

What About Rabies?

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With rabies present in a number of wild and domestic animals, you will want to know what you can do to protect yourself and your pets against this disease.

Probably the most inquired-about wild-life disease which we have in Wisconsin is rabies. Interested hunters, dog owners, and farmers are constantly raising questions such as: What causes rabies? How does one get it? How does it affect dogs, humans, and wild animals? Can I catch rabies? What are the symptoms of this disease? Can rabies be treated? Is rabies a rare disease in Wisconsin?

Because of this interest shown in rabies, a little information on the disease in general and on our Wisconsin situation in particular, on what the Conservation Department is doing, and finally what *you* can do should be valuable now.

HISTORY OF RABIES

Rabies or "hydrophobia" or "madness in dogs" as it has often been called is one of the oldest diseases known to man. Medical historians believe that rabies was referred to as early as the tenth century before Christ in the *Iliad* as "canine madness." It was a dread and fearsome disease then, and it has retained all its viciousness throughout the centuries. Everything from half-drowning in salt water, feeding pills made of pulverized jawbone of a dog, dried false-tongue of a newly foaled colt, and a pinch of corroded copper were used in an attempt to stop this feared malady. As late as 1848 "mad stones," stones found in the intestines of deer and goats, were bringing as high as \$250 in auction galleries because of their reputed ability to cure rabies-infected persons.

It was not until the 1880's that any treatment proved effective. Louis Pasteur was inspired to adapt to rabies his epochal discovery that the disease-

producing properties of microorganisms can be altered or weakened by treating them with certain chemicals and passing them through laboratory animals. This does not affect their capacity to produce protective antibodies in other animals. The Pasteur treatment has been refined and slightly modified through the years, yet today it is basically his vaccine which is used to save lives and protect us from this dread killer.

WHAT IS RABIES?

The causative agent of rabies is a filterable virus which is capable of infecting all species of warm-blooded animals including man. The virus is found in the saliva and is spread primarily by the bite of an infected animal. The virus must reach the victim's nerves where it is carried up the nerve in the fluids toward the spinal cord and finally reaches the brain. Damage to the cells of the brain causes the infected animal to manifest nervous symptoms. The virus also travels away from the central nervous system and reaches the salivary glands, making possible the transmission of the disease to another animal by a bite.

The incubation time (the interval between the time of infection and the establishment of the virus in the brain which produces the symptoms) of rabies is largely determined by the depth of the wound, its nearness to the brain, and the amount of virus inoculated with the bite. This incubation time is quite variable but is seldom less than 15 days and rarely longer than a year. Regardless of the incubation period, be it days or months, the ultimate result of the disease is death.

Animals that contract the disease show two distinct types of symptoms which have come to be known as the "furious" and "dumb" forms.

Furious rabies shows the classical "mad dog" symptoms in which the animal becomes nervous, irritable, restless and finally a vicious, biting terror. In wild animals this type is eventually seized with the desire to roam (as much as 20 miles in a day) and during this wandering many susceptible animals may be bitten. Five to 10 days after the appearance of symptoms, the animal will die of the paralysis that develops.

Dumb rabies result in a sluggish, sullen, lifeless animal which seeks a dark, secluded spot. These animals are not furious and rarely attempt to bite. The paralysis progresses rapidly, affecting the legs, then the entire body, and finally resulting in death. It is obvious that animals exhibiting the furious type of rabies are the ones most responsible for the spread of the disease and are to be most feared.

PREVALENCE OF RABIES

Since 1938 there have been 158,318 positively identified rabies cases in the United States, with the trend being downward in recent years. Last year there were 5,846 rabies cases, a low for the 18-year span, reported by the Animal Disease Eradication Branch of the U. S. Department of Agriculture.

While the number of domestic animals infected with rabies has declined in recent years, the number of wildlife cases has increased so that almost half of the reported rabies cases are now found in wildlife. It is difficult if not impossible to determine whether there are actually more cases of rabies in wildlife now or whether just more cases are being reported due to more attention being focused on rabies in wildlife by game men. Ten humans had rabies during 1956, none in Wisconsin. The leading states with rabies in wildlife are: Texas, Louisiana, Alabama, New York, Georgia,

and Virginia, with the fox being the major target of the disease.

Wisconsin has not experienced any major rabies outbreaks but the disease remains with us throughout the years, with local outbreaks of significant importance occurring periodically. While this "semi-dormant" condition continues it presents a constant threat to our wild, domestic and human populations. Since 1941 there have been only two cases of rabies in humans in this state—one in 1941 and one in 1955.

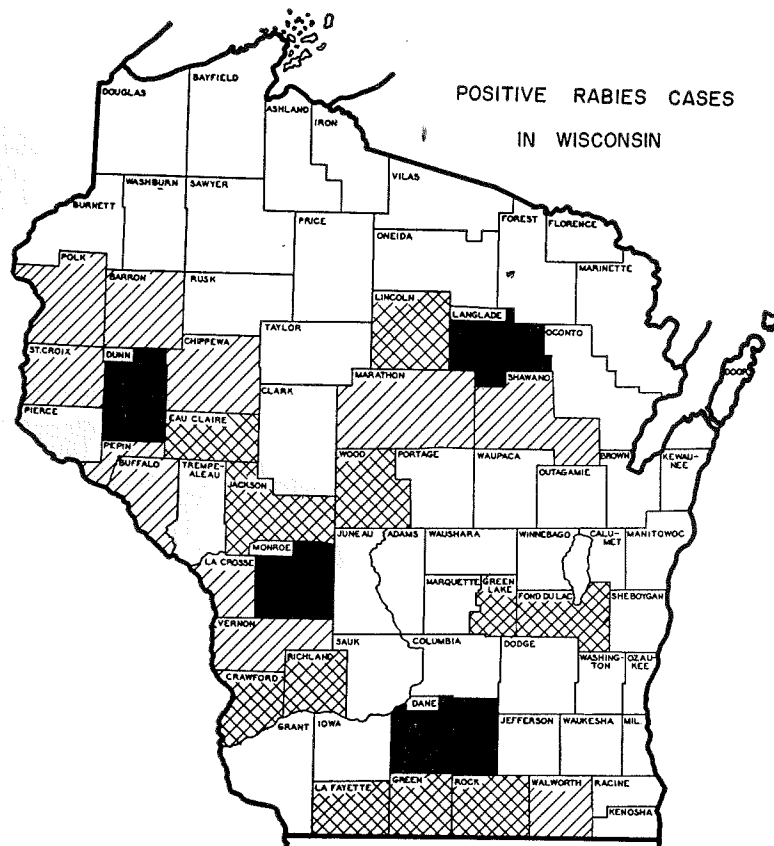
Unlike the majority of states, Wisconsin's main wildlife target for rabies is not the fox but the skunk. Other animals reported infected in Wisconsin are the fox, raccoon, woodchuck, muskrat, badger, squirrel, mouse, mink, and this year for the first time the bat.

Wildlife losses this year are far ahead of those of last year. In fact, the total reported wildlife deaths during the first six months of 1957 was double that of the entire number lost during all of 1956. The skunk again is leading the parade of infected animals, making up 65 per cent of the total. A number of humans (four by one fox) as well as numerous domestic animals and pets have been bitten by rabid wildlife this year, so although rabies is not considered a major public health problem in Wisconsin, it remains a potential menace and is important to anyone involved directly with it.

The map of Wisconsin shows the counties where rabid wild animals have been picked up since January, 1955. The black counties have had cases reported for all three years and could be considered centers of the disease among our wild populations. The other designated counties have a history of the disease in one or more of the past three years. The cross-hatching shows counties which have had rabies cases reported in the first six months of 1957.

THE SOLUTION

Rabies is in Wisconsin today and will undoubtedly continue to reside here for an indefinite period; therefore, it is im-



BLACK counties: Rabies cases have occurred for the past three years (1955-1957).
SHADED counties: Rabies cases have occurred in one or more of the past three years.
CROSS-HATCHED counties: Cases reported during the first six months of 1957.

important to know what can be done to prevent the disease, to be able to recognize the symptoms of a rabid animal and to know what to do if attacked and bitten by a suspected animal so that proper treatment can be obtained.

Let's take another quick look at the symptoms. The first sign of a rabid animal is usually a slight change in its behavior. The early symptoms are nervous excitability and loss of appetite. Wild animals lose their fear of man and as the disease progresses the animal may become vicious—mad-acting. This is the dangerous stage since the virus is transmitted in the saliva when the infected animal bites another individual. After

onset of symptoms, the infection terminates in death usually within 10 days.

If you see a skunk, fox, or other wild animal come into your yard or you encounter one in the field which shows no fear of man or other animals and sometimes actually attacks, treat it with all due respect and avoid personal contact with it, since it may be rabid.

IF RABIES is suspected, the local veterinarian or nearest Conservation Department game manager or warden should be contacted. It is important to keep a suspected animal alive and under observation, especially if it has bitten a human being. If necessary to kill the ani-

mal, shoot it in the neck or body regions rather than in the head, since brain material must be used for laboratory tests to detect the presence of rabies. *If a person has been bitten, a doctor should be called at once, since vaccination is effective if given in time but there is no cure when the disease becomes established.*

One of the best safety measures which can be taken to contain this disease is to vaccinate your pets against rabies. Contact your local veterinarian on this matter. Vaccination of pets will not eradicate rabies but it does serve as an effective barrier between man and rabid wildlife animals, thus breaking the chain of the disease. Before taking your dog into the field on your next hunting trip, protect not only Fido but yourself by having him vaccinated.

Sportsmen's clubs and other conservation or civic groups might assume the control of rabies as a special project—especially in counties where rabies cases have occurred over the past two or three years. Members might make a special effort to have their own dogs vaccinated prior to the hunting season, urge other members and friends to vaccinate their dogs, solicit members to exert additional effort to report any suspected cases of rabies, and abide by any quarantine instituted to prevent the spread of rabies during an emergency.

Although the cases of rabies in the state are increasing, there is no cause for panic. The actual number of reported cases is still relatively low. With everybody's cooperation, serious outbreaks of rabies can be prevented, and the disease itself contained.

Law Enforcement in the Northern Highland

BENJAMIN D. BENDRICK

Conservation Warden, Trout Lake

Warden work has trimmings on a 230,000-acre state forest in a resort area with thousands of visitors. Vandalism is perpetuated by both people and bears.

The problem of conservation law enforcement within the Northern Highland state forest is one that has a few more complications than enforcement in most areas.

The forest was first established by the State Legislature in 1903 when they set aside approximately 40,000 acres in Vilas county. In 1911, Trout Lake was set up as the forestry headquarters.

Law enforcement at that time had its problems, but today the forest includes about 230,000 acres and is used to a far greater extent by the vacationing public than ever before. Better roads, faster transportation, more modern trailers and living facilities make for much greater use of the forest by the public; also, there are about 16 improved camp-

grounds within the forest which have toilet facilities, pumps, fireplaces, etc.

Of the 941 lakes in Vilas county, approximately 200 named lakes fall within the forest boundary. The state, or public, owns about 444 miles of frontage on these lakes and 131 miles of frontage on the rivers within the forest.

From the statistics set forth here, it is apparent that public land with public use will bring with it some public abuse and consequently law enforcement problems over and above the ordinary.

The ordinary enforcement work done by state conservation wardens deals with fish and game violations. We have no authority to enforce trespass laws on private lands. However, in the state forests and parks wherever they are, the mis-