BOAT Pennsylvania

The Keystone State's Official Boating Magazine

January/February 1987
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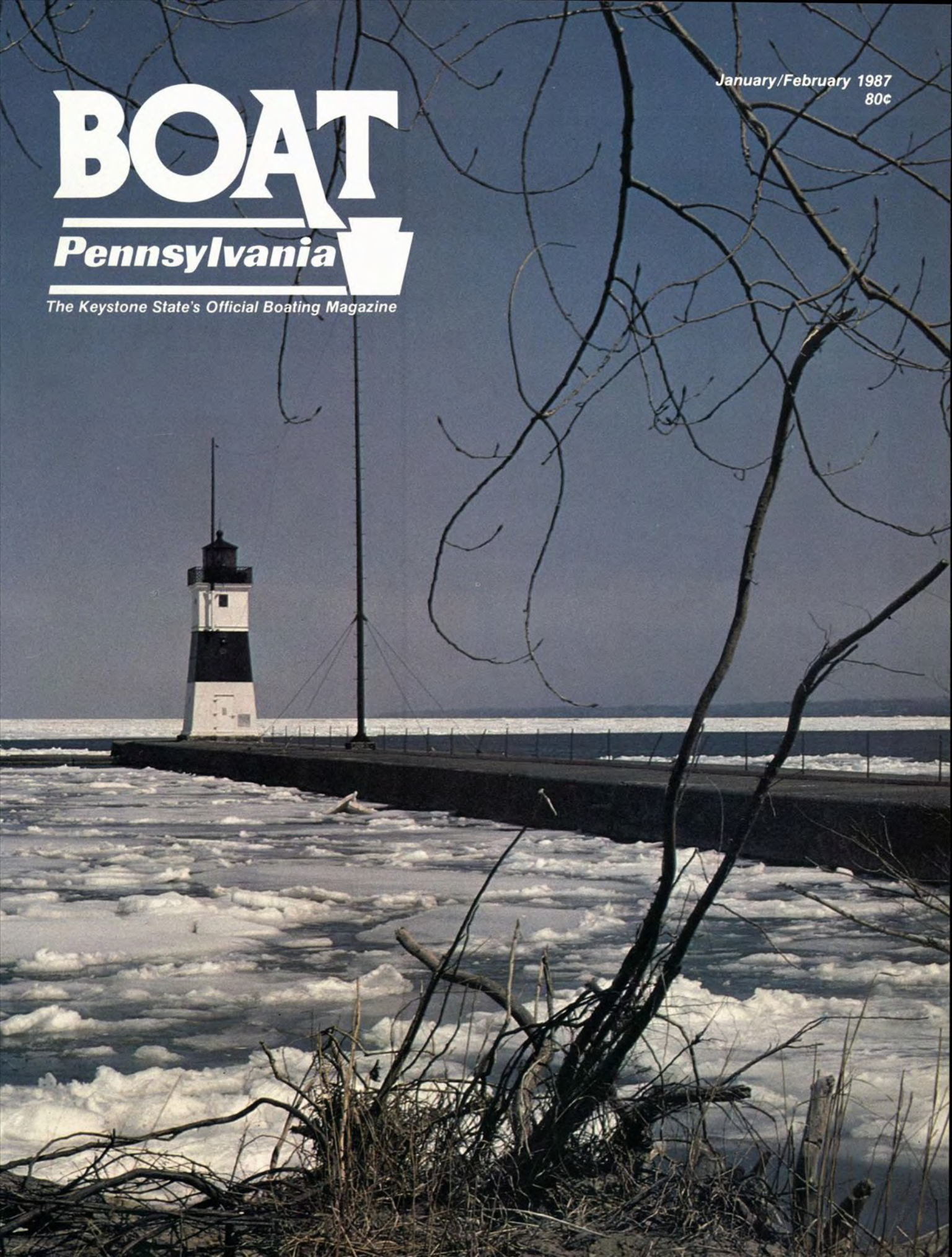

VIEWPOINT

Boat Manufacturing in America

Last week we visited the home plant of one of our country's largest boat manufacturers. What we saw makes us feel good about the old U. S. of A.

Innovation and ingenuity abound. Problems that have plagued the industry in the past, production inefficiency and shoddy workmanship are being solved through renewed company leadership and management interest.

For instance, the company we visited produces a well-equipped boat, but offers no factory installed options. This reduces inefficiency on the assembly line and at the same time removes the necessity of a large inventory. Cost is reduced and a better boat is passed on to the customer.

To assure that quality of workmanship is built into the product, the manufacturer pays bonuses to assembly teams based on quality control reports. When the boat leaves the factory, a dollar factor is added to the overhead for warranty work. If, at the end of the warranty period, that boat has not used up all the warranty dollars, the remainder is returned to the team that built the boat.

These are just a few of the innovative ideas our host of last week uses. Competition in the boating industry is keen, so you can be sure that the other companies are using techniques just as imaginative to stay in the ball game.

Companies of integrity and makers who care are not the only factors that go into the making of a good boat.

The Federal Boat Safety Act of 1971 put the Coast Guard into the regulatory construction standards business. So you don't have to worry any longer about household wiring, un-fused circuits, untested fuel and ventilation systems, flotation standards, and so forth.

We should also recognize those organizations that develop the standards and test the component parts—the American Boat and Yacht Council (ABYC), American Society for Testing Materials (ASTM), the National Fire Protection Association (NFPA), Underwriter's Laboratories (UL), the National Marine Manufacturers Association (NMMA) Boat Certification program—to name a few. When shopping, look for their logos.

This is the boat show season. Walk down the aisles of colors and dreams with confidence. Buy American.

Gene Sporl
Assistant Executive Director
Bureau of Waterways
Pennsylvania Fish Commission

Gene Sporl

BOAT Pennsylvania

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The cover

The ice-locked winter scene on this issue's cover shows Presque Isle Inlet and Lake Erie. Photographer Denis Stager braved bitter winds and cold to capture this scene on film. Speaking about braving the elements of Presque Isle, check out the nostalgic picture painted by the article that begins on page 18—those ice boaters careening across the frozen bay at speeds up to 100 mph! If you prefer to look forward to spring, consider how to enjoy a successful shakedown cruise in a new boat, in the article on page 26, and if you're unfamiliar with tournament water skiing, the article that begins on page 29 may interest you.

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Under 10 Horsepower

by Tom Reinke

Boaters, like the rest of the human race, are a clever lot. When faced with a challenge or an obstacle they will find a way to overcome it. Take, for example, the 10-horsepower limit that exists on many Pennsylvania lakes. The restriction is intended to assure a certain amount of sanity and safety on waters that are either small or are heavily used by different types of boaters. Among other things, the horsepower limit helps to keep down the speed limit and prevents smaller boats from being intimidated by larger, more powerful craft.

At first glance, the 10 horsepower limit may appear to be a severe restriction on the amount of fun that you can have on the water. After all, what can you do with boats and motors that small? Actually, boaters have risen to the challenge, making the most of the limit and getting true enjoyment out of boating under 10 horsepower.

They have been aided in this effort by the marine industry, which has devised an endless list of products that let boaters do just about everything under 10 horsepower that they could do over 10 hp, certainly with just as much fun and often at a fraction of the cost.

Motors

Much of the focus in the under 10-hp market is the motors that bump up against the limit, the 9.8 and 9.9 hp motors that virtually every outboard manufacturer offers. The 10 hp limit is very common across the country and the 9.8 and 9.9 hp models were designed to stay within the limit yet offer all the features that you can find on larger motors. Apparently the manufacturers have hit the nail on the head, because the 9.8s and 9.9s (we'll call them 10 hp for convenience) are the most popular outboards sold in the country.

There is more variety in the 10s than there is at any other power rating. In addition to the standard 2-stroke engines requiring the mixing of gas and oil, there are 4-stroke models that run on straight gas. The manufacturers of the 4-strokes contend that the advantages of these motors are that they run quieter require less maintenance and that they are 50 percent more fuel-efficient than their 2-stroke counterparts.

In keeping with their big motor image, the 10s use the latest technology found in the larger motors, from loop-charged cylinders that maximize power to automatic fuel mixing, which eliminates the troublesome chore of having to measure just the right amount of oil to add to the gas.

The real advantage of the 10 hp motors is that they come in versions to fit almost any type of boat. There are short, long and extra long shaft models to fit transoms from 15-25 inches. In addition, there are propeller and gearing options that make them suitable for everything from small fishing boats to pontoon boats to displacement hull sailboats 25 or 26 feet long.

On the practical side, there are rectifier and alternator kits available for powering running lights and electronic fish finders, depth gauges or CB and VHF radios. For boaters who want to set up a small yacht with all of the convenience of larger boats and motors, a 10 hp motor with electric starting and remote controls lets the skipper drive from a helmsman seat forward.

A nice thing about the 10s is that even when they are loaded with options, they are still portable, small and light enough to be carried by hand and transported in the trunk of the car.

The second category of motors under 10 hp are the 6 hp to 8 hp powerplants. These motors offer almost the same power as the 10 hp models but often at a savings because the range and options and add-on features is unlimited. The motors come with advanced design features and conveniences such as full gear shift, loop-charging and even alternators and electric starting. About the only things missing from this group are the options for remote controls.

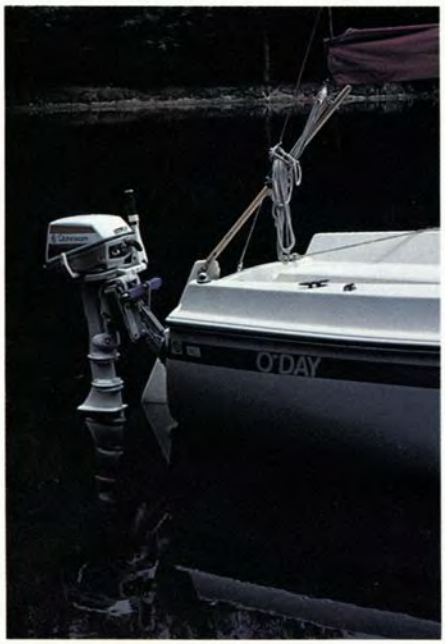
photos by Russ Gettig

Motors of 10 hp feature reliability and portability.

The best way of describing the 6-8s is to say that they have gutsy power while maintaining simplicity and reasonable cost.

At the small end are 2 hp to 4 hp motors that tout portability and reliability. At about 24 pounds for the 2s and 45 pounds for the 4s, they can be carried almost anywhere, and with features such as extended corrosion protection and sophisticated alloys in internal engine parts they are reliable to take you anywhere. One manufacturer reported that on a worldwide basis there are more 2 hp outboards sold than any other. The reasons are their low cost and the predominance of small boats throughout the world.

In recent years the 2 and 4 hp motors have grown up with features such as gearshifts, twist grip throttles and remote or enlarged fuel tanks for extended range.



Boats

The key to success in boating under 10 hp is not so much the size and power of the motor but the choice of a boat best suited to the things you want to do. If fishing is the primary goal, a john boat or utility boat is the way to go. If most of your boating takes place on rivers and small lakes, perhaps a canoe or similar boat that can be either rowed or powered is best. If you want to be able to take the family out and do a variety of things, or if you plan to use the boat on a variety of waters from inland lakes and rivers to Lake Erie or the Chesapeake or Jersey shore, a bigger boat with the freeboard, beam and carrying capacity to carry a load to take big water is probably best.

Proper matching of the boats and motor is essential. Overpowering a small boat gets you very little in terms of extra performance, so the money spent on the additional horses essentially will be lost. On the other hand, a severely underpowered boat will not perform as it should.

One rule of thumb used in matching a boat and motor is that the size of the motor should be 80 percent of the maximum horsepower rating. For larger boats, that represents a good balance. Above 80 percent, speed and load-pushing gains decrease substantially for each additional horsepower. For example, going from 50 hp to 60 hp represents a 20 percent gain that is not likely

Under 10 Horsepower

to pay off in 20 percent more speed, but it represents a substantial increase in price.

In smaller boats, power and performance gains are greater for each step up in horsepower. The changes are significant enough to consider going with the maximum power rating. A 10 hp motor is 25 percent more powerful than an 8 and 67 percent more powerful than a 6. Those are substantial differences that make a big difference in performance, considering that the loads carried by small boats can vary significantly.

A 14-foot fishing boat's empty weight is around 175 pounds. With an 8 hp motor, fuel and two people, the total weight is around 600 pounds. With two more people on board the weight jumps to 920 pounds, up over 50 percent. That's where the additional horsepower comes through.

The number of boats suitable for under 10 hp is staggering and constantly growing. When most people think of small outboards the first thing that comes to mind is aluminum fishing boats; the basic 12-foot or 14-foot fishing boat accommodating 3 or 4 people remains overwhelmingly popular.

Historically, these boats have been plain janes, but now they are starting to come alive with a long list of features and options. In addition to painted and striped topsides, some models have adopted serious bass boat features, including aerated live wells, lockers, pedestal seats and rod holders.

The aluminum bass boats have caught on like wildfire. Many of them are rated for motors up to 25-35 hp, but they can be easily powered by a 10 hp outboard. The boathouse statistics from outboard manufacturers indicate that lightly loaded these boats plane in a flash and hit 20 mph. Even when you pile on the gear or people most will still plane and top out at 15-16 mph. With a rig like that you have all the basic features of the 150 hp thundering bass boats except the high cost and the top end speed. The high cost you can always do without and as far as the speed is concerned, if you need to go 40-50 mph to get to the fishing hole, you're probably too late to get anything anyway.

Engines of 10 hp come in versions to fit just about any boat or application.

In spite of the popularity of the aluminum bass boats, there is nothing bad that can be said for the standard old-fashioned aluminum fishing boats. They have the carrying capacity and durability, and while they are not as fancy as the dressed up aluminum bass boats, you can do everything in them that you can in a fancier boat.

That holds true for john boats as well, the flat-bottomed blunt-nosed scows that are one of the roomiest and functional boats ever designed.

Smaller pontoon boats, floating patios as they are often called, are also ideal for under 10 hp motors and lakes. As a large, stable walk-around platform they are capable of carrying the whole family on fishing trips, swimming exercises or leisurely shoreline cruises.

Pontoon boats are best powered with high-thrust outboards, and since they are usually equipped with consoles and steering wheels, remote control and electric starting motors usually prove to be the most convenient powerplants.

Canoes can also be powered with a small outboard. The square-ended canoes are best suited for motors, but the traditional double-ended canoes can be adapted for outboard power with a bracket that mounts on the gunwale and carries the motor on the side of the boat. This is not as simple and safe an arrangement as a square ended canoe, but it does allow the double-ended models to be used as both a paddling or motoring canoe without any loss in paddling ease or performance.

Inflatables are still another type of boat suitable for outboards. They come in many different sizes from small 8-10 foot models to runabout-style 15-footers with wood floors and seats.

Inflatables are practical when large boat ramps are few, and they make good fishing boats as well as cruising craft. Inflatables are surprisingly stable, too.

No matter what your boating preferences are, there is a 10 hp lake near you where you can enjoy your sport.

Tom Reinke serves on the Boat Pennsylvania Editorial Advisory Committee.

Winter Projects *by Stephen Knox*

With most of Pennsylvania locked in the dead of winter, boaters are becoming restless. Spring seems an eternity away. Take hope, though, because there are lots of little projects that will make those long winter evenings easier to bear.

All the gear you removed from the boat in the fall should be cleaned, inspected, and repaired as necessary. Lifejackets, flares, lines, anchors, fire extinguishers, fishing gear—all require some annual care and now is the perfect time.

Start with your safety equipment. Check your flare kit to be sure that you have all the required equipment. Consider investing in more equipment if you have only the minimum required by law. If your flares have expired, buy new ones but do not throw out the old. Though expired, they are still probably all right.

Inspect your fire extinguishers. Most models have a pressure gauge that tells you when to recharge the unit. Like flares, you really need more than the minimum required by law.

Uncoil and wash all your dock and anchor lines. Wash them by hand in a large sink or throw them in the washer. The washer will do a better job, but you will have to spend some time untangling. Either way, give them a final soak in fabric softener. It will make even old lines soft as new. Check every inch for chafe and cut strands. Replace any lines that are the least bit suspect. Whip any ends that have come loose, coil everything neatly, and your lines are ready for spring.

Wash your fenders, too. Remove any creosote with varsol or mineral spirits. Replace the lines on the fenders, if required. Finally, give them a coat of ArmorAll or similar preservative.

If you are a sailor, stretch the sails out in the den for a thorough inspection. If any repairs are needed, take them to your sailmaker now, before the spring rush.

If your outboard requires service, do that now, too. If it is do-it-yourself work, haul it to the garage. If you have to send it out for extensive repairs, do it now while your repairman is slack.

Now is a good time to start on winter projects. They keep you busy warding off the effects of cabin fever, and by the time spring arrives, you'll be ready to launch without delay.

The winter doldrums are the perfect time to overhaul your fishing tackle. Sharpen all the hooks, replenish all the supplies, clean all the scales, etc., out of the bottom of the tackle box. Clean and lubricate your reels, renew the line, check rods for cracks or rough spots in the eyes.

While all this gear is off the boat, take the opportunity to give the inside of the boat a complete cleaning. It will be much eaiser before you restow all the gear in the spring.

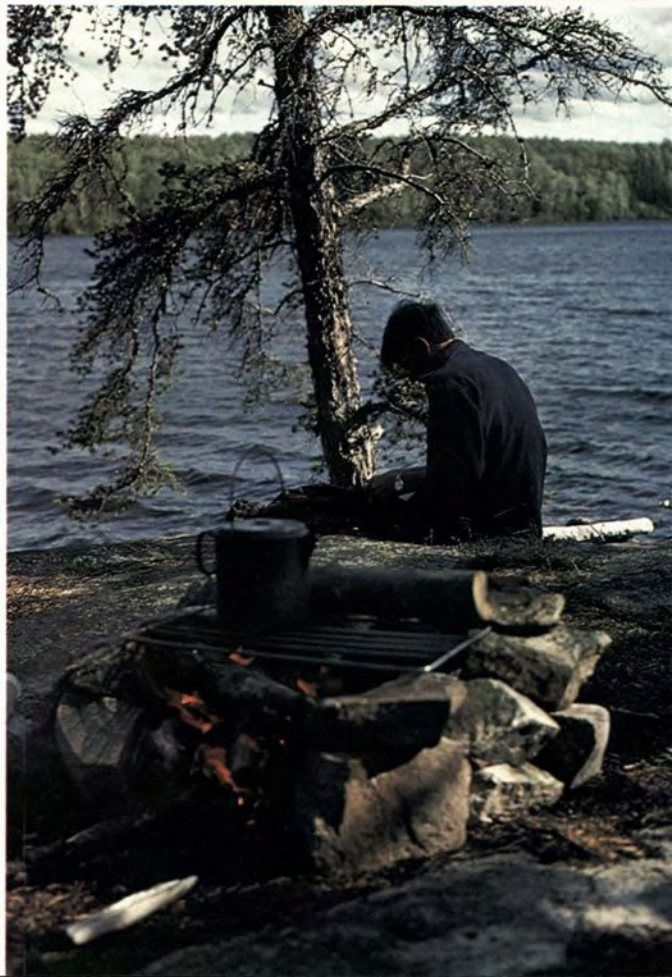
Look over all your equipment that is powered by dry cell batteries. If you do not regularly replace the batteries during the season, replace them all now. Better to spend a few extra dollars now than to discover on a dark May night that the flashlight batteries are dead.

If your boat is on a trailer, this is the time to check the trailer, too. Repack the wheel bearings, touch up any rust spots, and clean the light socket contacts. If the trailer is badly rusted, arrange to store the boat off the trailer long enough to do a complete paint job in the garage.

Sailors with boats stored ashore should check the mast while it is out. Inspect all bolts and screws for tightness, check the standing rigging for broken strands, and clean the contacts of mast-mounted lights.

Any boat could benefit from the addition of small canvas projects and winter is the perfect time to make them. Several good books are available that have detailed instructions. You can fill winter evenings with halyard bags, wheel covers, fitted sheets, seat cushions, life jacket storage bags, duffel bags, T-top canvas, or even a whole boat cover. Such projects are easier than you think, even if you have never sewn.

Finally, plan the work of spring recommissioning and order any material you will need then. When there is absolutely nothing left to do, read a good book. If you have done everything else, spring can't be that far away.



A compendium of essential gear and how to pack it

Equipping for Canoe Tripping

by Cliff Jacobson

photos by the author

It was 10 p.m. along the Fond du Lac River in northwest Saskatchewan. The sky was gentle gray, about as dark as it gets near timberline in late July. Four of us, all good friends, snuggled contentedly around the brightly blazing fire, while overhead Northern Lights danced eerily in bands of mist-green and creamy white.

A thousand miles of driving and a hundred more of paddling had ultimately brought us to this special place. Each man stared wonderingly into the crackling coals and in his own way recounted the joys of peace and friendship.

Then we heard the clanking of their canoes. The callous invasion of our privacy.

The spell was broken.

Without emotion, we silently watched the four bedraggled men file into the light of our campfire. They'd run a drop we portaged. Both boats had capsized. Everything was thoroughly watersoaked.

Knowingly, my crew sprung into action. We piled the fire high, brought forth dry clothes, hot sweet tea, and warm food. Later when normality resumed, our conversation turned to camping gear and the procedures for packing it.

Outwardly, the men poked fun at our plastic-lined canvas duluth packs, our watertight Wanigan boxes, and scientific ways. One man proudly proclaimed that "wet gear was part of the canoe tripping game." But we knew better. Despite their lofty airs, we knew they were impressed by our gear and methods. They were ordinary Fords and Chevys. We were the sports cars that just blew past.

Admittedly, our equipment was newer than theirs and better adapted to the rigors of wilderness travel. But that doesn't excuse the sloppy packing and resultant wet gear. Most items had been thoughtlessly stuffed into unlined nylon frame packs. What didn't fit was secured within leaky plywood boxes.

Yet, even this shabby outfit could have been waterproofed by anyone who understood the principles of packing and the realities of rough-water canoeing. For the rules are the same, be it a local overnighter or a month-long trek in the wilds. Rain is rain no matter where it falls, and gear will be as thoroughly drenched in a capsize on a mirror-flat pond as in a thrashing rapid. Even on routes where there are technically no portages, enough variables—high water, low water, no water, downed trees, fences, and the like—often combine to teach the fundamentals of careful packing and portability.

What keeps you dry and in command on non-intimidating local waters will do the same on extended ventures in the deep backcountry. Here are some of the basic items you'll need and tips for using them effectively.

Packs

For gentle rivers where there are no real portages, you can stow your gear inside army duffle bags, soft-sided canvas or nylon luggage, or plastic ice chests (coolers). However, everything *must* be waterproofed according to the method suggested in the sidebar that accompanies this article.

Nonetheless, if you're really serious about canoe tripping, you'll want one or more genuine packsacks.

In Minnesota, the traditional Duluth pack—a canvas envelope with seemingly unlimited space, reigns king, while in New England, the woven ash pack basket is most popular. Duluth packs come in several sizes, but the number-three model that measures 24 inches wide by 30 inches deep is most common. Duluth packs have been favored by canoeists for more than a century for one very good reason: Nothing better has come along. Consider these advantages:

A number-three Duluth pack accommodates more than 5,000 cubic inches of gear.

Duluth packs stow comfortably into the tightest confines of a canoe.

Duluth packs sit upright in the canoe, their backs and bellies out of contact with accumulated bilge water. The first time you have to carry a mud-smeared pack against the back of your new Pendleton shirt, you'll understand the importance of this "stand-up" feature.

Duluth packs are not watertight, so they're always lined with one or more waterproof plastic bags. The weakest part of a plastic bag is its mouth, which in this case is *upright,* out of touch with bilge water. You can swamp your canoe to the rails, and as long as you don't capsize, pack contents will stay dry *even if you inadvertently leave the plastic liners unsealed.* Try this with any other pack design!

Duluth packs are relatively expensive—$50 to $75 for a good one. *Pack baskets* of woven ash splints have the same advantages as Duluth packs but offer rigid walls which are useful for carrying awkward items like eggs, tin cans, cameras, and binoculars. Packbaskets should be "sandwich-lined."

If you want the finest in contemporary dry boxes, check out the E-M Wanigan (10411 Kelman Ct. North, Stillwater, MN 55082), which boasts a 5,000 cubic-inch capacity, padded shoulder straps and hipbelt, and a vacuum-tight rubber seal.

The Wanigan offers great protection for crushables and breakables.

Packing the camera

The best way to pack your camera is in an amphibious assault gas mask bag—about $7 at military surplus stores. Gas mask bags are constructed of tough canvas-covered rubber and have a roll-down seal and three positive brass fasteners. They are *absolutely* rapids-proof! A vinyl version of these bags is available from Phoenix Products, U.S. Route 421, Tyner, KY 40486. Surplus steel ammo boxes are also popular camera safes, though these are heavy, noisy to open and close, and frequently unreliable.

Tent

You don't need a sophisticated high-altitude tent for canoeing. Any simple forest tent will do if it has a bathtub floor (no perimeter seams at ground level) and a waterproof fly that stakes nearly to the ground. The fly must cover *every* seam and floor corner! A vestibule (alcove) is important: It provides a place to store equipment out of the weather. Vestibules also seal the entryway of a tent from blowing rain.

Always use a plastic ground cloth inside your tent. Any water that wicks through worn floor seams and fabric will be trapped between the plastic ground cloth and tent floor and you'll sleep dry. Never place the ground sheet under the tent floor, as is recommended by some tent makers: Flowing groundwater will become trapped between the plastic sheet and tent floor and be pressure-wicked (from body weight) into the sleeping compartment. Begin each new canoe camping trip with a new plastic ground cloth and you'll stay dry no matter how bad the weather!

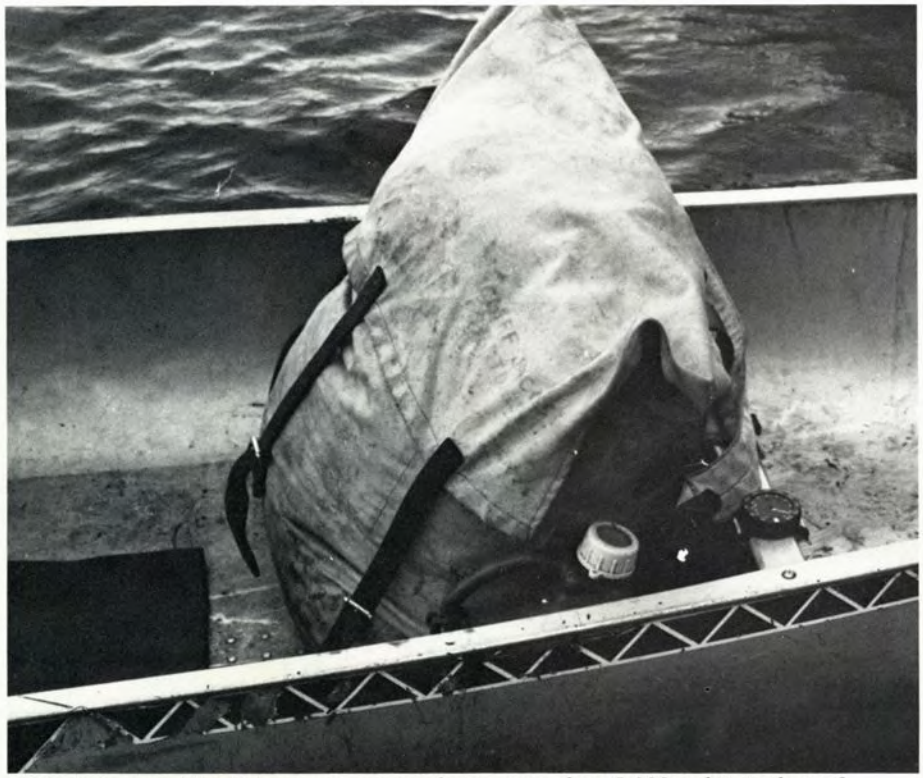
Clothing

You don't need sophisticated clothing for canoe camping. Simply avoid wearing cotton, except in the height of summer heat, and you'll do fine. Woolens, inexpensive acrylics, or polyester pile are the favored regimen. Military surplus wool tropical shirts and trousers make delightful summer wear, even when temperatures climb to the 90s.

A breathable nylon jacket is essential to stem the biting winds, and don't forget polypropylene, acrylic, or woolen gloves. A change of clothes from nose to toes is the rule whether you're going for a weekend or a fortnight. Everything should fit easily into an 8-inch by 11-inch nylon stuff sack.

Rain gear should be uncomplicated. A two-piece rain suit is better than a poncho, which dribbles through, or a knee-length shirt (cagoule), which could become entangled in a capsize. The best buys on rainwear are usually found in industrial supply stores, where construction workers and outdoor professionals shop. The new construction-grade rain suits are strong, light, and wondrously inexpensive. They'll keep you plenty dry even though they lack the exquisite tailoring, multiple pockets, and exotic hoods (which you really don't need) of high-tech camp store garments.

Do not wear your rain gear for wind protection. Any item that is frequently worn will eventually develop holes. Wear your nylon shell jacket for wind and keep the poly-coated stuff for its intended purpose. Always store rain clothes in a nylon sack to eliminate the abrasion that results from stuffing these garments into packsacks.



A Duluth pack like this one accommodates more than 5,000 cubic inches of gear, stows comfortably into a canoe's tight confines, and packs upright, away from bilge water.

Rain tarp

A 10-foot by 10-foot or larger nylon rain tarp, tightly pitched between two trees, will enable you to prepare meals, make repairs, and otherwise enjoy a rainy day. The rain tarp is one of the most essential and overlooked items on a canoe trip.

Edged tools

A folding saw and hand axe are essential to make fire when the woods are drenched from a week-long rain. Locate a dead downed tree and saw off a few foot-long sections. Use the hand axe as a wedge to split the sections to dry heartwood. Simply stand a cut section on end and gently bury the axe head. Hold the handle firmly with both hands while a friend pounds the head through with a two-foot chunk of log. This procedure is very safe and it virtually eliminates "axidents!" Remember, use the axe for *splitting* only, never chopping.

Packing the outfit

Here's a rapids-proof procedure for packing your gear:

Line your pack(s) with a plastic bag and inner abrasion liner. Sandwich-bag your sleeping bag and clothes bag in similar fashion. Pack items in this order:

1. Sleeping bag goes into the bottom of your pack, followed by your foam sleeping pad or air mattress. Atop this place your triple-bagged clothes bag, extra shoes, sweater, and sundries.
2. Roll down the abrasion liner to produce a tight seal. Place your rain gear and nylon tarp on top. This will isolate these possibly damp items from the dry gear within your pack.
3. Twist, fold over, and seal the waterproof plastic pack liner with a loop of shock cord. You now have an absolutely waterproof, well-balanced load.

Packing the tent

Most tents have poles that are too long to fit within a packsack. Consequently, tents and poles should be packed separately as follows:

1. Stuff or roll the tent, without stakes and poles, and place it in a nylon bag. Pack poles and stakes in a separate nylon bag with drawstring closure.
2. Pack the tent between the waterproof plastic pack liner and the tightly rolled abrasion liner. This will isolate it from the dry gear below. Set the pole and stake bag just under the pack flap and run the closing straps of the pack flap through loops of nylon cord sewn to the ends of the pole bag.

Cinch the pack flap down tightly. The nylon cord loops keep the pole bag from sliding out beneath the pack flap.

Cliff Jacobson has some 33 years of canoeing experience and is one of the foremost paddling experts in America. He is the author of three canoeing books. Cliff Jacobson hails from Minnesota.

Effective waterproofing

Canoeing books are rich with advice on how to waterproof your gear. You're generally advised to line each pack with one of two plastic garbage bags and to seal each with a rubber band. This works fine, as long as you don't tear the plastic bags. But every time you stuff an item into the pack, you stretch or abraid the light plastic liner. In no time, leaks develop. The typical garbage bag seldom lasts more than a day on most canoe trips.

Here's a more reliable method: First, line your packsacks with a sturdy plastic bag (I prefer 6-mil grain sacks, when I can get them). Then, place a tough, abrasion-proof sack *inside* this plastic bag. The abrasion liner may be made of nylon, polypropylene, burlap, or heavy (6-mil) plastic. It need not be waterproof. It's only purpose is to accept the wear normally incurred by the delicate plastic liner.

Now, pack your pack as described in the previous discussion. Twist and seal each pack liner and secure it with a loop of shock cord or inner tube band. Note that the puncture-prone vinyl bag is protectively sandwiched between two layers of tough material—the outer pack fabric and the inner abrasion liner.

I always "triple-bag" my down sleeping bag (you need two nylon stuff sacks) by this method before I place it in my Duluth pack.—*CJ*

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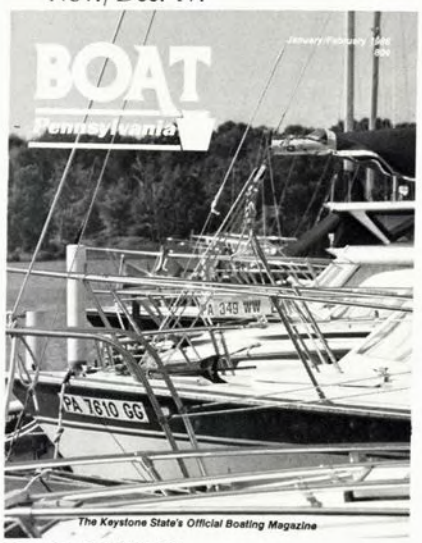

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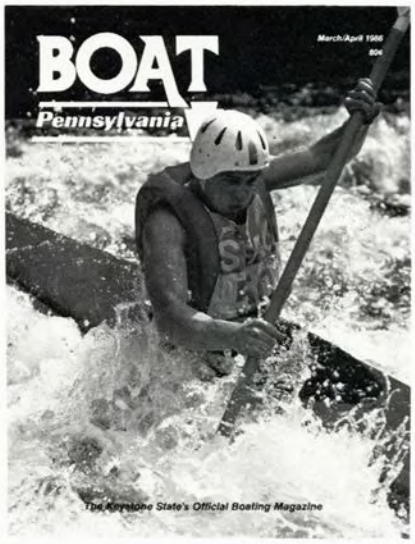

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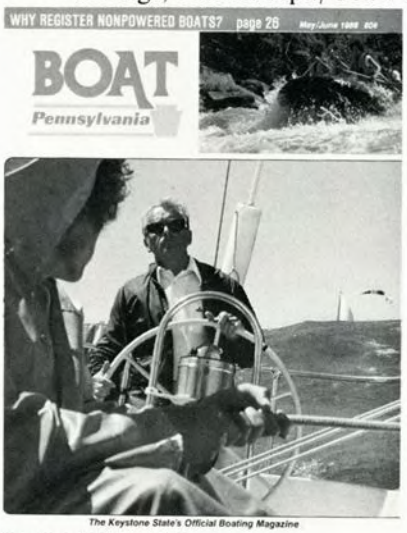

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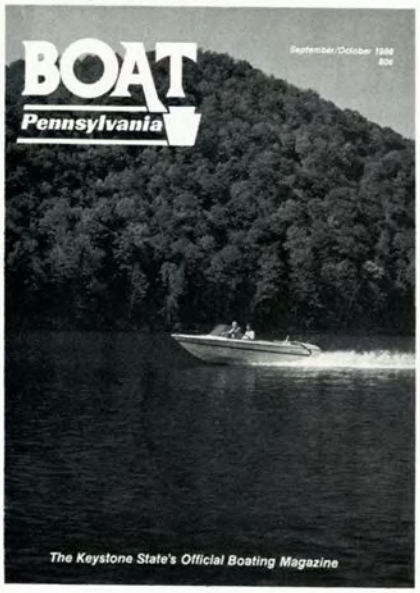

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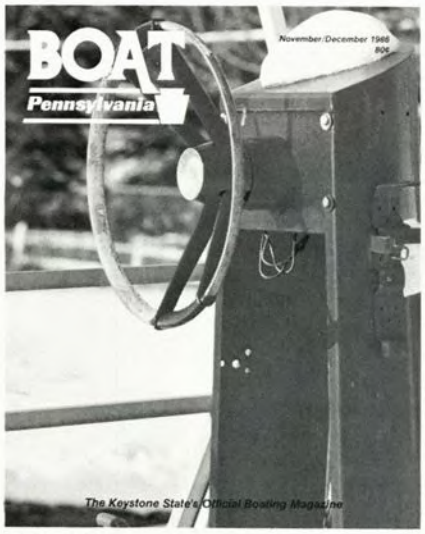

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The Marine Environment Can Destroy Your Boat

by Hank Albing

Most land vehicle owners recognize and take precautions against the effects of the environment on their vehicles. Vehicles are routinely rust-proofed, washed, waxed and taken to the shop for general repairs.

Boat owners know that vibration, shock, ultraviolet exposure, heat, cold, pollution, chemical attack and various forms of marine life, such as barnacles and algae, can lead to the destruction of even the most expensive craft.

Underwriters Laboratories also understands the harsh marine environment and investigates marine products and equipment for these special applications. Vibration and shock tests are conducted on almost every piece of equipment on a boat. Many materials and devices are subjected to harsh environmental conditions, such as extreme temperatures, to simulate conditions that might change the properties or performance of a marine product in the marine environment.

The UL mark on marine products and materials signifies to consumers that the product has been investigated in simulated environmental conditions and for electric shock, fire and casualty hazards that could affect life or property. In addition to purchasing marine products that bear the UL mark, UL recommends the following measures to extend the life of your craft.

- Visually check your craft before venturing out. Vibration and shock from engines, propellers and waves can cause fastenings to loosen, nuts and screws to drop out and cracks to develop in the strangest places.
- Check mooring lines, sails, cushion covers and PFDs for signs of deterioration. The effects on the sun and salts cause slow degradation of synthetic and natural fabrics used in these devices.
- Check the outside of your boat for barnacles and algae. Remove them with recommended detergents or cleaning solutions.
- Have your boat routinely inspected by qualified personnel. The Coast Guard Auxiliary is an authorized inspector and will make a routine safety check of your equipment. Boats meeting the criteria are awarded a courtesy marine examination (CME) decal.
- Don't overload or overpower your boat. Recommended loading and powering guidelines are on the capacity plate of your boat, usually affixed to the transom.

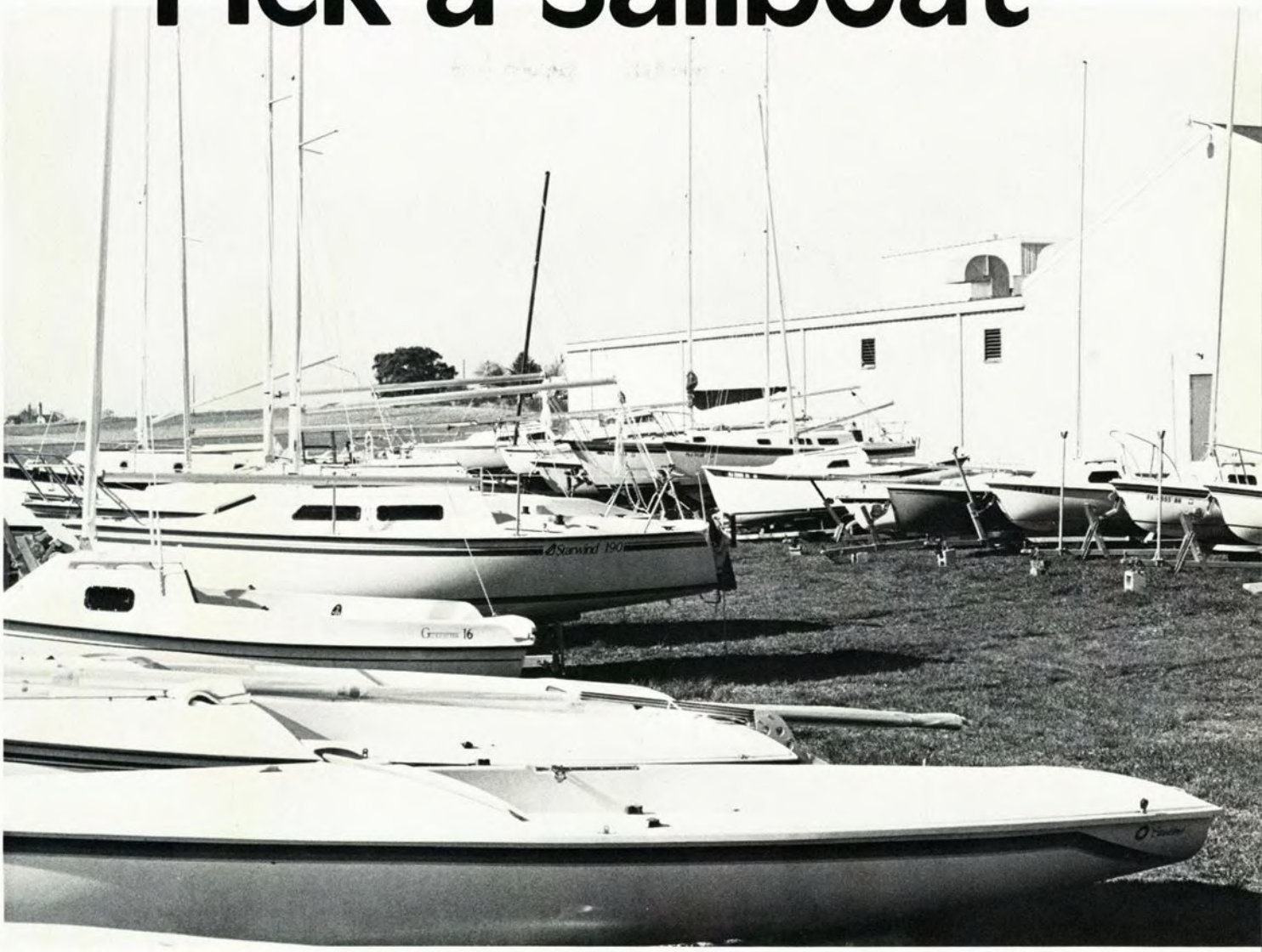
This device on Lake Wallenpaupack scrubs hulls to remove dirt. Regular cleaning and maintenance can prolong the life and beauty of your boat.

Hank Albing is a senior project engineer in Underwriters Laboratories Marine Department. This article is reprinted with permission from Tradewinds, *published by Underwriters Laboratories.*

illustration by Ted Walke

Art Michaels

Pick a Sailboat



by Kevin D. Kirkpatrick

We are approaching that time of the year when a sailor's fancy turns to thoughts of boat buying, but mid-winter seems an odd time to be thinking about selecting a new sailboat for next season. Here in Pennsylvania, summer is still at least 40 degrees and several inches of fresh snow away. Most sailors are more concerned with the wind chill than with windspeed or direction. For a sailor who is considering a new boat, the winter months provide an opportunity to get a head-start on the work necessary to make an informed judgment on the size, type and cost of a sailboat that fulfills his requirements and gives years of satisfaction.

For now, consider boats in three basic categories—daysailors, club racers and pocket cruisers—all 24 feet or less. These three categories, within this size range, account for as many as 80 percent of the sailboats plying Pennsylvania waterways. Unfortunately, even with these limitations, the subject may still be too broad for a single discussion. Perhaps the issues discussed will raise questions in your mind and provide direction when you seek your own solutions.

Another source of information is your circle of sailing friends and acquaintances. They may have literature on their own boats as well as others they considered when they were shopping. When it comes to boat literature, sailors tend to be packrats. They seldom throw any away.

While you're at it, ask if they have any back issues of sailing publications that you may borrow. These can also be useful reference materials. If your circle of sailing acquaintances is limited, try your local library. Many will allow you to check out back issues for a limited time.

If I seem to be stressing research and homework, it is for a good reason. Too many prospective boat buyers get caught up in the romance of boats and overlook certain fundamental facts that make up an informed judgment. Once they have fallen in love with a boat and bought it, they find out that they can't live with it.

Wants, needs, limits

Up until now this article has dealt with the "external" aspects of selection.

Pick a Sailboat

For all the time and energy this part requires, it is really the simplest element of the process. The most difficult phase is yet to come. You must sit down and evaluate your specific wants, needs, and expectations; then determine how much you are prepared to spend on them. If sailing is to be a family activity, their feelings are important, too. You must establish realistic limits. Some compromises may have to be made. It is far easier to make them now than it might be to change your lifestyle later. This part of sailboat buying can be a painful process and consequently the most frequently overlooked.

Cost

Let's begin with cost. How much are you really willing to spend on a sailboat? If you are a paragon of determination and economy, this is what you will spend. If, on the other hand, you are like the rest of us, add another 60 percent to your figure. This is how much the average buyer actually spends over his original budget. The information you've gained from your excursions to boat shows and dealers and the research you've done will help you set a realistic cost figure. Now might be a good time to think about how you are going to finance your purchase. Will the cost come from savings? Part savings/part loan? Perhaps one of your stops should be your local bank?

Once you have determined a realistic budget, the next step is to sit down and honestly assess how you plan to use it, with whom you are going to sail and where you will be sailing. If the boat is to be a shared, family experience, be sure that their feelings and input are included on your list.

This is usually the most difficult part of the selection process. This is where reality often runs head-on into romance. While this process is often painful, it is seldom terminal. Bear in mind that this needn't be the last and only boat you'll ever own. With a bit of thought and research, there are compromises that can be made and still provide a satisfying sailing experience.

Too often sailors make unreasonable demands of their boats and come away disappointed. Take, for example, the competitive sailor who buys a red-hot racer only to find out that the nearest active racing fleet is 300 miles from his home and dominated by world class sailors. Had that sailor done his homework, he would have selected another class of boat with an active fleet closer to home.

By conservative estimate, there are more than 400 different sailboat designs currently available on the new and used sailboat markets for craft under 24 feet in length. The sizes and types range from 8-foot sailing dinks through 19-foot club racers to 24-foot blue-water cruisers. Prices range from $100 for an older, used 12-foot Sea Snark to $43,900 for a new 24-foot Dana.

One would think that with a selection as broad as this, finding a boat to suit one's particular sailing requirements and pocketbook would be a simple task. Well, think again! The process of selecting a sailboat that fulfills an individual sailor's peculiar requirements is a long, slow passage of discovery.

Many sailors think that all they have to do is drive down to their local boat dealer and just pick one out. When this hapless sailor arrives, he finds few if any sailboats on the dealer's yard or in the showroom. Most Pennsylvania marine dealers concentrate their sales efforts and showroom inventories on powerboat lines. Those dealers who carry any small sailboats at all treat them as a sideline. Dealers who specialize in sail are few and far between. Opening the local newspaper to the classified ads doesn't help much, either. More powerboats! Even the national sailing magazines are woefully short on advertisements for new or used small boats.

If small sailboats are so hard to find, why are there so many of them out there sailing? Where did these people find them? Some found them by dumb luck. Most found their boats the same way that Stanley found Livingston—they went exploring and talked to the natives. They spent hour upon hour trekking through muddy boat yards. They made pilgrimages to convention center boat show extravaganzas. They went to shopping mall boat exhibits. They searched out local yacht and sailing clubs and read their bulletin boards. They had friends, family and co-workers bring them out-of-town newspapers. They asked questions: "What kind of boat is this? Where did you find it?" No one ever said that finding the right boat for you was going to be easy, but along the way you will gain a great deal of useful information and meet a lot of very pleasant sailors.

Above left, when you are seriously interested in buying a certain used boat, always inspect it carefully. The former owner's needs may seem similar to yours, but they may be quite different.

Above, consider the time of year you buy a boat. At certain times, dealers often offer incentives, which provide good deals. Late fall and winter are such times.

Homework

In addition to these field trips, there is homework that you should be doing. Pick up copies of the various sailboat reference guides at your local newsstand. Both *Sail* and *Sailing World* publish the most comprehensive guides annually. They are useful tools. They provide the basic specifications and suggested prices on hundreds of small sailboats. They also provide the names and addresses of the manufacturers and many individual class associations to whom you can call or write for additional information.

Most manufacturers are delighted to send you their latest sales brochures as well as a listing of their dealers nearest you.

Shopping

Now that you have done your homework, determined a realistic budget and honestly evaluated your requirements, it's time to go shopping for a boat. There are two basic markets for sailboats: the new-boat market—through local dealers or factory-direct agents and the used boat market—through local dealers and private sellers. Each market has its good points and bad.

New-boat market

Within the new-boat market you are usually doing business with a reputable dealer or factory with ties to the local community and sailing industry. Most new boats carry some sort of warranty. Should problems arise with the boat or its equipment after the sale, most reputable dealers and manufacturers will correct the defect at no cost. This is an added value.

In addition, many dealers and manufacturers may offer special incentive packages of boats ordered at this time of the year. These might include such things as a special option package or a boat trailer at no extra charge. Depending on the contents of these packages and the terms of the deals, this can represent substantial value. Most of the time you can negotiate a fair price for the boat you want to buy and the dealer wants to sell.

Used boat market

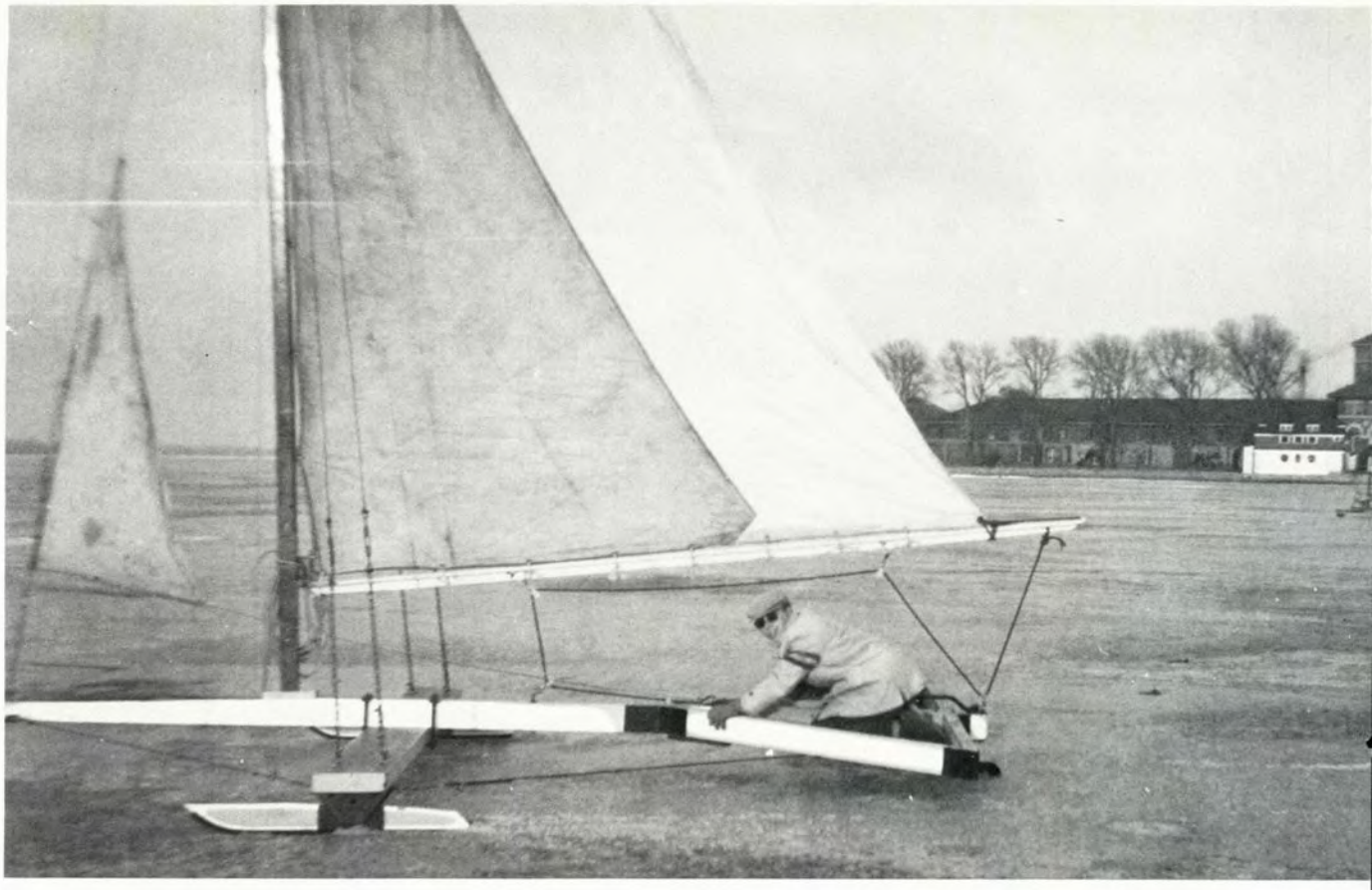
When you enter the used boat market you should adhere to the basic creed: Buyer beware! For the most part, this market is dominated by individual private sellers. There are remarkably few used sailboats on dealers' yards. While the majority of private sellers are honest, forthright people just like you or me, they are still just "folks." They make mistakes just like you or me. In most cases, when you do business with a private seller, there are no warranties and little recourse. The advantages of a private sale are usually a lower price and perhaps a few extras. Many sellers often include additional equipment and gear as a part of the deal. These are added values.

If you've seen a new model of a design that appeals to you, don't be overly optimistic about the price of a used model. Most sailboats hold 80 to 90 percent of their original value and may even appreciate in value over the years, depending on age and general condition.

When you become seriously interested in a used boat, whether from a dealer or private seller, *always* inspect it carefully. One question you should always ask a private seller is, "Why are you selling it?" The answer to this question may tell you a great deal about the boat and how it fits your plans. For instance, if you are looking at a 19-foot overnighter with a small cuddy cabin for you and your wife and the owner tells you that the boat is too small for him and his wife, you might want to reconsider it as a possibility.

Selecting the sailboat that is right for you can be a rewarding and satisfying experience. There are many less pleasant ways to pass cold, winter evenings than reading sailing ads and literature. It's all right to dream of warm, tropical breezes and long, sandy beaches while you're at it. But when the time comes to make the decisions, remember who you are and where you sail, and when the going gets tough, always remember that sailing is a dirty job—but somebody's got to do it! Why not you?

Kevin D. Kirkpatrick is education director and past commodore of the Pinchot Sailing Club in York County.



Hardwater Sailors

by Paul Jenkins

The day was cold and blustery and a strong west wind whipped stinging snow across the frozen bay.

It was late December as I made my way down the concrete steps at the foot of Walnut Street and over the railroad bridge toward the snow-covered boat shanties below.

A school chum had invited me for my first iceboat ride, and my curiosity peaked as I stepped onto the bay ice. In front of the boat house, my friend and another guy were unfurling the mainsail on a large red iceboat. I offered to help with the work, but they told me to just stand by and be ready to push when the sail was up.

The boat was crudely built with two-by-sixes and other heavy planks held together with steel plates and black lagbolts. It was obvious the builder used whatever backyard material he could find.

The mast was nothing but a rough-hewn tree trunk supported by rusty steel cable.

Once the sail was up and the lines were lashed, we pushed the contraption sideways to the wind. The sail filled and she started to move. At first it went slowly and then someone yelled for me to hop in. I pushed for a few more steps and had to dive to avoid being left behind. In seconds the boat was literally skimming over the frozen surface. Everything started to vibrate as we continued to accelerate. The ice below went by in a blur.

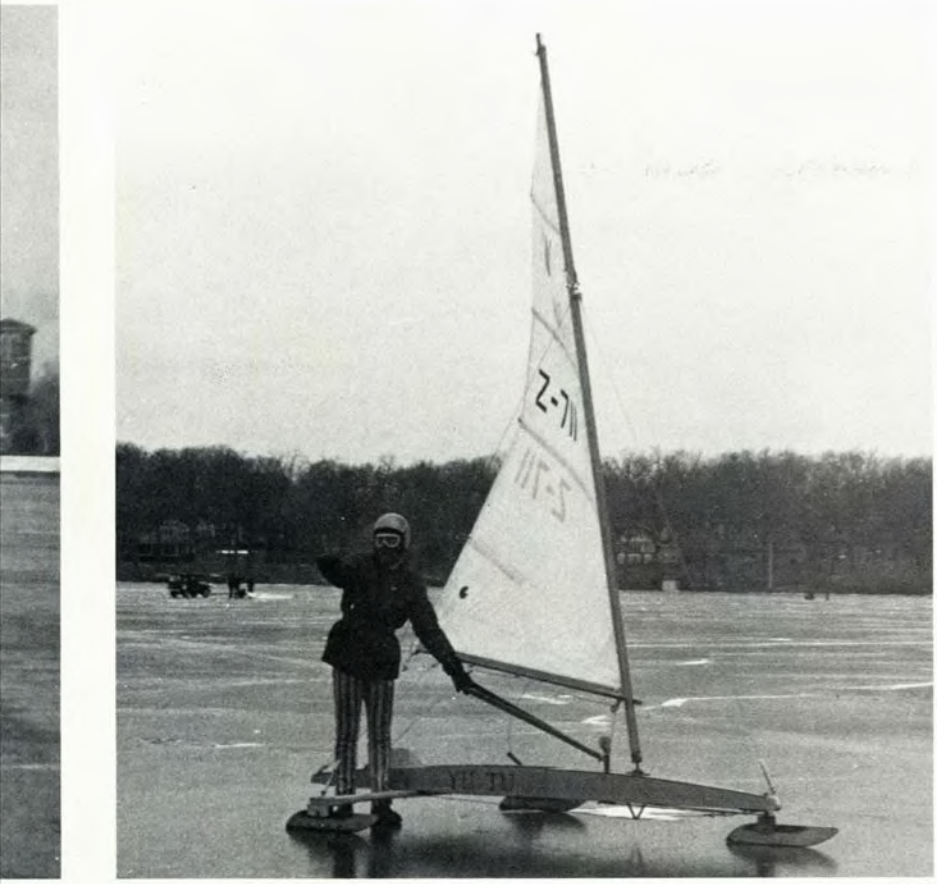
The wind-driven snow tore at my clothes as if in a wind tunnel, and even tiny openings let in cold needles that gave me goosebumps to mark the spot. I sat like a statue gripping the seat with both hands, not daring even to pull up my scarf.

The heavy cast iron runners passed over the ice, chattering like machine guns, and spitting chips of ice in all directions.

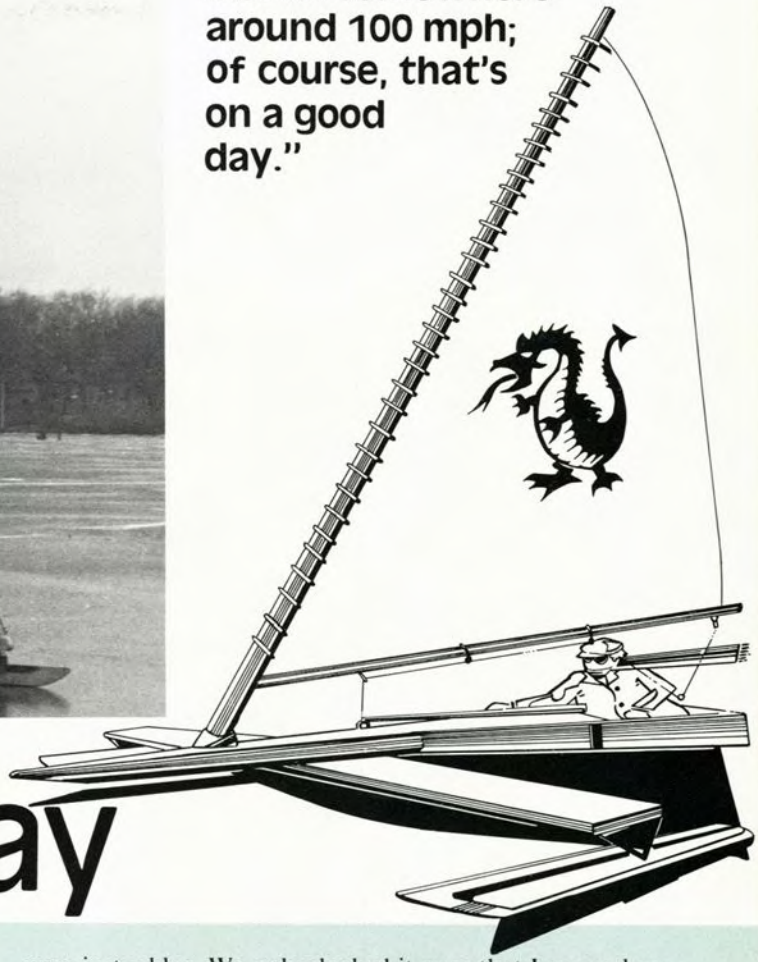
Was this what iceboating was all about?

All I could liken it to would be wing-walking in a snowstorm with one exception—we were flying a lot lower.

It was 1957 when I took this unforgettable iceboat ride. The red gaff-rigged boat belonged to Bob Zawadzki. Bob kept his boat at the foot of Walnut and remembers those days fondly. "In the winter all of us kids in the neighborhood spent our time on the bay either fishing, skating or sailing. I loved to sail, and built my first boat out of old wood found on the beach or parts scrounged up from Marty Jensen's boathouse. Most of the older guys worked in shops where they could make just about



"We would go so fast that the trees on the peninsula were just a blur . . . somewhere around 100 mph; of course, that's on a good day."



# of Yesterday

anything you needed. The rest we dug out of some junkyard. The boats didn't have to be fancy, just strong.

"We had almost an apprentice course in those days. Marty Jensen owned the boathouse and made us learn things right. We started getting things ready in the fall—we sharpened the runners, sewed the sails and worked on all the other parts. One Christmas I stayed up all night sewing a bolt-rope on the edge of my new red main. We all helped to put the boats up and it took a lot of people to do it."

Bob's boat was a gaff-rigged back steerer about 20 feet long, capable of speeds near 70 mph, and though more than impressive to me at that time, it was a mere junior version of boats on the bay that preceded it by 25 years.

I talked to Harry Bierig about the big boats of the earlier years. When were the big boats popular? I asked.

"From about 1900 to the Second World War. During the Depression, I wasn't working, so I sailed every day. My granddad had a boat in about 1890. I started sailing with him, later David (Harry's son) started sailing with me. I still have my old boat. A few years back, I hit a hole and wrecked it, but Dave fixed it up."

He said the old boats could go and win when the wind was right. "We would go so fast the trees on the peninsula were just a blur. We only clocked it once that I remember. We went exactly 1½ miles in 62 seconds and on the way back we did it in 57 seconds. The boat was about 35 feet long, so that makes somewhere around 100 mph; of course, that's on a good day."

Bierig said the old boats were heavy—"for comparison, I'm pretty sure one side runner weighed at least as much as one of today's DN boats. We didn't have the fancy gear they have today, but we made them sail."

I talked to Harry Hahn, 145 Park Ave. Harry's dad, Harry Sr., and the Hahn brothers were well-known in the early days of iceboating. Their boathouse was at the foot of Cherry. "My uncle Hickey Hahn was a real iceboater," Harry said. "He had a boat that could really go. The thing in those days was to be able to sail with the Finns (the men from the foot of Cascade were of Finnish descent). Hickey could stay with those guys on some days and even beat them across the bay on others.

"We were out one time and it was almost a full gale. We were sailing without a jib and had three reefs in the main and were still hitting over 80 mph.

"The largest boat in Erie belonged to Dr. Cooney. He actually used a telephone pole for a mast. The boat was between 50 and 60 feet long."

Illustration by Ted Walke

photos by the author

"The boat had a pirate ship look... and a fire-snorting dragon. When you push a boat to its limits, things start to go wrong."

How safe was iceboating in the old days?

"I think the old boats were actually safer and more forgiving than the new designs. In those boats, you sat in the rear car—a rope basket—alongside the rear or steering runner. The side runners were forward on the crossplank. When the boat lifted into a hike you were still close to the ice and if it did go all the way over, you just rolled out of the basket.

"I sometimes went over three or four times in an afternoon and never got hurt.

"In the new boats you sit over the runner plank and when you hike you are three or four feet above the ice. It could really hurt you if you came down at any speed.

"The old boats also were designed to come into the wind if you let go of the tiller, slowing them to a halt, a built-in safety device.

"Another boat I remember was built by Dennis Schaaf and sailed out of the Chestnut Street boathouse. Dennis, or Ben, as he was known in those days, was still in high school when he built her. It was not a large boat or a fancy one, but the bent wood basket and jet-black finishing along with silver runners would have made any backyard boatbuilder proud.

"The boat had a pirate ship look about it, and the fact that Ben had a six-foot, fire-snorting dragon painted on the green sail added to its mystique. Ben's sailing habits were almost as unorthodox as his craft. He designed the boat to be fast and sailed it the same way. There was only one problem—when you push a boat close to its limits, things start to go wrong.

"I recall the day Ben spent all morning sharpening a new set of runners. Bob Zawadzki and I had been out sailing and were about one-half mile off the boathouse when we saw Ben sailing out to meet us.

"We jibed onto his tack and luffed for a while to wait for his boat to draw nearer. As he drew closer, we sheeted in to sail with him but as we could see, the flying black dragon was going to be too fast for us. Just as we prepared to give him room to windward, we were hit by a hard windpuff that lifted our port runner off the ice. As I glanced back to see how Ben took the puff, I couldn't believe my eyes. His boat, already hiking on two runners, was hit by the puff and in one unreal moment, flipped over onto its back, exploding in a large cloud of splinters and snow when it hit a drift. By the time we got turned around and back to the stricken boat, Ben was walking around kicking the snow with disgust and asking Bob where he could get a new mast.

"Ben was known for these things. One winter, he managed to break three masts. He didn't get hurt, but old spars along the bayfront were becoming hard to find.

"At the end, I was becoming so desperate I used an old pond-net pole that was so heavy it just wouldn't break, no matter how many times I went over."

A story that seems to typify the type of people who fostered iceboating on the bay was this one told by Harry Hahn about his dad.

"I went down to the family boat shanty one winter day because I was making plans to put up a flagpole at my home and wanted to use an old spar, of which there were many in the boathouse loft. When I discovered every spar was gone, I asked my dad where they were. He smiled and said, 'Come over here by the window.' I looked out onto that bay and all I could see was iceboats. He said, 'There they are, out there.' I said those things must be worth something. At that he said to me, 'When a kid comes to me and says he needs a mast or a boom, I can't turn him down. There are a lot of happy kids out there and I ask you, what's more important than that?' "

PFC— In the Air Everywhere

by Larry Shaffer

The Fish Commission is in the air . . . everywhere. We don't mean to imply that the Fish Commission has begun using aircraft in the performance of its duties, but rather that it is using the airwaves: statewide radio broadcasts. Chances are we're heard over a station near you.

For several years now, the Fish Commission has been providing a weekly three-minute program to nearly 70 AM and FM radio stations throughout the Commonwealth and even one in New York state, and efforts are going to be made over the next several months to increase that number to provide even better coverage in this state where boating and fishing interest is always at a high level. We hope to see our "network" grow to at least 100 stations.

Why radio? Because most everyone listens to the radio at least during some part of the day, every day. There is at least one radio in nearly every home and in nearly every car and truck. When we need or want information, we've become accustomed to turning on the radio. So what better way is there to reach the boaters and anglers of Pennsylvania?

Each taped program distributed to the participating stations addresses an issue of concern to Keystone State boaters and anglers, provides information of interest, and keeps listeners up to date on information such as the wide range of boating opportunities this state has to offer, the latest in boating equipment and the how and where of fishing. We delve into such topics as fishery management, what it is and what it means to the sportsmen who enjoy Pennsylvania's vast water resources; pollution, its sources and effects; and we'll talk about fish and the other cold-blooded animals—reptiles and amphibians—for which the Fish Commission is responsible. We'll investigate their natural history, their habits and their peculiarities. We'll research boats and talk about advantages and disadvantages of the many different designs and types, pursue the growing popularity of boating, and stress boating safety. Into float trips? We can tell you where to find some of the best waters for this popular leisure-time activity, and we'll give you some ideas from time to time on how to extend the sport of boating through the winter months.

The interest in waterborne recreation in Pennsylvania is high, and it continues to grow each year. In addition, environmental awareness today is on the minds of nearly everyone. People need to be informed accurately to understand their environment better and allow them to make proper decisions about it.

We think radio can help, and we've found that this regular series of broadcasts is a logical medium to reach the million-plus boaters and anglers who excitedly call Pennsylvania one of the best states in the nation for varied boating and fishing opportunities.

If you haven't heard these Fish Commission programs, check with your local station for broadcast times. If they are not now carrying these programs, ask them to get in touch with us. We'd be delighted to add them to our network and help provide their listeners with this important service.

Larry Shaffer is an information officer who is responsible for broadcasts and special publications.

Radio Stations Airing Pennsylvania Fish Commission Programs

WCIK (Bath, NY)
WBVP (Beaver Falls, PA)
WYEP (Pittsburgh, PA)
WARO (Cannonsburg, PA)
WPQR (Uniontown, PA)
WCVI (Connellsville, PA)
WSKE (Everett, PA)
WDBA (Du Bois, PA)
WCED (Du Bois, PA)
WLEM (Emporium, PA)
WWBR (Johnstown, PA)
WISR (Butler, PA)
WFEM (Ellwood City, PA)
WEDA (Grove City, PA)
WPIC (Sharon, PA)
WMGZ (Sharon, PA)
WWNW (New Wilmington, PA)
WWCH (Clarion, PA)
WOYL - WRJS (Oil City, PA)
WVLV (Lebanon, PA)
WJUN (Mexico, PA)
WHP (Harrisburg, PA)
WFRA (Franklin, PA)
WMGW/WZPR (Meadville, PA)
WTIV (Titusville, PA)
WNAE (Warren, PA)
WWCB (Corry, PA)
WVCC (Linesville, PA)
WJET (Erie, PA)
WLKK (Erie, PA)
WRIE (Erie, PA)
WVAM (Altoona, PA)
WTRN (Tyrone, PA)
WESB (Bradford, PA)
WKZA (Kane, PA)
WMAJ (State College, PA)
WRSC-WQWK (State College, PA)
WPHB (Philipsburg, PA)
WFRM (Coudersport, PA)
WIOO (Carlisle, PA)
WHYL (Carlisle, PA)
WBCB (Levittown, PA)
WFIL (Philadelphia, PA)
WNPV (Lansdale, PA)
WSHP (Shippensburg, PA)
WGSA (Ephrata, PA)
WBPZ (Lock Haven, PA)
WBNE (Benton, PA)
WLSH (Lansford, PA)
WBRX (Berwick, PA)
WYZZ (Wilkes-Barre, PA)
WATS (Sayer, PA)
WOYK (York, PA)
WRAK (Williamsport, PA)
WTGC (Lewisburg, PA)
WMBT (Shenandoah, PA)
WDNH (Honesdale, PA)
HOST/PA Outdoor Life (Nanticoke, PA)
WPEL (Montrose, PA)
WQIQ (Aston, PA)

BOAT/U.S.

All seven past presidents of the National Association of State Boating Law Administrators (NASBLA) who are currently still active were honored recently by BOAT/U.S. at a ceremony in Washington, D.C. BOAT/U.S. President Richard Schwartz presented each past president with an engraved ship's wheel. Pictured from right to left are: Thomas C. Welsh (South Carolina), Tom Alexander (Arizona), George W. Stewart, Jr. (Delaware), Dale P. Morey (Wisconsin), William B. Garner (Alabama), BOAT/U.S. President Richard Schwartz, Gene Sporl (Fish Commission assistant executive director), Caroll Henneke (Indiana), and BOAT/U.S. Vice President Michael Sciulla.

"Friend of the River" Award

The Fish Commission received the Schuylkill River Greenway Association's "Friend of the River" Award last October, at the organization's annual dinner. The annual award is offered in three categories—people, groups, and communities—to recognize and call attention to significant work in conservation.

Cheryl K. Riley, director of the Commission Office of Education and Information, accepted the award on behalf of the Fish Commission. The award was presented by Dr. Maurice Goddard, former secretary of the Department of Environmental Resources who served under the leadership of five governors.

New Lake Erie Wind Warning System

The key to safe boating is avoiding trouble rather than getting out of trouble once you get into it. That's why a new wind warning system will be installed at the Commission Walnut Creek Access. The device consists of two powerful strobe lights and a propeller that accurately measures wind velocity atop a 26-foot tower. When wind speed reaches 15 mph or higher, the strobe lights flash. They are visible from 1-3 miles in daylight and some 10 miles at night. The system warns boaters of increasing winds that could create hazardous boating conditions. The warning system is expected to be operational during May 1987.

Coast Guard Continues Boating Safety Hotline

The popular Boating Safety Hotline will be continued and made a regular part of the Coast Guard's consumer services for recreational boaters.

The hotline is a toll-free telephone service available to boaters in the contiguous United States, Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands. Implemented on an experimental basis in the summer of 1985, the hotline handled nearly 6,000 calls from boaters in its first year of operation.

The hotline is designed to operate as a two-way service—both to give out information and receive it. Many boaters call the hotline to find out if there have been any safety recalls on the boat they own or are thinking of buying. Others who call to report problems they are experiencing with their boat often provide details of a potential safety defect that leads to a defect investigation and, where warranted, a recall.

Boaters may also call the hotline to ask questions about Coast Guard boating safety regulations, Coast Guard Auxiliary services available to the public, or some other boating safety topic.

The Boating Safety Hotline is located at Coast Guard headquarters in Washington, D.C., and operates throughout the year, Monday through Friday, 8:00 a.m. to 4:00 p.m. Calls received after hours are recorded on an answering machine and the caller is contacted by the hotline operator the next working day. The toll-free telephone number is 800-368-5647.

1986 Boat Registration Totals

Some 236,011 boats were registered in Pennsylvania in 1986, an increase of about 3.25 percent over the 1985 total. Allegheny County included the most number of boat registrants with 26,147. In second place was Bucks County with 9,778 registrants. Erie, Luzerne, Westmoreland, York, and Montgomery counties, in that order, included the next highest numbers of boat registrants.

Boating Facility Group Formed

Recreational marine facilities and access to boating and fishing waters were central themes of the First National Boating Water Access Conference, held last September in Roseville, Michigan. Nearly 100 representatives of state and federal agencies, manufacturers, architects and engineers shared their expertise and toured marine facilities on lakes St. Clair and Huron.

During the meeting, a group called "States Organization for Boating Access" (SOBA) was formed. The purpose of SOBA is to promote the acquisition, development and administration of recreational boating facilities by providing a medium for the exchange of views and experiences on this subject. SOBA membership is comprised of boating access specialists—both government and private sector—as well as water-based recreation industry representatives. The Fish Commission is a charter member of this group.

Ketterer, Eckert Recognized

State water rescue instructors Steven Ketterer, commander of Harrisburg's River Rescue Water Safety Division, and Thomas Eckert, lieutenant with York City Fire and Rescue Service, were presented with the Fish Commission's 1986 Water Rescue Awards in recognition for outstanding contributions in the promotion of water rescue training in Pennsylvania. Both Steve and Tom have been Commission-certified water rescue instructors for the three years.

The awards presentation was made last October by Virgil Chambers, chief of the Commission Bureau of Waterways Boating Safety Education Section, at Robert Morris College during the 1986 Water Rescue Seminar, in Pittsburgh.

Permits for Private Markers, Aids

The number of floats, ski ramps, slalom courses, aids, markers, and other floating objects on Pennsylvania waters is increasing, but it is illegal to place these devices unless the Fish Commission authorizes their use and placement.

In accordance with current boating regulations, requests to establish private markers or aids on Commonwealth waterways by clubs, individuals, state agencies, municipalities, and other groups must be made in writing on Form PFC-277. Written requests must be made to the waterways conservation officer of the district in which the marker or buoy is to be placed, through the nearest Fish Commission regional headquarters.

Float permits (Form PFC-277) may be obtained by writing to: Fred Menke, Aids-to-Navigation Coordinator, P.O. Box 1673, Harrisburg, PA 17105-1673. The phone number is 717-657-4434.

Attention: Businessmen and Employers

Why not give your new clients and customers gift subscriptions to *Boat Pennsylvania?* You might want to advertise these gift subscriptions as bonuses, as enticements for choosing your company or organization over competitors, and for opening new accounts.

Furthermore, let *Boat Pennsylvania* help you maintain goodwill among your present customers and provide year-round contact—your customers and clients will remember your products and services as each issue arrives.

You could also let *Boat Pennsylvania* be part of awards to employees for service, job performance, safety, and other special recognition.

For complete details, contact *Boat Pennsylvania* editor Art Michaels at 717-657-4520.

Correspondence Tip

If you ordered subscriptions, publications, and other items from the Fish Commission, and if you need to correspond with the Fish Commission about your order, be sure to include in your letter the 7-digit number on the back of your cancelled check. This number appears directly below the stamp, "Pay to the order of the state treasurer."

BOAT Pennsylvania

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There's a BOOM in Water Skiing

by John M. Cornish

The "boom" in water skiing isn't of a shattering explosive nature, but instead is a new training and teaching device. The water skiing boom has been used to teach barefoot water skiing for at least 10 years. More recently, "the boom," as the skiers refer to it, has been developed so that it can be used in the training and teaching of all types of water skiing.

Improvements have emerged as a result of manufacturers finding that booms could be profitable and marketable items. In the early days, the only booms that were seen on our rivers and lakes were those that competition skiers would buy or make for themselves out of some type of galvanized or painted pipe and pieces of rope. The pipe wuld have to be 1½ to 2 inches in diameter and be made of a heavy gauge so that it would not bend. This made them extremely heavy and hard to hold onto.

Since its popularity grew, the boom is now constructed of solid rods of anodized aircraft aluminum with vinyl-covered steel cables. The boom itself, where the skier holds on, is machined down to a thickness that is easy to hold with a textured surface that enhances the skier's grip. The total weight is approximately 30 pounds and is easily mounted to any ski boat. Different companies have different mounting brackets for pleasure boats as well. The cost of a boom averages around $300, which makes them affordable and now commonplace on many waterways.

This 10-foot to 12-foot rod mounts on the ski tow pylon that is found in the center of most ski boats. The boom extends perpendicular out over the gunwale of the boat. It normally has two guy wires that fasten to the bow eye or deck lifting ring to keep the boom at a 90-degree angle to the boat while the skier pulls on it. The main purpose for such a contraption is to assist in teaching and training water skiers from beginners to advanced barefooters.

Advantages

The boom allows a skier to stand on the water only a few feet from the boat. An instructor is able to talk to the skier while the skier is skiing. The skier can receive encouragement and instructions to correct improper body position when learning new water skiing skills. The boom also gives the skier a great amount of stability while holding onto it, which is not the case while holding onto a ski rope 75 feet behind the boat. Another problem that a skier on a boom does not have to contend with is the wake of the boat. The boat does give off a small amount of side spray that normally goes unnoticed by the skier.

Shortline

As a skier improves his attempts at a new water skiing endeavor, while holding directly onto the boom, he progresses to what is referred to as the "shortline." The shortline is a 5-foot ski tow line with a standard ski handle. This tow line is attached to the end of the boom, giving the skier a chance to learn the new feat on calm water, without the solid stability of the boom but not the instability of 75 feet of rope. The skier still has the privilege of skiing parallel to the boat, only a few feet away so that the skier can still be coached verbally. After continued practice with the shortline, the skier is ready to move to the standard skiing position behind the boat on a standard rope length of 75 feet.

For each new trick a skier tries to master, the boom can be an advantage. The boom can also become a crutch and cause the skier to develop some bad habits. The boom is very good for teaching a beginner to get up on skis for the first time. It's also very good for teaching a deep-water start on a slalom ski. In both cases, the skier learns to surface

Above, a boom is useful in learning new skiing tricks. At left, the author demonstrates the use of a boom for barefoot water skiing.

photos by the author

holding directly onto the boom. As that level is mastered, the skier progresses to the shortline and to the back of the boat.

In most cases, the boom is used more for learning barefoot water skiing tricks. Because of this, there has been a special harness designed. This cradle-like harness holds the skier in a position that allows the skier to ski but not fall. This too is a great help in learning certain skiing tricks.

Safety

Booms are very useful and can help raise a skier's performance level. They are relatively safe if they are used correctly and with respect. As with all things, there are those individuals who can abuse a good thing and turn it into a weapon. There are several safety precautions that should be followed. Keep all loose cables and ropes away from the boom, which keeps a falling skier from getting tangled up and being dragged after a fall or worse. This is a rule that should be followed by all boaters to avoid possible accidents.

Another rule that should be followed, which involves the driver, is to keep the boat moving after a skier falls until the boat is safely past the skier. The skier who falls while skiing on the boom falls beside the boat. If the driver were to stop the boat, the skier may be in danger of hitting the side of the boat or being run over by the boat if it made a turn. Keeping the boat proceeding straight ahead at a constant speed ensures that the skier will fall and be left behind, out of danger.

A competent driver is very important when boom skiing, as it is for any activity on the water. The weight of the skier pulling on the side of the boat several feet away causes the boat to pull to that side. The driver must be able to compensate for the changes while handling the boat.

Boat owners should be certain that their boats are safe for boom skiing before mounting a boom. Boats that are used with booms should be able to track straight and level. Weight distribution in any boat is an important factor; the boom makes this consideration more important. It becomes evident that most of the safety rules are common sense items that should be practiced in any types of watercraft, and extra caution should be taken with the addition of a boom.

A boom is a beneficial piece of equipment. It is a tool that should be used as such and treated with respect. It is not necessarily an instrument that every boater or water skier should have. If you decide to invest in a boom, take the effort to learn about it from someone who has experience with and knowledge about booms and boom skiing.

John M. Cornish coached the U.S. Barefoot Team to a first-place victory last summer in world competition in Germany. He lives in Rockwood, PA.

SHAKEDOWN CRUISE

SHAKEDOWN CRUISE

Don Carey

by Art Michaels

Buying a new boat, motor, and trailer is painless. When you hand the dealer the check and he gives you the rig's ignition keys, you feel no different than you did the moment before when you still clutched the money and you were thousands of dollars richer.

But if you want to keep your new-boat experience free of anguish, you have to plan the next phase of boat ownership carefully: the shakedown cruise. Whether your new rig is the first you've ever owned or if you've owned a boat before, the shakedown cruise is crucial to starting off on the right foot. You need to develop the confidence in the new boat that comes only with getting to know the rig well. Letting this trust in your boat grow is a key ingredient to enjoying it as the newness fades.

Handle this step with flying colors and you're well on the way to getting maximum pleasure and satisfaction from your new investment, and this idea applies whether your new rig is a 12-footer or a 40-footer.

Here are some ideas on how to have a pleasant maiden voyage.

First, don't plan an extensive caper in an untried rig. After I drove away with my new 16-foot center console, for example, I took it the next calm, sunny Saturday morning to a local unlimited horsepower lake, about an hour's drive from my home. I wanted to give the trailer a workout, but not on a long haul, and I wanted to test the boat's capabilities in a reasonably safe environment over which I could maintain control.

Trailering

That's the initial step: Trailering the new boat. When you trailer a new rig, stop after the first two or three miles and check everything—tie-downs, winch, lights, and tires, for instance. If you have problems, it's better to discover them only a few miles from home rather than farther away when the neglected difficulty could cause an accident or great damage to your new rig.

After the first stop, pull over again about 10 miles later, and then 25 or 30 miles later. If all's well, develop the routine of checking your rig regularly on trips, first after only a few miles and then every 100 miles or so.

Furthermore, at least in the beginning, don't use the radio or talk on the CB. You want to trailer the new boat silently so that you can learn the new sounds of your rig. You'll quickly learn to distinguish "okay" sounds from warning signals.

If you've never trailered a boat before, you'll want to listen specifically to how the trailer takes bumps in the road. You'll want to hear what the suspension sounds like in normal operation. When you learn the new trailering sounds and you take a trip, keep one ear on the radio, the CB, or the conversation with your fishing partner, and one ear on the trailer.

Even if you've trailered an older boat before, new boats and trailers can ride and "feel" very differently from your old rig. In addition to learning the new sounds of your trailer, you'll want to pay particularly close attention in the beginning to how the new rig takes bumps, dips, potholes, and other road obstacles—how those bumps "feel."

Getting to know your rig on the road in this way can give you the edge if something goes wrong. You can often feel and hear the problem immediately, thus preventing a minor mishap from becoming a disaster. That goes not only for physical damage, but for repair costs, too.

Perfect conditions

When I arrived at that lake, except for an occasional wake from another boat, no wave heights were higher than about 6 inches. That was perfect. If I needed assistance, other boaters were around, but conditions were not crowded, either.

Try to duplicate these ideal maiden voyage conditions when you take your test cruise. Crowded waterways mean you have to watch your lookout most diligently. You always want to maintain proper lookout when you pilot a boat, but on the maiden voyage, uncrowded conditions let you pay attention also to learning about your new boat. You can't accomplish this goal if you're constantly dodging water skiers, sailboarders, fishermen, trollers, pontoon boats, cruisers, and sailboats.

Engine break-in

Another aspect of the cruise to consider is that if you're using a new engine, follow the manufacturer's recommendations carefully concerning

Art Michaels

You'll enjoy your new rig much more when you learn to handle it well, trust its capabilities, and discover its limitations. During the shakedown cruise, all electronics and other gadgets on a new boat need a thorough test in reasonably protected water and controlled conditions.

the first 10 or so hours of operation—the break-in period. My new blaster, for example, required the first hour of operation to be no more taxing than running at half throttle, and the next hour of operation to include short bursts at full throttle with the rest of the time spent cruising at speeds no faster than those generated by about three-quarters throttle.

Pay attention also to the linkage, steering, and throttle controls so that if they need adjustment after a few hours of break-in, you can see that it's done.

Furthermore, new engines with their special kinds of oil injection systems require close observation during break-in so that you can monitor whether or not the system is working correctly. You'll want to make sure that the system is pumping oil properly into the engine, which you can observe by noting the differences in the oil level before and after the first few trips. Your owner's manual details more specifically what you need to do.

Don't let the new motor's smoothness fool you into fudging on the manufacturer's break-in instructions. You pave the way for smooth, reliable operation in years to come when you break in an engine properly during the maiden voyage, and during the entire break-in period.

New electronics, equipment

In addition to the engine owner's manual, be sure you have on board the owner's manuals and instruction books for all electronic gear. Many problems can be solved by checking out an item's initial performance with the operating instructions. You save time and money by making minor adjustments yourself instead of dragging the rig back to the dealer for a small adjustment that takes only a few seconds. Before you decide that something isn't working right, make sure you're operating it correctly.

For my boat's maiden cruise, I invited a knowledgeable boating friend aboard, in addition to running with two other fishing partners in their own separate boat. In this way, I checked out the VHF radio and tested my depth sounder and compass readings by comparing my soundings and readings with those of the gear on the other boat. The boating vet who accompanied me knew instantly whether all the electronics and other gadgets were working properly, and whether minor adjustments were required by either us or by the dealer. He also offered first-hand instruction in operating the new electronics.

During the maiden voyage, be sure also to test other new equipment, such as navigation lights, bilge pump, ventilation system, livewell, and electric motor.

After you launch and retrieve one or two times, you'll want to note new equipment with which you need to replace older gear from your previous rig. If your boat is all new, you'll probably come up with a list of small items you want aboard that you didn't pick up at the dealership.

For instance, I thought I could transfer a set of mooring lines from an old rig to a new one, but after one launching at a ramp where a swift current pushed the boat stern downstream while I launched and retrieved, I realized that new, much longer mooring lines headlined my shopping list.

Piloting

You learn how your new rig handles on the water only through practice and experience, but this aspect of the first cruise is very important. Right from the start, you need to develop a "feel" for the throttle and other controls, and how the boat responds, just as you do for your new trailer.

You need to practice maneuvering your boat so that getting under way and mooring at launch sites becomes second nature—like driving your car. Begin to develop this "feel" during the first outing by practicing in open water on that protected, relatively safe waterway.

Then you'll be prepared to take on an awkward mooring in winds and strong currents. When you deftly accomplish that docking, you feel how nicely the boat handles, and the pride in your purchase—investment—shows through your pleased look.

With a successful maiden voyage accomplished, you take your rig to the fishing grounds. There the deck becomes coated with bait and fish scales, and the shiny new fittings are dulled by a layer of dirt. Your engine's new prop now sports a slightly gray exhaust film, black in some places, and your compass and electronic gear housings become pocked with watermarks and some dirt. But everything works because you thoroughly tested each item.

Now your new rig is truly christened. Your pulse quickens at the thought of taking on still greater fishing challenges in your thoroughly tested, trustworthy boat.

The Hidden World of Tournament Water Skiing

by Bruce Kistler

Most people think of water skiing as a purely recreational activity, something that goes well with a day of family boating fun, but few are aware that it also is a serious competitive sport with local, regional, national and international tournaments and a following of rabid enthusiasts. Not limited to Florida and other warm-weather states, there is a surprising amount of tournament activity in Pennsylvania and throughout the Northeast, although it rarely if ever makes the sports pages.

Most weekend water ski tournaments are organized and produced by local water ski clubs. The events draw contestants from hundreds of miles away to compete in the events of slalom, tricks and jumping. New competitors generally are seeking tournament experience and to establish their first official ratings, while the more skilled skiers are looking to quality for the regional and national championship tournaments. Young or old, male or female, regardless of occupation or background, these people find a common bond in their love for this fascinating water sport. Like athletes in other sports, skiers love to show off their equipment and to talk about techniques in their special jargon. They discuss water conditions with discriminating analysis the way pro golfers discuss turf or downhill skiers discuss snow.

Let's take a look at how these water ski tournaments are conducted. The tournaments are sanctioned by the American Water Ski Association (AWSA) and follow AWSA rules. Contestants must be individual members of AWSA (dues are payable at registration), must pay an entry fee and must sign a responsibility waiver. The contestants are grouped according to age and sex. There are over a dozen divisions of competition so that anyone of any age can compete. Skiers as young as six or seven and as old as 70 can share the experience.

Above, tournament officials, including judges, drivers, and scorers, are unpaid volunteers. Below, international slalom champion Camille Duvall shows how it's done in competition.

American Water Ski Association

Some classes of tournaments may require that the skier hold a minimum AWSA Skier's Performance Rating, but most local meets have no such requirement and previous tournament experience is not necessary. There are also two special divisions—Open Men and Open Women—that are not age-specific. To "ski open" a skier in a regular age division must qualify by exceeding certain difficult performance standards in the event in actual competition. The open skiers are the most skilled.

Many types of waterways can be used for water ski tournaments, but ideally the water area must not be too large for protection from wind-induced waves. In fact, a length of about 2,500 feet and width of 300 feet are sufficient to accommodate the ski courses. Outside boat traffic must be controlled, and the spectators and officials must have a good view of the water from the adjacent shoreline. Because few natural water sites are perfect, there has been a trend toward using man-made tournament facilities. An example of such a site in Pennsylvania is Dave's Pond near Erie.

The tournament officials are all unpaid volunteers. These judges, drivers and scorers must hold appropriate AWSA official's ratings. Many skiers help out as officials or in other auxiliary capacities. It is common to see entire families involved at a tournament.

The contestants in a water ski tournament use their own skis, but boats are provided by the organizing club, usually through promotional arrangements with manufacturers. Currently the most popular AWSA-certified tournament towboats are inboards, although the once dominant outboards are making a comeback. Only one towboat operates at a time and safety boats idle at strategic points at all times to pick up fallen skiers and to provide immediate assistance in the rare event of injury.

Slalom

The largest number of contestants compete in the slalom event. The official slalom course consists of a long, straight corridor of buoys through which the boat passes and six skier buoys placed alternately 38 feet out on either side of the boat path. The skier passes through the first set of boat guide buoys (the skier entrance gate), skis around all six skier buoys in zig-zag fashion, and follows the boat out through the last set of boat guides (exit gate). With each successful pass through the course, the boat speed is raised two miles per hour until the maximum speed for the division is reached. (For the principal male divisions, the minimum starting speed is 30 mph and the maximum is 36 mph.) Each pass thereafter, the towrope is shortened in premeasured increments. The 75'5" towrope is first cut to 59'10", then to 52'6", 46'9", and 42'8" and so on. (The odd measurements result from metric dimensioning used in the rules.) The rope is shortened until the skier falls or misses a buoy or gate. The winner is the skier who has negotiated the most consecutive buoys.

Tournament water skiers put in many long hours of practice and spend much money on equipment and travel expenses.

Although it is legal to use two skis, the almost exclusive use of long, severly-tapered single skis in this event has given them their common name—slalom skis. The most advanced ski designs incorporate some type of concaved running surface and usually have foils or wings on the keels. All skiers in this event must wear vest-type (type III) flotation devices.

The best slalom skiers, such as the legendary LaPoint brothers of California, routinely ski into such short rope lengths that the towrope is actually shorter than the distance from the boat to the turn buoy, the difference made up entirely by reach! No wonder that the better performers in this event tend to be tall and strong!

Trick event

The trick event is much like gymnastics or figure skating. Each skier is allowed two 20-second periods in which to perform a routine of tricks. Each trick has a preset point value based on

American Water Ski Association

difficulty. The object is to do as many tricks of the highest point value possible in two 20-second routines without repeating.

The basic categories of tricks include surface turns, wake turns performed in mid-air off the wake, stepovers in which one leg passes over the rope during the turn, body overs in which the entire body passes over the rope, and toeholds in which turns are performed while the skier is towed by one foot from a toehold attachment on the rope. Point values range from 30 points for a simple 180-degree surface turn on two skis to 650 points for a forward wake somersault on one ski. Only two skiers in the world consistently score over 10,000 points in two 20-second passes—Cory Pickos of Florida and Patrice Martin of France.

Trick skis are short, wide, blunt-ended, nearly flat and have no keels. In tricks the skier supplies his own rope and handle-toehold bridle. The contestant may request any constant speed and may adjust the length of his towrope to find the sharpest part of the wake and the smoothest "table" between the wakes.

Tricks are usually performed at relatively slow speeds, 15-18 mph for most adults. This is one reason why tricks is the only event in which wearing a flotation device is optional. Most trick skiers also use a quick-release mechanism that enables the rope to be released from the boat instantly should the skier become entangled while performing any trick. Needless to say, most release operators are friends or relatives who regularly pull the release for the skier in practice.

Jumping

In jumping the contestant skis over a jump ramp for distance—no style or form points are awarded. For a jump to count, the skier must ski away from the landing. A maximum boat speed is set for each division (35 mph for Open Men, 30 mph for most others) and the boat must pass parallel to the ramp. To get the most distance, jumpers employ what is known as the double wake cut. The skier skis out as wide as possible to the side of the boat away from the ramp, waits until the last possible moment, then cuts hard across both wakes to the ramp. Performed properly, it is possible for the skier to nearly double his speed. This speed, coupled with a well-timed jumping or spring action, can send the skier soaring. It is indeed spectacular to watch, and the crashes that can result from miscalculations are even more spectacular.

The ramp surface, 14 feet wide and 21 feet long, is usually fiberglass or waxed plywood and is kept wet with a sprinkler system. The height at the takeoff edge is 5 feet for most divisions, 5½ feet for Men II and 6 feet for Open Men. Angled plywood "aprons" are affixed to the sides of the ramp to deflect any skier who may misjudge his approach and miss the ramp surface entirely.

The longest distances recorded in the Open Men division are in excess of 200 feet. Top jumpers like Sammy Duvall of Florida and Mike Hazelwood of Great Britain build up so much speed during their cuts that they actually land ahead of the boat.

Jump skis look much like old-fashioned square-backed recreational skis, but because they must be light for distance yet extremely strong to withstand the force of landing, they're constructed of modern reinforced plastics. A far cry from the hardwood planks of yesteryear, good jumpers are the most expensive skis made. Incidentally, jump skis *do* have keels.

Jump skiers must wear full flotation vests or special suits that incorporate the buoyancy of a vest with the extra impact protection of padded, reinforced wetsuit material. Most jumpers also wear helmets of some type.

Jump distances are measured by a simple yet accurate triangulation system. Three stations are set up on shore, each containing a set of protractors and sighting arms. Operators at these stations view through the sighting arms to the point where the skier lands and read the angle on the protractor. The distance between the first station and the ramp is known, and the distance to the other two stations is known, so the distance between the ramp and landing point can be determined from the angles. This calculation is now typically performed by a computer.

The skiers who compete in these tournaments put in many long hours of practice and spend a good deal of money on equipment, gasoline and travel expenses, all for a chance to win a few trophies and a moment of glory. The better skiers may qualify for their regional or even the national tournament. But most skiers admit that it is the close camaraderie of the tournament family, not just a chance to win, that makes it all worthwhile.

Some special classes of tournaments do offer cash prizes, but these tend to be limited to the skiers in the Open Men and Open Women divisions. While few tournament skiers at the local level expect to, or even care to, win money at tournaments, the "cash award" events are providing one means for competitive water skiing to break out of its relative obscurity. A grand prix tour of tournaments featuring the best skiers in the world is now attracting television audiences as well as substantial crowds at tour events. Another possible route to public notice may take a long while to accomplish—to make competition water skiing a participating sport in the Olympic Games.

Until the day arrives, young skiers with visions of glory and old skiers who are still young in spirit will take to the lakes and rivers with vigor and determination, even though they may not be in the limelight.


You have a boating
friend in Pennsylvania