

# ICE FISHING



University of Wisconsin Sea Grant Institute



Originally published 1973

Revised and reprinted October 2005

WISCU-G-05-001

*Ice Fishing* and other publications are available from the University of Wisconsin Aquatic Sciences Center online store at <http://aqua.wisc.edu/publications>.

Copyright 2005

University of Wisconsin Sea Grant Institute

Board of Regents, University of Wisconsin System

This work was funded by the University of Wisconsin Sea Grant Institute under grants from the National Sea Grant College Program, National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Federal grant number NA16RG2257, Project C/C-1.

Additional funds provided by the Sport Fish Restoration Fund through the Wisconsin Department of Natural Resources.

FH-941-05

# ICE FISHING



*Author: Warren Downs*

*Editor: Elizabeth White, UW Aquatic Sciences Center*

*Design: Amy Kittleson*

*Illustrations: Christine Kohler*

*Photo Credits:*

*Cover: Kenneth Melvin Wright, Minnesota Historical Society*

*Page 22: Minnesota Statehood Centennial Commission,  
Minnesota Historical Society*

*Page 24: Kenneth Melvin Wright, Minnesota Historical Society*

*All other photos: Amy Kittleson*

## ACKNOWLEDGEMENTS

Ice fishing may be a solitary pursuit, but writing about it requires the company of experts. For all information and advice that bears the test of experience, credit and thanks are extended to: John Klingbiel, Stanley Kmietek and Hal Schwenn, Wisconsin Department of Natural Resources; Ross Horrall, University of Wisconsin–Madison; John Magnuson, Center for Limnology, University of Wisconsin-Madison; and Berg-Pearson Sporting Goods, Inc.

We wish to thank Theresa Stabo, Aquatic Resources Education Director, Wisconsin Department of Natural Resources, for her assistance in revising this publication.



## TABLE OF CONTENTS

A Wintertime Izaak Walton .....	1
Wisconsin Ice Fishing Regulations.....	2
Clothing.....	5
Gear and Gadgets .....	6
Fishing Advice Once You're Out on the Ice .....	11
Panfish .....	11
Game Fish.....	14
Staying on Top of the Ice .....	17
A Parting Shot.....	23
Additional Resources .....	24

“...I shall stay him no longer than to wish him a rainy evening to read this following Discourse; and that, if he be an honest Angler, the east wind may never blow when he goes a-fishing.”

— The Compleat Angler  
Izaak Walton, 1593–1683



## A WINTERTIME IZAAK WALTON

When late fall quietly clamps an icy lid over Wisconsin's lakes and rivers, most ice anglers store their tackle and settle down to the slow march of winter. But a growing number of anglers are breaking with tradition, poking holes through the winter ice and through the notion that winter is a time for daydreams or thumbing through old fishing tackle catalogs.

During a typical season, ice anglers in Wisconsin spent a total of two million angler-days on the ice. While this accounted for only 13% of the state's year-round fishing activity, it yielded about 21% of the annual catch. This fact bears out what many enthusiasts have long claimed—the strikes come faster in winter.

However, no numbers can convey the tension before that first tender bite of a panfish. Neither can they describe the sudden, excited warmth suffusing fingers that must handle the line hooked to a frenzied game fish—without the aid of a flexible casting rod.

Ice fishing has its own style and fascination. For some, the wind skimming across the bleak expanse of a lake sharpens a feeling of self-reliance and agreeable solitude. Ice anglers of a more gregarious nature prefer to chip their holes within easy hailing distance, schooling together for company like their prey under the ice.

This booklet is written for the newcomer to ice fishing. It provides the basic information needed to take up the sport both safely and inexpensively. At first, perhaps, novices may find ice fishing simply an intriguing pastime to occupy long winter weekends. But once they master its essential skills, they will also find it an excellent way to enhance the family supper table.

## WISCONSIN ICE FISHING REGULATIONS

Just as in spring and summer fishing, there are rules governing ice fishing. Happily, the additional regulations are few and not complicated, but they are important to protect fish when they are most vulnerable, such as at spawning time. The following information is gleaned from the Wisconsin Department of Natural Resources' Wisconsin Fishing Regulations. For specifics on various species and important dates, obtain a current copy of the regulations at WDNR offices or fishing license sales outlets. Regulations are also posted on the WDNR's web site: <http://dnr.wi.gov/org/water/fhp/fish/regulations>.

### General Statewide Regulations

- Panfish (perch, bluegill, etc.) can legally be caught in all Wisconsin waters year-round.
- Anglers may fish with not more than three lines and not more than one hook per line. When only one line is used, up to three hooks may be used.
- No person shall have in possession or control more than the daily bag limit while on the ice or water or while fishing.
- For safety, it is unlawful to cut a square hole or one larger than 12 inches in diameter.
- It is unlawful to leave, deposit, place or throw away cans, debris, refuse or solid waste material on the waters, ice, shoreline or upon public or private property. This includes cigarette and cigar butts.

### On Inland Waters

- Walleye and northern pike can be fished on most inland waters until the spawning season.
- Muskellunge, salmon, and trout (except lake trout) are out of season in most waters, most of the winter. See regulations for exceptions.



### **Wisconsin-Iowa Boundary Waters**

- All fishing is legal year-round, except for musky and lake sturgeon. Paddlefish is a protected species and fishing for it is always prohibited.

### **Wisconsin-Minnesota Boundary Waters**

- Year-round fishing is legal for many, but not all fish species in the St. Louis, St. Croix and Mississippi (downstream from Prescott) rivers.

### **Wisconsin-Michigan Boundary Waters**

- Trout and salmon are effectively off-limits during late fall and winter months.
- Northern pike and walleye can be fished during the winter until the spawning season.

### **Lakes Superior and Michigan**

- Trout, salmon, northern pike, walleye and perch can be fished year-round with the exception of Lake Superior lake trout, which has date restrictions.
- Holes may exceed the 12-inch diameter limitation if you are skin-diving, dip netting, taking minnows by minnow trap, sturgeon spearing or spearing northerns on Lake Superior.



**Shelters are welcome refuges from the elements, which can be especially severe on a frozen lake, but keep in mind these regulations. Most are written to help keep you safe.**

- The door must be readily opened from the outside when the shelter is occupied.
- The name and address of the owner should appear legibly (and in English) on the outside in block letters, with each letter being at least one square inch in size and in contrasting colors. Fishing shelters that are occupied or otherwise in use are exempt from this requirement.
- Fishing shelters on the Wisconsin boundary waters with Iowa, Michigan or Minnesota must display the name and address on all shelters at all times, even portable shelters that are occupied and/or in use.
- After the date for removing shelters from the ice, you may continue to use a portable shelter, but you must remove it when it is not occupied. Shelters must be removed daily on the Fox River in Brown County from the De Pere Dam, downstream.
- Shelters must be removed by the date specified in the regulations or as declared by law enforcement due to unsafe conditions.

The above information cannot substitute for the complete set of fishing regulations. The ice angler is expected to know the rules on the size of catches, length of seasons, license fees and the raft of year-round regulations that have been developed over the years. If in doubt, contact the local county conservation agent.

## CLOTHING

In gearing up for ice fishing, you should aim not only at catching fish but also at surviving in reasonable comfort. This means taking the same care in dressing for ice fishing as you would for going to a late-season Packer football game.

In general, clothing should keep you warm and dry. Top off with a cap with generous ear flaps, plus mittens with liners and a good windbreaker jacket. Leather makes a good windbreaker, but it can stiffen and crack in the cold. In the past, wool was the best option for keeping warm. Today's synthetic fibers offer wool's warmth with less bulk and easier maintenance. Down-filled clothing is light and warm, although somewhat expensive. A one-piece, insulated coverall is ideal—especially if it has a hood that can be opened easily for ventilation or snugged tightly around the face. One technique is to buy coveralls in extra large sizes and slip them over your street clothes upon arrival at the lake.

Special care should be taken to keep dry; clammy hands or feet are susceptible to frostbite. To prevent perspiring extremities, wear your boots or overshoes loosely tied or unsnapped until arriving at your fishing site, and carry a few extra pairs of dry felt liners or socks, mitten liners, and mittens in a pocket.

To keep upright, cleats or spikes can be attached to footgear. In hustling over to a signaling tip-up, this can be a great help.

Cloth face masks and goggles tucked in a pocket can become a blessing in the face of a sudden, blustery wind.

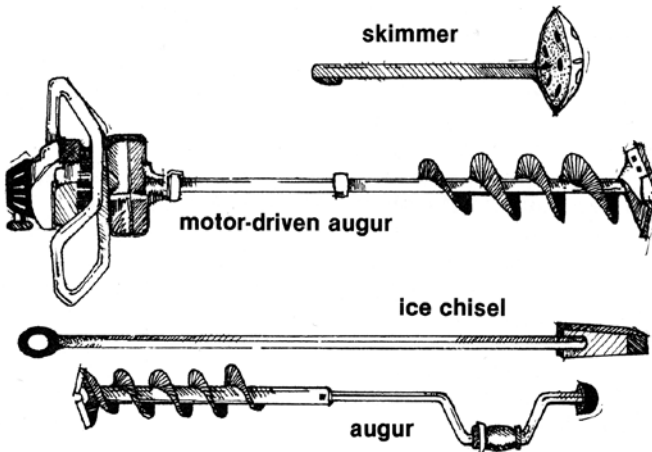
Alcoholic beverages “to fight the cold” are risky in severe weather. While a time-honored prescription, the bottle's benefit is temporary. The blood that warms the surface of the body may leave vital internal organs without sufficient protective heat, and the body rapidly loses its ability to stay warm. Hot soup, cocoa or coffee serve best.

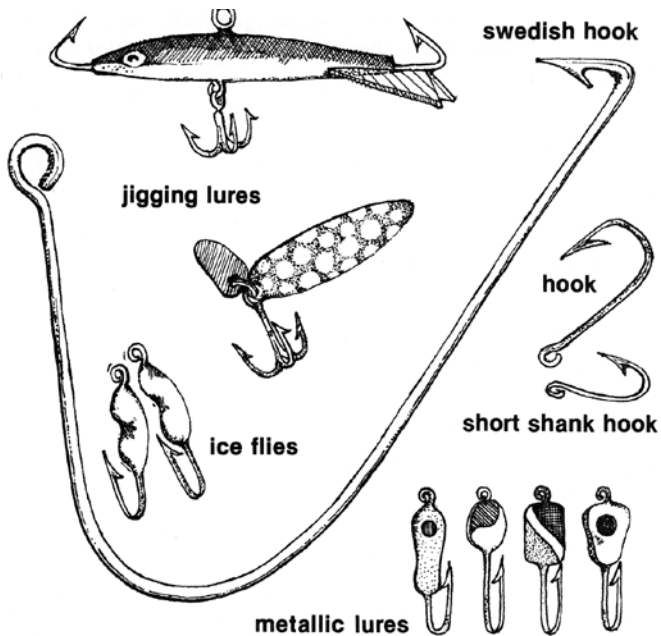
## GEAR AND GADGETS

All the hardware that has been devised for ice fishing is only as effective as the angler's skill or luck allows, but a little inventory planning helps. By its very nature, fishing through the ice suggests certain basic equipment:

**Compass.** When venturing far out on a large lake, you can lose your sense of direction at certain times. Some anglers “wear” a compass strapped to their arm or have one accessible in an outer pocket. Before leaving shore, they take a compass reading of their intended route. If time slips by and a blizzard “white out” or winter's sudden nightfall overtakes them, they negotiate the return trip by following their compass in the reverse direction.

**Ice augurs.** Most northern Wisconsin sporting goods stores sell these tools for drilling holes in ice.



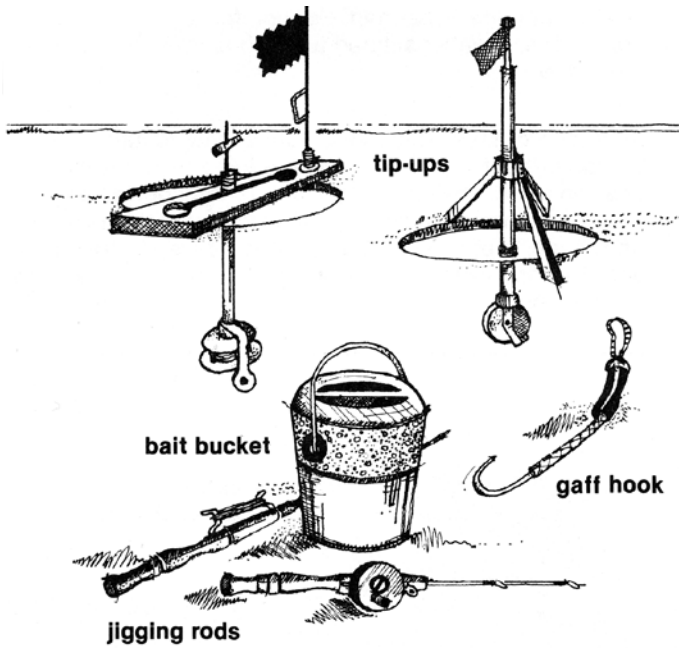


**Ice chisels.** Called “spuds,” ice chisels are still used occasionally for chopping holes early in the season when the ice is thinner. Be sure to secure these thin, but hefty, poles with a line tied to your arm; many spuds have slipped from grasp and plummeted to the bottom of a lake. Spuds are useful for testing ice thickness as an angler walks out and are best on fairly thin ice. Some tip-up ice anglers use them to widen the bottom of an augur hole so that it is easier to turn the fish up through the ice.

**Skimmer.** This handy implement is needed to scoop out slush or chips from the hole. A skimmer looks much like a long-handled soup ladle, with a shallow, sieved bowl.

### Gear for Game Fish

**Lines.** You should have at least two lines (heavy green dacron, commonly) that are at least 10-pound test and 20-25 yards long. Some experts advise that even heavier line—up to 25-pound test—is necessary.



**Leaders.** For walleye, take two or three monofilament leaders, at least 12-pound test and about three feet long. For northern pike, two or three wire leaders, about 15-pound test, will do the job, although in most pike waters, according to some, 8-pound test is enough.

**Hooks.** For walleyes, have an assortment of short-shank No. 3 to 2/0 hooks; for northern pike, No. 2/0 hooks to 6/0 hooks. Swedish hooks, also called pike hooks (see illustration), are also used for northern pike.

### Gear for Panfish

**Line.** Although some authorities suggest not more than a 2-pound-test line, a 4-pound-test monofilament line is less likely to snap.

**Jigging rods.** These can be improvised, but should be light and flexible for bluegills; a stubby, firmer rod is better for perch.

**Hooks.** For both bluegills and perch, use No. 10 or 12 hooks.

### **Additional paraphernalia worth considering:**

**Tip-ups.** These clever devices will signal activity on your lines. Designs vary, but the essential feature is a flag which “tips up” when a fish strikes. Essentially, a tip-up consists of crossed bars about the size of a large tire wrench. One bar spans the hole, and the other bar—with a reel and small flag at opposite ends—dunks vertically into the water. A tug on the reel trips a release mechanism, and the flag springs up.

**Minnow pail, minnow dip net and hook disgorgers.** One suggestion is to flatten and cut a notch in one end of an 18-inch piece of 5/16” wood doweling. This can then be attached to the minnow net with windings of strong cord and then spar varnished or shellacked. With this double-duty tool, hands do not have to dip into chilly minnow buckets or pry hooks out of fish gullets.

**Gaff hook.** A special-purpose, large and heavy hook to help hoist a cold, slippery fish out of the hole.

**Seat.** A small stool or folding chair.

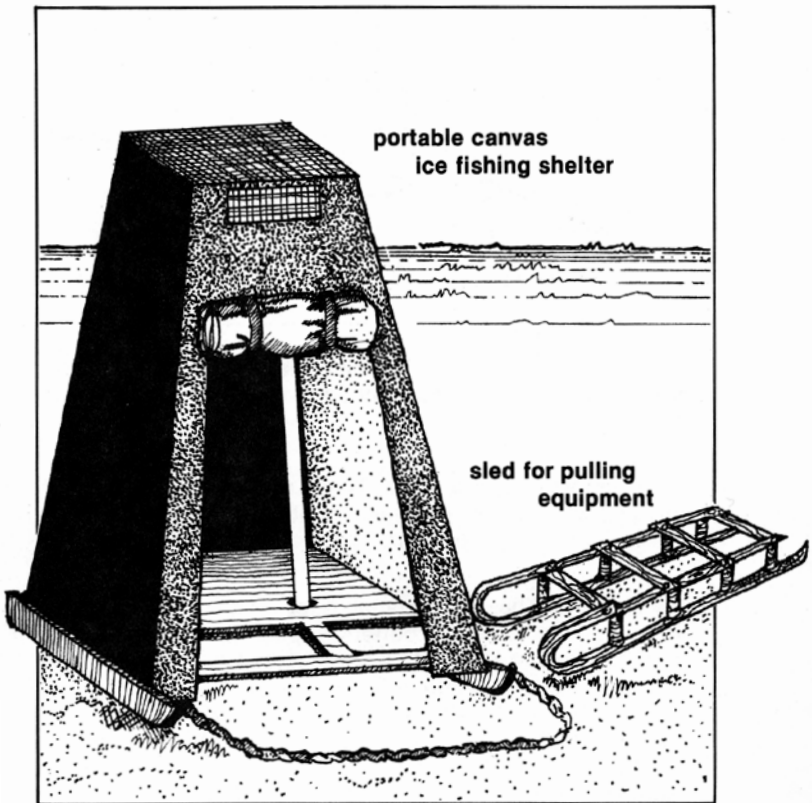
*The following additional equipment may be sheer luxury for some, but a matter of necessary comfort and convenience to others:*

**Seat with windbreaker back.** These come in a variety of designs and shapes. One such shelter looks like a tall but fore-shortened pup tent.

**Ice shanties.** These are available for rent from many Wisconsin sport fishing outlets. Typically, shanties cover about 35 square feet, with six feet of headroom and a wooden bench big enough for two. Inside, stoves and heaters vary from compact, efficient catalytic models to kerosene lanterns to camp stoves. Ventilation must be allowed for, and charcoal burners, which give off carbon monoxide, should be placed outside near the entrance.

**Small burners.** In the absence of a shanty, these are used to warm hands or comfort the nether portion of the chair-bound ice angler. For comfort under all conditions, a well-insulated jug of hot coffee or soup is unbeatable.

**Toboggan or sled.** This is a practical way to haul equipment onto the ice. Some ice anglers put their gear on top of their shanty, which is transported on runners, although most large shanties are left in place on the ice. A backpack is a reasonable way to transport gear for those who haven't brought along a large amount of equipment.





## FISHING ADVICE ONCE YOU'RE ON THE ICE

In selecting a site at an unfamiliar lake, move in among any group of ice anglers present. They usually have found a good location, and a certain amount of friendly crowding—short of “horning in”—is tolerated, even encouraged. Good manners in summer dictate plenty of elbow and casting room, but that doesn't necessarily apply in winter.

If you must do your prospecting, cut your first hole close to shore and drop in a little bait to prime it. (Crumbled egg shells, which twist and catch the dim light as they settle, easily attract minnows—and they bring the larger fish in their wake.) Then start another hole a little farther out. In this way you keep active and warm, and you should locate your quarry more quickly.

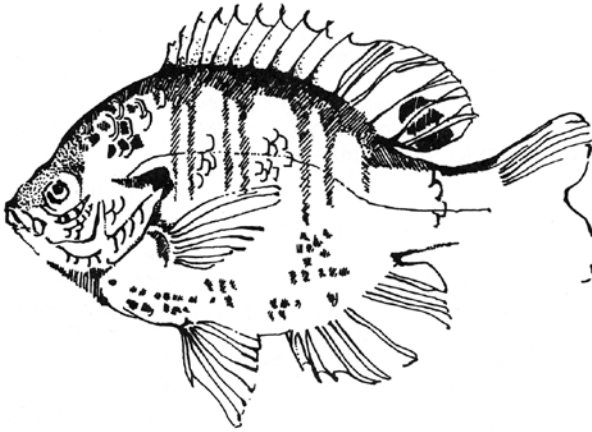
Not all fish bite in winter. A smallmouth bass caught through the ice would make headlines—at least in some counties of Wisconsin. But lakes with such fish as bluegill, perch, northern pike and walleye often provide larger catches in the winter than in the summer.

### PANFISH

Of the 17 million fish caught in Wisconsin during the winter, about 90% are panfish. Of these, bluegill are far and away the most abundant.

#### Bluegill

Bluegill hover near weed beds, brush piles, rocky shores and in calm bays. Just before winter really socks in, they can be found in water four to six feet deep. During this time, just after freeze-up and again a few weeks before the ice breaks, bluegill fishing is reputed to be best. When temperatures drop in January and February, they retreat to deeper waters—up to 20 feet deep. But bluegills are generally taken at depths of less than 12 feet.



An additional fact to consider is that many lakes lose dissolved oxygen as winter wears on. This anoxic condition near the bottom drives fish back toward the surface—an event that varies with the depth and condition of the particular lake.

To fish for bluegill, drop a light monofilament line, 4-pound test, with a baited hook weighted enough to sink near to the bottom.

The preferred hook is a bright-colored, tear-drop lure on which insect larvae can be impaled. These include earthworms, manure worms, rat-tail, meal worms, wax worms, goldenrod gall larvae and other insect larvae.

The rod should be light enough to feel that tender bite. The tip section of any old or discarded fly or spinning rod serves well. By gently jiggling the suspended line with a four-inch upward flick, you will send the lure twisting and flashing seductively as it settles down.

At the same time, your hands must be feeling for that first soft bite on the line. This will be your only signal that a fish is on the other end. The hook must be set gently, but quickly. If fishing with bait instead of a lure, attach a small bobber to support your line. Then watch for the slightest twitch of the bobber as your cue.

## Yellow Perch

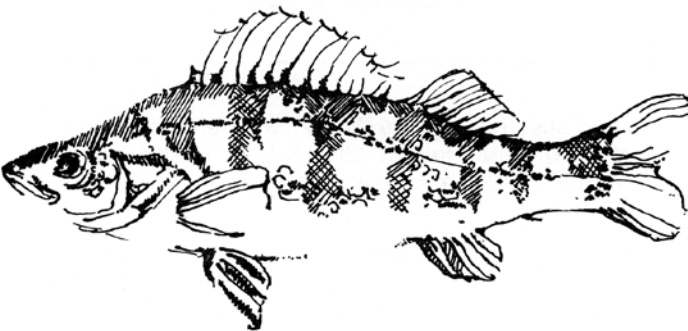
Perch are found in most lakes and the quieter backwaters of large rivers. They thrive particularly in large bodies of somewhat fertile water of a moderate temperature.

Because perch, like bluegills, are schooling fish, catching this species can be a feast-or-famine proposition. Larger perch are caught at depths of up to 35 feet. Smaller ones are to be found in shallower waters near shore.

Early in spring, the adult perch begin a slow migration shoreward to spawn by April or early May. Some experienced ice anglers claim that perch schools can be located toward the end of the season by checking on the water depth and shore areas suitable for spawning.

Perch fishing requires tackle slightly stronger than that used for bluegill, but just as sensitive to that nibbly strike. A short, stubby pole will support stronger line and a sinker heavy enough to carry the lure close to the bottom. A sensitive cork bobber, one that barely floats and is attached to a monofilament line, is often used. However, when fishing at greater depths, the heavier weight needed to lower the line quickly must be supported with larger floats.

For bait, weighted ice flies or bits of bright metal are effective when jigged. Insect larvae used for bluegills will attract perch, but the most reliable bait are small, live minnows (1<sup>1</sup>/<sub>2</sub> inches) impaled through the lower jaw on small No. 10 or No. 12 hooks. Sometimes it helps to gently jig the minnows. Some ice anglers tie the line to the ceiling of their shanties, leaving one hand free to jig the line and the other to stoke the stove or hold a cup.



## GAME FISH

Some species of game fish remain fierce competitors throughout the year. In fact, 30% of Wisconsin's year-round catch of game fish are caught in winter.

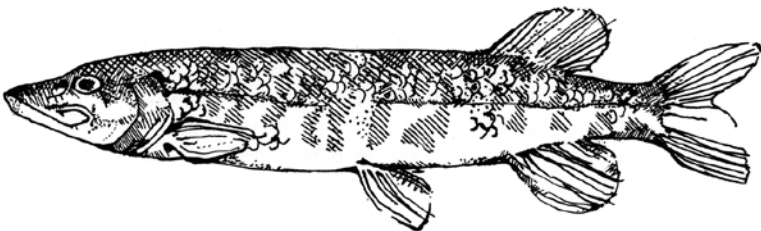
### Northern Pike

On bright days with clear ice, northern pike may hover just off the bottom at depths of 4 to 12 feet. At dawn or dusk or when the day is overcast, they may be ghosting close under the ice. Pike generally stay in the shallows, foraging for small fish near weed beds. The use of two lines at different and varying depths is one very practical way to learn their habits as conditions change.

Tackle for game fish must be stronger, of course, than that for panfish. For northern pike you can use heavy green dacron line, at least 10-pound test, and 20 to 25 yards long. The wire or heavy monofilament leaders, three feet long, should be about 15-pound test, although some claim 8-pound test is enough.

Live minnows make a good bait, especially if care is taken to bait the hook so that they live and are able to swim. Northern pike often prefer smelt to minnows. When fishing with dead smelt on a Swedish hook, set the hook on the northern's first run. Otherwise, when the fish turns the bait, it will feel the hook and spit it out.

Hooking and landing game fish differs sharply from landing panfish. The northern is not a discreet nibbler like the panfish. It may materialize like a dark phantom, finning into a "holding pattern" about three feet from your twitching minnow.



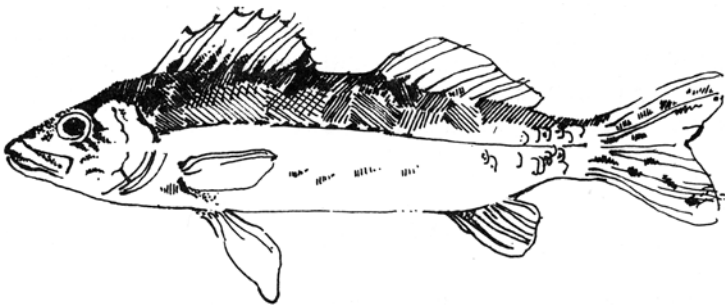
At this point, patience is the rule. The northern turns the minnow around, killing in it the process, before swallowing it head first. Experienced anglers call this “scaling the bait.” When you feel your fish start off once more, that’s the cue to set the hook hard.

If you are lucky, you will have turned the northern toward you, and it may come sailing up to your hole—perhaps even catapult right out on the ice. Chances are, though, that it will twist and shoot right by your hole, and you will then be paying out line faster than before and without the cushioning of a long, flexible rod. Your fingers will have to feel the fish out and be ready to clamp down enough to snub its turns.

With unflinching concentration you can work it back. When the northern is eventually within reach, gaff it through the mouth and haul it up through that 12-inch hole—which may now appear unreasonably small.

### Walleye

Walleye range widely, often in schools. Heavy predators of small fish, they may travel along the contour of the shore, along shoals, and in shallower bays. At dusk in particular, walleyes move into shallow bays to feed on smaller fish. It helps to become familiar with a lake during the summer so you can recall these features when they are iced over. Often state conservation or fisheries departments offer lake bottom maps, which show depth contours and location of weed beds, sandbars, drop-offs, deep holes and sometimes underwater springs.



On an unfamiliar lake without such aids, you can cut your hole near other fishing holes, or start prospecting reasonably close to shore. If your first hole or two draws a blank, drill new holes at evenly spaced intervals until the bottom drops sharply away. If bad luck still dogs you, check out an inlet or outlet, but be careful of thin ice at these points. You might also try chopping a hole close to a sandbar running out from a point of land.

The depth of your line is also an important factor. As in fishing for northerns, experimentation should pay off.

Eventually, the flag on your tip-up will signal a strike. Unlike the slashing attack of the northern, the walleye simply grabs the bait—a minnow two or three inches long—and heads matter-of-factly to the bottom. As with the northern, the only resistance should come from the unwinding reel. When the walleye stops, it should be left undisturbed while it scales the bait. This may sorely try your patience, sometimes taking four or five minutes. When the line is tugged once more, pick up the tip-up and set the hook in one motion. The walleye fights as much as the northern, but it usually stays near the bottom. After it tires, you can work it to the surface and, with the help of your gaff, fork it out of the hole.

Although tip-ups have brought the most success in game fishing, you can jig for walleyes in a simpler way with less equipment. This requires merely a monofilament line on a jigging rod with a wide variety of weighted lures, or “jigs,” on the other end. Most walleye jigs are baited with wax worms, small minnows or cut smelt.

As with panfishing, the art comes in twitching, or “jigging,” the lure in a way to entice and not frighten the fish. An important difference, however, is that the lure is not a minnow to be thoughtfully gummed around and swallowed, but a foreign object that will be spit out. When using a lure, the hook must be set immediately on the initial strike.

Jigging, besides being adaptable, also has other advantages. An easy adjustment of the rod or a pull on the line can change its depth. If a school of walleye are biting, you can haul up two or three fish in the time it takes to rebait with a minnow.

## STAYING ON TOP OF THE ICE

(Adapted with permission from *Danger: Thin Ice!* by Kim Elverum  
© 1985 Minnesota Department of Natural Resources)

When is ice safe? There is no sure answer. Ice is tricky, and just because a lake or stream is frozen doesn't mean the ice is safe.

To understand the factors involved in the strength of ice, it's necessary to understand how ice forms on lakes and streams and a few of its physical properties. Here are the key points to remember, some of which are based on research by the U.S. Army Cold Regions Research and Engineering Laboratory in New Hampshire:

- You can't tell the strength of ice just by its appearance, the daily temperature, thickness, or whether the ice is covered with snow or not. In fact, the strength of ice is based on all four factors—plus the depth of the water under the ice, the size of the water body and its chemistry, the distribution of the weight of the ice, and local climatic factors.
- Generally speaking, new ice is much stronger than old ice. Ice formed by the direct freezing of the water of a lake or stream will be stronger than ice formed by melting snow, refrozen ice, or ice made by water that bubbled up through cracks and froze on the surface. A few inches of new ice may be strong enough to support you, while a foot or more of old, “rotten” ice may not.
- The ice cover can be several inches thick in one spot yet only an inch thick nearby.
- A cover of snow insulates ice, slowing down the ice-forming process. The additional weight of the snow can also decrease the weight-bearing capacity of the ice cover.
- If you hear ice “booming” or cracking on cold days or during still evenings, it doesn't necessarily mean the ice is dangerous but merely that it's changing shape, expanding and contracting, as the temperature changes.

- Ice is weaker near shore. The buckling action of a lake or stream over the winter is continually breaking and refreezing the ice along its shores.
- The ice over flowing water can be dangerous, especially near shore, around inflows and outflows, at bridges and on lakes with large numbers of springs. The ice on straight, smooth-flowing stretches of a river is safer than that over the bends in the river. River mouths are dangerous because the current undermines the ice and creates weak spots. A potential danger spot on lakes is an open portion completely surrounded by ice, because winds force the exposed water beneath the ice and rot it from below.
- Fluctuations in water level and the actions of birds and fish can also weaken ice. Schools of carp, for example, create thin spots in ice covers, even open water, by congregating in one location while circulating the water below with their fins.

### Tips for Going Out on the Ice

Once you understand the physical properties and problems with ice, you can understand why ice is so unpredictable and why the only absolute rule for ice safety is to stay off. If you like ice fishing, cross-country skiing, ice skating, snowmobiling or ice boating, however, staying off the ice is going to put a crimp in your winter fun. So, for those who venture out onto the ice, whether on foot or by vehicle, here are some tips to lessen your chances of a breakthrough:

- Clear, solid ice uniformly at least two inches thick is usually sufficient to hold a single person walking on foot. Ice fishing requires at least four inches of ice, and a snowmobile, five inches. Automobiles and light trucks require at least eight inches to a foot of ice. (Remember that these are merely guidelines; the factors mentioned previously must always be considered also!)
- Before you head onto ice, check with a local bait shop operator, resort owner or ice angler about areas where the ice is known to be thin or where aeration operations have created open water.
- Refrain from driving onto the ice in a car or truck. It is illegal to do so on some lakes, particularly in urban areas, but driving



onto the ice in a vehicle on any lake—especially early or late in the season—is simply a matter of an accident looking for a place to happen. If you must drive on the ice, be prepared to leave your vehicle in a hurry. Unbuckle your seat belt and make a simple plan of action in case you break through. Some safety experts recommend keeping the vehicle's doors open and the windows rolled down for an easy exit.

- If you do drive onto the ice, prolonged parking is not recommended, especially if the thickness of the ice is marginal. Vehicles should be moved from time to time so the ice can resume its previous position and shape. Parking a vehicle in one spot too long tends to weaken the ice around it.
- Vehicles parked close together may depress the ice beyond its bending limit, causing it to break. A vehicle surrounded by ice cracks is in great danger, as it has only the buoyancy of the single uncracked piece it is sitting on to support it.
- If you drive across ice that has cracked and refrozen, cross the cracks at right angles and avoid parking near them.
- Often vehicles will establish “roads” leading from shore to the current ice fishing hotspot. After repeated use, these roads may cause the ice to weaken, so they may not be the safest routes to take.
- If you're on a snowmobile or driving a vehicle, be especially cautious at night or when it's snowing. Falling snow and darkness can obscure spots of thin ice or open holes.
- If you break through the ice, proper clothing can increase your chances of survival. An ordinary nylon snowmobile suit, if it is zipped up, can trap air and slow your body's heat loss. Snowmobile suits with inflatable flotation elements are also available. One of the newer vest-type, foam personal flotation devices (PFD or life preserver), worn under your outer clothing, can help keep you warm, conserve body heat and keep you afloat. However, don't wear a PFD while traveling across ice inside a car or truck. If your vehicle goes under with you inside, a PFD could hamper your escape.
- Carry a couple of large nails and a length of light nylon rope with you. The nails can help you pull yourself from the water on slippery wet ice. The rope is for rescuing someone else.

## What to Do in a Breakthrough

**To Help Yourself:** If you break through while on foot, don't panic. Your heavy winter clothing, especially a snowmobile suit, will not drag you down. Instead, if you remain calm, it provides excellent flotation.

To climb out, turn toward the direction you came from and put your hands and arms on the unbroken surface. Work forward on the ice by kicking your legs and using those nails, if you have them, to claw your way onto the ice. If the ice breaks, maintain your position and slide forward again. Once you are lying on the ice, don't stand up. Roll away from the break until you're on solid ice. Once you're on safe ice, get to shelter and warm yourself immediately.

**To Help Someone Else:** Resist the temptation to run up to the hole to give the victim a hand. Keep calm and think out a solution. It does neither the victim nor you any good to endanger your life unnecessarily. Use a rope, or look for a light boat to push across the ice ahead of you. If you are sure the ice will carry your weight, lie on your stomach and extend a ladder, pole or some object ahead of you for the victim to grasp. After being pulled from the water, the victim may require artificial respiration as well as treatment for hypothermia. Seek medical assistance immediately.

**To Escape a Vehicle:** If your car or truck plunges through the ice, your problems are compounded. You now must escape from your vehicle in addition to getting out of the water. Your escape should be relatively quick and easy if, as noted previously, you were driving with the vehicle's doors or windows open and you are wearing neither a seatbelt nor a PFD.

If the vehicle's doors and windows are closed, however, the best time to escape is while the vehicle is still afloat and not—as reported in the past—after it has sunk. Depending on the vehicle and the circumstances, the floating time can vary from a few seconds to two or three minutes. The more airtight the vehicle, the longer it will remain afloat.

Studies on the problems of escaping from submerged vehicles in Michigan and the Netherlands have revealed two facts:

- You won't be able to open the vehicle's doors until the water pressure inside the vehicle is equal to that on the outside. But unless there is structural damage, you will be able to open the doors once the vehicle is completely filled with water.
- Vehicles with engines in front will descend engine-first at a steep angle. In water 15 feet deep or more, such a vehicle may come to rest on its top at the end of its descent.

So, while the vehicle is still afloat, your best escape hatches are the windows, since water pressure from the outside will make it impossible to open the doors. If the side windows are blocked, try to force the front or rear (above water) window out of its frame by pushing against the corner of the window with your feet or shoulder. Once the vehicle starts to sink, the amount of time and air you have left to work with is greatly reduced. Water will rapidly displace the air remaining in the vehicle, which will escape through the cab and trunk. An air bubble may remain in the vehicle as it sinks, but such a bubble is unlikely to remain long after the vehicle reaches bottom.

Once the vehicle is filled with water, you will be able to open the doors, but the time you may need to remove children or injured persons is gone. This is why it is important to try to get everyone out through the windows while the vehicle is still afloat.

Even if you escape with no more harm than an icy bath, your problems aren't over. According to salvage experts, it will cost you from \$300 to \$2,000 or more to get the vehicle out of the water and refurbish it.

Remember, your greatest ally in preventing ice accidents is common sense. Assess the condition of the ice and be prepared for breaking through the ice before you venture out on it. Five minutes of checking the ice from shore—coupled with systematic regular checks of the ice while you are on it—can make the difference between an enjoyable outdoor experience and a tragedy.



## A PARTING SHOT

Although growing in popularity, ice fishing is not for everyone. The wind can be cold and raw, and the landscape bleak.

But experienced ice anglers, hauling in almost one-fifth of Wisconsin's annual catch, willingly brave the weather. And for rank beginners, ice fishing's initial appeal may lie in the fact that even they can score, if—like everyone else—they find the fish and follow a few basic techniques.

This booklet is meant as an introductory offer to try one of Wisconsin's best and fastest growing winter sports. Why not extend a baited or jigged “introductory offer” of your own through a hole in the ice? You are bounds to get some takers.

**“For Angling may be said to be so like Mathematics that it can never be fully learned; at least not so fully but that there will still be more new experiments left for the trial of other men that succeed us.”**

**— Izaak Walton**



## ADDITIONAL RESOURCES

### Ice Fishing—Recommended Books & Web Sites

**Any Wisconsin resident can check out books at Wisconsin's Water Library.**

*<http://www.aqua.wisc.edu/waterlibrary/icefishing.asp>*

**WDNR Fishing Wisconsin**

*<http://dnr.wi.gov/org/water/fhp/fish/>*

**Lake Maps**

*<http://dnr.wi.gov/org/water/fhp/lakes/lakemap>*

**Fish of the Great Lakes**

*<http://www.seagrant.wisc.edu/greatlakesfish>*

**Educational Resources—Bring fishing to your school & community!**

*<http://dnr.wi.gov/org/water/fhp/fish/kidsparents/anglereducation/index.shtml>*





