# Triploid Oyster Mortality

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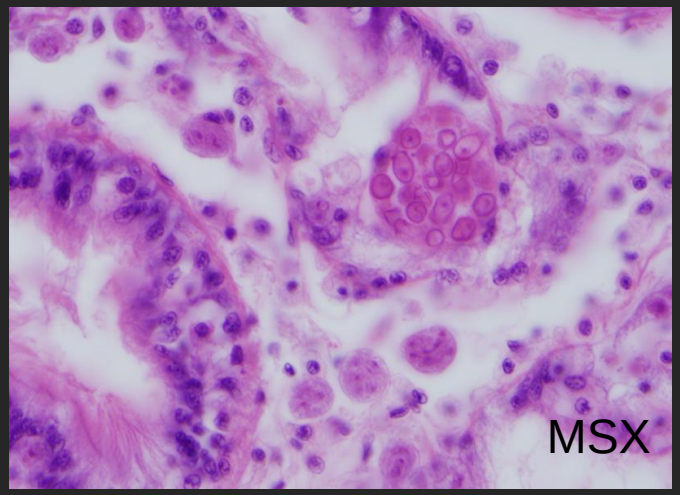
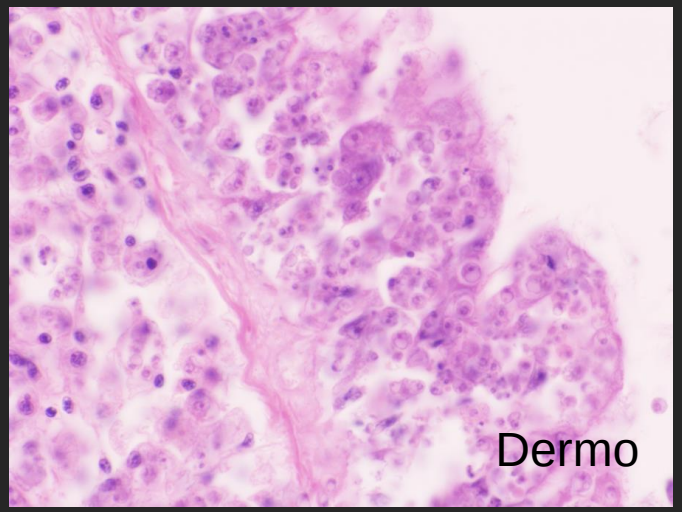
# Oyster Mortality Is Not Unusual

- MSX mortality has historically exceeded 95% annually, dermo mortality 70%
- However . . .
- Dermo causes typical mortality of only 15-20% nowadays (in fall)
- MSX mortality is often non-existent, and probably does not often exceed 15% (in springs when it occurs)
- Mortality of 30% and up focused in early summer should not be occurring



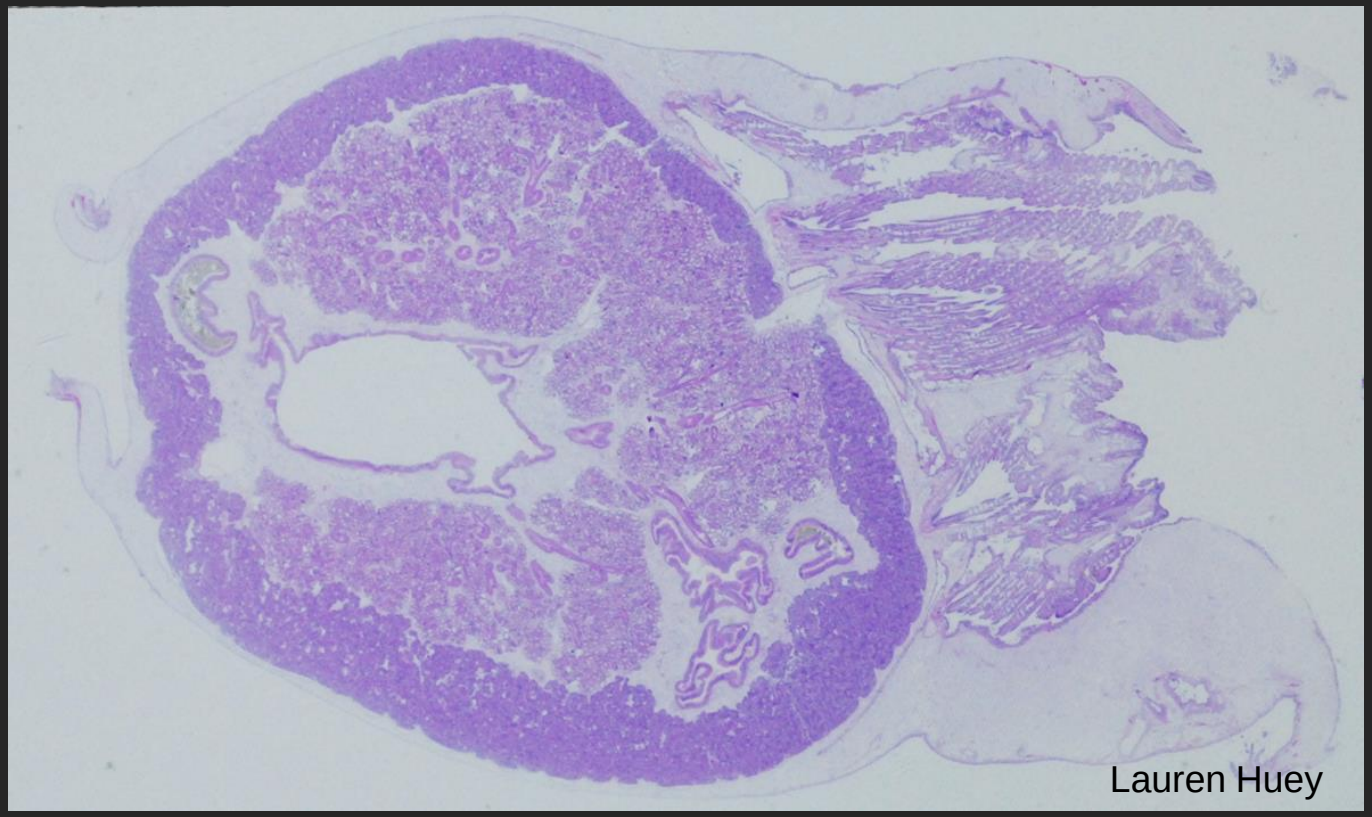



# Summer or "Triploid" Mortality

- Since 2012, reports of elevated oyster mortality from MD to LA
- Typically May-July, in one year old, hatchery produced oysters
- Oysters generally in excellent condition

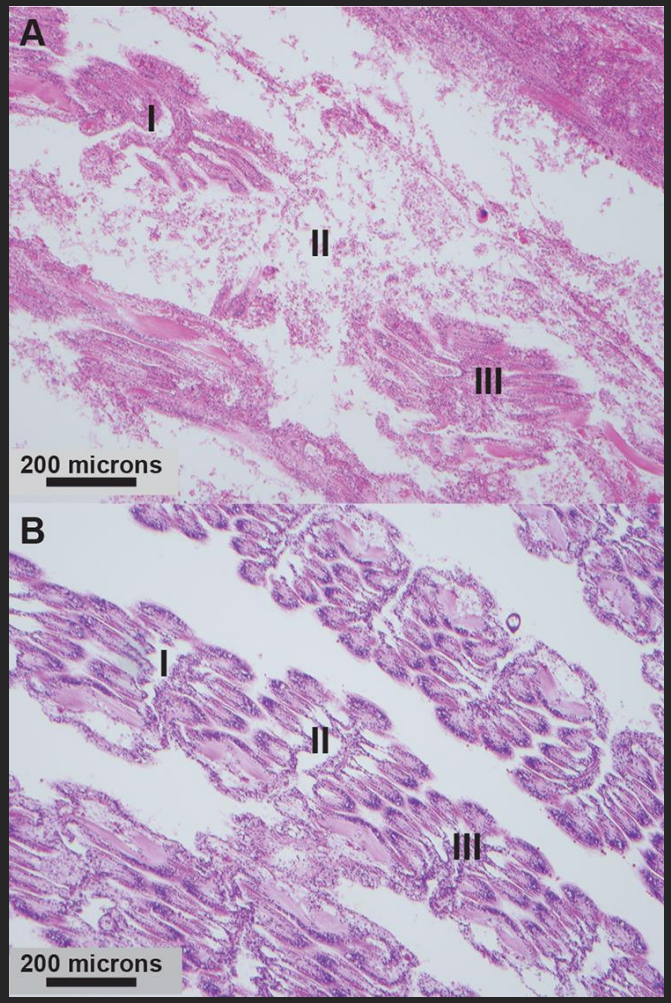
# Summer or "Triploid" Mortality

- What insights can pathology provide into a cause?
- > 90 samples from mortality events for histological analyses



# Observations

- MSX prevalence and impacts in spring can be unexpectedly high
  - Prevalence to 40%, with advanced infections indicating likely mortality
  - But far from typical, with MSX not detected in most cases
- Hemocytosis in gills, other epithelia advancing to disruption/erosion could suggest an environmental cause
  - 90% prevalence in some 2012 samples
  - This sign far less prevalent since 2012
- No clear agent or cause of the observed mortality



# What Is Going On?

- Are triploids actually more susceptible?
- Are *certain* triploids (domesticated oyster lines) more susceptible?
- Does significant gonad (if not gamete) production constitute an acute metabolic burden for 3Ns that allows other stressors to tip them over the edge into mortality?