

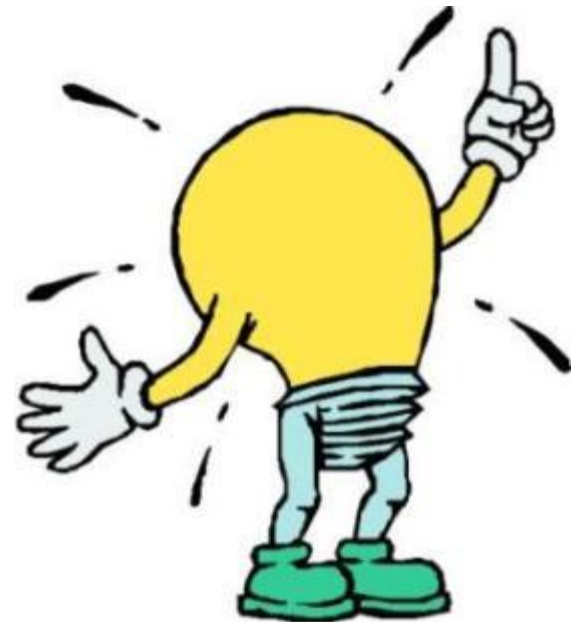
# Going Light

Lightweight Backpacking 2020

*Steve LeBrun & Michael Montgomery*



The  
**Mountaineers**  
Foothills Branch





Going lightweight helps us go to amazing places, like the Oregon Eagle Cap Wilderness



# Overview

- Course Goals / Objectives
- Sleeping Bags
- Shelters
- Packs
- (Food) / Water
- Clothing
- Misc.
- Weigh your gear!



# Goal

Our goal is to help you create your own personal lightweight system -- one that fits your needs, budget, and style -- by making informed, thoughtful choices.

# In honor of....

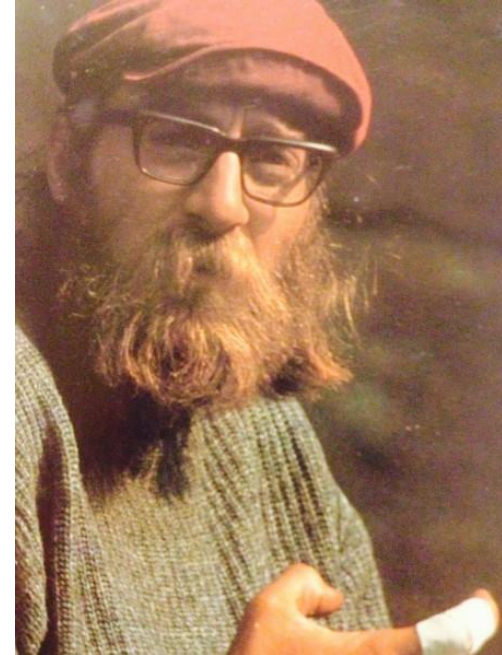
Emma  
“Grandma”  
Gatewood



"Make a rain cape, and an over the shoulder sling bag, and buy a sturdy pair of Keds tennis shoes. Stop at local groceries and pick up Vienna sausages."

# In honor of...

Ray Jardine



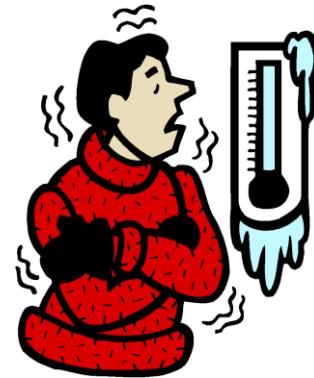
His 1992 book "PCT Hiker's Handbook," later retitled as Beyond Backpacking in 1999, laid the foundations for many techniques that ultralight backpackers use today.

Jardine claimed his first Pacific Crest Trail thru-hike was with a base pack weight of 12.5 pounds and by his third PCT thru-hike it was below 9.0 pounds

# Focus

Focus:

- 3-season
- Subalpine
- Temperate climates.



The principles discussed will still mostly apply outside this scope.

*What are other factors that impact choices?*

# Goals / Objectives

- Help you develop a lightweight mindset
- Inform you of alternatives
- Empower you to incrementally lighten your load, by finding the right balance of gear *need, preference, performance, versatility, repackaging, durability and price.*
- Enable you to make informed decisions about what to ask, what to buy, what to bring





# Non-Goals

What this course is NOT about

- Telling you what [not] to bring/use
- Giving you extensive gear lists  
(Gear choices change all the time)
- Extreme ultra-light

MYTHS -- Going Lightweight  
does NOT mean

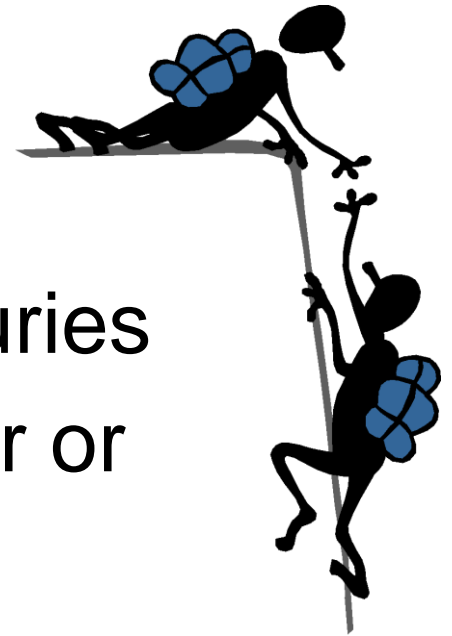
- Eating seeds & sleeping on leaves
- Sacrificing safety
- Giving up *all* luxuries
- Spending a small or not-so-small fortune



# Why Lightweight

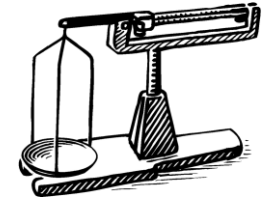
Why go lightweight?

- More comfortable
- Easier on your body
- Gives you room for (more) luxuries
- Lets you go on longer or harder or faster trips
- Can better help others





# Weighing Gear



- ❖ Doing the weight “math” is essential to good decision-making
- ❖ What is the weight of your current gear and where are the best *relative opportunities* to reduce weight?
- ❖ Only you can weigh what you’ll be carrying.
- ❖ Quoted weight for items may not include “extra” items like batteries, stuff sacks, stakes, or rain fly.
- ❖ Scale: Accuracy and precision --Standard bathroom scale vs. shipping, cooking, or fish scale
- ❖ Some stores have scales. If they don’t, take yours.
- ❖ Online product reviewers will often comment about item weights.



# Saving Weight & Money – An Example



6.25  
OZ



3.5  
OZ



1 Liter  
1.95oz



1.4oz



**3 liter**  
cantene  
2.7oz

Switch from two hard plastic to two canteens or smart water bottles: save  $\frac{1}{2}$  **pound** and space;

added cost: **\$0.00**

# Shaving weight and \$\$\$\$... some ideas, sometimes....

- Dental floss to stitch and tie
- Razor blade for knife
- Mini bic lighter
- Multi-use bandana or buff
- Multi-use vasoline
- Painters tarp footprint
- Make your own pillow
- Rocks vs. stakes
- Know the weather
- Embrace the smell
- Drink up at the water sources
- Dry out your gear

# Saving Weight – Cost per Ounce



REI QuarterDome 2lb7oz  
**\$299.00**

**Cost to upgrade:**  
**\$250 or \$10/oz;**  
**with less room and**  
**durability**



Zpacks Plexamid, 15.2oz,  
**\$549.00**

...and of course  
deciding  
that you don't need  
to bring something  
costs exactly  
*nothing*....

# Computing Pack Weight

- **Base Weight:** Weight of your pack minus food, water, fuel (or other “consumables”)
- **Trail Weight:** Total weight of pack, including consumables
- **Skin-out Weight:** Everything you carry, including clothes you wear – no skin-out cheating, now!!



# Categories of Pack (Trail) Weight

- Expedition – 55 pounds and above
- Traditional – 35 pounds or above
- **Lightweight** – **15-20** pounds or below
- Ultralightweight – 10 pounds or below
- Subultra – 6 pounds or below



# The Big Three – The 1<sup>st</sup> Ten

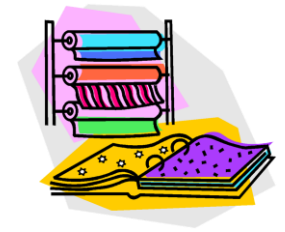
Lightweight: Backpack, Shelter, and Sleep pad and sleeping bag/quilt =  
< 10 pounds total

Ultralight = < 6 pounds total





# Lightweight Materials



## Wind/Waterproof Fabrics:

Silicone-impregnated Nylon (1.1 oz/yd<sup>2</sup>)

“Denier” 7d-100d, etc. (hair strand = 20d)

Polyester

Dyneema (DCF) - Cuben fiber

## Stakes/Poles:

Aluminum, Titanium, Carbon

## Kitchenware:

Aluminum, Titanium, Plastic

## Insulation:

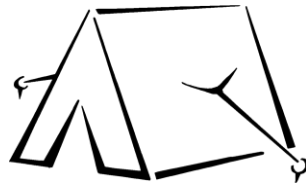
Down, PrimaLoft, Climashield



# Gear: The Big Three

These “Big Three” items account for most of the base pack weight, so they are where the biggest gains come.

1. Shelter



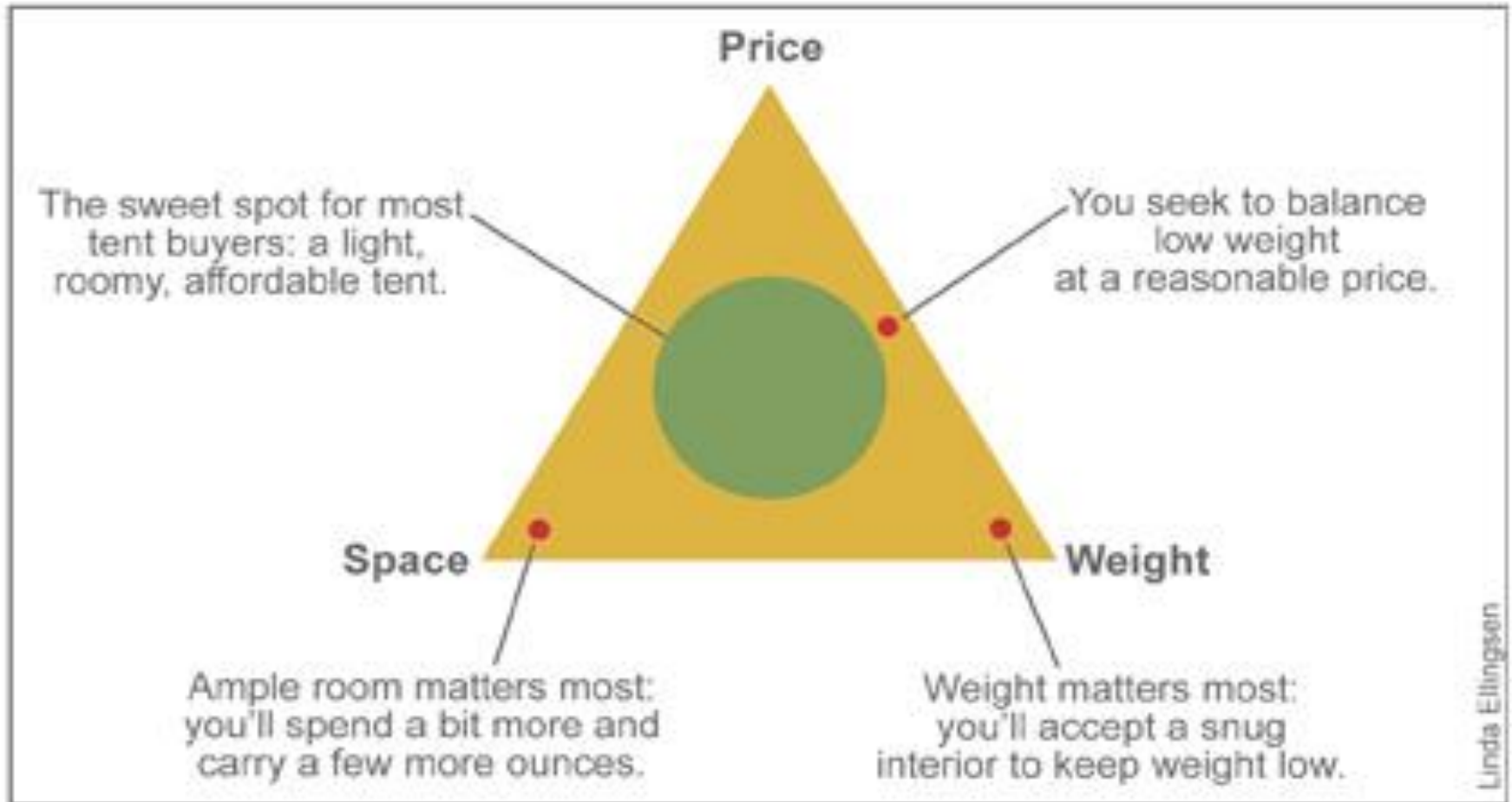
2. Sleep System



3. Pack



# Shelter: The tradeoff



# MOST POPULAR SHELTERS ON THE CDT in 2019:

- Zpacks Duplex
- Big Agnes Fly Creek HV UL2
- Big Agnes Copper Spur HV UL1
- Big Agnes Tiger Wall UL2
- Big Agnes Copper Spur HV UL2
- Also, among *highest rated* on the PCT: MSR Hubba Nx (2 lb14 \$379) and Hubba Hubba NX

# Tents – 2 Person



**New Model** -- Big Agnes Tiger Wall  
double-door UL 2 **\$399** 35 oz. - \$30 less  
and 6 oz lighter than the Copper Spur 2P

**Zpacks Duplex (\$599)**  
1 lb 6 oz.

**Nemo 2 Hornet (\$369)**  
2 lbs 6 oz.  
(1-Person 2 lbs. \$329)



# Tents 1-Person

**Big Agnes Fly Creek UL1 (\$379.95)**

2 lb 3 oz



**MSR Carbon Reflex 1 (\$399.95)**

2 lb 2 oz



**REI Quarter Dome T1 (\$279)**

2 lbs 13 oz



# Tents 1-Person

<http://LightHeartGear.com>

solo

1 lb 11 oz.



<http://zpacks.com> soloplex

16 oz

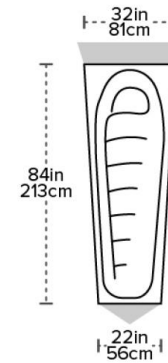




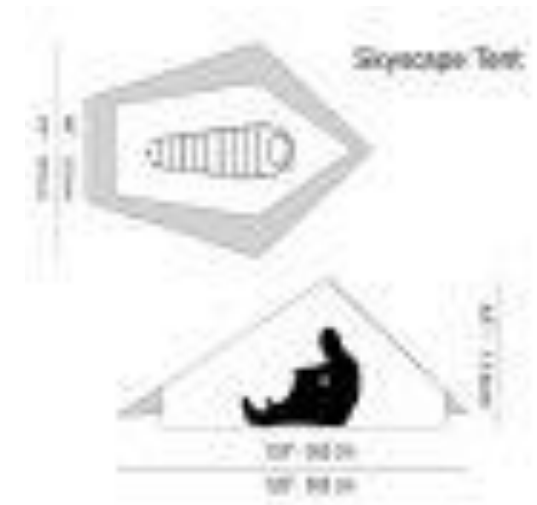
# Tents 1-Person



**Scout 1 Platinum  
Big Agnes**  
**\$349**  
17 ounces



**Skyscape Scout – Six  
Moons**  
**\$144.95**  
40 ounces  
Needs to be seam  
sealed





**Tarptent ProTrail (\$199)**  
26 oz

...part of  
weight saving  
of tarptents is  
often use of  
trekking poles  
as tent poles

Challenge: tarp tents and staking and “footprint” size



**Rab SilWing (\$125)**

Weight: 13 oz.

56 Sq. Ft.



**Gossamer Gear Q**

**Twinn (\$149.25)**

Weight: 7 oz

# Tarps

<http://www.tarptent.com>

<http://www.zpacks.com>

<http://gossamergear.com>

<http://sixmoondesigns.com>

<http://rab.equipment>

[BorahGear.com](http://BorahGear.com)

**Borah Gear**

7x9 Ultralight  
Tarp

9.5 ounces

\$98.00



# Other Options...

**Hennessey Hyperlight Backpacker  
A-Sym Hammock (\$279.95)**

Weight: 1 lb. 12 oz.

**Hammock challenges....**



**Six Moon Designs Gatewood Cape (\$135)**

Weight: 11 oz.



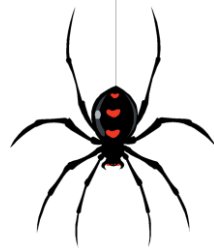
# Sleeping Systems

- Wear clothes (such as hat) to bed
- Liners
  - Silk is warmest per weight
- Sleeping Bags
  - 8-900+ Fill Goose Down-warmest per weight
  - Synthetics (MicroLoft, PrimaLoft) are close
- Bag Covers
- Insulation

# Sleeping Systems (Continued)

Considerations in choosing sleep system:

- Compressibility
- Weight
- Windproofness
- Rain Protection
- Temperature Protection
- Bug Protection



# Sleeping Bag Lightweight Features

- Lighter exterior fabrics  
(e.g. Pertex Quantum)
- Higher fill-weight down  
(loftier down = more warmth so less down is needed)
- Less beefy zipper
- Shorter/No zipper
- No insulation on the bottom of the bag.
- Hoodless
- Coated/Treated Down  
(Sierra Designs DriDown)

# Sleeping Bags & Quilts



Mountain Hardwear Phantom 32, 28 deg  
Fill: 800 down Weight: 1 lb., 6 oz.  
Half-length zipper



REI Magma – 15-30 degree; quilt option  
Mens and Womans  
All under 2 pounds  
**\$329-\$349**



The North Face Cat's Meow, 20 deg  
Fill: Climashield (synthetic) Weight: 2 lb., 10 oz.



Sierra Designs Lazer 30, 30 deg  
Fill: Primaloft Eco (recycled) Weight: 2 lb., 4 oz.  
Half-zip, Stretches (less air to heat), Snug design



Enlightened Equipment, Revelation 10 deg.  
Fill: 850 downtek Weight: 26 ounces.





# Quilts



**KATABATIC GEAR FLEX** 40 degree – 16.9 oz  
\$240-435

**ECON – 40 HAMMOCK GEAR**  
**BURROW** degree – 17 OZ \$120



**MASSDROP X EE REVELATION**

**Quilts - temperature considerations, drafts, weight/compressibility  
Attachment systems, collar, footbox options, widths and lengths, tapering**



**Big Agnes Sleep System**

# Sleeping Bags

- Western Mountaineering – down
  - Highest rated on the PCT
- Feathered Friends - down
- MontBell – “spiral” stretch down
- Nunatak – variety
- Selk



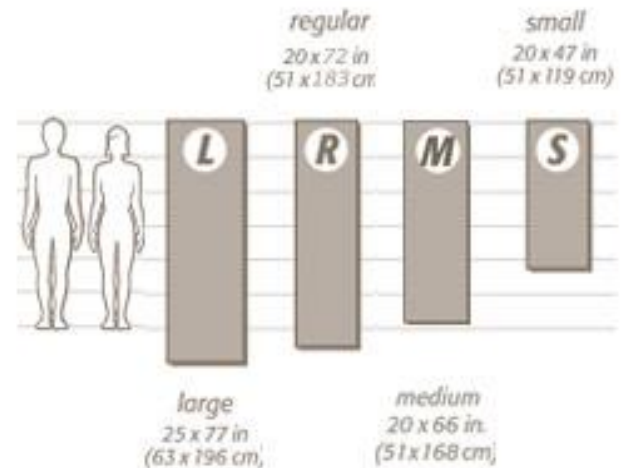


# Sleeping Pads



Types: Closed-cell foam, Inflatable, Self-Inflating  
Considerations:

- How thick?
- Ribbed can increase warmth/weight ratio
- Full-length or partial-length?
- Shape
- Can you cut it down to size?
- Filling (gel, down, air, foam)
- How wide?



# Therm-A-Rest

SLEEPING PAD	PRICE	TYPE	WEIGHT	R-VALUE	PACKED	THICKNESS	SATISFACTIO N
<a href="#">Therm-a-Rest NeoAir XLite</a>	\$160	Air pad	12 oz / 350 g	3.2	9 x 4 in / 23 x 10 cm	2.5 in / 6.3 cm	100%
<a href="#">Therm-a-Rest NeoAir XTherm</a>	\$200	Air	15 oz / 430 g	5.7	9 x 4 in / 23 x 10 cm	2.5 in / 6.3 cm	100%
<a href="#">Therm-a-Rest Z Lite Sol (Short)</a>	\$35	Foam	10 oz / 284 g	2.6	20 x 4 x 5.5 in / 51 x 10 x 14 cm	.75 in / 2 cm	100%
<a href="#">Therm-a-Rest Z Lite Sol</a>	\$45	Foam	14 oz / 410 g	2.6	20 x 5 x 5.5 in / 51 x 13 x 14 cm	.75 in / 2 cm	91%
<a href="#">Therm-a-Rest NeoAir XLite (Short)</a>	\$130	Air	8 oz / 227 g	3.2	9 x 3.3 in / 23 x 9 cm	2.5 in / 6.3 cm	90%

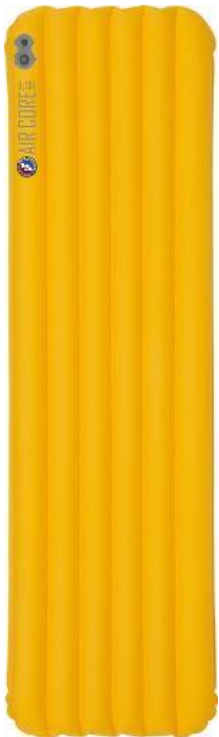
## NeoAir UberLite –

large 12 oz, 25 x 77 -- \$225

regular 8.8 oz; 20 x 72 - \$195;    Small 47x20; **6 ounces**

# Other Sleeping Pad Brands

And REI brand pads too....



Big Agnes AirCore  
\$64.95 - \$99.95  
18-24oz



Nemo  
Tensor  
\$149.95 -  
\$169.95  
15-20oz



Exped SynMat HL  
Sleeping Pad –  
14.6oz \$139



Sea To Summit  
\$99-\$119  
Long: 1 lb. 1.4 oz.  
Regular: 13.9 ounces  
Short: 12.1 ounces

# 5 Minute Break!

- When we return...
  - Packs
  - Cooking / Food
  - Water
  - Clothing
  - Everything else



# Pack Considerations

- Price
- Weight
- Frame
- Volume
- Design
- Material
- Fit

# Packs – A top 10 list

Make / Model	Weight	Volumes (L)	Price
<a href="#">Osprey Exos 58</a>	42 oz	58, 48, 38	\$220
<a href="#">Hyperlite Mountain Gear 3400 SW</a>	32 oz	70, 55, 39,	\$345
<a href="#">Granite Gear Crown2 60</a>	36.7 oz	60, 38	\$200
<a href="#">Osprey Atmos AG 65</a>	73 oz	65, 50	\$270
<a href="#">Gregory Zulu 55</a>	58 oz	65, 55, 40, 30	\$200
<a href="#">Gossamer Gear Mariposa 60</a>	28.7 oz	60	\$270
<a href="#">Gregory Baltoro 65</a>	77.4 oz	95, 85, 75, 65	\$300
<a href="#">Gregory Optic 48</a>	40 oz	58, 48	\$200
<a href="#">ULA Circuit 68</a>	41 oz	68	\$255
<a href="#">Zpacks Arc Blast 55</a>	21 oz	55	\$32



# Backpacks – A top 10 UL List

Make / Model	Gender	Volume	Materials	Weight	Price
<a href="#">Osprey Exos 58</a>	M   F	58L	Nylon	2 lbs 10 oz	\$220
<a href="#">ULA Circuit</a>	Unisex*	68L	Nylon	2 lbs 9 oz	\$235
<a href="#">Granite Gear Crown 2 60</a>	M   F	60L	Nylon	2 lbs 5 oz	\$200
<a href="#">Gossamer Gear Mariposa 60</a>	Unisex	60L	Nylon	1 lb 14.5 oz	\$270
<a href="#">Hyperlite Mountain Gear SW 3400</a>	Unisex	60L	DCF	2 lb 3 oz	\$345
<a href="#">Zpacks Arc Blast 55L</a>	Unisex	55L	DCF	1 lb 5 oz	\$325
<a href="#">Zpacks Arc Haul 62L</a>	Unisex	62L	DCF	1 lb 8 oz	\$299
<a href="#">Gossamer Gear Gorilla 40</a>	Unisex	40L	Nylon	1 lb 14.5 oz	\$260
<a href="#">ULA Ohm 2.0</a>	Unisex*	63L	Nylon	2 lbs 2.5 oz	\$210
<a href="#">Gossamer Gear Kumo 36</a>	Unisex	36L	Nylon	1 lb 5 oz	\$165

# Packs - Minimal Frame



Pack: ULA Circuit

Type: Light frame

Carry: 30 pounds or less

Capacity: 4200 cubic inches

Weight: 2 lb 9 oz

5 torso sizes

6 hipbelt sizes

2 shoulder strap

# Packs – Minimal Frame

Pack: **Zpacks Arc Haul**

Material: Dyneema

Type: Light Frame

Capacity: 3650 cubic inches

Weight: 1 lb 8 oz

**3 pack and 3 hip belt sizes**



Pack: **Gossamer Gear Mariposa**

(pack, belt, frame, lid and pad)

Small : 30.7 oz / 870 g

Medium : 32.7 oz / 927 g

Large: 34.8 oz / 986 g

**3 pack & 3 hip sizes**



ULA Catalyst  
41oz – 75L

<http://www.hyperlightmountaingear.com>

<http://www.zpacks.com>

<http://gossamergear.com>

# Two new Ospreys



## **Osprey Eja 58**

52-58 liters

Also Eja 48

Women-specific fit

2 pounds 10 ounces

\$220



## **Osprey Levity 60**

57-63 liters

1 pounds 15 ounces

\$270

Also Levity 45 - 1 lb 12

Woman's version:

Osprey Lumina 1 lb 14 oz

# Packs – Internal Frame



Pack: Osprey Exos  
58  
Type: Internal  
Frame  
Capacity: 3,539  
cubic inches  
Weight: 2 lb 10 oz



Woman's REI  
Flash 60  
Internal Frame  
3,661 Cubic  
Inches  
3lb 5oz (small)



Pack: Osprey Atmos 65  
Type: Internal Frame  
Capacity: 3800-4200  
cubic inches  
Weight: 3 lb 7 oz – 3 lb  
13 oz

# Popular Pack Brands

- Gossamer Gear
- ULA
- Zpacks
- HMG
- Granite Gear
- Gregory
- Osprey
- Deuter
- Others?



Hyperlite 3400  
Southwest  
Interior: 3400 cu.  
in. (55L)  
External: 600 cu.  
in. (9.8L)  
Center pocket:  
300 cu. in.  
Side pockets: 150  
cu. in.



Granite Gear  
Crown 60L  
Weight  
Regular: 2 lbs.  
4.7 oz.  
Tall: 2 lbs.  
6.7oz.

# Trailrunners, *perhaps* ?

## Highest Rated PCT Shoes:

- Hoka One One Speedgoat (10.8 oz)
- Merrell Moab 2 Vent
- Brooks Cascadia 14
- Altra Olympus
- La Sportiva Wildcat

## Most Common On the PCT:

Altra Lone Peak (1/3<sup>rd</sup>), Altra Timp



# Stoves

Going stoveless is an option

- Bring food that doesn't need cooking
- Make a fire [not recommended]

Stove Types

- Canister
- Liquid Fuel (heavier)
- Alcohol
- Other





# Maximizing Stove Performance

- Use windscreen (caution if canister type)
- Use natural windbreaks
- Use a tight-fitting lid
- Use an insulating base underneath (closed-cell foam wrapped in foil)
- Use correct size pot for your burner
- Get pan ready before lighting the stove
- Do you really need to boil the water?

# Stoves - Canister

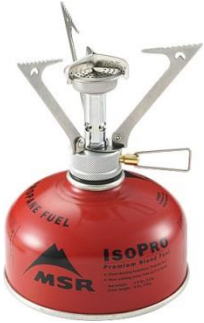
- Not much maintenance. Hassle-free.
- Can control the heat output readily.
- Have to pack out and throw away the empty canister.
- Hard to tell how much fuel is left.
- Don't work as well when it's cold (especially below 20).

# MOST POPULAR STOVES ON CDT 2019:

The MSR PocketRocket 2 was the most popular stove for Continental Divide Trail thru-hikers last year. However, 21% of respondents said they went stoveless on the trail.

- MSR PocketRocket 2 - 2.6oz
- BRS-3000T - 1oz
- Jetboil Flash - 15.25oz
- Jetboil MiniMo - 14oz
- Snow Peak GigaPower 2.0 - 3.2oz

# Stoves - Canister



Stove: MSR PocketRocket  
Weight: 3 oz



Stove: Snow Peak LiteMax  
Weight: 2 oz

Stoves like those above can't use  
windscreens that trap heat near the fuel.



Stove: MSR WindPro  
Weight: 7 oz (10.5 oz w/ windscreen)

Note: Stove weights exclude canister / fuel weights

# Stoves - Integrated



Burn Time (Max Flame)  
110g canister: 95 minutes  
Average Boil Time  
1 liter: 4.5 minutes

Stove: MSR Windburner  
Weight: 15.5oz

Stove: JetBoil MicroMo  
Weight: 12 oz

Average Boil  
Time  
2 min. 15 sec.  
per 16 fl. oz.  
Dimensions

Liquid  
Capacity (L)

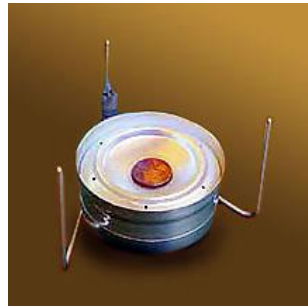
0.8 liters  
Liquid  
Capacity (fl.  
oz.)  
27 fluid  
ounces



# Stoves - Alcohol



Stove: Brasslite Turbo  
Weight: 2.2 oz



Stove: Penny  
stove  
Weight: 1.5 oz

See <http://zenstoves.net> for more.



Dimensions and weight of the cone vary depending on what size pot is being used. Each cone is hand crafted to fit your specific pot perfectly.

Min Weight:

Caldera Cone - 28gm to 78gm

12-10 Stove - 16gm

Fuel Bottle - 20gm

Material: Aluminum



# Stoves - Esbit



Stove: Esbit Pocket Stove

Cost: \$10

Weight: 3 oz

(long boil time)



# Metals & Weight

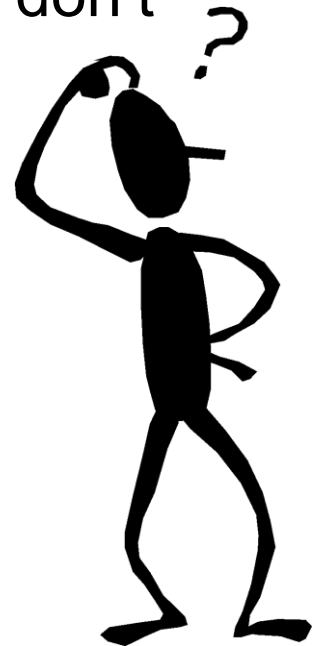
Which is heavier, Aluminum or Titanium?

Aluminum is  $2712 \text{ kg/m}^3$  while Titanium is  $4500 \text{ kg/m}^3$

So why is Titanium used?

- Titanium is ~2x as strong as Aluminum, so you don't need as much and it's actually lighter!
- Conducts heat well
- Non-toxic
- Naturally non-stick
- Durable, light and strong

BUT: Titanium is ex\$ensive.





**MSR Titan Kettle (\$59.95)**

Weighs just 4.2 oz  
.85-liter capacity



GSI Outdoors  
Halulite Boiler Pot -  
1.1 Liters  
8.6 ounces;  
aluminum  
**\$29.95**



**Evernew 900ml Pot (\$79.95)**

Weighs just 4.1 oz



**MSR Titan Cup (\$39.95)**

Weighs just 1.9 oz



**Snow Peak Trek 900 (\$52.95)**

Weighs just 6.2 oz  
.9-liter capacity

# Food Protection – Hanging food



Most people use heavier rope than they need.  
Hanging food is not always effective.  
It's not just bears that are after your food.

# Food Protection



Bear Vault \$79-69  
Weight: 2 lb 9 oz  
**11.5** liters – 500  
7.2 liters - 450

Bearikade \$288  
Weekender  
Weight: 1 lb 15 oz  
**10.6** liters



**Ursack Major**  
Weight: 7.6 oz  
Capacity: **10.65**  
(approx. 5 days of  
food for 1) \$85

**Major XL**  
**15 liters** \$99

ALSO:

**Ursack Minor**  
5oz

**Ursack AllMitey**  
13oz



And the Jeopardy  
answer is....

SINCE THE DAWN OF  
CAMPING, MAN HAS  
TRIED TO KEEP FOOD  
FROM THIS BEAST;  
A PRODUCT CALLED  
THE URSACK SAYS  
IT'S THE ANSWER



# Food

- Fresh Fruits and Veggies weigh a ton more than dried/freeze-dried
- (Freeze) drying reduces weight by ~75%
- Think weight AND volume
- Get enough calories and electrolytes
- High fat/protein items will give more sustained energy
- Eat heavier/bulkier things early on
- Don't forget the "Pack it out" weight
- Plan your meals & stick to your plan

# Food Types

- Freeze Dried
- Dehydrated
- Bulk Items
- Vacuum Sealed packages
- Cold soaking foods (couscous, ramen, instant rice or refried beans, instant potatoes, stuffing, powdered hummus, powdered yogurt)



# Water

Weights 2.2 lb per Liter

Occasionally (rarely) there are places where you need to haul all your water. **Find out how much water will be available, and only carry what you'll need.**

Get the rest from water sources:

- Springs / Streams
- Lakes / Tarns
- Snow / Glaciers / Ice



# Water Treatment

- Cooking (uses fuel)
  - Boiling water
- Chemical Treatment
  - AquaMira (Chlorine Dioxide)
  - Bleach (2 drops/liter)
    - Iodine (not recommended)
- Filters
- UV Light

\$14.95  
treats up  
to 30  
gallons





# Water Purification



Aquamira Frontier Pro Filter  
Weight: 2 oz



Katadyn Micro Microfilter Water Bottle  
Weight: 7 oz  
[Bottle holds 26 oz of Water but  
lid/filter may fit other bottles]

**Katadyn  
BeFree  
2.3 oz**



# Water Treatment - Filters



Katadyn Hiker PRO  
Weight: 11 oz



MSR MiniWorks EX  
Weight: 1 lb

Katadyn Mini Filter  
Weight: 8 oz



# Water Treatment - Squeeze

- Sawyer Squeeze
- 3 oz
- 1.7 liters/minute



( + )



# Gravity Filters...



## Platypus Gravity Works Features

- System includes a 2-liter dirty collection reservoir, GravityWorks filter cartridge, universal bottle adapter and hoses
- Fill the dirty collection reservoir, hang it above your water bottle and let gravity carry the water through the filter and hoses
- Bottle adapter fits Platypus and most Nalgene, MSR, Sigg and Klean Kanteen bottles
- Hollow fiber filter technology offers a high flow rate of 1.5 liters per min.
- Filter physically removes particles, protozoa, and bacteria down to 0.2 microns in size, including giardia, salmonella, cryptosporidia and others

# Water Purification - UV



SteriPen Ultra ([brand new model](#))

Weight: 4.8 oz.

*Rechargeable*; can treat 50 liters on a charge -- \$99.95



SteriPen Adventurer Opti

Weight: 3.8 oz

# Water containers



Camelbak Omega  
Volume: 100 oz (3+ liters)  
Weight: 7 oz

Nalgene Bottle  
(Polyethylene)  
Volume: 32 oz (1 liter)  
Weight: 3.5 oz



Nalgene Cantene  
(Polyethylene)  
Volume: 96 oz (3 liters)  
Weight: 2.9 oz



Platypus Hoser 3L  
Volume: 96 oz (3 liters)  
Weight: 3.8 oz



# Utensils



- Pan can be reused as a mug
- Do you need both a fork and a spoon?
- Scrub the pan with fingers
- Removing pan handles
- Titanium/Aluminum are light (pan)
- Plastic lighter yet
- Gloves substitute for potholders?

# Compressing Gear

- Think space as well as weight
- Compressibility of gear
  - especially sleeping bag, shelter
- Compression sacks are VERY handy
  - now also come as dry bags
- Large (2-3 gal) ziplocs can also work to compress clothes, rain/cold-weather gear
  - roll, press out air, zip while still compressing



# Clothing

Protects you from:

- Heat
- Cold
- Sun
- Bugs
- Rain
- Snow
- Wind
- Brush

# Clothing

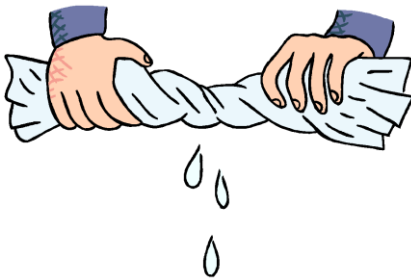
- ❖ Layer Layer Layer
- ❖ Protects you from Heat Cold Sun Bugs Rain  
Snow Wind Brush
- ❖ Don't pack more than you can use at one time
- ❖ Don't take more than 1 item that does the same thing
- ❖ Pick items with high performance / weight ratio
- ❖ Don't gamble: Hypothermia and exposure kill more than other causes

# Clothing

- Synthetic bra and underwear
- Wool or synthetic wicking socks
- Base layer top and bottoms
- Hiking pants or shorts
- Insulating torso layer (down or synthetic)
- Rain jacket or poncho/rain pants
- Wind shirt and pants
- Hat and gloves

# Clothing Fabrics

- Avoid cotton
- Wicking
  - Synthetics (polyester and polyester blends)
  - Merino wool



# Outer Shells (Rain/Wind)



Montbell Versalite

Waterproof / Breathable

Weight: 6.4 oz

AntiGravityGear Rain Jacket  
(1.1 oz silnylon)

Weight: 5 oz



Outdoor Research  
Helium II (Pertex  
Shield+)

Waterproof / Breathable

Weight: 6.4 oz



# Outer Shells (Rain/Wind)



Partial Zipper  
Patagonia Torrentshell  
Pullover  
(H2No® Performance  
Standard)  
10 oz

No Attached Hood  
REI Airlyte Running Jacket  
11 oz



Zippers add weight but allow more venting options.  
In the case of rain pants, convenience of donning.

# Outer Shells (Rain / Wind)



FroggToggs DriDucks Rain Suits  
Material: W/B Polypropylene  
Weight: ~1 lb. \$20-25

## Zpacks Challenger Pants

**Material:** 3-Layer Vertice waterproof breathable fabric. This material is constructed with a tricot lining to wick moisture away from your skin, a waterproof, vapor permeable membrane in the middle, and 7 denier ripstop nylon on the exterior. eVent, Spectra fibers, and Nylon  
**Weight:** 3.6 oz. \$149



# LED Lights – Lithium Batteries



Photon X-Light Micro LED  
Weight: 0.28 oz  
Cost: \$9



Black Crater Cord Lock Light  
Weight: 0.3 oz  
Cost: \$10



Scout (Princeton Tec)  
Weight: 1.6 oz  
Cost: \$20



Nitecore NU25 with Litesmith headband  
Weight: 1.2 oz  
Cost: \$42

Weight includes batteries.



# First Aid



- Most important gear is your brain
- There is no substitute for knowledge
  - Take an Outdoor-Oriented First Aid Course
  - Learn how to recognize and treat common problems: hypothermia, heat exhaustion, etc.
- Multiple use:
  - Can use poles, sticks, closed-cell pad as splint
  - Use bandanna or other clothes instead of triangular bandage to make a sling
  - Duct tape instead of moleskin
- Adventure Medical Kits (info in the packet)

# First Aid



- Don't skimp on or forget medicine you'll need  
Larger groups should coordinate who's bringing the complete kit and what should be in it so you don't have 10 pairs of scissors and no ace bandage
- Don't use a heavy container
- Replace, don't lug around, old / expired items





# Essentials



- Map: Trim the edges, leave critical info
- Compass / Altimeter: Don't skimp here
- Whistle: Lot of clips have built-in whistles
- Sunglasses: No need for a heavy case here when you can wrap them in clothes
- Sunscreen: Don't take the whole bottle – empty some into a smaller bottle and take that
- Fire Starter: DRY Matches in a ziploc are lightest and most reliable (or a matchbook)
- Sense of Humor



# Repackaging



Do you really need to bring the whole thing?

- Sunscreen / bug cream : mini squeeze tube
- Vaseline / foot cream : mini jar
- Sprays: mini sprayer
- Leukotape / duct tape: prepackaged mini rolls, or just roll some around your trekking pole
- Hand sanitizer / AquaMira: mini dropper
- Toilet paper: count out squares
- Toothpaste: toothpaste pills

# Tips and Tricks

- Think small before you go big!
- Cook with tepid water when possible
- Share
- Think versatility
- **And/or....????????????????**
- **Thank you...follow-up questions:**
- [stevelebrun@comcast.net](mailto:stevelebrun@comcast.net)

# Highest-Rated & Most Common PCT Gear

	HIGHEST-RATED PCT GEAR	MOST COMMON PCT GEAR
Total cost	\$2,968	\$2,440
Total weight – Big 3	7 lbs 7 oz / 3.374 kg	5 lbs 3.94 oz / 2.380 kg
Total weight – Big 4 (+ sleep pad)	8 lbs 6 oz / 3.799 kg	5 lbs 15.94 oz / 2.720 kg
All PCT gear (outside Sierra)	10 lbs 6.7 oz / 4.726 kg	7 lbs 4.74 oz / 3.310 kg
All PCT gear	13 lbs 12.06 oz / 6.239 kg	11 lbs 3.37 oz / 5.085 kg

# HIGHEST-RATED PCT GEAR

- Backpack: [ULA Circuit](#)
- Shelter: [MSR Hubba NX](#)
- Sleeping bag: [Western Mountaineering Versalite](#)
- Sleeping pad: [Therm-a-Rest NeoAir XTherm](#)
- Insulated jacket: [Rab Microlight Alpine Down Jacket](#)
- Shell: [Arc'teryx Beta SL Hybrid Jacket](#)
- Stove: [SOTO WindMaster](#)
- Water treatment: [Sawyer Squeeze](#)
- Trekking poles: [Black Diamond Trail Ergo Cork](#)
- Bear canister: [Bearikade Weekender](#)
- Shoes: [HOKA ONE ONE Speedgoat](#)

# Most Popular PCT Gear

- Backpack: [Osprey Exos](#)
- Shelter: [Zpacks Duplex](#)
- Sleeping bag: [Enlightened Equipment Revelation 20](#)
- Sleeping pad: [Therm-a-Rest NeoAir XLite](#)
- Insulated jacket: [Mountain Hardwear Ghost Whisperer \(Hooded\)](#)
- Shell: [Outdoor Research Helium II](#)
- Stove: [MSR PocketRocket 2](#)
- Water treatment: [Sawyer Squeeze](#)
- Trekking poles: [Black Diamond Alpine Carbon Cork](#)
- Bear canister: [BearVault BV500](#)
- Shoes: [Altra Lone Peak](#)



# A sample Checklist -- 2 night and 3 day backpack

Total Weight (oz)			295.7
Total Weight (lbs)			18.5
Subtract Worn or consumable items			2.7
<b>Base Weight</b>			<b>15.8</b>
Food			3.5
1.5L water			3.5
<b>Pack Weight</b>			<b>21.8 POUNDS</b>

# Backpack Gear Checklist

				3 day BP	Worn or
<b>Pack, Sleep &amp; Shelter</b>	Ounces	# to Bring?		Check	Consumable?
GoLite Quest backpack - 55L	48.9			0	
REI pack - 40L	44.2			0	
Gossamer Gear 60L BP w/ waist belt & pocket pouch	29.1	1		29.1	
Ultra-light Pack cover	3.4	0		0	
Ultralight pocket daypack	2.4	1		2.4	
Eureka Spitfire Solo Tent in bag	46	0		0	
Big Agnes Copper Spur 2-person tent in bag	56.8	0.5		28.4	sharing
Lafuma 40° down sleeping bag	30.6			0	
Revelations 20 degree quilt	19	1		19	
Eddie Bauer Karakoram 0° sleeping bag	40.4			0	
X-Small 6L ultralight compression sack	2.5			0	
Small 10L ultralight compression sack	2.5			0	
Large 20L ultralight compression sack	2.8			0	
Silk sleep sack	4.4	1		4.4	
Neo-Aire 3/4 length inflatable pad	9.6	1		9.6	
Cocoon inflatable pillow	2.8	1		2.8	
	Subtotal			95.7	

						Worn or
<b>CLOTHING</b>		Ounces	# to Bring?		3 day BP	Check Consumable?
	OR Helium jacket	8	1		8	
	Helly-Hanson full-zip Rain pants	8.4			0	
	Frogg Togg rainpants	5	1		5	
	Lightweight Smartwool Socks - 2 pairs	3.9	1		3.9	1.95
	Quick drying hiking shorts or skirt	3.3	1		3.3	3.3
	Underwear - 2 (wear one wash one)	2	1		2	1
	Merino wool lightweight long sleeve base-layer top	5.2	0		0	
	Merino wool lightweight full-length base-layer bottoms	5.5			0	
	Merino wool midweight long-sleeve base layer top	8.1	1		8.1	
	Merino wool expedition weight base layer bottoms	6.8	1		6.8	
	Dry-wicking short-sleeve shirt	4.4	1		4.4	4.4
	Dry-wicking long-sleeve shirt	4.6			0	
	Lightweight button-down long-sleeve UV protection shirt	6.3			0	
	Midweight convertible long pants	13			0	0
	Lightweight hiking pants	9.9			0	
	Ultralight camp/water shoes	7	1		7	
	Lightweight liner gloves	1.4	1		1.4	
	Possum-Merino mittens	2.6			0	
	Gore-tex overmitts	2.5			0	
	Buff	2.4			0	
	Warm cap	3.2	1		3.2	
	Light fleece pullover top	4			0	
	Merino wool lightweight half-zip top	4	1		4	
	Ultralight primaloft sweater (with zip-off sleeves)	11.2	1		11.2	
	Waterproof mid-height boots	35			0	
	Waterproof low-top hiking shoes	20	1		20	20
	Short gaiters	3.1			0	
	Long gore-tex gaiters	9.4			0	
		Subtotal			88.3	

							Worn or
<b>Camp &amp; Cooking</b>	Ounces	# to Bring?		3 day BP	Check	Consumable?	
MSR Windpro Remote Canister Stove with windscreen	8.5	0					
Pocket Rocket stove	3.9			0			
Caldera stove with integrated windscreen	5.6			0			
4 ozButane canister	7	1		7			0
4 oz liquid alcohol in plastic bottle	4.8			0			0
1.5L Platypus camp water bag	2.1	1		2.1			
MSR hanging camp water bag with faucet nozzle	4.5			0			
900ml titanium cook pot with lid in mesh sack	4.7	0		0			
Aluminum pot with foil lid	4.3			0			
Lightweight 2C plastic mug	4.4	1		4.4			
1Qt insulated cozy	1.2	0		0			
Lightweight spoon	0.3	1		0.3			
20' of lightweight paracord	1.5	0		0			
Odor proof plastic 2 Gal bag	1.5	1		1.5			
30-gallon trash compacter bag (pack liner)	2.2	1		2.2			
2 extra quart-size & 1 extra gallon size zip locs	0.8			0			
Lightweight folding knife	2.2	1		2.2			
Lightweight stuff sack (to carry food)	2	1		2			
Miniature sewing kit/safety pins	1	1		1			
BV500 bear canister	40.8			0			
Ur-Sack	7.8	1		7.8			
	Subtotal			30.5			

				3 day BP		Worn or
<b>Toiletries etc.</b>	Ounces	# to Bring?			Check	Consumable?
Packet "Wet Ones" wipes in quart zip-loc with extra zip-loc for used ones inside	2.5	1		2.5		
Charmin to go pack	1.1			0		
Small lightweight trowel (for digging catholes)	2.9	1		2.9		
Travel-size toothpaste and toothbrush	1.4	1		1.4		
Miniature hairbrush	1.6	1		1.6		
Travel-size deodorant	1.3	1		1.3		
Sleeping pills in small pill container	0.3	1		0.3		
Insect repellent (3.5 oz Natrepel pump)	4.7			0		
Small pack tape-type dental floss, clove oil for toothache	0.9	1		0.9		
Small bottle hand sanitizer (1.5 oz)	2.2			0		
Sm bottle (1oz) biodegradable soap	1.3			0		
Foot powder in small plastic container	0.7			0		
Small clippers	0.5	1		0.5		
Sm jar carmex (.25 oz)	0.6	0		0		
Mini pack towel on carabiner	0.8			0		
Medium-sized quick-drying pack towel	1.4	1		1.4		
	Subtotal			12.8		

# Ten essentials

<b>Ten Essentials</b>						Worn or
		Ounces	# to Bring?		3 day BP	Check Consumable?
Food (see separate tab)						
First aid kit (see separate tab)		7.5	1		7.5	
Clothing (see separate checklist below)					0	
1L plastic soft drink bottle		1.3	2		2.6	
Hardside square 32 oz water bottle (widemouth)		2.7			0	
Hardside Nalgene 1L bottle		6.2			0	
Aquamira water treatment drops		3	1		3	
Map in zip-loc bag, compass		3.4	1		3.4	
Large plastic map cover		4			0	
Headlamp		3.9	1		3.9	
Butane lighter		1.5	1		1.5	
Sm striker box waterproof matches + 4 cotton balls soaked with vaseline, all in small zip-loc		0.5			0	
1.5 oz tube UVA-UVB sunscreen & SPF lip balm		2.3	1		2.3	
Sunglasses with neck cord		1.3	1		1.3	
Sun hat with neck cord		2.4	1		2.4	
		Subtotal			27.9	

## Miscellaneous

Phone & battery	4	1
Large (20L) ultralight dry sack	2	0
Small ultralight dry sack	1	1
Z-Rest sit pad	2	
Kindle in neoprene case	10	1
Z Trekking poles - 2	12	1
Microspikes	11	1
Light clothesline with integrated clips	1.1	
Bear spray in holster	12.1	
Survival blanket (2 person)	4.2	
Permits, Emergency contact info, ID, insurance cards, debit card, cash, all in a small zip-loc	2.5	1

**Subtotal**

4	
0	
1	
0	
10	
12	
11	
0	
0	
0	
2.5	

**40.5**