

# ***TRENDS IN VETERINARY PARASITOLOGY***

**A TWO-DAYS COURSE**

**DEPARTMENT OF VETERINARY PATHOLOGY, MICROBIOLOGY &  
PARASITOLOGY**

**FACULTY OF VETERINARY MEDICINE  
UNIVERSITY OF NAIROBI**

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**Parasites of the ostrich  
(*Struthio camelus*)**

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**Parasites of the ostrich  
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# Introduction

- Largest bird in the world (Running bird or Ratite)
- Height
  - Male: About 2.5 m
  - Female: 2.0 m
- Weight
  - Male: 150Kg
  - Female: 110Kg
- Ostriches have long necks
- Long & bare legs
- Both neck & thighs – unfeathered

# Introduction cont.

- Medial toe longer & has a nail
- Have no keel unlike other birds
- Colour;
  - Females mostly brown (with some grey) in colour
  - Males: Black with white plumage on the wings and tail
  - Young ostriches are of same colour (brown or grey)
  - Colour of males become apparent as it begins to mature

# Distribution

- In nature, found in the plains of Africa
- But commercially many countries of the world raise ostriches

# Races or subspecies

1. *S. camelus camelus* – North & West Africa
2. *S.C. molybdophanes* (Somali East Africa – Kenya
3. *S.C. maasaicus* (maasai) – East Africa – Kenya
4. *C. australis* – South Africa

## Relatives

1. Cassowary: Australia
2. Emu: Australia
3. Rhea: South America
4. Tinamou: South America
5. Kiwi: New Zealand

# Ostrich products

1. Meat
2. Skin or Leather
3. Feathers
4. Other products
5. Infertile eggs
6. Ostrich oil

# Problems in ostrich farming

Commercial ostrich farming world over is beset with a number of problems which include:

1. Egg wastage before incubation
2. Poor hatchability and infertility
3. High chick mortality
4. Diseases of birds after three months of age



# Etiology of disease in ostrich

- Bacterial
- Viral
- Fungal
- Parasitic

# Parasites of ostrich

## Protozoa

- Histomonosis (*Histomonas meleagridis*)
- Leukocytozoon (*L. struthiothis*)
- Malaria (*Plasmodium struthiomis*)
- Coccidia (*Isospora struthiomis*)
- Cryposporidiosis (*Cryptosporidium* spp)

# Helminths

## Roundworms

### 1. **Libyostrongylus douglassi (wire worm)**

- Location - proventricular glands & under the kaolon layer of both gizzard & proventriculus
- Severe inflammatory reaction & anemia
- Treatment: Levamisole, Fenbendazole, Ivermectin

### 2. **Codiostomum struthionis**

- Large round worm – inhabits colon
- Less pathogenic than wire worm

### 3. **Filarial Worms**

- a) Paronchocerca struthionis
  - b) Decheilonema spicularia
- Lungs & peritoneal cavity

# Helminths **cont.**

## **Cestodes (Tapeworms)**

Houttuynia struthionis

- Large tapeworm inhabits small intestine of young ostriches
- Effects: Loss of condition  
Enteritis & diarrhoea
- Treatment: Fenbendazole

## **Trematodes (Flukes)**

Philophthalmus gralli (eye fluke)

- Conjunctival sacs-conjunctivitis

# Mites

Ostrich shaft, quill or feather mite

- *Gabucinia sculpturata*
- *Gabucinia bicaudata*
- Ventral longitudinal shaft groove and bore into the feather shaft
- Affects growth of feathers
- *Gabucinia novela* – Affects skin causing mange – like condition
- Treatment: Ivermectin etc

# Ticks

## **Hard ticks (ixodidae)**

- Ostriches affected when grazing

### Groups:

- Hyalomma
- Amblyoma
- Rhippicephalus spp
- Attach under the chin soft ticks

## **Soft ticks (argasidae)**

- Argas & Otubius spp can transmit diseases
  - Aegyptianellosis

# Insect parasites

## Lice

- *Struthiolipeurus struthionis*
- *Struthiolipeurus nandu* cause annoyance

## Flies

- *Simulium* spp & *culicoides* mosquitos
  - Cause annoyance
  - Can transmit diseases