

Intense parasitism of greater amberjack in
Greece by *Paradeontacylix* sp. and *Zeuxapta*
seriolae

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Case report

- Four populations of greater amberjack broodfish in Greece in different locations (Souda, Aqualabs-HCMR, Galaxidi and Argosaronikos)
- In total 125 fish examined for gonad maturation by Dinos
- During examination we visually inspected gills for parasites
- All fish were infected by blood flukes and monogenean parasites simultaneously except the fish at HCMR tanks which were infected only by the blood fluke

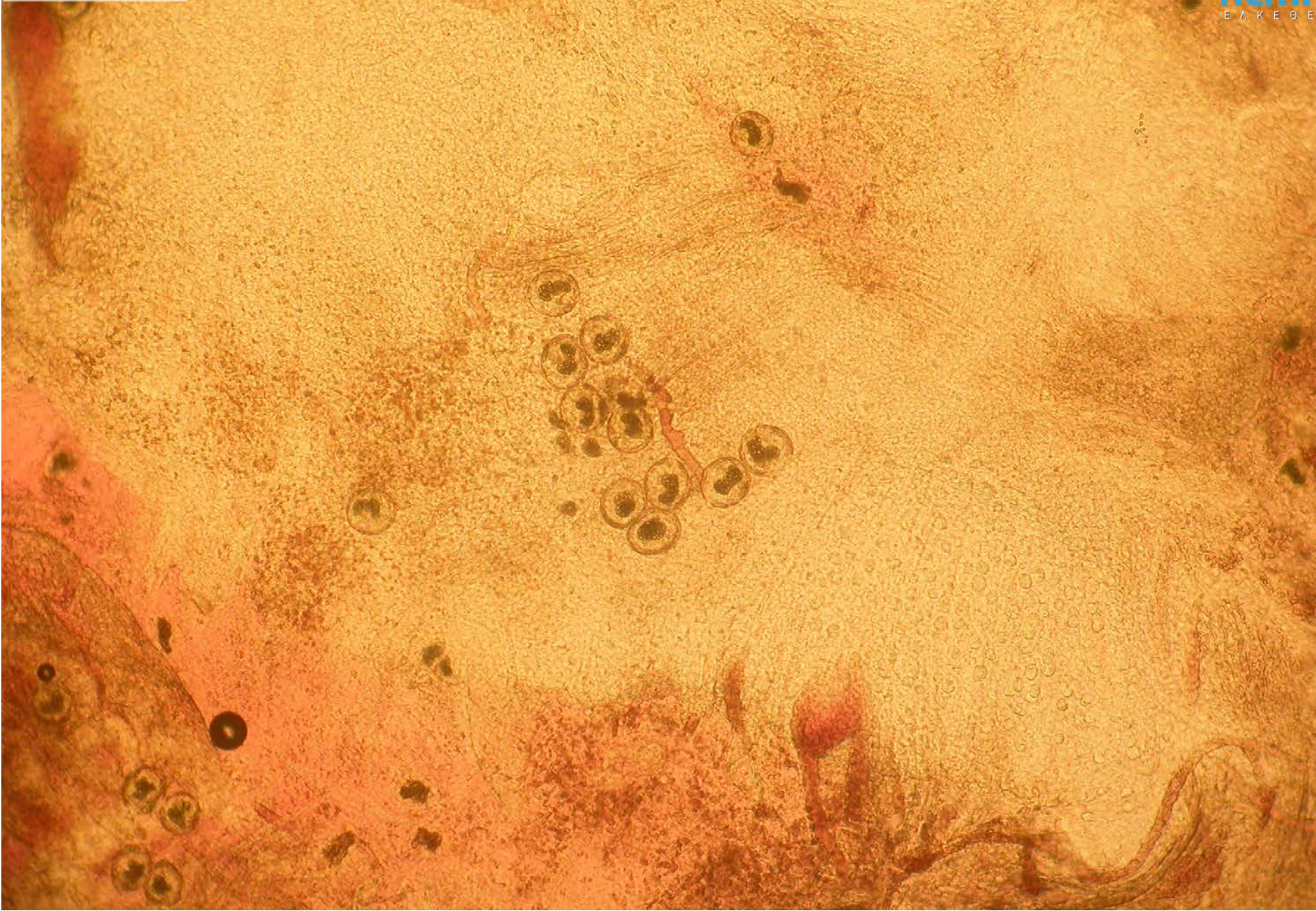
Paradeontacylix sp in amberjack

- Only eggs were found- no mature worm
- Eggs were accumulated in the gill lamellae and were seen as white spots blocking gill arteries

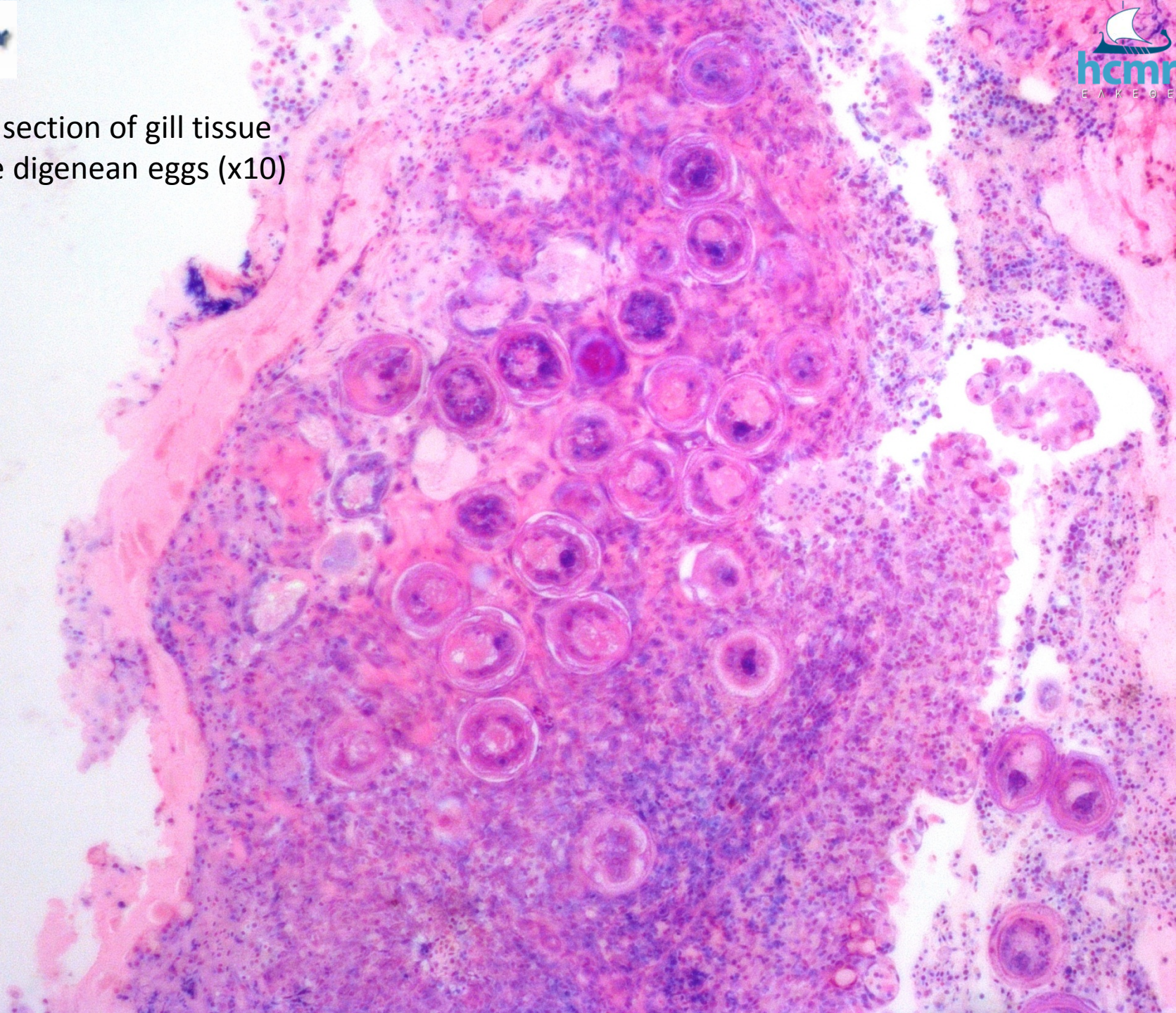
The white spots are accumulated Digenean eggs. Monogenean parasites can also be seen (arrows)



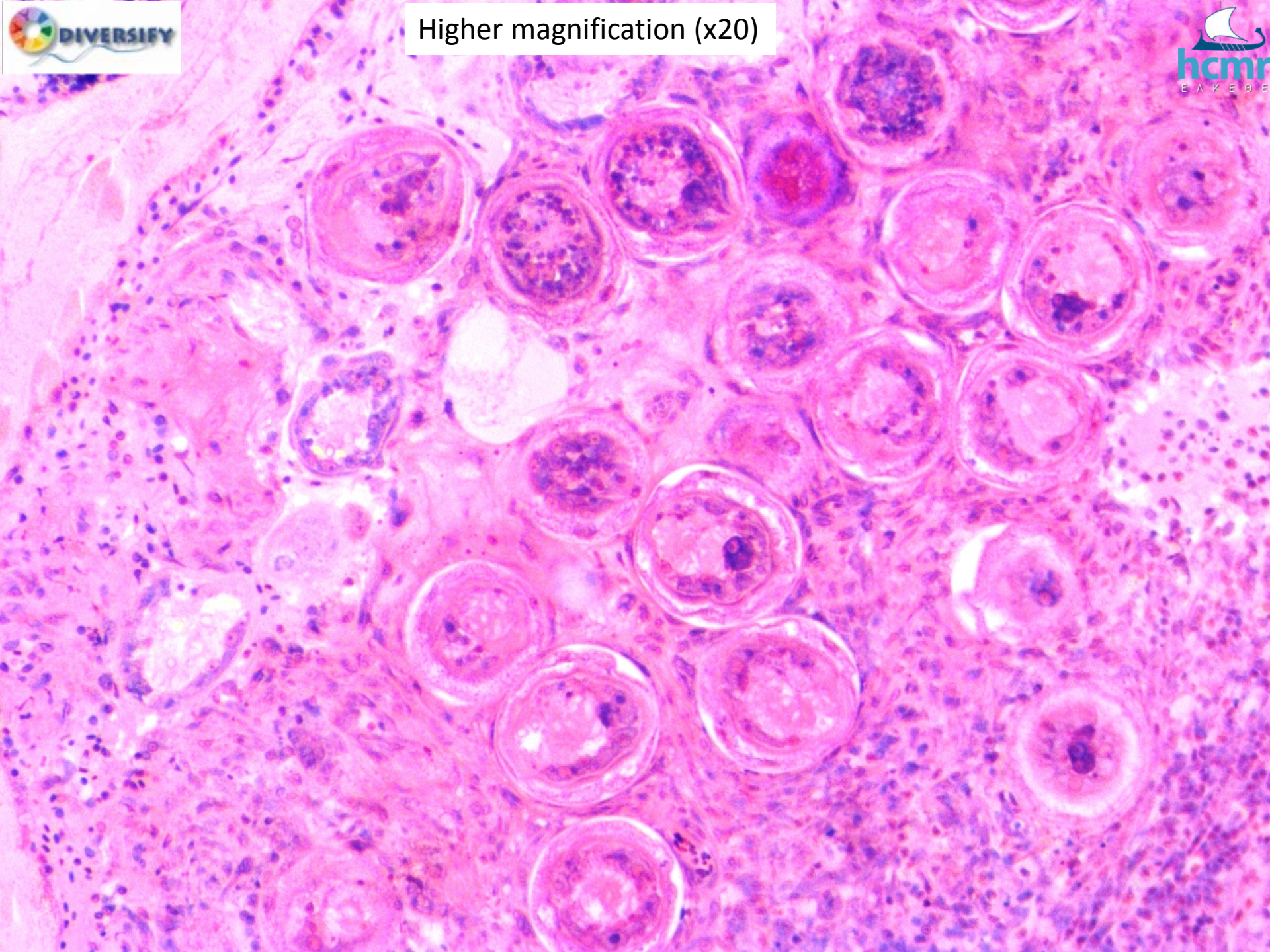
- We took small gill biopsies for further examination under stereoscope on site and for histology
- The cysts were aggregates of Digenean eggs probably from *Paradeontacylix* sp. which is a blood fluke reported in this species.
- The monogenean was *Zeuxapta seriolae*
- Interestingly there was a marked inflammatory reaction characterized by the presence of rodlet cells which formed an “epithelium-like” barrier at the gill lamellae.
- Whether this was elicited by the digenean eggs or the monogenean is not very clear

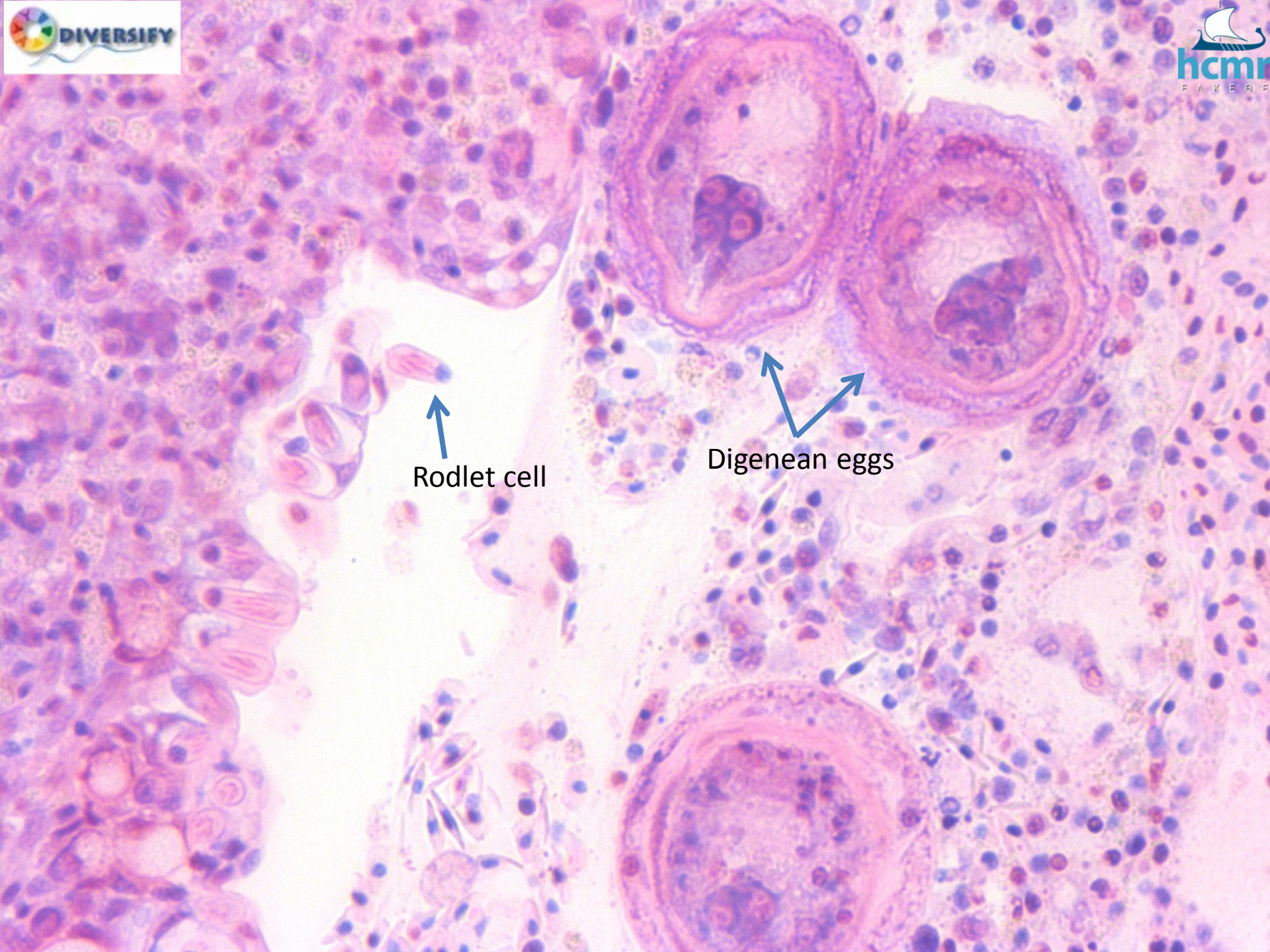


Histological section of gill tissue showing the digenean eggs (x10)



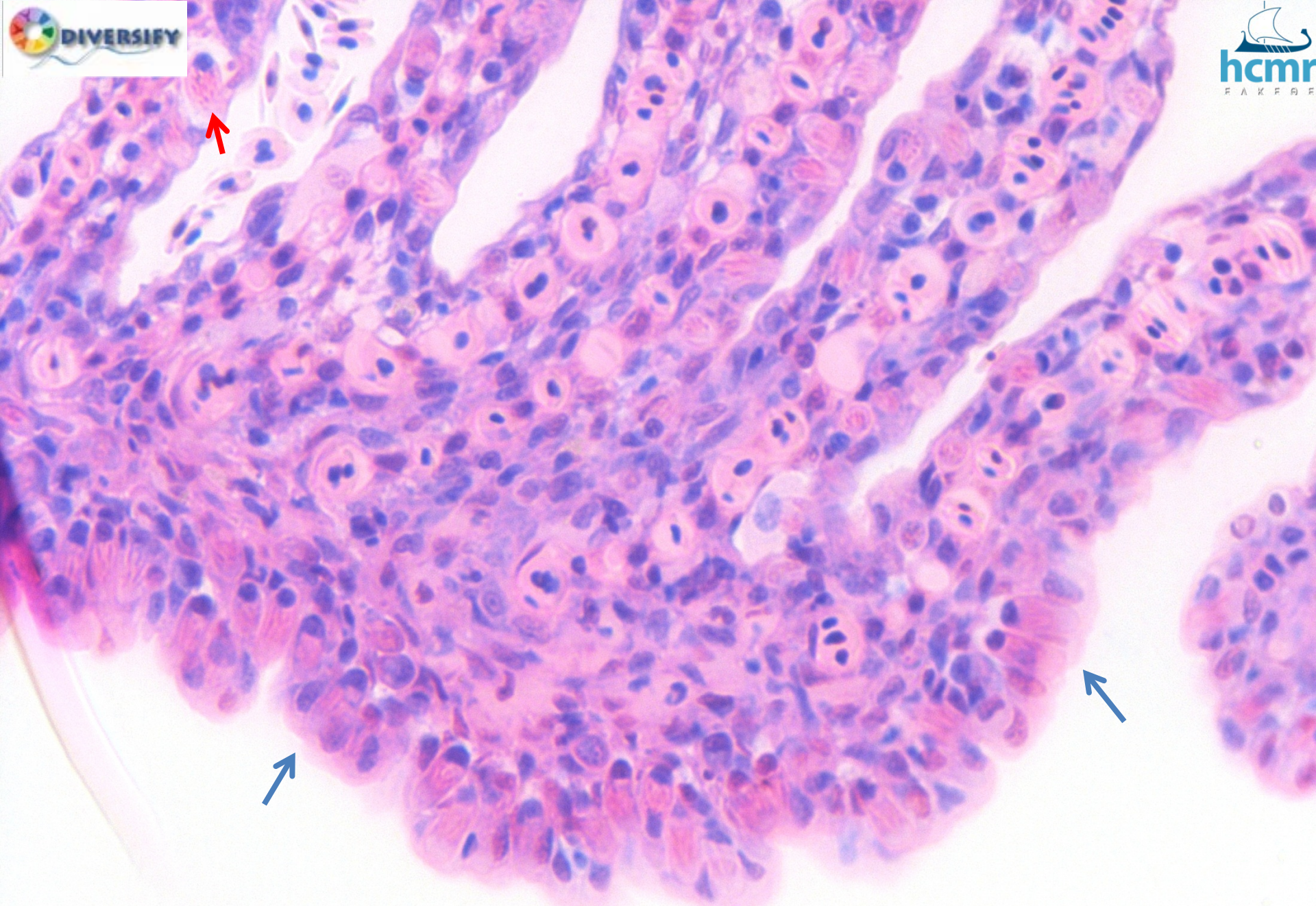
Higher magnification (x20)





Rodlet cell

Digenean eggs



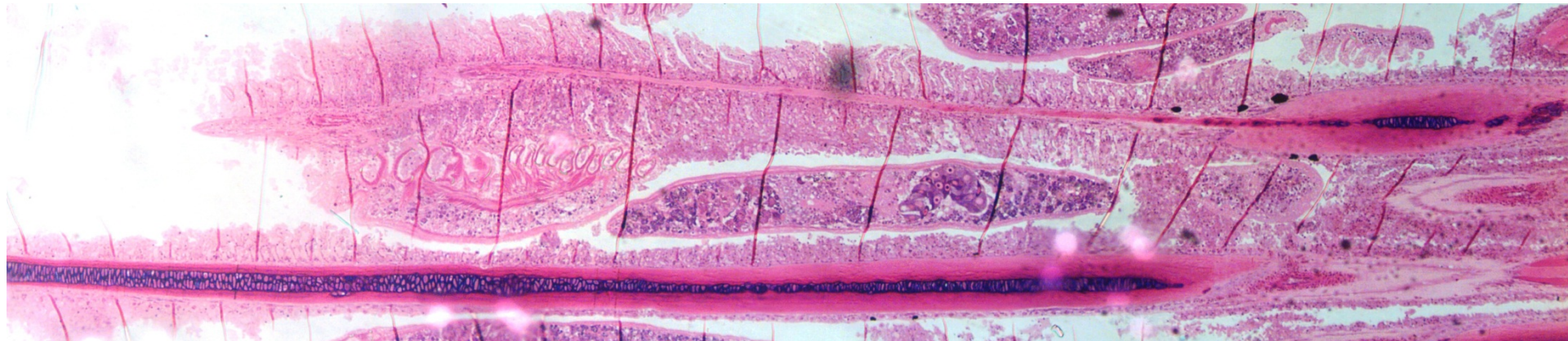
α rodlet cells have formed an “epithelium” like barrier at the gill lamellae

Zeuxapta seriolae

- It is a polyopisthocotylean monogenean worm
- It is a blood feeding parasite of the gills of greater amberjack and it is quite common
- It can reach very high numbers on the gills and causes significant problems



This is a dead amberjack from Argosaronikos. The fish was sent with ice at the Institute. Freshwater of the ice killed the parasites and made them visible



Specimen of the parasite and histological section of a *Seriola* gill (this is from a previous case from my collection)

Treatment

- We tested praziquantel treatment in the fish of Souda
- The treatment was performed in two rounds
- Initially we used injectable Droncit (unfortunately this is no longer available in Greece)
- We injected the fish intramuscularly with 5 mg/kg PZQ
- After a week we gave orally PZQ (Cestocur-Bayer) at 100 mg/kg for 5 consecutive days
- We re-examined the fish after ten days to assess therapeutic efficacy



IM injection of DRONCIT



Necrotic areas at the gill lamellae following treatment.

Efficacy

- After visual inspection of the 12 fish received the PZQ treatment we found that none had visible signs of any parasite
- There were necrotic areas in some gill lamellae (presumably due to blockage of the blood flow from digenean eggs) and mucous overproduction
- **PZQ was very effective against both parasites**