



STAPHYLOCOCCUS EPIZOOTIC IN WESTERN OREGON COTTONTAILS

Authors: McCOY, R. H., and STEENBERGEN, FRANK

Source: Bulletin of the Wildlife Disease Association, 5(1) : 11

Published By: Wildlife Disease Association

URL: <https://doi.org/10.7589/0090-3558-5.1.11>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

STAPHYLOCOCCUS EPIZOOTIC IN WESTERN OREGON COTTONTAILS

The rabbit is one of the more susceptible animals to staphylococcal infections, with naturally occurring infections recorded in both North America (Cheatum, 1941. *J. Wild. Mgmt.* 5:304-308; Bell and Chalgren, 1943. *J. Wild. Mgmt.* 7:270-278) and South America (Pacheco and Maciel, 1930, as indexed by Herman, Carlton M. 1942. *The Rabbit as used in Disease Research*. USF-WS, Dept. Interior, Chicago).

The typical pathogenic form is hemolytic *Staphylococcus aureus*, although nonpigmented or nonhemolytic, or both, forms are occasionally found in apparently causal relation to pathologic processes (Burrows, 1963. *Textbook of Microbiology*, W. B. Saunders. p. 462).

In 1937, eastern cottontails (*Sylvilagus floridanus*) were imported from Ohio to Benton Co., Oregon. In 1939, about 100 of these animals were released on Sec 23, T11S, R5W (Graf, 1955. *J. Wild. Mgmt.* 19:184-188). Thirty-two eastern cottontails were shot during March-April, 1968, on the 1,600 acre E. E. Wilson Game Management Area, located at T10S, R4W, Benton Co.

Blood and urine samples were immediately inoculated into tubes of Fletcher's semi-solid medium (Galton et al, 1962. *Leptospirosis*. PHS Pub. #951) and fluid thioglycollate enriched with peptone and beef extract. Caseous material was aseptically excised using flamed instruments and inoculated into the same media. Twenty-four to 36 hour cultures from these media were then streaked onto sheep blood agar plates and incubated at 37 C.

Direct smears made from the excised lesions were stained for microscopic observation.

Twelve of 32 specimens had large caseous sores, usually at the base of the ears and on the dorsal neck area, with smaller abscesses inside the ears and on the chin. Eight of these animals also had infected toes, while three additional animals had only foot infections. Internal abscesses were found in the kidneys, hearts, lungs, livers, and testes of six others, two of which also had foot lesions.

Smears and cultures of the material from the lesions yielded Gram positive cocci that were strongly coagulase positive and were identified as *Staphylococcus*. Both β -hemolytic and nonhemolytic isolates were found. Heart blood from a female yielded a β -hemolytic culture while a nonhemolytic strain was isolated from the urine of a single male. The majority of the isolates from the gross external lesions were of the nonhemolytic type, while hemolytic strains predominated in the internal abscesses.

Jack rabbits (*Lepus californicus*), skunks (*Mephitis mephitis*), raccoons (*Procyon lotor*), feral house cats (*Felis domesticus*), California ground squirrels (*Citellus beecheyi*), deer mice (*Peromyscus maniculatus*) and voles (*Microtus* spp.) collected in the area at the same time were uniformly negative for *Staphylococcus* infections.

Dept. Microbiology
Oregon State University
Corvallis, Oregon 97331

R. H. McCOY
FRANK STEENBERGEN