

# RYAN JORDAN

*Explore Your Wild Side (\*without having to drink your pee)*

## ULTRALIGHT BACKPACKING BOOT CAMP

### COOKING SYSTEMS OVERVIEW

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#### Introduction

- Cooking systems are generally grouped by “type” where “type” defines the type of fuel that is used.
- In the context of ultralight backpacking, most “cooking” is simply boiling water, which is then transferred to another container (e.g., a plastic bag, a mug, a plastic bowl) containing freeze dried/dehydrated foods that are then reconstituted by the hot water. Thus, the actual “cooking” occurs in the container containing the food, and not the container (pot) used to boil the water.

#### Types of Cooking Systems

- Wood Fire - Wood is used to build a small fire, into which you place the pot of water to be boiled. The pot may be placed directly into the fire, or suspended over the fire via the pot’s bailing wire handle hung from a stick or other contraption.
  - Key Advantage: least fuel and equipment weight, fire doubles for warming
  - Key Disadvantage: most skill required, especially in wet conditions



**Wood Stoves: (L) Backcountry Boiler by Boilerworks; (R) Ultra by Bushbuddy.**

- Wood Stove - Wood is used to fuel a stove that contains a “fire chamber” the concentrates heat from the stove’s fire to the bottom of the pot.
  - Key Advantage: of all of the wood options, least amount of wood required, easy to use “junk” fuel (grass, pinecones, dry animal droppings, etc.)
  - Key Disadvantage: very difficult to produce enough heat if wood is very wet
  - Example: Bushbuddy Ultra

- Double Wall Boiler - Wood is fed into a fire chamber that then delivers heat upward through a chimney port, heating water that is contained by a double walled cylindrical vessel.
  - Key Advantage: pot and stove are integrated into one unit, very simple and a beautiful design aesthetic; same advantages of more conventional wood stoves, but boilers are typically much faster.
  - Key Disadvantage: same as wood stoves; also, you can't "cook" food in, or eat from, the integrated water vessel.  
Examples: Kelly Kettle, Boilerwerks Backcountry Boiler
- Solid Fuel - Solid hydrocarbon fuel tablets are placed into/onto some type of tablet burning platform/pot support.
  - Key Advantage: usually the lightest weight option for short duration trips, solid fuel is very easy and safe to use and a good option for kids.
  - Key Disadvantage: very sensitive to wind
  - Example: Esbit Folding ("Wing") Stove
- Alcohol Fuel - Ethanol / isopropyl alcohol is placed into a non-pressurized or pressurized vessel that delivers a hot flame as a result of the alcohol either boiling, or vaporizing through jets, delivering heat to the bottom of the pot.
  - Key Advantage: stoves can be homemade very cheaply, and are light
  - Key Disadvantage: poor fuel efficiency, poor performance in cold and windy conditions
  - Example: Cat Food Can Stove



**Alcohol Stove System: A 4-oz 500ml Titanium Pot, a 0.5-oz “Cat Food” style titanium alcohol stove/pot stand, and a 0.5-oz titanium windscreen.**

- “Pocket” Canister Stoves - Small pocket sized stoves (2-4 oz) that screw onto the threads of readily-available isobutane canisters (usually sold in net weights of 110g, 220g, and 450g). Pot supports are integrated.
  - Key Advantage: simple aesthetic, easy to use, safe, and fuel efficient
  - Key Disadvantage: poor performance in very cold conditions, sensitive to wind
  - Examples: Snow Peak Giga Power, MSR Pocket Rocket
- Heat Exchanger Canister Stoves - Stoves that integrate a cooking pot with a heat exchanger and windscreen with the stove, they also screw onto the threads of isobutane canisters.
  - Key Advantage: Very easy to use and the most fuel efficient - and fastest - of any system.
  - Key Disadvantage: Expensive, gear weight may be heavier for very short duration trips.
  - Examples: Jetboil SOL Ti, MSR Reactor



### Heat Exchanger Canister Stove - The Jetboil SOL Ti.

- Remote Canister Stoves - Stoves that attach to isobutane fuel canisters via a fuel line and feed adapter.
  - Key Advantage: Can be safely used with a windscreen; larger burner head is more appropriate for larger pots/water volumes; some can be used with the canister inverted (upside-down) that delivers a liquid-feed to the stove (more efficient in very cold conditions).

- Key Disadvantage: Heavier than above systems, less fuel-efficient.
- Examples: MSR WindPro, Primus Spider Express
- Liquid Feed Stoves - Stoves that use (most commonly) white gas or unleaded gasoline as the fuel source.
  - Key Advantage: Best performance (speed of boiling) in extreme cold (less than zero deg F) and for boiling very large water volumes (4L+).
  - Key Disadvantage: Heavy, expensive, lots of parts that can fail in the field.
  - Examples: MSR Whisperlite