**ACADEMIC TRIP FOR MSC. STUDENTS TO SAGANA AQUACULTURE CENTRE IN KIRINYAGA COUNTY, KENYA**

**a) Summary:** Three MSc. students from DVPMP were taken for an academic trip to Sagana Aquaculture Centre on 17th January 2023. Members of staff involved in this trip were:-

i) Prof. R.M. Waruiru – Trip coordinator
ii) Prof. P.G. Mbuthia
iii) Dr. N.M. Kamuti
iv) Mr. E.M. Nyaga
v) Ms. B.M. Mutende
vi) Mr. Gilbert Ireri – Driver

**NB:** We had a quest, Mr. J.M. Muchiri a PhD student, Department of Animal Production


**Fig. 1: The Kabete team, MSc. students and Mr. Muchiri in Sagana Aquaculture Centre, Kirinyaga West Sub-county**

**b) Trip objective:** MSc. students lack essential knowledge on how to collect diagnostic/research samples under field conditions. The field trip was organized for the students to receive firsthand information and be able to:-

- Conduct post mortem examination of fish for gross lesions
- Collect bacteriological, histopathological and parasitological samples for laboratory analysis at DVPMP, UoN
- Examine fish tissues for parasites under field conditions (*in-situ*)

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**c: Trip outcomes**

i: The Kabete team and students visited fish ponds where Mr. Muchiri was conducting his research project.

ii. Fish were harvested for necropsy and water was collected for bacteriological analysis


**Fig. 2: Mr. Muchiri from the Department of Animal Production explaining his experimental design and study expectations**


**Fig. 3: Specimens (skin, gills, eyes and intestinal contents) were examined microscopically for ecto- and endo-parasites**

iii. The fish were heavily infected with the gill monogenean *Dactylogirus* spp.

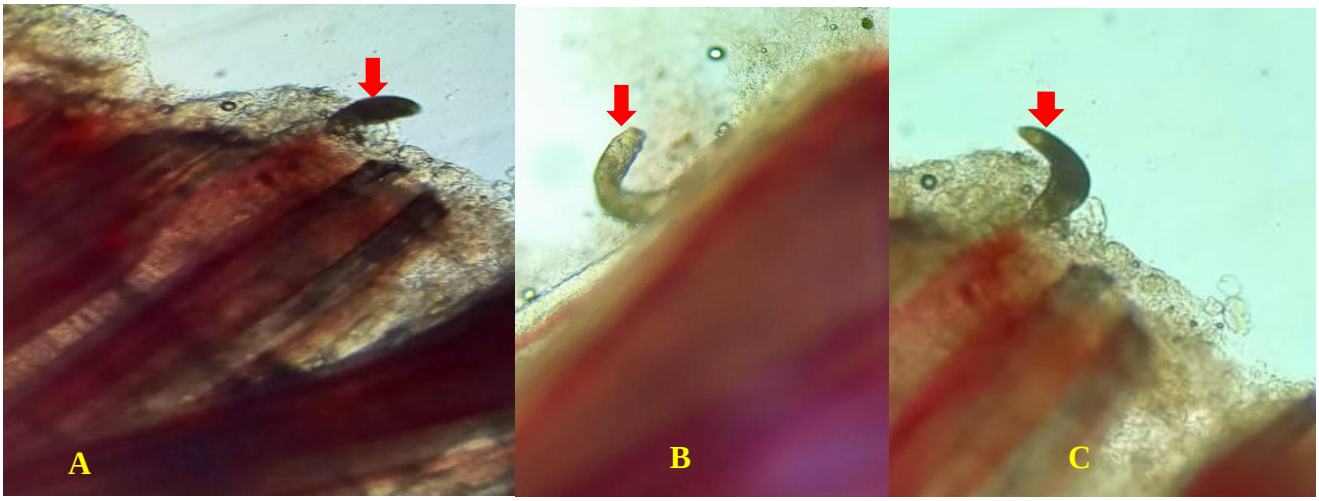


**Fig. 4: Tilapia gill filaments being scavenged by *Dactylogirus* spp. (red arrows) found in Sagana Aquaculture Centre**

- *Dactylogyrus* spp. are monogenean parasites that are usually found on the gills of fish
- Infected fish may have clinical signs that include inflamed gills, excessive mucous secretions and accelerated respiration
- They also become lethargic, swims near the surface, and their appetite decreases
- In severe infections, *Dactylogyrus* spp. can cause haemorrhaging and metaplasia of the gills which can lead to secondary bacterial infections and death
- Heavily infected fish are also anorexic and can be found gasping for air and exhibiting abnormal behaviour such as jumping out of the water.

**NB:** The management was advised on primary control method of *Dactylogyrus* spp. which include application of chemicals like Praziquantel, salt baths, formalin, Bromex-50 (organophosphate) and potassium permanganate.