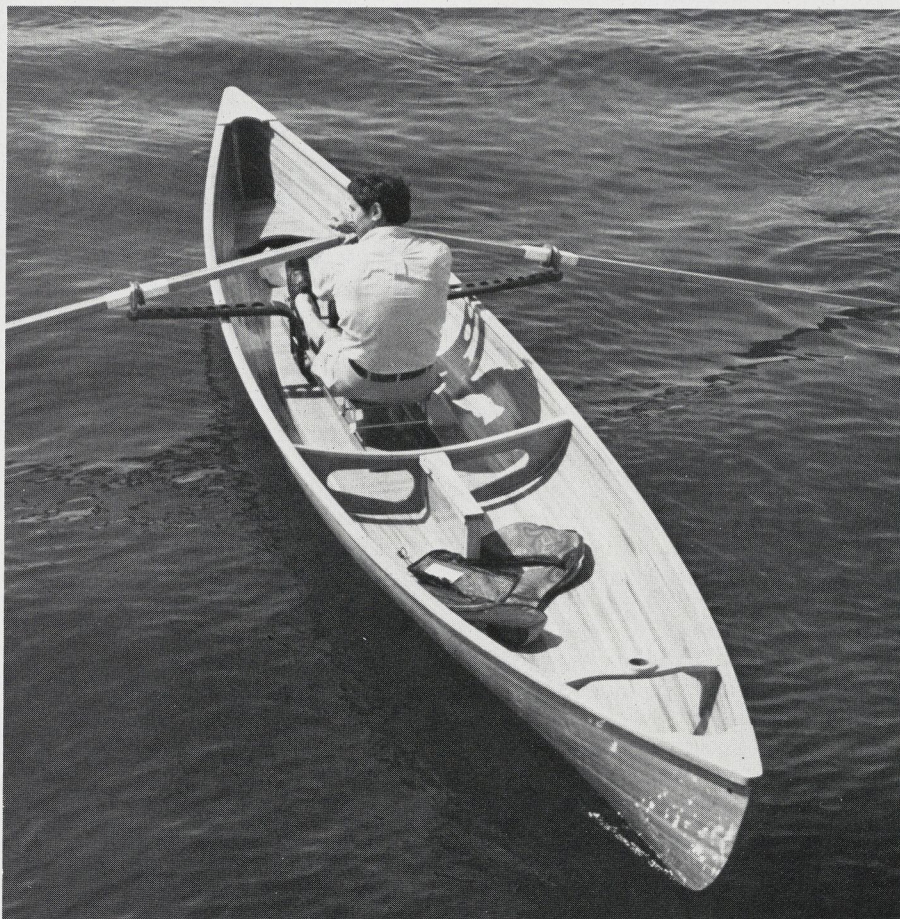
Tradition Updated. The cedar, strip-built Dove follows the double-ended form of a St. Lawrence River skiff. The lightweight hull is easily cartopped and buoyant as a cork.

in this version is fitted into bow and stern, while the removable midships thwart is optional. Flotation in both models is provided by the natural buoyancy of the wood and polyurethane foam under the sliding seat platform, though this latter arrangement caused Ken to comment that the craft might turn turtle if swamped.

Ken noted that the surfaces were quite fair for a strip-planked hull. However, he



Ken Steinmetz



thought joinery work was mixed, both good and poor evident. And it appeared that where work was poor, as around both sides of the framing and trim edges, and along the edges of the plywood platform, an attempt was made to compensate through an overapplication of epoxy. Ken also expressed concern that the plated steel fastenings on the platform for securing the Oarmaster would rust.

In the Sea Trials, Dove sat very high on the water, as might be expected from a lightweight boat copied from a heavily-built traditional design. (The 70-pound modern version weighs half its 140-pound prototype.) As a result, handling, while quick and light under windless conditions, became a struggle with any kind of breeze. Ralph, a trim 150 pounds, noted the extreme buoyancy of the craft, which made it difficult to handle in a light wind. Furthermore, he felt that the platform for the Oarmaster was positioned too far aft, which gave Dove a bow-high attitude that caught the wind like a sail. The cranky state of the Oarmaster provided for the Trials didn't help matters. Ralph abandoned the sliding seat and treated Dove as a fixed-seat craft but found handling just as cumbersome.

The Oarmaster worked a bit better under my heavier weight, and I was grateful for the greater power afforded by the sliding seat. I needed it all to keep the Dove on course against the wind. Although there is only room for one rowing station, weighting the craft with passengers gets the hull close to its intended waterline and helps mitigate handling problems. With a passenger coaxed into the stem seat, the boat needed even more balancing ballast forward, but she tracked better and felt more solid in the water. A benefit of the Dove's buoyancy and high freeboard is dryness — only a comber could have climbed the sides of this cork. This is just as well, since there was no self-bailing drain.

Although Dove's round bottom contour does not encourage one to move around inside the boat, its stability did. It was possible to stand alone on either bow or stern seats with no threat of capsize. Another feature of the hull shape is the reverse rocker of its keel line. The builder made the forefoot at bow and stern deeper than the original design to aid tracking.

Despite the Dove's light weight, its broad beam required a second person's help in portaging. It's hard to grip the

gunwales for carrying, and the seats were too deep and sharp-edged to be friendly handholds; she's best carried canoe style, just under the stem.

On the one hand, Dove appears to be strong and capable of carrying quite a load of cargo; in fact, a few hundred pounds of evenly distributed ballast would probably improve her rowing performance. (The builder reports that Dove can carry up to 450 pounds.) On the other, her size makes carrying awkward, while her light weight renders a trailer superfluous. Once allowance is made for these drawbacks, Dove is versatile — there's a choice of fixed-seat, sliding seat, and spritsail rig — attractive, and reasonably priced: \$1,795 for fixed seat rowing, and \$2,395 with the Oarmaster sliding seat. The sailing version used in the trials cost \$2,995 with the rowing unit. Spars and sails are \$600 extra.

Editor's note: Since the Sea Trials in May, Dove Industries has replaced the OarMaster drop-in rowing unit with the RoWing. This new unit eliminates the rust-prone steel fastenings in the sole and permits a greater range of placement fore and aft for better trim control.

Lowell Atlantic Rowing Skiff

Following the lines of the Salisbury Point Rowing Skiff introduced for recreational rowing in the 1860s, this flat-bottomed, lapstrake dory is a high-prowed rough rider that instilled in its two foul-weather testers a great sense of security. She rocked into, over, and through the nastiest weather while affording us a strong and stable base for rowing.

Adapted from fixed-seat rowing — with Latanzo tracks, seat, stretchers, and stainless steel rod riggers bolted through standard gunwale oarlock holes — the Atlantic Skiff is meant for and attuned to open-sea handling. Her high freeboard, 13-inches amidships, and rockered bottom showed a built-in wisdom with waves. Her attractiveness is enhanced by her adaptability; she can be set up as a two-station fixed-seat craft, or as a sailboat (mast step in the bow seat) with choice of a sprit or gunter rig.

Construction, workmanship, and materials are of a high order. Planking is northern pine, the sides of 7/16-inch stock, the bottom 3/4-inch, and the transom 7/8-inch. White oak is chosen for bottom cleats, rails, stem, and frames, with solid Honduras mahogany for the thwarts, knees, and breastwork. Laps are fixed with copper clenched nails, with all other fastenings of bronze. Three frames of 3/4-inch white oak with stainless gusset plates (dory clips) as well as sturdy rails, seat risers, and bottom cleats provide a good stiff hull. The bottom and garboards inside the boat are



Versatile Dory. Adapted from fixed-seat rowing, the Atlantic Skiff is meant for and attuned to open-sea handling. She can also be rigged as a sailboat.

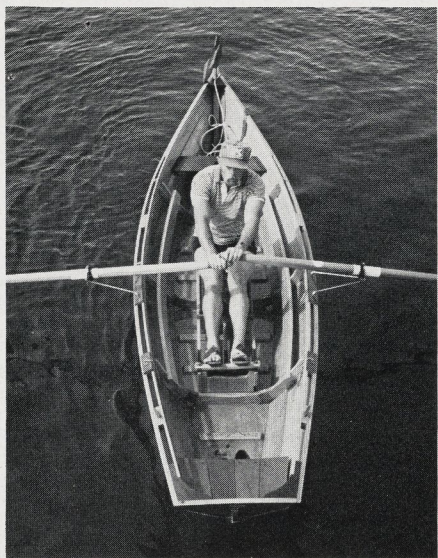
sealed with epoxy, with a layer of 10-ounce cloth embedded in epoxy on the bottom and outside to protect against abrasion. U.V. filter varnish protects the interior epoxy, and the interior surfaces are finished bright with Deks Olje #2. The exterior hull sides of the test boat were painted with a contrasting sheer stripe. Ken calls this a "well-built" dory with a good choice of materials and very good finish and joinery work.

In any open boat headed out onto the water, there is always the risk that somehow the water is going to get into where you are, or you are going to end up out there where the water is. As a sculler, I have long borne a deep antipathy toward even the slightest wrinkle in the water. But nothing matched my confidence in the Atlantic Skiff's seaworthiness, both

with its promise to stay afloat and its steadiness as a platform for rowing. Ralph felt the same sense of safety and workability. "I was impressed with her overall stability and her ability to track well," he remarked.

Given the premium put on seaworthiness, it is not surprising that she required some labor on the oars to keep her moving into a headwind. But the high rigging relative to the seat, combined with a high seat relative to the water, permitted room to maneuver the oars over the waves. You have to pull higher at the oar handles, but on the open sea, who cares? In fact, Ralph felt it was the easiest boat to row in a seaway.

While initial stability wasn't terrific, and she rolled with weather abeam, in neither case did this interfere with handling. Di-



Well-Built Skiff. *Pine planks riveted to oak frames make this all-wood Lowell dory solid and seaworthy.*

rectly into and out of the wind, she remained solidly upright, though she was subject to a bit of pitching. The skiff showed good balance between tracking and maneuverability. She stayed on course with only a moderate, easily controllable, pull into the wind and remained highly responsive to steering in all conditions. Her speed is moderate with seas abeam or following, and as mentioned, heading upwind is work. With no passengers or cargo, she rides bow-high, which might contribute to the headwind struggle; perhaps she would be more manageable with some weight in the bow. (The standard rowing skiff is rated for a total of 375 pounds.)

The custom stainless steel riggers used in the Trials were quite rigid fore-and-aft but less so vertically. One hex nut worked loose during our test. Assuming this craft is going to be used in fairly rough conditions, I found the rigging marginally sufficient.

At approximately 140 pounds (unrigged), the Atlantic Skiff requires either a trailer or some hefty lifters. For the determined big-boaters, there is a 17-foot model available that permits two sliding-seat stations as well as the sailing option.

The \$2,700 base price buys a removable sliding-seat (or sliding-rigger) assembly, two fixed seats, stainless steel riggers, and bronze oarlocks. The optional sailing rigs include daggerboard, rudder, and either a 42-square foot spritsail (\$1,125) or gunter rig (\$1,175), both loose footed.

Designer Jim Odell has created a seaworthy rowing skiff ideal for the beginning rower, for rough-water tending duties, as well as for safe family outings: The careful woodworking and protective finish promise long life in a sturdy, hardy, handsome boat.

Sea Ranger

The Sea Ranger is a high-sided 16-foot fiberglass single modeled after the Whitehall ferry rowboats. Her bow is plumb and slightly flared, her transom has a pleasing wineglass shape, and her sheer is graceful. She is designed to perform on rough water as well as on inland waters as an exercise and touring boat, and her easily removable sliding seat assembly makes her a good cartop craft.

Construction is solid and durable, promising many maintenance-free miles. The hull's combination of mat, cloth, and Divinycell foam core is adequately thick and stiff, and adorned with a pleasing teak rub rail and oak inwale, breasthook, and outboard motor transom pad. Hull reinforcement is provided by molded-in bow and stern compartments accessible through O-ring sealed hatches. Storage in the stern is accessible through a 6-inch hatch. These compartments also provide flotation with inflatable plastic air bags.

Further stiffening consists of six side frames of 1-inch Divinycell foam tabbed to the hull sides. Ken noted that one of the test boat's side frames had begun to work loose, suggesting insufficient tabbing material. Otherwise, workmanship on the hull and trim is excellent, with good fits and smooth, fair surfaces. Fastening is all stainless steel hardware, as is the self-bailer conveniently installed amidships. Gelcoat surfaces are uniformly good. The test boat's interior cockpit was finished in an off-white gelcoat with a spatter (color optional) that helped hide the tabbing parts.

The 25-pound E-Z Rigger drop-in rowing unit is constructed of nylon-coated aluminum and fastens to fixed nylon tracks with two spring-loaded pins. It is as easy to insert and remove as its name suggests. Four holes spaced along tracks on the Ranger's sole permit the rower to

adjust the unit for best fore-and-aft trim. The foot stretchers are made of very comfortable neoprene material, nylon heel cups, and Velcro fastenings that form a firm but non-chafing hold on the rower's feet. And the builder even provides a foam-cushioned seat that was pure bliss to our weary backsides. The seat slides effortlessly on Latanzo tracks and wheels and the riggers have satisfactory stiffness. This rowing unit shows careful attention to the rower who wants a prolonged experience in a boat, and it will be appreciated by any who have endured less hospitable hardware.

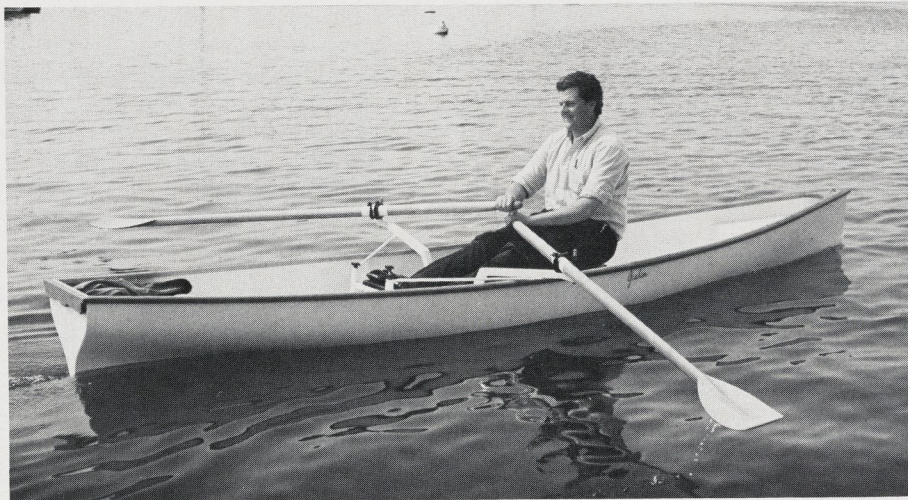
Both Ralph and I found the Ranger a pleasure to row, with stability, tracking, and rigging hardware the major strengths. One can move about the Ranger without keeping hold of the oars, and there's enough stability to handle rough water. This steadiness was much appreciated by Ralph, who immediately felt confident and in control. He noted the ease of handling at rest and the good tracking when underway. I caught the Ranger tending to yaw away from the wind, a characteristic unusual in a rowing craft, but agreed that the overall stability of the boat at rest and underway is very high. We both felt that the plumb bow makes turning a bit stiff, but since the object of most travel is a straight line, good tracking is generally preferable to ease of steering, especially since you can't see where you're rowing.

The value of the Ranger's rowing rig was proven by Ralph's confidence in his strokes, and mine in my more experienced tugging. The system is rigid and able to withstand hard rowing pressure, which helps in translating your efforts into boat speed (as opposed to rigger bending) and in withstanding any collisions with nuns, cans, or pilings.

Into the wind the Sea Ranger was heavy, and off the wind she tended to plow and

Steady Ranger. *One can move about the Sea Ranger without keeping hold of oars and there's enough stability to handle rough water. Teak and oak trim adorn her sheer.*





Rigged Whitehall. *Her bow is plumb and slightly flared, her transom has a pleasing wineglass shape and her sheer is graceful. The rowing unit will be appreciated by any who have endured less hospitable hardware.*

Bangor Packet

The pretty all-wood Bangor Packet is designed by Joel White as a no-passenger, relatively high-performance, rough-water sliding-seat rowing craft for the more experienced sculler.

The hull is a three-tier epoxy laminate of 1/16-inch western red cedar. The laminate is cold molded over a solid building form and vacuum bagged. Its basic structure is provided by a spruce keel, two laminated bulkheads for the watertight bow and stern compartments, and a shaped plywood frame, epoxy glued and filleted into place. Gunwale moldings and coamings are solid mahogany, and the decks are 5/32-inch Bruynzeel mahogany plywood, bedded (not glued) over spruce frames for easy removal for painting and cleaning. The bedding also provides a watertight seal for the compartments for stowage and flotation.

These closed decks and their coaming add to the dryness and seaworthiness of the Packet, which may be why she is not fitted with a drain or self-bailer. Access to the compartments is through 6-inch ports in the bulkheads. The stern port, however, is blocked by the stretchers when they're set for long legs. Because the stretchers were difficult to secure in the first place, short of an emergency, I'd be reluctant to loosen them just to get at the stern compartment.

The craft presented for the Trials had some structural weaknesses, including insufficient inboard bracing for the riggers and a long foredeck that cramped against the lower back, but these have been corrected in newer models. To be fair, few designers, including ex-rowers, appreciate the substantial stresses on a sculling rigger, and it is common for new designs to return to the shop for more beef in the framing and gunwales. Nonetheless, the fitting, joining, finishing, and hull fairness

were all judged by Ken to be very good to excellent, testifying to the Brooklin Boat Yard's ability to build high-quality wooden craft.

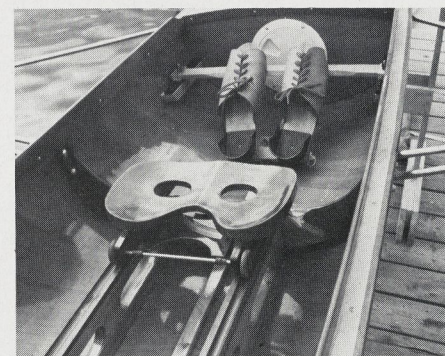
The rower's seat close to the waterline allows maximum leverage on the oars through the drive. The hull is long (20 feet), slender (19-inch beam) on the waterline, and nearly round in section, so keeping her upright requires careful control of the oar handles. Beginners will find the Packet a challenging boat. In fact, Ralph had to bow out of reviewing the boat's performance because so much of his energies were spent keeping the boat upright rather than rowing.

The test boat was "rigged low" (height of the rigger relative to the seat was low), offering little room in which to maneuver

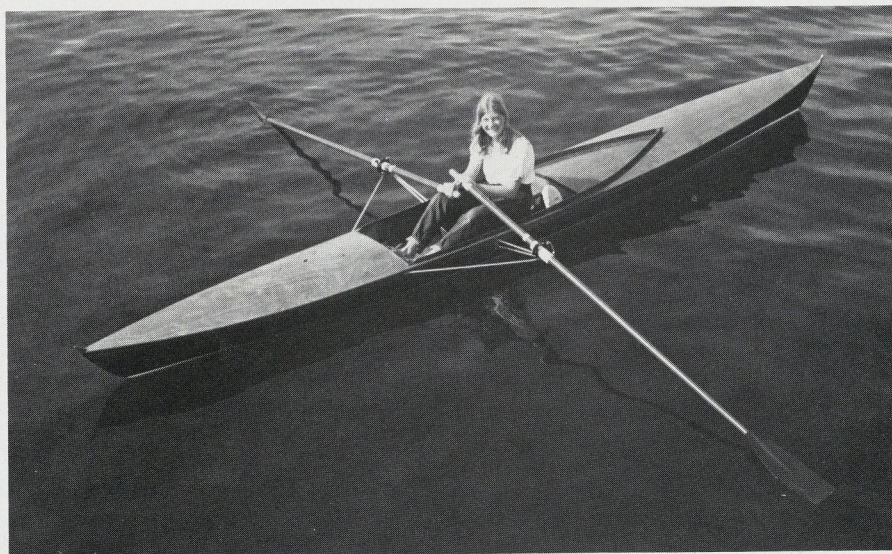
Cold-molded Mover. *The Packet flies into and before the wind, accelerates quickly, and maintains her run during recovery. A warm-hued red cedar hull gleams through the wood framing of the cockpit.*

move only at the speed of the waves. In all conditions, she was quite dry, handling some heavy launch wash with no difficulty. With the wind abeam, she rocked a bit rather than simply lifting and falling, but rowing was still possible. During the stroke cycle, she pitched more than I expected, which might explain her heaviness into the wind. Also, without ballast added as countering trim when carrying a passenger, the bow becomes a plaything to the wind.

The only real difficulty I had with the Ranger was finding a comfortable handhold for carrying her 75 pounds on land. There may be faster hull shapes, but for touring the wide-open sea or more protected water, this is a good choice: very comfortable, dry, maintenance-free, and easy to cartop. And with her 19th-century look, she's handsome to the eye.



Ken Steinmetz



tendency to head toward the wind. Trim was balanced and, due to the overall length, pitching was no factor.

These performance characteristics suggest a narrower market of recreational rowers than the other more stable boats suitable for novices and kids. The intent of this boat seems closer to that of a recreational "trainer."

The Packet's good performance was not matched by good rigging, unfortunately. The 1/2-inch stainless-steel riggers were sufficiently strong for fore-and-aft pressure but had relatively poor torque and vertical rigidity. The mounting bases and socket plates are stainless steel, with standard Latanzo nylon oarlocks, shaped

mahogany seat, carriage, wheels, and anodized aluminum track. The test boat's rigger bolts were not lagged, so that tightening attempts resulted in the bolts' turning. Before my first stroke, I also noticed that the stern ends of the tracks were not bobbed, and they pricked my calves at the end of every stroke.

The stretchers also briefly earned my enmity. The old design with ratchet settings is notorious for giving way at crucial moments. I was unable to tighten the bolts sufficiently to secure the stretchers and ended up rowing around with my feet adrift, which was a little disconcerting, given the attention required for stability. I suspect that with repeated slip-

ping, the U-clamps that fit into the rachets, and the rachets themselves, will round off until it would be difficult to secure the stretchers even with pliers.

The Bangor Packet is an excellent design for the experienced rower headed on a solo tour or ocean race. Modifications would be in order to make the rigging more rigid and adjustable, to make the stretchers less prone to slipping and more comfortable, and to pad the seat and slides for any outing longer than an hour. These changes, in addition to those already made by the builder, should produce an excellent, well-made wooden boat that meets high aesthetic and performance standards.

Barnegat Bay Rowing Dory

The Barnegat Bay Dory is a fiberglass replica of a 15-foot-2-inch 19th century wooden lapstrake boat of Scandinavian origin, saved from oblivion by Bill Feist and Carl Schmidt.

Her appearance is unusual, rather like a wide (36-inch beam) single seat kayak, with decking around the rower's cockpit. The lapstrake fiberglass hull has a strong sheer, and there's plenty of camber in the decking lines, giving her a pixieish character in profile.

The hull and deck are formed with a layer of 1 1/2-ounce mat on a layer of 10 x 10 roving (3/4-ounce mat and a lightweight woven roving) and are fastened together with polyester compound. The layout provides good stiffness, as do the lapstrake ridges in the hull. The cockpit coaming and rub rail are of mahogany. Ken points out that neither is bedded, so owners will need to varnish the undersides of the rails and trim to prevent rot. He also noted some lapses in joinery work, such as the rub rail's rising above the deck line where it can collect dirt and water and be chipped and broken.

Framing is provided by four cross-braced mahogany half-frames that support the track stringers and two bulkheads fitted halfway under the decks. The ends of the boat past the bulkheads contain flotation foam. Ken rated the deck finish as good, with some slight mat print-through. But he pointed out that the exterior hull finish was mediocre, owing to the very pronounced wood grain from the original plug, and that the interior finish was rough, owing to the use of roving on the outside of the layout. Finally, the hull planking looked unfair, perhaps from oversanding the plug.

Rowing gear is standard Latanzo issue: nylon locks, Stampfli-style carriage (removable for cleaning), anodized aluminum tracks, and a shaped mahogany seat I'd need to modify before any prolonged row. Racing shell builder Cal Coffey's rigging exhibits excellent rigidity in all

stress directions, but only height adjustments can be made.

A worrisome point in the rowing rig is the weakly supported stretcher arrangement, a combination of wooden clogs with leather lace-up skirts and a plastic heel cup. The stretchers flexed considerably during the stroke, so the unsupported heel cups chafed at the hull. Adjustment is set by a ratchet and thumb screw mechanism which would tend to wear, work loose, and slip even in the best of circumstances. I would expect it to fail early in the boat's life. A further complication is that the stern deck extends over the stretchers, making them nearly inaccessible. This arrangement precludes stern stowage.

The Dory was not well set up for sliding seat rowing. Ralph and I found we had to pull the oar handles much higher than we liked to bury the blades, and it was difficult to clear the waves on the recovery without scraping the oar loom on the

cockpit coaming. Ralph complained about the tracks banging his calves, and I worried about hitting my knuckles on the close stern deck. These snags may be inherent in the effort to convert a shorter-oared fixed-seat boat to the long-oared sculling rig. Ralph suggested that maybe

Nordic Design. *The fiberglass laps reveal the Barnegat Bay Rowing Dory's Scandinavian origin. The deck and high freeboard make this a dry, secure boat.*



Ken Steinmetz



she should be returned to her fixed-seat configuration. Anyone considering long hours in a sculling boat, where the slightest irritation can spread to epidemic proportions, might well heed his recommendation.

Underway, the Barnegat Bay Dory provided good overall stability, and all that decking and ample freeboard lends a good bit of security in rough conditions. However, she tended to pitch her nose into the water at the finish of the stroke, creating a substantial bow wave and throwing up splash even in flat water. At the same time, she remained dry in the cockpit despite the spray, which may explain the lack of a bilge drain.

Her plowing was particularly troublesome headed downwind with any kind of sea: She just couldn't be persuaded to

climb and pass the waves. However, into the wind, the pitching didn't seem to present quite as much problem, and she made pretty fair speed. Handling with seas abeam required lots of attention because she yawed into the wind, but it was manageable. On the plus side, she tended to bob upright rather than roll with the waves. In calmer water, she pulled persistently toward port, perhaps due to the hull fairness deficiencies reported by Ken. (A trim tab might be worth adding.) Her rockered hull, however, made handling at rest quick, and made it easy to change course underway. Nonetheless, I wouldn't have chosen to set out in the test boat on a 20-mile crossing with wind coming off the port bow.

The dory is fairly heavy, close to 100 pounds when rigged, and would require

two strong people to cartop. She might also trim better with someone lighter than my 190 pounds. Even for short outings on protected waters, she'd need some modification to lower the coaming, improve the rigger setting, soften the seat, ballast the stern to counter bow dive, and counter the yaw.

Editors note: In response to the judges' comments during the Sea Trials, the builder has cut back the aft deck by 6 inches to make access to the foot stretcher easier, has changed the angle of the foot stretcher to a more comfortable 45 degrees, and has raised the rigger 1 inch for better oar handle clearance on the recovery. In addition, the builder can equip the dory with shorter oars that do not cross at the handles.

Fiord

Despite its Scandinavian name, this high-quality, high-performance fiberglass sculling/touring boat is made by Englishman Stephen Mistrachi with operations near Paris, France, and distributed by James Dreher of the Durham Boat Company of New Hampshire. Her high price establishes equally high expectations, which she satisfies for the most part.

The decked 80-pound craft features a long cockpit to accommodate either one sculler with lots of gear (no seat for a passenger) or two scullers as a double. Her cambered bow and stern decks enclose watertight flotation/storage compartments. Access to stowage is through 9-inch Holt-Alden ports. Oars and rowing hardware are top quality and extremely comfortable. One imagines the canals of Europe teeming with these boats.

The lamination schedule for the very rigid molded PVC foam-core fiberglass hull was not available, but the results are impressive: It is a strong, smooth, and fair layup. Lightweight and attractive mahogany plywood, finished bright, is used on the decks and the fore-and-aft bulkheads. The framing is superb, provided by four ash-and-mahogany laminates spaced evenly throughout the cockpit, tied in with mahogany and ash stringers and cross braces for the sliding seat platforms. Strength at the sheer derives from 1½-inch mahogany gunwale and inwale woodwork. The overall result is a rigid, strong, and lightweight system that is built to endure. Joinerwork and finishes, including the exterior gelcoat and interior wood varnish, were also rated highly by Ken.

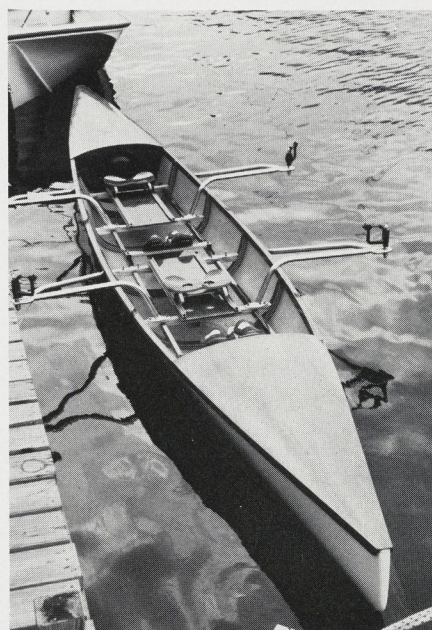
The polished aluminum tubing riggers, attached to aluminum brackets and sockets for the oarlocks, deliver good fore-and-aft and torque rigidity, but only moderate vertical strength. They are adjustable for spread, pitch, and height. The

good quality Martinoli oarlocks were somewhat compromised by a lack of adjustment for oar collar size; the superb Ciolli oars, meant to fit the Fiord, bound in the locks when I attempted to back the boat down. Bolts to hold the riggers at various positions are permanently fixed thread-up in the framing system, an arrangement Ken flagged as likely to scrape skin and snag clothing. The stretchers, fashioned from plywood and hardwood, hold Velcro-laced running shoes, and are adjustable for both length and height. The molded plywood seat rolls on a standard carriage in slick aluminum tracks with end stops. The entire arrangement is mounted on a mahogany plywood board that can be shifted for single/double configuration changes with the release of a few Velcro patches.

Only the Bangor Packet is longer and narrower than the 19-foot-9-inch-long,

Class Apart. *Excellent construction and design make the Fiord attractive to the experienced rower. She is well-suited for racing or touring in protected waters.*

31-inch-wide Fiord, which puts these two in a class apart in terms of handling and speed. The Fiord is close to the racing single both in her low roll stability and positioning of the seat close to the water-



Ken Steinmetz



line. In this craft, you must maintain vigilant control of the oar handles and hand height throughout the stroke, as well as in squaring and feathering. Error may lead to a wild roll, perhaps a rollover.

Nonetheless, she does respond well to authority, taking lots of pressure on the oars without losing pitch in the riggers, accelerating smoothly into high speeds without hitting any discernible "wall," and running out well on the recovery.

As further recompense for the skill required to row her in smooth water, you get a razor-straight track. There is a re-

movable skeg, the only Trials boat fitted with one. At rest, she resists changes in her heading, and she gets even more stubborn about turning as she picks up speed. With any wind off the bow quarter, however, the Fiord tends away, a behavior so unusual that I tested this repeatedly. It's not unsafe; it just means a harder pull on the leeward oar.

Generally, I found rough water uncomfortable in the Fiord. In a good side chop, she rolls and bobs, which makes rowing pretty tentative. She is fairly wet, and sends spray amidships from bow or stern,

depending on the heading. This seems partly due to her tendency to plow at the release, when the rower's weight is thrown into the bow. In smooth to moderately rippled water, however, she shows her major strength: high, efficient, and comfortable cruising speed.

The Fiord is a strong, well-made, and well-designed sculling boat suited for racing or touring relatively protected inland waterways. The large compartments and choice rowing apparatus on her excellent hull make Fiord extremely attractive to the experienced recreational rower.

Appledore Pod 16

Arthur Martin, the granddaddy of recreational rowing in this country, designed the Appledore Pod 16 for maximum stability, seaworthiness, and carrying capacity in an open sliding-seat boat. She'll take four folks aboard, up to two of them active at Oarmasters, has handy flip-out oarlocks (optional) for fixed-seat rowing, and can be equipped with a 52-square-foot roller-reefing sail (see *SBJ* #35).

The Sea Trials boat was handsomely formed of two cold-molded layers of 1/8-inch western red cedar and finished bright inside and out (a fiberglass version is also available). The rugged exterior is covered by 6-ounce cloth and four epoxy coats, and the interior's finish includes three coats of epoxy and three coats of U.V. filter varnish, all earning Ken's highest praise. Fully rigged, with the 23-pound Oarmaster, she weighs just over 100 pounds. The hull takes the weight of your foot without flexing, and the stability of her flat bottom and 35-inch beam permits you to pace almost her full 16-foot length.

The only screws in the boat fasten the mahogany breasthooks; everything else is epoxy glued, including the mahogany in-wales and gunwales. A pair of mahogany plywood frames amidships are filleted into place with an epoxy/microballoon mix and glued to the mahogany stringer system supporting the Oarmaster(s). Mahogany bow and stern seats accommodate passengers and cover foam flotation. Ken noted that the hull was smooth and fair and the joinery work was first class.

The hull's performance won equally high praise from both Ralph and me. Her sharp entry and exit held her well to her track, and she provided excellent stability in all conditions and attitudes toward the weather. She was even steadier as a double than a single. Her 12-inch freeboard kept her dry in moderate water, and her flared bow makes her seem trustworthy for heavier conditions than we found on Trials day. At rest and underway, she responded nicely to steering nudges, locking onto new headings without continuing to turn.

By the same token, she's no racer. As both single and double, she hit a wall at a surprisingly early point beyond which it was senseless to row harder, and generated an unusually substantial stern wave. The solution? Make no pretensions about getting anywhere quickly.

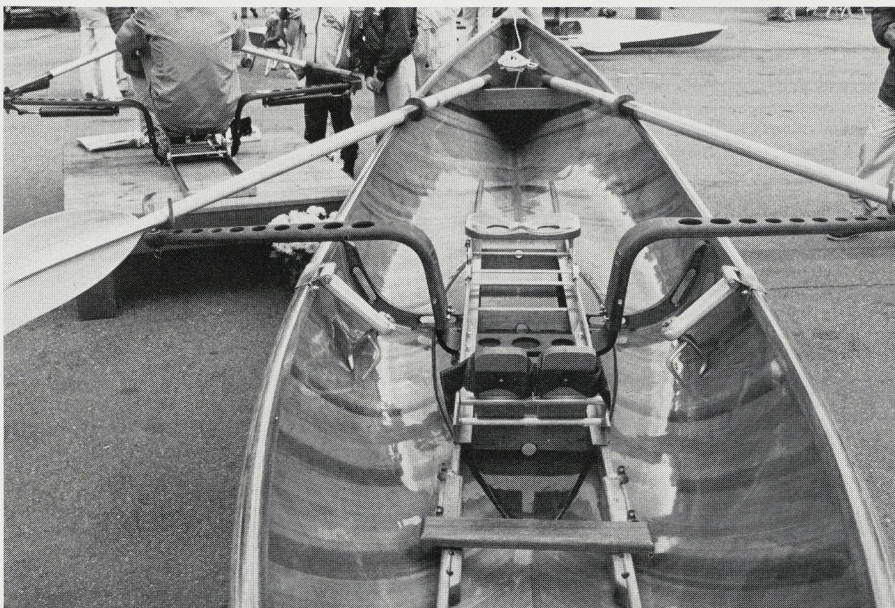
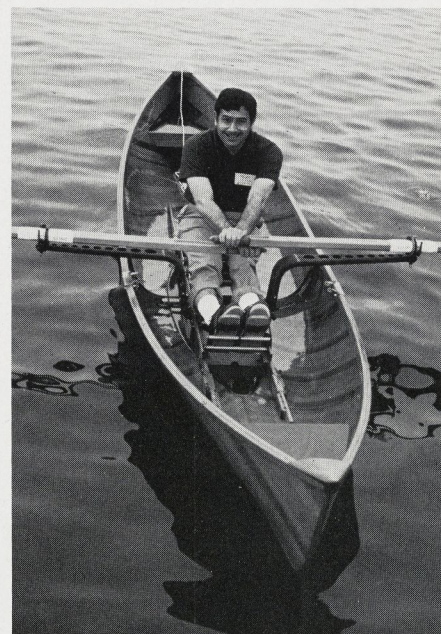
In the center position (the pod comes with three positions for anchoring the Oarmaster to adjust trim), I felt she pitched down at the bow. Because the Oarmaster has flat tracks, this pitching made recovery more difficult, as I had to pull myself "uphill." Most sliding seat tracks are elevated slightly toward the bow to aid recovery. Perhaps some ballast in the stern or a repositioning of the Oarmaster would have alleviated this problem.

The Appledore's main weakness was the Oarmaster unit itself. It's a Yankee concoction, spare and adequate, but its riggers have quite low vertical and torque rigidity, its seat travels roughly and needs padding, and its clogs offer minimal comfort. Also, after not many strokes, the

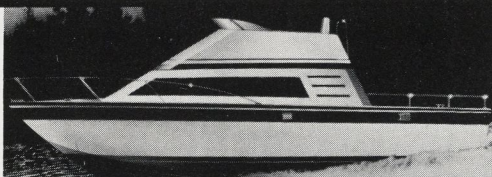
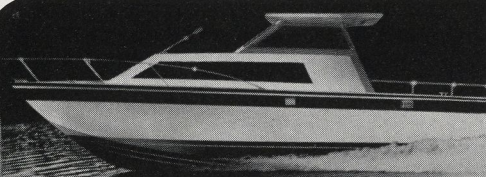
backs of my knees began to hyperextend at the finish, a sign that a leg stop is needed for a long row.

Nevertheless, this is a superb hull, a terrific open-water boat capable of transporting you and your friends and a picnic lunch under oar or sail. It's safe, durable, stable, and pretty. □

Open-Water Rower. *Stable and seaworthy, the Appledore Pod 16 can be easily driven by one or two oarsmen manning Oarmaster drop-in units.*



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Our new trailerable Bel Aire above is available in 24 or 26' length with an 8' beam. This modern hull form with its 18° Deep V bottom and lift strakes is ideal for running at high speeds in rough, choppy water. Shown above are two versions of the Bel Aire Fly Bridge and Express Cabin. Both the Cuddy Cabin and a large open center console fishing model are also available. Designed for the latest plywood epoxy construction. Plans and patterns for either model **\$79.00**. Complete Boat Kit Express Cabin 26' **\$4,100.00**. Complete Boat Kit Fly Bridge 26' **\$4,700.00**. Study prints only (all models) **\$15.00**. **Design 268.**

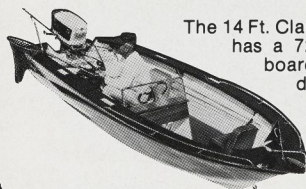


Crown Cruiser above with its 8' beam is trailerable and available in 24 or 26 Ft. length. Introduced in 1958, we have sold thousands of plans and kits for this model with as many satisfied customers. This classic design can be built using the new plywood epoxy construction. Plans and patterns only **\$79.00**; complete boat kit 26 Ft. model **\$3,700.00**. **Design PB 72X.**



The new 22 Ft. Viking fishing boat with its 92" beam is trailerable and a versatile addition to the Clark Craft line. Designed for inboard, outboard or stern drive power this model can be built using the new plywood epoxy technique. Plans and patterns **\$49.00**; complete boat kit only **\$1,995.00**. **Design No. 226CC.** Study Print only **\$7.00**.

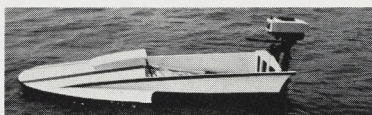
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The 14 Ft. Clark Craft Fish & Ski model has a 72" beam, will take outboards to 50 hp and is designed for plywood epoxy construction. Plans and patterns **\$19.50**; complete boat kit **\$590.00**. **Design PB 57.**



MONGOOSE 6 Meter Deep V Racer is capable of speeds over 60 mph with a 200 hp outboard engine. Overall length 19'8" with a beam of 86". The Mongoose is extremely fast and maneuverable, excellent for racing or water skiing. Build using the new plywood epoxy technique. Plans and patterns **\$45.00**. Complete Boat Kit **\$1,695.00**. **Design KS 198.**



The SR-1 is not for competition racing, but a lot of fun for those who just want to buzz around the bay, and an excellent first project. Overall length 8'5" with a beam of 56". Will do up to 35 mph with a 15 hp outboard. Plans not available. Complete Boat Kit only **\$199.00**. **Design SR-1.**



Trailer Sailer 12' above has a beam of 5'9", sail area of 100 Sq. Ft. and needs no ballast. Cabin space provides storage for cooking utensils, clothes, etc. Plans and patterns **\$22.50**; frame set includes plans **\$110.00**. **Design CM 28.**



The 18 Ft. Trailer Sailer above has a beam of 7'8" and a hull depth of 2'6". Draft center plate down 4'9". One of our more popular sailboat designs. Plans and patterns only **\$41.50**; Study print only **\$7.00**. **Design CM 31.**

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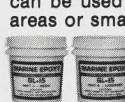
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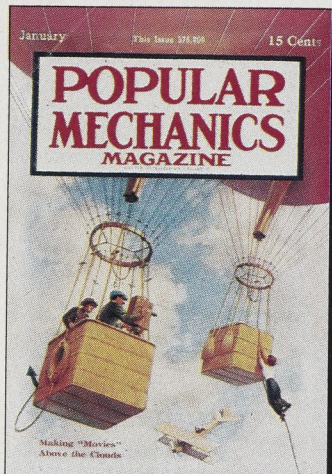
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75 YEARS AGO: JANUARY 1914

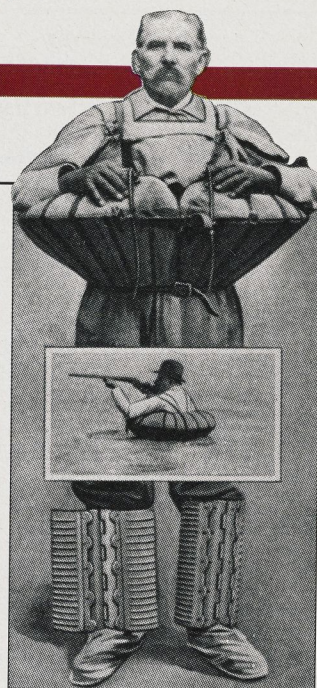


Silent Stunts

The motion-picture industry was barely into its adolescence, but audiences were sophisticated enough to spot a crudely crafted stunt. In our January 1914 cover story we explored the ways filmmakers framed spectacles before the magic of special effects. In one silent thriller, the airborne climax featured an escape from a kidnapper's balloon into a maneuvering biplane. The scene was filmed thousands of feet up, the cameraman's balloon tethered to the villain's.

Water Walker

The spark of homespun invention has always lit up our pages, and never more brightly than during our early years. Case in point: this life preserver with hinged leaves that let the wearer duckwalk through the deep. The aluminum leaves folded to the calf during a forward stride and deployed outward when the leg swung back. The St. Louis inventor used the contraption to stride waist-deep through the Mississippi as he gunned down unsuspecting waterfowl.



50 YEARS AGO: JANUARY 1939



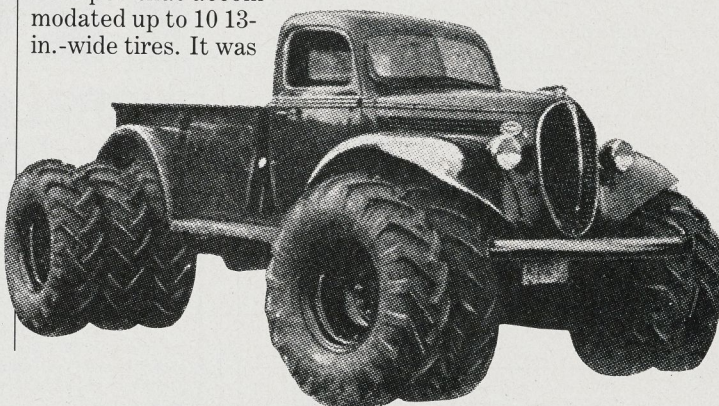
Flame Tamers

As the nation bounced back from the Depression, a gas-guzzling populace returned Texas to a boom state—sometimes literally, when oil wells blew out. Wild-well damage control was our cover story 50 years ago. Teams of asbestos-clad specialists, operating behind tin heat shields, detonated nitroglycerin to snuff out or divert 40-ft. flame geysers. Meanwhile others set to work with high-pressure dredging equipment and capping manifolds to salvage buried casings.

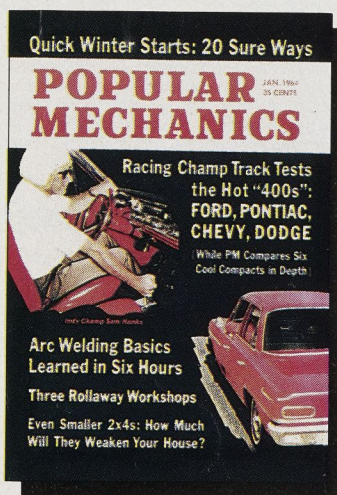
Bigfoot's Daddy

Monster trucks aren't a recent phenomenon, as evidenced by this '39-vintage stomper that accommodated up to 10 13-in.-wide tires. It was

built for wading through the bayou, rather than steam-rolling its lesser brethren in the gladiatorial arena.



25 YEARS AGO: JANUARY 1964



Four On The Floor

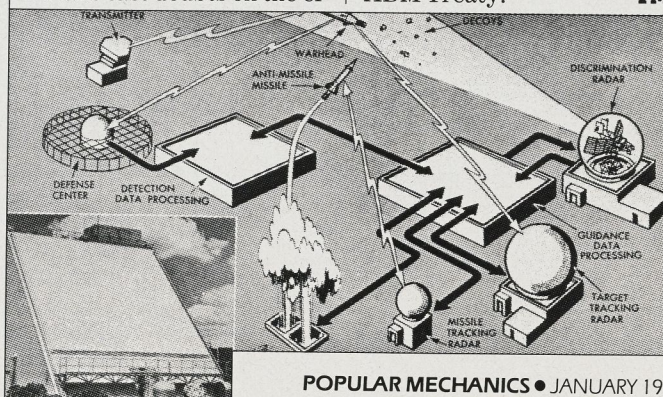
Power-mad auto buyers snapped up Detroit's 1964 offerings, particularly the optional 400-cu.-in. engines. For our January cover story Indy champ Sam Hanks put four hot-engine cars through the paces at Willow Springs Raceway in Rosemond, California. The contestants: Ford Galaxie, Plymouth Sport Fury, Chevrolet Impala Sport Coupe, and Dodge Polara 500. Despite the cars' different transmissions, steering and brakes, the results were surprisingly close.

SDI, 1960s-Style

Cold Warriors learned that the Soviets installed a new antiballistic missile complex. Details cast doubts on the ef-

fectiveness of the U.S. Nike-Zeus defense system and opened an era of strategic jockeying leading to the 1972 ABM Treaty.

PM



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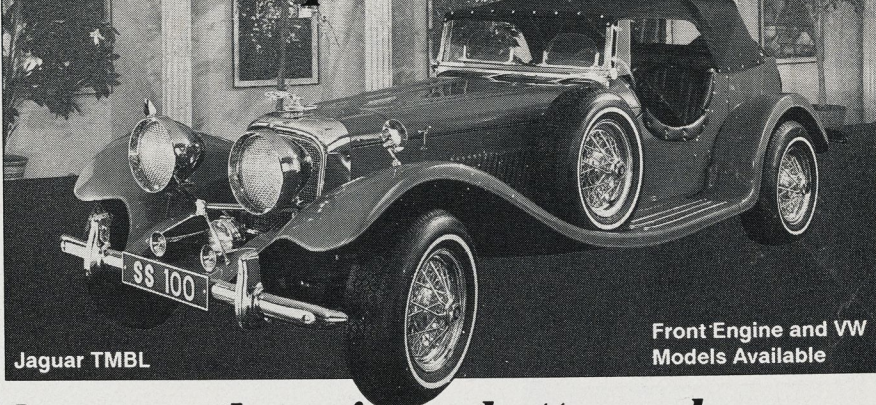
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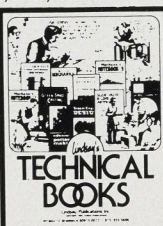
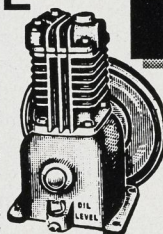
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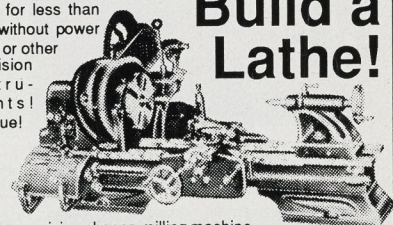
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