The MacScouter -- Scouting Resources Online

Cooking for Scouts and Scouters

Dutch Oven Cooking -- Introduction

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1. Introduction

The reason for this book is to provide reference material for an individual who is planning or cooking a meal for six to ten people. For larger groups, most of the recipes can be easily doubled or tripled and two or more dutch ovens may be needed. Most of the information has been targeted toward the first time dutch oven user, although, the more experienced cook may find a tidbit or two here and there. I hope this book will intice all of you potential dutch oven cooks to "give 'er a try" and you will see why I call them "man's best friend".

 This book is intended as a growing document containing Dutch Oven tips, techniques and recipes. Please let me know which recipes are good, bad or need improvement. If you wish to contribute your favorite recipes for the next issue, please send your inputs to me at the following address and I will give you and your troop credit in the next issue:

John W. Lyver, IV
Herndon, VA

2. What Your Dutch Oven Can Do

Cooking techniques such as roasting, baking simmering, stewing, frying, boiling, steaming, and many others are easily done on the campfire with only a single utensil, the dutch oven. Think of the possibilities, delicious fresh baked bread that will rise up and lift the lid, cobblers made from berries picked fresh at the campsite, incredible deep-dish pizzas, stews, quiches that melt in your mouth, cornish game hens roasted to perfection, and imagine a chocolate cake a foot in diameter. These and many, many more are very possible and sometimes easier than they are at home. With very few exceptions, I have been able to duplicate my home recipes on the campfire using the dutch oven.

All recipes use one of two dutch oven techniques, cooking with your dutch oven or cooking in it. The first is when the food is placed directly in the bottom of the dutch oven. In the second method, food is placed in a second dish and this dish is then placed onto a trivet in the bottom of the dutch oven. The reason for the trivet is to elevate the dish

above the bottom of the oven to prevent burning.

3. A Little About the Dutch Oven

Before we get started, we should review some of the things you will need to know before purchasing your first dutch oven. There are literally hundreds of option and size combinations available, so it would be impractical for me to tell you which oven is the one for you. Because each type of oven is designed for a different type of cooking situation. I will go over the various options and you will have to decide which ones you will look for. In shopping for an oven, you should look for one that is obviously well made. Look at the bail handle, it should be of heavy gauge wire and securely attached to molded tangs on the side of the oven. Ovens that have riveted tabs should be avoided. Most oven handles will lay down against the side of the oven in both directions, but if you look hard enough, you will find some that allow the handle to stand up at a 45 degree angle on one side. This allows you easier access to it when positioning or removing the oven from the fire.

Another area that bears close examination is the handle on the lid. It should be a loop attached to the lid on both ends and hollow in the center allowing it to be easily hooked. Stay away from the ones that have a molded solid tab on the lid for a handle. These are very difficult to grasp and manage with a load of coals. The loop style offers much better control. While examining the lid, check that it has a lip or ridge around the outer edge. The lip keeps the coals from sliding off of the lid. Don't get me wrong, the ridgeless ones can be used but it is difficult to keep coals on the lid and if you are not meticulous in cleaning the ash from the lid each and every time you open the oven, you will end up with ash and/or sand in your food. The lip virtually illuminates the problem and the lid can be lifted even fully loaded with ash and coals with little difficulty.

Another feature to look at is the legs. The most common variety is one with three legs, although flatbottomed ones and four legged ones can also be had. For outdoor cooking, legs are a necessity, they maintain the height of the oven above ground allowing air for the coals underneath. The flat bottomed ones can be set up on rocks(which are scarce as hen's teeth here in Florida) or up on steel tent pegs. If you figure in Murphy's Law here, the flatbottom ovens are best left in the store or on the kitchen stove where they were intended. I highly recommend three legs over four simply for the stability factor. It is much more stable with three legs sitting on rough ground than with four.

The last option to look at is a second handle attached to the lid or upper rim on the oven base. Some ovens are offered with a skillet type handle attached to the lid. This, in theory, is a good idea, but in reality they seem to be more in the way than of assistance. The handle does assist in using the lid upside down as a skillet or griddle but when using it as a lid, they get in the way of the bail handle and also misbalance the lid when lifting by the center hoop. They also tend to be in the way during storage and packing situations. Fixed handles on the oven base, with one exception, should be absolutely avoided. I believe the theory behind these handles was to make the oven easier to position in a deep fire pit. If you insist on considering the handle, take a couple of red bricks with you to the store and place them in the oven. Then give her a lift by the handle and you will see the uselessness in the handle. A loaded 12" oven can weigh 20 to 25 pounds, a real wrist breaker. The one exception is a small tab sometimes offered which is about 1 to 1-1/2" deep and 2-3" wide on the upper lip of the oven. This tab makes pouring liquids from the oven very easy and its small size has never caused storage or packing problems for me.

When someone mentions "Dutch Oven" most people immediately think "Cast Iron", but dutch ovens are supplied in aluminum also. An aluminum oven weighs only 6-1/2 to 7 pounds opposed to around 18 pounds for the cast iron oven. There are advantages and disadvantages to each.

The most obvious aluminum advantage is weight, 11 pounds lighter. Additionally, because aluminum doesn't rust, care is restricted to simple washing with soap and water. Aluminum tends to heat faster requiring less preheating time but they don't retain the heat very long after the coals are removed. Also because aluminum reflects more heat than cast iron, more coals will be required to reach and maintain a set temperature. Also on windy days, you will see a greater variation in temperature than one of cast iron. Where weight is very critical, most of the disadvantages can be overcome. For canoeing,

backpacking or trips where weight is a problem, aluminum ovens are the answer.

Be careful with aluminum, it will melt! The melting point of aluminum is (cast alloy 43 is 1065 to 1170 deg F Ref Perry's Handbook of Chemical Engineering 6th ed p 23-40 Table 23-6). Other alloys are higher melting point up to 1200 deg F. The melting point of cast iron is 2100 deg F to 2200 deg F (same reference). It is possible to generate that kind of temperature if the oven is in direct contact with the coals below it or if there are too many coals below the oven.

Personal Note on Aluminum:

With charcoal on and under when a strong wind came up a blast furnace effect caused the bottom to sag and the lid was dripping molten aluminum into the cake! The top held its shape, but there are little metal balls stuck all over the inside of the lid. I always thought they were indestructible until then.
Milt Forsberg, SM, Troop 7, Champaign, IL

Aluminum is ok if properly used. Keep coals from contact with the bottom of the dutch oven. Only use the number of coals needed to prepare the meal. Melting point of aluminum is (cast alloy 43 is 1065 to 1170 deg F Ref Perry's Handbook of Chemical Engineering 6th ed p 23-40 Table 23-6). Other alloys are higher melting point up to 1200 deg F. The melting point of cast iron is 2100 deg F to 2200 deg F (same reference). It is possible to generate that kind of temperature if the oven is in direct contact with the coals below it or if there are too many coals below the oven. Aluminum is ok if properly used. Keep coals from contact with the bottom of the dutch oven. Only use the number of coals needed to prepare the meal. Spread the coals below the oven out to evenly distribute the heat. Train the boys in the proper method of using an aluminum dutch oven. Spread the coals below the oven out to evenly distribute the heat. Train the boys in the proper method of using an aluminum dutch oven.
Ralph Romig, Scouter

When weight is not a problem, the cast iron oven has the upper hand. Cast iron reacts more slowly to temperature changes so don't burn food as easily if the fire flares up and they retain heat for quite a while after the coals have been removed, keeping food warmer longer. Also, because they retain heat well, they fair better on windy days with smaller variations in temperature. Cast iron absorbs a great deal of heat, consequently, they require fewer coals to reach and maintain a set temperature. Weight is its obvious disadvantage, but there are others. Clean up is not as simple, but done regularly and correctly, it is not much of a chore. Rust is the other, bare cast iron will literally rust overnight if not protected. This protection naturally must be done each time it is used but is part of the cleanup procedure and fairly simple. After all, I 've got Tenderfoot Scouts that are 11 years old that do it like clockwork.

The last thing you must consider is the size of the oven. They range from the tiny 4" to the giant 24" monsters. Personally, I have ovens ranging in size from 6" to 18". For small group or patrol situations, 10"-12" will serve rather adequately for almost all circumstances.

As a review, you should look for a 10"-12" oven that is obviously well made and of good design. It should have three legs, loop type handle and a lip on the lid and a strong bail type handle for the bottom. You can choose other options but those are personal preferences and totally up the user. Weather to choose cast iron or aluminum should be based on the service conditions the oven is going to be MOST used in.

Now that you have decided the type, style and options, where do you find one? Check your Boy Scout Troop Equipment Catalog or your local Boy Scout Equipment Center. Many good sporting goods or camping supply stores also will carry them. Also, restaurant supply houses may stock them or will have a catalog they can order them from. From my experiences, the restaurant houses typically cost a bit more but the ovens are commercial quality and they usually have a better selection to choose from. Another option is mail order. Companies such as REI, Campmor, etc may carry them but look out for the shipping charges on the cast iron ones. In your shopping around by mail, it is best to request their shipping charges and add that in when comparing to local prices.

If you go into the store armed with information, you should have little problem in selecting an oven for your needs and it will be the start of some long lived happy memories. One word of fair warning, SHOP AROUND! I have seen the same 10" oven by the same manufacturer range in price from $25 up to their mighty proud $60, so be

careful. Demand quality, a poorly made oven with lots of options is not worth the time to carry it to the car.

3.A. Other Things You Will Need

A good pair of leather gloves can save time and prove invaluable around a hot fire. A pair of Work Style gloves will do, but I recommend you look at a Fire and Safety Supply house or a store that supplies fireplace accessories and locate a pair of fire handling gloves. Although these typically cost more, they offer thicker leather and an inner insulating lining. They allow you to literally place your hand into hot coals, though I don't recommend doing so. Because of my experience on the Fire Department, the extra protection and quality far outweigh the few extra dollars they cost. You will have to weigh the quality against the higher price for yourself.

Something else you will need is a shovel. The standard garden type will be sufficient. It will be used for stirring the coals and lifting them out of the firepit to the oven. The style and length of the handle is up to you, the user. The longer ones are great but not practical on hikes and canoe trips. While the short "ARMY" folders are great for hiking and canoes, they suffer from short handles, getting you and your hands closer to the fire.

Another item which will prove to be worth their weight in gold is a pair of hot pot pliers. The pair listed in the Boy Scout Troop/Patrol Equipment catalog are probably the best designed for the job. They are inexpensive, well built, and light weight. The pliers have a specially designed jaw that grips the oven lid very securely. The handle has a hook that is used to grab the bail handle when it is too hot to hold by hand or when it is hanging down in the coals.

3.B. Preparation of Your Oven

For aluminum, your pretreatment is simply washing well with soap and water. Some aluminum ovens are shipped with a protective coating and a simple washing will remove it. Since aluminum doesn't rust, no further protection is required, however, I have found that if you treat the aluminum like the cast iron oven, food will not stick near as often as the untreated oven. This pretreatment is at the user's option, so if you just want to wash it and be done with it, you can.

Cast iron ovens, if properly cared for, will last many a generation. I know several individuals that have dutch ovens belonging to great-great- grandmothers, dating back well into the 1800s. Personally, I have an oven that belonged to my grandmother and dates back before the turn of the century.

Although this book is oriented toward dutch ovens, the treatment and care instructions are applicable to any cast iron skillet, griddle etc.. The secret of cast iron's long life is really no secret at all. Constant and proper care beginning with the day it is purchased will keep the oven in service for many years. All quality ovens are shipped with a protective coating that must be removed. This will require a good scrubbing with steel wool and some elbow grease. Once removed, the oven needs to be rinsed well, towel dried and let air dry. While it is drying, this would be a good time to pre-heat your kitchen oven to 350. After it appears dry, place the dutch oven on the center rack with it's lid ajar. Allow the dutch oven to warm slowly so it is just barely too hot to handle with bare hands. This pre-heating does two things, it drives any remaining moisture out of the metal and opens the pores of the metal.

Now, using a clean rag or preferably a paper towel, apply a thin layer of saltfree cooking oil. Oils such as peanut, olive or plain vegetable oil will be fine. Tallow or lard will do also but these animal fats tend to break down during the storage periods that typical Boy Scout dutch ovens experience between campouts and are not recommended. Make sure the oil covers every inch of the oven, inside and out and replace the oven onto the center shelf, again with the lid ajar. Bake it for about an hour or so at 350. This baking hardens the oil into a protective coating over the metal.

After baking, allow the oven to cool slowly. When it is cool enough to be handled, apply another thin coating of oil. Repeat the baking and cooling process. Again reapply a thin coating of oil when it can be handled again. Allow the oven to cool completely now. It should have three layers of oil, two baked on and one applied when it was warm. The oven is now ready to use or store.

This pre-treatment procedure only needs to be done once, unless rust forms or the coating is damaged in storage or use. This baked on coating will darken and eventually turn black with age. This darkening is a sign of a well kept oven and of it's use. The pre-treatment coating's purpose is two fold, first and most important, it forms a barrier between moisture in the air and the surface of the metal. This effectively prevents the metal from rusting. The second purpose is to provide a non-stick coating on the inside of the oven. When properly maintained, this coating is as non-stick as most of the commercially applied coatings.

A Personal Favorite Method of Sweetening:

Another method for "sweetening" dutch ovens is to get some heavy, spicy bacon or sausage and cook it in them. Next, completely cover the inside (and outside if you like) of your dutch oven with the grease. Next you will want to bake it in the oven at, oh, say 450 for 20 minutes or so. For a real deep seasoning, and especially for new ones, it's necessary to do this two or three times. If you can get your hands on it, use some really spicy Pennsylvania dutch sausage. By the way, this will not make the pan bake everything real spicy or anything, it just gives it a light flavor.
-- Jim Van Hecke/Jason Keen, Scouters

3.C. Cleaning Your Oven

For aluminum ovens, the cleaning is the same as for ordinary pots and pans. Use soap, water and scrub as usual for your other pans. More often than not, cleaning cast iron ovens is much easier than scrubbing pots and pans. For cast iron ovens, the clean process is in two steps. First, food is removed and second, maintenance of the coating. To remove stuck on food, place some warm clean water into the oven and heat until almost boiling. Using a plastic mesh scrubber or coarse sponge and NO SOAP, gently break loose the food and wipe away. After all traces have been removed, rinse with clean warm water. Soap is not recommended because its flavor will get into the pores of the metal and will taint the flavor of your next meal.

After cleaning and rinsing, allow it to air dry. Heat over the fire just until it hot to the touch. Apply a thin coating of oil to the inside of the oven and the underside of the lid. Allow the oven to cool completely. The outside will need little attention other than a good wipe down unless you see signs of rust forming. As a suggestion, it is a good idea to keep a scrubber for cast iron and never use it with soap.

A Personal Favorite Method of Cleaning:

Add 1 to 2" of clean water and bring to a boil (uncovered) this will open the cast iron pores and allow the food to release. Scrape again, if the water is very dirty repeat with fresh water and after boiling pour off 1/2 the water. (trick) wad up a foot long piece of aluminum foil and use it to scrub the DO. For all of you who now protest, I encourage you to try this because it has never harmed our seasoned DO's. The foil is soft enough that it actually self destructs as it removes the toughest particles. Rinse the DO and add 1" water and boil. Discard water, dry with paper towels and oil interior with 1T vegetable oil, same for lid.
-- Greg Gough, Scoutmaster Troop 201, Ozark, MO.

3.D. A Few No-No's

- **Never, and I repeat, NEVER allow cast iron to sit in water or allow water to stand in or on it. It will rust despite a good coating.**
- **Never use soap on cast iron. The soap will get into the pores of the metal and won't come out very easy, but will return to taint your next meal, though. If soap is used accidentally, the oven should be put through the pre-treatment procedure, including removal of the present coating.**
- **Do not place an empty cast iron pan or oven over a hot fire. Aluminum and many other metals can tolerate it better but cast iron will crack or warp, ruining it.**
- **Do not get in a hurry to heat cast iron, you will end up with burn't food or a damaged oven or pan.**
- **Never put cold liquid into a very hot cast iron pan or oven. They will crack on the spot!**

4. Tips on Cooking

Enough about the oven and on to what you can do with it! You can also figure that each charcoal briquette is worth about 25 degrees Fahrenheit. 20 coals will give about 500 degrees.

4.A. Techniques

ROASTING:
The heat source should come from the top and bottom equally. Coals should be placed under the oven and on the lid at a 1 to 1 ratio.

BAKING:
Usually done with more heat from the top than from the bottom. Coals should be placed under the oven and on the lid at a 1 to 3 ratio, having more on the lid.

FRYING, BOILING ETC:
All of the heat should come from the bottom. Coals will be placed under the oven only.

STEWING, SIMMERING:
Almost all heat will be from the bottom. Place the coals under and on the oven at a 4 to 1 ratio with more underneath than on the lid.

THE LID:
The lid can be placed on the fire or stove upside down and used as a skillet or griddle. Using the lid in this fashion, you can make virtually error free pancakes and eggs that don't run all over. This is because most lids are shaped like a very shallow bowl so things naturally stay in the center, even if the lid is not level.

4.B. Measurements

Here are the abbreviations that will be used here:

oz - Ounce tsp - Tea Spoon
lb - Pound Tbs - Table Spoon
pt - Pint c - Cup (8 oz)
qt - Quart pkg - Package
gl - Gallon

Here are a few measurement conversions you may need:

1 Tbs = 3 tsp 1 Stick Butter = 1/4 lb or 1/2 c or 8 Tbs
2 Tbs = 1 oz
1/4c = 4 Tbs 1 lb bread loaf = About 17 slices
1/3c = 5 1/3 Tbs 1 1/4 lb loaf = About 20
1/2c = 8 Tbs 1 1/2 lb loaf = About 23
1 c = 8 oz
1 qt = 4 c
1 gl = 4 qt
2 c = 1 pt

Stick butter
Bread loaf, 1-1/4 lb loaf and 1-1/2 lb


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