

By Darrell Harrington

PHOTOGRAPHING THE MILKY WAY

Background

- Who the heck is Darrell



Why (I) Shoot the Night Sky

- Getting up at 5am to photograph the sunrise was providing you way too much sleep
- Good excuse to purchase new gear
- Good way to push your photography further
- Not everyone is willing to do it
- You are just a little crazy

Gear

- Tripod
- Lens choice
 - Wider and faster the better
 - Look for good coma performance
- DSLR / Mirrorless Camera with good ISO performance
- Remote Trigger
- Flashlight
- Other useful accessories
 - Headlamp with red light or low intensity setting
 - Gaffers Tape
 - Hoodman loupe



Safety

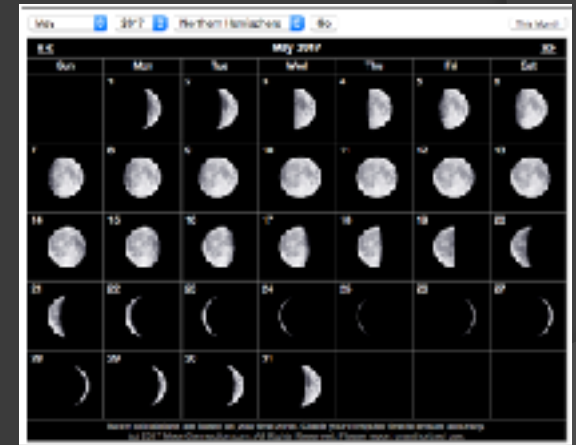
- Go with buddy if possible
- Let someone know where you will be
- Plan where you are going and travel during daytime if possible
- Use flashlight and/or headlamp
- Don't be afraid to make noise
 - Let wildlife know you are there
- Dress for the temperature

Planning

- The single most important part of photographing the night sky is planning for it.

Where to go / when to go

- Milky Way viewable from March until November
 - Starts horizontal and move to vertical throughout season
- Best viewed during New Moon
 - or 4 days before and after
- Viewable to the southern sky
- Avoid light pollution

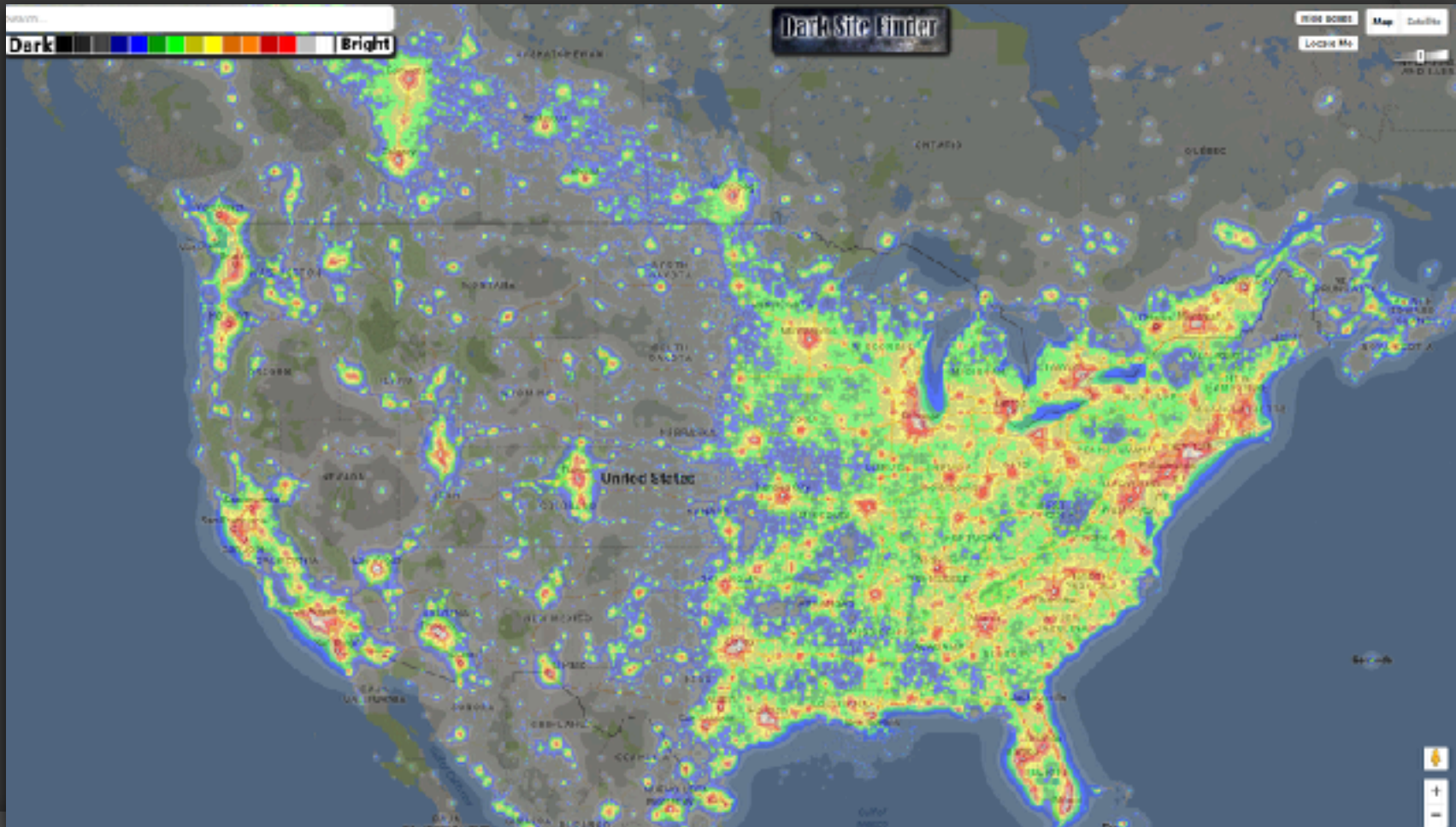


Scouting Locations

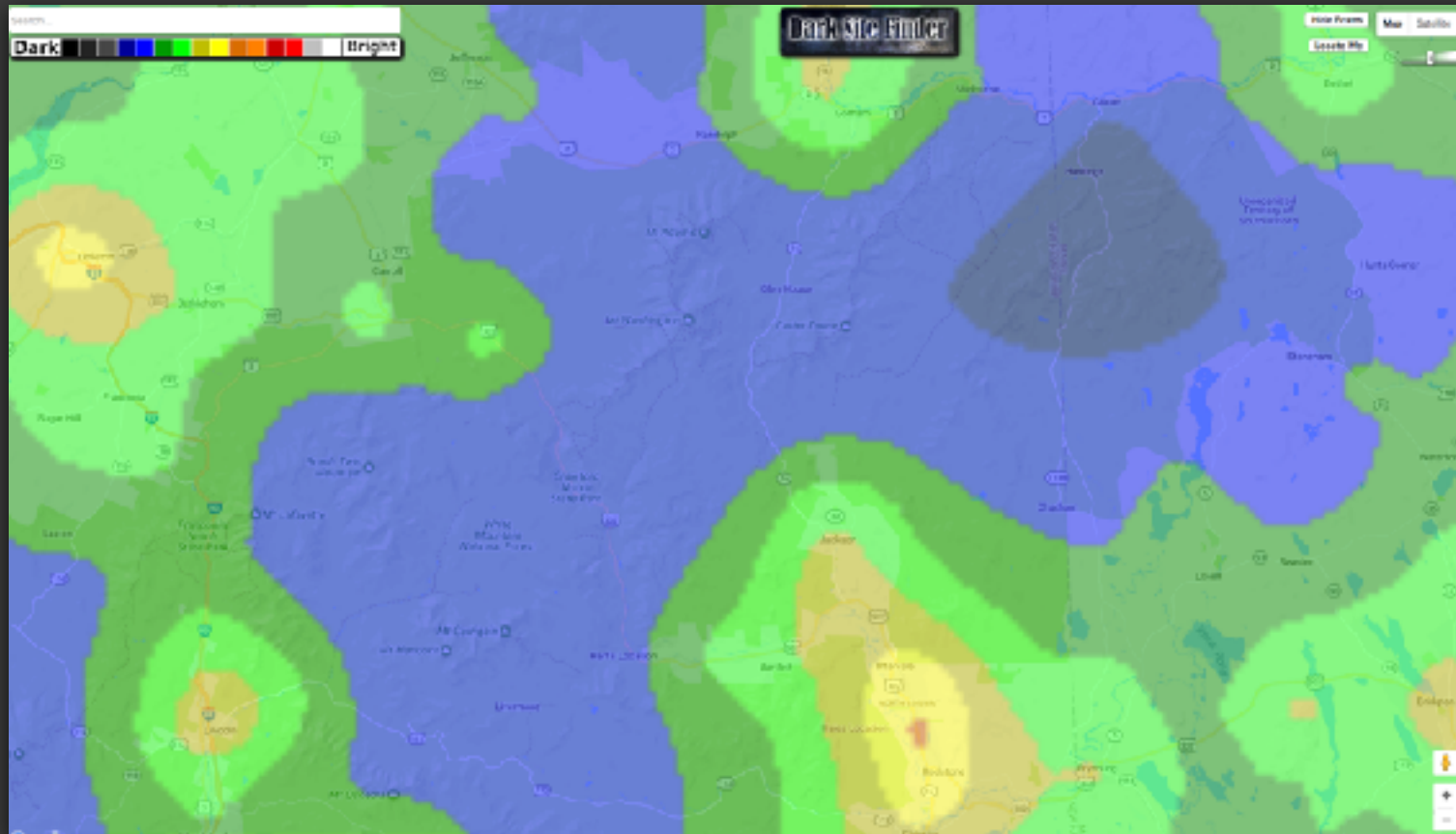
- <http://darksitefinder.com>
- www.500px.com
- Google Maps
- Google Earth
- Specialized apps (phone and desktop)
- Reach out to local photographers

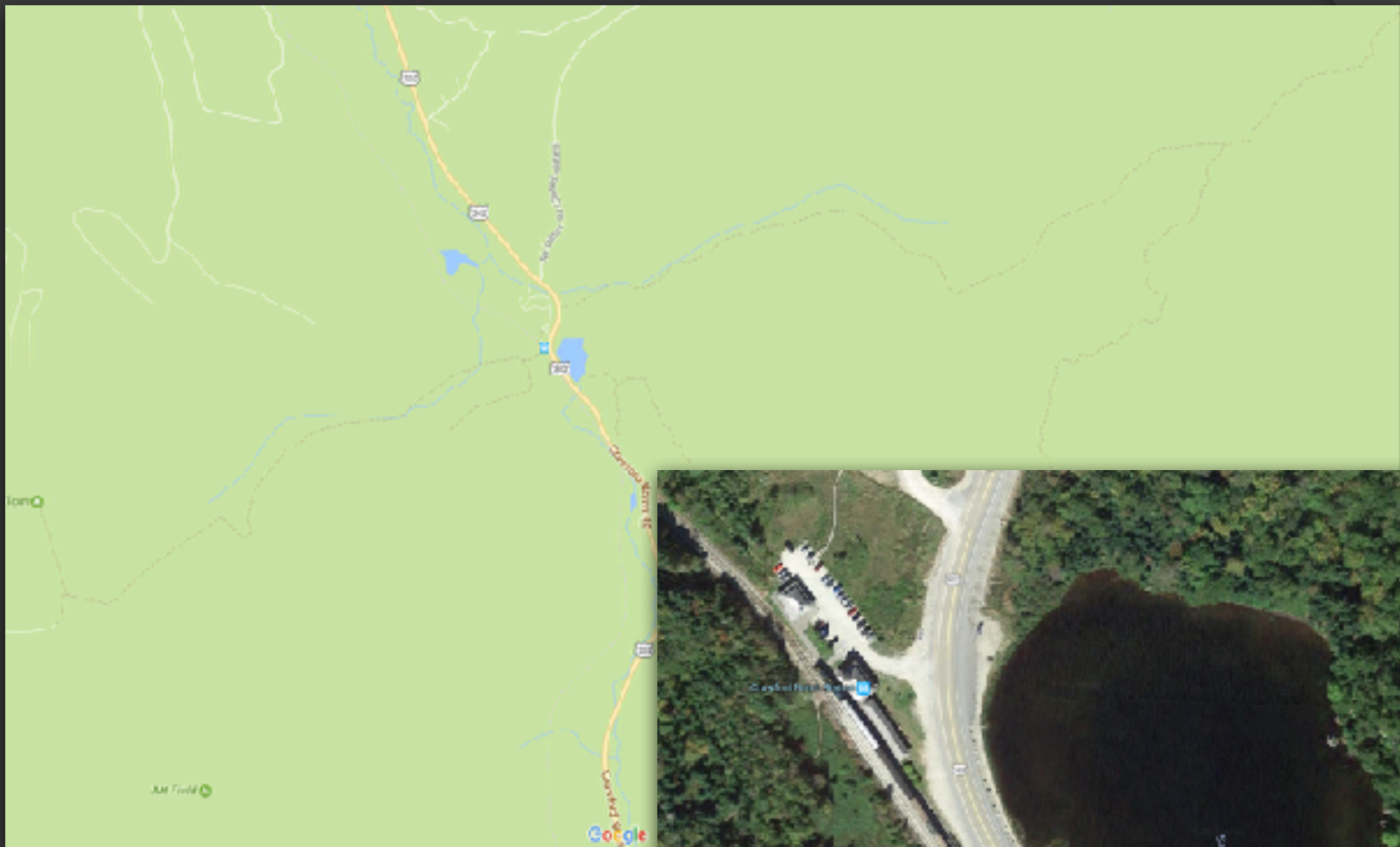
Finding Dark Sky's

- darksitefinder.com - <http://darksitefinder.com/maps/world.html>



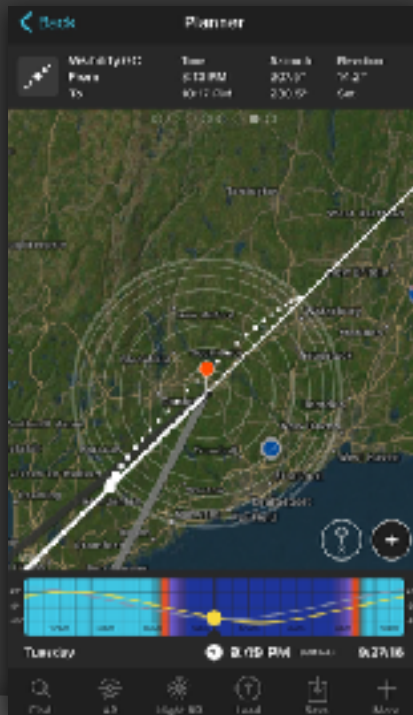
Find a dark spot





Apps for planning

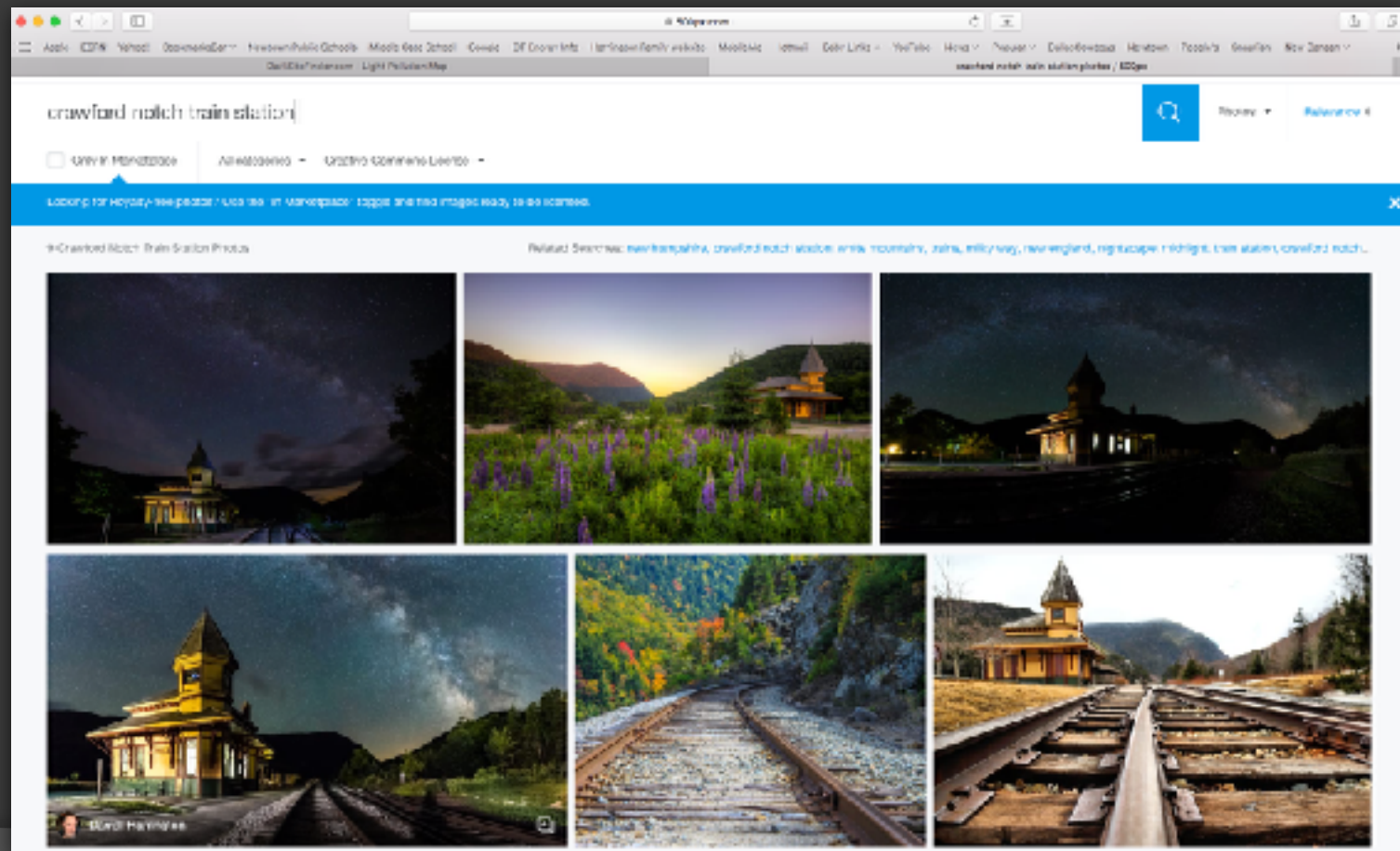
- Photopills
- Planit
- Photographer's Ephemeris





See what photos others have taken there

- Search 500px, Flickr, Google images



How to get there


- Google Map/ Google Earth
 - Where to park
 - Where trail heads are
- Arrive before dark whenever possible
 - Remember that movement in dark will be much slower
- Have multiple locations scouted

Weather



- Be aware of weather before you go out
 - Cloudy sky's = no viewing of Milky Way
 - This is another reason to have multiple locations scouted
- Know what weather was prior to going out
- Many different mobile apps that will help with tracking of weather

Camera Settings

- Shoot in Manual Mode
- Shoot Raw not jpeg
- White Balance (my go to is 3700k)
- Focal Length – Wider equals longer shutter duration
- Shutter duration – 500 Rule (500 / focal length)
 - $500 / 20\text{mm} = 25$ seconds
 - Include crop factor in calculation
 - This is to avoid star trails
- Aperture – Wide open (smallest F stop number)
 - Generally f2.8 or faster
- ISO – Adjust based on light conditions and ability of camera
 - Generally ISO 1600 - 6400
- Focus – Set to manual
 - Pre-focus on infinity before it gets dark 
 - Confirm focus after dark
 - Tip: Tape down focus and zoom rings

Composition

- Orientation of the Milky Way.
 - Keep in mind that it will start the season horizontal and gradually move toward vertical
- Include a foreground subject
- Look for bodies of water
 - Clear view to sky
 - Reflections

Milky Way with no foreground



Including foreground



Lighting the foreground

- Light paint with flashlight
- Much longer exposure for foreground and composite two photos together
- Close by light source (street light, etc)





- Reflections in water

Panorama



Tips before going out

- Gear check list
 - Camera, lens, tripod, remote release etc
 - You would be amazed what you will forget
- Paper map and compass or off line maps on mobile device
- Dress for weather (It will be colder than you think)
- Nap earlier in the day

Other Tips

- Know your camera
- Have patience and don't get discouraged
- Early results won't be your best
- Enjoy your surroundings but, be aware of them
- Use light only when needed to keep your night vision

QUESTIONS?