Backyard Poultry and Waterfowl

John Chitty BVetMed CertZooMed MRCVS,
Strathmore Veterinary Clinic, London Rd., Andover, Hants SP10 2PH
jkre42@tiscali.co.uk

- What do people keep?
  - Poultry
    - Chickens, bantams, turkeys
  - Gamebirds
    - Pheasants, quail, peafowl
  - Waterfowl
    - Ducks, geese, swans

- How kept?
  - Free-range
  - Enclosures
  - Arks
  - Runs
  - Intensive housing?
  - Aviaries

- Waterfowl need water!
  - Artificial/natural pond
  - Dishes?
  - Cleaning!
  - Environmental effects

- SECURITY IS IMPORTANT!

- Sourcing birds
  - Breeders – large and small-scale
  - Dealers
  - Sales – shows and commercial sales

- Breeding Systems and Egg Production
  - Ducks – pair. Monogamous??
  - Geese – harem system
  - Swans – monogamous pair
  - Peafowl and poultry – territorial males gather harem

- In captivity poultry species bred for reduced seasonality and increased egg production

- Need to prepare for laying season
  - Nutrition, husbandry, laying site
  - Production rate
  - Male: female ratios?

- How to silence cockerels?
  - Devoice? Castrate? Hormone implants?

- Sexing
  - Mature – physical characteristics and behaviour
- Immature- palpation, DNA, endoscopy

**Rearing**
- Incubation? Parent-rearing?

**Ex-commercial birds**
- Rescues incl ex-layers
- Consequences on life span?

**Biosecurity**
- Infectious disease a big problem
- Closed flock concept
- Quarantine? Disinfection? Cleaning? Barriers?

**Deflighting**
- Enclose? Wing trim? Pinion?
- Effects of territory?

**Diet**
- Waterfowl- commercial feeds? Grazing? Dabbling?
- Life-stage diets?

**Sources of Information**
- Texts – commercial poultry texts? Victoria Roberts? BSAVA?
- Specialist/ hobbyist magazines ?
- Keepers ?
- Internet ?

**Basic Approach to Birds**
- Triage !
  - Phone call to clinic- assess urgency ; assess owner perception

**Important signs** – altered droppings, anorexia, altered water consumption, altered attitude, fluffed, reduced vocalization, altered respiration, weight/ condition loss, swelling, bleeding, vomition, ocular/ nasal discharges

**Bringing to the clinic**
- At the clinic – see quickly; keep in quiet place

**Stabilization** – warmth, dark, humidity, oxygen, nebulise

**Examination**
- assess breathing BEFORE handling
- reassess when bird relaxes
- assess condition, check discharge, auscultate, check vent + staining
- weight vs condition!!
  - Abdominal swelling

**Fluids** – UGA? Assess risk! Choose route

**Samples**
- Faeces
- Bloods

**Dying Birds**
- Do PM’s As many as possible from the group
- Sacrifice birds?
  - Storage/ transport of bodies
Dead Ducks
- In Spring consider Duck Viral Enteritis esp in Muscovies + their crosses
  - Many dead – few show illness first
  - Diphtheritic membranes pharynx and cloaca
- Control methods

Financial concerns – discuss with owner according to purpose of bird AND their personal feelings for it

Handling

Overgrown spurs

Anaesthesia

Medication

Cascade applies – these are food-producing birds. MUST apply cascade rules and MRL’s
  - Licensed for that purpose in that species
    - Which drugs are these?
    - Is practicality an argument?
  - Licensed for another purpose in that species
  - Licensed for that purpose in another species
  - Use other drugs?
  - Anaesthetic agents?
  - REMEMBER – the license applies for formulation and dose rate!!!
  - MRLs
    - Always ensure your data sheet is up-to-date
    - Check allowed in laying vs meat bird
    - STANDARD MRL – eggs = 7 days; meat = 28 days
  - Unlicensed drugs?

Follow the BVA Guide
  - discuss issues with the owner and make sure they record medications
  - record instructions and label properly
  - record batch numbers, etc

REMEMBER YOU ARE THE VET AND WILL CARRY THE CAN!!!!

Hospitalisation requirements
  - Poultry vs waterfowl
  - Feeds
  - Biosecurity

Notifiable Diseases
  - Newcastle Disease- PMV-1
  - Respiratory disease +/- neurological signs
  - Egg drop
  - Death!!
  - Minimal signs?
  - How will you pick this up?
Consider when pigeons show disease on same premises

- Avian Influenza
  - Consider the HPAI strains
  - Signs
  - Death!
  - Respiratory signs…then death
  - When to suspect?
  - Consider disease prevention plans
  - Vaccination?

- Endoparasites
  - Nematodes
    - G-I
    - *Syngamus trachea* - gapeworm
      - Access to soil
      - Faecal screen
      - Signs?
      - Therapy
    - *Heterakis*
      - In gut
      - Significant?
    - Diagnosis and Control
  - Protozoa
    - Coccidia
    - Flagellates – *Trichomonas, Hexamita, Histomonas*
    - Signs, Diagnosis and therapy

- Ectoparasites
  - *Dermanyssus*
    - aka Red Mite/ Roost Mite
    - Free-living
    - Feeds on blood at night
    - May survive 5 months without feed
    - *D. gallinae* primarily poultry mite but will feed on any bird
    - Irritation/ restlessness
    - Anaemia/ debility
    - May be fatal to young birds
    - Diagnosis
      - Clinical signs
      - typical history
      - Use of old poultry housing
      - Finding mites AT NIGHT!
    - Therapy
      - Environmental control essential
      - Possible?
      - Use
        - cypermethrin
- malathion
- permethrin-pyriproxyfen
- **On-bird**
  - fipronil
  - ivermectin

- *Ornithonyssus*
  - aka Northern Fowl Mite
  - Primarily a poultry parasite but found on other spp
  - *Ornithonyssus sylviarum*
  - Whole life-cycle ON HOST
  - Blood feeder
  - Differences in life-cycle cf *Dermanyssus* mean
  - More irritation
  - Blood feeding through the day
  - Diagnosis
  - Signs
  - Finding mites/ eggs
  - Therapy
  - On bird only

- Feather mites
  - Live between feather barbs on
  - ventral surface
  - Host-specific
  - Niche preference
  - May co-exist on same host
  - Numbers kept low by wing-flapping
  - Feed on feather/ skin debris
  - Nymphs move to the plumulaceous barbs to moult
  - Some irritation if too many?

- Epidermoptid mites
  - Depluming Itch
  - pruritus
  - crater lesions
  - scurf
  - hyperkeratosis
  - Congestion / swelling of feather bulbs
  - *Microlichus* spp
  - Diagnosis
    - typical signs
    - long winding burrows
    - feather bulb swelling
    - skin scrape
    - biopsy
    - response to therapy
    - **NB – favus = avian ringworm is an important differential**
o Cnemidocoptid mites
  ▪ Many species -
    • C. mutans -feet/legs - poultry
    • Neocnemidocoptes gallinae -skin – poultry
  ▪ Invade follicles and stratum corneum
  ▪ Burrowing mites stimulate hyperplasia/hyperkeratosis
  ▪ Heterophilic inflammation
  ▪ Pruritus
  ▪ Secondary infection
  ▪ Diagnosis – scrapes, biopsy – appearance!

o Lice
  ▪ Chewing lice only - Mallophaga
  ▪ Host-specific
  ▪ Site-specific
  ▪ reflected in morphology
  ▪ Named by host/site or morphology
  ▪ Rarely significant pathology
  ▪ Heavy infestations may cause
    feather damage
    irritation
    SIGN OF DEBILITY!

• Respiratory disease
  o Gaping
    ▪ Gapeworm?
    ▪ Mycoplasmosis?
  o Respiratory noise
    ▪ Mycoplasmosis
    ▪ Gapes
    ▪ Tracheitis
    ▪ Obstruction
    ▪ LRTD?

• Tracheitis
  o Consider -Viral disease, Mycoplasmosis, Irritant/FB problems

• Mycoplasma
  o Common cause of URTD/sinusitis
  o aka coryza
  o Signs
  o One eye or both?
  o Lameness?
  o Carrier state
  o Therapy?
  o Prevention?

• LRTD – less common. Bacterial/fungal disease usually secondary disease. CONSIDER THE ENVIRONMENT!!

• Lameness
  o Is it really lame?
o How many are affected
  o cf neurological disease
  o Causes of lameness –Trauma, Infection
    • Joints, Feet, Tendons, Neuropathy, Rickets??

• Approach
  o Examine
  o Radiography
  o Sample taking

• Marek’s Disease
  o Herpesvirus
  o Affects nerves – legs and wings
  o Clinical findings
  o Control

• Bumblefoot
  o All spp – esp waterfowl
  o Causes
  o Therapy

• Arthritis
  o Esp inter-tarsal joint
  o Causes
    • Gout, Osteoarthritis, Septic arthritis
  o Diagnosis
  o Therapy – systemic AB + NSAID: joint flushing

• Neurological disease
  o Paresis/paralysis
  o Incoordination
  o Distinguish from weakness!!!
  o Consider infections and toxins

• Lead Toxicosis
  o Signs
  o Diagnosis
  o Therapy

• Egg Retention
  o Causes
  o Therapy

• Soft/ deformed eggs? Can be normal at beginning or end of lay

• Thin ADR bird
  o Need an approach
    • Examine: Take samples
    • Radiograph?
    • Endoscopy?
  o Check the abdomen!! Often swollen
    • Ascites? ERP?

• ERP
  o Recent history of cessation of egg-laying?
  o Any age but often at beginning or end of lay
- Aspirate infected yolk
  - Memo...some yolk can be normal!!

- Heart Disease
  - Broiler ascites
  - Ducks prone?
  - Genetic factors?
  - Diet?
  - Diagnosis?
  - Therapy??

- Avian TB
  - Many affected?
  - Impossible to keep out?
  - Spread within group?
  - Human consequences??
  - Signs
  - Diagnosis
  - Therapy?

- Prolapses
  - Poor prognosis
  - Oviduct or cloaca??
  - Causes?
  - Therapy