LEUCOCYTOZOON DISEASE

- Occurs in Southeast, Mid-west, California, Canada and Western Europe. Usually in Spring or Fall.
- Was reported in Georgia many years ago.
- Causes problems mainly in turkeys under 12 weeks of age.
- A malarial or red blood cell parasite.
- Debilitates birds leading to secondary infection.
ETIOLOGY

- *Leucocytozoon smithii* in turkeys.
- Other species infect ducks, geese, chickens and wild birds.
- Requires the black fly *Simulium solossinae* as a biological vector.
- Sexual stage requires 5 days in a black fly.
- Flies require slow moving water.
Black fly
Black fly
Black fly habitat
Fly eggs
Black fly larva
INCUBATION PERIOD

14-21 days after turkeys are infected by black flies.
COURSE OF DISEASE

• A single "outbreak" usually in flock for 2-3 weeks.

• In individual bird symptoms present for 2-3 days.

• Can become chronic - retards breeding in breeder turkeys.
Sick turkey
MORTALITY

• Low to none usually.

• Depends on level of infection which depend on black fly numbers.

• In high black fly density 75% mortality rate has been reported.
POSTMORTEM LESIONS

• Blood appears thin with prolonged clotting time.
• Swollen liver with hemorrhages.
• Swollen, possibly blackened spleen.
• Congested lungs, black appearing in severe cases.
• Emaciation with flabby, brownish muscles in chronic cases.
Blackened spleen
Lung

LUNG
Leucocytozoon disease
DIAGNOSIS

SUGGESTIVE DIAGNOSIS -
Black fly infestation with bites on turkey heads followed by symptoms which last only 3 days.

POSITIVE DIAGNOSIS -
Symptoms and lesions + demonstration of gametocytes on stained blood smears (Wright's or Giemsa's)
Megaloschizonts in liver
Gametocyte in blood
Gametocytes in blood
Gametocytes in blood
Gametocyte in blood
TREATMENT

Clopidol (coyden) will eliminate the mature gametocytes from blood; however, this will not help treat or prevent the symptoms or lesions.
PREVENTION

- Very difficult.

- Screening out flies, or try to control them with sprays.

- Raise turkeys away from slow-moving stream.