# WILDLIFE PHOTOGRAPHY ESSENTIALS

Richard Seeley Photography rev 1

# Agenda

- Why Wildlife?
- Get Close, Safely
- Keep It Steady
- Understand Your Subject
- Capture Behavior
- Aperture Priority (Av) v. Shutter Priority (Tv)
- Aperture, Shutter Speed, ISO, AF Point Mastery
- Av/Tv Safety Shift
- Wildlife and Shutter Speed
- Autofocus Points (AF points)
- Metering for Wildlife
- AF Modes
- Exposure Histogram
- Gear Guidelines
- Professionals, Magazines, Associations, Photo Clubs

# Why Wildlife?


- One of the most difficult areas of photography
- Wildlife are undependable – they move
- Safety concerns when approaching
- Tend to be crepuscular (active at dawn and dusk) when lighting is the most challenging.
- Can require state-of-the-art camera technology
  - Big glass, fast frame rates, fast auto focus, many megapixels
- Because its so thrilling when you capture that “moment”

# Get Close, Safely

- Each species has a different “threat zone”
  - Safety for wildlife and human life
  - Become agitated, notice you, flee or consider you prey
  - Red fox kits – 5-8m; egrets – 10-20m; lions and elephants – 5m when in a vehicle; polar bears 50-75m with rifle; bighorn sheep – 10m
  - Better to be stationary and let wildlife approach you
  - Long lens gets you “close” and provides comfort zone


# Keep it Steady

- Use a tripod whenever possible.
  - Carbon fiber is lightest, stiffest, most expensive and works well
  - A monopod is better on a rolling boat. A tripod on one leg can serve as a monopod
  - Avoid extending the center post, since it is unstable
  - Extend heavier segments of legs first when not extending all segments
    - unlike image on the right ☺
  - Hang weight from center to stabilize when possible
  - Gimbaled (ie. Wimberly) head best for birds (see image at right)
- Use bean bags mounted on window sill when in vehicle
- Handheld can work effectively
  - High shutter speed and panning skill required for birds or animals in flight (1/1500 or faster)
  - Lower shutter speed for blurring of background (1/80 – 1/125)
- Image Stabilization (can get 1-4 additional f-stops of light, depending on lens)
  - Read lens manual to determine if IS should be on/off when on tripod. Each lens is different.
- Maximize shutter speed for sharpest shot

# Understand Your Subject

- Understanding behavior is the key to **anticipation**. Anticipation allows you to start shooting before the action starts.
- A lion will mate every 15-20 minutes when in heat
- A leopard will jump and climb a tree when threatened by a hyena
- Whooping cranes will lean forward just before they begin their take off
- A red fox mother will leave the den at dawn and return in 30-60 minutes with breakfast for the kits
- An osprey will squawk when it is about to leave the nest
- Read about your target wildlife and learn their behavior.


# Capture Animal Behavior

- The best shots that captivate the imagination and win competitions are those that usually exhibit behavior
- Behavior can be
  - Action (running, hunting, fighting, flying, climbing, etc.)
  - Animal interaction (mother grooming infant, infants at play, etc.)
  - Family portraits



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# Aperture Priority v. Shutter Priority

- Aperture Priority (Av – Aperture value) – set the aperture and let the camera determine the shutter speed for a properly exposed image.
- Shutter Priority (Tv – Time value) – set the shutter speed and let the camera determine the aperture setting for a properly exposed image.
- In wildlife photography, which is best?

# Aperture Priority v. Shutter Priority

- In wildlife photography which should be used?
- Depends on objective. If shutter speed is most important (birds flying, cheetah running) then use Tv. If depth of field is most important (need sharpness on multiple animals not in same focal plane or want to blur the background), then use Av.
- General consensus (unscientific survey) among colleagues and google searches is either will work, but Av is favored.
- Most important is to know how to use the camera buttons/dials to get the desired setting for the conditions at the time.
- Very important to be able to change shutter speed, aperture, ISO and Auto Focus point (AF point) without looking up from the viewfinder

# Aperture, Shutter Speed, ISO, AF Points - Examples

- Early morning light, pride of lions dozing,
  - Av mode, operate aperture to get ss of around 125-250, if not possible, increase ISO. May have to open aperture to max.
  - If desire to get all of pride in sharp focus, then close down aperture to increase dof (depth of field) at risk of camera blur. Increase iso to increase ss.
  - Use center Auto Focus point (AF point)
- Late morning, cheetah on a run
  - Av mode, spin aperture to full open to get max ss. Increase iso to get ss of 2000 or greater. Pan with the cheetah.
  - Use center AF point
  - Open up the aperture to slow ss to 80-125 for a blurred background and hopefully a sharp cheetah (big challenge). Decrease iso to reduce noise since high iso no longer needed.
- Bird in Flight
  - Tv mode, set ss to 2000, Av max open, ISO to allow for high ss. Center AF point, pan to follow

# Av/Tv Safety Shift

- Set camera to allow “Safety Shift”
- When exposure settings (shutter speed, aperture, ISO) are insufficient for a properly exposed image, the camera will automatically adjust the setting to a create properly exposed image.
- Nothing to lose, and can save a shot
- The setting can usually be found in camera’s “Custom Settings” section of the menu

# Wildlife and Shutter Speeds

- Stationary wildlife – 1/125-1/250 sec with a tripod. Image Stabilization can reduce ss further (lens/tripod combination permitting)


- Slow moving wildlife – 250 to 1000

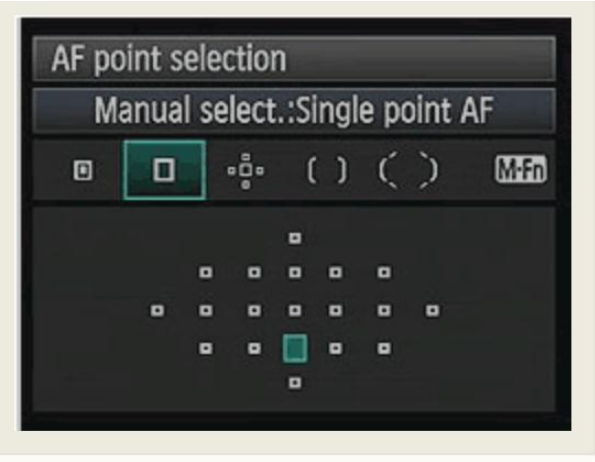

- Fast moving – 1000-2000


- Birds in flight - >2000


- Slow moving wildlife can quickly become fast moving wildlife, so anticipation is important, select fastest shutter speed possible

# Auto Focus Points (AF Points)

- Center Point works most of the time and is usually the most accurate and fastest for autofocus
- When subject is clipped in viewfinder, can move the AF point to recompose.
- Be able to recompose while looking through the viewfinder and not at the dials/buttons.
- Know “quick return button” to get back to center point AF



# Metering for Wildlife

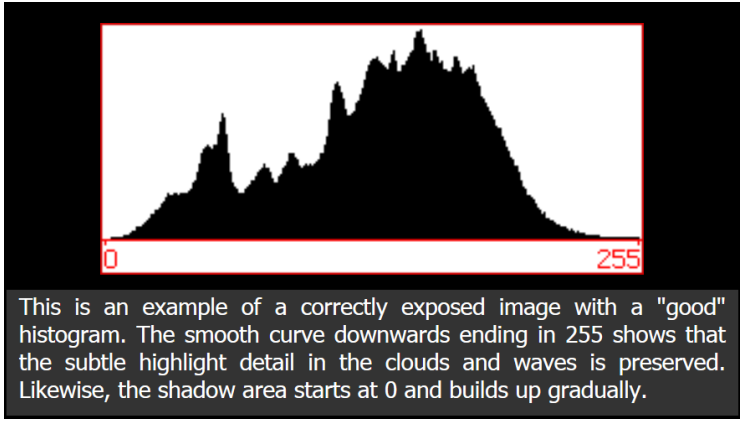
- Evaluative metering – general purpose, averages the exposure over entire scene
  - The default and works most of the time
- Partial metering – varies with camera, but usually meters on 10% of center area of viewfinder. Good for backlit subjects or when background is brighter than subject
- Spot metering – meters on 2-3% on the selected AF point or center of viewfinder
  - Not all cameras follow the AF Point and only do the center of the viewfinder. Check user guide.
- Centered Weighted – similar to partial metering, gives priority to center area, but averages in the surrounding area.
- Theoretically spot metering would be best for animal subjects that are a small % of the viewfinder area. Unfortunately, in wildlife photography one does not always have the time to set and reset the metering mode and as mentioned above metering may not follow AF point. Better to set to evaluative as default and forget about it. Adjustments, if necessary, can be made in Camera RAW.

# AF Modes

- Single Shot – Stationary subjects
- Continuous (also predictive) – Moving subjects, camera will continue focusing as long as shutter button is depressed half-way
  - Camera will predict next location of animal for next focus sample assuming constant velocity.
- A stationary animal can very quickly become a moving animal
- Can use Continuous for most situations including stationary animals
  - Don’t have to change modes, one less thing to think about
  - Best for birds in flight or animals on the run
  - Can program the “AF On” (aka back button) button to stop continuous mode and become single shot mode
  - Beware of foreground distractions that will “steal” focus from subject.

# Exposure Histogram

- Set “blinkies” to “on” for indication of over exposure clipping (highlight clipping)
  - Have not seen any settings for underexposure clipping
- Check histogram frequently, especially at the beginning of a new event
- Strive for a “good” histogram with no clipping on left or right edge (see diagram)
- Adjust exposure compensation to eliminate/reduce clipping
  - Should be doable while looking in the viewfinder
  - Negative EV (exposure value) for highlight clipping
- Not all clipping is bad – look at the % of area blinking. Some can be ignored if minor
- Also check focus and detail on subject by zooming in to max zoom on LCD and using a Loupe to view the image



This is an example of a correctly exposed image with a "good" histogram. The smooth curve downwards ending in 255 shows that the subtle highlight detail in the clouds and waves is preserved. Likewise, the shadow area starts at 0 and builds up gradually.

# Gear Guidelines

- These are meant to be guidelines and depend on ones budget
- Camera Body
  - 12 or more megapixels (mp), the more the better
  - Continuous burst rate of 6 or more frames per second (fps), the more the better
  - Fast autofocus system
  - Selectable AF points
- Lenses
  - Wide angle
  - f/2.8 or f/4 70-200mm or 70-300mm
  - f/4 200-400mm or 100-400mm
  - f/4 500mm or 600mm
- Accessories
  - 1.4x tele-extender
  - Hoodman loupe
  - Polarizer filter
  - External shutter release (cable or wireless)
  - Tripod
- For wildlife photography one cannot get enough mm, mp or fps

# Read and Follow the Works of Well-know Professionals (web, blog, Facebook)

- Thomas Mangelsen
- Art Wolf
- Rob Sheppard
- George Lepp
- Franz Lanting
- Art Morris

# Subscribe to Magazines

- Outdoor Photographer
- Nature Photographer
- Popular Photography
- National Geographic
- National Wildlife Federation
- Natures Best

# Become a Member of a Photo Club

- Merrimack Valley Photo Club
- Mile High Wildlife Photo Club
- Enter competitions
- Do field trips

# Enroll in Photography Associations

- NANPA (North America Nature Photographers Association)
- On-line forums

# Most of All

- Have fun