

January/February 1986
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BOAT

Pennsylvania

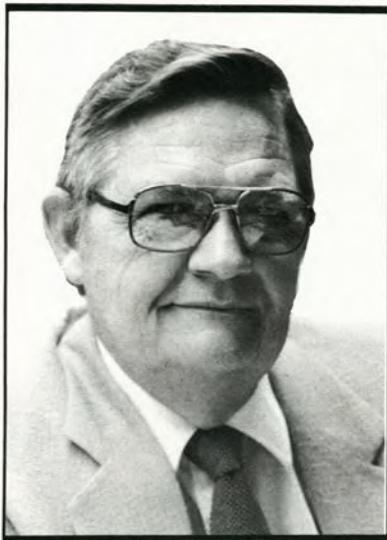


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The Keystone State's Official Boating Magazine

PERSPECTIVE ON ACCOMPLISHMENTS



Gene Spori
Assistant Executive Director
Bureau of Waterways
Pennsylvania Fish Commission

As the new year begins, it is time to reflect on the accomplishments of the previous year. Boating was exceptional during most of the year with good water conditions and fair weather. The number of accidents was at an all-time low primarily as a result of the absence of high, cold water in the early part of the year. We would also like to think that our educational efforts as well as the common sense of Pennsylvania's boaters had a great deal to do with this decline.

Law enforcement efforts continue to make the water safe for all users. Citations were issued for 3,481 violations of the Boat Law and some 14,000 warnings were issued. The enforcement of the new drunk boater law gained much media attention, but the results of a full year of enforcement showed what we believed all along—that our boaters are some of the best in the nation. Despite national statistics to the contrary, Pennsylvania had only 15 arrests for operating under the influence of alcohol, and most of these arrests were made in conjunction with the violation of some other regulation.

The number of boat registrations continued to climb. Over 228,000 boats were registered, an increase of over 11,000 from 1984. This 5 percent increase continues a long history of consecutive increases, emphasizing the quality of water recreation opportunities and the health of boating in Pennsylvania. Also notable is that 14,000 people indicated that they were first-time boat owners.

Boating safety education continues to follow the course set several years ago with prime emphasis placed on the education of youth in conjunction with high school aquatics courses. Last year, the course was taught in 18 school districts. It is our hope that this program will be expanded to include many more in the near future.

Also taking a great deal of time and effort of the section is the river rescue training project. The benefits of this

program became quite evident when in late September a volunteer fire company used the training it received from the Commission to rescue by boat five individuals stranded by the high water produced by Hurricane Gloria. Our program was credited with the success of the rescue.

The Fish Commission operates a network of over 250 developed boating accesses across the Commonwealth. During this past year, major additions to this system were accomplished at Halifax, Frankford Arsenal, Montgomery, Muncy, and Conneaut Lake. Several important new sites were acquired, and initial engineering work was completed for access development in the coming year. The maintenance of these areas has become an increasingly time-consuming, expensive undertaking. Five regionally headquartered maintenance crews are responsible for the upkeep of these areas as well as repairing hatchery facilities, Commission-owned buildings and equipment, lake structure management, and other duties.

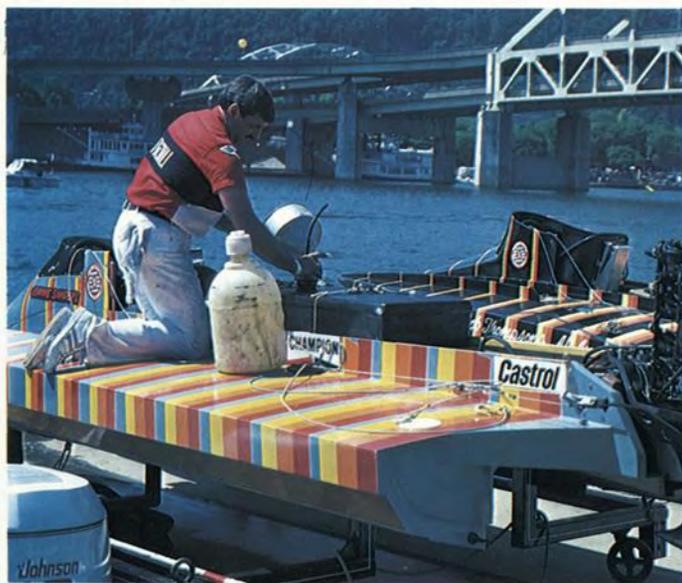
The magazine you are now reading is the result of a concerted effort by both the Office of Information and the Boating Safety Education Section. Funded in part by the Coast Guard grant for boating safety, this publication is an effort by the Commission to provide the boaters of the Commonwealth with local boating information. The circulation has topped 10,000, a most encouraging figure for a magazine of this type in its first year of operation.

Overall, it has been an exceedingly good year and an exciting one. We're proud of our accomplishments, and we're proud of our boaters. A complete copy of the Annual Report of Fish Commission activities is available by writing to: Publications Section, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.

A handwritten signature in black ink, appearing to read "Gene Spori". The signature is fluid and cursive.

BOAT

Pennsylvania



The fastest racers page 26



French Creek odyssey page 28

Beneath the surface appearance of snow-covered trailered boats and ice-locked shorelines, we're swamped with things to do—the repairs and maintenance we're wrestling with, the equipment changes we're making, and the new boating challenges we're anxiously seeking. Along these lines, paddlers could be spurred on by the articles that begin on pages 8 and 12, and sailors might be equally stimulated by the information beginning on page 18. Motorboaters could also be inspired by the article beginning on page 26. This issue's cover was photographed by *Boat PA* editor Art Michaels.

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Pennsylvania Fish Commission

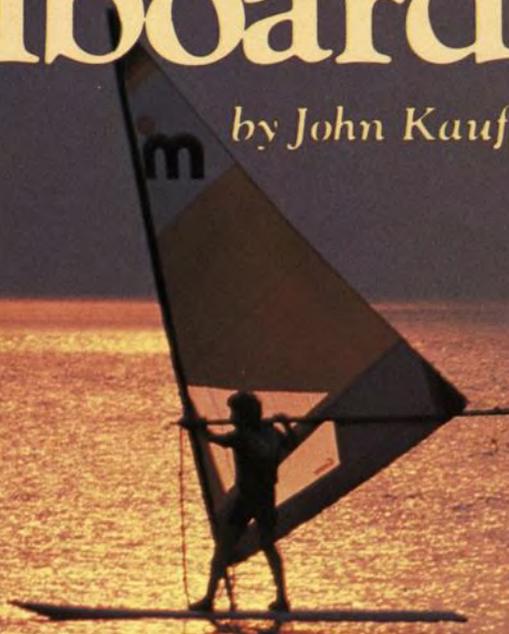
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Choosing a Beginner's Sailboard

by John Kauffman



Pennsylvania is an ideal state for a beginning boardsailor. The lakes of our Commonwealth provide easy access to water for everyone. Many lakes prohibit motorboats, which helps to keep the water smooth. In fact, boardsailing is a more logical choice than sailboating for many sailors. The light, shifty winds of hill lakes make a board more responsive than a heavier boat. A board is easier to transport and store than a boat, and it's often easier to buy and maintain.

Boardsailing does not require strength, but rather balance, endurance, and good swimming ability. The first step in buying a board is to buy a PFD. The Coast Guard approved jacket type is comfortable and meets the law. Wear it whenever you are on the board—your strength and confidence as a swimmer are worthless if you've been hit by the boom or have cramped muscles.

When you go to a dealer or peruse sailing catalogs, it is easy to be overwhelmed by the number of boards and options. But a sailboard is actually simple, with only half a dozen parts to consider. Once you understand what to look for, the best board for your needs becomes obvious.

Hull

The largest, most expensive part of a sailboard is the hull. The hull also has the greatest role in making a board easy for beginners. Boards fall into four classes. The first is Division I, characterized by a flat bottom, wide bow and stern, and a large volume. Division II boards are more boat-like; large, deep hulls with a round bottom and an even greater volume. The bow and stern are broad, like those in Division I. "Fun" and wave boards, the last two classes, are short, narrow, and tapered forward and aft. Very low volumes and a series of foot straps on the deck make wave and fun boards sensitive and specialized, not well-suited for a beginner.

On the other hand, both division I and II boards forgive a beginner's mistakes, and are well-suited for Pennsylvania's lakes and rivers. Most division I and II boards are 12 to 13 feet long and weigh 45 to 55 pounds. The longer length provides "tracking"—the tendency of the board to sail on an even, straight course. A large volume makes a board easier to balance and requires less wind to keep moving.

All boards are made of a foam core covered by one of four types of skin. The first two are ABS and ASA, types of plastic that can be molded in two halves and welded to the foam core. Polyethylene, the third type of skin, is "roto" or "blow" molded to produce a seamless shell. The final type of skin, fiberglass, must be laid up by hand. ABS, ASA, and polyethylene are more durable and less expensive than fiberglass, well-suited for the beginner. Of these, ABS is least expensive and polyethylene most durable.

The shape of the hull determines freeboard, or the height (thickness) of the hull above the water when loaded with the rig and sailor. This distance varies with the sailor's weight and position on the board. On a still day and flat water, stand just forward of the mast and then just aft of the daggerboard trunk. On a good beginner's board, there should be at least one inch of freeboard at both the bow and stern.

Daggerboard, skeg

Below the hull extend two fins: a daggerboard in the middle and a skeg at the stern. The daggerboard extends through the hull via a daggerboard trunk, while the skeg is rigidly attached below the hull. Of the two, the daggerboard and its trunk require more attention by the boardsail buyer.

A good daggerboard has three qualities. First, it should be strong, smooth, and buoyant. Second, the daggerboard should be easy to insert and remove from the trunk. Inspect the mechanisms for keeping the daggerboard tight in the trunk. Consider the effect of sand getting into the system. Lastly, the daggerboard should be adjustable. Although

you keep the daggerboard fully extended in the beginning, before long you will want to make adjustments in the blade's depth and angle. Be sure also that the daggerboard automatically swings up if it is accidentally run aground.

The skeg of a sailboard is easy to check out. You should be able to remove the skeg while traveling, but still have a strong, durable anchoring system.

Sails

Sails are the second most important part of your purchase. The terms describing sails can be confusing, but there is clearly a right sail and a wrong sail for the beginner.

"Aspect ratio" refers to the shape of a sail. A high aspect ratio sail is more of a broad, even triangle. Leave the high aspect rigs to the surf sailors. A beginner on a lake is best served by the low aspect sail.

Sail size ranges from about 4.5 square meters (48 square feet) to about 8 square meters (87 square feet). Larger sails allow better speed in light air, and the smaller sails decrease the power in heavy air. I recommend a smaller sail for a beginner. Most novices are interested in successfully staying on the board and learning good technique rather than developing speed. As you become more proficient, you can still use the small sail on heavy days and buy a new, larger sail for speed in high winds. When shopping for a small sail, don't buy a "storm sail" (less than 4 square meters), which, although small, is cut quite differently to provide power in very high winds.

Sail cloth

Sail cloth has come a long way from canvas. Almost all sails are constructed of dacron. The dacron cloth was originally designed for very high stresses in racing yachts, so it rarely fails in sailboard sails. Modern dyes do not significantly weaken the cloth, so feel free to indulge in the wild Hawaiian designs. A large window, however, is important. Ideally, the window is at eye level so that you can naturally look to the lee side without crouching down to watch for danger.

Battens

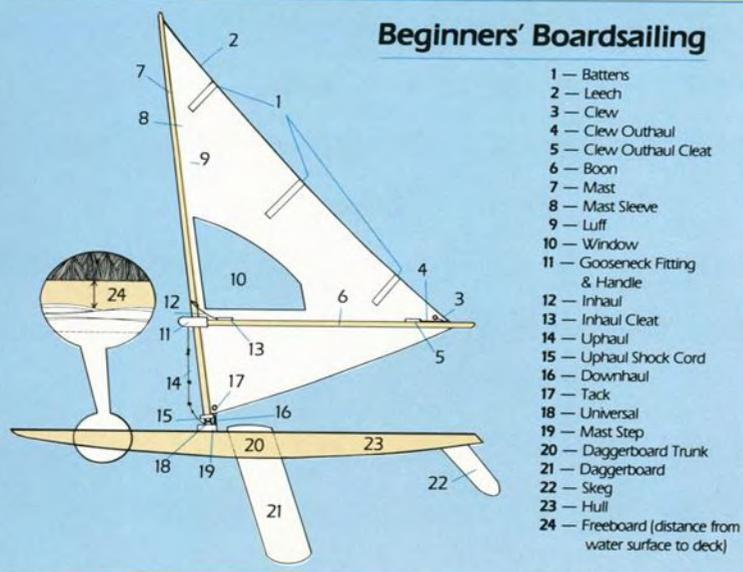
Battens are crucial on the sailboard. The most basic sails have a series of battens that extends only partially into the mast. In more advanced designs, a series of battens extends from the leech all the way to the mast, and each of these battens is individually adjustable. For a beginner, the mini-batten style is more practical. Fewer battens mean lower cost and less expertise required to tune (the full battens) for the day's wind conditions.

It is important to inspect the sail carefully for tidy, tight stitching at the seams. Check to make sure that the reinforcing in the corners is accurately matched with the layers of cloth in the panels. Are the tapes along the edges securely stitched to the cloth? Look at the eyes of the clew and tack. Are the fittings accurate and secure? If you are not buying a board/boom/sail/mast unit, be sure that the sail fits within the boom and over the mast.

Masts

A sailboard mast should meet three criteria. First, it must support the sail and provide a backbone to give the sail the proper shape. Second, the mast should float. Third, the mast should be durable enough to withstand the knocks of

Beginners' Boardsailing



graphics — Ted Walker

workout with your hands. Twist the boom, pull it back from the mast, lever the boom up and down, and do these motions in combination. Now check to see how tight the gooseneck is. The boom will go through all these motions as you sail. If the gooseneck system can't take it, look at another rig. If the loosening is slight, check the means for tightening the gooseneck while under way, especially the strength and size of jam cleats.

On the forward side of the gooseneck fitting the uphaul is inserted, and you may find a handle molded there as well. Check to see that the uphaul has a secure anchor. A handle is useful for the first lessons, but after a few hours, you will rarely use it again.

Universal

The key to the development of the boardsail was the development of the mast base universal. It is here that there is the greatest variety on the market. It is important to keep in mind the four requirements of a good universal. First is that the system must be strong. The entire power of the sail is at times transmitted to the hull via this joint. The second need is to be durable and replaceable. The third is a safety factor: the joint should not have exposed edges or parts that could injure the sailor's toes. Finally, the universal must be cleanable.

There are three types that are common and suitable for the beginner. First is the mechanical metal joint first used by Windsurfer. This design has proven to be acceptable, provided that the rubber hood is regularly replaced. They occasionally fail from metal fatigue, and the Windsurfers had a problem with the wedge coming out of the mast step.

The second type is the "rubber tendon," as on the Waylor and Windsurfer Hawaii. While strong and safe, these joints should be replaced regularly. Check to see how easily this task is done. Also inspect the fittings around the tendon: threads will almost invariably become sand-clogged and worn.

Finally, there are a few rope joints on the market. Inspect the design carefully to ensure that the mast foot can't come in contact with the deck of the hull. These universals are easy to inspect for wear, and they are easy to replace.

A note on used boards: inspect them carefully. Check the hull for cracks, repair marks, waterlogging, and splits at the seams. Look over the sail for wear at the boom line, corners, and batten pockets. Check to see that the threads in the sail seams haven't worn out. Beware of play in the daggerboard trunk. Although the above faults are common, don't dismiss a board because of one fault. Talk to a dealer about the cost of a replacement part. Then take that cost into account when you offer a price on the board.

Most stores carry several books on boardsailing. Before buying, look up one of the topics covered in this article and see if it gives at least as much detail on the subject as you read here. I have found *The Sailboard Book*, by Jake Grubb (W. W. Norton Company, 1984), to be good. Also see the July 1985 issue of *Consumer Reports* for an evaluation of boards for beginners.

The sailboard market is very exciting. New technology appears weekly, and the marketing is aggressive. Take your time in evaluating several sailboards. Get to know the dealers in your area. A wise purchase makes your entrance to the sport faster and easier.

transportation on a roof rack.

With the experimental incorporation of aerospace materials, sailboard masts are in a stage of rapid development. But for the beginning boardsailor, there are three good options on the market. The first is the original: soft fiberglass. Fiberglass is inexpensive and durable, and tends to be forgiving due to its softness. However, this softness prevents the sailor from obtaining the optimal sail shape.

The second type, a stiffer fiberglass mast, uses more layers of glass and firmer resins. A stiffer mast gives better sail shape, at the expense of more weight and less forgiveness.

Finally, there are aluminum alloy masts, which vary greatly depending on the standards of the manufacturer. Aluminum can be stiffer and gives a better sail shape, but it can also become permanently bent over time. Any of the above types is fine for a beginner. First-time sailors need the flex of the soft fiberglass, while those familiar with other types of sailing can probably appreciate the sail shape only afforded by a stiffer mast.

I would buy an aluminum mast only from a dealer who has a lot of experience with that brand of mast. A good aluminum mast costs you more than the fiberglass, but it could give you the best sail shape.

Booms

Booms present two decisions to the buyer: type of material and type of gooseneck. Most booms are now made of aluminum or fiberglass. Either is fine for a beginner. The gooseneck is one of the critical fixtures on a rig because it attaches the boom to the mast. There are many styles, and the number grows as new patents are granted.

The best way to choose is to make a two-fold test at the showroom. First ask the dealer to demonstrate the knot or mechanism that makes the joint. Do you feel comfortable doing this each time you rig? If knots are difficult for you, don't get a rig that requires an intricate knot. Then, once the dealer has attached the boom to the mast, give it a good



Is the Ice Safe?

Russ Gettig

Even though you may be anxious to enjoy activities on or near Pennsylvania waterways this winter, beware! Ice can be dangerous. Here are some hints on determining ice safety, for all your winter waterway activities.

- Lakes rarely freeze uniformly. Early and late in the season, ice that's safe in the morning may be dangerous by late afternoon.

- Prolonged frigid weather makes safe, thick ice. Use an auger to test ice. Four inches of clear, blue ice is probably safe for lone anglers and small groups of fishermen.
- Single, unbroken pressure cracks in the ice are probably safe to cross, but stay away from areas where cracks meet or intersect.
- Be extra careful where water levels vary—rivers, streams, inlets, outlets,

coves, eddies, and springs. Moving water erodes ice from beneath, as does wind pushing water under ice.

- Avoid areas with "stick-ups." Protruding logs, brush, plants, and docks absorb heat from the sun, thus weakening surrounding ice.
- Dark areas of ice may reveal places where ice is thin. Avoid these spots.
- You will probably find ice thicker on a waterway's north shore than on the south shore.



HOW TO BUY A USED CANOE

BY CLIFF JACOBSON



photos by the author

Buried deep in the pages of every canoeing guidebook is a sentence or three devoted to the art of “buying a used canoe.”

The text usually reads something like this . . .

“Sight along the keel and make sure it is straight; check for damaged fittings which could break and cracks which might spell failure. Avoid any canoe which has been patched or welded.”

Hardly profound advice. Extolling the obvious may make for pleasant reading, but it won't get you a good deal on a used canoe. What will is an in-depth appreciation of the following factors.

Price

Know the new retail price of the canoe before you buy it. Figure on paying up to 85 percent of cost for well-maintained, brand-name canoes and around 60 to 70 percent for lesser-known cheapies. Age of the canoe means nothing. “Condition” is the determining factor. Good canoes, like all good boats, appreciate with time, so you can't go wrong by buying quality.

Locating your treasure

Occasionally, you'll see an ad that reads, “Canoe for Sale,” followed by an extremely attractive price. Don't be fooled. Invariably, this is an attempt to sell a very bad canoe for about what it's worth, or for much more than it's worth. Almost without exception, the seller knows the value of his product. So *caveat emptor*: Brand names that command respect will be clearly specified in newspaper ads.

Home-built canoes are the exception to this rule. Canoe enthusiasts often turn out exquisitely crafted fiberglass and woodstrip canoes at a fraction of the cost of comparable factory models. These “builders” frequently become disenchanted with the performance of their creations and want something better. So they price these boats for a quick sale—often little more than the cost of new building materials. I've sold two of my own woodstrip designs for this very reason. One, a 45-pound solo canoe, went for just \$200, complete with nylon splash cover!

However, you do have to be very careful when you buy home-built canoes, for there are some really bad ones for sale. The key to finding good

ones is to read sale ads which appear in canoe club newsletters. The best canoes are never advertised in newspapers.

You'll also want to rub shoulders with the competitive canoe crowd. Club newsletters (and sometimes local papers) list the times and locations of canoe races and training seminars. Almost without exception, the best deals—and the best leads on deals—are found at canoe races and seminars. The only canoes you'll find advertised in local papers are low-performance models with “mass appeal”—the aluminum and polyethylene ones. If performance, light weight, and beauty are important to you, stay away from the classifieds.

Home-built canoes: how to tell the good from the bad

Use some psychology here: Ask the owner about the plans used to make the boat. Did plans come from a popular magazine whose emphasis is not canoeing? Or are they from a canoe specialty magazine or one of the state or national canoe clubs? Canoes built from popular magazine plans are best described as “terribly low performance.” Many are little more than pointed fishing platforms.

There are, of course, good and bad



Here are two views of a woodstrip racing canoe. Racers are minimalists; they want a canoe that is as light as possible, even if it means sacrificing strength. Consequently, a well-used racing canoe may show considerable damage — damage you'll have to repair. On the other hand, racers sometimes sell a good canoe cheap because they think it's no longer competitive, and that may mean a very good deal for you. Remember that canoe races are a good place to frequent if you want a good deal on a canoe.



club plans, but the worst of the lot offers far greater performance than the average factory canoe. Besides, canoe enthusiasts are dreadfully honest about the performance of their boats. They won't lie to you, even if it means losing the sale. Most would rather see their old canoe fall into the hands of an enthusiast rather than a casual paddler. Tell an enthusiast a good sob story and watch the price come down!

Racing canoes

Occasionally, a racing enthusiast will offer a sleek, fast canoe at a very attractive price, which, depending on your perspective, may or may not be a very good deal. Racers are minimalists; they want a craft that's as light as possible (most 18½-footers weigh in at 35 pounds or less). Race boats are built with cores of closed-cell foam, sandwiched between one or two layers of Kevlar. They are by no

means fragile, but they are not very strong, either.

Racers push their canoes hard and subject them to considerable abuse, so they become wrecks real fast. But that doesn't daunt these competitors, for aesthetics are not part of the racing game. Winning is, so when they lose, they naturally assume their boat (not their body) was at fault. If they lose a lot, they lose faith in their canoe and yearn for a more competitive model. With the regionals, nationals, and planetary championships just a month away, they panic: They've got to peddle their "pig" quick so they'll have the money to purchase something better. Very serviceable (and competitive) racing canoes that originally retailed for over \$1,000 can often be bought for \$500 or less after an unsuccessful race. Canoe races are good places to frequent if you want a good buy on one of these canoes.

Assessing the damage of a used canoe

You can be too picky when evaluating a used canoe. Galled varnish and torn seat cane is unsightly, to be sure, but they are also easy to repair. So are chipped gel coat, surface scratches, and the like. Of course, you'll want to play up your dissatisfaction with these blemishes and drive the price down, but be aware that minor surface damage is just that—minor.

Unacceptable damage

Unless you're very skilled in canoe repair, you'll want to walk away from boats that show the following types of damage:

- **Twisted stems.** Turn the canoe over and sight along the keel line from each end. The stems (ends) should be plumb, not twisted to the right or left. Ironically, some top-line production canoes feature fractional amounts of twist at one or both ends (usually the result of a bad plug that was used to make the mold), and this is acceptable if the twist is very small and above the waterline. Twisted stems usually mean a twisted hull, and twisted canoes don't paddle straight. A friend of mine has such a canoe. To keep it tracking straight, you take five paddle strokes on the left to every three on the right!
- **Hull out of round.** The formula for achieving this condition is to store a fiberglass/Kevlar or Royalex canoe

on overhead rafters in a garage with one side exposed to a south-facing window. In time, the heat from the sun will warp the canoe. Another sure-fire method is to store the canoe with one side touching the ground. Wait a year or two and you'll have a delightfully asymmetric hull.

• **Hogged keels.** Keels and keel lines (the best canoes don't have keels) should be straight or gently rockered like the rails of a rocking chair. If they're hogged (bent in, in the middle), the canoe won't paddle right. Aluminum canoes frequently suffer hogged keels, but these are easy to straighten. A hydraulic jack and some lengths of two-by-four work better for this procedure than a mallet. Set the canoe on a flat surface and crank the jack a notch at a time watching the curve of the keel as you jack. Hogged aluminum keels can generally be restored to the original contour in a matter of minutes by this process.

Hogged keel lines on non-metal canoes are another matter. They cannot be straightened. In all likelihood, they are the result of rigorous application of the "hull out of round" formula, explained above.

Note: You don't need scientific equipment to tell if a canoe is twisted, out of round, or hogged. Your eyes are the most precise measuring device you can find. If a canoe "doesn't look right," it probably isn't. Don't let anyone tell you that what you see as a "bend" is an optical illusion!

• **Delamination of fiberglass/Kevlar.** It's rare today to find a canoe that shows signs of delamination. However, manufacturers experienced some horrendous problems with the early Kevlar canoes, and you may encounter one of these.

Look for a chalky or resin-starved appearance on the inside of the hull, especially in regions where the hull has been subjected to flex (the bottom, and sidewalls near the seats). Unfortunately, there is no way to repair delamination short of sanding out huge layers of material and re-glassing.

On a positive note, there is no certainty that delamination will spread. I had a very early Kevlar canoe some years ago that exhibited significant delamination in the bottom. I used that canoe in tough water for 10 years without difficulty and never experienced problems with

it. Nevertheless, you are probably wisest to reject any canoe that indicates this condition.

• **Leaking rivets in aluminum canoes.** Always try a canoe before you buy it. That's the only practical way to ascertain whether or not the hull is sound. I've replaced rivets and ribs in aluminum canoes, but it is not an easy process. The only way to repair a leaking rivet is to replace it with an oversized one.

• **Broken gunnels.** Broken or severely cracked gunnels can be repaired with epoxy and screws, but in the end, seldom look right. If you sight down the rails of a canoe and see a broken curve, forget it. Re-forming the curve correctly usually requires installation of a new rail—a half-day's job, assuming you own a table saw and wood clamps. And obtaining wood gunnel stock longer than 16 feet (especially clear white ash or Sitka spruce) is not easy. You may have to splice short pieces of wood to get the length you need—a tedious process.

Patched canoes

Patches always depreciate the value of a canoe, though they seldom affect its strength. On the contrary, a properly patched area is often stronger than the surrounding material. This is especially true when an epoxy-fiberglass patch is applied to a polyester or vinylester hull. Take offense at patches when you haggle the price, but don't be concerned about possible failure.

• **Canoes that can't be patched.** This is a misnomer because any canoe can be patched. However, polyethylene, Royalex, and aluminum canoes don't patch very well. Sure, the repair will hold, but it's seldom very pretty. There's really no way to patch these canoes so that they look factory-new.

Stay away from welded canoes. The surrounding metal invariably loses its temper and becomes brittle and prone to failure.

Gel-coat damage

The thin, hard surface layer on the outside of fiberglass/Kevlar canoes is called "gel-coat." (Racing canoes are usually built without gel-coat to save weight.) Gel-coat provides abrasion resistance and color to the hull.

One trip down a rocky creek is all that's necessary to scratch or gouge the gel-coat. Scratches show "white"

(regardless of canoe color), and are most visible on dark-colored hulls.

Generally speaking, a canoe drops \$80 to \$100 in value after it receives its first good scratch in the gel-coat. Substantial surface scratches and gouges may reduce the value substantially, by up to 50 percent of "new condition" cost.

Don't over-react to the seriousness of gel-coat damage. Fact is, a glass or Kevlar canoe is almost certain to incur some gel-coat damage every time it is paddled. Fortunately, repairing these small abrasions is easy.

All in all, your dream canoe is out there, and if you heed the advice in this article, you can greatly increase the chances of finding it.

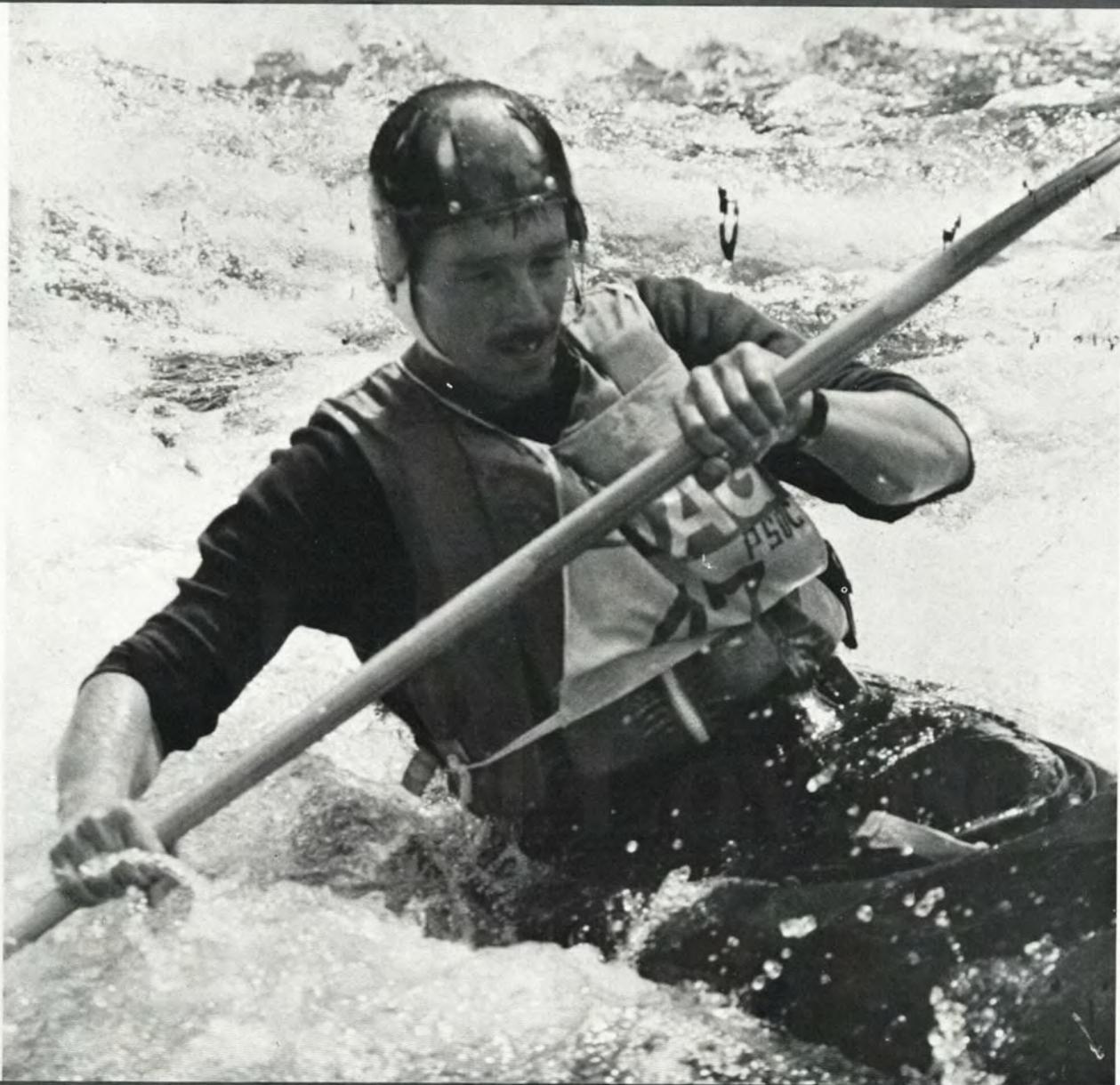


Summary of a good buy on a used canoe

1. Know the current retail price of the canoe before you buy it. Good canoes command 80 percent of their current market value; cheapies, 10 to 20 percent less.
2. Stay away from the classified ads in newspapers unless you want a typical aluminum or polyethylene canoe. If brand names are not specified in the ad, you can bet the canoe is a piece of junk.
3. Home-built canoes may be good or bad. The good ones are built on club forms and are advertised almost exclusively in canoe club newsletters and by word of mouth. The bad ones are usually constructed from plans supplied in popular magazines and are invariably advertised in newspapers.
4. Canoe races and seminars are good places to frequent if you want a good buy on a used canoe. Enthusiasts want their old canoes to go to other enthusiasts.
5. Don't over-react to minor surface damage: Galled varnish, scratched gel-coat, and surface cracks in woodwork are easily repaired. But don't buy a canoe with a hogged keel, twisted stem, broken gunnel, or hull that's out of round.
6. If a canoe "looks" out of round or twisted, it probably is. Your eyes are a most accurate measuring device.
7. Good canoes appreciate. Bad ones do quite the opposite. You can't go wrong by buying a good used canoe.

The Jack Anderson Memorial Loyalsock

Slalom



by Dave Wonderlich

Meandering through sleepy pools, then boiling and swirling along steep, rocky mountainside banks, the Loyalsock is the heartbeat of World's End State Park. This beautiful, wild location is the setting for the annual Jack Anderson Memorial Loyalsock Slalom. It is a race where spectators are able to be in the center of the action. Onlookers line the rocky shoreline to watch canoeists and kayakers pit their skills against the turbulent waters. The audience is only a few feet away as cold spray splashes from the skilled paddlers and the gates wait motionless in the eddies.

The race was begun in 1964, and shortly thereafter hosted the Eastern United States Championships and the Middle States Divisional Championships (Virginia, West Virginia, Maryland, Delaware, southern New Jersey, eastern Pennsylvania) for open boats and decked boats.

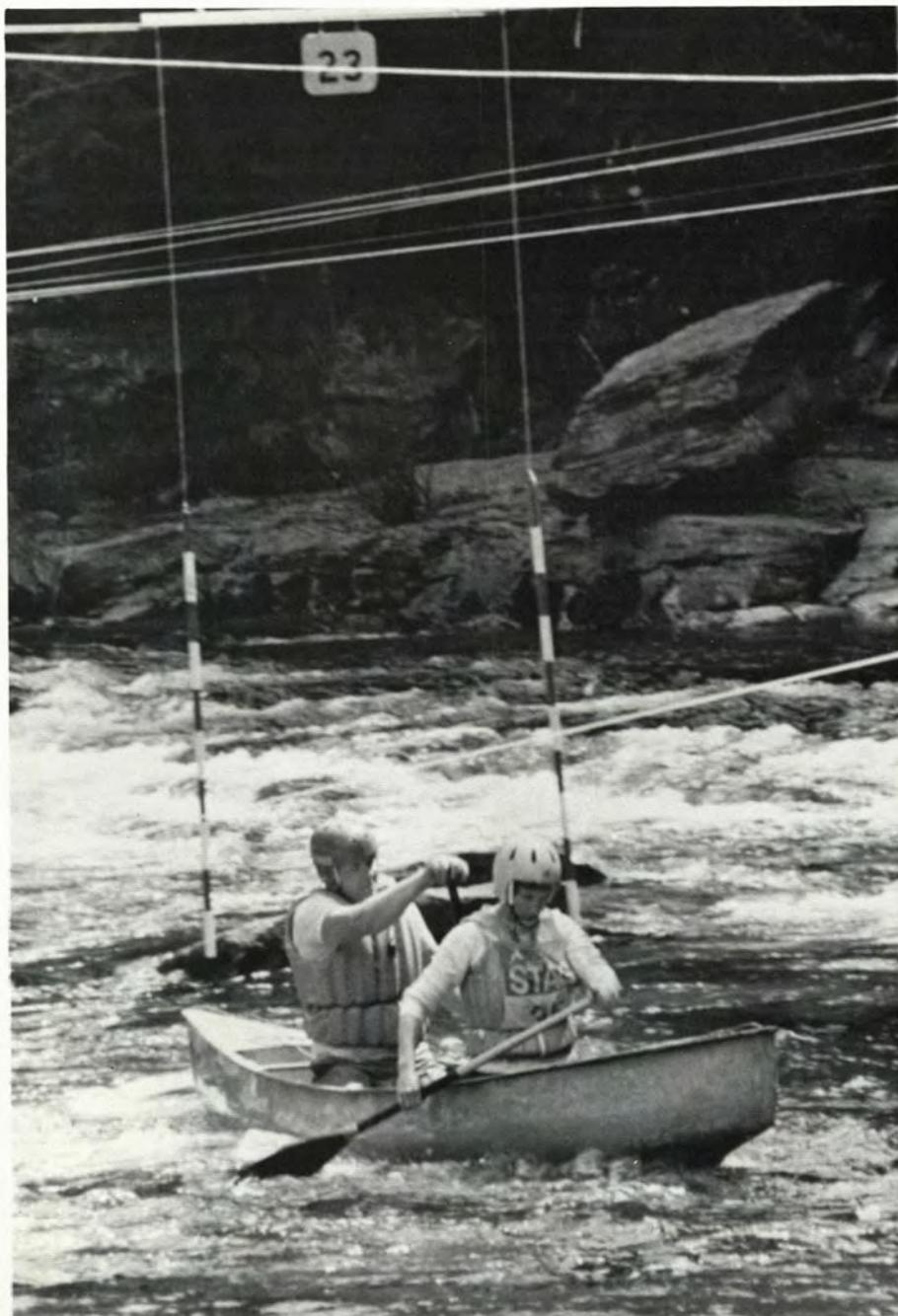
The race is historically one of the oldest continuously running events in the United States. It honors the memory of Jack Anderson, formerly of Montoursville, who was a member of the Wildwater Boating Club, which originated the race. Anderson's contributions and enthusiasm for the race helped keep it running continuously over the years.

The race is not one for novices. The race is held early in the spring, so the first weekend after trout season opens or usually the third Sunday in April, the weather is often uncooperative and the water, coldly unreliable. The variable conditions and type of water make the race the perfect challenge for intermediate and advanced-level paddlers. The water can change from morning to afternoon, and Saturday to Sunday. In 1983, the water level rose two feet from the start of the race to the finish in one day. The course is now laid out according to existing water conditions.

The number of entries determines the number of classes; there are usually eight to 10. Classes include single and double men's, women's, and mixed in canoes and kayaks.

For information and registration, contact Penn State Outing Club Slalom Chairman, 4 Intramural Building, University Park, PA 16802.

photos by the author



The Jack Anderson Memorial Loyalsock Slalom is sanctioned by the American Canoe Association and sponsored by the Penn State Outing Club in cooperation with the Department of Environmental Resources Bureau of State Parks.

When you receive the information, you may find that the race will be host to the Eastern Slalom Championships again this year. The race is sanctioned by the American Canoe Association and sponsored by the Penn State Outing Club in cooperation with the Pennsylvania Bureau of State Parks.

World's End State Park has camping facilities and a snack bar. A listing of places to stay can be requested with the registration materials.

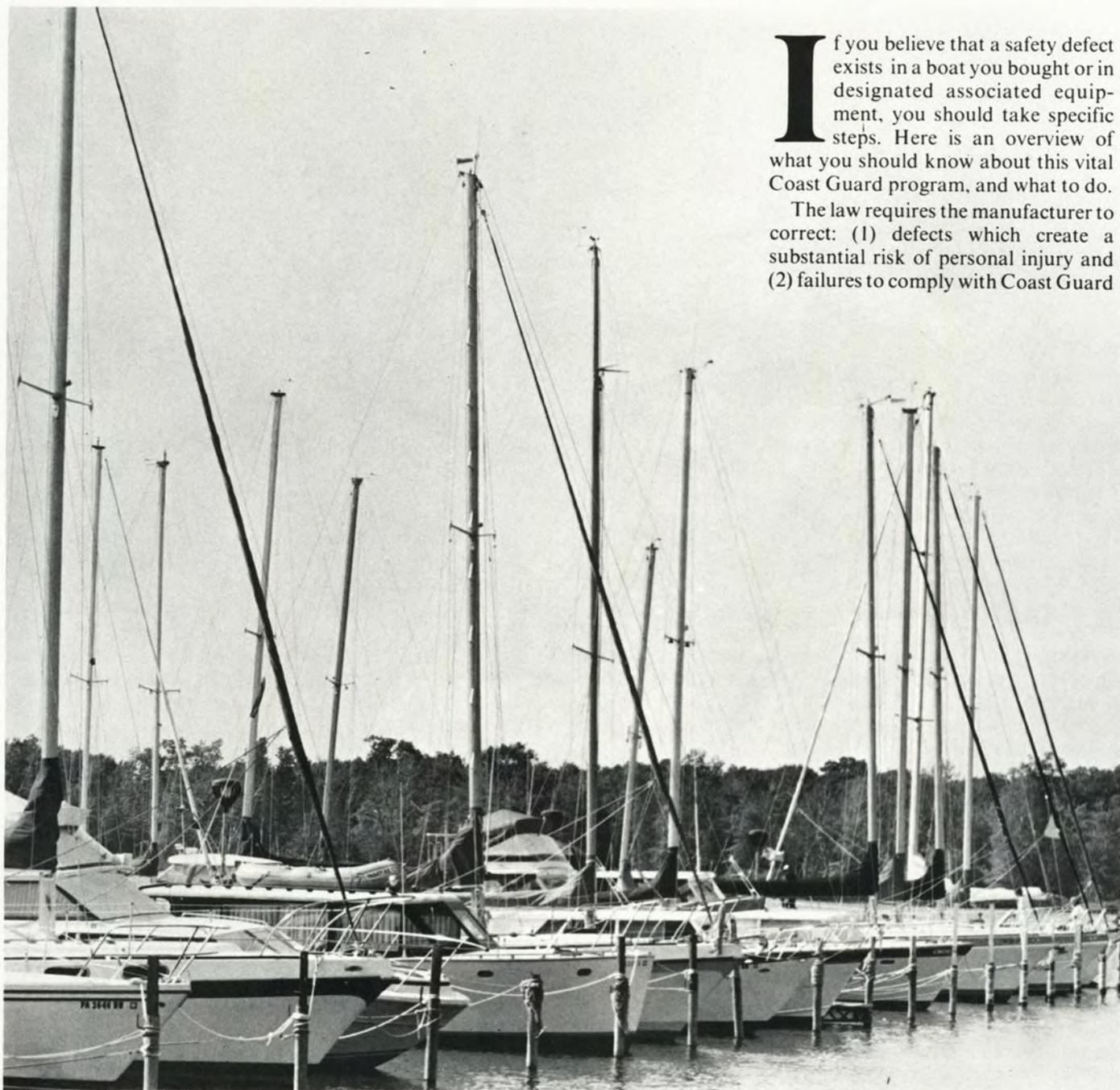
Whether you are a participant or a spectator, the beauty of the interplay of the water and mountains in this remote part of the state will make the visit a lasting memory. Each year, people go back, and each year they marvel at how the racers read the water and maneuver their crafts through the eddies and white water between the steep banks of the Endless Mountains.



The Coast Guard Boating Safety Defect Notification Program

If you believe that a safety defect exists in a boat you bought or in designated associated equipment, you should take specific steps. Here is an overview of what you should know about this vital Coast Guard program, and what to do.

The law requires the manufacturer to correct: (1) defects which create a substantial risk of personal injury and (2) failures to comply with Coast Guard



Art Michaels

Safety Regulations for boats and designated associated equipment. The Coast Guard defines "designated associated equipment" for defect notification purposes: as: inboard engines, outboard engines, and sterndrive units.

There are certain time limits on the defect notification and correction requirements. The law does not apply to boats or designated associated equipment manufactured before the effective date of the law (August 10, 1971), or manufacture of the boat or designated associated equipment.

The law is enforced by the Coast Guard Office of Boating, Public, and Consumer Affairs at Coast Guard Headquarters, Washington, D.C. 20593. Investigations of alleged or possible safety defects may be carried out by the Boating Safety divisions in the various Coast Guard districts (field offices).

How the defect notification program operates

Either the Coast Guard or the manufacturer can determine that a safety defect exists. If it is determined that a safety defect exists, the manufacturer must notify the first purchaser (first retail owner) and subsequent purchasers, if known, by certified mail. To be prepared for this possibility, most manufacturers record the name and address of the first purchaser on warranty cards or records created at the time of purchase in the retail store.

The notice sent by the manufacturer to the first purchaser must include a clear description of the defect, an evaluation of the hazard created by the defect, and a statement of the measures to be taken to correct the defect.

What will the manufacturer do to correct the defect

The manufacturer must assume all costs and expenses necessary for correcting the defect. Manufacturers can choose among several options to correct the defect. Here are some examples:

- Replacing the defective item with an equivalent non-defective item.
- Refunding the full purchase price on recall of the item.
- Having the defect corrected at a dealer/service facility located near the consumer.
- Having the consumer transport the product to the factory (at the manufac-

turer's expense) for correction of the defect.

- Providing instructions and materials for the owner to correct the defect, if the owner so elects (this method is sometimes used to correct relatively minor defects).

How to report a possible safety defect

If a consumer discovers a possible safety defect, first contact the selling dealer or the manufacturer. The consumer can then notify the Coast Guard in writing, giving full details. Mail to: Special Assistant for Consumer Affairs (G-BC), U.S. Coast Guard Headquarters, 2100 Second Street, S.W., Washington, D.C. 20593.

Include the following information in your letter:

- 1) Complete name or model designation of the boat (or outboard engine, inboard engine, or stern drive unit).
- 2) General description of the boat or designated associated equipment, including its type and hull material and any model year designation assigned by the manufacturer.
- 3) Hull identification number (HIN) (affixed to the outside of the boat transom) or serial number for designated associated equipment.
- 4) Complete description of the alleged safety defect. Include photograph of the defect, if possible, or drawings, or copies of boat plans, if available, to help illustrate the defect.
- 5) A summary of any correspondence with the dealer of manufacturer concerning the alleged defects. Include copies of the correspondence, if available.

What will the Coast Guard do when a report is received

The Coast Guard will acknowledge receipt of your report and will send a copy of the report to the manufacturer. The information will be entered into a central file or data base.

If the Coast Guard or the manufacturer determines that a safety defect does exist, the manufacturer begins the notification process. If the five-year limit has expired (which means that the manufacturer's notification and correction obligation is over), the Coast Guard might still determine that a safety defect exists and the Coast Guard may publicize the defect through press releases and other media.

How to get information on defect campaigns

Be sure to record your purchase with the manufacturer. The manufacturer will not be able to notify you if there is a defect notification unless your name and address are on file. Submit a warranty registration, or whatever other document the manufacturer uses to create defect notification lists. Be sure to keep manufacturers informed of any change in your address.

If you are buying a used boat or item of designated associated equipment, you are still entitled to defect notification remedies provided that the manufacturer knows your whereabouts and the five-year time limit has not expired. Send a letter to the manufacturer giving the following information: date of purchase, hull identification number (or serial number for designated associated equipment), name and address of previous owner (if known), and your name and address.

You can also call the Coast Guard at 202-472-2384 and find out if a boat or designated associated equipment has been or is currently involved in a defect notification campaign. The Coast Guard can give instructions on how to contact manufacturers to determine if the defect has been corrected.

Remedies for non-safety defects

Coast Guard authority extends only to safety defects. Non-safety defects can best be resolved directly with the manufacturer or with the assistance of the state or county Consumer Protection Office (listed in the white pages of the telephone book under state or county government).

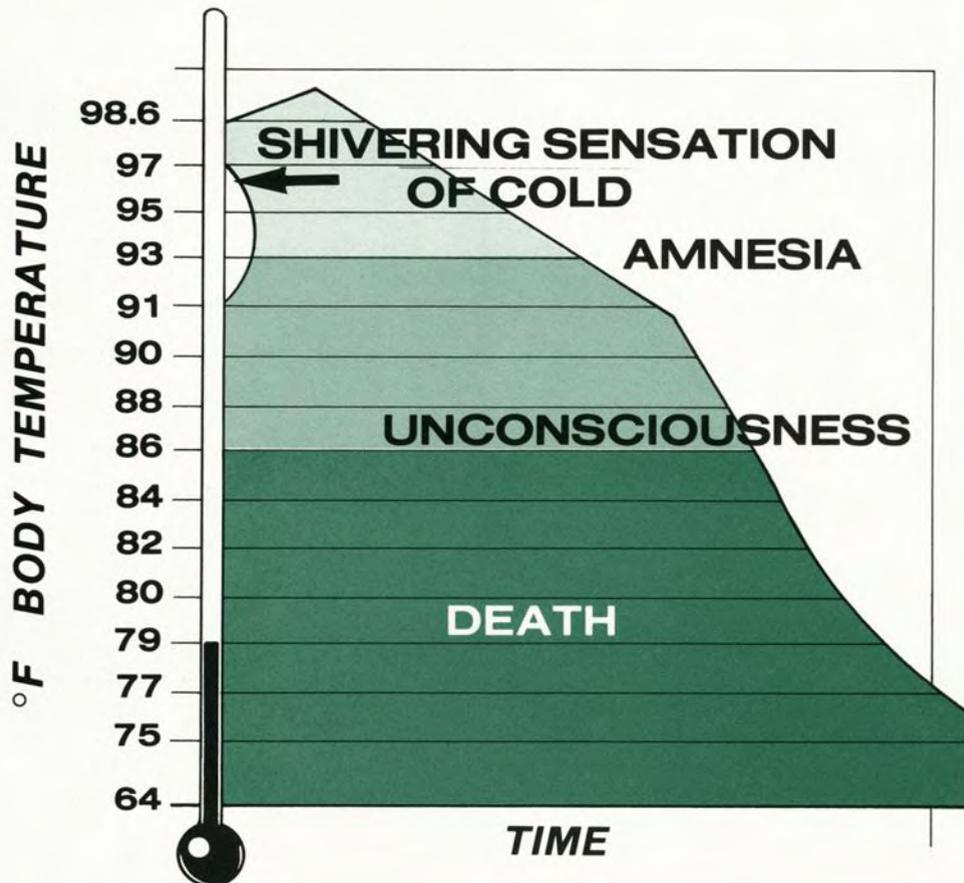
Another source of help is a guidebook called, *Consumer Resource Handbook*, published by the U.S. Office of Consumer Affairs. It lists many aids to the consumer in resolving product and warranty complaints. Single copies are available free by writing to: Handbook, Consumer Information Center, Pueblo, Colorado 81009.

For further information on consumer issues, or to express your comments and views, contact: U.S. Coast Guard, Special Assistant Consumer Affairs Officer, Washington, D.C. 20593. The phone number is 202-472-2384.

Beware of Cold Water



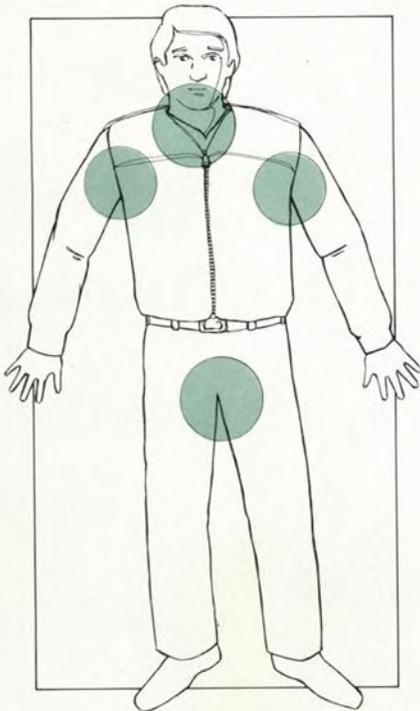
by **Virgil Chambers**



Over the past few years, approximately half the total number of fatal boating accidents have occurred "out-of-season" when the water is cold. This information suggests that some of those individuals die of exposure before they could drown. Thus, cold water, any temperature of 70°F. or lower, is the villain in many water fatalities. Early spring is a particularly dangerous time because water temperature is still cold while air temperature can be summer-like.

Panic and shock

The first hazards in cold water are panic and shock. The initial shock can severely strain the body and may produce instant cardiac arrest. Survivors of cold water accidents have reported the breath driven from them on first impact with the water. Disorientation may occur after cold water immersion, too, and persons have been observed thrashing helplessly in the water for 30 seconds or more until they are able to get their bearings.



The major body heat loss areas are the head, the neck, the armpits and chest, and the groin.

In addition, immersion in cold water can quickly numb the extremities to the point of uselessness. Your cold hands may be unable to fasten the straps of your lifejacket, grasp a thrown rescue line, or hold onto your overturned boat. Within minutes, severe pain clouds rational thought. Finally, hypothermia

(exposure) sets in, and without rescue and proper first aid treatment, unconsciousness follows with death not far behind.

Survival time in water depends largely on two factors: the temperature of the water and the behavior of the victim. There is little you can do about the temperature of the water, but the behavior of the victim can be controlled. Educating boaters on cold water survival can make the difference.

For example, physical exercise such as swimming causes the body to lose heat at a faster rate than remaining still in the water. Blood is pumped to the extremities and quickly cooled. Knowing this process is important because, suddenly immersed in cold water, the boater faces a critical choice—adopt a defensive posture in the water to conserve heat and wait for rescue, or attempt to swim to safety.



**H.E.L.P.
Heat Escape
Lessening Posture**

H.E.L.P.

In adopting a defensive posture, try to remain as still as possible. The H.E.L.P. (Heat Escape Lessening Posture) of holding your upper arms tightly against your sides, thighs pressed together and raised to close off the groin region, and huddling side-by-side if others are in the water with you, are the most effective methods of retaining body heat. Research shows that heat loss is greatest at the head, neck, upper sides of the chest, and groin.

Should you decide that swimming to shore is your best chance, use a survival stroke. The modified breast stroke, side stroke, or elementary backstroke involve less exertion than the typical overhand swimming or crawl stroke. Nevertheless, effort should be given to whatever gets you out of the water fastest with the least amount of energy loss.

Proper preparation is important when using a boat on cold water. By following these suggestions, your chances of survival increase:

- Always tell someone where you are going and when you expect to return. When hunting and fishing, form a group and take several boats along.
- Dress properly for the cold. Several layers of light clothing offer better protection than a single heavy layer. Next to the diver's wet suit, wool clothing offers the best protection.
- Always wear a personal flotation device (PFD) when on the water. It is extremely difficult to put on a PFD in cold water.

Should you be so unfortunate to put on a PFD in cold water, try not to panic. Think survival. Keep movement to a minimum, and if you do have to tread water, do it slowly. This will reduce heat loss and aid retention of air trapped inside your clothing, which can provide buoyancy and insulation. This spring, know the dangers of cold water and prepare yourself accordingly.

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

More Information

You will find detailed information on this article's topic in two Fish Commission pamphlets.

- *Personal Flotation Devices* is an overview of the different types of PFDs, how to use them, and how to select them.
- *Survival in Cold Water* provides specifics on what happens to victims immersed in cold water, what to do in the water, how to be prepared, first aid measures, and CPR.
- *Summary of Boating Regulations 1986* is a 32-page booklet that each boat registrant receives with registration materials. The book contains useful information on PFDs, in addition to legal requirements and safety ideas.

All these materials are available free of charge. Please include a self-addressed, stamped legal-sized envelope with requests. Contact: Boating, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673.



**Huddle —
to maintain body heat**

Iceboating:

Winter's High-Speed Thrill

by Tom Reinke

At 50 mph on smooth ice, the sounds you hear are the rush of the wind over the fuselage and the *woosh* of the runners skating over the ice. Reclined in the cockpit just a few inches above the frozen lake, the sense of speed is incredible—like driving a wind-powered rocket.

It's no wonder that iceboaters are willing to wait in anticipation of winter for 10 months a year. When their season finally arrives, hard-water sailors have one of the most exciting cold weather, or warm weather, sports around.

An iceboat is a sail-powered craft that glides across the ice on three runners. One runner is attached to the front of the boat. It serves as the steering blade, controlled by a tiller in the cockpit. The other two runners are attached to a plank that extends outboard on each side of the boat's fuselage.

The principles of sailing an iceboat are similar to those of wet-water sailing. Iceboats are much faster, and because of the extremely low drag on the runners, iceboats can travel up to three times the speed of the wind. The slowest tack is downwind where the boat cannot exceed windspeed. But on a reach or windward tack, where the sail's aerodynamics take over, the boat's speed can climb and climb, reaching 50, 60, even 70 mph.

The ice belt

Iceboating is practiced in the United States, Canada, and Europe. The best conditions are found in a narrow geographic region known as the ice belt, a band of territory where winter temperatures are low enough to freeze lakes and rivers, but also where snowfalls are light enough to avoid constant snow

photos by the author





The slowest tack is downwind, where the boat can't exceed the wind speed, but on a reach or windward tack, pictured at left, the sail's aerodynamics take over, and the boat's speed can reach 50, 60, or even 70 mph.

cover. In this country, the ice belt runs from the southern New England and northeastern states to the Great Lakes states. The belt includes Pennsylvania, and although the Keystone State is not as popular among iceboaters as are some other states, there are many lakes across the Commonwealth where you can see the speedsters darting about.

John Jombock, of New Kensington, is an avid iceboater who has been at the sport for 20 years. He reported that Lake Arthur west of Butler, Glendale Lake northwest of Altoona, and Lake Wallenpaupack are the best iceboating lakes. Of the three, Lake Arthur probably has the most activity; that's where the Penn Lakes Ice Yacht Association, an iceboating club, holds races throughout the winter.

Pennsylvania's iceboating season generally runs from Christmas to the end of February. The exact length of the season, however, and the quality of the ice, are totally dependent on the weather. Winters with cold temperatures and light snowfalls produce the best conditions and longest season. That's when you get the iceboater's dream—"black ice," so named for its reflections of a lake's dark depths. During cold winters in the western part of the state, the season can begin in December and reach into early March. The rule of thumb that governs the season is that four inches of solid ice is needed for safe sailing. At the opposite end of the spectrum, warm, snowy winters can frustrate iceboaters and limit the season to just one or two weekends.

Origins

The sport reportedly originated among Dutch watermen in the 1600s, who put runners on their skiffs and sailed them on Holland's frozen rivers and waterways. The first iceboats in the United States date back to 1790. The sport's heyday in this country was the late 1800s and early 1900s, when a large variety of designs could be found across the country. Some of them were mammoth yachts carrying over 850 square feet of sail. Part of the appeal in that pre-flight era was that the large ice yachts were the fastest vehicles on earth, at times topping 120 mph.

Today, the sport has diminished somewhat in general popularity, but it remains active on those lakes with a reputation for good ice.

The DN Class

The most popular iceboat is the DN. The initials stand for *Detroit News*, which in 1937 ran a contest for readers to send in designs for a simple, inexpensive iceboat that could be built at home by amateur carpenters. The design that won was a 12-foot single-handed model carrying 62 square feet of sail. The newspaper made the plans available for a number of years after the contest, and since then they have continued to be available from the International DN Ice Yacht Association and a couple of commercial sources.

The DN is raced by the Penn Lakes Ice Yacht Association on Lake Arthur. It also appears to be the most popular boat on the other Pennsylvania ice-

boating lakes, with both racers and non-racers. Two other types of iceboats that are fairly common are the skimmer, a metal-framed model with 45 square feet of sail, and the skeeter, a free-form class whose only design limitation is 75 square feet of sail.

The DN's dominance in Pennsylvania and in other parts of the country reflects a number of factors. One is that it is a small, simple, affordable boat. Many are still home-built and can be constructed for about \$1,000. For those who are interested in a finished boat, new professionally built models sell for about \$2,500. But probably the best alternative, especially for newcomers to the sport, are used boats, which run from \$1,000 to \$1,500.

An equally important factor contributing to the DN's popularity is the strong class organization. The DN has the largest number of organized fleets, which means that no matter where you go you can find other DN's to race or just sail with. Information about DN iceboats can be obtained from Evert Vanderberg, Secretary, International DN Ice Yacht Association, 3202 Maple Avenue, Kalamazoo, MI 49001.

But by far, the most important reason for the DN's popularity is the same one that attracts anyone to iceboating—performance. It's a high-speed thrill.



Boating expert Tom Reinke serves on Boat Pennsylvania's Editorial Advisory Committee. He writes the boating column for the Philadelphia Inquirer.

New Advanced Water Rescue Course

Fish Commission water rescue experts met last September with seven leading emergency responders to develop an advanced training program for the Commission's Pennsylvania Water Rescue Course.

The Commission has been offering water rescue training to emergency responders for two years. The current training teaches rescuers a basic level of awareness that is critical to ensure their personal safety while attempting to save the lives of others in an aquatic emergency.

The weekend brainstorming session was led by Virgil Chambers, chief of the Commission Bureau of Waterways Boating Safety Education Section, and included volunteer instructors who have been teaching the current course to their local fire and rescue units in addition to serving as consultants to neighboring squads.

In addition to personal safety skills and knowledge, rescuers are instructed in the proper uses of a wide assortment of special equipment that may be necessary to perform a rescue. When the students demonstrate their clear understanding of water and its potential hazards, they are introduced to boat handling skills on calm and eventually on moving water. A great deal of the training involves practicing specific skills. The final phase in this comprehensive training will include advanced-level rescue skills that may be necessary under unusual conditions. Ice and low-head dam rescues, rescues in severe weather, wildwater rescues, and the use of specialized equipment will be taught in this new phase of the training course, originally developed by Chambers.

The pilot course content will be available during the next few months and will be offered formally this spring. For more details, contact Boating Safety Education, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. The phone number is 717-6571-4540.

River Rescue Commander Receives Award

State water rescue instructor Steven M. Ketterer was presented with a Fish Commission 1985 water rescue plaque in recognition of his outstanding contributions in the promotion of water rescue training in Pennsylvania. The presentation was made by Virgil H. Chambers, chief of the Fish Commission Bureau of Waterways Boating Safety Section, at the Harrisburg River Rescue Headquarters during the organization's October general membership meeting.

Mr. Ketterer, a city employee and Commander of Harrisburg's River Rescue Water Safety Division, has been a certified instructor for the Commission's state water rescue course for the past two years.

The state water rescue course, developed by the Commission, is a three-phase certification program that trains rescue personnel in the most current techniques of boat rescue and water safety. The two-year-old program has more than 100 certified instructors and is ranked as one of the top water rescue programs in the nation.

BOAT *Pennsylvania* over the Counter

Newsstand dealers, vendors, marine suppliers, and distributors who want to sell *Boat Pennsylvania* over the counter can contact the editor for the details. *Boat Pennsylvania*, only a year or so old, boasts a circulation of about 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.

Free Sailing Information

Thanks to a new toll-free information service from the American Sailing Council, it's as easy to learn where to sail as it is to learn to sail. Starting last July, anyone anywhere in the U.S. can call 1-800-447-4700 to find the location of the closest sailing school. Callers are given the name of the sailing school or community sailing instruction program closest to their preferred sailing spot up to within 100 miles.

The American Sailing Council, which represents the sailing industry, has developed a list of 372 locations where sailing is taught, including sailing schools and community or university sailing programs open to the public. Many of these schools operate with fleets of boats ranging from 14 to 36 feet and teach everything from basic sailing to advanced cruising.

Coast Guard Consumer Publications

The U.S. Coast Guard has available some 20 publications that provide information to users of Coast Guard services. Publications cover topics such as boating safety, marine environment and water pollution, navigation safety, and merchant marine safety. For a complete list and description of these Coast Guard publications, contact: U.S. Coast Guard, Office of Boating, Public, and Consumer Affairs, Washington D.C. 20593. The phone number is 202-472-2384.

Boat Handling Courses

The U.S. Power Squadrons has printed a pamphlet called, *Learn to Skipper a Boat with Confidence*, which describes free classes available and tells where boaters can take the classes. Copies of the pamphlet can be obtained by writing to: U.S. Power Squadrons, P.O. Box 30423, Raleigh, NC 27622.

Calendar

January

7 Boating skills and seamanship course (13 weeks), in Pottstown, PA. Contact: Harvey Smith, USCG Auxiliary Flotilla 10-5. Phone: 215-323-7308.

9 Sailing and seamanship course (13 weeks). Stroudsburg High School. Stroudsburg, PA. Contact: Richard Lord, USCG Auxiliary Flotilla 10-1. Phone: 717-421-1191.

9 Boating skills and seamanship course (13 weeks). Stroudsburg High School, Stroudsburg, PA. Contact: Richard Lord, USCG Auxiliary Flotilla 10-1. Phone: 717-421-1191.

18 Pennsylvania Fish Commission meeting, Harrisburg area (specific place to be announced). For details, contact 717-657-4522.

22 Boating skills and seamanship course, Erie Yacht Club, Erie, PA. Contact: Dorce Beddows, USCG Auxiliary Flotilla 5-3. Phone: 814-833-7826.

22-26 Suburban Philadelphia Boat Show. National Marine Manufacturers Association. Valley Forge Convention & Exhibit Center, King of Prussia.

25 Basic boating course (10 weeks), Lakeside Marine, Harrisburg, PA. Contact: Allen Capron, Susquehannock Power Squadron, U.S. Power Squadrons. Phone: 717-744-2152.

February

1-9 Philadelphia Boat Show, Philadelphia Civic Center, Philadelphia.

11 Basic sailing course, Erie Yacht Club, Erie, PA. Contact: Dorce Beddows, USCG Auxiliary Flotilla 5-3. Phone: 814-833-7826.

March

1 Basic boating course, Cedar Cliff High School, Camp Hill, PA. Contact: Allen Capron, Susquehannock Power Squadron, U.S. Power Squadrons. Phone: 717-744-2152.

1 Basic boating course, Carlisle High School, Carlisle, PA. Contact: Allen Capron, Susquehannock Power Squadron, U.S. Power Squadrons. Phone: 717-744-2152.

6 Boating skills and seamanship course, Allegheny Community College South Campus, Elizabeth, PA. Contact: Verne Stephens, USCG Auxiliary Flotilla 9-1. Phone: 412-233-7515.

17 Boating skills and seamanship course (6 weeks). Flotilla 5-2, USCG Auxiliary, Erie. Registration 3/17 at 7:30 p.m., West Lake Fire Department, 3762 West Lake Road, Erie.

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 example, if your group's event begins or occurs in May, we must have the details in February. Send items to: The Editor, *Boat Pennsylvania*, P.O. Box 1673, Harrisburg, PA 17105-1673.



I read with interest the "Currents" item in the Sep/Oct *Boat PA* on "Propeller Peculiarities." You mentioned in the article that prop rotation and operator seating positions are related. I offer a different relationship. I am a member of the Antique Outboard Motor Club. I did a little research and found that many early motors such as Lockwood, Caille, Ole Evinrude's Elto, Lauson, Neptunes, Mercury, and Evinrude all had a counter-clockwise (CCW) prop rotation when viewed from the back. I have models of Mercury and Evinrude as late as 1950 that have a CCW rotation. So why the seeming predominance of clockwise rotation? Most people (over 75 percent) are right-handed and thus crank their motors with the right hand. It is much easier to sit on the right side of the boat and turn to the left to crank a motor with your right hand than the opposite. People became used to the right side of a boat as the proper place to sit, so this was also incorporated as steering

wheels replaced tillers. The change from CCW to clockwise rotation may have been done to level the boat to compensate for the weight of the operator on the right side. I enjoy your magazine so keep them coming.—*Wayne Frazier, Stafford, VA*

Because I am an instructor in water skiing for Boy Scout Merit Badge candidates, I boat quite a bit on Lake Clark, and we do some swimming. I was therefore interested in the article, "Swimming From Your Boat," by Virgil Chambers (July-August 1985 *Boat Pennsylvania*). We follow most of what he said in his article, and I picked up a few tips.

Perhaps you might want to pass this idea on to other readers. We anchor not too far offshore in a place out of traffic. Then we tie a PFD to a ski rope and float it downstream. This gives a safety line of 100 feet. It's especially helpful if there is more than moderate current or a tired swimmer. It poses no obstacle to boat traffic because we stay in an out-of-the-way place.—*Rev. Lawrence C. Gross, Lancaster, PA*

Correction

In the article, "Aids to Navigation," by Fred Menke (November/December 1985 *Boat Pennsylvania*), the last sentence under the heading, "Red, Right, Returning," read, "The red buoys should be on the right when a boat is returning from upstream and heading toward land." It should read, "The red buoys should be on the right when a boat is returning from the sea or looking upstream."

The first item under the heading, "Buoy colors," read, "Red: Right-hand side of a channel (as seen from upstream)." It should read, "Red: Right-hand side of a channel (as seen from seaward or downstream)."

The photograph at top left of page 26 was identified as a mid-channel marker. It is not. It is a channel marker.

Finally, the photo at the bottom center of page 26 was identified as a special mid-channel lighted mark on Lake Wallenpaupack. It is not. The buoy is a special-purpose lighted marker.

The Law & You

by Sam Everett

Q. My friend likes to cruise in early spring, around the end of February into March. He says that he doesn't need the new registration materials affixed to his boat until April 1. I say he needs new registration materials in order by January 1 each year. Who's right?

A. Your friend is correct. The registration year in Pennsylvania begins April 1 and ends March 31.

Q. I plan to move within Pennsylvania shortly. What do I have to do to change my address with the Boat Registration Section?

A. Within 15 days of your move you need to file form PFC-732 with the Boat Registration Section, Pennsylvania Fish Commission. You can contact the Section at P.O. Box 1852, Harrisburg, PA 17105-1852.

Q. I plan to take my 6-year-old son kayaking this spring and summer at a nearby state park waterway. Can't I just let him set in the kayak between my legs without a PFD on?

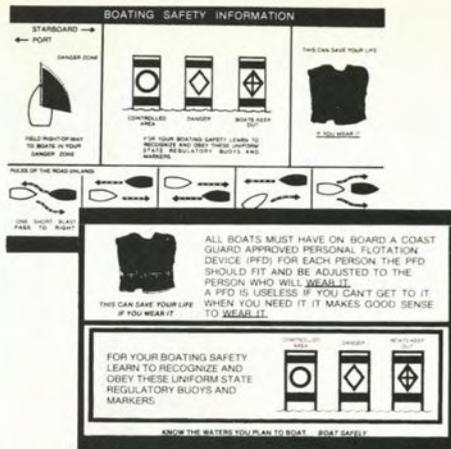
A. No. On Fish Commission and state park lakes, children under 9 years of age and all non-swimmers must wear a personal flotation device (PFD). In addition, do not let the child occupy your seat. If your kayak isn't a 2-seater, don't sit with the child in the kayak, and before you take your child out in the kayak, make sure he or she has the proper training and skills required to escape from a capsized craft.

Q. I want to launch my sailboat on a trout-stocked lake at the end of April this year. Any problem with that?

A. Yes. On trout-stocked Fish Commission lakes, no sailboats are allowed between the date trout season opens and June 1.

Q. I have a brand new 18-foot boat with a 90hp engine. If I use an engine powered at half the maximum power stated on the capacity plate, I don't need PFDs, right?

A. No. It is unlawful to operate your boat unless you have on board a PFD for each occupant plus one throwable device if your boat is 16 feet or longer. Engine horsepower is not part of this provision.



Boating Safety Decals

The Fish Commission Bureau of Waterways Boating Safety Education Section has available two waterproof decals that summarize practical boating safety information, and another that serves as a reminder. The boating safety information decals show the use of PFDs, uniform state regulatory buoys and markers, and inland rules of the road. The decals can be affixed to your boat where the operator can see them readily. They are available free of charge from: Boating, Bureau of Waterways, Pennsylvania Fish Commission, P.O. Box 1673, Harrisburg, PA 17105-1673. Include a business-sized stamped, self-addressed envelope with requests.

Green Reappointed to Fish Commission

Commissioner Leonard A. Green, of Carlisle, has been reappointed by Governor Dick Thornburgh to the Pennsylvania Fish Commission for another term of four years. He was first appointed to the 10-member panel in 1975.

Commissioner Green is currently eastern vice president of the National Wildlife Federation and chairman of the board of trustees of the Pennsylvania Federation of Sportsmen's Clubs Endowment Foundation. He also serves on the board of directors of the Pennsylvania Wildlife Federation, and he is a past-president and current board member of the Pennsylvania Forestry Association.



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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Reader Survey Results

A total of 392 *Boat Pennsylvania* subscribers responded by the deadline so that their survey answers were included in our survey results. The survey appeared in the September/October 1985 issue with a September 30 deadline.

Assisting the Commission in tallying the results was Dr. Fred Hockersmith, Shippensburg University professor of psychology and computer data specialist.

In question 1, concerning the type of boats owned, 59.9 percent of the respondents indicated that a runabout was their boat. Other information in this item showed that 15.8 percent chose a canoe as their primary boat, 5.4 said that an auxiliary powered sailboat was their first boat, and 8.9 percent said that a sailboat (nonpowered) was their primary craft.

In question 2, 68.6 percent propel their boats with an outboard engine, while 18.6 percent have an I/O. Electric motors accounted for 4.6 percent, and 3.6 percent said that inboards propelled their craft.

In question 3, horsepower ratings were as follows: 5.6 percent, 0-5hp; 18.4 percent, 6-10hp; 6.4 percent, 11-35hp; 18.4 percent, 36-75hp; 14 percent, 75-110hp; 18.1 percent, 110-150hp; and 14 percent, over 150hp.

In question 4, the salient feature of the responses was that 78.8 percent had boats that measure 14 feet to 20 feet.

In question 5, which asked questions about electronic devices, 19.1 percent use a CB radio on their boats, and 12 percent have a marine radio. A total of 40.1 percent use a depth recorder. Only 3.1 percent use LORAN, and no respondents use radar.

We also found out that 95.4 percent of *Boat Pennsylvania* readers do not participate in organized races, while 3.6 percent do.

We'll publish more survey results in forthcoming issues. In the meantime, thanks to all subscribers who responded!

1985 Boat Registration Totals

In 1985, more boats were registered in Allegheny County than in any other Keystone State county—25,630. Ranked second in boat registration totals was Bucks County, with 9,508. Erie County (9,122) was third, Luzerne County (8,670) was fourth, Westmoreland County (7,992) was fifth, and Montgomery County (7,599) was sixth.

About 65 percent of all registered boats in Pennsylvania were under 16 feet, the largest single class of registered boats. Some 23 percent of the total were boats 16 feet to less than 20 feet. Almost 6 percent of the boats were 20 feet to less than 40 feet. A total of 186 boats registered in Pennsylvania were over 40 feet long.

The total number of boats registered in Pennsylvania in 1985 was 228,561, and increase of about 5 percent over the 1984 total. Over the last 10 years, the number of boats registered in Pennsylvania has increased annually by about 4 to 5 percent.

BOAT

Pennsylvania

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Keystone State Water Ski Clubs

by Bruce Kistler

One of the nice things about water skiing is that it only takes three people—a driver, an observer, and a skier. That's why it's such a great family sport. Mom, dad, and the kids make a perfect team. Yet, those who are serious about water skiing often find it desirable, even necessary, to be part of a larger, more organized group of skiers. Being a member of a water ski club can broaden your knowledge of the sport and open up opportunities for participation that you might not have known existed.

Why join a ski club? For one thing, it's fun to be with others who share your interest in skiing. You make new friends and have more fun both on and off the water. You also learn faster. As a member of a club you can generally find people who can help you learn to barefoot, to run the slalom course to jump—almost anything you might want to learn, and you usually have better access to instruction books, articles, and video tapes. Most ski clubs maintain regulation slalom courses and jump ramps—critical equipment if you want to get into competition. Some offer other facilities to members such as dock space, storage for ski equipment, and a clubhouse.

Organized water skiing

Ski clubs are the backbone of organized water skiing in the United States. They sponsor hundreds of American Water Ski Association-sanctioned (AWSA) tournaments each year in slalom, tricks, jumping, and barefooting. They put on water ski shows ranging from simple once-a-year skits as a thank-you to the community, to professional-quality extravaganzas. They produce other events such as learn-to-ski days and ski marathons for charity. Most

importantly, the local ski groups that are affiliated with AWSA form a vital network for communication and action to help organize and promote the sport. They are strong voices for safe water skiing and boating practices and collectively work to protect the rights of water skiers to use public waterways.

There are about 400 AWSA-affiliated water ski clubs in the United States. Currently, 10 clubs are active in the Keystone State, and most have an open membership policy and welcome newcomers. A club may have organized primarily for recreation and social activity, while others may specialize in tournament skiing, barefooting, or show production.

Starting a club

If there isn't a water ski club near where you ski, why not start one? With a little leadership it's possible to launch a brand new club almost anywhere that people water ski. Many skiers on your favorite lake or river probably would like to have a club. Usually all it takes is someone with enough initiative to talk up the idea.

Once the need is planted, the enthusiasm grows and others who are willing to help come forward. Identifying this small nucleus of people who are dedicated to the concept of creating a club and are willing to work for it should be the first objective. With each one doing his or her part, the job is made much easier. This small group of key volunteers should then work to create enough grassroots publicity to generate the desire for a ski club in the community.

When the idea has taken hold, initial organization meetings can be called to name committees to flesh out the details of how the club should be structured and develop a set of bylaws. For more detailed



information on how to get a club going, send a stamped, self-addressed envelope to the American Water Ski Association, P.O. Box 191, Winter Haven, FL 33882, and ask for the booklet, "How to Organize a Ski Club."

All water ski clubs, regardless of their size or structure, should affiliate with the American Water Ski Association. Although AWSA is a membership organization for individuals, it also offers a number of valuable services for clubs including magazines, newsletters, and eligibility to purchase liability insurance.

If you love to water ski and want to be a part of an active, vital organization dedicated to the sport, join a water ski club—or start one! You'll find a whole new world of water skiing fun and opportunity waiting for you.



Bruce Kistler, a former Pennsylvanian, is executive director of the American Water Ski Association.



AWSA Water Ski Clubs in Pennsylvania

- 1. Sandy Lake Water Ski Club, 502 E. Lutton Street, New Castle, PA 16101**
- 2. Black Rock Water Skiers, 228 Miller Road, Phoenixville, PA 19460**
- 3. Dave's Pond Ski Club, 9748 Eureka Road, Edinboro, PA 16412**
- 4. Reading Water Skiers, Inc., R.D. 9, Box 9187, Reading, PA 19605**
- 5. Lake Aldred Water Ski Club (intramural), Room 4, Intramural Building, University Park, PA 16802**
- 6. Port Indian Ski Club, Inc., 33 West Indian Lane, Norristown, PA 19403**
- 7. William Penn Water Ski Club, 2110 Fuller Street, Philadelphia, PA 19152**
- 8. Golden Triangle Water Ski Club, 10 Washington Avenue, Oakmont, PA 15139**
- 9. Indian Lake Water Ski Club, 10 Kiowa, Indian Lake Road, Central City, PA 15926**



Formula One

by Mike Sajna

Crossing the Duquesne Bridge above the Allegheny River toward Three Rivers Stadium, the sound was already audible. By the time we reached the parking lot above the pit area, it was almost overpowering, and nearly too much for my friend, Bob Costello, an attorney who would gladly give up his practice to race speed boats.

"My, goodness!" he sighed excitedly. "Listen to those things wind. They have to have those motors tuned so tight. One more turn and it sounds like they'd blow up. I can't wait!"

And what we were headed for were only the time trials. The qualifying heat was still several hours off, and the 50-lap final race was not until the next day. But such is the excitement that Formula One boats continue to elicit from audiences in Pittsburgh's "Three Rivers Regatta," and especially boaters, like Bob, who relish speed and performance.

"Formula One" is the fastest of all outboard racing classes. It's an inter-

national class for which a circuit is organized each year involving 10 to 15 races in both the United States and Europe. Formula One has been a major sports attraction in Europe for approximately six years now. It was introduced to the United States at Pittsburgh in 1982, under the gaze of some 400,000 people, and has been a regular attraction at the annual event ever since.

Engines

Engines that can compete in Formula One come in two general types. Starting at the top, the most serious racers use either a Johnson or Evinrude V-8 racing mill with electronic fuel injection and low center of gravity. Second choice is the Johnson or Evinrude V-8 carbureted engine. Both are 3.5 liter powerplants and the only V-8 outboards in the world.

The fuel-injected version develops more than 450 horsepower at 10,000 rpm using ordinary 94 octane gasoline. They are available only to certified racing teams and sell for about \$24,000 each.

The carbureted V-8 is the older style motor. It develops about 420 horsepower through an aluminum block, loop-charged two-stroke powerhead with two banks of four cylinders set at 90-degree angles. There is one carburetor with two venturies for each cylinder, or 16 venturies for each engine.

Other engines that can be seen competing in Formula One are V-6s, both carbureted and fuel injected. These powerplants are generally 2.7 liters or smaller, and it takes a super-performing V-6 rig in the hands of an extremely skillful driver to be really competitive on the racing circuit. Only in a few rare cases have V-6 outfits finished in the top money.

Boats

Crafts to which these monster engines are attached are known as "tunnel boats." They're the result of a hydroplane design theory that was developed in Italy more than 20 years ago.

Instead of riding on the surface of the water, tunnel boats actually ride on air

captured and compressed in a tunnel extending the full length of the hull. Walls of the tunnel are formed by two "sponsons," one on each side of the cockpit. The shape of the sponsons determines turning characteristics, drag, and general stability, while the shape of the tunnel roof is critical in distributing lift.

Major accidents to which the boats are prone include "blowover" and "roll-over."

Blowover is caused by an increased angle of attack (usually into the wind) that makes the boats begin to lift and will eventually blow them over in a half loop. Control of engine thrust angle,

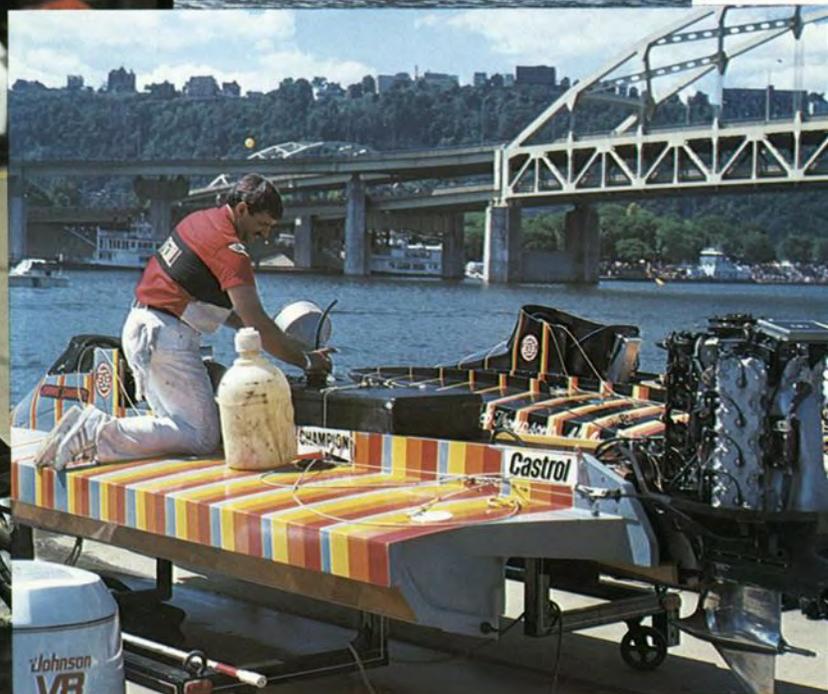
weight distribution, and skillful use of the throttle by the driver are among the factors that prevent blowover.

Roll-overs most often occur in violent turns when a driver fails to let off on the speed soon enough. A tunnel boat can decelerate from a straight-away speed of 140 mph to a turning speed of roughly 80 mph in a distance of about 200 feet. Because of sponson design, they can hook around corners with unbelievable quickness, but if everything is not handled properly, the result will be a rolling over of the boats.

Major builders of tunnel hulls are located in Italy, Holland, England, and the United States. The most successful

of these brands can be counted on the fingers of one hand. All the boats are made from selected spruce, mahogany, plywood, and various hardwoods. Plastic is used only on the cowls and shrouds. Most Formula One boats weigh about 500 pounds and measure somewhat less than 20 feet in length.

At the driver's disposal in the cockpit and on the steering wheel of a Formula One boat are buttons to control engine angle, start, radio, fuel flow, and a foot throttle. That is it, but when all are properly coordinated, the result is a ride in an "aquatic rocket"—the fastest outboard-powered boats Pennsylvania has ever known.





Floating French Creek: “The Buffalo River”

by Mike Bleech

French Creek is a place for relaxation. It is a place for the novice canoeist to learn the sport on friendly water. It is a place where any canoeist can gain a sense of history on one of the most important waterways during the infancy of our nation, and it is convenient to float, with enough accesses to arrange a variety of floats.

The headwaters of French Creek are in the southwest corner of Chautauqua County, New York. From there it flows about 105 miles until it empties into the Allegheny River at Franklin, draining 1,232 square miles. The West Branch also begins in New York. It meets the main body at Wattsburg. The South Branch, which gathers its waters from swamps in the Corry area, joins a few miles farther downstream. Wetlands surrounding these headwaters provide excellent waterfowl nesting habitat.

The French Creek valley was, for a time, the channel of the Allegheny River. The Allegheny then flowed north, toward Lake Erie. But the course of the river was changed by the advance of glaciers, during the Wisconsin Ice Age.

The 1700s

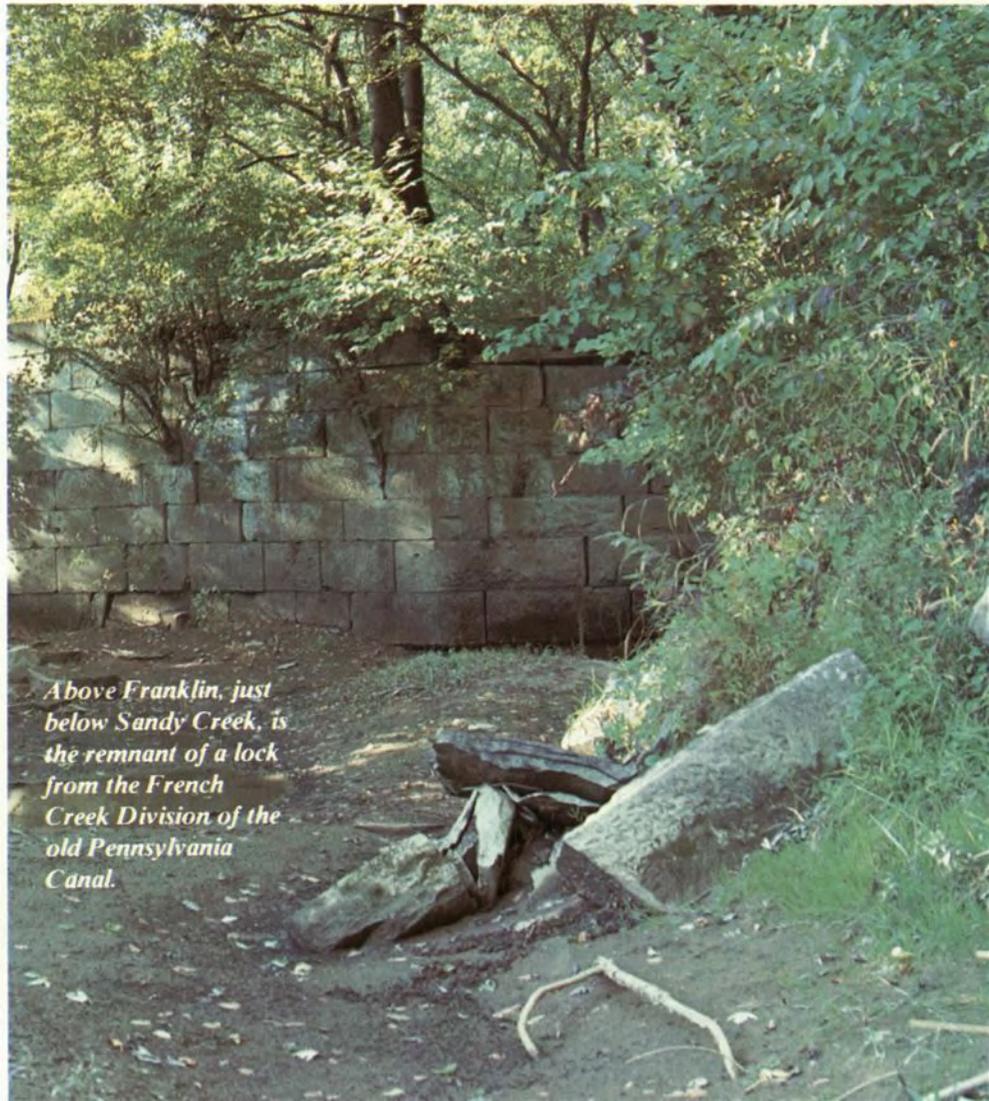
In the 18th century, when the area was America's wild western frontier, traders entered French Creek about 42 miles from its source by way of LeBoeuf Creek. An overland trail brought goods and travelers from Lake Erie to Fort Le Boeuf. This fort and Fort Machault, near the mouth of French Creek, were part of the French

effort to establish dominance over this part of North America. Both forts were visited by Major George Washington in 1753, and were later destroyed by the French to avoid takeover by the British.

While under control of France, the creek was known as *La Bouffe*

Riviere, which means, “the Buffalo River,” so named because of the herds of bison that roamed the valley. Elk, cougars, wolves, bobcats, lynx, and otters also inhabited the area.

The British dominated the area for the two decades before the American Revolution, though it could be argued



Above Franklin, just below Sandy Creek, is the remnant of a lock from the French Creek Division of the old Pennsylvania Canal.

photos by the author

that various Indian tribes controlled more lands. The British built Fort Venango at the mouth of French Creek. In 1763, Seneca Indians entered the fort on the pretext of friendship, and then murdered the entire garrison. The commanding officer was slowly tortured over a fire.

After the revolution, in 1787, Fort Franklin was built on the same location, but it was abandoned in 1796. By that time, resistance from native Americans had been nearly eliminated.

The 1800s

Great changes took place along French Creek during the 19th century. The valley was noted for its magnificent pine forest, which was cut and shipped to downstream markets. Agriculture was developed, mostly in the upper two-thirds of the valley. French Creek became a very important commerce route. Salt, a vital commodity in those days, was shipped from the Onondaga salt works, at present-day Syracuse, NY, across Lake Ontario and Lake Erie, overland to Waterford, and down French Creek. Whiskey, beans, beeswax, paper, and furs from the valley were shipped to Pittsburgh. Ice cut from the creek was shipped to Natchez and Vicksburg.

Various types of craft were used to haul cargo down French Creek. Trees were cut and made into rafts, and loaded with cargo, and then the rafts and cargo were sold at Pittsburgh. Keelboats, such as the Jolly Traveler, operated between Meadville and Franklin. An occasional steamboat may have been operated on this same stretch of water.

The Pennsylvania Canal System, intended to connect the Atlantic Coast with the headwaters of the Ohio River, nearly spelled disaster for the natural beauty of French Creek. The French Creek Division of the system, between Franklin and Meadville, was opened in 1834 at a cost of \$1.25 million. Only two canal boats ever used it, because of a miscalculation in stream flow. Still, there was pressure later to connect this canal with Lake Erie.

The modern-day water traveler can discover a French Creek that is a product of both nature and the intrusion of civilization. The upper

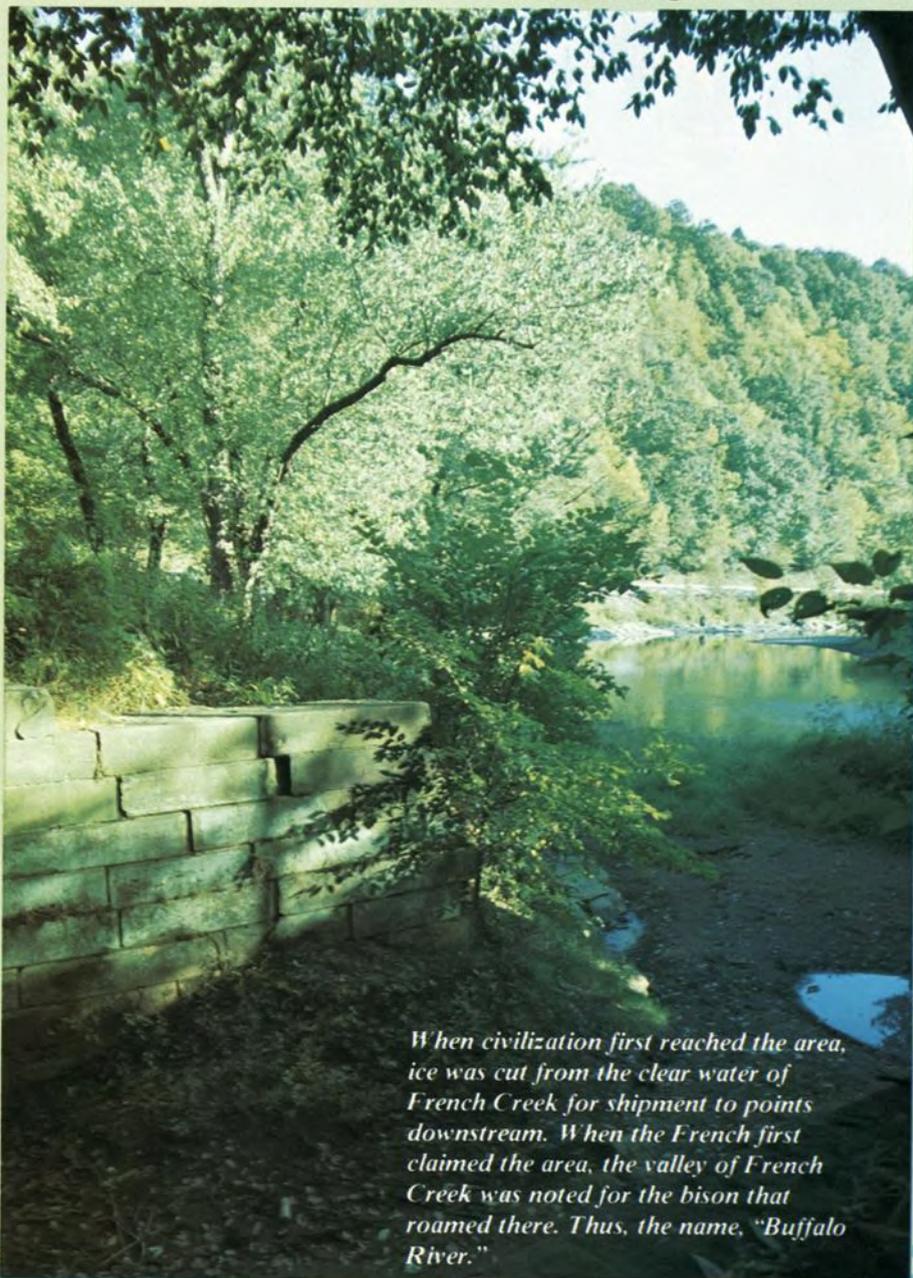
two-thirds of the creek are surrounded by gently rolling farmland, a few small towns, and in some areas, camps. Downstream from the small city of Meadville the hills become higher and steeper, the valley narrower, and there is more forest land. Stream flow is slow in most places, and it never gets wild.

Put-in

The Fish Commission has four access areas along the floatable section of French Creek. The uppermost is just above the town of Cambridge Springs, slightly over 50 miles from the source of the creek. The stream is certainly floatable a few miles above this point, many miles above during high flow. This access is

about 15 miles downstream from the upper end of the old trade route, at Waterford, including a section of LeBoeuf Creek.

Early last fall, I floated the creek from the Cambridge Springs Access. The launch is in a weed-choked cove that opens up into the slow, soft-bottomed creek. Numerous logs lay rotting in the water. We paddled along the lazy creek, feeling isolated by the lush green bottomland. Just as we left the town of Cambridge Springs, a great blue heron startled us by letting out a noise as it flew from behind shoreline brush. The only sounds that met our ears were created by wild creatures or the wind. The only tracks along the bank were made



When civilization first reached the area, ice was cut from the clear water of French Creek for shipment to points downstream. When the French first claimed the area, the valley of French Creek was noted for the bison that roamed there. Thus, the name, "Buffalo River."

by raccoons, deer, birds, and muskrats. It was easy to imagine that the next person we would see would be an 18th century French trapper.

The sight of farms and a highway soon wiped out that mental image. Yet, the serenity remained. About four miles below the launch the soft banks gave way to rock and the current picked up speed. Stream flow was minimal, so we had to get out of the canoe to wade through a few short riffles. Such is the nature of French Creek: pools, some very long, connected by mild riffles.

Saegertown to Meadville

The next access is at Saegertown, about 11 miles downstream from the

Cambridge Springs Access. This is a fine one-day float, but do not tarry along the way, because the current provides little help during the journey.

The section from the Saegertown Access to the Meadville Access is about eight miles. Meadville is the largest town along French Creek.

Meadville to Franklin

Meadville to Franklin is the most popular part of French Creek for canoeing. The Commission operates an access about one mile below the mouth of French Creek, on the Allegheny River. Another, the Shaw's Landing Access, is on French Creek about three miles downstream from Meadville. The trip from Meadville to Shaw's Landing takes about three

hours, and from Shaw's Landing to the Franklin Access another nine hours.

Rick Swendsen, who operates a canoe service (Hallstown Marine, Star Route Box 32, Franklin, PA 16323. Phone: 814-432-3449) just upstream from Franklin, advises that the Meadville-to-Franklin stretch is a two-day journey.

"You could do it in one day if you leaned on the paddle," he said.

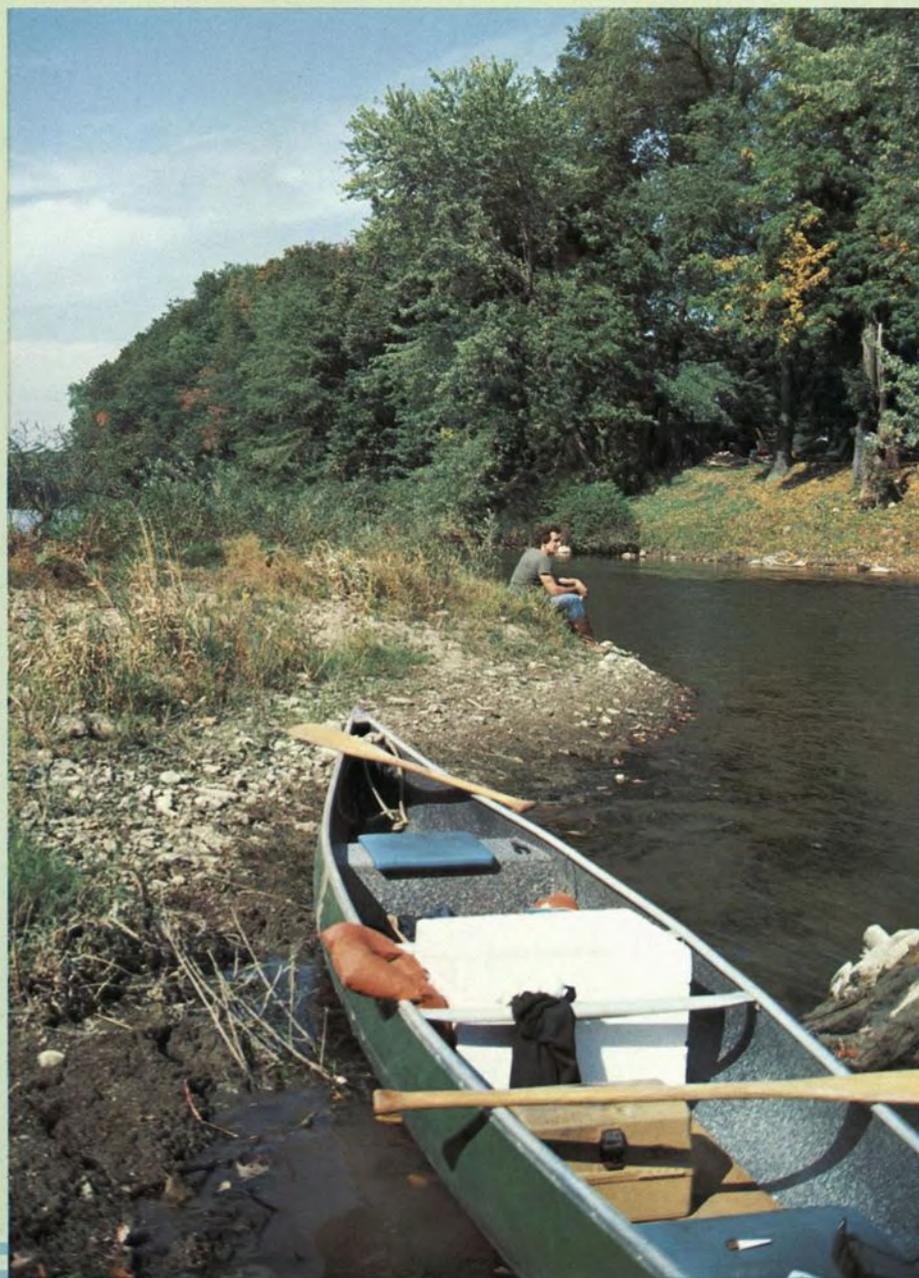
Swendsen noted that many canoeists take out at other sites between Meadville and Franklin to cut the section down to a one-day outing, while some camp on islands. However, none of the islands is publicly owned. A private campground, Anglers' Rest, is located above the village of Utica.

By staying in the main channel, he said, the entire section can be navigated without needing to portage the canoe, even during periods of low flow.

While touring the lower part of French Creek with Swendsen, he pointed out remnants of the old canal. An old lock, where the creek swings close to U.S. Route 322 just above Franklin, is worth a stop. A small channel rejoins the main channel here. The lock is adjacent to the small channel. The magnificent cut-stone walls, now overgrown with brush and trees, are eerie reminders of a grandiose but futile effort more than a century-and-a-half ago. If you gaze long enough at the symmetrical gray stones, you may still hear the crack of a whip or the bray of a mule.

There are about 53 floatable miles of French Creek between the Cambridge Springs Access and the Allegheny River. The Franklin Access is another mile down the river. Public access areas make several different one-day trips possible, depending on your ambition. Extended trips are difficult because camping opportunities are limited. However, Rick Swendsen points out that it is possible to make arrangements for camping on islands, which are high and dry through most of the summer.

Swendsen also mentioned that the lower part of French Creek remains ice-free through the winter, making it available to those who like the solitude of the winter float.



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