NIGHT PHOTOGRAPHY 101

Fort Collins Digital Camera Club

Lessons from the Field

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SAFETY - SAFETY – SAFETY – SAFETY!!

- You will be out late at night, often in unfamiliar territory.
- Sleep deprivation is a dangerous thing. If you are sleepy, PULL OVER and sleep. An open car window doesn't help enough. A cat-nap will often refresh you enough to continue.
- If possible, travel with someone. They can spell you driving, help navigate, provide conversation, and share the misery.
- Scout locations in daylight, if possible. Take notes about landmarks, road-signs, etc. Note distances.

GROUP BEHAVIOR, LIGHTS

- Be respectful. Exposures are long, and others may have their shutter open when you want to check something. Call out!
- Headlamps are recommended, but keep a flashlight in your pocket. Red lights are good to keep eyes adjusted, but the camera records the red.
- You will often be walking in the dark. Go slowly, watch your step, keep your distance.

Photographing the Milky Way

- Choose your date carefully. New Moon is best, but +/- 2 days works.
- Galactic Core is the sweet spot. Generally in the South but can vary from east to west.
- In the spring, you can get a Milky Way Arch - use multiple exposures for a panoramic view. Try to get an interesting element in the center of the arch.
- In the fall, the Milky Way is more vertical – great for V-shaped scenes.
- Galactic Core visible here March – October.

NEW MOON

- New Moon dates for 2022:
  - April 30
  - May 30
  - June 28
  - July 28
  - August 27
  - September 25
  - October 25

DARK SKY ESSENTIAL

- Nearby Dark Sky Locations:
  - Jackson Lake State Park – go to the north end.
  - Snowy Range west of Laramie, WY
  - Westcliff and Silver Cliff, CO
  - Others:
    - Crestone, Norwood, Ridgeway, Black Canyon of the Gunnison, Great Sand Dunes National Park, Florissant Fossil Beds National Monument, Dinosaur and Hovenweep National Monuments, Mesa Verde National Park

CAMERA(S) AND LEN(S)

I like a full frame camera, but use what you have. Mine full frame is a Canon 5D Mark IV, but I also use a Canon 7D Mark II crop sensor.

Use the widest lens. For the 5D, I use a Tamron 15-30 mm, f/2.8. For the 7D, I use a 10-22 mm, f/3.5.

Sturdy tripod is essential. Long exposures are required.

Focus is critical. I make sure the lens is set on manual mode, then focus using live view. Find a bright star and focus until star is the smallest dot possible. Once focused, don't change. Some recommend taping the focus ring to insure focus doesn't change.

EXPOSURE SETTINGS

- Get enough light from the stars to register, but keep the stars from "trailing" or moving slightly.
- My basic settings:
  - Aperture: Wide open, f/2.8 or as wide as possible.
  - Exposure time: Generally 25 seconds, but depends on focal length.
  - ISO: Generally 3200. I use a high ISO to focus and compose, then lower to make the shot. The lower the ISO, the less the noise.
  - White Balance: I've been happy with Auto White Balance. If necessary, adjust in post-process. Some say 3200K cuts down the orange of ground light.
  - Check your histogram. Try to get a "shoulder" on the left (dark) side.

POST-PROCESSING

- In Camera Raw or Lightroom, darken blacks and shadows. Increase white and highlight slider.
- I use Starry Landscape Stacker, which requires taking 5 "dark" frames (with the lens cap on) and 10-25 "light" frames. I set up my exposure and focus settings, then take the dark frames, followed by the light frames, all without moving the camera or changing settings or focus. Using Starry Landscape Stacker significantly reduces the noise. However, it is available only on a Mac, so I have to go between computers to use it. Takes some practice, but well worth the effort.

OTHER TOPICS

- Star Trails
- Light Painting and interior illumination
- Photographing the moon
- Street photography