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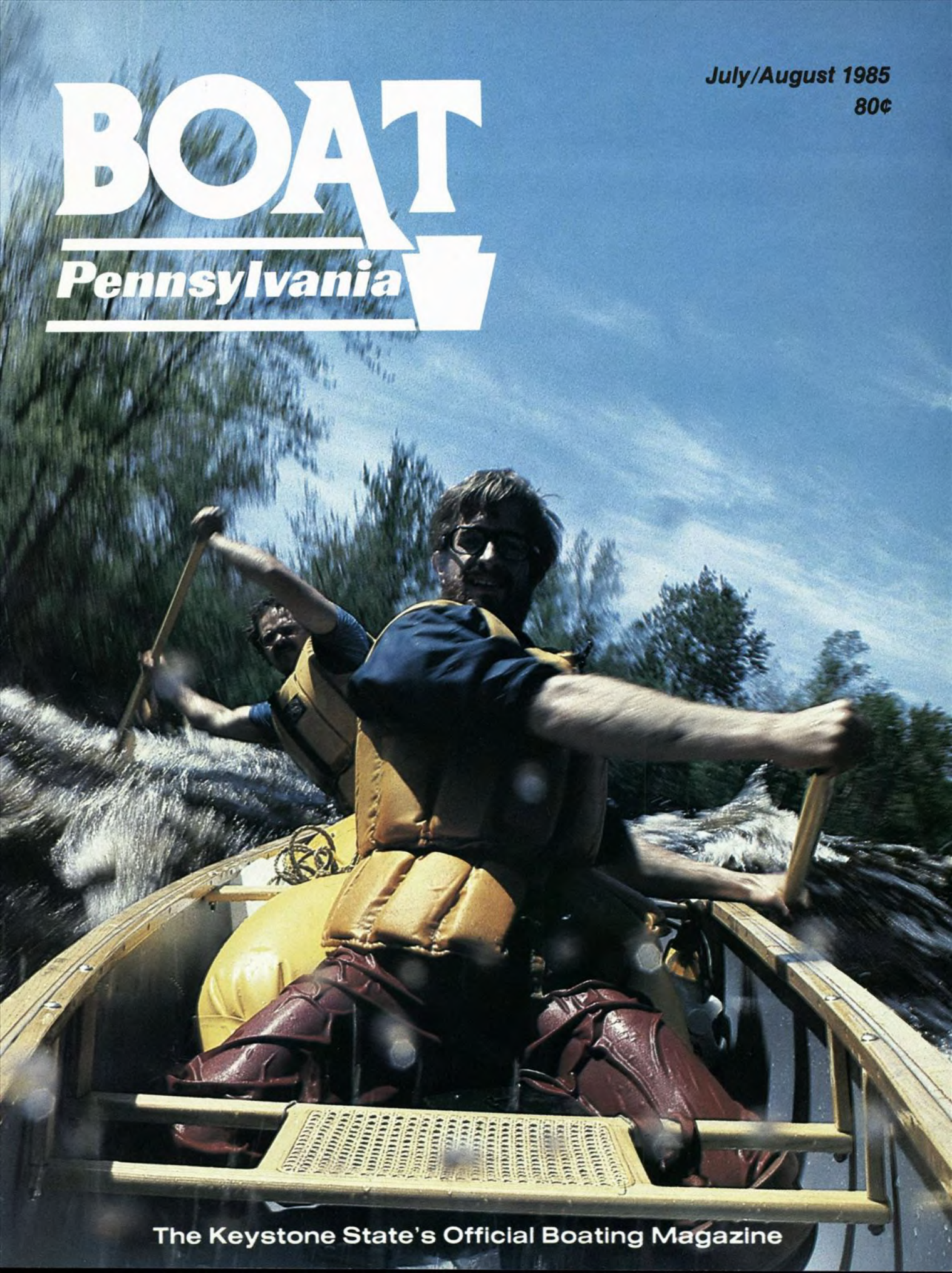
BOAT Pennsylvania



The Keystone State's Official Boating Magazine

Viewpoint

Hydrilla: Pennsylvania Waterway Threat

Gene Sporl
Assistant Executive Director
Bureau of Waterways
Pennsylvania Fish Commission

It probably all began when someone decided to clean his tropical fish tank, and dumped its contents in a backwater canal in southern Florida. That act released a pesky water plant that is now threatening the fresh waters as far north as the Potomac River in Maryland, and is costing the state of Florida alone some $2.2 million a year to control.

This plant's name is hydrilla. Hydrilla forms dense mats of vegetation on a waterway's surface. Penetrating the mats of growth is practically impossible, so swimming, boating, fishing, and water skiing become dangerous and difficult, if not impossible. When hydrilla establishes itself in a waterway, control or eradication becomes nearly impossible. Controlling infestations costs some $400 per acre, and usually, more than one treatment per year is required.

What makes hydrilla so insidious is that it is almost identical in appearance to an innocent and often beneficial water plant also common to tropical fish tanks and fresh waters. This plant is known as elodea. The two plants are so similar, it's been said that a federal agency actually planted hydrilla in one area thinking it was elodea.

Hydrilla is most hardy. It can survive in brackish water with up to 35 percent salt water, and water temperatures down to 55°F. The best growing depth is in waters 10 to 15 feet deep, making many Pennsylvania lakes susceptible.

Hydrilla looks very much like other water ferns, but its stems and leaves are much more coarse and the leaves are serrated. Its roots run rapidly along a mud bottom, implanting themselves and starting new growth. In late summer or early fall, a very small white flower appears.

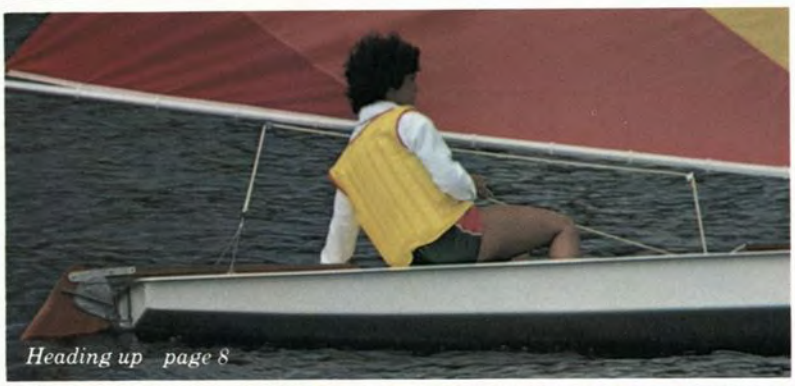
Hydrilla can reproduce in many ways. One of the more common ways of spreading is hitch hiking on trailerable boats. This is the primary way that the plant can spread from one watershed to another. Wash your boat thoroughly after each use, particularly if you've been boating in waters south of us. This precaution greatly reduces the chances of hydrilla becoming a problem in Pennsylvania.

Finally, tell others about the threat, and watch for signs of hydrilla in lakes and streams. Keeping hydrilla out of Pennsylvania ensures our continued enjoyment of Pennsylvania waterways.

BOAT Pennsylvania

July/August Vol. 2 No. 4

This issue's front cover, photographed by R. Hamilton Smith, shows paddlers who might wish they had read the article beginning on page 12 of this issue before venturing out. Also, powerboaters won't want to miss the articles starting on pages 18 and 30, and sailors will want to check out pages 8 and 28. All boaters will find informative the material on pages 14 and 20.



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Canoeing in the Rain

by Cliff Jacobson

photos by the author

Rain..,cold and unyielding. Socked in solid as far as you can see. The weather report is not reassuring; it forecasts "more of the same" for the next day.

You slump in the seat of your sedan and stare longingly at the thin ribbon of brown, which is the river. The ground is flooded with moisture, every depression holds a pond, every leaf contains a pool. Hundreds of tiny channels cut their way determinedly to the river, which by your estimation is several feet above normal.

"It'd be a great run," suggests your partner gloomily. "Yeah, if you're fool enough to be out in it," you reply sarcastically.

"Speaking of fools," says your friend, "here come two now!"

Sure enough, a canoe has just beached at the landing below. You crack the side window for a better look and to communicate with the smiling young woman who is walking your way.

"Pulling out?" you ask.

"Nah," is the reply. "We just ran the upper stretch. Lots of action and no people. We just stopped to take on fresh water. You guys gonna paddle the lower end, too?"

You look at your partner. She returns the gaze. Suddenly you both burst out laughing. "Why not!" You assert. "We won't melt."

"Melt, indeed! If you're properly outfitted and have the "right attitude," rain will do little more than inconvenience your style.

Frankly, I enjoy canoeing in light, persistent rain. The river takes on a mystic beckoning quality, which alerts and ravishes the soul. The gray moistness of the day magnifies sounds and smells and enables you to "feel" the river, to experience it in an intimate primordial way. Every canoe trip needs a good rain to develop the proper respect for nature.

In the paragraphs that follow, explore some time-tested procedures for canoeing in the rain. If you follow these recommendations, you're sure to stay warm, dry, and in command, no matter how bitter the weather. However, I can't promise miracles: You must do your part by supplying the "right attitude." Being well-clothed and outfitted is one thing; enjoying the day is another. Some people just aren't happy unless the sun is shining. If you're one of these, read no further, for the most intelligent preparations are no match for inappropriate genetics.

Rain gear

Get the most rugged two-piece rain suit you can find. Ponchos dribble through and are dangerous in a

capsize. Knee-length rain coats and cagoules (ankle-length rain shirts) aren't much better.

Light-weight polyurethane-coated outfits are fine for occasional rains, but they're not reliable in sustained bad weather. And Gore-tex, in my experience, is even worse: it works well when spanking new but frequently fails with age (use), usually just when you need it most. Only fully waterproof rain gear that's built to military specs keeps you dry when it pours unmercifully for hours (days!) on end.

Look around and see what professional outdoorspeople—commercial fishermen, foresters, and construction workers—are wearing. Ultimately, you'll discover that the choice lies between an expensive PVC or neoprene-coated foul-weather sailing suit and an inexpensive industrial-grade outfit.

Industrial-grade (construction) rainwear is as light and watertight as the best foul-weather suits, but there are no frills—pockets, Velcro overflaps, "designer-hoods," or reversible zippers to jack up the price. The least expensive outfits employ snaps instead of zippers and can be purchased for under $50. Good foul-weather sailing suits cost three times as much!

Get a souwester hat instead of a hood. Any commercial fisherman will vouch for its effectiveness. In cold weather, wear a light wool or acrylic stocking cap under your souwester.

Get your rain jacket large enough to wear over your life vest so you don't have to remove the vest to put on or take off rain gear every time showers begin or stop. And trim rain pants level with the top of your boots. Don't use the snap/Velcro closures at the ankles; they restrict ventilation.

Raingear should never be worn next to bare skin. You need at least one layer of material between you and the waterproof fabric to absorb and distribute perspiration. A porous nylon wind jacket will do. Add a wool and/or polypropylene shirt under the wind jacket, and you'll be amazingly comfortable even on hot, muggy days. And don't neglect your legs: Trousers should be wool or acrylic, but never cotton.

In cold rains, hands must be protected, too. I wear "water ski" gloves, which have rubber palms and thin neoprene backs. These gloves are very light and permit excellent dexterity.

For paddling in icy rains (and snow) I prefer neoprene wet-suit gloves or mittens, which are available at every scuba shop.

For an all-around glove, try "millar mitts"—fingerless gloves used by mountaineers. Millar-mitts protect the sensitive backs of your hands but leave the fingers free to do fine work. Most backpacking/mountaineering shops have them.

Footwear

You'll be perfectly miserable if your feet are wet. The answer is waterproof footwear of some sort. I prefer hunting shoes that have leather tops and rubber bottoms. Knee-high rubber boots are also a good choice, as are plastic booties or galoshes with sneakers inside, which are ideal for children. Five-buckle galoshes over tennis shoes were the choice of Clint Waddell when he and Verlen Kruger paddled their home-built 21-foot cedar-strip canoe 7,500 miles from Montreal to the Bering Sea in 1974. See Verlen's new book, *One Incredible Journey* (Wilderness House Books) for specifics.

Rigging the canoe

If you're serious about paddling in rain, you'll rig your canoe with these accessories.

- **Knee pads.** These keep you from sliding around on the wet floor of Royalex canoes and protect the knees of your rain pants when you kneel in the rough bottom of aluminum and fiberglass craft. Knee pads should be glued to the floor of the canoe. See "Low-Cost Ways to Improve the Performance of Your Canoe," on page 9 of the May/June 1984 *Boat Pennsylvania* for a discussion on this important item.
- **Sitting pad(s).** Cover a 10-inch by 14-inch square of waterproof foam with coarse canvas to make a sitting pad for your canoe seat. Sew nylon webbing and buckles to the edges of the pad so it can be tightly strapped to the canoe seat. Now you've got a warm, non-slippery seat that's easily removed for lunch stops on shore.
- **Shock-corded thwarts.** String lengths of shock-cord through holes drilled in your canoe thwarts. Keep your map in a plastic case tucked under a shock-cord on the aft thwart. This leaves both hands free to paddle and keeps your map in place (and in view) in a storm.
- **Install a running compass.** Ferreting through layers of rain gear

and clothing to get at your compass to check directions is a hassle. A Silva wrist compass strapped to the rear thwart solves the problem instantly.

● **Fabric canoe cover.** If you really want to stay dry in an all-day rain, equip your canoe with a three-piece splash cover. Removable "end caps" with elasticized sleeves protect each paddler from wind and rain while an expandable (elasticized) belly section covers all your gear, no matter how bulky.

When you need to portage, roll and reef the bow and stern caps at the extreme ends of the canoe (they remain on the canoe while portaging). Then remove the belly section and stuff it under a pack flap. The system is very versatile. For example, when rains come, button up forward, center, and aft. In whitewater, omit the tail section so that the stern paddler can quickly exit if the canoe grounds on a rock or upsets. When tacking across wind-tossed lakes, remove the end caps and run with the cargo section. That's all you need to keep out wave splash, which usually comes in near the waist of the canoe—the place of lowest freeboard.

Unfortunately, you can't buy a cover of this design. But you can easily make one from my plans in about 15 hours. You'll find detailed instructions in my book, *Canoeing Wild Rivers* (ICS Books).

Protecting gear

Specialized waterproof gear bags and dry boxes that are designed especially for whitewater and wet-weather boating can be purchased (they are expensive) at every canoe shop. Fortunately, there are reliable low-cost alternatives that work as well.

Here are the trade secrets:

Camera. Some very experienced canoeists use surplus 50 caliber ammo boxes to protect their cameras. Others rely on plastic "Phoenix" bags, which can be purchased at most equipment shops.

The best camera case I've found is the military surplus amphibias assault gas-mask bag. It's constructed of tough canvas-covered rubber and has three solid-brass marine fasteners. Gas-mask bags are absolutely watertight and nearly indestructible. They cost about $4 at most surplus stores.

Breakables and crushables (food, tackle, thermos, etc.). A plastic ice-chest with a fail-safe latch makes a convenient rain-proof container for all your breakables and crushables. If you mount the chest on an aluminum pack frame, it will be easier to carry.

You can also make a "hard pack" by inserting a large rectangular waste basket into an oversized plastic bag. Place this unit into a nylon or canvas packsack. The waste can protects your breakables, and the nested plastic liner seals out rain and the effects of a capsize.

If neither of these ideas appeals to you, you may want to purchase an Egge-Morgan "Wanigan"—a unique dry box with suitcase-style closures and padded carrying straps (From Egge-Morgan Wanigan, 10411 Kelman Ct. N., Stillwater, MN 55082).

Personal gear. Many canoeing experts recommend that you pack clothing and sleeping bags (soft items) inside a canvas or nylon packsack that has been lined with a plastic garbage bag. Frankly, I think this is a bad idea. Every time you stuff a jacket, shoe, or fishing reel into this unit, you'll abraid the plastic liner. In no time there'll be a hole—and a leak!

You can, however, make the plastic liner tear-proof by placing a tough abrasion liner inside it. Make your abrasion liner from heavy plastic (duct-taped to form a bag), polypropylene, or nylon. Even a burlap gunny sack will work. The abrasion liner need not be waterproof. It is merely a barrier between the thin waterproof pack liner and your gear.

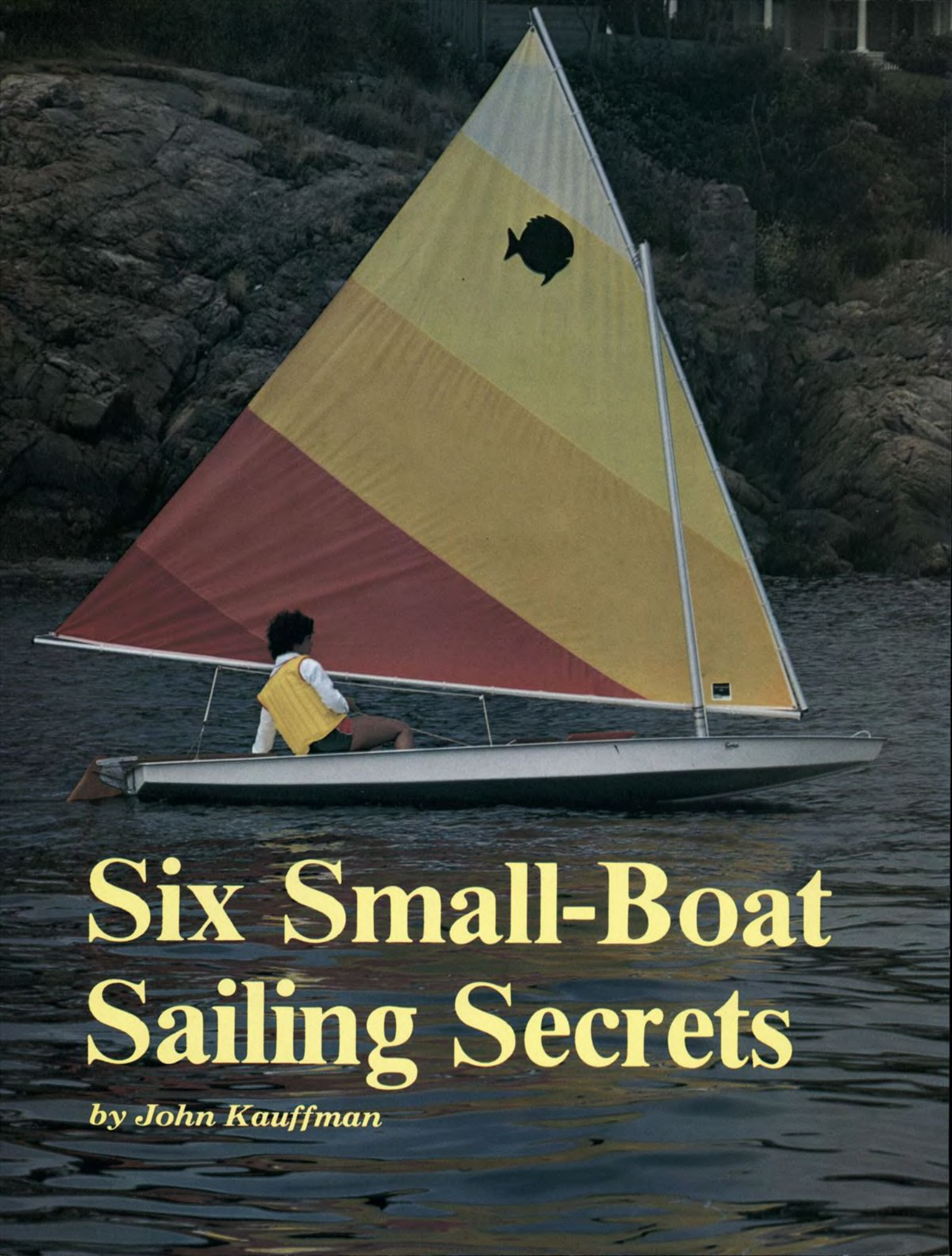
Firearms. I've seen hunters set gun cases into the wet bottom of a canoe with no thought whatsoever of the consequences. Within minutes, rain soaks through the case into the gun. A better solution is to tie the cased gun under a gunnel where it will be protected from rain, out of contact with the canoe's bottom, and secure in a capsize. To remove the gun, just unzip the case and pull.

Amenities. One of the most essential and forgotten items on a rainy day trip is a tarp. If you have a rain tarp you can lunch in luxury along the river bank or persevere through an all-day rain in an overnight camp. Without one, there is no way to stay dry and retain your good humor.

Customize your rain tarp by adding loops of webbing to the face. This lets you rig it quickly in a number of geometric configurations.

Canoeing in rain is mostly a matter of common sense: Like putting on your rain gear before you get wet, or packing your outfit so it is waterproof and easily accessible. Plastic-lined packsacks and duffels, ice chests, trash can/pack combinations, and fabric canoe covers provide all the protection you need. To this, add a positive mental attitude ("PMA") and a friend of similar constitution, and you'll enjoy the worst of nature on the best of terms.

Cliff Jacobson has 32 years of canoeing experience and is one of the foremost canoeing experts in America. He is the author of three canoeing books, the newest of which is Canoeing Wild Rivers, *published by ICS/Stackpole.*



Six Small-Boat Sailing Secrets

by John Kauffman

Many Pennsylvanians have learned the basics of small-boat sailing in 12-foot to 15-foot Sunfishes, Phantoms, and Lasers. It is no surprise that Pennsylvania's lakes are peppered with sailors. But what about after the "learn to sail" course? Reaching back and forth across the lake is fine for some, but you might like to move on to the intermediate level.

In my years of teaching and coaching, I've seen the same mistakes made again and again. Most of them are easily corrected. Here are six stumbling blocks for the beginner, and techniques for getting over them.

1 Boating to windward has always required a balance between pointing high and maximizing speed. By heading up, the course is shortened, but speed is lost. As you bear off, speed is regained, but the distance to your mark increases. I advise a three-step procedure to students. First, haul the sheet until it pulls the boom down, rather than in. The aft end of the boom should be about over the aft corner of the deck. Second, point as high as possible without letting the sail luff. And third, keep your boat sailing as flat as possible.

You and the crew should be on the weather rail, hiking if you feel comfortable. As a gust comes, it is better to ease the sheet and spill some air rather than let the boat heel.

2 As you develop confidence in sailing, more of your attention should go to the shape of the sails. Sail trim is a subject you will constantly be developing, but here are the three key places to start: the foot tension, the luff tension, and the draft. If the foot is attached to the boom by clips or lace, as in a Sunfish, the clew outhaul should be tensioned so that the wrinkles are just removed. As the air picks up, tighten the outhaul to remove the scallops.

An open-footed boat, for example, a Laser, requires a more deft eye. In light air, keep the outhaul loose enough to have an even curve. In medium air, tighten the foot until a slight curl develops. At over 15 knots, the outhaul should be tight enough to keep the foot against the boom.

Luff tension is easy to adjust. If there are vertical wrinkles, ease the halyard. Horizontal wrinkles require halyard tension. The optimum is a smooth airfoil from the mast into the sail. The draft, or curve, of the sail requires an experienced eye, and the time to start developing it is now. As you are moving along, put your head down into the cockpit and look up at the sail. Note how far forward or aft the "belly" of the sail is. Observe it on both tacks, as the light conditions vary. Try to remember the location of the draft in light vs. heavy air days. When you feel you can spot the draft position, begin to adjust it forward by tensioning the halyard and cunningham, or aft with the outhaul and sheet. Heavy air requires the draft forward, the sail flat. Light days favor a fuller sail, with the draft aft. Draft control in a small boat requires only slight adjustments, but the payoff is great.

3 Begin to study the waves and how they affect your progress. Pennsylvania's lakes usually generate short, choppy waves. When beating or reaching, you will meet them head on. Just before the boat lifts, head up to cut the wave with your bow. Although you lose some speed by pinching, you offer a more narrow hull profile to the wave. As the boat comes over the crest, bear off to regain speed. Sideslip becomes a problem, so keep the boat as flat as possible with the centerboard getting a good bite through the water.

The waves have two downwind forces. First is the tendency for the nose to dive under the wave in front of you. Secondly, waves from behind try to pivot the boat around on the centerboard. As in upwind sailing, subtle helm work keeps the boat going smoothly on the run. As you climb the back of a wave, steer slightly sideways so the bow isn't cutting into (and under) the water. Then when a wave overtakes you from behind, steer the transom square to the water. As you work through the waves on a run, stay alert to the direction of the wind and to the angle of the sail. An accidental jibe is dangerous, and being knocked unconscious and out of the boat is the reason sailors should always wear a PFD.

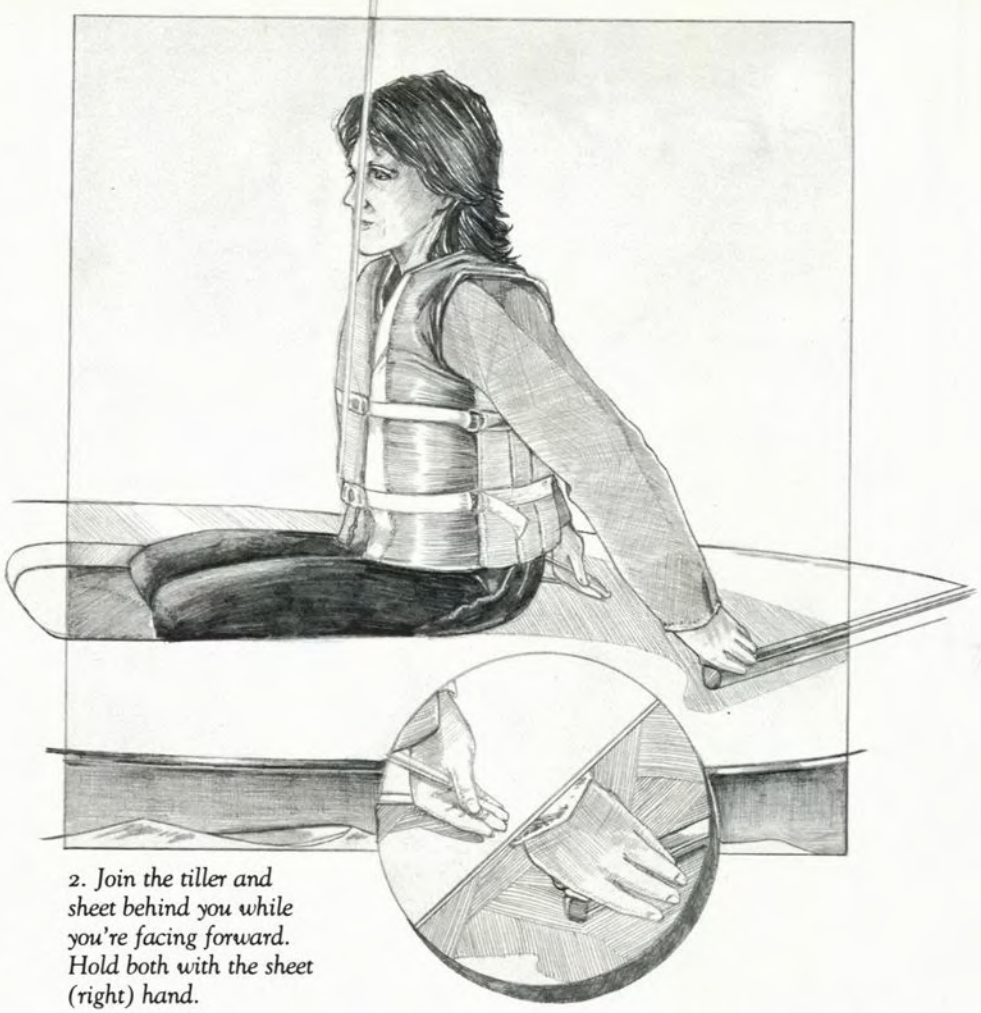
4 The tack can be a three-ring circus for most beginners. They get through it only with anguish, a great loss in boat momentum, and some danger. To get over this beginner's hump, try this technique. The ideas are always to be in control of both the sheet and tiller, and to keep your body in a position to see what is going on.

Imagine you are close-hauled on a starboard tack. You are on the starboard rail, the wind is hitting your back, the sheet is in your right hand,

and the tiller is in your left. The first step is to think and look. Think of where you will be headed after the maneuver. In a close-hauled to close-hauled tack, you will be pointing in the direction your back is facing before the tack. Then look for other boats, puffs of wind, or rogue waves, and check that the lines are free to run in the cockpit. If it has been a long leg, flex your muscles to warm up.

While maintaining good boat speed, push the tiller toward the sail, and when the boat begins to turn, start to move inboard. Pull the sheet hand (right) back behind you as you pivot forward. Now move your body into the cockpit so that you are facing forward. Always face forward through a tack—that is where you need your eyes. As you bring your body down into the cockpit, continue pulling the sheet behind you so that you have the tiller and sheet in the same hand (right). Complete the pivot and end up back on the side of the boat but on the port tack. Once you are back up on the boat, reach up with the old tiller hand (left) and grab the sheet in front of you. Release the sheet from the old sheet hand (right).

A smooth tack with this technique has three advantages. First is that you have control of both tiller and sheet through the entire maneuver. Second is that your body stays in a comfortable position: you are alert to other boats, the movement of the sail and boom, and any line snags. Finally, the control permits you to tack at any speed and with last-minute pauses or reversals. You are no longer limited by lunges across the cockpit or by a thrashing sheet. I drill my students on tacking by setting up a pair of facing chairs as gunwales, with a broomstick "tiller," and a "sheet" tied to a doorknob forward. This skill is one that can be practiced before hitting the water.



2. Join the tiller and sheet behind you while you're facing forward. Hold both with the sheet (right) hand.

1. To begin the tack, push the tiller toward the sail, and pull the sheet behind you.

5 Your weight is about the same as the boat's if you are in one of the popular 12-footers to 15-footers (Sunfish, Phantom, or Laser). Balancing your body properly in the boat reinforces the hydrodynamics of the hull. Start with your body in the center, and sail with a friend in another boat who can watch your transom. Slowly inch forward and have your friend hail when your transom stops dragging in the water. Memorize this point and the strength of the wind. As the air picks

up, move aft. But more importantly, in light air, go far forward.

In the delicate, drifty days of a Pennsylvania August, a dragging transom kills what little power the sails can muster. The fore-and-aft balance of the hull should be centered under the effort of the sail. Hold the tiller in the center of the boat and see if the boat heads up. If it does, move aft. Move forward if the boat tends to bear off on its own. A well-balanced combination of hull and sails should require only the slightest touch on the tiller.

6 Finally, there are two books that I recommend to beginners who want to improve. The first is an inexpensive paperback by Stephen Falk called, *Fundamentals of Sailboat Racing,* which has good chapters on sail trim, boat handling, and smoothing out your technique. The second is a major work: *Sail Power,* by Wallace Ross. Don't be intimidated by the size and apparent complexity. Each chapter is carefully developed, starting with very simple explanations.

In addition, contact your local chapter of the American Red Cross to find out where in your area this organization conducts sailing and water safety courses.

You can be proud of learning the basics of safe sailing, but continue to learn. Develop the skills to become a better sailor. Study these tips and practice them, and watch how you overcome those beginner's stumbling blocks.

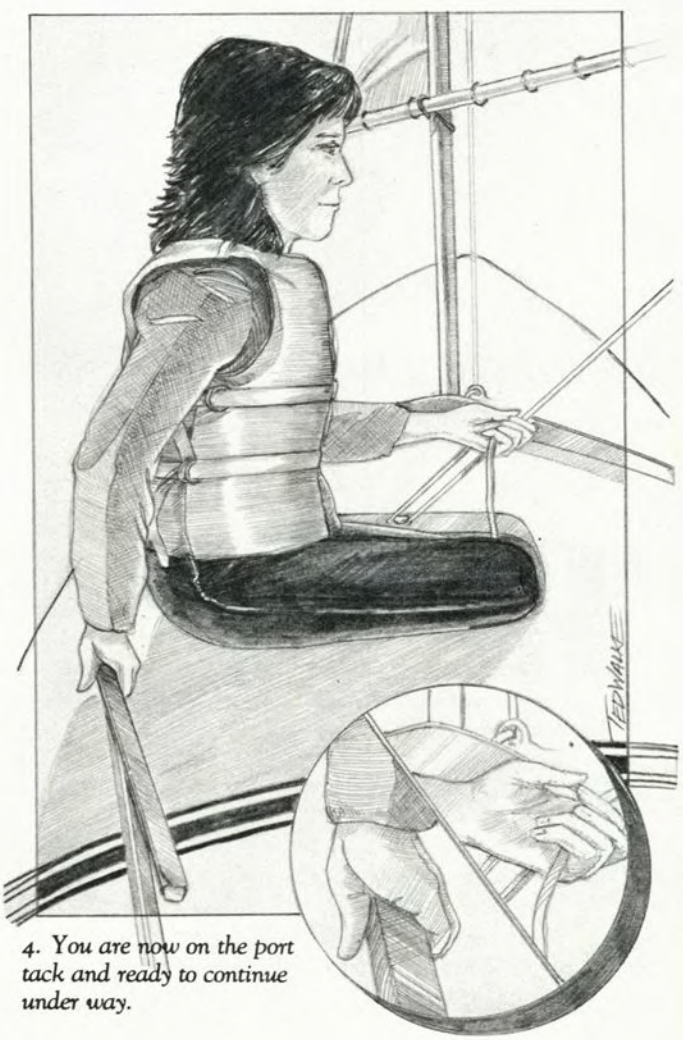
Pamphlets for Small-Boat Sailors

The Fish Commission has available several practical publications for sailors of small boats. Here's a selection.

- *Boat Trailering* briefly describes trailer selection, equipment, maintenance, launching and retrieving, safety information, and registration.
- *Personal Flotation Devices* is an overview of the different types of PFDs, how to use them, and how to select them.
- *Sailing in Pennsylvania* describes sailboat classification, righting a capsized boat, sailing safety suggestions, and information on sailing on Fish Commission waterways.
- *Survival in Cold Water* reviews hypothermia, how to prevent it, and what to do if you end up in cold water.

These pamphlets are free, but with requests include a business-sized stamped, self-addressed envelope. Send requests to: Boating, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

3. As you sit back up into a port tack, the old tiller hand (left) becomes the sheet hand



4. You are now on the port tack and ready to continue under way.

A New Kayak Deck Plate

by

Leann R. Diehl

photos by the author

The force of moving water crashing down a mountain stream is incredible. To the kayaker, this natural motion of power is what makes the sport fascinating—and frightening. Nothing is more dangerous to a paddler than being pinned—tons of unforgiving water crushing the boat against a tree or rock with the paddler, helpless, trapped inside.

Pinning accidents are not restricted to those courageous paddlers who challenge the big Class IV-V whitewater. Often, it's the inexperienced paddler, underestimating the power of moving water, who finds himself pinned against a rock or tree. The beginner paddler tests his skill on small, shallow streams that look harmless. But shallow water, even Class I water, can be deceptive. Without big swells or crashing waves, it looks innocuous. Actually, it's the shallow water that often runs the fastest and has the most power to pin boats.

Consider this: If a 13-foot kayak becomes pinned on a rock in a 5 mph current, the force of the water crushing against the boat is about 1,800 pounds—an incredible weight! Think about trying to lift that kind of weight. It'd be impossible, and that's why the paddler who's pinned is unable to escape.

Kayak safety

Some marginal safety features are available in certain boats to protect the paddler. Walls are added to most whitewater fiberglass and plastic boats, but even with walls, the kayak can fill with water so that the paddler remains trapped inside.

Breakaway cockpits are added to some fiberglass boats, but they rely totally on water pressure to splinter the deck and release the paddler. Too often, water pressure is strong enough to trap the paddler but not break the hull. Or

once broken,
the boat may be destroyed
or at least be in need of major repair.

So if a kayaker is pinned in the middle of a seven-mile river run and his cockpit breaks away, he'll be safe, but stranded. If the paddler is pinned and rescue is not imminent, or the deck doesn't break, the boat can slowly wrap itself around the obstacle, crushing the paddler's legs. The result can be serious injury or even death.

A new idea

But now two young paddlers have come up with a near-perfect solution. They call it the "safety deck system" and it promises to keep paddlers safe, even in the most vicious pinning situation. Rick Curtis and Tom Kreutz, owners of Outdoor Safety Systems in New Jersey, formed the corporation just to introduce their innovative "deck plate." The inventors also hope to sell their idea to several leading manufacturers of plastic boats.

The safety mechanism is surprisingly simple. A larger-than-usual "extended cockpit opening" is built into the hull of each boat during manufacture. Then, this opening is completely covered by a watertight, removable foredeck section, called the "deck plate," which includes the forward cockpit rim. The beauty of the deck plate is that it can be released without damaging the boat. It's equipped with flotation, so even during emergency release it can be recovered and put back on the kayak.

Unlike the breakaway cockpit that relies on Mother Nature to trigger the break, the deck plate is controlled by the paddler. It's secured to the deck by a locking handle with a quick release that is very accessible. One pull on the handle and the deck slides forward to allow the paddler to escape. Because the movement is forward, it can be pushed away even against tons of water power.

The inventors

Curtis, a kayaker with eight years experience, says he and Tom started thinking about ways to build safer boats after reading the 1984 River Safety Task Force findings, published by the American Canoe Association. The publication listed boating deaths and injuries that occurred during the past year. The majority of accidents included pinnings.

"We were just having a conversation on how dangerous kayaks were, and we slowly developed ideas to build safer boats," Curtis says.

After talking about it informally, the two men agreed to "get serious" and eventually came up with the design for the deck plate. They say the deck plate does not affect the original deck design, nor does it reduce interior room, and although it's easy to open by hand, it's constructed to withstand stress and torque of the toughest rivers without accidentally releasing. The deck plate doesn't add extra weight to the boat, and it doesn't reduce the structural integrity or flexibility, either.

And it's so easy to use that Curtis says paddlers can even use it to ease boat entry and exit during everyday use. The deck plate is connected to the boat by a short piece of elasticized cord, so recovery is ensured.

Avoid pinnings

Inexpensive to manufacture, it may add about $50 to $75 to the boat's cost. Nevertheless, the best advice is always to avoid pinning situations. Scout rivers to find the safest routes. Don't be surprised by sudden, unavoidable rocks in your path. Remember that even shallow, slow-moving water can pin boats and make rescue difficult, if not impossible. If you see an obstacle straight ahead that you can't avoid, remember to lean into it, always leaning downstream. Use every available safety measure, too. Never paddle without walls and air bags in both bow and stern.

Check out this new deck plate system—it could save your life. But remember, it is not a substitute for walls and air bags. It is an extra, very vital safety addition for kayaks.

Leann R. Diehl is an instructor in the Central Pennsylvania Kayak School in Harrisburg. She recently created Pennsylvania Women Outdoors, Inc., a nonprofit organization dedicated to involving women in outdoor challenges like kayaking and canoeing. She is a reporter for the York Dispatch, *and appears weekly on television station WGAL's "PM Magazine." Ms. Diehl serves on* Boat Pennsylvania's *Editorial Advisory Committee.*

Pennsylvania Boaters and Wa

by Gary E. Deiger

When a boater thinks of an enforcement official of the Pennsylvania Fish Commission, the image of the fellow in the khaki and green uniform who stocks fish and checks fishing licenses often comes to mind. Still, waterways conservation officers (WCOs) and deputy waterways conservation officers (DWCOs) do much more than that. Enforcement of the Pennsylvania Fish and Boat Code is their primary function, and this task includes boating as well as fishing.

In fact, in counties that have large or numerous lakes and navigable rivers, a majority of their time during the summer and early fall may be spent on boat patrol. Here is a close look at this aspect of a Fish Commission enforcement officer's duties.

In 1980, Act 1980-175 of the Pennsylvania State Legislature amended Title 30 of the Pennsylvania Consolidated Statutes—now known as the Fish and Boat Code. Section 5101 of this act states, "This commission shall supervise, through the executive director, the administration and the enforcement of the provision of this part, the rules and regulations promulgated thereunder and any existing laws regulating the operation and equipment of boats operated on any waters of this Commonwealth, the establishment of educational programs and the improvement of water facilities including aids to navigation."

The enforcement of the laws and rules, and regulations for the operation and equipment of boats is solely the responsibility of waterways conservation officers and their deputies. The Pennsylvania Fish Commission is the sole state agency responsible for enforcement of laws relating to boats,

terways Conservation Officers

for prosecuting offenders, for investigating and reporting boat accidents, and for prosecuting homicide-by-boat cases. No other state agency has such a mandate, and it is indeed a great responsibility.

Training for WCOs

An important aspect of any law enforcement officer's career is training. Both WCOs and DWCOs receive many hours of training, preparing them for boat-law patrol and enforcement.

WCO's, who are full-time salaried Fish Commission employees, receive their basic training during approximately four months spent at the H.R. Stackhouse School of Fisheries Conservation and Watercraft Safety in Bellefonte. Many hours of instruction in the classroom and in the field are devoted to the study of the boat laws and the handling and operation of boats.

Additionally, WCOs attend an annual in-service training seminar, where review and update of boat law enforcement is part of the agenda. This training is usually at least one full week long. In 1985, much of the annual in-service training included practical application of the recent law pertaining to boating under the influence of alcohol or drugs.

In past years, the Fish Commission has provided its field officers with training sessions on boat and engine maintenance, instruction on U.S. Coast Guard laws, Red Cross basic water rescue, and river rescue, and in 1984, seminars on novelty watercraft were held across the state. During these seminars, WCOs were instructed in the use of watercraft such as motorized surfboards, sailboards, and wet bikes, and officers were then given the opportunity to operate these craft on various Commonwealth waters.

This type of regular specialized training lets officers be more cognizant of the problems encountered by users of crafts of this type. Furthermore, all WCOs and DWCOs are required to qualify annually with their sidearms, and must receive annual CPR recertification with other detailed first aid know-how.

Deputies

DWCOs, part-time employees who serve under a district WCO, also receive extensive training. They are required to attend 40 hours of basic instruction at the Fish Commission training school in Bellefonte during the first year of their enforcement commission. Classroom study and testing on boat law, and rules and regulations are stressed, and they must complete the Fish Commission basic boating course.

Sometime before 1988, all active deputies must complete the advanced training course, which includes another 40 hours of even more intensive, involved instruction. This aspect of a deputy's training places heavy emphasis on boat handling and practical application of the boat laws. Here, deputies receive on-the-water instruction in boat handling and are placed in practical enforcement situations. An additional 40 hours of training are available in an Advanced II course, in which more boat enforcement is stressed.

To date, all active DWCOs have attended the basic school, nearly 60 percent have attended or will attend the advanced school by the end of 1985, and 15 percent have attended the Advanced II course. DWCOs who do not pass written exams at the training schools or who fail to qualify with their sidearms are taken off active status and given remedial instruction. If they cannot then satisfy the prescribed requirements, they are relieved of their commissions and can no longer engage in law enforcement activities.

Enforcement of the laws and rules concerning boating in Pennsylvania is one responsibility of waterways conservation officers and their deputies.

This boat is one of several new patrol craft. Here it's being tested by Bureau of Waterways personnel.

Art Michaels

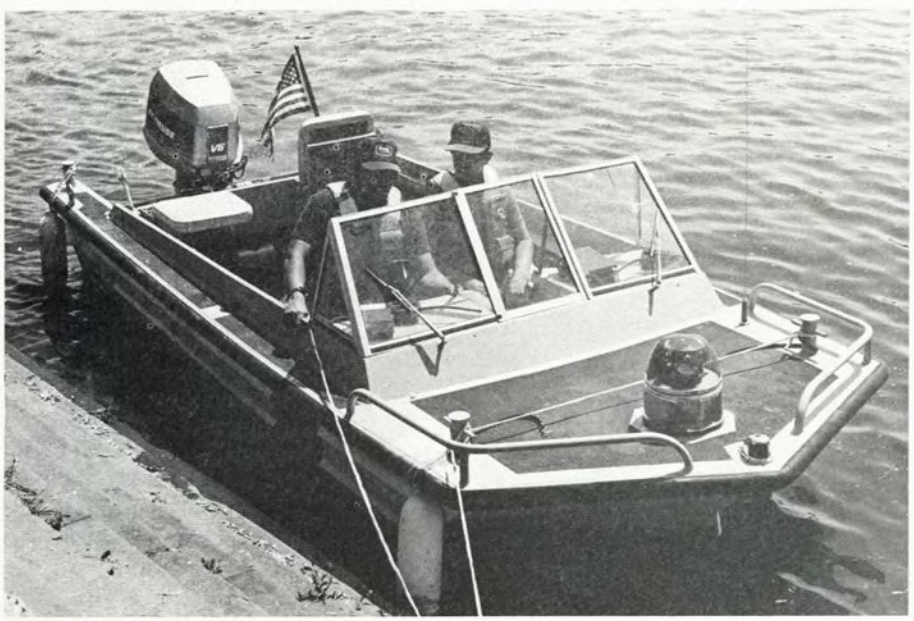
All deputies are also required to attend meetings and training sessions provided by their district WCOs in their respective work areas. All aspects of law enforcement are reviewed at these sessions, and mandatory training subjects are sent on a quarterly basis to the field from the law enforcement office headquarters in Harrisburg.

During the second quarter of 1985, heavy emphasis is placed on boat law enforcement. These mandatory training subjects include reckless and negligent operation and its use with boating-under-the-influence violations; reviewing rules of the road and the Inland Navigation Rule Act of 1980; unloading and trailering of boats; boarding procedures; rescue operations; and in-the-water exercises using PFDs.

Patrol craft

With the great variation of water resources, Fish Commission patrol craft vary greatly. Officers patrol in canoes, small open boats, medium-sized runabouts, and in some cases, such as Lake Erie and the western rivers, 20-foot cruisers. They are identified by a diagonal blue strip amidship with the Fish Commission keystone logo in the center of the blue stripe. Equipment may include sirens, blue flashing lights, PA systems, and ship-to-shore VHF radios. Most vessels have Fish Commission frequency radios on board, and some have radio contact with local or county policy agencies.

Boating officers realize that the laws they are empowered to enforce tend to infringe upon the freedom of movement of persons who are engaged in recreational activities, and they try to keep this idea in the proper perspective. The goal of Fish Commission boating patrols is to ensure safe boating on any given body of water in a fair, discreet manner through sound practical applications of the Fish and Boat Code. Officers avoid random stops of boats, they avoid stopping boats en masse, except where circumstances dictate otherwise, they avoid singling out any one type of boat or boater, and they attempt to treat all boaters equally and fairly.



Art Michaels

A total of 152 craft are used to patrol Commonwealth waterways.

Boardings

When a WCO or DWCO boarding team stops a boat for enforcement purposes, it is because the officer observed some infraction of the boat law. In most cases, this infraction is an observed equipment or operational violation. Upon stopping the alleged offender, the officers identify themselves and inform the operator why he was stopped. A full inspection for compliance with the Fish and Boat Code is then undertaken. If all

required equipment is on board and in good order, and the reason for the initial stop was minor, the boat operator will generally be given a warning and requested to correct or at least not repeat the infraction.

If the required equipment is found to be lacking or not in proper working order, or the initial infraction which caused the initial stop was serious in nature, a prosecution may result. If this is the case, the boat operator will be given his options for settlement of the charge or charges, which will be either through a citation and summary trial or by direct payment through the field acknowledgement of guilt.

In cases where safety-related equipment is involved, boats may be escorted ashore or to a dock and ordered off the water until the violation is corrected. When a potentially hazardous or dangerous operational practice is encountered, the operator may be instructed to cease and desist from engaging in or continuing that practice. In cases of boating under the influence of alcohol, operators deemed under the influence will be prohibited from continuing to operate their vessels and will be taken before local authorities for processing.

Fish Commission officers attempt to enforce the boat law with boating safety first in their minds. This does not mean, though, that these patrols are out there simply to aid boaters in distress. They are enforcement officers and have been mandated by the Commonwealth to do just that—enforce the boat law. Safety equipment such as personal flotation devices, fire extinguishers, sound-producing devices, and lights on boats while operating before and after sunset are checked thoroughly and must be on board and in good working order. Motorboats are required to be registered, their registration numbers and validation stickers are required to be displayed according to law and regulation, and the registration card must be available for inspection while the boat is in operation. Water skiers must wear approved PFDs, must provide competent observers, and must obey the rules of the road. Boats must be operated in accordance with the rules of the road and must not threaten the safety of other boats and water resource users. When a boating officer observes one or more of these items, he is bound by law to stop and inspect the vessel.

Frequent violations

The most common violations that are observed and that lead to stops and full inspections are improperly displayed registration numbers and validation stickers, and operational or rules-of-the-road infractions. When a boat is stopped and inspected, violations relating to equipment then become apparent. All boat owners who register their vessels in Pennsylvania receive a copy of the Summary of Boating Regulations for that registration year. This publication contains all the information necessary for a boater to equip and operate his vessel in accordance with the law. All equipment and operational requirements for boats are contained in this booklet, and a listing of regional offices and local WCO telephone numbers is supplied. If you have a question on operating your boat, call your local WCO or the regional office.

One of the items that is of major concern to pleasure boaters at present is the "boating under the influence law." When the Fish and Boat Code became law in 1980, it became a violation to "operate a vessel while under the influence of alcohol or a controlled substance (drugs) to a degree which renders the person incapable of safe operation of the watercraft." In August of 1984, an amendment to that law provided for chemical testing to determine the amount of alcohol or drugs in a person's system. What this means in practical terms is that alcohol is permitted on board vessels (where permitted by federal and state laws), but the operator of the boat should not partake to such a degree that his capacity to operate his vessel safely is impaired. Loss of boating privileges results from a refusal to undergo a blood alcohol or controlled substances test, or on conviction, and severe penalties are imposed on persons convicted of a violation.

All in all, the primary purpose of a WCO and DWCO is to ensure that all boaters enjoy their pastime in safety. If you are stopped by a WCO or DWCO while boating, please try to keep in mind that he is ultimately looking out for your welfare.

Gary E. Deiger is the waterways conservation officer assigned to Mercer County. Before becoming a WCO in 1974, he served four years as a deputy.

WCOs and DWCOs make more than 54,000 boardings each year. Here, WCO Paul Antolosky (Centre County) boards a boat at Foster Joseph Sayers Dam, checking safety equipment.

Summer Powerboat Maintenance

Outboards and I/Os require maintenance schedules all season long, but I/Os, like this one, require more attention because their engines are more complex.

by Eric B. Burnley

Most boaters are very careful to do all the required maintenance in the fall when they winterize their boats and again in the spring before they launch them. Still, summer upkeep is important, too. A pleasant cruise or exciting ski outing can come to an abrupt end when something breaks. Usually, the broken part could have been saved, or at least spotted, before it left you in the middle of the lake or halfway up the river looking for a tow.

Outboards and I/Os each require a different maintenance schedule. The inboard/outboard, or stern drive, is a more complex machine and therefore needs more attention than an outboard, but both require certain basic checks every time you use them.

Most of us operate our boats on the weekends, and unless we are on vacation, the boat sits for five days between use. Many of us also trailer our boats from home to the water each week, and gremlins can do a lot of damage during this trip.

Prelaunch check

Always climb on board before launching to check the battery water level, drain plug, and electrical

Mid-season, when you use your boat most, is the time you're likely to encounter problems. You can prevent breakdowns by maintaining your boat during this heavy-use time.

connectors. Your boat receives more vibrations on a 100-mile tow than it gets in a summer of use on the water. Crankcase oil level, fuel lines, and all connections must also be checked before the boat goes into the water. As a final check, turn on the blower for 30 seconds, and then turn the key on and watch the gauges—they should zero out and the amp meter should register a slight negative reading.

If your boat is a stern drive, turn on the blower and run it for at least 30 seconds before starting the engine. As an added precaution, I open the engine cover while starting. As soon as the engine is running, go back and look at it. Check for leaks on stern drives and be certain the water pump is working before you pull away from the dock.

Following this simple pre-launch checkout only takes a few minutes but can save a great deal of time and aggravation later on. The time starting procedure should be followed by those who keep their boats in a permanent mooring.

If your boat is on a trailer, the next series of preventive maintenance checks can be made in your driveway at home. Outboards and stern drives that are permanently moored will have to be hauled to check the lower unit lubricant, which should be done after every 50 hours of operation.

Outboards

One of the best preventive maintenance routines for outboard motors is to remove the cover and get your hands on the insides while the engine is cold and off. Look at and touch the throttle linkage, spark plug wires, fly wheel, starter motor, generator, and fuel lines. Tighten anything that is loose, replace anything that is worn. Perform this procedure once a week if the boat is used only on weekends and every other day if the boat is in constant use.

This look-and-touch routine is good for stern drives, but they also require additional maintenance. The engine in a stern drive is very similar to the one in your car and needs the same kind of attention.

The engine oil and filter should be replaced after every 100 hours of operation. If you don't have an hour meter on your boat, you may want to keep a written log to determine how long you have run since the last oil change. The lower unit oil also needs changing after 100 hours.

Even if you don't run your boat for 100 hours during the season, there are other maintenance procedures that must be done. The crankcase vent hose and flame arrestor should be cleaned every 50 hours. Use an approved cleaning solvent, not gasoline, to remove built-up dirt and oil.

Check the tension and condition of the water pump and alternator drive belt regularly, too. I do this procedure every week, but the manufacturer of my stern drive recommends this check after 50 hours of operation.

A dirty fuel filter can drive you crazy. The engine may run well at low speeds, then cut out at higher RPMs, or when you are pulling skiers. The filter should be changed once a year and cleaned every 50 hours of operation. If you purchase gas from a dealer and you suspect that dirt or water may be present in his tanks, clean the filter more often.

Stern drives and some outboards require an oil supply to operate the power tilt and trim. Check this level at least every 50 hours of operation. It is also a good idea to keep an eye on the hydrolytic hoses used to operate this mechanism. They are exposed and can be damaged or deteriorate from the elements.

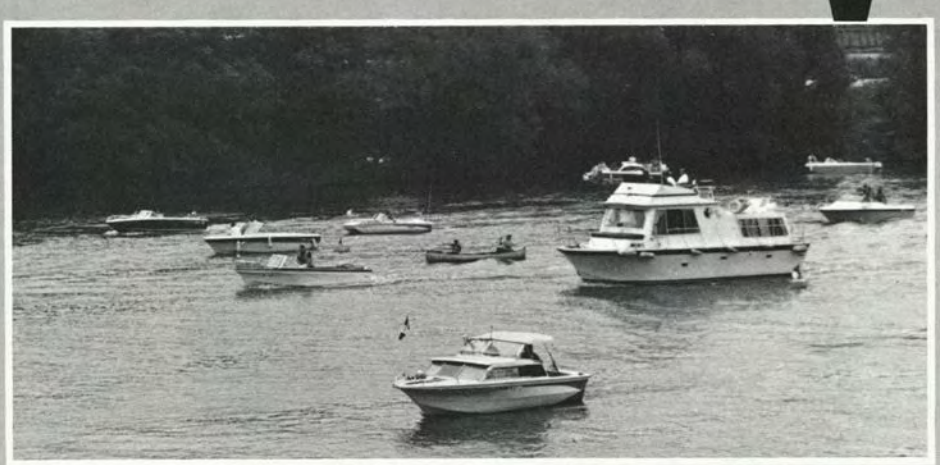
The propeller should also be checked regularly. Look for dents, cracks, or other damage, and be certain that the nut and pin used to hold the prop on the shaft are properly tightened.

Washing

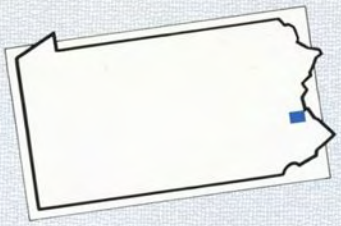
The engine is not the only part of the boat that requires preventive maintenance. The finish also needs protection. Boats are exposed to sun, rain, road dirt, and other damaging elements that destroy the finish. A good washing is in order after every use, and wax should be applied at least once a year.

I combine the wash down and maintenance check of the engine. You normally wash the boat from bow to stern, so when you finish the final rinse you are right there at the motor. This is the perfect time to look at the oil level, belts, battery water level, fuel hose, electrical connections, and whatever else needs checking.

Preventive maintenance is the key to keeping your boat running and looking like new. It doesn't take much time, doesn't cost much money, and returns big dividends. You probably have invested thousands of dollars in your rig, so it makes sense to protect that investment, especially during the time you use your boat most.



Southeastern Pennsylvania's Mecca for Boaters



by Tom Reinke

Situated among the wooded hills and rolling farmlands of Bucks County is picturesque Lake Nockamixon, the heart of southeastern Pennsylvania's beautiful Nockamixon State Park. Located approximately five miles east of Quakertown, between Pennsylvania routes 313 and 611, Lake Nockamixon offers sailors, canoeists, and small powerboat owners some of the best boating in the Commonwealth.

The lake is a 1,450-acre manmade reservoir fed by three small streams, Tohickon Creek, Haycock Creek, and Threemile Run. Nockamixon is about seven miles long and slightly less than a mile wide at its widest point. From an aerial view, it is a faceted lake with many small bays for fishing and exploring.

What makes Nockamixon so attractive is its surrounding state park, which provides a variety of year-round activities for boaters and non-boaters alike. The majority of the park's facilities can be found on the north side of the lake. For non-boaters, there are picnic areas, hiking trails, a horse trail, a swimming pool complex, a fishing pier, and countless scenic views from the hills overlooking the lake.

For those who want to stick to the water, the park has four boat launch ramps, a boat rental concession, and a 576-slip marina. The boat rental is open from Memorial Day through Labor Day with a mix of rowboats, outboard motors, sailboats, canoes, pedal boats, and pontoon boats. Both veteran skippers and novice boaters can escape to the water by renting these craft for a few hours or for an entire day.

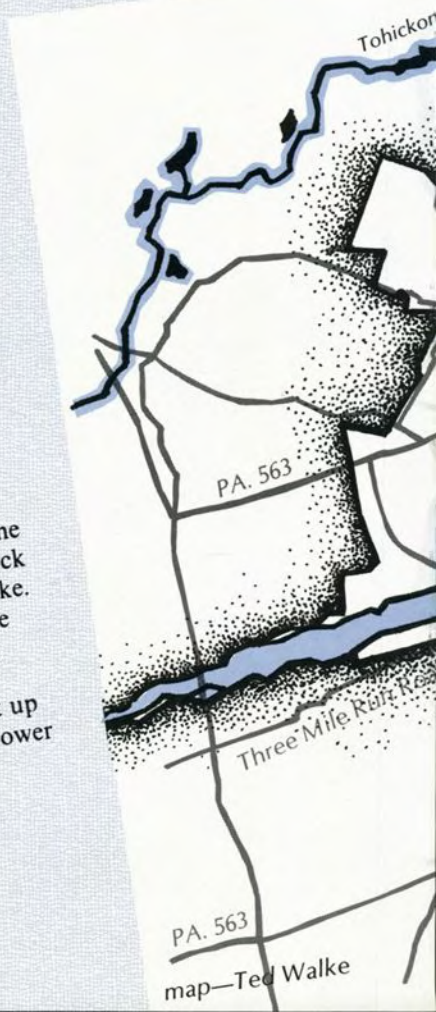
The immensely popular marina is crowded with boats from the day it opens in April until it closes in the fall. Slips are divided into two categories: those for boats under 16 feet and those for boats between 16 and 24 feet. The maximum length boat allowed in the marina is 24 feet. For boaters who cannot get a slip, or who may prefer to dry sail their craft, the marina has reserved part of its parking lot for boats to be stored on trailers. The marina is so popular that the current waiting list for a slip or storage spot on land is 2,800 names long and still counting.

For those who tow or cartop their boats to the lake, the four boat ramps are strategically located to provide access to every part of the lake. The Threemile Run ramp is located at the southwest tip of the lake, while two others—the marina and Tohickon ramp—can be found near the center of Nockamixon. The fourth ramp, the Haycock ramp, is located on Haycock Creek at the northeast end of the lake.

On any mid-summer day, you are likely to see up to 700 boats on the water. The fleet includes virtually every size, shape, and type of craft up to the 24-foot limit and 10-horsepower maximum. Generally, however, sailboats outnumber powerboats.

While the powerboats can navigate almost anywhere, the sailboats like to stick to the center of the lake, between the Tohickon ramp and the fishing pier. This area is the widest part of the lake, and it is favored by sailors because it provides the longest tacks.

Sailing on Nockamixon, like any inland lake, is especially challenging because of constantly shifting winds, tricky thermals, and unexpected calm spots. One-design racing is a popular



map—Ted Walke

sport with sailors on the lake, and the Nockamixon Sail Club makes sure there's plenty to do with a series of weekend races for Lightnings, GP-14s, Hobie Cats, Buccaneers, and other types of boats. One of the most spectacular sights on the lake is a group of these racers reaching or running together with their colorful spinnakers flying.

Cruising sailors can be seen lazily sailing up and down the lake or gunkholing in its small bays and coves. However, while the lake is open 24 hours a day for fishing, anchoring overnight is prohibited. So in the late afternoon, couples and young families in their pocket cruisers begin heading back to their slips in the marina, and back at the dock, as dusk approaches, scores of weekend mariners can be seen enjoying a nice dinner or quiet conversation.

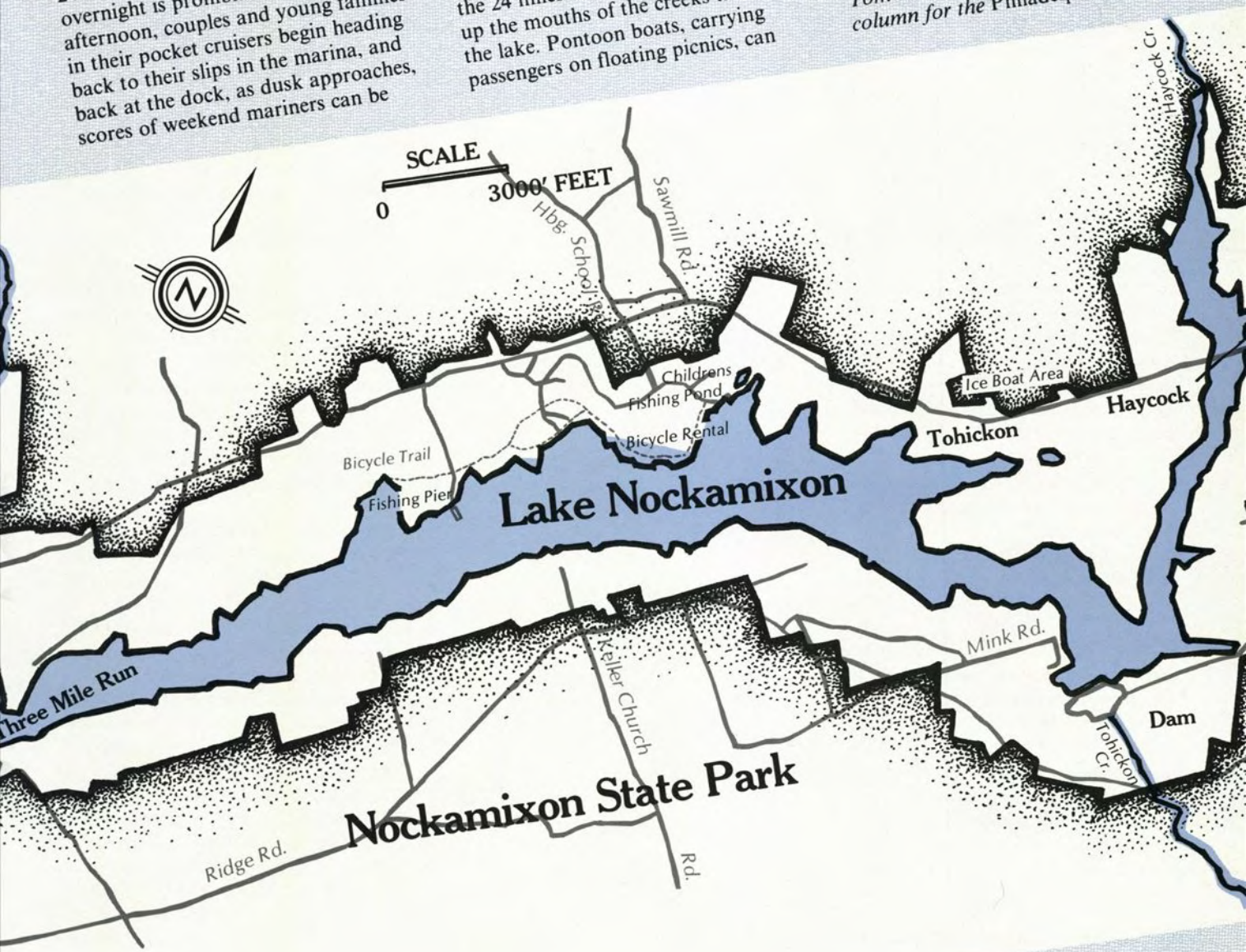
Small powerboats, pontoon boats, rowboats, and canoes roam all over the lake. The powerboats zip and dart around on pleasure excursions or carry fishermen in pursuit of panfish, walleye, bass, and even muskies. There is an active stocking program for many species, and fishing has been popular over the years. But in the past few years, it has fallen off slightly because of an algae problem. Fish Commission biologists are working on the problem and promise that a solution is not far off.

Canoeists seem to enjoy exploring the 24 miles of shoreline or paddling up the mouths of the creeks that feed the lake. Pontoon boats, carrying passengers on floating picnics, can also be seen leisurely motoring along the shoreline.

When boaters tire of the on-the-water activities, there is plenty to do on shore. The swimming pool complex with its main pool and separate wading and diving pools is a great way to cool off. The bicycle and hiking trails are great for getting some exercise or seeing different areas of the park, and for those who want to combine camping and boating, there are private campgrounds nearby.

With so much to do on the water and on shore, its no wonder that Lake Nockamixon is the mecca for boaters in southeastern Pennsylvania.

Tom Reinke writes the boating column for the Philadelphia Inquirer.



CURRENTS

The LAW & YOU

by Perry D. Heath

Q. My boating friends advise me that it is illegal to carry any alcohol on my boat because of a new law that was enacted in 1984. Is this true?
A. No. The new law provides that you may not operate or be in actual physical control of the movement of a watercraft while under the influence of alcohol to a degree which renders you incapable of safe operation of the watercraft.

Q. We want to trailer our boat to the seashore this month. Do we have to purchase another registration for our boat, or is our Pennsylvania registration valid in other states?
A. Reciprocal privileges are granted to motorboats registered in other jurisdictions with numbering systems approved by the Coast Guard for a period of up to 60 days.

Q. We enjoy going out into the lake after dark and mooring our boat. Do we need to keep all our lights on?
A. From sunset to sunrise, boats at anchor tied to a mooring buoy, or tied to the bank and floating freely, must display where it can be seen, but at a height not exceeding 20 feet above the hull, an all-around white light visible at a distance of at least one mile.

Q. My boating friend advises me that I must carry visual distress signals on my boat. Is this true?
A. Visual distress signals are required only on those boats operating on Lake Erie.

Q. We just purchased a sailboard. Is it a requirement that we must *wear* a Coast Guard approved flotation device while using the sailboard?
A. Yes. It is illegal to operate or attempt to operate any sailboard on any waters of the Commonwealth unless you're wearing a type I, II, III, or V Coast Guard approved personal flotation device.

Perry D. Heath is deputy chief of the Commission Law Enforcement Division.

Yacht Racing Rules Available

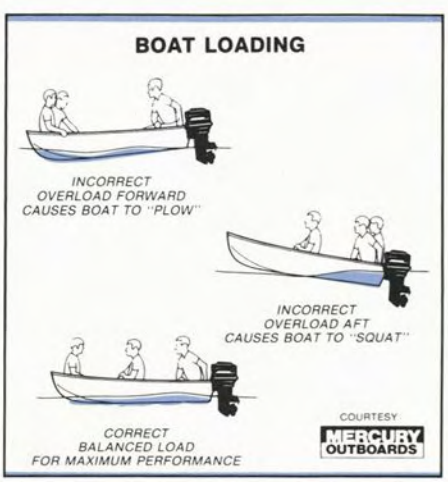
The United States Yacht Racing Union's (USYRU) edition of the 1985-88 International Yacht Racing Rules, which took effect in the U.S. last April 1, are available. Every four years the International Yacht Racing Union revises the book to improve and clarify the rules under which sailors race. To order, send $5 to USYRU, Box 209, Newport, RI 02840.

Reader Survey

The September/October issue of *Boat Pennsylvania* will include a reader survey that's specially prepared for paid subscribers. The survey will include questions concerning reader interests and preferences, and it will be used to help steer *Boat Pennsylvania* on a course that continues to provide readers with the kind of articles they want most.

The Fish Commission wants to survey readers because of the phenomenal increase in the number of paid subscribers in less than a year since the magazine was launched. The magazine now boasts some 10,000 paid subscribers, and the number is still increasing.

All paid subscribers who participate will be offered an extension of two issues on their subscriptions. Watch for the survey, and be sure to complete and return it.



Boating Safety Coalition Expands

Representatives of boat manufacturing, retailing, consumer, and state law associations meeting as the Coalition on Recreational Boating Safety Education recently reviewed its first year's work and planned to expand its reach during the 1985 boating season.

Concerted efforts in 1984 focused widespread attention on boating safety issues, and legislative efforts were successful in developing new funding sources for safety programs. Achievements included the passage of the Wallop-Breaux Act of 1984, which dictates $45 million a year for fiscal years 1985 through 1988 for state recreational boating safety programs. Guidelines were adopted for state legislation stiffening the penalties for drunk boat operators, and a federal bill making drunk watercraft operation a federal offense was passed.

In 1985, these programs will be joined by others. A grant from the U.S. Coast Guard has led to production of a boating pamphlet dealing with alcohol abuse on the water. Additional funds were being sought for production of the already widely distributed "Rules of the Road" decals, which aid navigation. Extra funding would also allow additional airing of public service announcements dealing with personal flotation devices, boat safety courses, and the dangers of drinking and boating.

Members of the Ad Hoc Coalition on Recreational Boating Safety Education include the Boat Owners Association of the United States, BOAT/U.S. Foundation, National Association of Canoe Liveries & Outfitters, Marine Retailers Association of America, U.S. Power Squadrons, National Association of State Boating Law Administrators, National Water Safety Congress, Tennessee Valley Authority, Outdoor Empire Publishing Company, Oswego Maritime Foundation, Outboard Marine Corporation, National Boating Federation, MIA of South Florida, Jacksonville Marine Association, and the National Marine Manufacturers Association.

Calendar

July

3, 6-7, 12, 17, 20, 23-35 MORC regattas, Lake Erie. Erie Yacht Club, David Preston, P.O. Box 648, Erie, PA 16512 (races through 10/6).

4, 7, 14, 21, 28 Sailboat races, Lake Nuangola. Nuangola Yacht Club, Commodore Stephen Fleetwood, 15 Nuangola Avenue, Mountaintop, PA 18707 (races through 9/1).

6-7 Rowing races, Schuylkill River. J. Sweeney, Commodore, Schuylkill Navy of Philadelphia, #4 Boat House Row, Philadelphia, PA 19130. Telephone: 215-978-6919 (races through 11/24).

6, 11, 12-14, 27 Sailboat races, Presque Isle Bay and Lake Erie. Presque Isle Yacht Club, Harold Eisert, 3217 W. 25th Street, Erie, PA 16505 (races through 9/29).

6, 20 Sailboat races, Conewago Lake, Pinchot State Park. Pinchot Sailing Club, Keith W. Brown, 615B Third Street, New Cumberland, PA 17070 (races through 10/12).

6, 18, 20, 27 Sailboat regattas, Leaser Lake. Windward Sailing Club, Michael J. Geisen, 1771 Peachtree Circle, Whitehall, PA 18052 (races through 10/26).

7 Pennsylvania Fish Commission Boating Information Van at Beltzville State Park. Janet R. Mayer, Bureau of Waterways. Telephone: 717-657-4540.

7, 14, 21, 28 Sailboat races, Conneaut Lake. Conneaut Lake Yacht Club, Mark D. Prather, 791 North Main Street, Meadville, PA 16335 (races through 9/2).

7, 14, 21, 28 Sailboat races, Rose Valley Lake. Lycoming Yacht Club, James Bryan, 322 Union Avenue, Williamsport, PA 17701 (races through 10/13).

8 Pennsylvania Fish Commission meeting, Harrisburg. For details, contact Bureau of Administrative Services, 717-657-4522.

13, 20, 27 Sailboat races, Lake Nockamixon. Nockamixon Sail Club, Joseph M. Galli, 406 Calais Drive, Sellersville, PA 18960 (races through 10/20).

13, 27 Sailboat races, Lake Arthur, Moraine State Park. Moraine Sailing Club, P.O. Box 692, Pittsburgh, PA 15230 (races through 10/12).

14, 28 Sailboat races, March Creek State Park Lake. Marsh Creek Sailing Club, Graham S. Thompson, 97 Waterloo Avenue, Berwyn, PA 19312 (races through 10/20).

19-21 Eastern Region water ski meet, Felix Dam, Schuylkill River. Reading Water Skiers, R.D. #9187, Reading, PA 19605.

20-21 32nd Annual Port Indian Regatta (hydroplane and ski boat races), Schuylkill River. Port Indian Civic and Boating Association, William G. Dougherty, 80 West Indian Lake, Norristown, PA 19403.

28 Boat parade, sailboat races, wind surfing demonstration, and pontoon boat races, Yellow Creek State Park Lake. Indiana County Tourist Promotion Bureau, Wayne Avenue and Sixth Street, Indiana, PA 15701.

August

2-4 Three Rivers Regatta, Pittsburgh. Pittsburgh Department of Parks and Recreation.

10 Water ski demonstration, Kinzua Reservoir (Access near Boy Scout Camp Olmstead). Western PA Conference, United Methodist Church, 223 Fourth Avenue, Pittsburgh, PA 15222.

8, 15, 22, 29 Sailboat races, Delaware River between Betsy Ross and NJ/PA Turnpike bridges. Delaware River Yacht Racing Association, 200 Fulton Street, Riverton, NJ 08077 (races through 10/6).

15, 28-29 Sailboat races, Blue Marsh Lake (State Hill access). Blue Marsh Sailing Association, Murry Fink, 3120 Octagon Avenue, Sinking Springs, PA 19608 (races through 10/27).

18 Pennsylvania Fish Commission Boating Information Van to Susquehanna Boom Festival, Williamsport, PA (see July 7 entry).

24 Annual Yough Upstream & Wildwater Race, Youghiogheny River. American Canoe Association, P.O. Box 248, Lorton, VA 22079.

31-9/1 Pennsylvania State Water Ski Championship, Erie. Dave Strong, 9748 Eureka Road, Edinboro, PA 16412.

September

14-15 Pennsylvania Fish Commission Boating Information Van to Speedwell Forge Lake during Lancaster YMCA triathlon (see July 7 entry).

14-15 Keystone Slalom, Reading, PA. American Canoe Association, P.O. Box 248, Lorton, VA 22079.

14-15 Slippery Rock Creek Slalom, Porterville, PA. American Canoe Association, P.O. Box 248, Lorton, VA 22079.

21 Water release from Francis E. Walter Dam on the Lehigh River. U.S. Army Corps of Engineers, 215-597-3311.

21-22 Riversport Slalom, Confluence, PA. American Canoe Association, P.O. Box 248, Lorton, VA 22079.

28-29 Lenape Slalom, West Chester, PA. American Canoe Association, P.O. Box 238, Lorton, VA 22079.

To have your organization's activities considered to appear in *Boat Pennsylvania*'s "Calendar" Column, send the information to us at least three months before the date of the activity. For instance, if your group's event occurs in October, we must have the details in July. Send items to: The Editor, *Boat PA* "Calendar," P.O. Box 1673, Harrisburg, PA 17105-1673.

Safety Code

The American Canoe Association (ACA) and the American Whitewater Affiliation (AWA) have prepared a safety code for canoeists, kayakers, and rafters. The pamphlet contains useful information on personal preparedness and responsibility, boat and equipment readiness, leader's responsibilities, and the international scale of river difficulty, and drawings with explanations of a new system of universal river signals. For a free copy, contact the American Canoe Association at P.O. Box 248, Lorton, VA 22079.

BOAT Pennsylvania

over the Counter

Newsstand dealers, vendors, marine suppliers, and marine operators who want to sell *Boat Pennsylvania* over the counter can contact the editor for the details. *Boat Pennsylvania,* only a year old, boasts a circulation of over 10,000, and already the magazine has some 100 over-the-counter vendors that sell about 1,200 magazines, with *Pennsylvania Angler.* To cash in on a good thing, contact Art Michaels, editor, *Boat Pennsylvania,* P.O. Box 1673, Harrisburg, PA 17105-1673.

BOAT Pennsylvania

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PENNSYLVANIA FISH COMMISSION

Dedicated to the sound conservation of our aquatic resources, the protection and management of the state's diversified fisheries, and to the ideals of safe boating and optimum boating opportunities.

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Boating Violations

In 1984, violations of the general boating regulations resulted in 2,395 prosecutions, with some 10,000 warnings issued statewide. Five violations were more common than others. About 56 percent of all violations, some 1,345, involved personal flotation devices (PFDs)—no PFDs on board, not wearing them when it's required, or having too few available for passengers. About 11 percent involved unacceptable boating practices, which include standing in a boat while under way and sitting on the seat covers or gunwales. About 9 percent of the violations involved excessive speed in minimum wake areas. Lighting violations accounted for about 8 percent of the total, and 5 percent involved water skiing and kite skiing.

What is good insurance against violating the law? For one thing, everyone who registers a boat receives a copy of the Summary of Boating Regulations. Read them, and get to know the requirements. For another thing, if you have a question on boating safety or on boating rules and regulations, call your local waterways conservation officer or the nearest regional office. These phone numbers are listed in the Summary of Boating Regulations.

Pennsylvania Pirates

by Virgil Chambers

The descendants of Blackbeard still walk the docks and sail the waterways. They steal everything: boats, trailers, motors, navigation equipment, radios, life jackets, water skis, paddles, and fishing equipment.

Boat thieves are serious about their business and go to great lengths to burglarize your unprotected boat and accessories.

Boats are in great demand, and most boat builders can sell boats faster than they can build them. With thousands of different models and lots of look-alikes, it's easy for a boat thief to sell his loot to an unsuspecting buyer.

If someone offers to sell you a boat at a real bargain, be suspicious. If the price is too low, you may be getting a stolen boat.

Protect your boat against theft. If the boat is on a trailer, take off one trailer wheel and store it in the trunk of your car. Add a hitch lock so the trailer can't be towed away easily.

Don't leave ignition keys in the boat. Don't tie up at unattended or poorly lighted docks. When you're not using your boat, shut off the fuel line or remove the battery. Install a hidden ignition switch. It isn't easy to steal a boat that won't run. Smaller boats like canoes and kayaks are more easily stolen than larger craft, because it is easy to transfer a boat from one vehicle to another. In addition, hiding the small craft in a garage, shed, or basement makes it popular for thieves to target. When you store your boat between weekends or seasons, keep it out of sight behind the house or in the garage.

"Lock it or lose it" is sound advice for all boat owners. Run a hardened steel chain or cable (not rope) through a fixed part of a small open boat, under a thwart or around a seat, for instance. Even with a bolt cutter, a thief will pass over a strongly secured boat and go for one that is easy to untie. Be sure that what you chain your boat to is as secure as what you chain it with.

Paint your boat's name on the hull or transom. Boats with painted letters or designs are less desirable to thieves and easier to recover if lost. Manufacturers attach a Hull Identification Number (HIN) to new boats. The law requires these numbers on all boats. Record your number and keep it in a safe place.

When moored, keep extra equipment and accessories out of sight. Pull curtains, close up cabinets, and take important equipment home. If you own a small open boat, do not leave gear in it unattended.

Have a complete inventory of everything you use in boating—know when an item is missing. The chances of recovery are greater if you can report when something was taken. Mark all your equipment. In many areas, police departments will engrave your valuables free of charge.

As a boat owner you have specific responsibilities. Yet, law enforcement agencies indicate that boat owner apathy about preventive measures is a prime cause of increased boat theft. Assume the responsibility of securing your boat and its gear. If you don't want to be a victim, don't be apathetic about security. As John Paul Jones said, "Don't give up the ship!"

Virgil Chambers is chief of the Fish Commission Bureau of Boating Education Section.

Tips for Safer Water

by Larry Shaffer

All forms of boating, from sailing to canoeing to powerboating, are fast becoming favorite summer pastimes for more and more Pennsylvania residents, and with increased interest in boating comes a surge in the number of people taking up water skiing. Water skiing is not especially difficult to learn, but there are several important factors to consider, whether you are a novice and find yourself on the twin boards for the first time, or whether you have been skiing for a longer time and think you've really got the hang of it.

The responsibility for successful, safe water skiing does not rest solely with the skier, because he is only one member of the team. The boat operator and the observer, required by law, make up the two remaining members. All three people involved in this exciting sport have important responsibilities to ensure the safety of the skier as well as the boat and its occupants.

The operator is, first and foremost, just that—the operator. Operating the boat in a safe manner is his prime job. He should not be concentrating his attention on the skier. That is the main reason for having the observer on board. Because most boating accidents relating to water skiing occur just as the vessel is getting under way, the operator must be quick to check the area ahead before pulling out. Remember, most boats require more time to plane when pulling a skier, so the operator's vision may be obscured by the high-riding bow of the boat for a longer-than-usual time. The operator also needs to remember that a boat pulling a skier requires more room to maneuver. If an evasive maneuver becomes necessary, it may be better to throttle back and dunk the skier rather than risk collision. Always approach a downed skier into the wind or current when making a pick up, keeping the skier on the operator's side of the boat for better visibility.

Responsibility concerning the rules of the road do not change, even though there may be a skier on the end of an 80-foot tow rope. Incidentally, 80 feet is the maximum length of rope you may use to tow a person on regular sport skis. The maximum length for any other device other than kites is 50 feet.

It is the observer's job to watch the progress of the skier. He is the main communication link between the skier and the boat operator, allowing the operator to devote his full attention to the ski boat and boat traffic. Using standard hand signals, the observer can give instructions to the skier while relaying information to the operator. When necessary, the observer also is there to assist a fallen skier.

That brings us to the skier skimming

Skiing

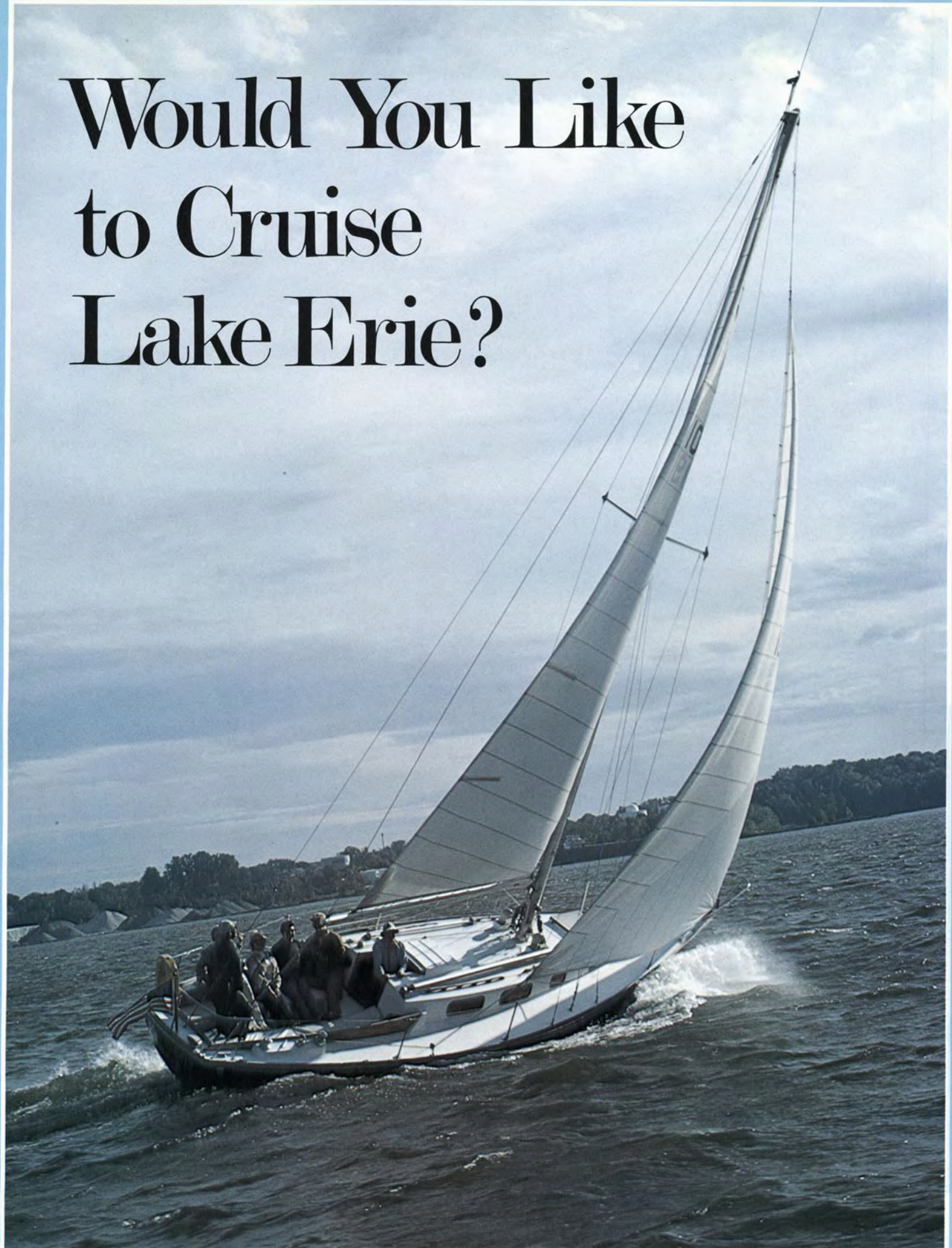
across the water at half-a-mile-a-minute or so. Sooner or later, and too often, it seems it's sooner, the skier is going to take a dunking, often hitting the water hard. Here's where the law requires skiers to wear a Coast Guard approved device, and it is imperative that the lifesaving device is correctly sized for the person wearing it. Too large, and it could easily pop completely off the skier on impact with the water.

While traveling, the skier must be alert to objects floating in the water, especially if swinging wide on turns. He should look out for bridge piers and other projections, as well as other boat traffic. When downed, it's wise to raise a ski to be better seen in the water.

All in all, water skiing is an exciting sport, but remember that it must be done safely.

Larry Shaffer creates and produces the Fish Commission's weekly radio broadcasts, from which this article is adapted. Commission broadcasts can be heard on 70 AM and FM radio stations throughout Pennsylvania.

Would You Like to Cruise Lake Erie?



by Gus Neuss, Jr.

Hundreds of trailered boats are launched each year at the many ramps in the greater Erie area. Most of them restrict their travel on the water to Presque Isle Bay and when weather and wave action permit, to more venturesome excursions on the near-shore waters of Lake Erie. Many people think that cruising the lake for any distance is limited to large non-trailered boats. As a consequence, these boaters miss what can be the truly enjoyable experience of cutting parochial ties to a single sailing locale and visiting other ports. There are, of course, some prerequisites.

The boat must be properly equipped mechanically and safely for an overwater single leg of at least 30 miles. The nearest ports to the west on the United States shore of Lake Erie are Conneaut, Ohio, and to the east, Barcelona, New York. Depending on the launch site, over-the-water distance can vary from 30 to 40 minutes for each port. The trip north across the lake to Port Dover, Canada, is about 50 miles.

The boat must be structurally sound. The engine and gear train must be in trouble-free running condition. An engine spare parts kit and tools for repair work must be carried for insurance purposes. Extra fuel and oil should be on hand in sufficient quantity to ensure a safe landfall. A working marine radio is a must. A depthsounder and a speed-ometer/odometer are desirable. Running lights must be functioning, with spare bulbs on hand. All electrical equipment, including batteries, must be checked and in A-1 condition.

Of course, all Coast Guard requirements should be met. This includes PFDs, fire extinguishers, horn or bell, throwable life preservers, flotable cushions, etc. In addition, carry a good first aid kit, with seasick medicine, at least one safety harness, and foul-weather gear for all the crew. Also equip with two anchors, one a lunch hook and one a storm anchor, with sufficient anchor rode for each. A sea anchor and a radar reflector are not a must, but should be considered. Don't forget to carry a good supply of lines for docking, and fenders and fender boards.

A well-equipped, functioning boat is of little value for a cruise without a qualified operator. No extended trip should be attempted by the untrained boater. Chart reading and dead reckoning course plotting for continuous location of position are essential. Both the U. S. Coast Guard Auxiliary and the U. S. Power Squadron offer courses in seamanship and piloting to qualify boaters for offshore sailing.

Furthermore, take short trips in varying weather conditions close to home to gain experience in the performance of the boat in other than fair, calm situations. As you gain self-confidence in boat handling abilities, you get ready to take the more challenging journey.

Finally, the key to a safe cruise is weather. Monitor the weather reports and complete your sailing plan based on optimum weather information. The Erie wind and wave action can make for rough to impossible boating conditions for small craft. Don't tempt fate. Make your cruise on the good days and get to know our neighbors. You'll make it a habit.

Gus Neuss, Jr., has sailed all over North America. He is a member of the Erie Power Squadron and the Erie Yacht Club, and he's a director of the Pennsylvania Boating Association. Mr. Neuss serves on Boat Pennsylvania*'s Editorial Advisory Committee.*

Go ahead and take the plunge—but only in the right places and with the appropriate precautions.

Swimming from Your Boat

by Virgil Chambers

Using your boat as the "platform" for swimming can be fun. The boat can take you to areas of a waterway that you normally would not think of as a swimming hole. Want to try diving? You can't dive from the shoreline, but boating out over greater depths ensures that the water is deep enough to maximize your safety. In addition, on a very warm day, you'll find the cooler water in the deeper waters.

Still, just as a responsible boater must be ready for all emergencies, a boater must be ready for a safe swimming excursion before anyone can be permitted to jump in.

Children and weak swimmers should not be allowed in without wearing a personal flotation device. Remember that the water is deeper and colder. Protect those at risk. In addition, assign someone to remain topside at all times to act as a lifeguard.

Be certain the area chosen for swimming is safe for swimming. Is it in the mainstream of boat traffic? This is not only hazardous to the swimmer, but to the other boaters as well. Did you choose an area where a current flows? Remember that you're here for enjoyment, not search and rescue. Do you know the bottom conditions of the area? Cliffs, rocks, and debris can cause serious injury or death. Know your water!

Keep tabs on the weather, too. Call in your swimmers when any sign of bad weather shows.

Can you provide the necessary equipment to permit swimming from your boat? Boarding ladders make exiting from the water easier and safe. A throwing device can help a tired swimmer return to the boat. A sound-producing device like a whistle or boat horn can alert swimmers and approaching boaters to any need or hazard. Don't forget the towels. The draft on wet swimmers when boating back to shore can be downright cold!

Just as boating is regulated on some waterways, swimming is not permitted on all waterways. Be sure you are aware of any restrictions and special regulations. For example, in Pennsylvania state parks, swimming is allowed only in designated swimming areas. Consequently, no swimming is permitted from boats. However, most federally controlled lakes and many private lakes do allow swimming from watercraft, so remember to boat and swim by the rules.

One last item: Skip the alcohol. As the boater, do you want the responsibility of a less-than-sober swimmer? And as the swimmer, would you trust a less-than-sober boater?

When calling in your swimmers, make sure to take a head count, and never start your boat with anyone left in the water.

Swimming and boating can be a great diversion, and a refreshing activity. You know that the water is no place for horseplay. That's why you take precautions. That's why, when you use your boat to swim, you're nobody's fool. You have fun, safely.

Virgil Chambers is chief of the Bureau of Waterways Boating Education Section.

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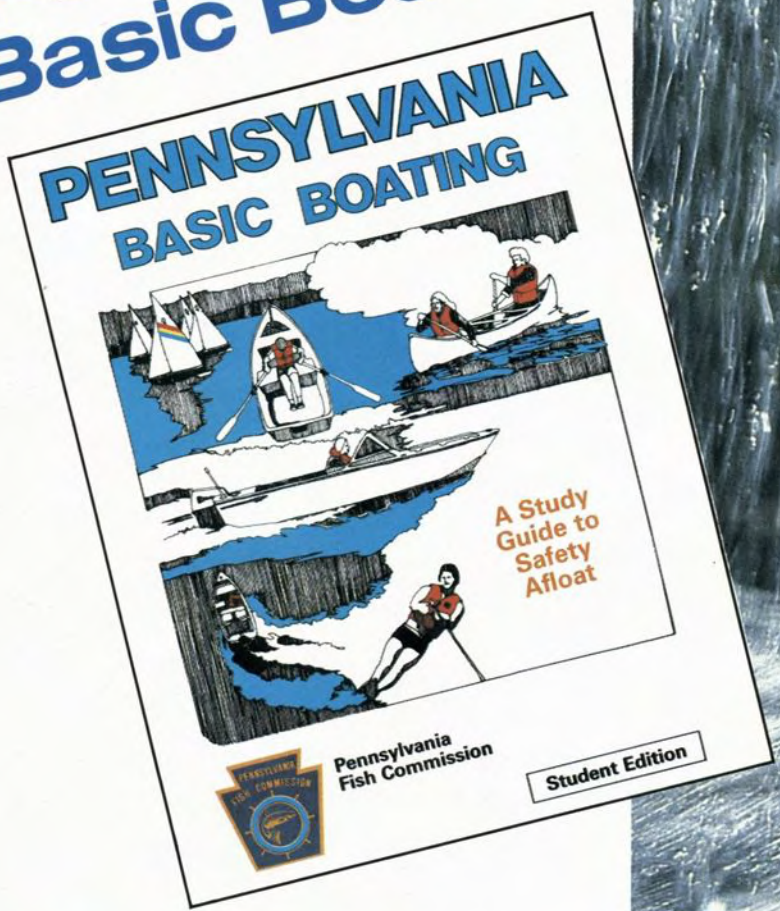
The updated Pennsylvania Basic Boating



Pennsylvania Basic Boating is the Fish Commission's 84-page book on the rudiments and requirements for all Commonwealth boaters. The book's 26 chapters detail information on boat types, equipment, navigation, safety, emergency measures, and a skipper's duties. This book is available for $1 postpaid. Send requests to: Boating, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. Make checks or money orders payable to **Pennsylvania Fish Commission.**

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