Seabird and Shorebird Rehabilitation

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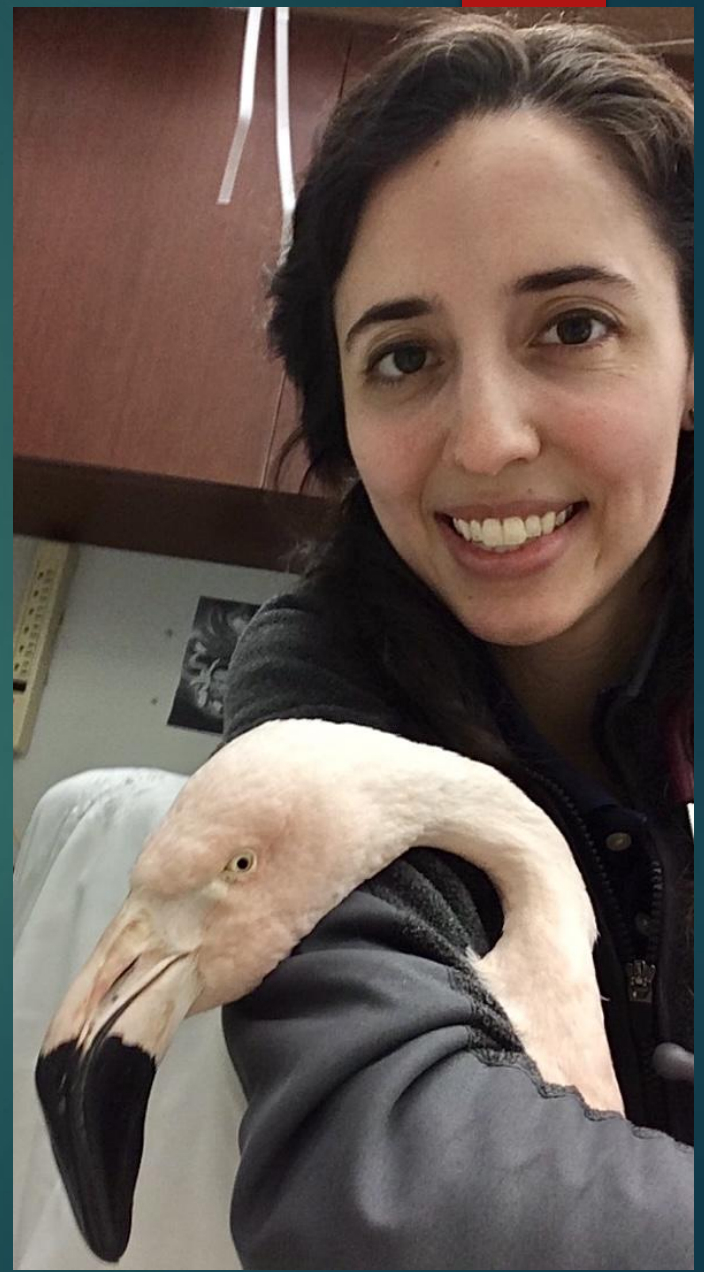
Quick Intro



Species

- Pelicans
- Gulls, terns
- Small shorebirds
- Frigatebirds
- Deep sea birds (gannets, boobies, tubenoses)
- Loons
- Cormorants
- Osprey

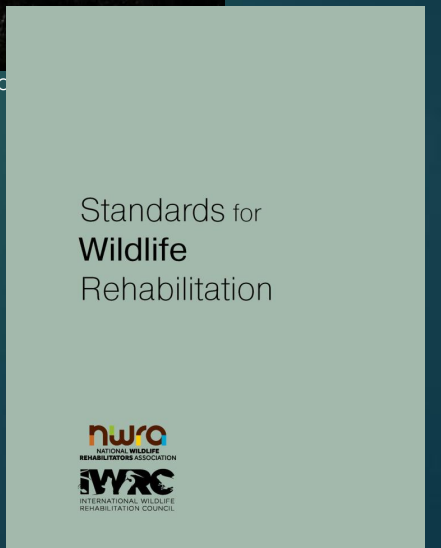
Capture & Transport

- Safe approach, handling
  - Educate public and volunteers
  - Danger bits by species
  - Safety equipment
  - No injuries to humans OR birds
- → Never tape the beak shut!
- Limit handling time
  - Reduce stress
  - Avoid capture myopathy
- Proper transportation
  - Appropriate kennel size for species
  - Padding
  - Do not use metal or wire kennels

Zoonoses of Seabirds/Shorebirds

- Major examples
  - Highly pathogenic avian influenza (HPAI)
  - Avian chlamydiosis
  - Salmonella
  - Campylobacter
  - Mycobacterium avium
- Staff/volunteer education
- PPE protocol
- Disinfection protocol

Picture from National Geographic depicting a seabird colony ma
HPAI in Scotland.



Initial Exam

- Rest period
  - Exception: hook/line removal
  - Exception: fracture stabilization
- Head-to-toe
  - Check inside mouth!
  - Check under feet!
  - Dehydration status
- Note feather quality
  - Broken feathers?
  - Mid molt? Missing feathers?
- To temp or not to temp
  - Risk of cloacal perforation

Stabilization

- Heat support
- Fluids
  - IV fluids
    - Pros: Fast rehydration, IV medications
    - Cons: requires training, IV management
    - Avoid IO whenever possible
  - Subcutaneous fluids
    - Proceed: gulls/terns, small shorebirds, cormorants, osprey
    - Caution/do not use: pelicans, gannets/some deep sea birds
  - Oral fluids
    - Only if stable enough
- Nutritional support
  - Emeraid Piscivore care
  - Mazuri fish analog
  - Whole fish
    - Size appropriate for species
    - Can cut soft fish
  - Vitamin supplementation (Sea Tabs, Mazuri tabs)

Reporting

- Threatened or endangered species?
  - Federal OR state
  - Don't forget to report it!
  - Examples:
    - American oystercatcher (ST)
    - Black skimmer (ST)
    - Least tern (ST)
    - Piping plover (FT)
    - Roseate tern (FT)
    - Rufa red knot (FT)
    - Snowy plover (ST)

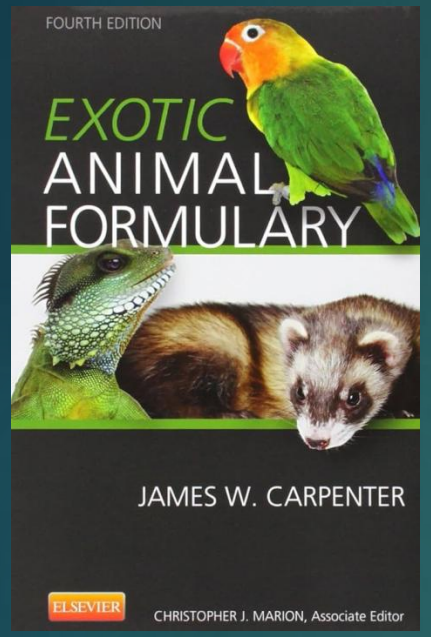
Housing

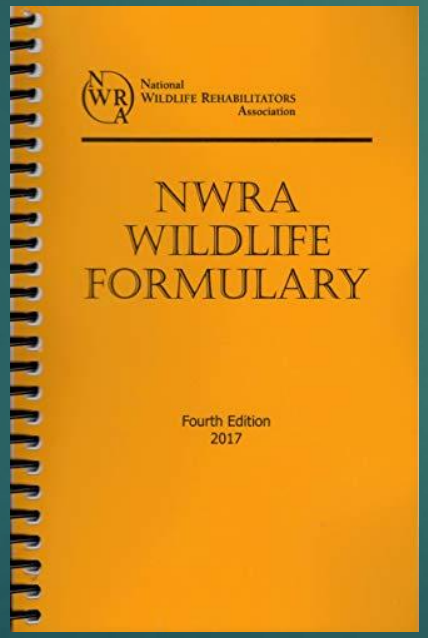
- Good ventilation
  - Coughing pelicans?
- Guard plumage quality
- Maintain diurnal light cycles
- Loons, deep sea birds on netting or padding
- Tubenoses/alcids need salt supplementation
- Juvenile pelicans fight the adults
- Stress regurgitation

Diagnostics

- Fecal exam
- X-rays
  - Hooks, sinkers, etc.
- Lead testing?
- Other bloodwork?

Medications: Quick Notes

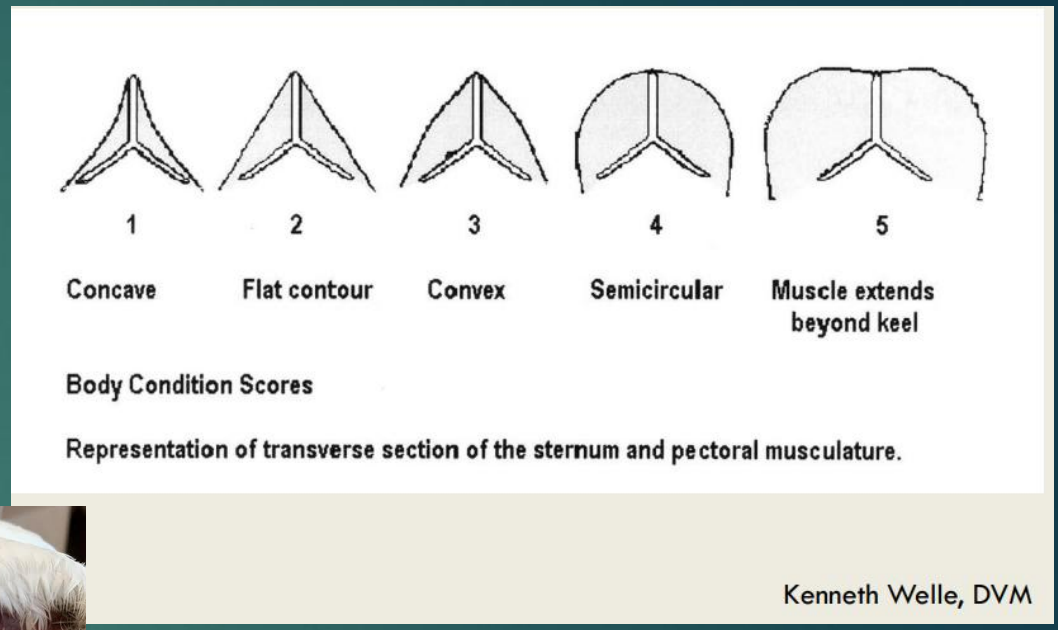


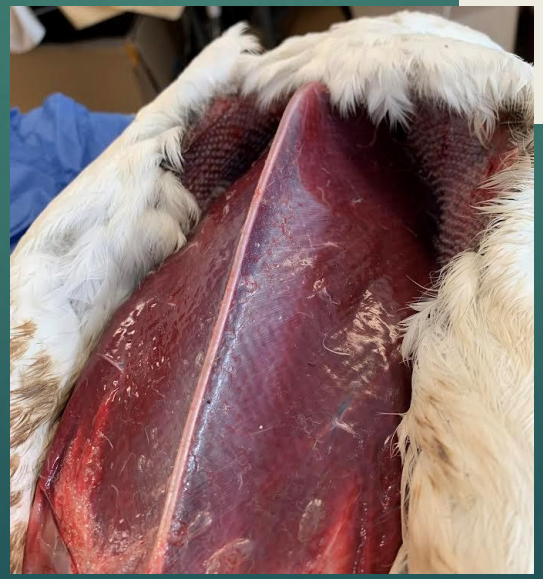


- Meloxicam in pelican species
  - 0.2 mg/kg PO SID x 3d, then q3d PRN
  - All seabird/shorebird species may be sensitive
- Dewormers
  - Fenbendazole (Panacur)
- Antibiotics
  - May cause GI upset with extended use (Baytril)

Common Problems: Emaciation

- Juvenile pelicans, gulls
  - "Failure to thrive"?
- Deep sea birds
  - Gannets
- Loons
  - "Emaciation syndrome"
- Diagnostics
  - Fecal
  - Bloodwork
- Difficult to treat



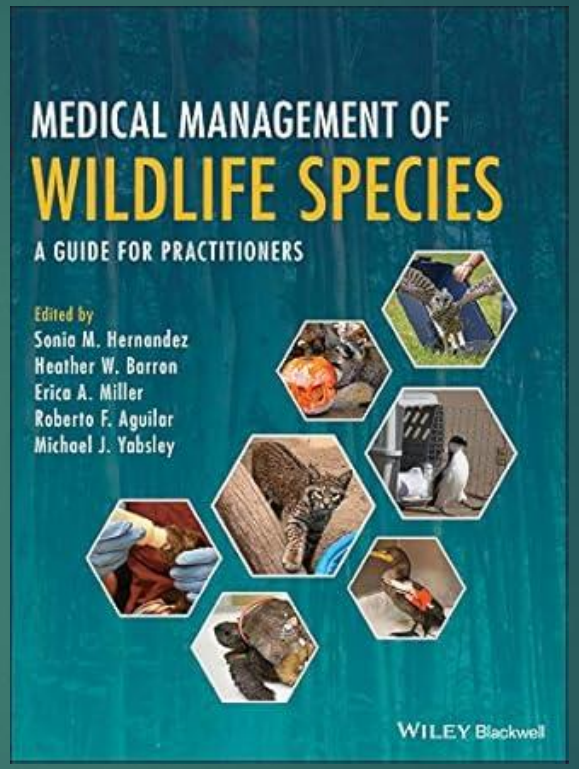


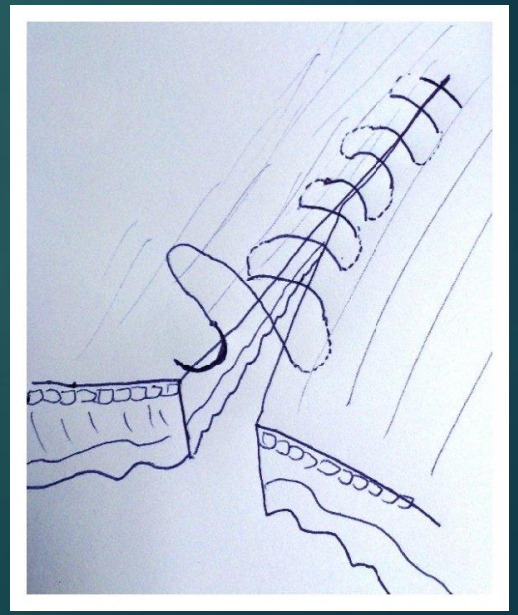
Common Problems: Hook & Line

- Hook removal
  - External
  - Internal – cotton ball, tube removal, arm down the gullet, surgery (endoscopic vs normal)
- Swallowed hook/line – secure line with a tape necklace?
- To abx or not to abx
- Constriction injuries
- Lead poisoning

Common Problems: Pelican Pouch Tears

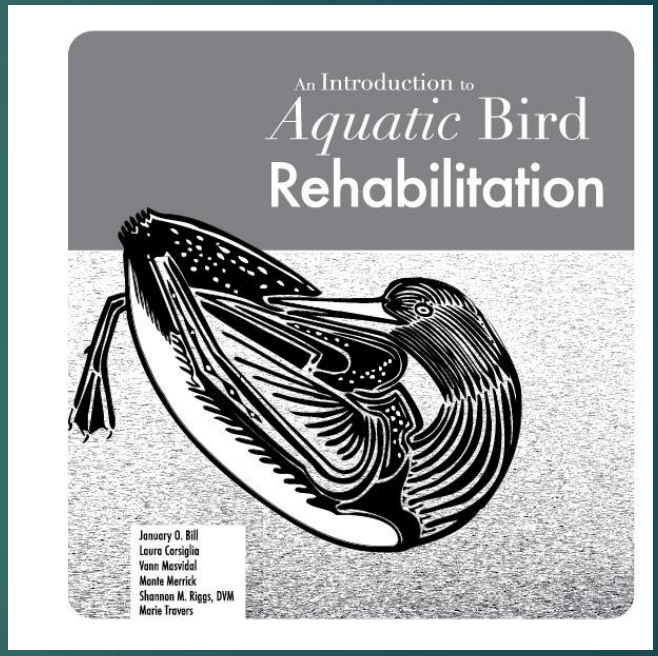
- Less than 3” will often heal itself
- Step 1: Staple & Stabilize
- Step 2: Surgery





Common Problems: Keel Sores

- High risk:
  - Loons, grebes, tubenoses
- Prevention is key!
  - Minimize dry docking
  - Taut netting
  - Check keel routinely
  - Keel bandages?
- Mild – may heal with adjustments
- Moderate to severe – need surgery
- Recurrence likely without husbandry changes



Common Problems: Bumblefoot

- Pressure sores with infection
- Causes:
  - Hard or rough surfaces
  - Lack of perch variation
  - Enclosure contamination
  - Overconditioning
  - Altered stance due to injury
- May come in with bumblefoot already present
  - Pelicans, gulls
- Higher risk in extended captivity
- Prognosis depends on severity
  - Grade 1: may resolve with husbandry adjustments
  - Grade 2: will likely need antibiotics, pain meds, +/- bandaging
  - Grade 3-4: requires antibiotics, pain medications, likely surgery
  - Grade 5: bone infiltration, poor prognosis for return to function

Common Problems: Shark Bite, Boat Collision

- Loons, cormorants
- Rarely salvageable
- May see teeth punctures

Common Problems: Red Tide

- *Karenia brevis* → brevetoxins
  - Lipid soluble neurotoxins
- Symptoms
  - Cormorants: cerebellar ataxia
  - Other species: hindlimb paresis, fecal retention
  - GI symptoms
  - Respiratory symptoms
  - +/- Ocular, Cardiovascular
- Treatments
  - Supportive care
    - Fluids
    - Nutritional support
    - +/- Antibiotics (Bloodwork?)
    - +/- Deworm (Fecal exam?)
    - +/- Symptomatic tx (GI support, etc)
  - Intravenous lipid emulsion therapy (IVLE)
    - Seems to have good success in birds
    - Need IV access
    - Expensive
    - Relatively short shelf life

Common Problem: Aspergillosis

- Prevention is key
  - Good ventilation
  - Minimum time indoors/in captivity
  - Antifungal prophylaxis sometimes used
- Antemortem diagnosis is difficult
  - Xrays
  - Bloodwork?
- Treatment is difficult
  - Nebulized antifungals
  - Oral antifungals

Common Problems: Getting Ospreys to Eat

- Best case scenario: watch another osprey eat
- Operant conditioning?
- Video of osprey eating?

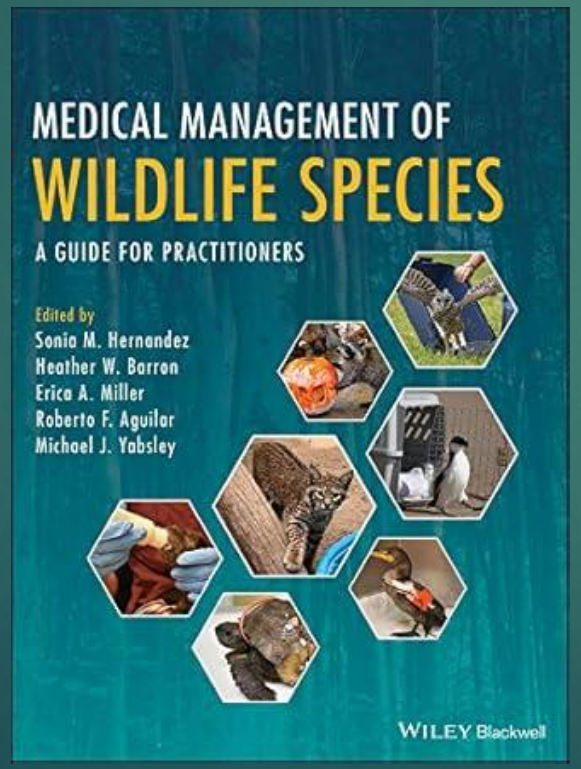
Release

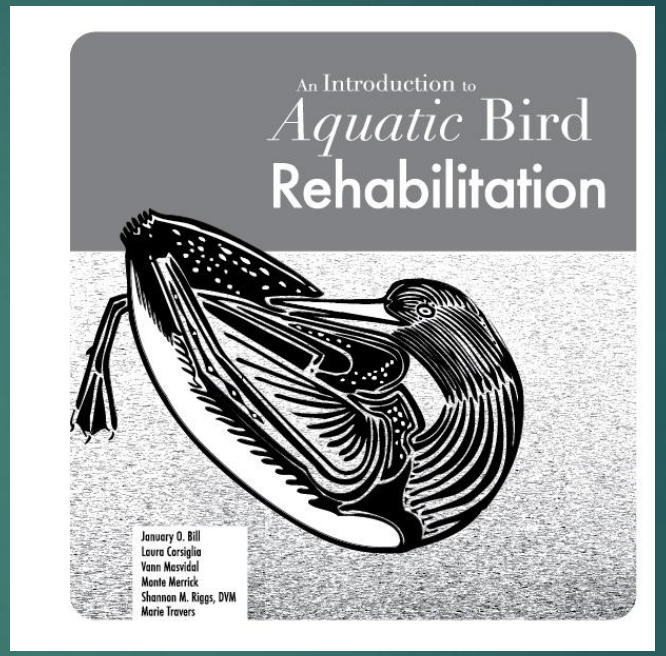
- Release criteria
  - Athletic flight – STAMINA
  - Plumage quality, waterproofing
- Roof release for some species (frigatebirds)
- Loons in enough water to take off from

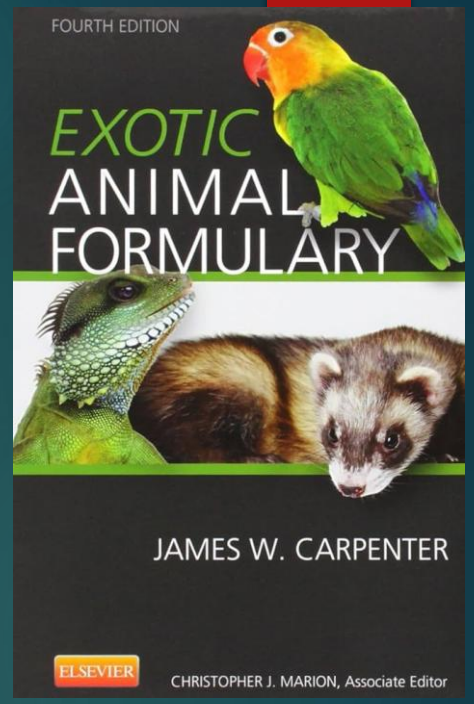
Resources

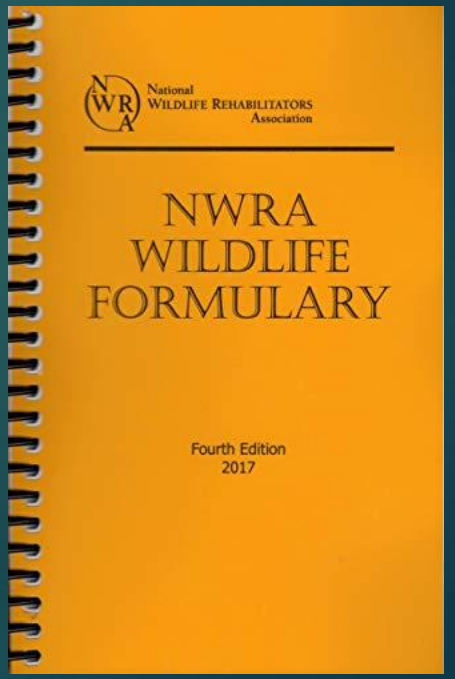
Standards for
Wildlife
Rehabilitation

nwra
NATIONAL WILDLIFE REHABILITATORS ASSOCIATION
IWRC
INTERNATIONAL WILDLIFE REHABILITATION COUNCIL









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- Aaziz, R., Gourlay, P., Vorimore, F., Sachse, K., Siarkou, V. I., & Laroucau, K. (2015). Chlamydiaceae in North Atlantic seabirds admitted to a wildlife rescue center in western France. *Applied and Environmental Microbiology*, *81*(14), 4581-4590.
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Thank You!

ANY QUESTIONS?