

# AVIAN POX

Slide study set #16

*Prepared by:*

**D.N. TRIPATHY**

College of Veterinary Medicine

University of Illinois

Urbana, Illinois 61801

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AAAP BUSINESS OFFICE  
NEW BOLTON CENTER  
382 WEST STREET RD.  
KENNETT SQUARE, PA 19348

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## AVIAN POX

By: D.N. TRIPATHY

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Avian poxviruses--fowl, pigeon, turkey, canary, junco, quail, sparrow, and psittacine poxviruses--are members of the genus *Avipoxvirus* of the Poxviridae family. Fowl poxvirus is the type species of the genus. Because of similar clinical manifestation in different avian species, only fowl pox is described here.

Fowlpox is a slow-spreading disease, and the virus can persist in a susceptible population for a long time. The disease occurs in two forms: cutaneous (slides 1,2) and diphtheritic (slides 3,4).

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**Morphopathology.** Fowlpox may be suspected when skin lesions erupt on various parts of exposed skin (cutaneous form) of affected chickens. A mild form of the disease may remain unnoticed, with only small focal lesions, usually on the comb and wattles. In severe forms of the disease, generalized lesions may occur on any part of the body, such as the comb, wattle, corner of the mouth, around the eyelids, angle of the beak, ventral surface of the wings, legs (slide 5), and vent. Skin lesions may be small and discrete or may involve large areas through the coalescence of adjoining lesions (slide 6). Coalescence of the lesions around the eyelids can cause complete closure of one or both eyes (slide 2). The small focal nodules of the skin, initially vesicular, enlarge rapidly because of proliferation of the virus in the epithelium and infiltration by the inflammatory cells. The surface of the lesions is moist for a short time, but it dries soon and develops a rough irregular surface, which becomes yellowish-brown to dark-brown. Removal of such lesions, if they are not completely dry, leaves a hemorrhagic moist surface. When the scab is dry, however, it drops off, leaving a scab. Often the virus also affects the mucous membrane of the mouth (slide 4), nares, pharynx, larynx, esophagus, and trachea (slide 3), causing white or opaque eruptions which coalesce and expand rapidly, later becoming ulcerated and covered with a yellowish caseous necrotic exudate. Mucous membranes of mouth, larynx, pharynx, and trachea (diphtheritic form) undergoing the extensive fibrinonecrotic process develop a diphtheritic membrane. A hemorrhagic surface is left when the diphtheritic membrane is removed. Lesions in the mouth, tongue, and esophagus interfere with the feeding, and lesions of the trachea often result in the formation of tracheal plugs (slide 3). In such cases, there is serious difficulty in respiration, with signs of gasping, and suffocation may result. This form of the disease may simulate signs of laryngotracheitis.

In layers, fowlpox causes a drop in egg production; in young chicks, growth is reduced and feathering may be abnormal. Mortality occurs in birds with generalized lesions or with the diphtheritic form of fowlpox. Recovered birds are immune. The lesions of fowl pox develop after an incubation period of 4 to 8 days, and in protracted severe infections may last as long as 8 to 9 weeks.

## REFERENCES

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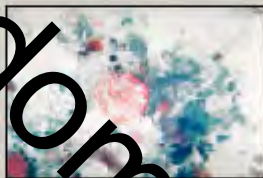
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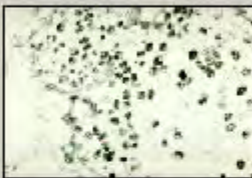
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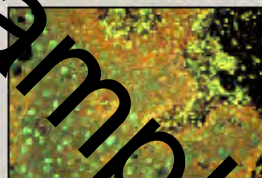
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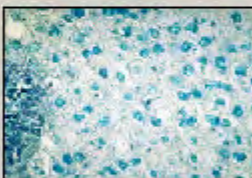
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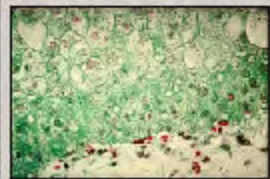
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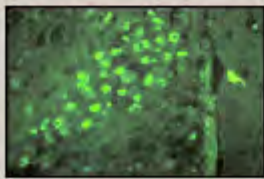
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**SLIDE 1.** Cutaneous pox lesion in a naturally infected bird involving head area.

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