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Wildlife and the Spread of Rabies

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Abstract

Wild animals and the spread of diseases that are transmissible to human, such as rabies, are an important One Health issue. With human populations and cities expanding, wild animal and human encounters are going to be on the rise, and this will increase the chance for the spread of diseases. The majority of human rabies are caused by canine bites. The majority of these bites also occur in poorer areas and regions of the world. Education efforts must be made to teach people how to recognize the signs and symptoms of rabies and what they should do if they find an animal they suspect might have rabies. The vaccination of wild animals, especially dogs and canines, against rabies should also be a top priority in the prevention of rabies transmitting to humans. The problem of the spread of rabies from wild animal, canines in particular, to humans must be solved with a One Health mindset, since every aspect of animal, environmental, and human health are closely related.

Wildlife and the Spread of Rabies



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INTRODUCTION

Wild animals and the spread of diseases that are transmissible to human, such as rabies, are an important One Health issue. With human populations and cities expanding, wild animal and human encounters are going to be on the rise, and this will increase the chance for the spread of diseases. The majority of human rabies are caused by canine bites. The majority of these bites also occur in poorer areas and regions of the world. Education efforts must be made to teach people how to recognize the signs and symptoms of rabies and what they should do if they find an animal, they suspect might have rabies.

One Health and Rabies

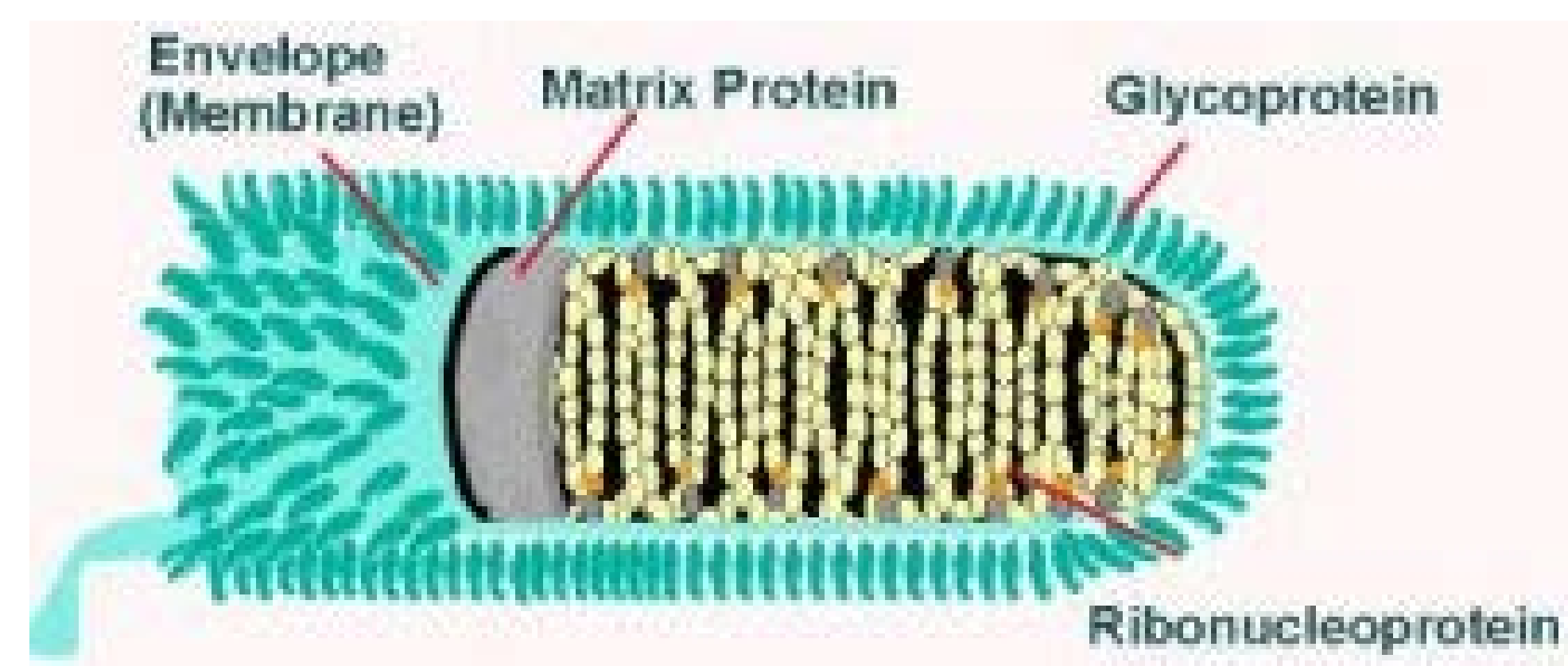
One Health

- One Health is an approach to problems in our world that recognizes the interconnectedness of human health, environmental health, and animal health

Rabies Virus

- Rabies is a virus in the Rhabdoviridae family. Rabies attack the hosts brain the excretes in the hosts saliva. For animals and people, who begin to exhibit the symptoms of rabies, the fatality rate is near 100%

A One Health Issue



Source: CDC <https://www.cdc.gov/rabies/about.html>

Rabies in the World

The rabies virus is a great example of a one health issue as it shows the interconnectedness between human and animal health, both of which affect the well being of the environment.

99% of all rabies cases in the world are canine mediated. This particularly affects poorer and developing regions of the world with less access to veterinary resources and general knowledge about rabies. With Africa and Asia account for 95% of rabies cases worldwide.

Through extensive rabies vaccination programs some regions have been able to get rid of canine rabies.

Currently in the United States, and in Idaho, the most prevalent reservoir for rabies is found in bats.

Zoonotic Disease

A zoonotic disease is a type of disease that can be transmitted between animals and humans.

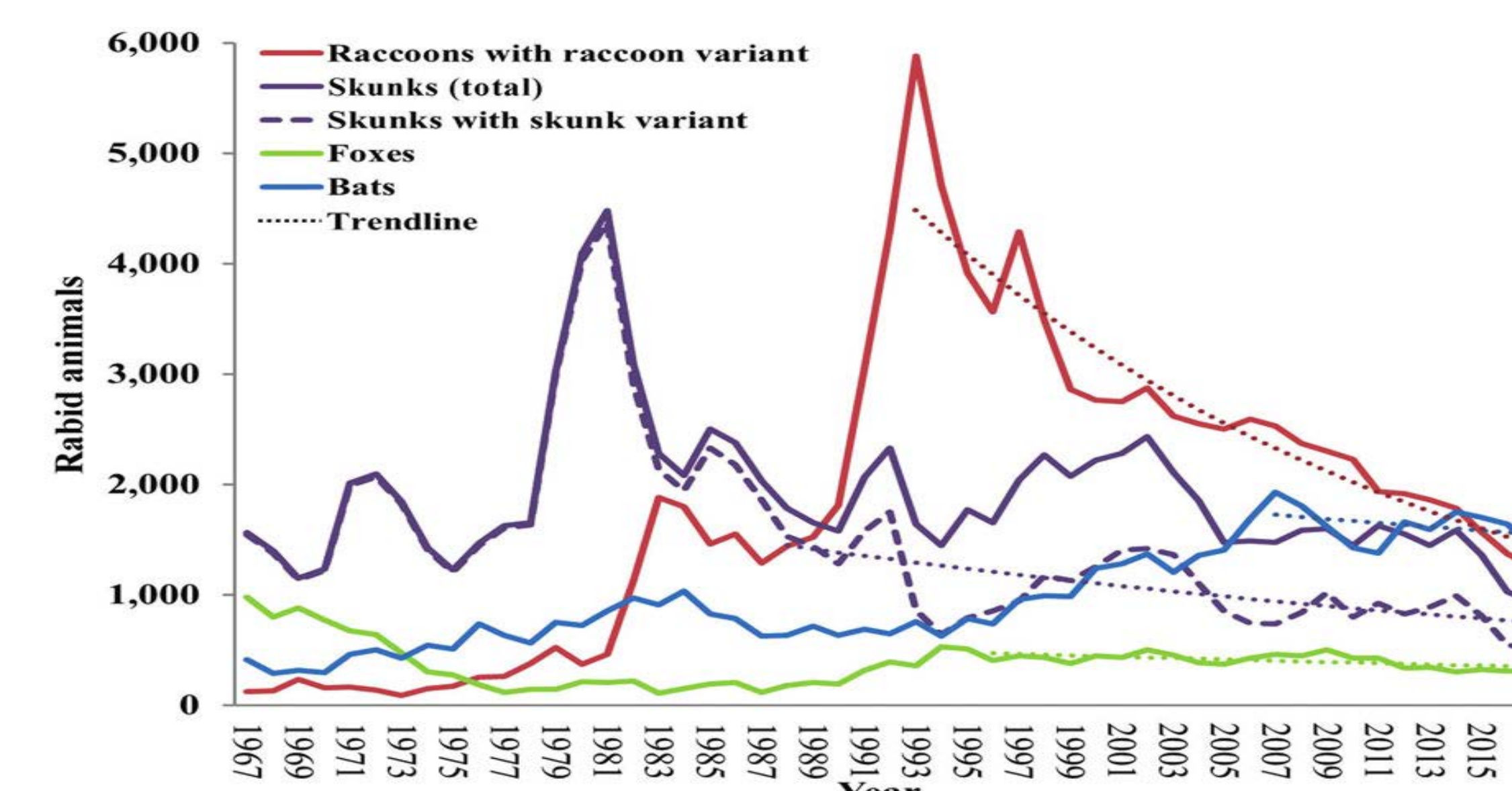
CONCLUSION

Rabies is a One Health issue that shows how connected human health is to animal health. Education efforts must be made in regions with high cases of rabies. Vaccination of wild dogs would be an effective way to reduce the large amount of deaths every year.

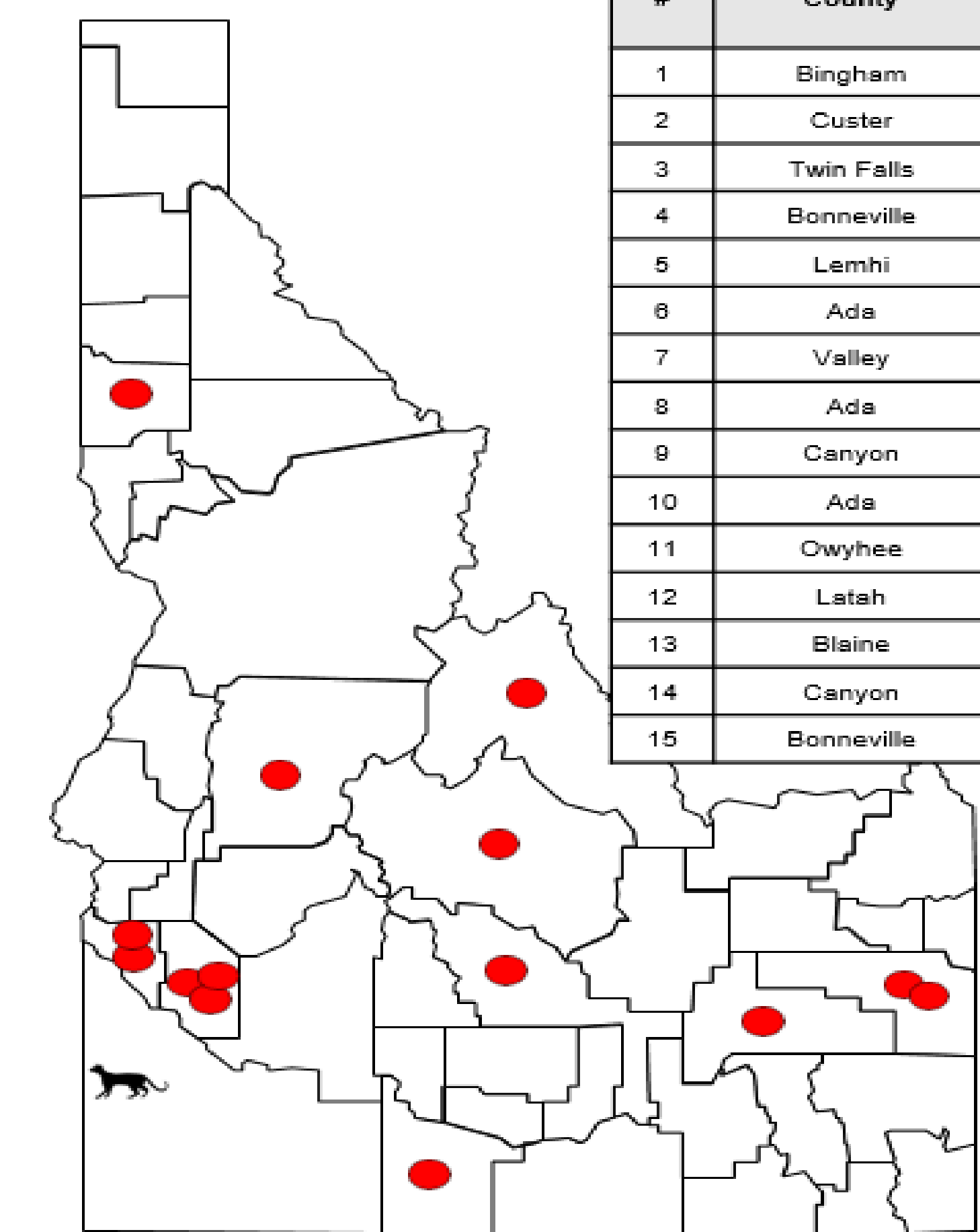
A One Health approach to dealing with rabies is ideal because all the factors of human health, animal health and environmental health must be taken into consideration when dealing with an issue of this magnitude.

Rabies in Idaho

- Last case of rabies in a human in Idaho was in 1979
- In 2007 the CDC declared that canine rabies had been eliminated in the United States
- Any mammal can get rabies but the most common are; bats, raccoons, skunks, foxes, as well as cats, dogs and cattle



#	County	Animal Type	Date of Report
1	Bingham	Bat	6/11/2019
2	Custer	Bat	7/23/2019
3	Twin Falls	Bat	7/24/2019
4	Bonneville	Bat	8/5/2019
5	Lemhi	Bat	8/14/2019
6	Ada	Bat	8/14/2019
7	Valley	Bat	8/20/2019
8	Ada	Bat	8/23/2019
9	Canyon	Bat	9/4/2019
10	Ada	Bat	9/12/2019
11	Owyhee	CAT	9/13/2019
12	Latah	Bat	9/18/2019
13	Blaine	Bat	9/25/2019
14	Canyon	Bat	10/18/2019
15	Bonneville	Bat	10/24/2019



Note, the last rabid cat was detected in Idaho in 1992. This is a reminder to keep dogs AND cats vaccinated against rabies.

Top: Source: Idaho Department of Health and Welfare <https://healthandwelfare.idaho.gov/Health/Disases/Conditions/Rabies/information/tabid/176/Default.aspx>
Bottom: Source: CDC https://www.cdc.gov/rabies/location/usa/surveillance/wild_animals.html

Asia

59%

Africa

36%

All Other Continents

5%

Percentage of dog mediated rabies.
Source: WHO