



# SURVEILLANCE OF INFECTIOUS DISEASES IN WILDLIFE IN SWEDEN

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CLINF seminar  
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SVA

# NORDIC COUNTRY WILDLIFE DISEASE CENTERS



Veterinærinstituttet  
*Norwegian Veterinary Institute*



**Evira**  
Finnish Food Safety Authority

NATIONAL  
VETERINARY  
INSTITUTE

**SVA**

# SWEDISH WILDLIFE DISEASE SURVEILLANCE

## 70 YEARS 2017!



Professor Karl Borg, from 1947



SVA Wildlife disease section 2016

# Government instruction for SVA , SFS 2009:1394

"... to follow and analyze the development of disease conditions in domesticated animals and wildlife."

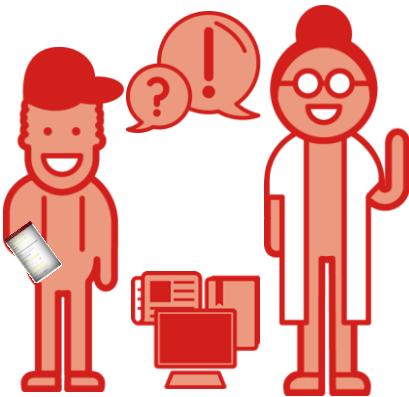




## FINANCED BY

- Annual state hunting fee
  - state funding
- Government/
  - Ministry of environment and energy ->
  - Environmental Protection Agency
  - Wildlife surveillance at SVA
- PhD projects: external funding

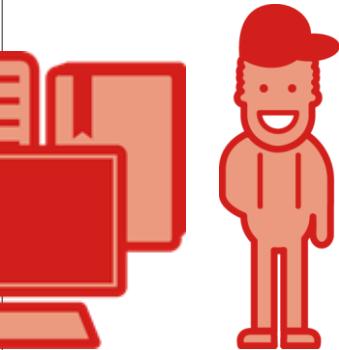




# GENERAL WILDLIFE DISEASE SURVEILLANCE



A large red arrow points from the necropsy photograph to a digital report document. The document is a scanned version of a form titled "RÄPORT" (Report) from "STATENS VETTERINÄRMEDICINSKA ANSTALT" (SVA). The report includes sections for "Vidarebefordring" (Forwarding), "Utdragsuppgifter" (Summary information), and "Utdragsbestyrkande" (Information that strengthens the summary). It contains handwritten text and printed tables with details such as "Ljungby", "Höstungegg", "2014-08-08", "Mell", "Vikt", "7,5 kg", and "Ovrigt meddelande". At the bottom, there is a section for "Analysen markerade med \* är utförda med en akrediterad metod" (Analyses marked with \* are performed using an accredited method) and a stamp from "SLU ETAT FÖR PATOLOGI OCH ULTRALUDOMAR".



# <https://rapporteravilt.sva.se>



### Rapportera sjuka/döda vilda djur

Län  
Södermanlands län

Kommun  
Nyköping

Fyndplats/ort  
Öster Malma

Jag anger koordinater manuellt (i WGS84 lat/long decimalt)

Koordinater

### Uppgifter om fyndet

Djurslagsgrupp  
Däggdjur

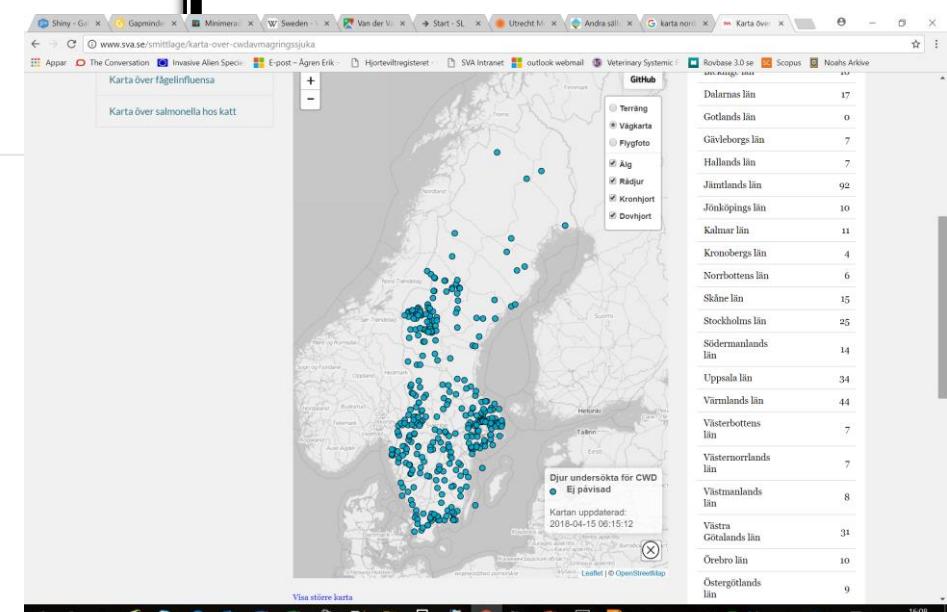
Djurslag  
Älg

Antal  
1

Skick  
Delvis uppäten

Bild på fyndet

Övrig information



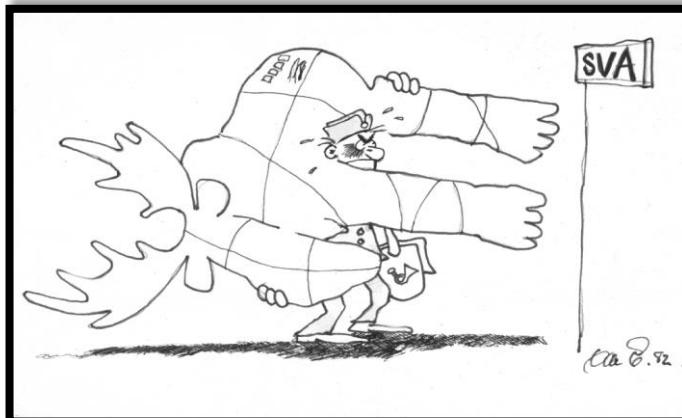
Windows taskbar at the bottom of the screen.



**SVA**



# CITIZEN SCIENCE



Hunters (& associations) – "Wildlife samplers"  
The public – bird feeding  
Wildlife officials – Municipalities, Counties  
Police (for protected wildlife)



# HUNTER ORGANISATIONS

Red fox (*Vulpes vulpes*)  
*Echinococcus multilocularis*



SVA  
STATENS VÄLKEMONITORINGS  
ANSTALT

Remiss Råvårdrörelse samling Dvärgbandmask 2012

Regionnummer	Postnr.	Ort	Landsting
Förnamn	Mitt		
Efternamn	Mitt		
Tel nummer			
Förslag till rörelse			
Kontaktperson			
Från	Postnr.	Ort	Landsting
Spårningsnr:	Fraktur	Datum:	Med:
X	○		
V	○		
Vid fraktmeddelande om att denna post är patienter att behandla, vänligen se på patienten och sätta kontaktpersonens namn i detta fält.			



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# Large carnivore management

Brown bear (*Ursus arctos*)

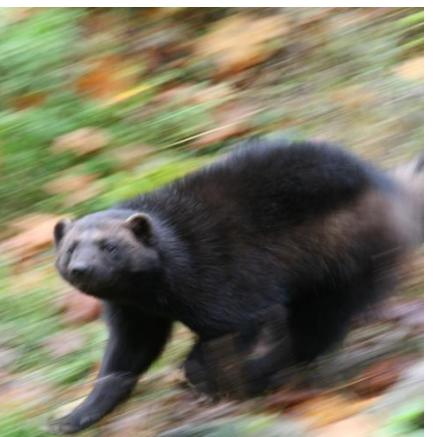
Wolf (*Lupus canis*)

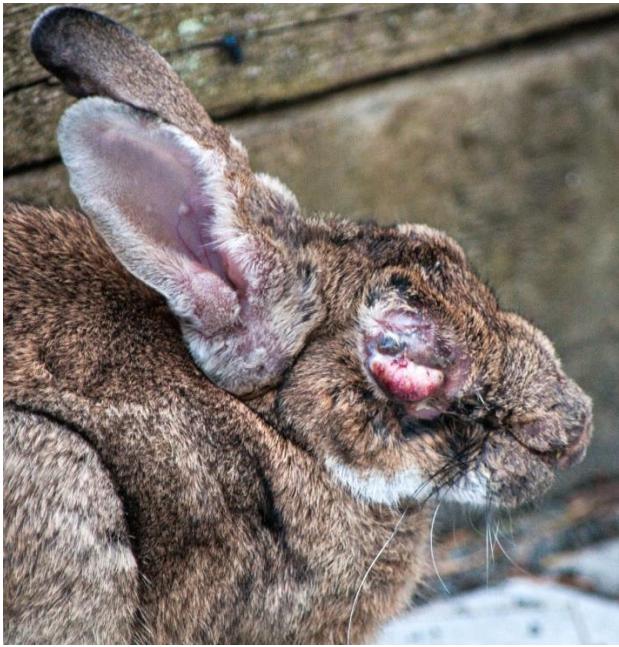
Lynx (*Lynx lynx*)

Wolverine (*Gulo gulo*)

- § All dead large carnivores must be sent to SVA
- Separate funding from the EPA

Threatened species  
Increasing populations  
Nuisance animals





Myxomatosis



Moose (*Alces alces*), anthrax, 2016



Reportable diseases  
(Board of Agriculture)



OIE list of non-listed  
wildlife diseases



# OIE LISTED, AND NON-LISTED DISEASES

## OIE listed disease

Anthrax  
Infection with Echinococcus multilocularis  
Infection with Echinococcus granulosus  
Infection with Trichinella spp.  
Myxomatosis  
Tularemia  
Rabbit haemorrhagic disease  
Newcastle disease  
Avian chlamydiosis

## Presence / absence of non OIE-Listed wild diseases/infections

### Non-listed pathogens and other disease-causing agents in wildlife

Agent causing chronic wasting disease (CWD)  
Inf. with low path. avian influ. viruses (all subtypes)  
Infection with Alcelaphine herpesvirus 1 or Ovine herpesvirus 2  
Infection with Borrelia spp.  
Infection with circoviruses  
Infection with European brown hare syndrome virus  
Infection with flavivirus (causing tick borne encephalitis)  
Infection with Leptospira interrogans ssp.  
Infection with Listeria monocytogenes  
Infection with morbillivirus (canids and felids)  
Infection with morbillivirus (marine mammals)  
Infection with parvoviruses  
Infection with Pasteurella spp.  
Infection with Pox viruses (other than those listed by the OIE)  
Infection with Psoroptes spp.  
Infection with Salmonella enterica (all serovars)  
Infection with Sarcoptes scabiei  
Infection with Toxoplasma gondii  
Infection with Trichomonas spp. in birds and reptiles  
Infection with Yersinia enterocolitica  
Infection with Yersinia pseudotuberculosis  
Reptiles  
Infection with ranaviruses  
Infection with Ophidiomyces ophiodiicola (causing snake fungal disease)  
Non-Infectious Diseases  
Algal toxicosis  
Botulism  
Chemical poisons  
Mycotoxins  
Diseases of Unknown Cause  
Unusual morbidity or mortality event (cause undetermined)

# Preparedness: Looking beyond our borders...



Program for Monitoring Emerging Diseases



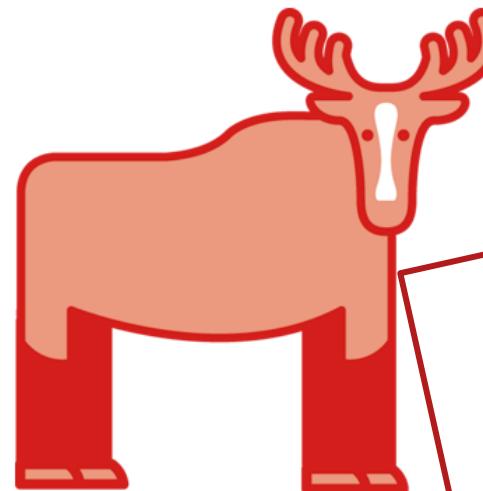
OIE Working group on Wildlife

International Wildlife Health  
Program Working group

EWDA Google group  
EWDA Wildlife Health Network

# rapporteravilt.sva.se

rapportera in döda och sjuka vilda djur på mobilen



AKTUELLT JUST NU

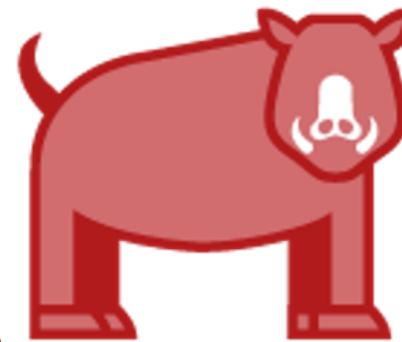
## CWD

Avmagringssjuka hos hjortdjur är  
av särskilt intresse att övervaka

Rapportera in avmagrade  
älgar, hjortar eller rådjur!

# rapporteravilt.sva.se

rapportera in döda och sjuka vilda djur på mobilen



AKTUELLT JUST NU

## ASF

Afrikansk svinpest  
är av särskilt intresse  
att övervaka

Rapportera in hittade  
döda vildsvin!



[www.sva.se](http://www.sva.se)



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STATENS  
VETERINÄRMEDICINSKA  
ANSTALT



## TARGETED DISEASE SURVEILLANCE

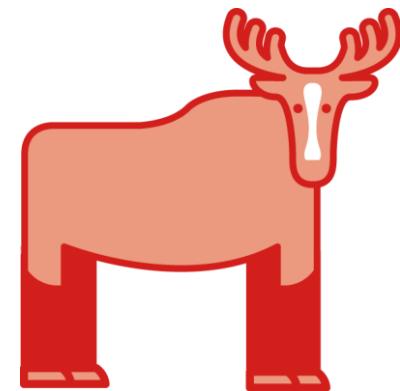
Avian influenza  
2006 H5N1  
2015 H5N8  
2016 – 2018 H5N6



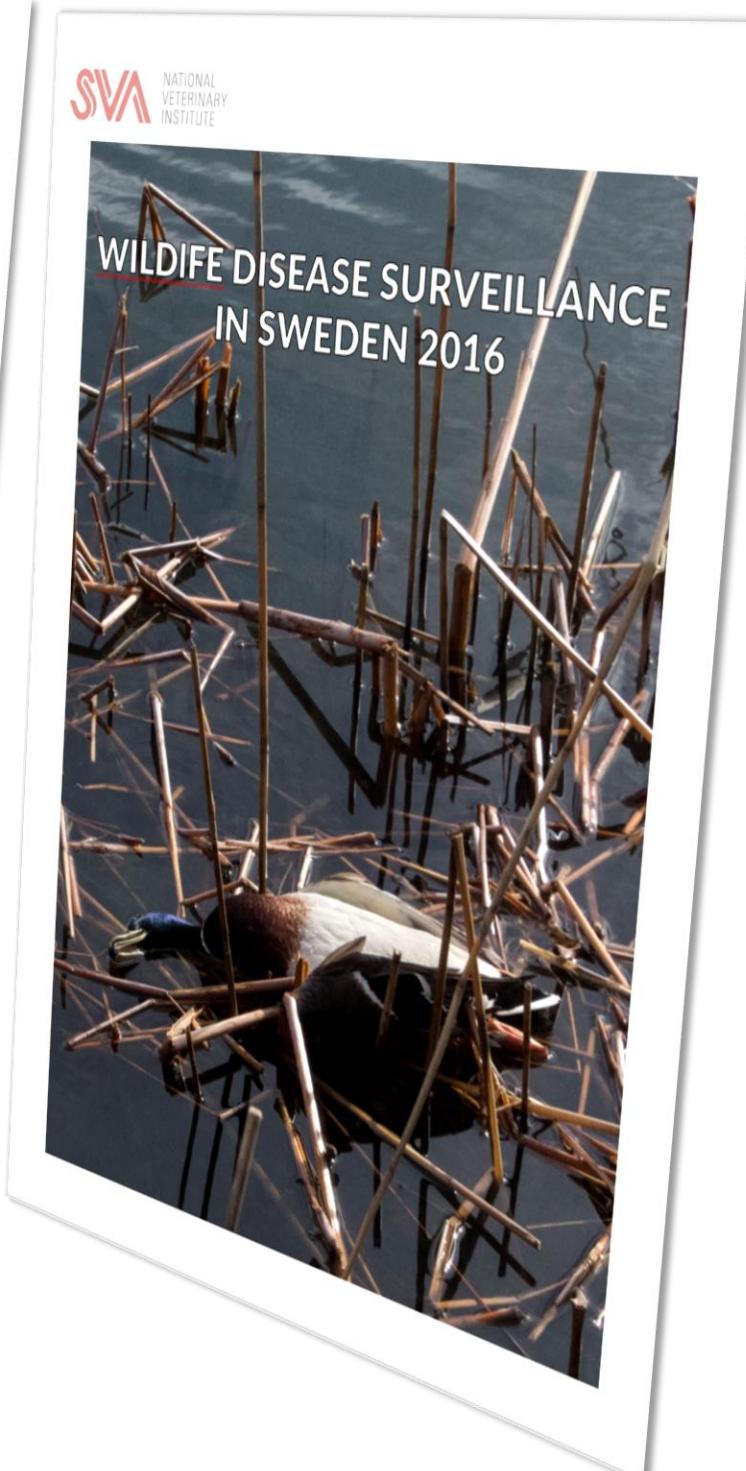
RESEARCH

# Acute project funding

EPA



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## DISSEMINATION

**Reports  
Lectures  
Conferences  
Publications  
[WW.SVA.SE](http://www.sva.se)**