

## Baking in the Backwoods

by Steve Turner, with Dawn Morrison

Outdoor baking requires a different set of rules and equipment than those we use at home and a lot more planning. Follow these tips to help you enjoy not only the food but the process of preparing it.

### Heating Up

From common elements like butane to the less popular yak dung, there are a number of different options for heat sources in the great outdoors.

There are three ways of heating food: conduction, convection and radiation.

Conduction occurs when the food is heated by direct contact. When frying, heat from the pan is passed on directly to the food. Similarly, when boiling, heat is transferred from the hot water to the food by conduction.

Convection takes place by hot moving air. Air expands when it is heated, causing it to move up and heat food in its path; this is natural convection. When you bake bread in a Dutch oven, the air at the bottom of the oven is heated by conduction, causing the air to expand, rise and displace the cooler air over it. This motion of air inside the oven bakes the bread evenly by natural convection. Forced convection happens when hot air is directed at the food by a fan. If your oven at home has a fan, it's a forced convection oven.

Radiation is heating by radiant energy. A fire gives off radiant energy, which travels in all directions around the fire; the hotter the fire, the more radiant energy it gives off. Because of this, a hot fire can heat food without conduction or convection.

### The Hunt for the Ultimate Stove

You can find many stove options suitable for various purposes, fuels and pocketbooks.

These stoves range from classic designs modeled after ones our grandparents used, to newer models incorporating cutting-edge vaporization technology and special materials to make them lighter or perform better. Each stove design has its own special features: white gas stoves work at subfreezing temperatures, butane stoves are as easy to use as a home gas range, alcohol stoves burn clean, hexamine stoves and fuel are ultra-light, wood stoves don't require packing in fuel and solar stoves are pollution free. And each stove design has its unique drawbacks: petrol stoves use caustic fuel, gas stoves must use pre-filled canisters, alcohol stoves have poor efficiency, hexamine gets very expensive, wood blackens pots, and solar stoves are generally extremely slow to cook with.

Faced with all of the stove choices out there, you may need to do a little research to narrow down which stove, or stoves, will best suit your needs. Some factors to consider when selecting a stove are fuel type and availability, price, heat level and control, weight and efficiency, durability and maintenance, and environmental impact.

### Open Flames and You

The trend in the backcountry is to reduce the use of campfires, and when having one, to keep it small and contained. Fires leave a mark on the land that is not easily removed — in minor ways like a black mark on the rocks or a burn in organic soils, and more seriously as a root or forest fire. The impact of wood gatherers making trails off the path, cutting down standing trees and dragging them back, or leaving trash and food waste behind is a hazard to the next party that visits. Lower your impact by not having a fire whenever possible. If you do have one, here are some guidelines to follow for "leave no trace" (LNT) fires:

- 1 An LNT fire starts with identifying whether your immediate surroundings can handle the harvesting of firewood; take into consideration elevation, plant growth and use of the site.
- 2 There is only room for one small fire pit per camp site. If you come across more than one fire pit (or one bigger than you can fit your arms around) dismantle the rock pile and disperse the ashes properly. Build a new pit on the original site, checking to make sure there are no branches above the fire.
- 3 If there is no existing fire pit, your options are limited. You may wish to build a disposable fire: put down a tarp with 4 cm of sand or mud on it, tuck in the edges and build your cooking fire on top.
- 4 "If you can't break it, you can't burn it." Only gather dead and down wood for your fire, and choose wood no larger in diameter than your wrist. Also remember that fires are not a way to deal with waste; if you brought it in, take it out.
- 5 Be sure to put out the fire properly. Fires and glowing coals must be watched until they are cool to the touch. Burn all debris in the fire to ash and generously douse with water.

### Stove-Top Baking with a Twiggy Fire

When planning to bake in the woods, there are some basic tools you will need to take with you. A must-have is a deep, non-stick fry-bake pan with a snug-fitting lid. (The lid must fit tightly to ensure that you can trap the necessary amount of heat.) You will also need a bowl or pot large enough for mixing in, and a sturdy spoon (without one, be prepared to get your hands in the mix).

To get started, gather a pile of small twigs and have on hand a pail of water for safety. Light your stove and let it run at its lowest heat. The temperature will be right if you can comfortably hold your hand 10 inches above the stove; too hot is generally more of a problem than too cold. Although water can

also be used in the pan to stop the bottom of the baking from burning, using too much can lead to a pudding-like texture in the baked good.

When the proper temperature is attained, put the baking pan on the stove and build a twiggy fire on the lid. You'll need to spread the fire evenly over the lid and feed it enough wood to keep it burning; it's next to impossible to generate too much heat.

Total cooking time usually runs 20 minutes for light, quick breads and up to 40 minutes for dense, moist breads. After 15 or 20 minutes, carefully lift the lid off and check the progress; don't lift the lid too often or you will lose the heat needed for baking. The dough is cooked when it has a firm crust and sounds hollow when you thump it. After you are done baking, set the pan off the stove but continue burning the twiggy fire until nothing is left but a fine ash that can be scattered.

### Flip Baking

Compared to stove-top baking, this method yields results that are just as tasty, but the much faster cooking process results in denser dough. It is ideal if you are in a rush, twiggy supply in the area is low, or a high fire danger is on.

Begin by oiling your pan and placing the batter or dough inside; place on the heat and carefully flip when it is done on one side. The time needed on each side will depend on the thickness of the dough and the heat of the stove; when you see bubbles or steam coming through the dough, it's time to flip. Be sure to cook until both sides are toasty and the middle is not gooey.

Flip baking is great for pancakes, pan biscuits, tortillas and Johnny-cakes.

### Reflector Ovens

Reflector baking is another fun way to bake your favourite goodies. The bonus of this form

of baking over other forms is that you can see the food while it bakes; this makes it easy to adjust the heat and time as needed.

Reflector baking is done in a reflector oven, which is an aluminium “half box” with a shelf in the middle to hold the food. A metal bar, or legs, in the back of the oven supports it and keeps the shelf level. The size will vary for each oven, but it is easily taken apart and folded for packing.

The reflector oven heats food by capturing radiant energy from the campfire and directing it onto the food. The food is placed on the shelf and when the radiant energy strikes the shiny, sloped top or bottom of the oven, it is reflected toward the food where it is absorbed. Once the energy is absorbed, the food starts to bake.

The amount of energy captured by the oven depends a lot on the temperature of the fire and the distance between the fire and the oven. If the temperature of the fire is doubled, the amount of energy captured by the oven will increase by a factor of 16! If the distance between the fire and the oven is cut in half, the amount of energy captured will decrease by a factor of four. You can adjust the

temperature of the oven, then, simply by changing its distance from the fire.

You will need to be VERY careful when you position the oven; you will have to work near the fire, as the oven should be placed less than a foot from the edge. Be sure not to place your oven so close that flames pass under and lick the bottom of the oven shelf. If they do, you will end up frying food that should be baked and will be disappointed with your results.

It is hard to keep the oven temperature steady and it is almost always too hot, so bake by visual inspection whenever possible; when the knife comes out clean, the baking is done. Also, be sure to rotate the food when it looks as though the side nearest to the campfire is getting a little over done.

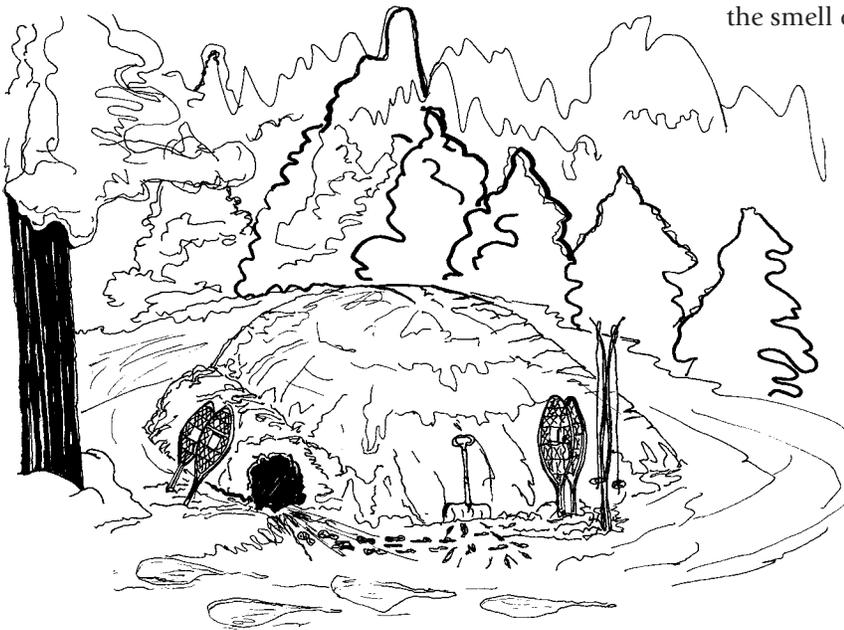
**A Safety Tip:** Because you are cooking with radiant energy, the oven will always be much hotter than the air around it. You must use oven mitts when handling the hot pans.

### Basic Batter Mix

What an amazing thing it is to wake up to the smell of fresh baked cinnamon rolls or an apple crisp hot off the stove. It’s even better when you wake up in the woods to the smell of fresh baked goodies.

All you need is a basic batter mix.

The initial basic batter mix ingredients will be much the same for pancakes, quick breads and pie crusts. What will vary is the consistency of the batter and the additional ingredients that make each batch special. For



example, pancake batter should pour easily, while muffins and cakes need to be thicker. While this recipe offers some suggestions as to the amounts of liquid needed, the best plan is to add water slowly until the batter is the desired consistency.

### The Mix:

- 2 to 3 cups flour
- ¼ cup dry milk (optional)
- ¼ cup powdered egg mix (optional)
- 2 to 4 tsp. baking powder
- 1 to 2 tsp. baking soda (optional)
- ½ tsp. salt
- ½ tsp. sugar (optional)
- ½ cup light oil or margarine
- + water

How much water do you add? For pancake batter, about 2 cups; the batter should run off the spoon easily. For cake batter, about 1 ½ cups; the batter should fall slowly from the spoon. Muffins and quick breads need less water, about 1 ¼ cups; this batter is twice as thick as pancakes. For biscuit batter about 1 cup; this batter is quite stiff but still sticky, and you'll have to push it off the spoon or press it into the pan.

### Watch Out for Altitude

The higher up you go the less leavening agent you will need. Double-acting baking powder releases its leavening agent in two stages so cakes won't rise too fast.

If you are using double-acting baking powder, here are some guidelines for how much to add per 2 cups of flour:

- 0 – 3,500 feet: 4 tsp.
- 3,500 – 6,500 feet: 3 ½ tsp.
- 6,500 – 8,500 feet: 3 tsp.
- 8,500 – 10,000 feet: 2 ½ tsp.
- Over 10,000 feet: 2 tsp. and an extra egg

If the recipe calls for a considerable amount of sugar, cut back a tablespoon or two as you gain elevation. Using too much sugar at higher altitudes may make your cakes fall.

For commercial mixes, you must add extra flour. Extra water should also be added to the mix for two reasons: the first is to compensate for the extra flour, and the second is because water evaporates faster at the drier heights.

If you do not adjust for the altitude, your baked goods will expand out of your pan, crumble into a small pile, and be otherwise inedible without the use of a spoon.

### My Final Word

Baking in the woods can be a lot of fun and can help to make a good trip an amazing one. It does take some time, planning and preparation, so make sure you do your homework before you venture out. Test your chosen recipes in your oven at home before trying them out on your friends on a 10-day trip.

On trips I like to bring along some basic mix for quick breads, and I carry flour and yeast for yeasted breads when I have more time. I like to experiment with different flours and change recipes to suit my tastes and the tastes of the group I'm travelling with. For example, try whole grain flour instead of white, or spelt flour instead of wheat. I have made many birthday cakes in the bush with an icing out of coconut cream and sugar water — try it on a chocolate mint cake. YUM!

Baking is a great way to have gourmet meals that pack very small, weigh little and feed lots of people for pennies. If you have not yet baked on a trip, give it a try; if you have, try making a new recipe or fancy bread — your trip mates will love you for it.

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*Steve Turner is an outdoor environmental educator at the YMCA of Oakville and Operating Officer of ECHO Adventures with over 20 years experience safely leading and teaching people in the outdoors.*

*Dawn Morrison is a professional writer with a strong passion for the outdoors and the environment.*