MINK DISEASES

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The Enigma of Aleutian Disease

WHILE vacationing on the beautiful Oregon coast in what our host, Paul Autio, inaccurately calls his "beach shack," I am reminded that this is the area where the Aleutian gene was first recognized. Strangely enough, Paul and some of the other early Aleutian ranchers have never been bothered with what has come to be known as "Aleutian Disease"—a slowly progressive and invariably fatal malady.

Other ranchers were not so fortunate. In the late forties, we received many Aleutians and Sapphires in which the diagnosis was nephritis or bleeding disease—cause unknown. The immediate cause of death was kidney failure with uremia (urine in the blood) as a result of the inflammatory reaction in the kidneys.

In 1951, I asked Dr. Spencer, newly arrived veterinary pathologist here at Washington State University, to look over the microscopic sections from dead Aleutians and Sapphires. He found changes in the blood vessels that I had overlooked. The cells in the walls of the small blood vessels were dead with an accompanying cellular reaction that suggested a collagen disease. Examples of this type of disease in man (we find few others in animals) are glomerulo-nephritis, rheumatic fever, and lupus erythematosus. Other medical pathologists in the early '50s investigating the condition on a Tacoma ranch, and pathologists at the National Institutes of Health, were impressed by the similarity of lesions of Aleutian disease and collagen diseases of man.

To acquaint the industry with the disease, Dr. Hartsough and I wrote an article for the fur trade journals in 1956. We used 800 words to point out we didn't know the cause, prevention or treatment. On the other hand, there has been nothing written since that time, either in English, Scandinavian or Russian, that would convince me that anyone has contributed anything of fundamental or practical importance.

The Connecticut workers described the microscopic lesions in detail. A Swedish paper by Anna Lisa Obel described mink having plasmacytomas (tumors composed of a certain type of white blood cells). It is apparent from her microscopic descriptions that she was dealing with Aleutian disease.

As far as human medicine is concerned, the loss of mink pelts is of no consequence. But it is exciting for those concerned with heart and blood vessel diseases of man to find a naturally occurring disease of mink that involves blood vessels. To medical researchers, the mink offers promise of being an animal in which these important diseases may be experimentally produced and studied under controlled conditions. Since the disease has certain genetic ramifications, it is even more intriguing. Thus the National Institutes of Health have made sizable grants to the Universities of Connecticut and Minnesota. Furthermore, since its inception, the Mink Farmers Research Foundation has had funds available for any investigator that had the facilities and a solid program for research.

The Astoria ranchers, and later those around Portland, have provided a rather expensive, unexplained field observation in regard to Alu-

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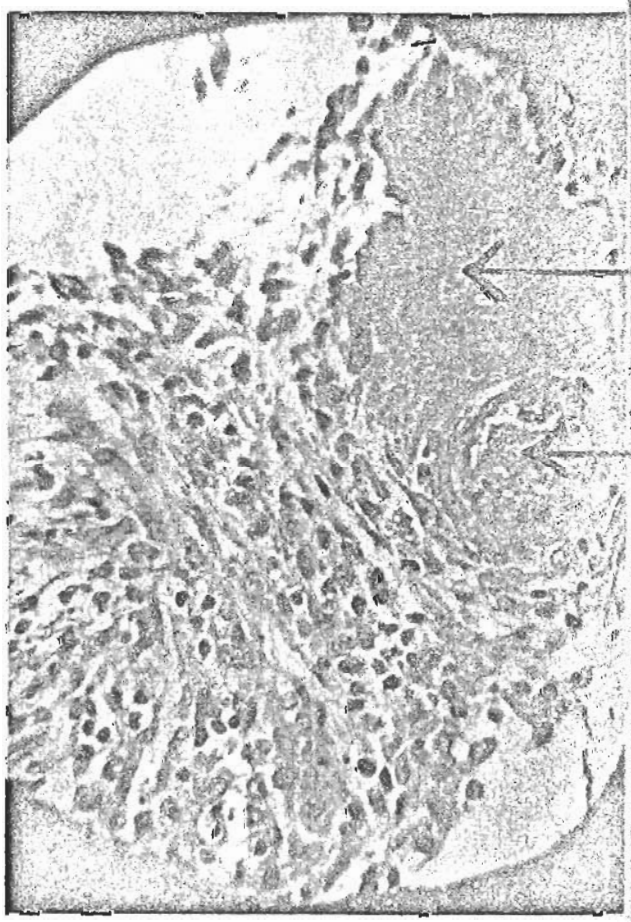
Paul Autio, mink rancher, equipment manufacturer, and hunter extraordinary, is shown measuring the tusks of a wart hog shot on a recent safari to Mozambique. Paul and Lester Bennett of Victor, New York, hunted a variety of big game including elephant without the aid of "white hunters," relying instead on "native trackers."



Aleutian Disease of Mink. (A.) Necrosis (cell death) of the wall of a small blood vessel (B.).

Aleutian Disease

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tian disease. In the days before chick embryo distemper vaccine, it was common for veterinarians to make up autogeneous vaccines to control distemper outbreaks. Mink with distemper were killed, their spleens ground into a suspension and a low percentage of formalin added. After incubation for a certain length of time, the formalized suspensions were used as a vaccine. Mink herds were often vaccinated three or more times during an outbreak.

Distemper played havoc on these Oregon ranches, but the real killer was Aleutian disease. After the vaccinations, Lauri Pernu lost nearly 500 Pastels, Sapphires and other types. Floyd Marsh, one of the real colorful guys in the mink industry, said "They didn't make baskets big enough to pack out my dead mink." No one can say whether the multiple vaccinations had anything to do with the production of Aleutian disease, but one can certainly appreciate why the ranchers in this area are a bit apprehensive of using vaccines made from mink tissue.

It is tempting, albiet risky, to speculate that the inoculated mink became hypersensitive to the mink tissue in these particular vaccines which resulted in a collagen disease reaction we recognize as Aleutian disease. Perhaps I had best end this tirade and dig some clams. . . .

Look for another authoritative helpful article on Mink Diseases by Dr. Gorham in next month's issue.

Seattle Fur Lists Dates for 1960-1961

Seattle Fur Exchange, Seattle, Wash., has scheduled its sales for the 1960-61 season. The schedule is as follows:

Dec. 15, Emba and general; Jan. 12, Emba and general; Feb. 9, Emba and general; March 16, general; April 20, Emba and general; May 18, Emba and general; June 22, general; July 20, Emba and general; Aug. 17, general; Sept. 14, general; Oct. 19, general; Nov. 16, general; Dec. 14, Emba and general.