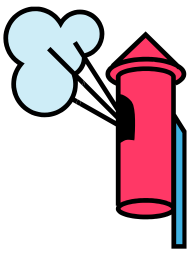
CHAPTER 1

TO FISH ANOTHER DAY (safety)

Every year we hear of an unfortunate person who falls through the ice on a pond or lake while ice fishing or snowmobiling. If lucky, the abrupt end to their ice fishing trip means only a cold, wet trip home to change and warm up. Without proper **precautions** that same unanticipated cold swim might have ended his or her life. When out in the weather, safety should always be your number-one concern.

When thinking about safety in ice fishing, the most obvious concern is the fishing platform, the ice. Not only must it be thick enough to support a person, it also has to have a uniform quality to support his or her weight. It is not uncommon for ice to vary in thickness. It may be thick enough in one area, but be unsafe a few yards away. Current, springs, upwelling, underwater structures and **aquatic growth** can all affect ice thickness. A snowfall after first ice can insulate ice from the cold and slow its thickening.

Let's take a look at how ice is formed. Water (two molecules of hydrogen and one of oxygen) exists in three forms: liquid, gas and solid.



The approaching winter cools the surface water, packing water molecules more densely together and causing it to become heavier (Fig. 1). The surface water sinks into the less dense, warmer water below. This cooling and settling process continues until a uniform water temperature of 39.2 degrees Fahrenheit is reached. **Turnover**, the name given to this mixing phenomenon, occurs until the whole water column is **homogenized**, or of equal temperature and density (Fig. 2). An interesting and important event occurs as the water continues to cool. At 39.2 degrees water has reached its highest **density**, its molecules tightly packed. Then, as the surface water temperature drops below 39.2 degrees, the water molecules gradually expand, becoming less dense. You could say that they now take up more room. At 32 degrees the water molecules expand even further and begin to form organized ice crystals. Much lighter than the denser warmer water below, the ice crystals float.

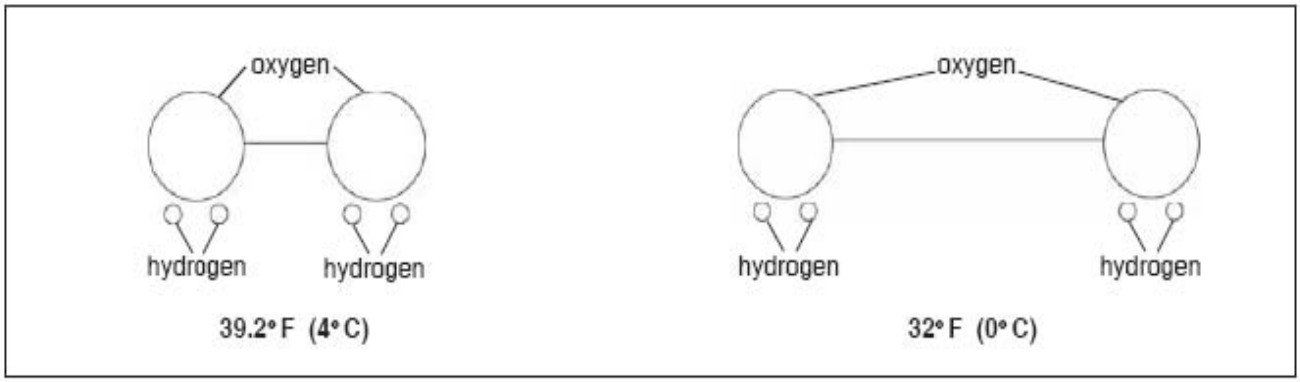


Fig. 1

The layers of ice that form on lakes and rivers act as insulators, preventing the water below from freezing. If it were not for this, a pond or lake would freeze from the bottom up, eliminating a year-round **environment** for aquatic plants and animals, and our ice fishing story would end here.

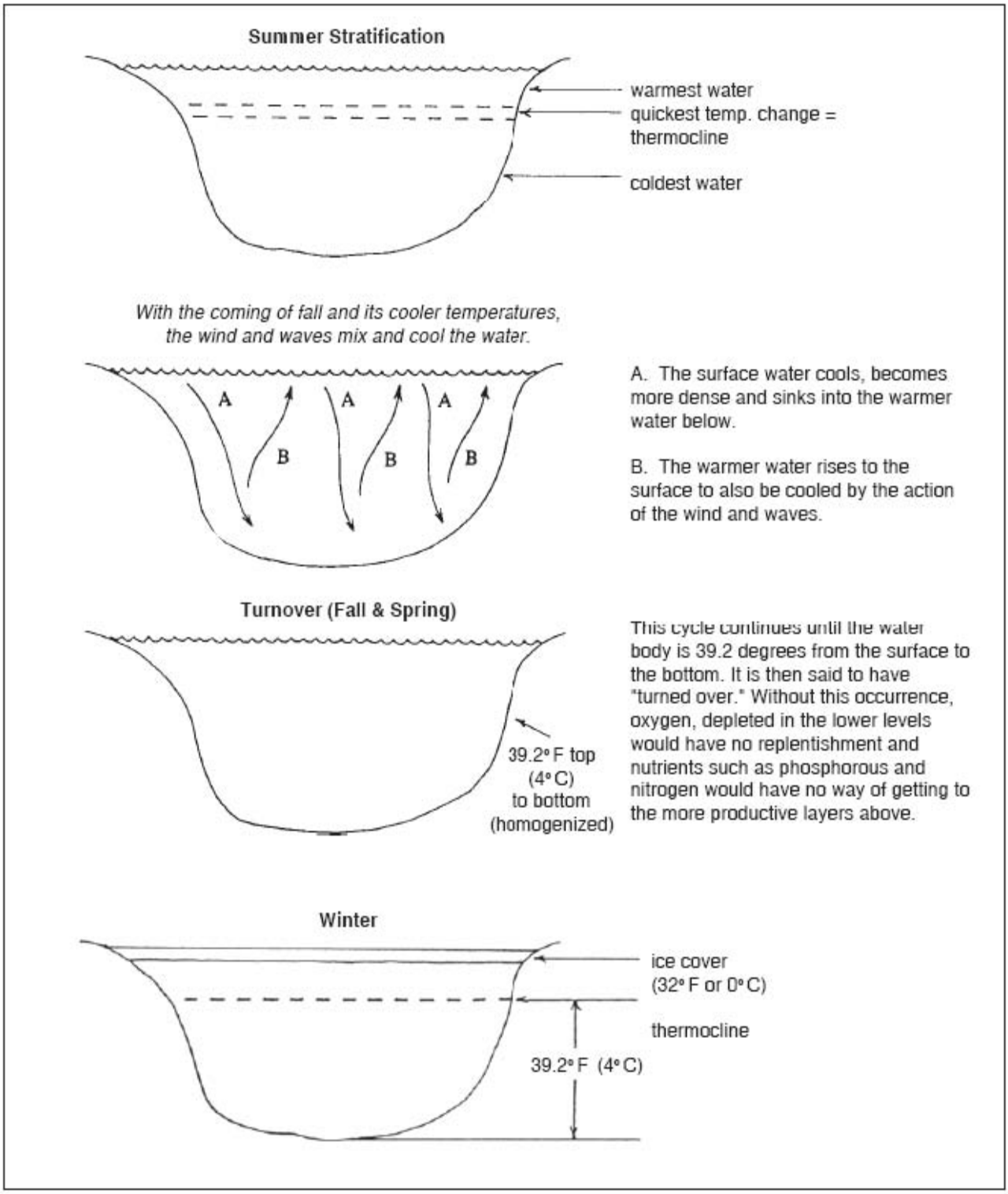


Fig. 2

The best method of checking the ice is with an old standby tool, the ice spud. Best described as a chisel with a long, heavy handle, the

spud is used to “thunk” the ice as you slowly proceed. If the spud breaks through, get off the ice immediately! If it does not, use it or an auger to drill a series of test holes.

This leads us to the question, what *is* safe ice thickness? Remember: all conditions call for sub-freezing temperatures. As a rule of thumb (for new, clear ice), there should be a minimum thickness of:

4 to 6 inches for a few, well-dispersed anglers

6 to 7 inches for small group activities

8 to 10 inches for snowmobile activities

12 or more inches for passenger vehicles

Remember: SOMETIMES NO ICE THICKNESS IS SAFE. Shoreline ice and frozen bays may be affected by wind and waves. Moving water erodes ice from underneath. Bridge supports and reefs can harbor unsafe ice. Docks, logs, weeds or any protruding objects can absorb heat and weaken ice. If the ice looks too clear, honeycombed, or just not safe, don’t risk it.

Don’t forget the weather. An extended period of sub-freezing temperatures helps ensure safe ice. **A few days of warm, windy weather can drastically weaken ice.** Being aware of what weather has occurred and what is forecast will help make your ice fishing trip more enjoyable and safe.

When going ice fishing, plan ahead and bring some safety devices. Before you leave home let somebody know where you are going and when you are planning on being back. When you are not quite sure of ice thickness or conditions, the most important thing you can do is bring is a friend. *Do not go alone.* If one person or the other falls through the ice, the other can get help. The following is a list of things you should take along:

1. A friend 

2. Spike nails tied together by a cord (in case you have to pull yourself back onto the ice)

3. Proper clothing

4. Emergency preparation plan

5. Ice spud

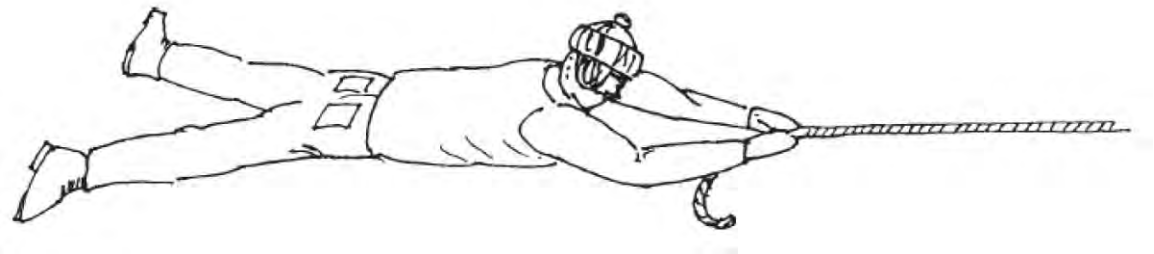
6. Compass, GPS, or both (sudden storms can arise, seriously affecting visibility)

WHAT DO I DO IF I FALL IN?

As in any emergency, **don't panic.** Call for help. It doesn't take long for the cold water to start slowing your physical and mental functions, so you must act quickly. Air will remain trapped in your clothes for a short time aiding your buoyancy. Kick your legs while grasping for firm ice. Try to pull your body up. After your torso is on firm ice, roll towards thicker ice. This will better distribute your weight. Remember: ice you have previously walked on should be the safest. After you reach safe ice, contact emergency services as soon as possible and make them aware of the incident. Hypothermia is extremely dangerous and you need to be taken care of as soon as possible. You need to warm up to prevent hypothermia. Go to the nearest ice fishing shanty, warm car or home.

WHAT DO I DO IF SOMEONE ELSE FALLS IN?

Call for help. It does no good to have two people in the water. Don't put yourself in danger. Let the person in the water know that they are going to be okay. Have them try to get on to thicker ice. After getting help, and if it is safe, toss the person a rope or another long object. A ladder, a long branch, a piece of clothing, anything to extend your reach can be used. It is important that your weight be distributed. But remember, the most important thing you can do to help the person is to stay calm and contact emergency services.



One of the nice things about ice fishing is its simplicity. With just a few pieces of equipment, proper preparation and prudent safety practices you can be sure to fish another day.

Possible extension activities:

1) (Critical Thinking Exercise) Discuss the safety items in the room that you would take with you ice fishing. Once the items are listed, pretend to have somebody fall through the ice and show what you would do.