

# LISTERIOSIS OF A SKUNK

## SMELLY MEPHITIS IS CARRIER OF DISEASES WHICH AFFECT OUR DOMESTIC ANIMALS

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With very few exceptions, isolations of *Listeria monocytogenes* have been made from animals and birds that were domesticated or kept under domestic conditions. Gifford and Jungherr<sup>5</sup> reported on Listeriosis in a wild raccoon (*Procyon lotor*). The following case is used to illustrate Listeriosis in another wild animal host.

### Case Report

On June 29, 1955, the head of a skunk was submitted to this laboratory for examination for rabies. The animal had been found "staggering" around the kennel of a dog boarding establishment. Since only the head was submitted, we have no information as to



FIGURE 1.—*Mephitis*, one of the most commonly found wild animals in North Dakota and much of the nation, is in bad odor both socially and economically. The economic blot on his reputation comes because mephitis, the skunk, has been found to be a carrier of diseases such as rabies which affect domestic animals. Now, as described in this article, he is charged with being a carrier of listeriosis.

the presence of any pathology of the visceral organs. Routine culturing resulted in the isolation and later identification of *Listeria monocytogenes*. Impression smears of the brain were

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<sup>5</sup>Listeriosis in Connecticut with Particular Reference to a Septicemic Case in a Wild Raccoon, Cornell Veterinarian, 37-38; 39-48, 1947-48.

negative for Negri bodies. This case is of particular interest, because it establishes the skunk as another reservoir of infection. Since the skunk is the principal reservoir of rabies infections, the importance of differential diagnosis of skunk encephalitis is necessary for establishing protective measures for livestock and people.

Die-offs of skunks and raccoons are not unusual when the populations become dense enough. Since both species are present in North Dakota, and both species are susceptible to both rabies and listeriosis, the correctness of the diagnosis becomes more important.

Livestock losses from both diseases continue to interfere with livestock production. As a means of livestock loss prevention and a public health measure, it is suggested that when raccoons, skunks or other wild animals exhibit abnormal behavior, they be submitted to a diagnostic laboratory for a differential diagnosis.

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## WEEDS ARE WONDERFUL PLANTS

When the Pilgrims first landed in America, there was no terrible weed problem. It started on a small garden hoe scale in the patches where trees were cut down and ground plowed. Weeds appeared when man first plowed the ground and thus invited plants that were the most vigorous and produced the most seeds to invade the place.

The astounding fact that plants we call weeds wake up and become terrifically lively if they are grown in a distant part of the world, has a simple explanation. In their native places all plants are under control. Part of this control is exerted by insects or diseases that evolved with them. These reduce the flowers, seeds and leaves and keep the plant from getting out of hand. This control is removed when a plant sprouts far from home. The tidal wave of weeds rose when seeds traveled with man overseas and across continents. They rode serenely on his clothing, in a bit of mud on a shoe, in burlap and in shipments of grain and other things.

Seedmaking machinery of weeds is the most superb in the plant kingdom. A single crabgrass plant will produce 90,000 seeds. But far out ahead as champions of mass production are pigweed and Russian thistle, each with one million seeds per plant. If there were a sort of hundred yard dash race in the kingdom of plants, the pumpkin would win. It adds five inches per day—and you see it grow.

But roots grow many times as fast and as far as the parts of a plant in the air. This is true even in the face of hard, stony, compact ground that a man could hardly drive a spade into. Roots twist and bore and push, with the action of screw, nail, wedge, gimlet. But they never fail to plunge deeply for moisture. A small alfalfa plant will drive its roots down into the hardest earth, diving 33 feet.

An example of resourcefulness of weedlike plants is the way some of them eat their way into solid ground by exuding chemicals from roots that dissolve the earth, clay or rock particles as they go. The tall yellow and white sweet clovers that line hard, dry shoulders of roads use this dissolving substance. Also sunflower, ragweed and cocklebur. The pumpkin vine that won the race above ground adds roots at the rate of 1,000 feet a day. A single grass plant, wild oats, managed in 80 days to put together for its own well being a roots system 54 miles long; a crested wheat grass achieved 315 miles of roots in three years. That averages 100 miles a year.

When they are thinned out, so that crop plants have plenty of room, the weeds become "mother plants" and will help to grow better crops than ever. Their marvelous roots systems, with countless billions of root hairs bind the earth, making it not too loose, not too hard—moist and not dried out. This soil conditioning unlocks the nourishment of the earth.