



HACKERS VS. DISASTERS

RenderMan

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HACKERS VS. DISASTERS

Our hacker brains are pre-wired to find alternate uses for many devices. We look at the world as a puzzle to solve in everything we do. We can come up with the most extraordinary solutions to problems under the most extraordinary circumstances.

Hacker skills are largely compatible with the skills necessary to survive in the wilderness or during a natural disaster.

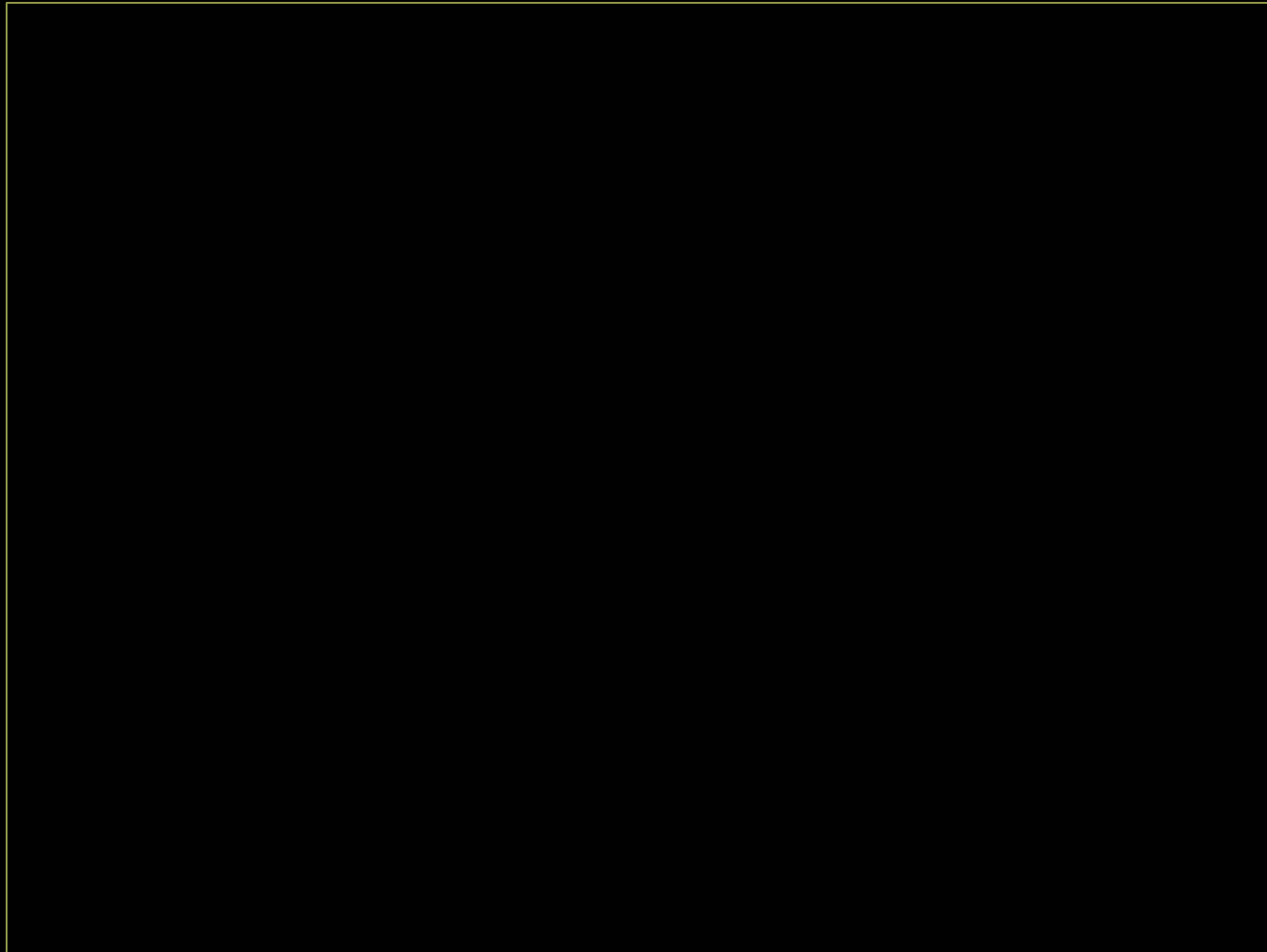


PART 1

HACKER SKILLS FOR WILDERNESS AND DISASTER SURVIVAL



Have you seen *Survivorman*?



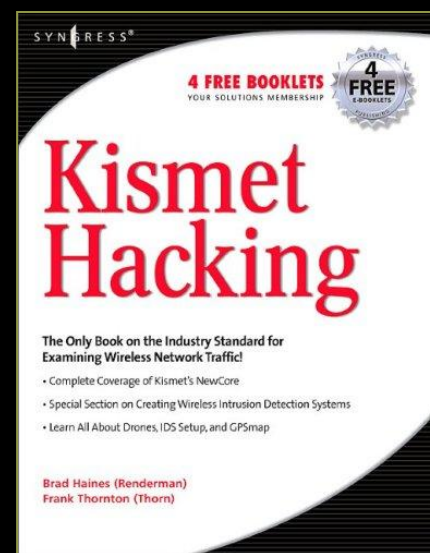
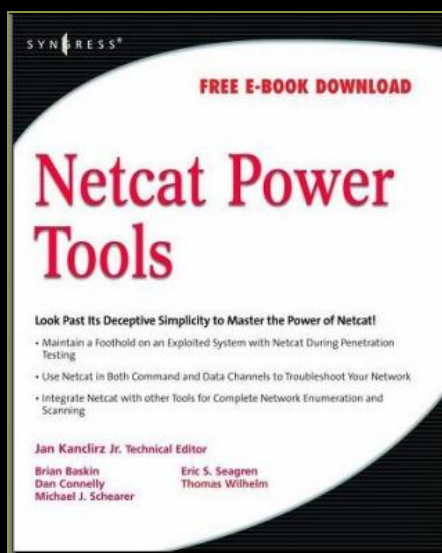
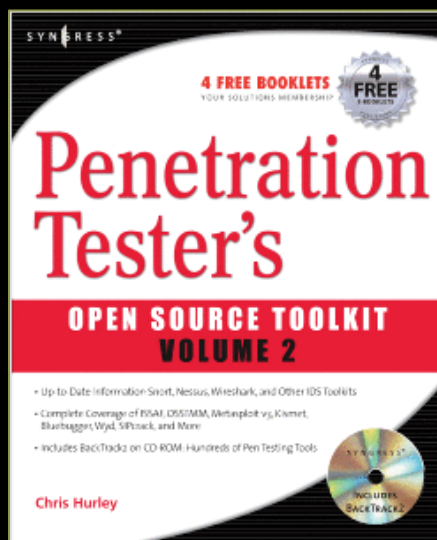
Michael “theprez98” Schearer

- Work for Booz Allen in central Maryland
- Spent 8+ years in the U.S. Navy as an EA-6B Electronic Countermeasures Officer
 - Veteran of aerial combat missions over Iraq and Afghanistan
 - Spent 9 months on the ground in Iraq as a counter-IED specialist
- Licensed amateur radio operator, active member of the Church of WiFi, a football coach and father of four



Michael “theprez98” Schearer

- Previous speaker at DEFCON, ShmooCon, HOPE and other conferences
- Contributor to several Syngress books



Why you should listen to me (maybe)

- Military experience
- Graduate of the Department of Defense's Survival, Evasion, Resistance and Escape (SERE) school
- Other survival and outdoor training
- Skills learned from experiences (both good and bad!)



Why you should be skeptical

I am not this guy...



...or this guy

- I am not a survival expert; other people (maybe some of you) know more than I do
- Survival skills will vary based upon experience, training, geography, weather, time of year and other factors



Why you should care: Natural disasters

- Tornadoes
 - ~1300 tornadoes per year since 2000
 - \$427 million of damage per year since 1950
- Hurricanes
 - ~10 named (Atlantic) storms per year since 1944
 - \$1.6-6.2 billion of damage per year since 1950
 - Hurricanes Katrina and Rita caused an estimated \$45 billion dollars in damage



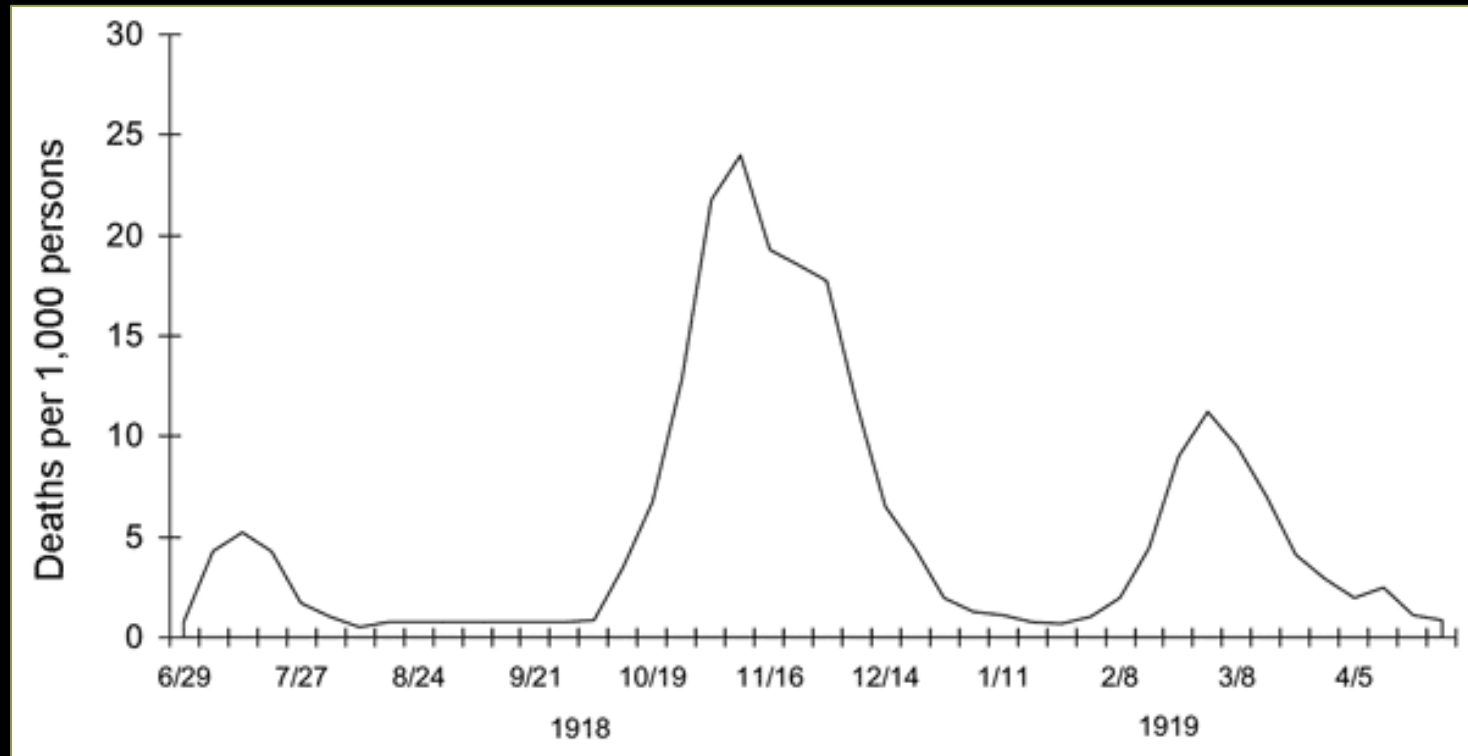
Why you should care: Natural disasters/Pandemics

- Earthquakes
 - 19.4 magnitude 7.0+ earthquakes per year
 - \$4.4 billion in damage per year
- H1N1 Flu Pandemic (as of July 24/29)*
 - 43,771 cases, 302 deaths (U.S.)
 - 134,503 cases, 816 deaths (worldwide)

In 2008, there were 9 weather events whose damage costs exceeded \$1 billion and caused 256 deaths



Why you should care: Influenza waves

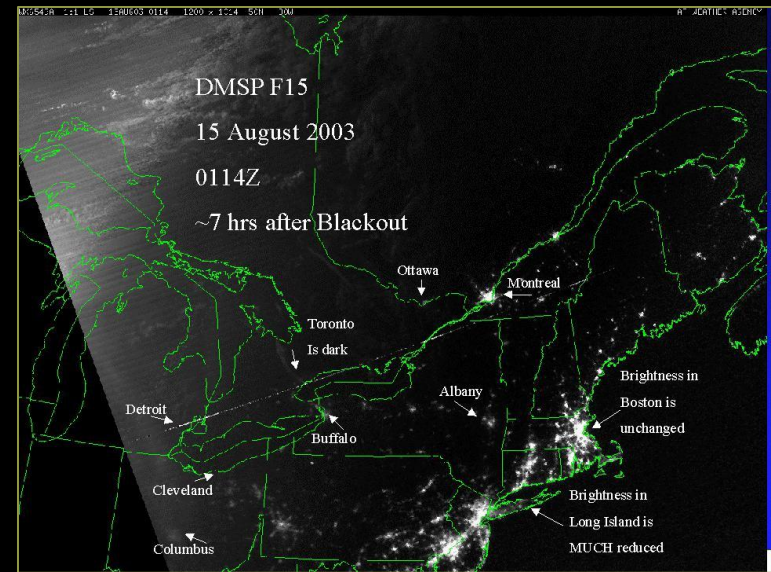
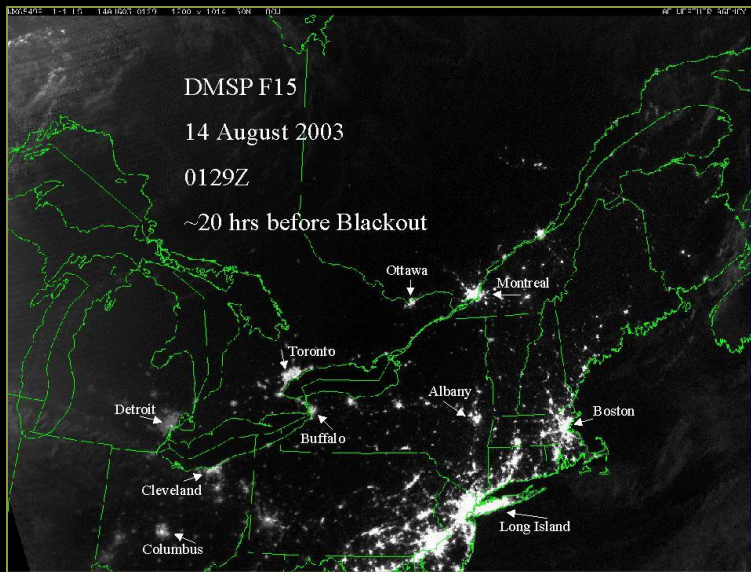


Swine flu could hit up to 40 percent in US

New flu resembles feared 1918 virus: study



Why you should care: Large scale/long term power outages



- On August 14, 2003, cascading shutdowns at over 100 power plants resulted in 61,800 megawatts of power being lost to 50 million people
- In January 2009, 68 counties and 36 cities in Kentucky, totaling 525,00 people, lost power in a powerful winter storm; many people lost power for several weeks



Why you should care:

The bottom line

- People underestimate how physically demanding the outdoors can be
- Thousands of people get lost every year on simple day trips with no maps, inadequate supply of food and water, lack of warm clothes
- Many people are unprepared to live without power for anything longer than a few hours
- The time when something bad happens is too late to start thinking about being prepared



What I did*

- Traveled to “remote” areas for primitive overnight camping
- One day’s supply of food and water
- No shelter
- Video camera, limited other supplies

I attempted “real life” demonstrations as a means of showing how the Hands-On Imperative can apply to survival situations



Appalachian mountains South central Pennsylvania

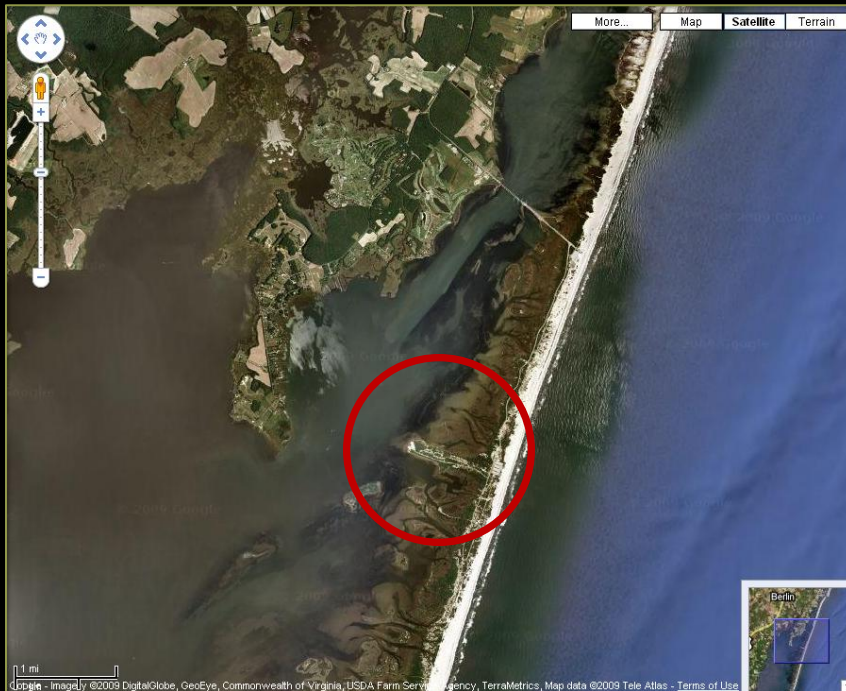
- Michaux State Forest
- December 21-22, 2008
- Challenges
 - Very little daylight
 - Below freezing
 - Snow/ice on the ground
 - Waterlogged wood
 - No shelter



Why oh why did I pick December 21st? ;-)



Assateague Island, Maryland



- Assateague Island National Seashore
- April 4-5, 2009
- Challenges
 - Long distance to site
 - Little protection from wind
 - Rain, rain and more rain
 - Waterlogged wood
 - No shelter



OMG! PONIES!



Five Basic Survival Skills

- Fire
- Shelter
- Signaling
- Food and Water
- First Aid



Q. Which is most important?

A. It depends.



FIRE

“What disaster makes it so that guns and matches don't work? If you want to survive, buy a case of ammo and some waterproof matches.”

--Penn Jillette, “End of the World,” *Bullshit!*



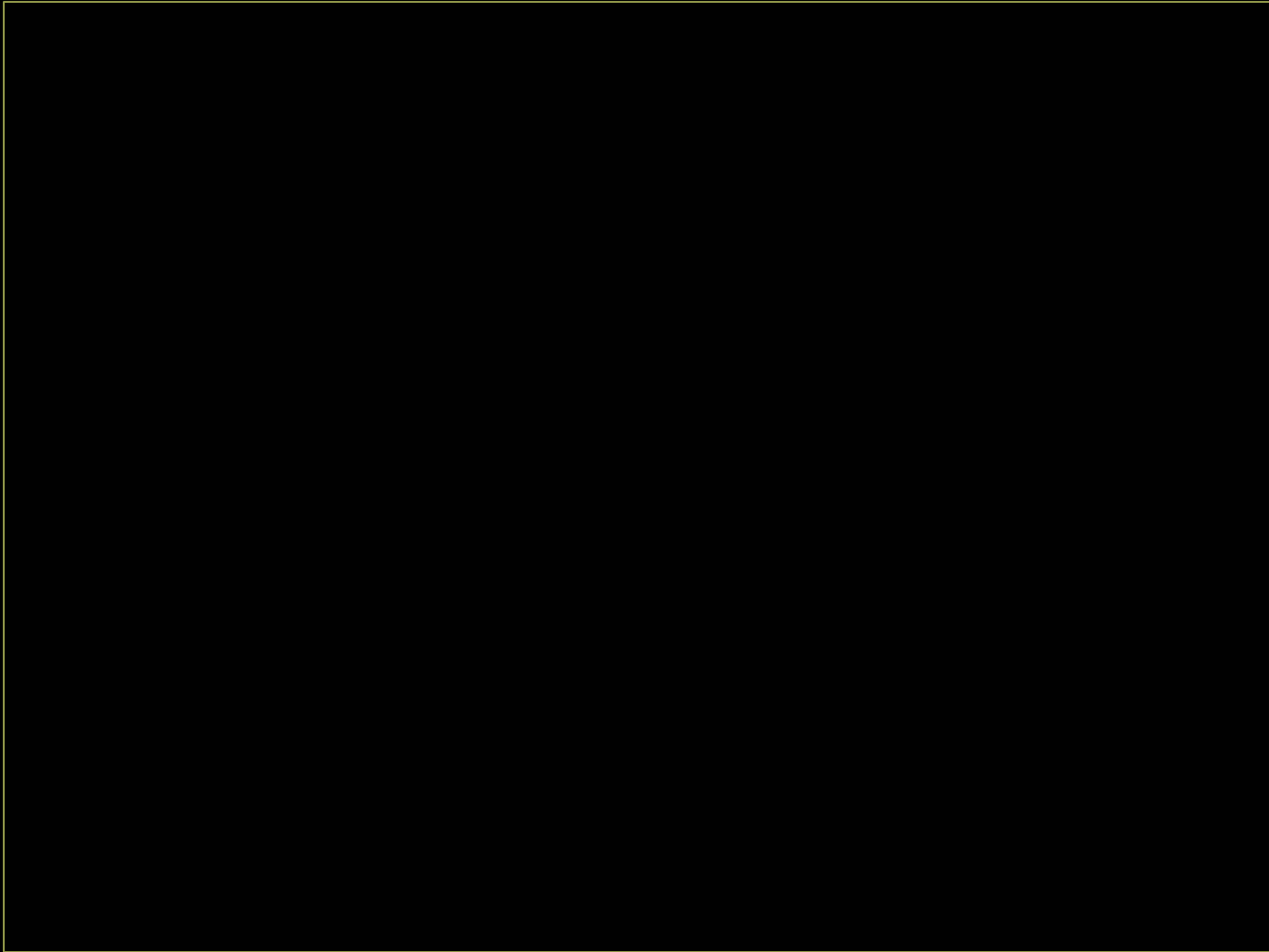
Fire

- Fire provides warmth, light, and comfort
- Allows for cooking and boiling
- Matches and lighters: Ok, but...
- Bow drill fire on the fly? Think again...
- Fire sticks, dryer lint, steel wool and batteries
- FireSteel

The bottom line: have multiple fire-starting methods available at all times



Fire



SHELTER

“Clothing is shelter in close proximity to the body.”

--Donald C. Cooper, National
Association for Search and Rescue



Shelter

- Provides some degree of protection from the elements as well as psychological comfort
- The shelter you choose to build will be highly dependent upon location, time of year, weather and other circumstances
- Clothing is shelter in close proximity to the body; wear layers to be able to shed and add



Shelter

- Select your site considering availability of water (and avoiding water), protection from the elements, and proximity to resources
- If you need to break or destroy something to help you stay alive, do it!

The things you use to make a shelter are often the “perfect camouflage” from those searching for you



Shelter



SIGNALING

“The irony of survival is that for all the planning and preparation you do to stay alive in the wild, all you really want to do is to *go home*.”

--Les Stroud, *Survive!*



Signaling

- Once your immediate safety is taken care of, prepare your signals to be ready *at any time*
- Mirrors/Flashlights/Flares/Chemicals
- Signal fire, triangle, day/night
- Personal Locator Beacon (PLBs)
- SPOT satellite messenger
- SendAnSOS.com



Signaling

TV show helps Utah boy survive night solo in woods

AP Associated Press

 Buzz Up |  Send |  Share |  Print

By ELIZABETH WHITE, Associated Press Writer – Tue Jun 23, 3:42 pm ET



AP – This photo released by the Wynne family Tuesday, June 23, 2009, shows Grayson Wynne, 9, after he was ...

SALT LAKE CITY – When he realized he'd been separated from his family on a weekend hike in a northern Utah forest, 9-year-old Grayson Wynne's thoughts turned to television. Grayson watches "Man vs. Wild" on the Discovery Channel every week with his brothers and his dad. On the show, host and adventurer Bear Grylls strands himself in the wilderness and then shows viewers how to survive the sticky situations.

That's where Grayson says he learned to leave clues behind to help searchers find him.

On Saturday, when he was scared and alone in the Ashley National Forest, Grayson started tearing up his yellow rain slicker, despite the intermittent downpours, and tying pieces to trees.



 TV Video: **Celebrity 'Superstars' Get Physical**
ABC News



FOOD AND WATER

“It is wise to bring some water, when one goes out to look for water.”

--Arab proverb



Food and water

- You can live 4-6 weeks without food
- You can only live 2-10 days without water
- Very hot, very cold, very dry, and windy environments are all bad for water needs
- Waterborne illnesses (giardia)
- Boiling water
- Eating ice/snow?
- Drinking your own urine?!

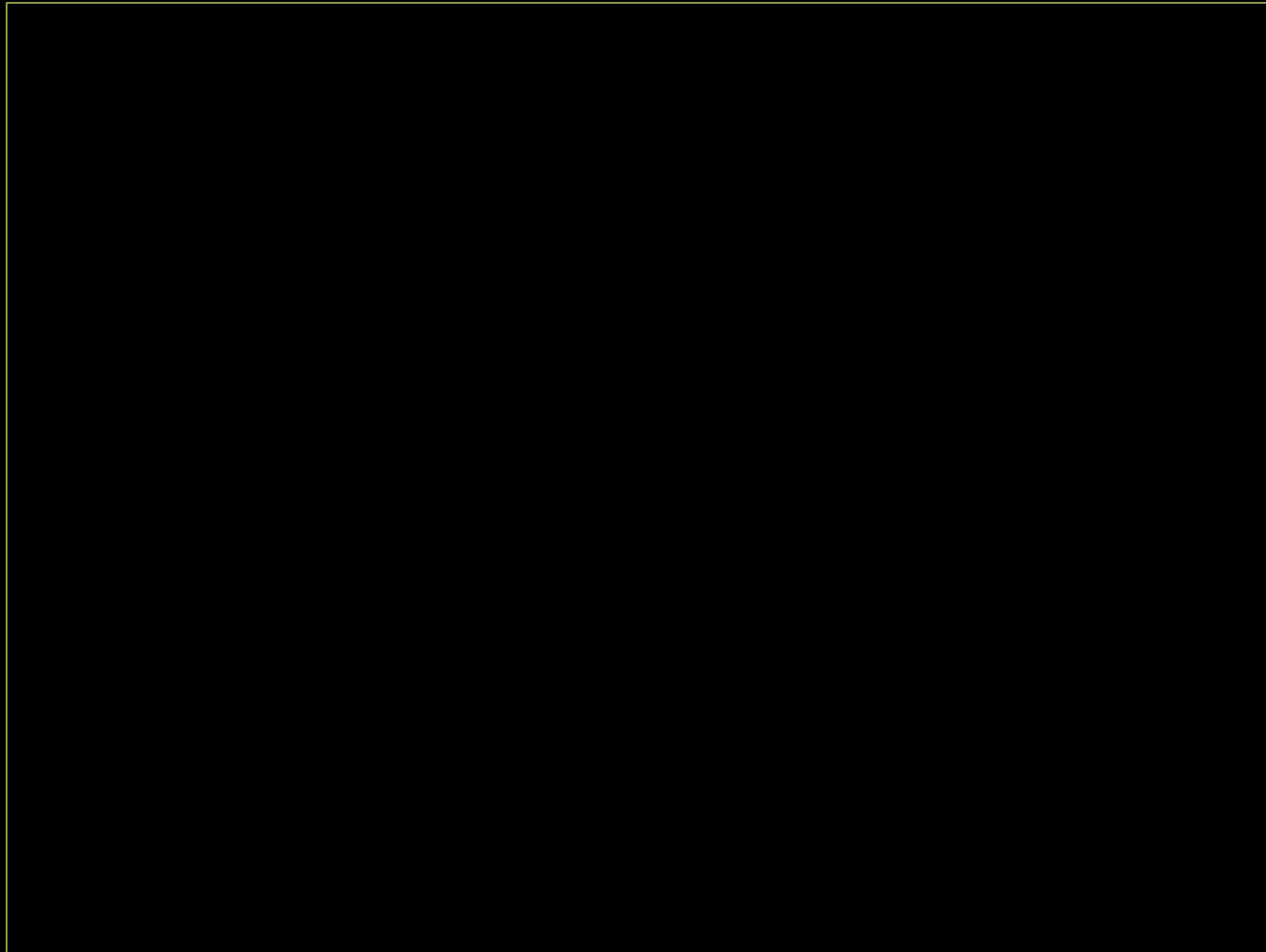


Food and water

- “The Myth of Wild Edibles”: identification, availability, season, latitude
- Insects/bugs/other various critters
- Fish and small game: traps, snares, falls
- Water needs increase with more food



Food and water



FIRST AID

Lou: A bandage keeps a boo-boo

Louise: or an "owie" clean and safe.

Lou: We're the Safety Patrol.

Louise: We're here to keep people safe.

Dad: Kids, aren't you forgetting something?

Lou: We are?

Louise: I thought we covered everything.

Dad: You forgot to kiss it and make it better.

Louise: Oops.

Lou: Oh, right.

-- Lou and Louise: Safety Patrol



First aid

- Do not panic
- STOP: Stop, Think, Observe, Plan
- First Aid & CPR
- Eyes, Feet, Hands, Stomach (Stroud Survival Tip)



PREPARATION

“Luck is what happens when preparation meets opportunity.”

--Seneca



Preparation

Given the will to survive, thriving in the wild or in a disaster situation or in the wilderness is largely a matter of preparation combined with the “hacker” ingenuity to find creative solutions under extraordinary circumstances.



Preparation

- Kits vs. Custom
- Gear Recommendations
- Home Preparation
- Vehicle Preparation
- Hiking/Camping (*Ten Essentials*)
- Bug Out Bag



Gear Recommendations

- Clothing
 - Under Armour boxer briefs
 - Comfortable, broken-in boots
 - Thorlo-type socks
 - Rigger's belt
 - Recon wrap
- Accessories
 - Surefire flashlight
 - Leatherman/Multi-tool
 - Swedish FireSteel



Preparation: Home

- Water
 - Drinking (bottled/tap/bathtub/toilet tank?)
 - Bathing
- Food (perishables/non-perishables/cookability)
- Heat (fireplace/wood stove/space heater)
- Signaling and communication
- Travel and navigation



Preparation: Vehicle

- Water (+food)
- Fire-starting capability
- Signaling devices (flares, whistle, etc.)
- Battery cables
- Other materials as space allows

Don't hesitate to cannibalize your vehicle if you need the parts in it to survive



Hiking/Camping

The Ten Essentials

- Map
- Compass (+GPS)
- Sunglasses and sunscreen
- Extra food and water
- Extra clothes
- Headlamp/flashlight
- First aid kit
- Fire starter
- Matches
- Knife

Essential items are dependent upon location; experts recommend supplementing the essentials



Bug Out Bag

- Survival kit containing items for short term evacuation (~72 hours)
 - One gallon of water per day per person
 - Non-perishable food
 - First aid kit
 - Etc...
- Contents dependent upon location and individuals (kids, elderly, pets, medicine...)



FINAL THOUGHTS

“Man can live about forty days without food, about three days without water, about eight minutes without air, but only for one second without hope.”

--Author unknown



Final Thoughts

- Don't be squeamish about breaking or destroying something to help you stay alive
- You are not Jack Bauer, MacGyver, or Survivorman; you need practice to survive
- Employ the Hands-On Imperative: "Don't consider what it *is*, but what it *could be*"

Your psychological strength together with the will to survive is the most important survival skill



Credits and Further Research

- Centers for Disease Control and Prevention
- National Oceanic and Atmospheric Administration (National Weather Service)
- World Health Organization
- Les Stroud, *Survive! Essential Skills and Tactics to Get You Out of Anywhere—Alive*
- *Mountaineering: The Freedom of the Hills*
- www.survivaltopics.com
- My family



QUESTIONS



PLEASE STAND BY FOR

PART 2

HOW TO REBOOT SOCIETY
ON A BUDGET

