

TRENDS IN VETERINARY PARASITOLOGY

A TWO-DAYS COURSE

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

**FACULTY OF VETERINARY MEDICINE
UNIVERSITY OF NAIROBI**

10TH & 11TH AUGUST 2011

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

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

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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