Blue Sac Disease of Fry

I. **Causative Agent and Disease**
   Blue sac disease of fry is a non-infectious disease that is caused by the accumulation of metabolic wastes and reduced dissolved oxygen resulting in excessive buildup of ammonia nitrogen.

II. **Host Species**
   This condition has been reported primarily in salmonid fishes, especially brook trout and other char that tend to be the most susceptible species.

III. **Clinical Signs**
   The alevin/fry exhibit an abnormal accumulation of fluid, often bluish in color, at the posterior of the yolk sac often progressing to surround the entire yolk. Due to the increased fluid, fry cannot swim normally. Fry may have exophthalmia, coagulated yolk, and appear smaller and pale. Petechial hemorrhages of the head, thoracic and vitelline blood vessels can occur in severe cases with hemorrhaging into the blue-sac fluid and severe anemia.

IV. **Transmission**
   Due to the environmental nature of this disease, transmission between fish does not occur.

V. **Diagnosis**
   Diagnosis is based on the observation of typical clinical signs of the condition.

VI. **Prognosis for Host**
   The condition is usually fatal due to improper organogenesis and body development.

VII. **Human Health Significance**
   There are no human health concerns associated with this condition.
NON-INFECTIONOUS DISEASES

Swollen yolk sacs of cultured lake trout caused by Blue Sac Disease