

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
WILDLIFE DIVISION
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SUMMARY OF PATHOLOGIC CONDITIONS
OBSERVED IN CAPTIVE PHEASANTS - 1991

by

Thomas M. Cooley and Stephen M. Schmitt

The Wildlife Disease Laboratory monitored the health status of the various species of pheasants, housed at the Mason Wildlife Facility, (Hatchery and Rearing Unit) Rose Lake Hatchery Unit, Lazy Boy Chair Company in Monroe, the J.R. Whiting facility in Erie, and the Detroit Edison Club in Monroe County. Monitoring was done in order to detect diseases and other conditions which might threaten the success of the Southern Michigan Pheasant Program. When available, sick and dead pheasants were collected and examined on a weekly basis by personnel of the Wildlife Disease Laboratory. Necropsy results have been tabulated for the birds which were examined from the 6 units, following the descriptions of these findings (Table 1).

Abscess

An abscess is a circumscribed collection of necrotic (dead cells) material. In birds the contents of an abscess are tan and dry. The materials that make up an abscess are granulation tissue (tissue made up of fibre-producing cells and minute blood vessels)

Aspergillosis

Aspergillosis is a disease involving the lungs and air sac membranes and is caused by the fungus Aspergillus fumigatus. Fungal spores are widely distributed in moldy vegetative matter. Extensive outbreaks of the disease appear to be associated with moldy litter or feed. Lesions observed are white, thickened air sac membranes, white raised nodules or plaques on the membranes, and occasionally a blue-gray mold which constitutes the fruiting bodies of the fungus.

Drowning

Pheasants dying from drowning are usually young chicks that have fallen into a waterer and are unable to get out.

Exposure

Pheasants dying from exposure are generally in good physical condition with empty crops and gizzards, enlarged gall bladders (sign of digestive stasis) and shrunken intestinal tracts. Deaths are associated with wet, sometimes cold, weather and muddy range pens. It is also seen in young birds that have been in range pens and have suffered feather loss and are then exposed to cool overnight temperatures. The birds' physical conditions are similar to those dying from the stress of moving -- only the events preceding mortality are different.

Hepatitis

Hepatitis is an inflammation in the liver that can be caused by viral and bacterial agents, parasites, or organic and inorganic toxic substances.

Impacted Gizzard

Impacted gizzards are seen in pheasants that have not adapted to the feeder locations following a move from one pen to another. The impacted material is usually wood chips used for litter on the floor.

No Diagnosis

Birds for which no diagnosis can be given for a cause of death exhibit no gross lesions and are in good to excellent physical condition with subcutaneous and visceral fat deposits present. Fecal samples from these birds are examined for parasites using the direct smear technique and generally found to be negative. If any parasites are found, they are present in insignificant numbers.

Pericarditis

Pericarditis is an inflammation of the pericardium due to a traumatic injury and/or an infection. This is a common finding in many infectious diseases.

Peritonitis

A peritonitis is an inflammation of the peritoneum in response to an infectious agent. This bacteria may be part of the normal flora or may be introduced by an injury to the peritoneum.

Pulmonary Edema and Congestion

Pulmonary edema and congestion is an accumulation of watery fluid and blood in the lung tissue. These products can be expressed by squeezing the affected tissue. Causes of edema and congestion are varied, but a failing heart muscle is one cause.

Septicemia

A septicemia is a bacteria-induced disease whereby the bacteria enter the animal's body, rapidly increase in numbers in the bloodstream and produce tissue damage throughout the body.

Starvation and/or Dehydration

Starvation and dehydration are seen in birds in all age groups. Intra-specific competition often results in the inability of some birds to obtain food and water. Usually smaller and less competitive birds are found dead due to starvation and/or dehydration. Birds are generally in poor physical condition with very little gizzard and crop contents, and with shrunken intestinal tracts.

Trauma

Traumatic deaths are due to physical injuries such as broken necks, fractured ribs, ruptured livers, cannibalism, breeding activities, etc.

Unabsorbed Yolk Sac

Unabsorbed yolk sacs are usually observed in chicks less than two weeks of age. The chicks are unable to utilize their yolk sacs and either fail to eat or have a less-than-normal food intake. The yolk sac will frequently rupture, spreading yolk-like material throughout the thoracic and abdominal cavities.

Visceral Gout

Gout is due to failure to eliminate nitrogenous waste products from the bloodstream through the kidneys. As a result, insoluble material, mainly in the form of urates and related substances is deposited in certain areas of the body. The liver and heart are the organs usually affected.

SUMMARY

This year, as in past years, Trauma and Starvation/Dehydration were 2 of the principal causes of mortality. Pulmonary Edema/Congestion, Impacted Gizzards and Exposure were also significant mortality factors. Many of the birds died from a combination of factors such as Trauma, Exposure, and Starvation; Starvation, Unabsorbed Yolk Sac and Dehydration; and Starvation and Pulmonary Congestion. When this occurred, the death was attributed to the most life threatening cause.

The number of birds examined this year was approximately the same as last year. There were few large die-offs and usually when only a few birds died, they were not submitted for examination.

Losses of Sichuan x Ring-necked birds at the various Sportsman's Clubs were insignificant and were mainly due to Trauma and Impacted Gizzards.

Table 1. Diseases diagnosed at the Hatchery and Rearing Units at the Mason Wildlife Facility, the Rose Lake Facility, the pen at Lazy Boy Chair Company Incorporated in Monroe, the pens at J.R. Whiting in Erie, and the Detroit Edison Club in Monroe County.

	Sichuan (Hatchery)	Sichuan (Rearing)	Sichuan (Rose Lake)	Sichuan X Ring-necked (Rose Lake)	Ring-necked (Iowa) (Rose Lake)	Ring-necked (Michigan) (Rose Lake)	Sichuan X Ring-necked Lazy Boy Co.	Sichuan X Ring-necked J.R. Whiting	Sichuan X Ring-necked Monroe Co. Detroit Edison	Totals
Abscess			1							1
Aspergillosis				1						1
Drowning		1						1		2
Exposure	10	9								19
Hepatitis						1				1
Impacted Gizzard	6	15					7			28
No Diagnosis	2	1								3
Pericarditis			1							1
Peritonitis		2								2
Pulmonary Edema and/or Congestion	10	4	1	1				1		17
Septicemia			1							1
Starvation and/or Dehydration	41	38	57	9				1		146
Trauma	5	12	32	8	6		2	25	1	90
Unabsorbed Yolk Sac	3	1								4
Visceral Gout	1									1
Total	78	83	93	19	6	1	9	28	1	317
Sex Ratio:Males	33	31	68	11	4	0	6	20	1	173
:Females	45	52	25	8	2	1	3	8	0	144