

Genus : Bunostomum

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Bunostomum : Morphology

- These are endoparasites of small intestinal of large and small ruminants.
- *B. phlebotomum* primarily seen in calves whereas *B. trigonocephalum* in lambs.
- They are greyish-white worms, 1-3cm in length and stout .
- Their anterior end is bent dorsally giving them a hook like appearance.
- The buccal capsule is funnel shaped and bordered with a pair of chitinous cutting plates .
- These chitinous plates serve to attach the parasite to the intestinal mucosa.



Source- Google

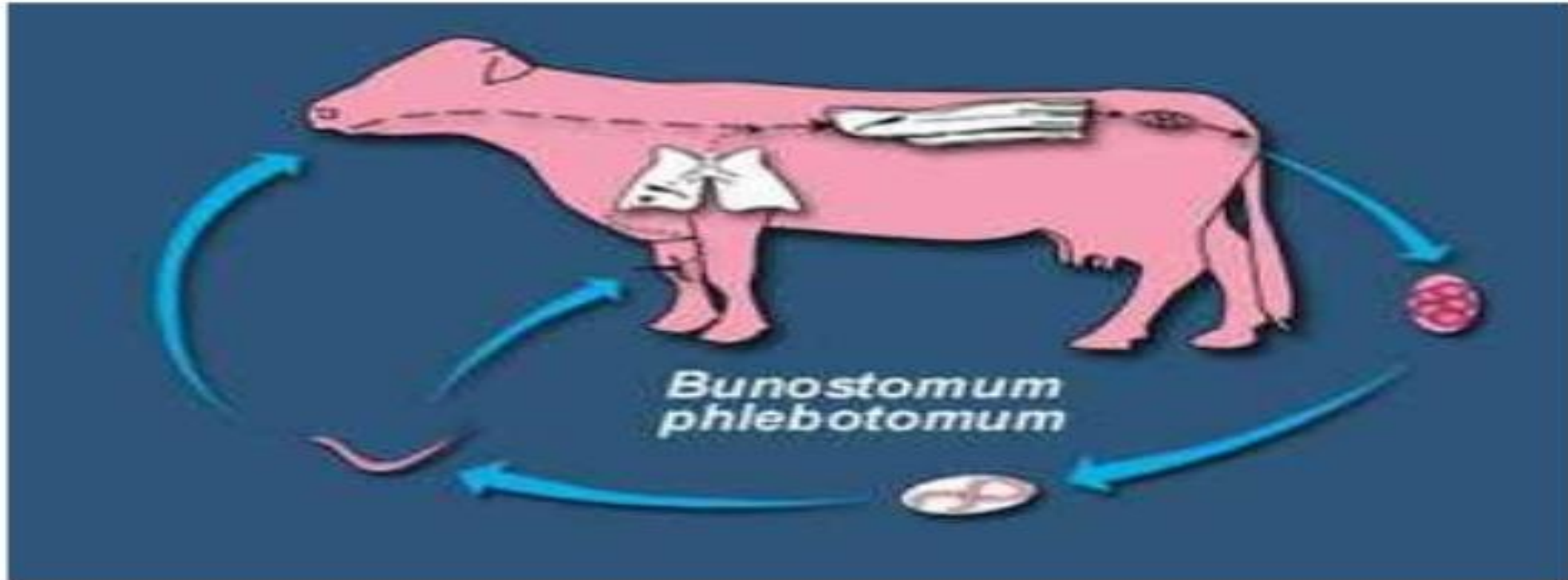
Bunostomum trigonocephalum

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Bunostomum : Life cycle

- They have a direct life cycle. The infection occurs through percutaneous route but can also acquire oral infection .
- Hot weather restricts survival on pasture to 6-7 weeks, and the larvae/eggs do not survive the winter on pastures .
- The eggs taking 24-36 hours to hatch and 5-16 days to develop into enheathed L3 infective larvae.
- The hatched out larvae then migrate to the lungs and trachea, reaching the intestine after they are coughed up and swallowed.
- Larvae moult both in the lungs and when they reach the abomasum or intestine.
- Eggs are shed into the faeces by infected individuals.

Bunostomum .sp life cycle



Source -Google

Bunostomum : Life cycle in sheep

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Bunostomum : Pathogenesis

- Initially there is diarrhea containing mucus and/or blood.
- Anorexia, inappetance and weight loss or stunted growth are other symptoms.
- Hypoproteinaemia due to parasitic consumption may cause peripheral oedema, e.g. bottle-jaw.
- Bleeding and fluid loss often causes anaemia, dehydration and associated pallor, prostration, emaciation and weakness.
- Skin infection generally seen in the feet and limbs as pruritus, erythema, oedema, alopecia, hyperkeratosis and papule/pustule formation.
- The coat in affected areas is often rough and poor . Claws and hooves also exhibit defective growth, fragility and overgrowth.
- Larval migration through the lungs may also cause a cough and other respiratory signs.



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Cutaneous Larval Migrans

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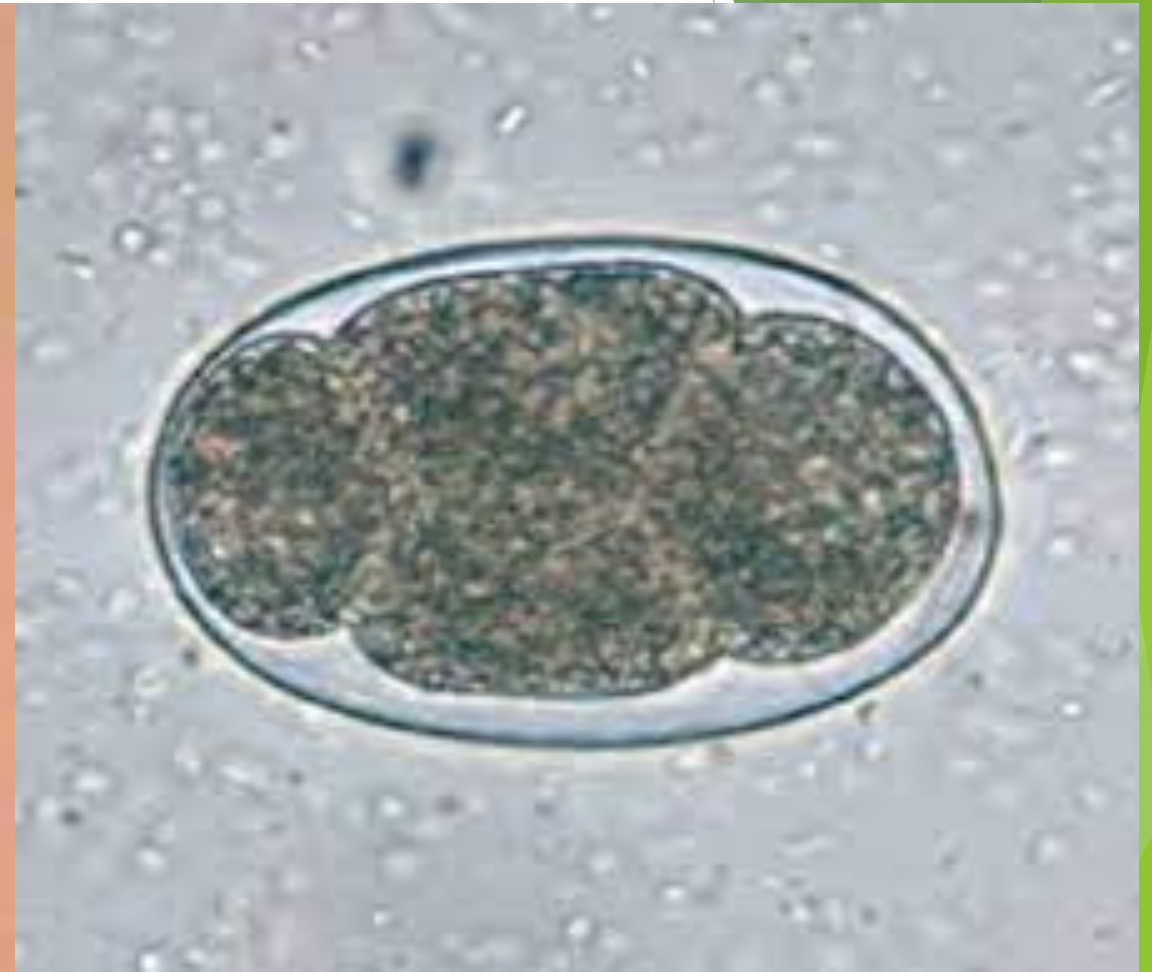
C L M in leg region

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Bunostomum : Diagnosis

- Clinical signs and symptoms.
- Faecal examination for detection of eggs by the floatation technique .
- At necropsy, adults can be demonstrated in the proximal segments of the small intestine and identified microscopically.



Source -Google

Eggs of Bunostomum spp.

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Bunostomum : Prevention & control

- It is very important to keep livestock away from moist pastures because infective larvae swim to the tip of the grass blade, from where it is easier to reach the skin of their hosts.
- A dry and clean atmosphere is necessary, because humid bedding and dirt favors the development and survival of infective larvae.
- Alternate grazing (e.g. cattle followed by sheep or horses with 2-3 months interval) can help reduce pasture contamination with *Bunostomum* worms.
- As a general rule is reduction in pasture contamination with infective larvae (e.g. adequate pasture rotation) or exposure of livestock to such larvae will diminish the impact on the herd.