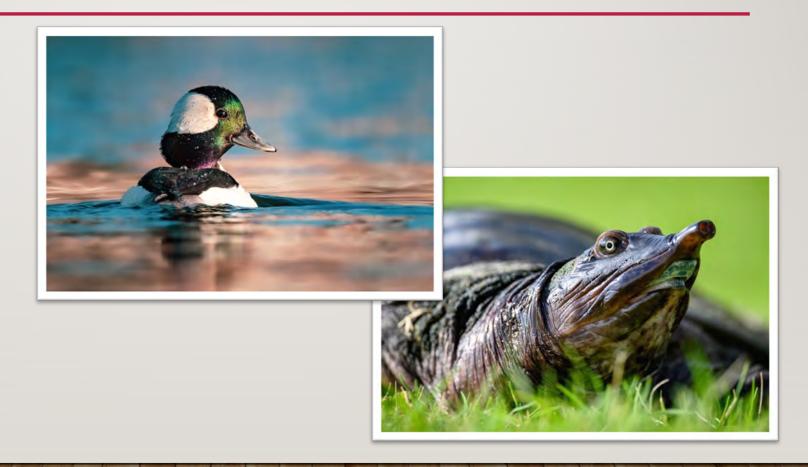




2 TOPICS

- Equipment
- Settings
- Wildlife Habitats and Behavior
- Shooting Tips
- Post-processing
- Final Tips



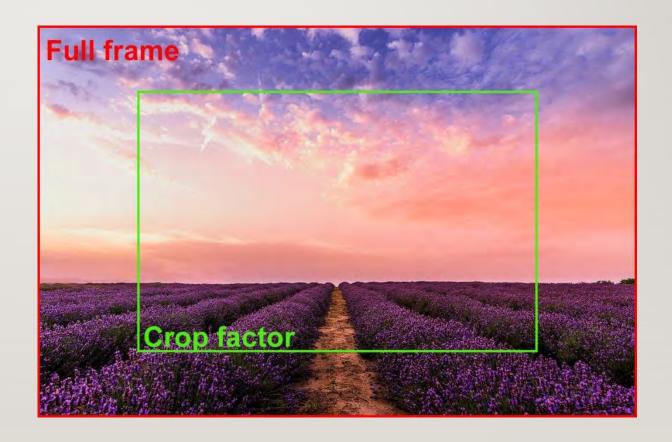


3 CAMERA BODY COMPARISON

	Portability/ Weight/Size	Image Quality	Autofocus Speed	Quiet Shutter	Customize Controls	Burst Capability
Point and Shoot Superzoom	Best	Worst	Worst	Best	Worst	Worst
DSLR	Worst	Best	Best	Worst	Best	Best
Mirrorless	Slightly Better than DSLR	Best	Better	Best	Best	Best

4 FULL FRAMEVS CROP SENSOR

- Crop sensor cameras have a natural magnification for a given focal length lens...great for wildlife!
- Full frame cameras have better high ISO capability due to larger pixel sizes
 - Good for low light situations
 - Good when higher shutter speeds are required
 - Not as critical with good light





5 WILDLIFE LENSES

- Typical wildlife photography setups use telephoto lenses with focal lengths >200mm
- Quality telephoto zooms that won't bust your budget and are hand-holdable
 - Nikon 200-500mm f/5.6
 - Tamron 150mm-600mm f/5-6.3
 - Sigma 150mm-600mm f/5-6.3
 - Canon 100-400mm f/4.5-5.6L
- Professional grade telephoto lenses are very expensive and require tripods or monopods
- Prime (i.e. single focal length) lenses tend to focus faster and produce sharper images than zooms
- Teleconverters (TCs) are an inexpensive alternative to increase focal length of a given lens
 - Decreases aperture
 - Decreases image quality
 - Decreases autofocus speed
 - Example: 200-500mm f/5.6 + I.4x TC = 280-700mm f/8







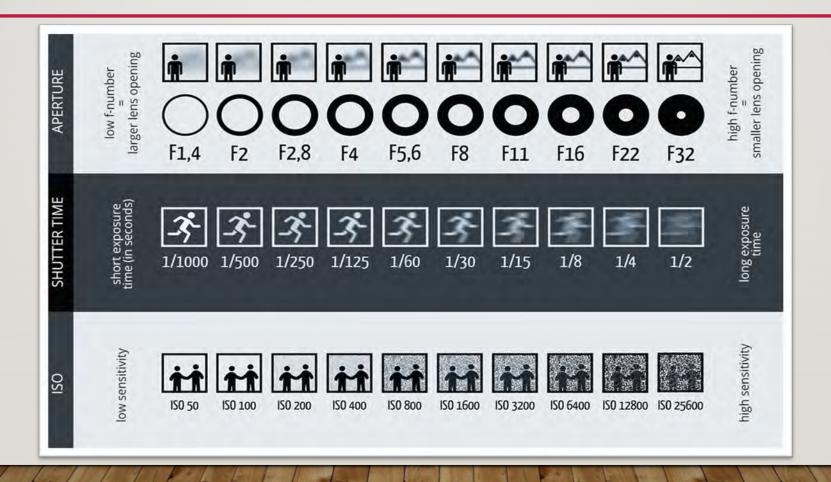
6 WHAT'S IN MY BAG?

- Cameras
 - Nikon D500 (APS-C DSLR)
 - Nikon Z6 II (Full Frame Mirrorless)
- Lenses
 - Nikkor 500mm f/5.6 PF
 - Nikkor 70-200mm f/2.8G II
- Teleconverters
 - Nikon TC-14E III
 - Nikon TC-20E III





7 EXPOSURE TRIANGLE REVIEW





8 CAMERA SETTINGS

- Shutter priority (i.e. control shutter speed)
- Auto ISO
- RAW file format
- Matrix/Evaluative Metering
- Focus Modes
 - Single Point for precision focus of stationary subjects
 - Multi-point/Dynamic Area for maintaining focus of subjects that move predictably
 - 3D Tracking for maintaining focus of subjects that move erratically

- Burst Shooting
- Back Button Focus
 - Decouples focus from the shutter release and relocates it to the "AF-On" button on the back of the camera
 - Advantages
 - Shoot in AF-C (continuous) with the benefits of AF-S (single)
 - Instant manual focus
 - Ignore obstructions
 - Reference: https://photographylife.com/back-button-focus



9 SHUTTER SPEED EXAMPLES





Portraits 1/100 - 1/500 sec





Large Birds in Flight Slow Action 1/500 - 1/1600 sec





Small Birds in Flight
Fast Action
1/1250 - 1/3000 sec



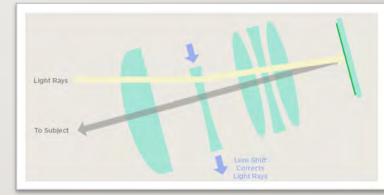


Hummingbirds 1/2000 - 1/4000 sec

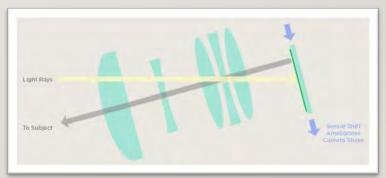


10 IMAGE STABILIZATION / VIBRATION REDUCTION

- What it does: Allows you to capture sharp images of static subjects at slower shutter speeds
- What it doesn't do: "Freeze" fast-moving objects at slower shutter speeds
- General rule for capturing sharp, hand held images = I / focal length
 - Example: For a 500mm lens, you'll need a shutter speed of 1/500 sec
- Pros vs Cons
 - Pro: Shoot at slower shutter speeds with long focal lengths (up to 4-stops!)
 - Pro: Smooths image in the viewfinder
 - Pro: In-body IS/VR will benefit all lenses attached to camera
 - Con: Lens-based IS/VR is unique to the lens and increases the lens cost
 - Con: IS can introduce blurriness to images shot from a tripod
 - Con: IS produces small misalignment and can result in off-center shots
- When to turn off IS/VR
 - · When camera is mounted to a tripod
 - When shooting at shutter speeds faster than 1/1000 sec (optional)



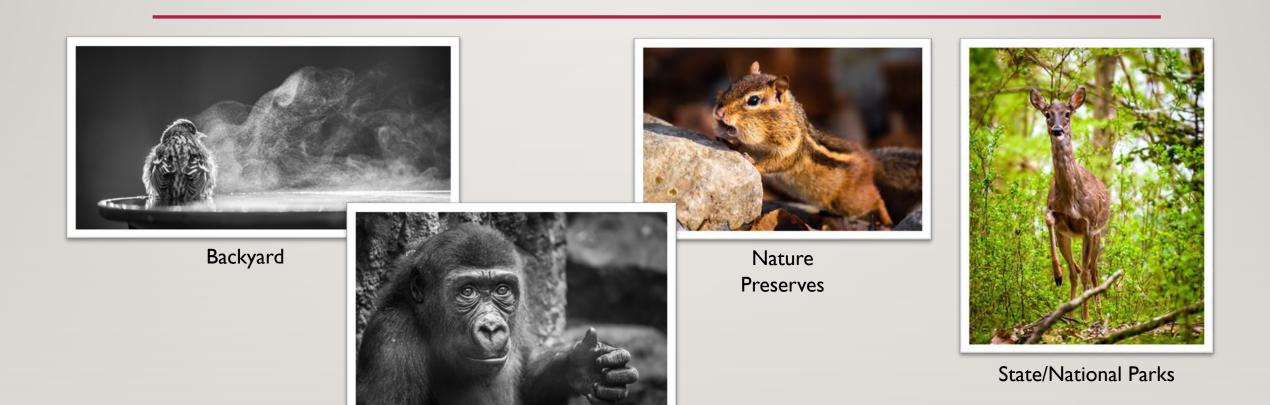
Lens-based - uses a floating lens element, which is electronically controlled and shifted opposite to any camera shake



In-body - physically shift the image sensor to compensate for camera body movements



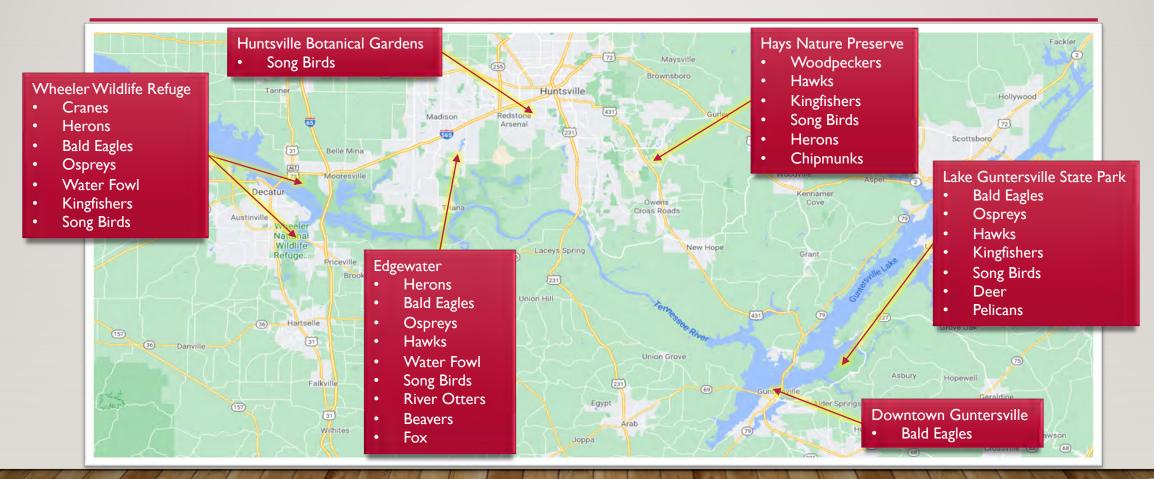
II WHERE TO FIND WILDLIFE



Zoos



12 WHERE DO I SHOOT?





13 START SIMPLE – A BACKYARD BIRDFEEDER

Birds I've seen at my feeder or in my backyard

- Northern Cardinal
- Eastern Bluebird
- House Finch
- Purple Finch
- Downy Woodpecker
- White-breasted Nuthatch
- Red-breasted Nuthatch
- Rose-breasted Grosbeak
- Blue Grosbeak

- Carolina Wren
- Carolina Chickadee
- Pine Siskin
- White-throated Sparrow
- Chipping Sparrow
- Indigo Bunting
- American Goldfinch
- Dark-eyed Junco
- Yellow-rumped Warbler

- Pine Warbler
- Blue Jay
- Brown Thrasher
- Blue-gray Gnatcatcher
- Wood Thrush
- American Robin
- Yellow-billed Cuckoo
- Morning Dove
- Cooper's Hawk



14 LEARN ANIMAL BEHAVIOR

- Preferred habitat (e.g. wetlands, woods, lakes)
- Feeding/hunting preferences
- Migration patterns
- Type of food
- Watch for unique/funny/interesting moments



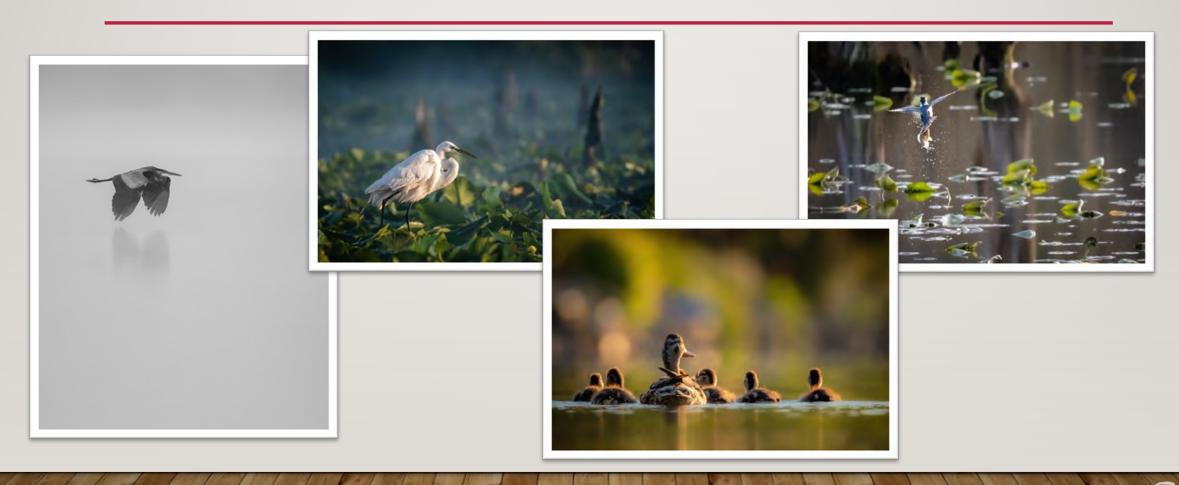








15 CAPTURE WILDLIFE IN ITS HABITAT





16 APPLY PORTRAITURE TECHNIQUES

- ALWAYS focus on the eyes
- Wait for the catchlight
- Crop so that your subject is looking/moving into the frame
- Avoid distracting backgrounds
- Get low
 - Provides a different perspective
 - Feels more intimate
 - Isolates subject from background





17 LIGHTING

- Clearer skies produce plenty of light for high shutter speeds
- Early morning/late afternoon light
 - Helps light the underside of birds in flight
 - Warmer tone
 - Sideways light







18 ADAPT TO WHAT NATURE GIVES YOU

- Be careful about getting too greedy
- Capture the moment before maneuvering for a "better" shot
- Take advantage of silhouettes and backlighting when shooting into the sun









19 SET INCREMENTAL GOALS

Example: Great Blue Heron

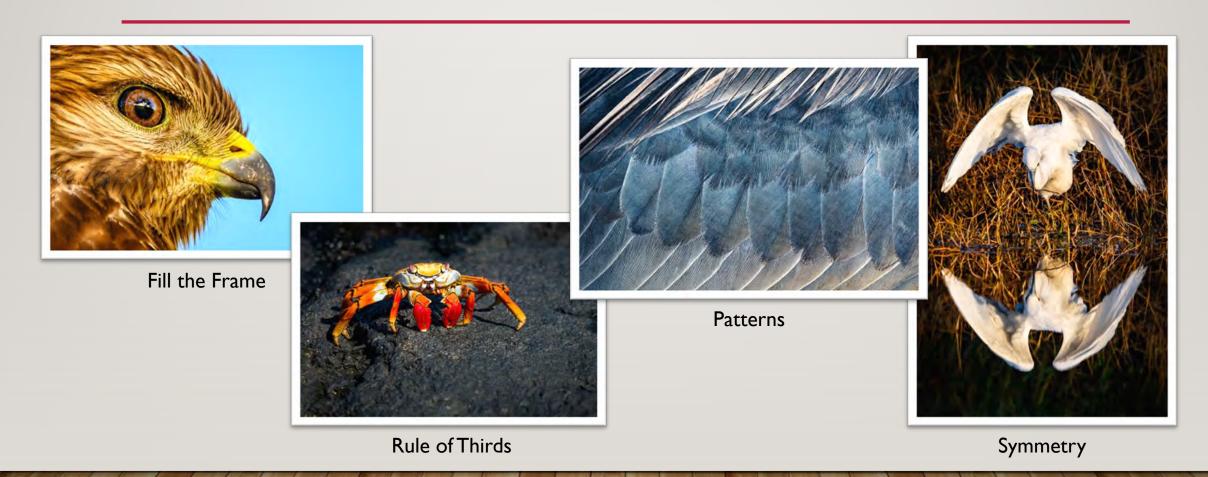
Portrait ----> Environment -----> Flying -----> Catching a Fish



Easier — — — — — — — — — — — Harder

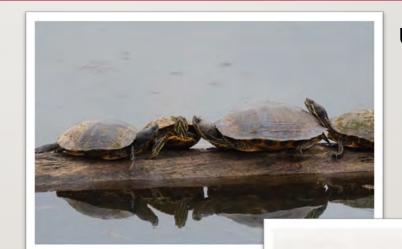


20 COMPOSITION TECHNIQUES



21 POST-PROCESSING TIPS

- Don't be afraid to crop
 - Take advantage of the megapixels to zoom into the subject
 - Wildlife photos are tough to compose properly in the field
- Try monochrome when scene lacks strong color or flattering light
- Over or underexposing select background areas can help remove distracting elements and draw focus to the subject

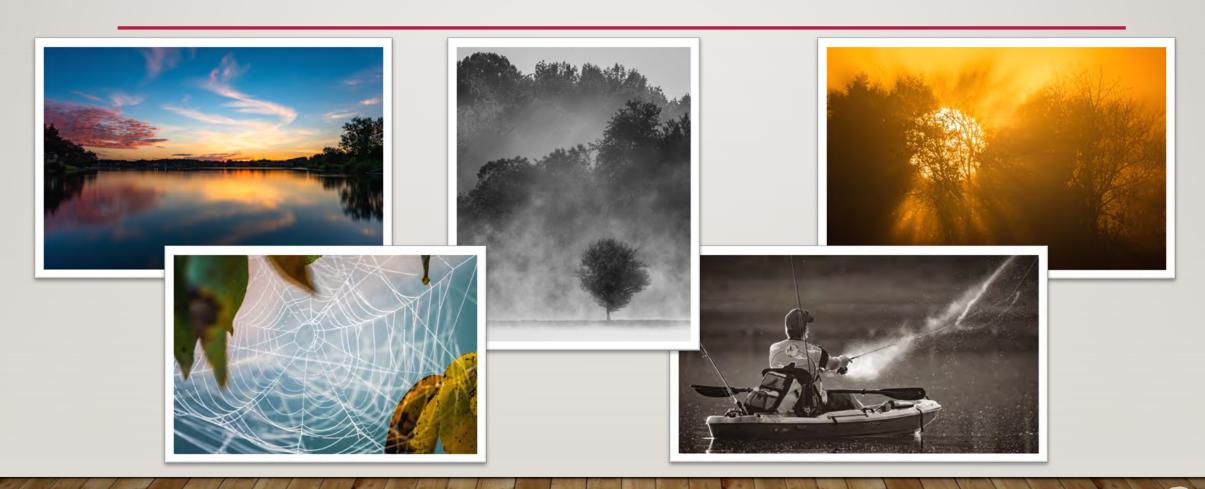


Unedited

Edited



22 NOT EVERYTHING HAS TO BE WILDLIFE





23 FINAL TIPS – THE THREE P'S

Patience

- Animals are extremely unpredictable and not on a schedule
- Move slowly
- Start from afar and gradually close distance
- Must be willing to remain still and wait for action to occur

Persistence

- Revisit the same location
- Get to know the lighting conditions
- Don't expect award winning photos each outing

Preparation

- Wear comfortable shoes and clothing that can get dirty
- Start with shutter speed high
- Check behind you birds in flight appear out of nowhere





24 REFERENCES

- Magazines
 - National Geographic
 - Outdoor Photographer
- Instagram
 - @nuts_about_wildlife
 - @nuts_about_birds
 - @nuts_about_nature_
 - @natgeo
 - @outdoorphotomag
 - @shannon_wild
 - @stevegettle
 - @c_scott_photo (me 🤤)

- Contests
 - Audubon Society
 - Outdoor Photographer Magazine
 - Smithsonian
 - Birdwatching Daily
 - Nature's Best Photography
 - Birds and Blooms
 - Big Picture Natural World Photography
 - Outdoor Alabama
- My website: https://cscottphoto.smugmug.com

