

## How to Make a Soot Tray

### Materials

A 9" X 13" **cake pan** (with an aluminum lid) is great for holding the flame and creating the soot trays. The pan provides for containment and the lid is an optimal way of extinguishing the flame when you're done.

A small metal '**ashtray**' type container (approx. 3" diameter) for holding the flame. I've found cast iron ashtrays (mini cast iron pans) work very well, although any small pan with a 1/2" - 3/4" lip is good.

**Wick material:** T-shirt or cotton rag – tear several strips 1/4" x 3" long. One is typically enough for creating several soot trays, and more may be needed for creating additional trays. It is reasonable to prepare 8-10 trays with a small amount (1 - 1 1/2 oz) of fuel with several small wicks.

### 'Soot' mixture.

- Gasoline/oil – 2 parts oil to 1 part gas – Using a 1 pint container of 2-cycle oil works well. The top third of the oil can be poured into another container, and replaced with gasoline. Afterwards it is easily storable and shakable for the next use. This is a non-volatile mixture, but care should always be used in handling and lighting.
- Or Kerosene. This creates a sooty flame if the air is restricted well, but does burn a bit hotter.

Stiff aluminum '**trays**' (will be reusable) A variety of sizes works well but ranging from 4x6 to 8x12 are good sizes to prepare and handle in the field. A sheetmetal provider can make these for you.

**Pliers.** For handling the soot trays from the flame... they will be hot, but only take a few moments to cool off for handling.

### Matches/lighter

Latex gloves (optional) – Preparing for, and making soot trays can be a slightly messy undertaking, although nothing that doesn't wash up. At times you may opt to wear latex gloves to stay less messy. Extreme caution should be used while wearing the latex gloves since latex melted to skin is likely very unpleasant.

**Paper towels.** For preparing used soot trays

**Steel wool.** For preparing used soot trays

## Directions

Unless new, each soot tray will need to be prepared prior to setting in the field. This will include removing the previous soot and then resetting the soot.

To prepare the trays prior to setting over flame, it is important they are clean of the previous soot deposit. An initial wipe with a paper towel is adequate to remove the major soot residue. Follow the paper towel wipe with a good scrub with steel wool. This removes the residual soot and makes the surface more uniform. Note; the aluminum trays never seem to 'shine' after a few uses, but it doesn't deter the usefulness of the next soot tray preparation. . Prepare all the trays prior to starting the flame.

Find an outside place protected from any wind/breeze, since the lazier the flame the better the soot potential.

Find a good protected, stable place for the cake pan. Place the 'ashtray' in the middle/center of the cake pan. Pour approx. 1 tablespoon of the fuel into the ashtray and add the cotton wick(s).

Have the trays and pliers handy. Light the flame.

If appropriately protected, a lazy flame will develop. Using the pliers, place an aluminum tray directly over the flame and resting on the edges of the cake pan. To soot the tray adequately you may need to adjust/move the tray relative to the flame. The process should take approx. 30 seconds to one minute for each tray depending on the sootiness of the flame.

Using pliers remove the tray from the heat/soot source and, soot side up, either lay flat or set on edge to cool. Note; setting the trays on edge helps reduce the chance things will accidentally mar the trays.

Prepared soot trays don't travel particularly well, so if possible prepare in the field just prior to use. During recovery, it is also best to 'capture' the story of the soot tray while in the field, although finding ways to transport soot trays back to the 'classroom' allows for more intense investigation and the ability to share more easily.

The prepared soot trays can work with or without bait, although placing them without bait might require reading the landscape with a bit more intensity. Baiting the soot trays should be so very modestly. Too much bait will typically result in a soot tray with so many tracks they can become indiscernible. Bait the soot tray with an amount which is no more than approx. the size of your little fingernail. Grains, seeds, breads, often bring the herbivores (mice, voles, squirrels, etc.). A bit of meat may just bring a carnivore (weasel, raccoon, sasquatch, etc.)

Optional/additional fun: Take wide, clear wrapping tape and lift the track off the aluminum and place onto white paper (journal). Soon you'll have a 'library' of tracks from your adventures.