

RABIES BULLETIN EUROPE

Volume 26/No 2

Quarter 2

2002

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Map of Rabies Cases in Europe, 2. Quarter 2002

The Rabies Bulletin Europe has been compiled and edited by the

WHO Collaborating Centre for Rabies Surveillance & Research

at the
Federal Research Centre for Virus Diseases of Animals
Postfach (P.O.Box) 1149
D-72001 Tübingen
Federal Republic of Germany

Dr. W.W. Müller
Dr. J.H. Cox
K.-P. Hohnsbeen, Data Processing

Phone +49 7071 967-210
Phone +49 7071 967-226
Fax +49 7071 967-105
E-mail who-rabies@tue.bfav.de
Internet www.who-rabies-bulletin.org
www.rabnet.who.int

The Rabies Bulletin Europe *is sponsored by the*
World Health Organization, Geneva, and the
International Office of Epizootics, Paris

Gratefully acknowledged is the *financial support*
of the WHO Collaborating Centre by the

Bundesministerium für Gesundheit
Bonn

Change of Editorship

As already mentioned in 2 previous issues of the **RABIES BULLETIN EUROPE (RBE)**, with the next issue the editorship is going to change. The production of the **BULLETIN** still remains within the Federal Research Centre for Virus Diseases of Animals, however, the geographical location is going to change.

There is no problem with mail still going to the old location as it will be forwarded to the new location in Wusterhausen.

Here is the new address:

**WHO Collaborating Centre for Rabies Surveillance
and Research
at the Federal Research Centre for Virus Diseases of Animals
Institute of Epidemiology
Seestr. 55
D-16868 Wusterhausen /Germany
Tel. +49-33979-80 158
Fax +49-33979-80 200 or 222
E-mail carsten.poetzsch@wus.bfav.de
Internet www.bfav.de and
www.who.rabies.bulletin.org**

The personnel actively involved in the production of the **BULLETIN** are going to be, for the moment, Drs. C. Pötzsch, T. Müller and M. Kramer until the exact responsibility is settled on.

The previous editors Drs. W.W. Müller and J.H. Cox and K.-P. Hohnsbeen thank the contributors for the many years of good cooperation.

1. INTRODUCTION

This BULLETIN describes the **reported rabies cases in Europe** for the **Second Quarter 2002**, subsequently referred to as "*This Quarter*".

In SECTION 2 a **summary of the rabies situation of the second quarter 2002** is given.

SECTION 3 (3.1-3.39) reflects the **situation for individual countries**. Unfortunately, not all countries report regularly. However, their contribution is expected.

In the **Miscellaneous SECTION (4)** under **4.1** an article elaborates on arctic rabies in Greenland from 1975-2001. **4.2** confirms a new case of European Bat Lyssavirus (EBL) infection in Danish sheep. With **4.3**, RABIES BULLETIN EUROPE - New conceptions, an article presents the new ideas on how the data should be collected in the future by the new editors of the BULLETIN.

The **rabies case data** are tabulated for the **Second Quarter 2002** in SECTION 5. The arrangement of countries follows practical considerations, not alphabetical ones.

SECTION 6 lists the **official contributors** to the BULLETIN.

The **geographical distribution** of rabies cases in Europe of the **Second Quarter 2002** is shown on a map of Europe in the ANNEX.

2. SUMMARY OF RABIES IN EUROPE

During "*This Quarter*", 1844 rabies cases were reported in Europe. Of these, 996 were in wild animals and 847 in domestic animals. There was 1 human case.

Of the 996 cases in wild animals, 780 were foxes, 2 jackals, 9 wolves, 132 raccoon dogs, 17 badgers, 1 stone marten, 22 pine martens, 14 polecats, 1 fish otter, 1 raccoon, 4 roe deer, 1 wild boar, 5 bats, 1 squirrel, 2 hamsters, 1 other wild animal and 3 unspecified animals.

Of the 847 domestic animals, 251 were dogs, 182 cats, 17 horses, 1 pig, 315 bovines, 76 sheep and 5 goats.

There was 1 **human case** reported in the Russian

Federation.

The **5 bat rabies cases** occurred in Denmark (1), Germany (2), the Russian Federation (1), and Spain (1). Because of the distinct epidemiological features of bat rabies, the cases are marked in a different colour in the map of the ANNEX. So is **the sheep case** of Denmark which was caused by the bat virus (see under 4.2 of this BULLETIN).

The **dog-mediated rabies** is only found in an obvious pattern in Turkey. Of 87 cases during "*This Quarter*", 75 (18 dogs, 55 bovines, 2 sheep) were in domestic animals, 12 (9 foxes, 2 jackals, 1 wolf) were in wild animals. However, certain areas

in the south of the European part of the Russian Federation indicate dog-mediated rabies or the mixed type of dog- and fox-mediated rabies as well.

The majority of cases derives as usual from **fox-mediated rabies**. It is therefore expected that a seasonal decrease of cases in the second quarter occurs in the countries with fox-mediated rabies. This can be seen during "*This Quarter*" as well, indicated by the decrease of cases in Europe from 2549 of the previous quarter to 1844 of "*This Quarter*", in spite of having the data included from Turkey and the areas in the southern part of the Russian Federation with dog-mediated rabies, which

have little or no seasonal changes.

Rabies-free countries in Europe during "*This Quarter*" were: Belgium, Cyprus, Finland, Greece, Iceland,

Ireland, Italy, the Grand Duchy of Luxembourg, Norway, Portugal, Sweden, Switzerland, the United Kingdom and Northern Ireland.

There were **no rabies cases reported** from Albania, France and the Netherlands. However, the last indigenously acquired case (terrestrial or bat) was less than two years ago.

3. RABIES IN INDIVIDUAL COUNTRIES

3.1 Albania ALB

by Kristaq Berxholi

There was no rabies case reported in the country during "*This Quarter*".

3.2 Austria AUT

by Walter Schuller
and Gabriele Romanek

An outbreak of rabies which started in the south of Austria, in Kärnten, described in the previous quarter, continued with 4 more cases - 3 foxes in the districts of Wolfsberg and Völkermarkt in the beginning of April, and 1 badger in Wolfsberg on 4th June. Should these be the last cases of the outbreak, the measures of control in regard to the application of the oral vaccination can be considered very successful (see as well the report in the previous issue of the RBE 1/02, pp 10 and 11).

In the entire country furthermore 2942 animals were examined for rabies with negative results.

3.3 Belgium BEL

by L. Lengele and Pierre Dechamps

The country remained **rabies-free**.

Surveillance

Up to the second quarter the following 560 animals were investigated with negative results: 194 foxes, 270 bovines, 6 dogs, 7 cats, 59 small ruminants, 2 horses, 15 badgers, 6 cervids and 1 stone marten.

3.4 Bosnia and Herzegovina BIH

by Ramiz Velic

During "*This Quarter*", 2 rabies cases (in 1 cat and 1 fox) were reported in the Federation of Bosnia and Herzegovina.

by Drago Nedic

From 1.1. to 31.08.2002 24 rabies cases were reported in the Republic of Srpska of Bosnia and Herzegovina. The disease occurred in 19 foxes, 1 dog, 1 bovine, 2 horses and 1 pig.

Editors note: The report of Dr. Nedic was received for the first time. As the data were not arranged according to quarters we can only include them in tables and maps from the next quarter onward.

3.5 Bulgaria BUL

by L. Lavchev

During "*This Quarter*", 3 rabies cases were reported in the province of Choumen. The animal species affected was not supplied.

3.6 Belarus BYE

by A.M. Axenov

A total of 146 rabies cases were reported in all 6 administrative regions, 8 cases more than in the previous quarter. The following animals were diagnosed rabid: 83 foxes, 1 wolf, 14 raccoon dogs, 2 badgers, 1 polecat, 1 hamster, 18 dogs, 14 cats, 1 horse, 10 bovines, 1 sheep.

3.7 Croatia CRO

by Mate Brstilo and Josip Marković

Of 597 animals investigated for rabies (159 domestic and 438 wild animals), a total of 70 were diagnosed rabid. There was an increase of 4 cases compared with the same period in 2001, and a decrease of 64 cases compared to the previous quarter.

Of 61 wild animals rabies was reported in 60 foxes and 1 badger, of 9 domestic animals in 1 dog, 2 cats, 1 pig and 5 sheep.

3.8 Cyprus CYP

by P. Economides

The country remained **rabies-free**.

3.9 Czech Republic CZH

by Oldrich Matouch

During "*This Quarter*", a total of 2111 samples (1871 wild and 240 domestic animals) were examined for rabies in the Czech Republic. Of these only 2 foxes were found rabid.

They were located in the district Trutnov near the state border to Poland.

An oral vaccination campaign was carried out in April 2002. An area of 53,922 km² was treated with 1,200,000 vaccine baits. Both, the aerial and manual technique were practised for their distribution.

3.10 Denmark DEN

by Preben Willeberg
and Tina Mørk

The country remained free of the classical rabies type.

There was 1 case of bat rabies and 1 sheep which died of a bat rabies infection. See the article in this BULLETIN under 4.2 for details.

3.11 Germany, Federal Republic DEU

by Winfried W. Müller
and Matthias Kramer

During "*This Quarter*", 6 rabies cases were reported in Germany. They occurred in 2 Federal States: 4 of the classical rabies type in 2 foxes, 1 stone marten and 1 roe deer in the state of Hessen and two bat cases in the state of Sachsen.

3.12 Estonia EST

by Matti Nautras

A total of 79 rabies cases was reported during "*This Quarter*", 8 cases more than during the previous quarter and 47 cases more than during the second quarter 2001.

The cases occurred in 41 foxes, 25 raccoon dogs, 8 dogs, 2 cats and 3 bovines.

3.13 Finland FIN

by Nina Sarén

The country remained **rabies-free**.

Surveillance

The following animals were examined for rabies during "*This Quarter*" with negative results: 36 foxes, 26 raccoon dogs, 7 badgers, 1 pine marten, 3 other wild carnivores, 1 dog and 2 cats.

3.14 France FRA

by Florence Cliquet

The country remained rabies-free in terrestrial animals.

There was no report on bat rabies.

Surveillance

471 animals were examined for rabies in the country with negative results.

3.15 Federal Republic of Yugoslavia FRY

by Nenad Ivančev

A total of 24 rabies cases (18 foxes, 1 other wild animal, 3 dogs, 2 sheep) were registered during "*This Quarter*" in the Federal Republic of Yugoslavia. There were 84 cases in the first and second quarters of this year compared to 165 cases in the same period of 2001.

3.16 Greece GRE

The country remained **rabies-free**.

3.17 Hungary HUN

by Tibor Balint and Zsolt Földi

During "*This Quarter*", 29 rabies cases were diagnosed in the country. 5 cases were located to the west of the river Danube.

Of the 29 cases, 23 were in wild animals (20 foxes, 2 roe deer, 1 badger) and 6 in domestic animals (4 cats, 1 dog, 1 horse).

3.18 Iceland ICE

The country remained **rabies-free**.

3.19 Ireland IRE

The country remained **rabies-free**.

3.20 Italy ITA

by Franco Mutinelli

The country remained **rabies-free**.
Surveillance

427 wild animals (of these 364 foxes) and 53 domestic animals from Trentino Alto Adige, Veneto and Friuli Venezia Giulia Regions (north-eastern Italy) were tested for rabies with negative results.

3.21 Lithuania LTU

by Kasimieras Lukauskas and A. Dranseika

During "*This Quarter*", there were 163 cases of rabies. 40 cases (24.5%) were diagnosed in domestic animals (13 bovines, 13 dogs, 13 cats, 1 horse) and 123 cases (75.5%) in wild animals (58 foxes, 50 raccoon dogs, 8 pine martens, 1 badger, 5 polecats, 1 fish otter).

During "*This Quarter*", 36 districts were affected. The most affected ones were the districts of Ignalina, Lazdijai, Panevėžys, Klaipėda.

During "*This Quarter*", 25,000 dogs, 3,500 cats and 1,875 bovines were vaccinated against rabies.

No human rabies case was registered in the country.

3.22 Luxembourg LUX

by Arthur Besch

The country remained **rabies-free**.

Summary 2001

16 foxes and 1 stone marten were tested for rabies with negative results.

The foxes were tested as well for *Echinococcus multilocularis* at the Institut Veterinärmedizin, Lebensmittelhygiene und Molekularbiologie in Saarbrücken, Germany. They all revealed negative results.

Control

In June an oral vaccination campaign against rabies for

fox cubs was carried out as intended. The vaccine baits were placed by hand near the fox dens.

3.23 Latvia LVA

by V. Veldre and E. Jēgers

81 rabies cases were registered during "*This Quarter*" in 21 districts. 73 cases were diagnosed in wild animals (90.1% of total). 53 of the cases in wild animals were foxes, 15 raccoon dogs, 2 polecats, 2 badgers and 1 pine marten. Of 8 rabies cases in domestic animals, 4 were dogs, 3 cats and 1 bovine. The most affected districts were Riga with 11 cases, Cesis 10 cases and Bauska 9 cases.

3.24 Moldova MLD

by E. Renita and B. Demchenco

Out of 23 animals examined for rabies during "*This Quarter*" (10 dogs, 5 cats, 3 bovines, 1 pig, 3 foxes, 1 rat) 4 were diagnosed rabid - 3 foxes, 1 cat.

3.25 Netherlands NET

by Monique Aalten

The country remained **rabies-free** in terrestrial animals.

There was no bat rabies case.

Surveillance

Of 28 animals tested for rabies (24 bats, 3 foxes, 1 cat), all revealed negative results.

3.26 Norway NOR

by Eivind Liven

The mainland of Norway remained **rabies-free**.

There was no case reported in the archipelago of Svalbard.

Correction

In March 2002 a fox was diagnosed rabid which had been stored in a freezer. The animal had been found dead in Svalbard in 1999. This was the first case since 1992.

3.27 Poland POL

by Andrzej Komorowski

A total of 248 rabies cases was registered in Poland during "*This Quarter*", 222 cases less than in the previous quarter and 501 cases less than in the second quarter 2001.

There were 226 cases in wild animals (189 foxes, 20 raccoon dogs, 4 badgers, 9 pine martens, 2 polecats, 1 roe deer, 1 wild boar) and 22 in domestic animals (4 dogs, 17 cats, 1 bovine).

The cases were reduced in general in comparison to the last year however, the area once already free for some time in the west of the country is at present reinfected.

3.28 Portugal POR

The country remained **rabies-free**.

3.29 Romania ROM

by Viorel Andronic

During "*This Quarter*", 19 rabies cases were reported in Romania, 32 cases less than in the previous quarter and 93 cases less than during the second quarter 2001.

There were 8 cases in foxes, 2 in badgers, 5 in dogs, 3 in bovines and 1 in a cat.

**3.30 Russia RUS
European part only**

by V.A. Vedernikov, V.A. Sedov, A.A. Shabeykin, A.A. Kharkevich, N.A. Klementyeva I.V. Baldina and A.M. Gulyukin B.L. Cherkasskiy and V.J. Ladnyi V.V. Seliverstov, V.N. Abramov, S.A. Kolomizev and N.V. Matochina

During "*This Quarter*", 622 rabies cases in animals were reported.

Of the total, 446 cases were in domestic animals - 118 dogs, 63 cats, 188 bovines, 13 horses, 64 sheep.

Of 176 wild animals rabies was diagnosed in 158 foxes, 8 raccoon dogs, 5 wolves, 2 polecats, 2 badgers, 1 bat.

Most affected were the Republic Bashkortostan with 82 cases, Astrakhan Region with 88 cases, Orenburg Region with 91 cases, Belgorod Region with 29 cases, Republic Tatarstan with 22 cases.

There was 1 human case reported - in the Orenburg Region.

3.31 Spain SPA

by Carlos Abellan Garcia

During "*This Quarter*", the mainland and islands of Spain remained rabies-free in terrestrial animals.

There was 1 dog case in Melilla, the Spanish territory of North Africa.

In Murcia on the mainland 1 bat rabies case occurred.

3.32 Slovak Republic SVK

by Dušan Magic

A total of 13 cases in animals was reported in the Slovak Republic during "*This Quarter*". Of these, 10 were in wild animals (9 foxes, 1 squirrel) and 3 in domestic animals (2 dogs, 1 cat).

3.33 Slovenia SVN

by Zoran Kovač

Only 2 cases in foxes were registered during "*This Quarter*", 1 case less than in the previous quarter, and 24 cases less than in the second quarter 2001.

3.34 Sweden SWE

The country remained **rabies-free**.

3.35 Switzerland SWI

by Reto Zanoni

The country remained **rabies-free**.

Surveillance

During "*This Quarter*", 25 animals were examined for rabies with negative results: 19 foxes, 2 bats, 2 dogs and 2 cats. The bats (in brackets the community where the sample was taken) were specified as *Eptesicus serotinus* (Les Brenets) and *Pipistrellus pipistrellus* (Renan BE).

3.38 Ukraine UKR

by P. Verbitskiy and Liudmyla Grishok

During "*This Quarter*", 235 rabies cases in animals were reported in the Ukraine. Of these, 163 were in domestic animals (55 dogs, 60 cats, 41 bovines, 1 horse, 1 sheep, 5 goats), and 72 in wild animals (61 foxes, 2 wolves, 2 badgers, 3 pine martens, 2 polecats, 1 raccoon, 1 hamster).

Of 25 regions in the country, 3 regions reported no rabies cases. 22 regions reported between 1 and 35 cases.

3.36 Turkey TUR

by Hüseyin Sungur

During "*This Quarter*", 87 rabies cases in animals were reported in Turkey. The disease occurred in 18 dogs, 55 bovines, 2 sheep, 9 foxes, 2 jackals and 1 wolf.

There was a major outbreak in Aydin and Izmir provinces in the west of the country (52 and 10 cases respectively). All other provinces recorded between 1 and 5 cases.

3.39 United Kingdom UNK

by Fred Landeg

The country remained **rabies-free**.

3.37 Macedonia TYM

No data.

4. MISCELLANEOUS ARTICLES

4.1 Rabies in Greenland, 1975 - 2001

by Ken Leisner, Directorate for Environment and Nature, Dept. Veterinary,
Box 280, 3952 Ilulissat, Greenland
Present address: Bjørnsholmvej 260, DK-9670 Overlade, Denmark

Introduction

Greenland is regarded as the largest island in the world (2,175,600 km²), however 77% of its land masses is covered by an up to 3 km thick ice cap. The ice cap covers all but a narrow, mountainous, barren rocky coast. Only along the 44,000 km long coastline animal and plant life can be found, including the settlement of approximately 60,000 human inhabitants. The mammalian biodiversity in this arctic and sub-arctic region is very small, only nine terrestrial wildlife mammals occur in Greenland; arctic lemming, arctic hare, arctic fox, wolf, stoat, polar bear, wolverine, caribou and musk-oxen. Humans brought sheep, dogs and introduced also the house mouse into town. Sheep are only found in the southern part. In these sheep-farming areas the keeping of sledge dogs is forbidden by law.

The first documented rabies case was described in a report written in 1859, ever since rabies has been reported on and off. The major vector species is the polar fox (*Alopex lagopus*) which is found all along the coast. Little is known about the ecology of this animal in Greenland. Animals submitted for rabies diagnosis are sent to the Danish Veterinary Institute Lindholm in Denmark. The virus strain is the arctic fox strain. This review will only discuss rabies and rabies control in animals, while the annual number of human exposures and post exposure treatment (PET) are unknown. Only one human rabies case has been documented. In 1960, a 4-year old child from Aasiaat died after it was bitten by a dog.

Rabies Cases

Between 1975 - 2001, a total of 279 cases was reported from Greenland (FIGURE 4.1.1, see page 12). The number of cases is relatively low, making it difficult for general comments. Unfortunately, on some occasions the exact number of animals involved was not documented, only the number of outbreaks was reported. Arctic foxes accounted for 73.5% (n=205) of all cases, followed by dogs - 24.4% (n=68) and sheep - 2% (n=5). In 1990, a rabies case in a caribou was reported from the Nuuk-region.

To be able to analyse the data in more detail, Greenland has been divided in 8 regions that are isolated from each other as a result of geographical barriers - mountain ranges, ice cap, or glaciers - (FIGURE 4.1.2, see page 13). Of course, these barriers are not definite; the sea ice during the winter period can be used by the foxes for example as a route to surpass these barriers.

TABLE 4.1.1 (see page 13) shows the cases by regions and year.

In Region III (Uummannaq) all cases were reported from sledge dogs. Here, no case of arctic fox rabies has ever been documented. In the sheep-farming Region VII, South-Greenland, rabies re-emerged after a 28-year period of absence since the last epizootic in 1964-65.

Most cases were reported during the 1st quarter (44.3%), followed by the 2nd quarter (29%) and

the 4th quarter (12%), the lowest number was observed during the 3rd quarter (14.7%). The seasonal arctic fox and dog rabies incidence on a monthly basis is shown in FIGURE 4.1.3 (see page 14).

Data on the total number of animals submitted are only available for the period 1997-2001; almost 40% of all animals (n=154) handed over resulted rabies-positive. However, there was a distinct difference between arctic foxes and sledge dogs: 65% of the arctic foxes and only 6% of the foxes (n=83) and dogs (n=67) were rabies-positive, respectively.

Arctic fox

The arctic fox is the major vector species of rabies in Greenland. Little is known on the exact distribution and population numbers of arctic foxes here. Also, the hunting figures can not give any information, simply because they are not reported to the authorities. In 1900 and 1939, 5,600 and 7,000 pelts of arctic foxes were exported from Greenland, respectively. Nowadays, fox hunting has decreased considerably, most likely as a result of low fur prices and alternative sources of income. The topographical characteristics of Greenland would implicate that the arctic fox population consists of different sub-populations that are geographically isolated from each other. Especially the ice cap seems to be an insurmountable barrier. However, there are several reports of arctic foxes observed on the ice cap hundreds of kilometres from the coast. On the other hand, arctic foxes will often follow a polar bear far out onto the drift ice in order to eat the remains of the bear's seal catches. These unlikely routes over large distances could result in the interconnection of the different sub-populations. Arctic fox migrations of more than 1000 km in one season and up to 2300 km in total have been reported. Arctic foxes are opportunistic feeders and eat almost anything that is available (berries, seaweed, insects and larvae, birds and their eggs, fish, seal placentas, lemmings, carrion of

large animals, rubbish from the dump sites). When food is abundant, large litters are common and the population size increases rapidly, only to crash when food sources are scarce. These population cycles are typically repeated every 4 years. In other areas, along ice-free shore lines, food abundance is more stable over the years and arctic fox reproduction and population densities are relatively constant between the years. The few detailed reports on the behaviour of rabid arctic foxes, indicate that these animals become tame and loose their natural shyness. This behaviour would facilitate the interspecific virus transfer from the arctic fox to the second most often infected animal species in Greenland, the sledge dog.

The Greenland Inuit Dog

These animals are, with a few exceptions of some bitches with their litters, never free-roaming but are always chained up. However, around the so-called stake-out no fence is placed so rabid arctic foxes can walk between these dogs without any limitation. The number of sledge dogs that are kept around the villages in Greenland is incredibly high; examples are 37,000 in 1998 and 24,000 in 2002.

The only way to protect these animals against rabies is by vaccination. Due to the remoteness of the villages, the actual vaccinations are not done by the veterinarians. The dog are vaccinated every three years, free of charge. Therefore, during the annual vaccination programme, only the newborn and animals previously vaccinated more than 3 years ago are immunized. On an average, 35% of all dogs are vaccinated every year. It is assumed that the other dogs are still protected against rabies (TABLE 4.1.2, see page 14). However, a small study examining the immunogenicity of a commercial rabies vaccine in sledge dogs revealed very low titres.

Blood samples were taken from sledge dogs 9 to 12 months post-vaccination. The Geometric

Mean Titre was 0.69 IU/ml (± 0.8) by using the RFFIT. Five of 17 dogs vaccinated had a titre below the arbitrarily defined threshold of 0.5 IU/ml. The causes of this poor immune response remains to be clarified.

Conclusions

Rabies does not pose a serious threat to the public health in Greenland. The number of human rabies reported is low. However, the annual dog vaccination programmes have to continue because there is no wildlife rabies control programme. Also, the very high population turnover of the dogs implicates that every year a relatively large proportion needs to be vaccinated. The concept of oral vaccination of wildlife as practised in Europe

and North-America is not feasible without major adaptation due to the exceptional climatic and geographical conditions of the arctic and subarctic. Although Greenland is an island, a permanent rabies-free status will be difficult to achieve as during the winters animals from Canada and Europe (e.g. Svalbard) can cross the arctic sea to re-infect Greenland.

Source used on the ecology:

Born EW, Böcher J (2001)
 The Ecology of Greenland.
 Ministry of Environment and Natural Resources, Nuuk

FIGURE 4.1.1
 Number of rabies cases reported from Greenland, 1975-2001

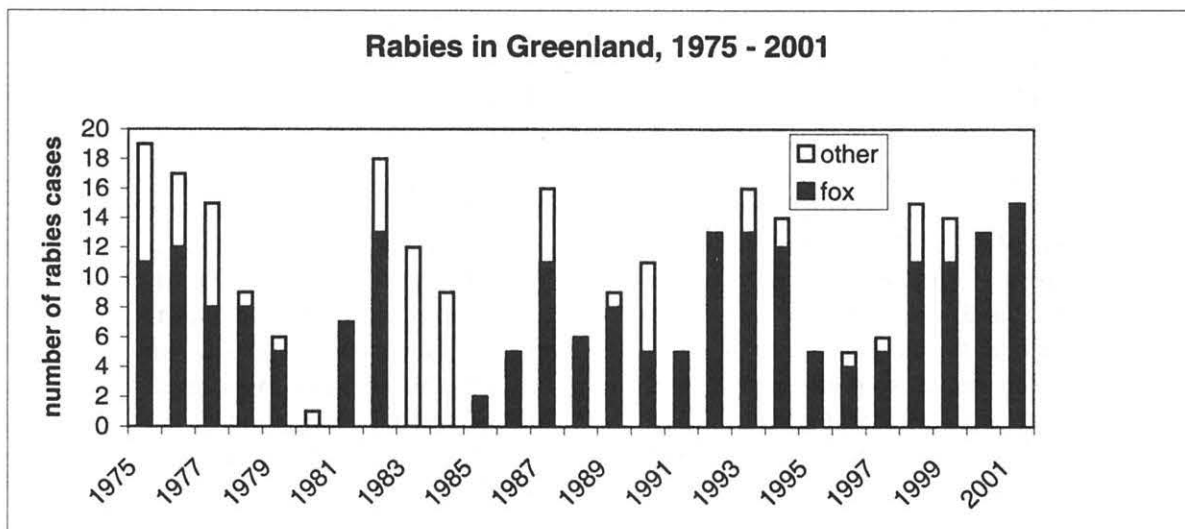


FIGURE 4.1.2

Greenland and the location of the 8 regions:

- I - Qaanaaq
- II - Upernavik
- III - Uummannaq
- IV - Disko Bay
- V - Sisimiut
- VI - Nuuk
- VII - South Greenland
- VIII - East Greenland

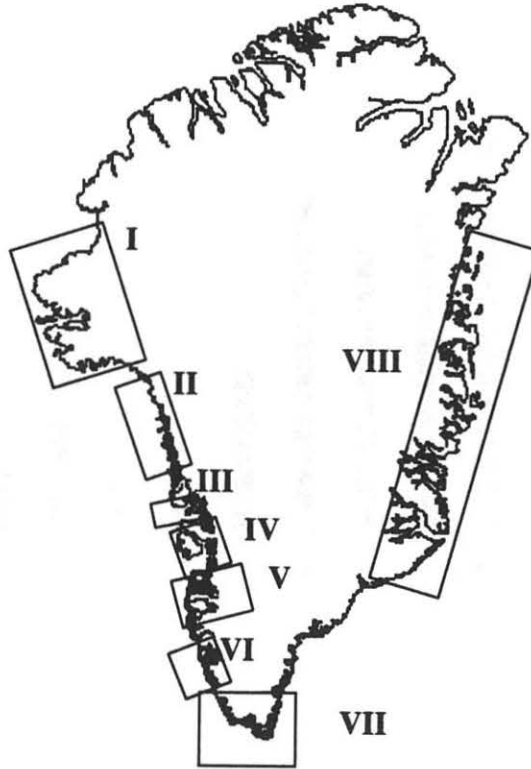


TABLE 4.1.1

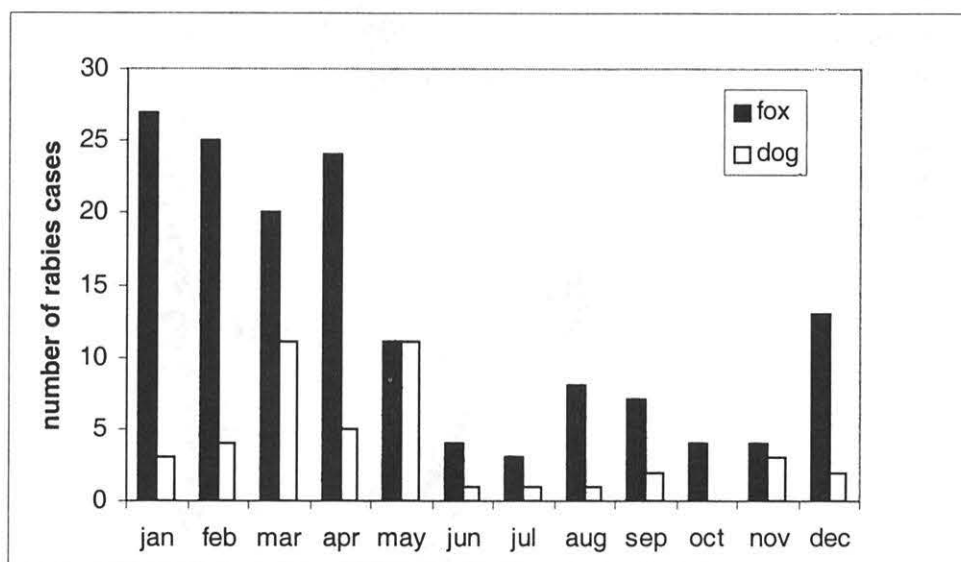
The annual number of rabies cases in the 8 different regions between 1975-2001

	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
I	1	1	9	6	6		5	4			1	4	3	1		5	1	6	3								1
II				3		1	2	2		6	1	1		1		1			3	11	1		1				
III									12	3																	
IV	12	2						12							4	3							1	5	2	4	5
V	2	5	6															6	8			1			4	1	2
VI													11		1									1	1	5	7
VII													2	4	1	2	3	1		1					1	1	5
VIII	4	9																*	2	1	3	1	4	4	9	4	1

* - in 1992 an outbreak was reported, but no detailed information on the number of animals involved was available.

FIGURE 4.1.3

The arctic fox and dog rabies incidence in Greenland on a monthly basis between 1982-2001

**TABLE 4.1.2**

An estimation of the number of sledge dogs and the number of dogs vaccinated between 1990 and 2001

Year	Population size	Number of dogs vaccinated	Year	Population size	Number of dogs vaccinated
1990	28.449	10.832	1996	29.449	11.645
1991	28.526	4.712	1997	30.432	7.202
1992	31.162	10.274	1998	36.965	18.809
1993	31.600	8.108	1999	27.732	10.868
1994	32.106	9.770	2000	25.099	12.855
1995	31.994	9.017	2001	24.425	12.211

4.2 A New Case of European Bat Lyssavirus (EBL) Infection in Danish Sheep

by Rønsholt, Danish Veterinary Institute, Lindholm, DK-4771 Kalvehave

Denmark has been free from classical rabies, caused by lyssavirus genotype 1, since 1982. However, like other European countries especially in the Northwestern part of the region, an increasing number of EBL infections in free-living as well as in some zoo- and laboratory bats have been registered. The EBL seems to survive as a persistent infection in the bat, which might be activated by an eventual stress situation in the environment (Rønsholt et al. 1998, Serra Cobo et al. 2002, Wellenberg et al. 2002).

Besides three fatal EBL infections in man, the spread of the infection to terrestrial animals has previously only been registered in four cases of which the first three were related to individual sheep belonging to three Danish herds in 1998 (RBE 3/98, RBE 4/98), which according to the results of a histological investigation also suffered from an cerebral infection with *Listeria monocytogenes*, while the fourth case, reported in 2001 (RBE 3/01), describes a fatal infection in a stone marten located in the northern part of Germany (Brandenburg).

In April this year a new sporadic EBL infection of a sheep appeared in another Danish herd consisting of 55 ewes situated not far from the former reported outbreaks in sheep 4 years ago. The affected sheep was euthanased after having shown central nervous symptoms in the form of starring glance, salivation, stiff gait and circling movements. Histological evidence of scrapie or *Listeria* infection was not present. The rabies diagnosis was confirmed by the standard fluorescent antibody test (FAT) on brain smears with two independent sets of serological kits, while the isolated EBL itself by a monoclonal antibody analysis was characterised to be homologous with

previously isolated Danish EBL-1a strains from both Danish bats and sheep (King 1993). Future results from an ongoing detailed sequence analysis of the actual strain and a serological screening of sheep and eventual other virus hosts in the nearest and the more distant environment may add to our knowledge about the EBL epidemiology.

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4.3 Rabies Bulletin Europe - New Conceptions

by Dr. Carsten Pötzsch

WHO Collaborating Centre for Rabies Surveillance and Research in Europe
Institute of Epidemiology; Federal Research Centre for Virus Diseases of Animals
Seestr. 55, D-16868 Wusterhausen/Germany

As announced in the „Rabies Bulletin Europe“ 4/2001 and in this present volume, the editorship of the Rabies Bulletin Europe (RBE) within the "WHO Collaborating Centre for Rabies Surveillance and Research" will be shifted from Tübingen to Wusterhausen, Germany.

This article will introduce modified data sheets for the reporting of rabies data to the RBE. **The new forms should be used starting from the 4th quarter 2002.** This present paper is therefore of high relevance for national representatives involved in gathering and summarizing rabies data, as well as for specialists of rabies surveillance and control in a wider context.

The RBE is an essential data reporting system that is widely used as an information source and decision support for rabies control and prevention. The print copy is sent out quarterly to over one thousand subscribers worldwide, and the RBE website is accessed and worked with by about one thousand users every month. The RBE has provided 25 years of excellent service to its users. As a modern and important information source, the RBE will adjust to changing possibilities in the communication field and continue meeting the expectations of its users. This includes adaptations regarding data quality and analysis, and faster availability of information through the use of modern communication systems.

Described below, a modified system for the quarterly reporting of rabies data to the RBE is introduced. This system is based on email reporting of rabies data.

The advantages of this system are that the results are available much faster, the print

version of the RBE could be sent out earlier than presently and the electronic version in the Internet will be available shortly after data submission. The new system still allows the use of mail or fax by simply copying the data sheets and completing them by hand. However, the use of email reporting is strongly encouraged.

The new reporting forms consist of:

- an "Area list"
- a reporting form "Rabies cases"
- a reporting form "Animal tested"

Area list

The reporting system is based on given administrative subdivision for each country in an "Area List". This "Area list" is derived from the most recent geographical database available to the editors. Countries will report exclusively on the basis of these given areas. This simplifies geographical data collection for both the reporting countries and the editors of the RBE.

Reporting form: Rabies cases FIGURE 4.3.1 (see page 18)

Each individual rabies case will be entered by date and administrative subdivision. This reporting form is similar to the form which has been used until now.

Reporting, using the new forms, is simplified and has considerable advantages:

- firstly, the categories of rabid animals have been reduced and are provided on the form
- secondly, all administrative subdivisions are provided on the area list

Reporting form: Animals tested FIGURE 4.3.2 (see page 19)

Information about animals tested, broken down by administrative subdivision, should be provided on this form. So far, only the number of rabies cases was reported to the RBE. However, this figure is of limited information to assess the rabies situation in a county. To measure the rabies incidence, the number of cases, as well as the number of animals tested is important.

Up to now, already 43% of the countries (13/30) do regularly report the number of animals tested for rabies.

Outlook

This email reporting system is part of a 3 step conception to offer more information and analytical precision to the users of the RBE. These 3 steps are (date of planned introduction in brackets):

- Step I Email reporting (4/2002)
- Step II Use of standardized
 geographical references
 For case reporting (early 2003)
- Step III Interactive Internet
 reporting (2003/2004)

Summary

Advantages of the new reporting system:

- simplified case reporting
- defined administrative subdivisions simplify reporting and data analysis
- the inclusion of the number of animals tested will allow information about rabies incidences, and more detailed national and Europe wide spatial and temporal analyses
- the use of standardized geographical references and Internet reporting in the future allows improved data analyses and more user friendliness

The system can only work to its full advantages, if all participating countries contribute in time. The WHO Collaborating Centre Wusterhausen will provide all the necessary assistance and support.

Important note

The new forms will be sent by email to each participating country until mid November. The national representatives are asked to use the new reporting forms **starting with the 4th quarter 2002**. From each country a completed copy of the "Rabies cases" form and the "Animal tested" form should be sent to the following email address:

Carsten.Poetzsch@wus.bfav.de

These two data sheets replace the present case reporting form. The country representatives are also invited to send their comments and suggestions about the new reporting system.

Further contact details:

Dr. Carsten Poetzsch
Institute for Epidemiology
Federal Research Centre for Virus Diseases of Animals
WHO Collaborating Centre for Rabies Surveillance and Research in Europe
Seestr. 55,
D-16868 Wusterhausen, Germany
phone: ++49 (0) 33979 80158
fax: ++49 (0) 33979 80200

This paper was presented at the "WHO Meeting of Rabies Control in middle and eastern European Countries" in Košice, Slovak Republic on 25.-27. September 2002.

FIGURE 4.3.1
Example of the reporting form "Rabies cases" with explanations

RABIES BULLETIN EUROPE

1. Rabies cases Country: **Poland** Reporting period (quarter.year): **3** **2002**

Date (dd.mm.)	Area (see "area list")	Rabies cases (1=yes, [empty field]=no)																									
		Domestic animals										Wildlife									Human cases	Human exposure					
		dog	cat	cattle	equine	sheep	goat	pig	stray dog	other	unspecified	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelides	other carnivores	wild boar			roe deer	red deer	fallow deer	other	bat
11.9	Lubuskie	1																									
16.9	Slaskie											1															
1.10	Malopolskie											1															1
17.10	Mazowieckie																			1							
22.10	Lódzkie					1																					
Total		1	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1

- Only administrative subunits given in the "Area list" should be used
- Rabies cases are sorted chronologically by date
- Total number of cases of the reporting quarter (after the at the last case)

- Animal categories other than mentioned
- Animal categories that can not be assigned
- Human rabies cases
- Human exposure related to a rabies case

FIGURE 4.3.2
Example of the reporting form "Animal tested" with explanations

2. Animals tested (cases not included)		Country: Poland										Reporting period (quarter.year): 3 2002													
Area (see "area list")	No. of animals tested																								
	Domestic animals											Wildlife													
	dog	cat	cattle	equine	sheep	goat	pig	stray dog	other	unspecified	fox	raccoon dog	raccoon	wolf	badger	marten	other mustelides	other carnivores	wild boar	roe deer	red deer	fellow deer	other	bat	unspecified
<i>Example</i>																									
Dolnośląskie	23	12									118	22									3				
Kujawsko-Pomorskie		2																							
Lubelskie	6		2																		2				
Lubuskie																								1	
Łódzkie					4							56													
Małopolskie			4								34														
Mazowieckie	76	23																							
Opolskie																									
Podkarpackie																									
Podlaskie		1									66	7													
Pomorskie		4																							
Śląskie	45	33	1																						
Świętokrzyskie											93	12									1				
Warmińsko-Mazurskie		1																						8	
Wielkopolskie	7	3										9													
Zachodniopomorskie					8						17														
Total	157	79	7	0	12	0	0	0	0	0	328	106	0	0	0	0	0	0	0	6	0	0	0	9	0

- All animals tested for rabies with negative result
- These are all administrative subdivision from the "area list"

Table 5.1

EUR		EUROPE		2/2002		RABIES CASES							1. 4.02 - 30. 6.02			
LOCATION		DOMESTIC ANIMALS						WILD ANIMALS						HUMAN CASES	TOTAL	
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
ALB	ALBANIA	*						0						0		0
AUT	AUSTRIA							0	3	1	-	-	-	4		4
BEL	BELGIUM	*						0						0		0
BIH	BOSNA I HERCEGOWI	1)	-	1	-	-	-	1	1	-	-	-	-	1		2
BUL	BULGARIA							0					3	3		3
BYE	BELARUS		18	14	10	1	-	44	83	2	1	-	16	102		146
CRO	CROATIA		1	2	-	-	5	9	60	-	1	-	-	61		70
CYP	CYPRUS	*						0						0		0
CZH	CZECH REPUBLIC							0	2	-	-	-	-	2		2
DEN	DENMARK		-	-	-	1	-	1	-	-	-	-	1	1		2
DEU	FED.REP.OF GERMANY							0	2	-	1	1	2	6		6
EST	ESTONIA		8	2	3	-	-	13	41	-	-	-	25	66		79
FIN	FINLAND	*						0						0		0
FRA	FRANCE	*						0						0		0
FRY	FED.REP.OF YUGOSLA		3	-	-	-	2	5	18	-	-	-	1	19		24
GRE	GREECE	*						0						0		0
HUN	HUNGARY		1	4	-	1	-	6	20	1	-	2	-	23		29
ICE	ICELAND	*						0						0		0
IRE	IRELAND	*						0						0		0
ITA	ITALY	*						0						0		0
LTU	LITHUANIA		13	13	13	1	-	40	58	1	14	-	50	123		163
LUX	LUXEMBOURG	*						0						0		0
LVA	LATVIA		4	3	1	-	-	8	53	2	3	-	15	73		81
MLD	MOLDOVA		-	1	-	-	-	1	3	-	-	-	-	3		4
NET	NETHERLANDS	*						0						0		0
NOR	NORWAY	*						0						0		0
POL	POLAND		4	17	1	-	-	22	189	4	11	1	21	226		248
POR	PORTUGAL	*						0						0		0
ROM	ROMANIA		5	1	3	-	-	9	8	2	-	-	-	10		19
RUS	RUSSIAN FEDERATION		118	63	188	13	64	446	158	2	2	-	14	176	1	623
SPA	SPAIN	2)	1	-	-	-	-	1	-	-	-	-	1	1		2
SVK	SLOVAK REPUBLIC		2	1	-	-	-	3	9	-	-	-	1	10		13
SVN	SLOVENIA							0	2	-	-	-	-	2		2
SWE	SWEDEN	*						0						0		0
SWI	SWITZERLAND + LIEC*							0						0		0
TUR	TURKEY		18	-	55	-	2	75	9	-	-	-	3	12		87
TYM	MACEDONIA	**						0						0		0
UKR	UKRAINE		55	60	41	1	6	163	61	2	5	-	4	72		235
UNK	UNITED KINGDOM	*						0						0		0
TOTAL			251	182	315	17	81	847	780	17	38	4	157	996	1	1844
PER CENT			13.6	9.9	17.1	0.9	4.4	45.9	42.3	0.9	2.1	0.2	8.5	54.0	0.1	100.0

* no cases ** no data 1) not complete 2) 1 dog in North Africa

Table 5.2

EUR		EUROPE		1-2/2002				RABIES CASES						1. 1.02 - 30. 6.02	
LOCATION		DOMESTIC ANIMALS						WILD ANIMALS						HUMAN CASES	TOTAL
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS		
ALB	ALBANIA	*						0						0	0
AUT	AUSTRIA		1	1	-	-	-	2	19	1	-	2	-	22	24
BEL	BELGIUM	*						0						0	0
BIH	BOSNA I HERCEGOWI	1)	-	1	2	-	-	3	22	-	-	-	-	22	25
BUL	BULGARIA							0	-	-	-	-	8	8	8
BYE	BELARUS		36	20	13	1	1	71	185	3	1	1	23	213	284
CRO	CROATIA		3	2	1	-	7	14	185	1	2	2	-	190	204
CYP	CYPRUS	*						0						0	0
CZH	CZECH REPUBLIC							0	3	-	-	-	-	3	3
DEN	DENMARK		-	-	-	-	1	1	-	-	-	-	1	1	2
DEU	FED.REP.O.GERMANY	2)	1	1	-	-	-	2	9	-	3	5	3	20	22
EST	ESTONIA		10	6	4	-	-	20	66	-	-	-	64	130	150
FIN	FINLAND	*						0						0	0
FRA	FRANCE	*						0						0	0
FRY	FED.REP.OF YUGOSLA		8	2	1	-	2	13	69	-	-	-	2	71	84
GRE	GREECE	*						0						0	0
HUN	HUNGARY		1	8	5	1	1	16	48	1	-	3	1	53	69
ICE	ICELAND	*						0						0	0
IRE	IRELAND	*						0						0	0
ITA	ITALY	*						0						0	0
LTU	LITHUANIA		26	24	21	1	2	74	112	1	25	2	137	277	351
LUX	LUXEMBOURG	*						0						0	0
LVA	LATVIA		17	13	1	-	-	31	122	3	8	-	50	183	214
MLD	MOLDOVA		1	2	1	-	1	5	8	-	-	-	1	9	14
NET	NETHERLANDS	*						0						0	0
NOR	NORWAY	*						0						0	0
POL	POLAND		20	36	9	-	-	65	565	4	20	3	61	653	718
POR	PORTUGAL	*						0						0	0
ROM	ROMANIA		14	6	3	-	8	31	34	2	2	-	1	39	70
RUS	RUSSIAN FEDERATION		291	135	349	29	130	937	397	2	5	-	23	427	1365
SPA	SPAIN	3)	1	-	-	-	-	2	3	-	-	-	1	1	4
SVK	SLOVAK REPUBLIC		5	3	-	-	-	9	38	-	-	-	2	40	49
SVN	SLOVENIA							0	5	-	-	-	-	5	5
SWE	SWEDEN	*						0						0	0
SWI	SWITZERLAND + LIEC*							0						0	0
TUR	TURKEY		40	-	85	-	7	132	17	-	-	-	4	21	153
TYM	MACEDONIA	**						0						0	0
UKR	UKRAINE		127	131	89	1	9	358	200	3	8	-	6	217	575
UNK	UNITED KINGDOM	*						0						0	0
TOTAL			602	391	584	33	169	1787	2104	21	74	18	388	2605	4393
PER CENT			13.7	8.9	13.3	0.8	3.8	40.7	47.9	0.5	1.7	0.4	8.8	59.3	100.0

* no cases ** no data 1) not complete 2) dog imported from Azerbaijan 3) 3 domestic animals in North Africa

Table 5.3

EUR		EUROPE		2/2002		RABIES CASES 'OTHER ANIMAL SPECIES'					1. 4.02 - 30. 6.02		
LOCATION		OTH.DOM.ANI.	OTHER WILD ANIMALS								UNSPEC.	TOTAL	
CODE	NAME	PIG	JACKAL	WOLF	RACCOON DOG	RACCOON	WILD BOAR	INSECT. BAT	SQUIRREL	HAMSTER	OTH.WILD ANIMAL		
BUL	BULGARIA	-	-	-	-	-	-	-	-	-	-	3	3
BYE	BELARUS	-	-	1	14	-	-	-	-	1	-	-	16
CRO	CROATIA	1	-	-	-	-	-	-	-	-	-	-	1
DEN	DENMARK	-	-	-	-	-	-	1	-	-	-	-	1
DEU	FED.REP.OF GERMANY	-	-	-	-	-	-	2	-	-	-	-	2
EST	ESTONIA	-	-	-	25	-	-	-	-	-	-	-	25
FRY	FED.REP.OF YUGOSLA	-	-	-	-	-	-	-	-	-	1	-	1
LTU	LITHUANIA	-	-	-	50	-	-	-	-	-	-	-	50
LVA	LATVIA	-	-	-	15	-	-	-	-	-	-	-	15
POL	POLAND	-	-	-	20	-	1	-	-	-	-	-	21
RUS	RUSSIAN FEDERATION	-	-	5	8	-	-	1	-	-	-	-	14
SPA	SPAIN	-	-	-	-	-	-	1	-	-	-	-	1
SVK	SLOVAK REPUBLIC	-	-	-	-	-	-	-	1	-	-	-	1
TUR	TURKEY	-	2	1	-	-	-	-	-	-	-	-	3
UKR	UKRAINE	-	-	2	-	1	-	-	-	1	-	-	4
TOTAL		1	2	9	132	1	1	5	1	2	1	3	158
PER CENT		0.6	1.3	5.7	83.5	0.6	0.6	3.2	0.6	1.3	0.6	1.9	100.0

Table 5.4.1

R A B I E S C A S E S															1. 4.02 - 30. 6.02	
LOCATION		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL	
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL
AUT A U S T R I A																
	208 VOELKERMARKT							0	1	-	-	-	-	1		1
	209 WOLFSBERG							0	2	1	-	-	-	3		3
TOTAL		0	0	0	0	0	0	0	3	1	0	0	0	4	0	4
DEU F E D . R E P . O F G E R M A N Y																
	06 Hessen							0	2	-	1	1	-	4		4
	14 Sachsen							0	-	-	-	-	2	2		2
TOTAL		0	0	0	0	0	0	0	2	0	1	1	2	6	0	6
PER CENT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	16.7	16.7	33.3	100.0	0.0	100.0
HUN H U N G A R Y																
	01 Budapest	-	1	-	-	-	-	1						0		1
	03 Bacs-Kiskun	-	1	-	-	-	-	1	2	-	-	1	-	3		4
	04 Bekes	-	1	-	-	-	-	1	2	-	-	-	-	2		3
	05 Borsod-Abauj-Zemplen							0	1	-	-	-	-	1		1
	06 Csongrad	1	1	-	-	-	-	2	5	-	-	-	-	5		7
	09 Hajdu-Bihar							0	3	-	-	-	-	3		3
	10 Heves							0	1	-	-	-	-	1		1
	12 Nograd							0	1	-	-	-	-	1		1
	13 Pest							0	2	1	-	-	-	3		3
	16 Jasz-Nagykun-Szolnok							0	1	-	-	-	-	1		1
	18 Vas	-	-	-	1	-	-	1	1	-	-	-	-	1		2
	19 Veszprem							0	-	-	-	1	-	1		1
	20 Zala							0	1	-	-	-	-	1		1
TOTAL		1	4	0	1	0	0	6	20	1	0	2	0	23	0	29
PER CENT		3.4	13.8	0.0	3.4	0.0	0.0	20.7	69.0	3.4	0.0	6.9	0.0	79.3	0.0	100.0
SPA S P A I N																
	30 MURCIA							0	-	-	-	-	1	1		1
	52 MELILLA (NORTH AFRICA)	1	-	-	-	-	-	1						0		1
TOTAL		1	0	0	0	0	0	1	0	0	0	0	1	1	0	2

Table 5.4.2

R A B I E S C A S E S																1. 4.02 - 30. 6.02	
LOCATION CODE NAME		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL		
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL	
BIH B O S N A I H E R C E G O W I N A																	
03	Tuzlanski						0	1	-	-	-	-	1		1		
07	Hercegovacko-Neretvan	-	1	-	-	-	1						0		1		
TOTAL		0	1	0	0	0	1	1	0	0	0	0	1	0	2		
CRO C R O A T I A																	
01	Zagrebacka	1	-	-	-	5	-	6	6	-	-	-	-	6	12		
02	Krapinsko-Zagorska	-	1	-	-	-	-	1	1	-	-	-	-	1	2		
03	Sisacko-Moslavaca						0	10	-	-	-	-	10	10			
04	Karlovacka						0	3	-	-	-	-	3	3			
10	Viroviticko-Podravska						0	3	-	-	-	-	3	3			
11	Pozesko-Slavonska						0	2	-	-	-	-	2	2			
12	Brodsko-Posavska	-	1	-	-	-	1	2	-	-	-	-	2	3			
13	Zadarska						0	1	-	-	-	-	1	1			
14	Osijecko-Baranjska						0	2	-	-	-	-	2	2			
15	Sibensko-Kninska						0	3	-	-	-	-	3	3			
16	Vukovarsko-Srijemska	-	-	-	-	-	1	3	-	-	-	-	3	4			
17	Splitsko-Dalmatinska						0	12	-	-	-	-	12	12			
18	Istarska						0	10	-	1	-	-	11	11			
19	Dubrovačko-Neretvanska						0	1	-	-	-	-	1	1			
21	Zagreb						0	1	-	-	-	-	1	1			
TOTAL		1	2	0	0	5	9	60	0	1	0	0	61	0	70		
PER CENT		1.4	2.9	0.0	0.0	7.1	12.9	85.7	0.0	1.4	0.0	0.0	87.1	0.0	100.0		
SVN S L O V E N I A																	
107	ROGATEC						0	1	-	-	-	-	1		1		
143	ZAVRC						0	1	-	-	-	-	1		1		
TOTAL		0	0	0	0	0	0	2	0	0	0	0	2	0	2		

Table 5.4.3

R A B I E S C A S E S															1. 4.02 - 30. 6.02	
LOCATION		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL	
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL
BUL B U L G A R I A																
27	CHOUMEN							0	-	-	-	-	3	3		3
MLD M O L D O V A																
01	Balti							0	1	-	-	-	-	1		1
03	Chisinau							0	1	-	-	-	-	1		1
05	Lapusna	-	1	-	-	-	-	1						0		1
07	Soroca							0	1	-	-	-	-	1		1
TOTAL		0	1	0	0	0	0	1	3	0	0	0	0	3	0	4
PER CENT		0.0	25.0	0.0	0.0	0.0	0.0	25.0	75.0	0.0	0.0	0.0	0.0	75.0	0.0	100.0
ROM R O M A N I A																
03	ARGES	-	-	1	-	-	-	1	-	1	-	-	-	1		2
05	BIHOR	3	-	2	-	-	-	5						0		5
08	BRASOV	2	1	-	-	-	-	3						0		3
16	DIMBOVITA							0	1	-	-	-	-	1		1
20	GORJ							0	2	-	-	-	-	2		2
22	HUNEDOARA							0	1	-	-	-	-	1		1
27	MURES							0	1	-	-	-	-	1		1
30	PRAHOVA							0	1	-	-	-	-	1		1
32	SALAJ							0	2	-	-	-	-	2		2
38	VASLUI							0	-	1	-	-	-	1		1
TOTAL		5	1	3	0	0	0	9	8	2	0	0	0	10	0	19
PER CENT		26.3	5.3	15.8	0.0	0.0	0.0	47.4	42.1	10.5	0.0	0.0	0.0	52.6	0.0	100.0

Table 5.4.4

R A B I E S C A S E S																1. 4.02 - 30. 6.02	
LOCATION		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL		
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL	
BYE B E L A R U S																	
01	Brest Region	2	1	-	-	1	-	4	2	-	-	-	-	2	6		
02	Vitebsk Region	4	5	2	1	-	-	12	33	2	-	-	12	47	59		
03	Gomel Region	7	6	8	-	-	-	21	7	-	1	-	3	11	32		
04	Grodno Region	2	-	-	-	-	-	2	15	-	-	-	-	15	17		
05	Minsk Region	1	2	-	-	-	-	3	10	-	-	-	1	11	14		
06	Mogilev Region	2	-	-	-	-	-	2	16	-	-	-	-	16	18		
TOTAL		18	14	10	1	1	0	44	83	2	1	0	16	102	0	146	
PER CENT		12.3	9.6	6.8	0.7	0.7	0.0	30.1	56.8	1.4	0.7	0.0	11.0	69.9	0.0	100.0	
LVA L A T V I A																	
01	Aizkraukle							0	-	-	-	-	1	1	1		
02	Aluksne							0	1	-	-	-	2	3	3		
03	Balvi							0	2	-	-	-	1	3	3		
04	Bauska	-	1	1	-	-	-	2	5	-	-	-	2	7	9		
05	Cesis	-	1	-	-	-	-	1	6	1	-	-	2	9	10		
06	Daugavpils							0	1	-	-	-	1	2	2		
07	Dobeles	1	-	-	-	-	-	1	-	-	-	-	2	2	3		
08	Gulbene	1	-	-	-	-	-	1	3	-	-	-	-	3	4		
10	Jelgava							0	2	-	-	-	-	2	2		
11	Kraslava							0	2	-	-	-	1	3	3		
13	Liepaja							0	3	1	3	-	-	7	7		
15	Ludza							0	1	-	-	-	-	1	1		
16	Madona							0	1	-	-	-	2	3	3		
17	Ogre							0	4	-	-	-	1	5	5		
18	Preiļi	1	-	-	-	-	-	1	2	-	-	-	-	2	3		
19	Rezekne	-	1	-	-	-	-	1	1	-	-	-	-	1	2		
20	Riga	1	-	-	-	-	-	1	10	-	-	-	-	10	11		
22	Talsi							0	1	-	-	-	-	1	1		
24	Valka							0	2	-	-	-	-	2	2		
25	Valmiera							0	4	-	-	-	-	4	4		
26	Ventspils							0	2	-	-	-	-	2	2		
TOTAL		4	3	1	0	0	0	8	53	2	3	0	15	73	0	81	
PER CENT		4.9	3.7	1.2	0.0	0.0	0.0	9.9	65.4	2.5	3.7	0.0	18.5	90.1	0.0	100.0	

Table 5.4.5

R A B I E S C A S E S																1. 4.02 - 30. 6.02	
LOCATION		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL		
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL	
CZH C Z E C H R E P U B L I C																	
05	East Bohemia							0	2	-	-	-	-	2	2		
FRY F E D . R E P . O F Y U G O S L A V I A																	
03	Novi Sad							0	2	-	-	-	-	2	2		
06	Sombor							0	2	-	-	-	-	2	2		
07	Sabac	1	-	-	-	-	-	1						0	1		
08	Pozarevac							0	2	-	-	-	1	3	3		
10	Zajecar							0	1	-	-	-	-	1	1		
11	Kraljevo	2	-	-	-	2	-	4	6	-	-	-	-	6	10		
12	Nis							0	4	-	-	-	-	4	4		
13	Podgorica							0	1	-	-	-	-	1	1		
TOTAL		3	0	0	0	2	0	5	18	0	0	0	1	19	0	24	
PER CENT		12.5	0.0	0.0	0.0	8.3	0.0	20.8	75.0	0.0	0.0	0.0	4.2	79.2	0.0	100.0	
TUR T U R K E Y																	
09	AYDIN	1	-	43	-	2	-	46	6	-	-	-	-	6	52		
10	BALIKESIR	1	-	-	-	-	-	1						0	1		
16	BURSA	1	-	-	-	-	-	1						0	1		
21	DIYARBAKIR	1	-	-	-	-	-	1						0	1		
23	ELAZIG	1	-	-	-	-	-	1	-	-	-	1	1	2			
24	ERZINCAN	1	-	-	-	-	-	1					0	1			
25	ERZURUM	1	-	-	-	-	-	1					0	1			
27	GAZIANTEP	-	-	1	-	-	-	1					0	1			
31	HATAY	1	-	-	-	-	-	1					0	1			
34	ISTANBUL	2	-	1	-	-	-	3	-	-	-	2	2	5			
35	IZMIR	2	-	6	-	-	-	8	2	-	-	-	2	10			
45	MANISA	1	-	1	-	-	-	2					0	2			
46	KAHRAMANMARAS	1	-	-	-	-	-	1					0	1			
48	MUGLA	-	-	3	-	-	-	3	1	-	-	-	1	4			
55	SAMSUN	2	-	-	-	-	-	2					0	2			
61	TRABZON	1	-	-	-	-	-	1					0	1			
63	SANLIURFA	1	-	-	-	-	-	1					0	1			
TOTAL		18	0	55	0	2	0	75	9	0	0	0	3	12	0	87	
PER CENT		20.7	0.0	63.2	0.0	2.3	0.0	86.2	10.3	0.0	0.0	0.0	3.4	13.8	0.0	100.0	

Table 5.4.6

R A B I E S C A S E S																1. 4.02 - 30. 6.02	
LOCATION CODE NAME		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL		
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL	
DEN D E N M A R K																	
055	RIBE	-	-	-	-	1	-	1	-	-	-	-	1	1		2	
EST E S T O N I A																	
01	Harjumaa	3	-	-	-	-	-	3	6	-	-	-	1	7		10	
04	Jogevamaa	1	-	-	-	-	-	1	4	-	-	-	2	6		7	
05	Jaervamaa	1	-	1	-	-	-	2	3	-	-	-	2	5		7	
06	Laeaenemaa	-	-	-	-	-	-	0	-	-	-	-	1	1		1	
07	Laeaene-Virumaa	1	1	-	-	-	-	2	4	-	-	-	5	9		11	
08	Polvamaa	-	-	1	-	-	-	1	4	-	-	-	4	8		9	
09	Paernumaa	-	-	-	-	-	-	0	1	-	-	-	1	2		2	
10	Raplamaa	-	-	-	-	-	-	0	4	-	-	-	1	5		5	
12	Tartumaa	-	-	-	-	-	-	0	4	-	-	-	5	9		9	
13	Valgamaa	-	-	1	-	-	-	1	3	-	-	-	1	4		5	
14	Viljandimaa	-	1	-	-	-	-	1	1	-	-	-	-	1		2	
15	Vorumaa	2	-	-	-	-	-	2	7	-	-	-	2	9		11	
TOTAL		8	2	3	0	0	0	13	41	0	0	0	25	66	0	79	
PER CENT		10.1	2.5	3.8	0.0	0.0	0.0	16.5	51.9	0.0	0.0	0.0	31.6	83.5	0.0	100.0	
POL P O L A N D																	
02	Dolnoslaskie	-	-	-	-	-	-	0	3	-	-	1	-	4		4	
04	Kujawsko-Pomorskie	-	-	-	-	-	-	0	2	-	-	-	-	2		2	
06	Lubelskie	1	4	-	-	-	-	5	68	2	5	-	1	76		81	
10	Lodzkie	-	-	-	-	-	-	0	-	-	1	-	-	1		1	
12	Malopolskie	1	-	-	-	-	-	1	5	-	-	-	-	5		6	
14	Mazowieckie	-	2	1	-	-	-	3	9	-	-	-	2	11		14	
16	Opolskie	-	-	-	-	-	-	0	1	-	-	-	-	1		1	
18	Podkarpackie	-	5	-	-	-	-	5	17	-	1	-	1	19		24	
20	Podlaskie	-	2	-	-	-	-	2	30	-	2	-	10	42		44	
26	Swietokrzyskie	-	-	-	-	-	-	0	1	-	-	-	-	1		1	
28	Warminsko-Mazurskie	-	1	-	-	-	-	1	8	1	1	-	2	12		13	
30	Wielkopolskie	2	3	-	-	-	-	5	42	1	1	-	3	47		52	
32	Zachodniopomorskie	-	-	-	-	-	-	0	3	-	-	-	2	5		5	
TOTAL		4	17	1	0	0	0	22	189	4	11	1	21	226	0	248	
PER CENT		1.6	6.9	0.4	0.0	0.0	0.0	8.9	76.2	1.6	4.4	0.4	8.5	91.1	0.0	100.0	

Table 5.4.7

LTU		L I T H U A N I A											R A B I E S C A S E S			1. 4.02 - 30. 6.02	
LOCATION		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL		
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL	
32	Akmenes	1	-	-	-	-	-	1	-	-	-	-	2	2	3		
33	Alytaus	-	-	-	-	-	-	0	1	-	-	-	-	1	1		
34	Anyksciu	-	-	-	-	-	-	0	-	-	-	-	1	1	1		
36	Birzu	1	-	-	-	-	-	1	1	-	1	-	-	2	3		
38	Varenos	-	-	-	-	-	-	0	-	-	-	-	1	1	1		
39	Vilkaviskio	-	-	-	-	-	-	0	-	-	-	-	1	1	1		
41	Vilniaus	-	-	1	-	-	-	1	6	-	-	-	1	7	8		
43	Zarasu	-	-	-	-	-	-	0	-	-	-	-	3	3	3		
45	Ignalinos	1	-	2	-	-	-	3	4	-	-	-	7	11	14		
46	Jonavos	-	-	1	-	-	-	1	1	-	-	-	1	2	3		
47	Joniskio	-	2	-	-	-	-	2	2	-	1	-	1	4	6		
49	Kaisiadoriu	-	-	1	-	-	-	1	-	-	-	-	-	0	1		
53	Kedainiai	1	2	-	-	-	-	3	1	-	-	-	-	1	4		
54	Kelmes	-	-	-	1	-	-	1	-	-	-	-	-	0	1		
55	Klaipedos	1	2	-	-	-	-	3	1	-	-	-	4	5	8		
56	Kretingos	-	1	-	-	-	-	1	2	-	-	-	1	3	4		
57	Kupiskio	-	-	1	-	-	-	1	1	-	-	-	-	1	2		
59	Lazdiju	1	-	2	-	-	-	3	8	-	1	-	4	13	16		
62	Moletu	-	-	-	-	-	-	0	-	-	1	-	2	3	3		
65	Pakruojo	-	1	-	-	-	-	1	1	-	1	-	-	2	3		
66	Panevezio	-	1	-	-	-	-	1	1	1	-	-	2	4	5		
67	Pasvalio	-	-	-	-	-	-	0	1	-	-	-	1	2	2		
71	Radviliskio	1	2	-	-	-	-	3	-	-	-	-	2	2	5		
72	Raseiniai	-	-	2	-	-	-	2	1	-	-	-	-	1	3		
73	Rokiskio	-	1	-	-	-	-	1	1	-	1	-	-	2	3		
77	Taurages	-	-	-	-	-	-	0	1	-	-	-	1	2	2		
78	Telsiu	1	1	1	-	-	-	3	2	-	-	-	1	3	6		
79	Traku	1	-	-	-	-	-	1	-	-	1	-	1	2	3		
81	Ukmerges	2	-	-	-	-	-	2	1	-	-	-	-	1	3		
82	Utenos	-	-	-	-	-	-	0	1	-	1	-	2	4	4		
84	Sakiu	1	-	-	-	-	-	1	2	-	4	-	2	8	9		
86	Svencioniu	1	-	1	-	-	-	2	4	-	-	-	1	5	7		
88	Silutes	-	-	-	-	-	-	0	4	-	-	-	1	5	5		
89	Sirvintu	-	-	1	-	-	-	1	5	-	-	-	1	6	7		
91	Siauliu	-	-	-	-	-	-	0	3	-	-	-	5	8	8		
94	Jurbarko	-	-	-	-	-	-	0	2	-	2	-	1	5	5		
TOTAL		13	13	13	1	0	0	40	58	1	14	0	50	123	0	163	
PER CENT		8.0	8.0	8.0	0.6	0.0	0.0	24.5	35.6	0.6	8.6	0.0	30.7	75.5	0.0	100.0	

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Table 5.4.8

RUS		RUSSIAN FEDERATION						R A B I E S C A S E S						1. 4.02 - 30. 6.02		
LOCATION		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL	
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL
08	Pskov Region	3	1	-	-	-	-	4	6	-	-	-	3	9		13
09	Bryansk Region	1	1	-	1	-	-	3	1	-	-	-	-	1		4
10	Vladimir Region	5	1	1	-	-	-	7	4	-	-	-	-	4		11
11	Ivanovo Region	2	2	-	-	-	-	4	7	-	1	-	2	10		14
12	Tver Region							0	12	-	-	-	1	13		13
13	Kaluga Region	1	2	-	-	-	-	3	11	-	-	-	-	11		14
15	Moscow Region	1	1	-	-	-	-	2	2	-	-	-	1	3		5
16	Oryol Region	2	2	1	-	-	-	5	6	-	-	-	2	8		13
17	Ruazan Region	4	-	-	-	-	-	4	4	-	-	-	-	4		8
18	Smolensk Region	9	-	-	-	-	-	9	6	-	-	-	-	6		15
19	Tula Region	7	4	-	-	-	-	11	7	-	-	-	-	7		18
21	Nizhniy Novgorod Reg.	3	4	-	-	-	-	7	2	-	-	-	-	2		9
25	Rep. of Chuvashiya	1	1	1	-	-	-	3						0		3
26	Belgorod Region	11	4	4	-	1	-	20	9	-	-	-	-	9		29
27	Voronezh Region	3	4	4	-	-	-	11	2	-	-	-	1	3		14
28	Kursk Region	2	3	7	1	1	-	14	2	-	1	-	-	3		17
29	Lipetsk Region	-	1	-	-	-	-	1						0		1
30	Tambov Region	-	1	1	-	-	-	2	1	-	-	-	-	1		3
31	Astrakhan Region	11	4	12	3	55	-	85	2	-	-	-	1	3		88
32	Volgograd Region	7	5	15	-	-	-	27	6	-	-	-	-	6		33
33	Samara Region	2	5	6	-	-	-	13	3	1	-	-	-	4		17
34	Penza Region	1	-	-	-	-	-	1	1	-	-	-	-	1		2
35	Saratov Region	5	1	2	-	-	-	8	7	-	-	-	-	7		15
37	Rep. of Kalmykiya	1	1	3	-	1	-	6						0		6
38	Rep. of Tatarstan	-	1	9	1	1	-	12	9	-	-	-	1	10		22
39	Krasnodar Territory	4	-	1	-	-	-	5	5	-	-	-	-	5		10
40	Stavropol Territory	3	4	8	-	1	-	16	3	-	-	-	1	4		20
41	Rostov Region	7	2	6	1	-	-	16	-	-	-	-	1	1		17
42	Orenburg Region	15	6	58	2	-	-	81	9	1	-	-	-	10	1	92
43	Perm Region	-	-	7	-	2	-	9						0		9
44	Rep. of Bashkortostan	3	1	42	4	2	-	52	30	-	-	-	-	30		82
46	Kaliningrad Region	4	1	-	-	-	-	5	1	-	-	-	-	1		6
TOTAL		118	63	188	13	64	0	446	158	2	2	0	14	176	1	623
PER CENT		18.9	10.1	30.2	2.1	10.3	0.0	71.6	25.4	0.3	0.3	0.0	2.2	28.3	0.2	100.0

Table 5.4.9

R A B I E S C A S E S																1. 4.02 - 30. 6.02	
LOCATION		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL		
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL	
SVK S L O V A K R E P U B L I C																	
	2 Trnavsky kraj							0	4	-	-	-	-	4		4	
	3 Trenčiansky kraj	1	-	-	-	-	-	1						0		1	
	4 Nitriansky kraj	1	1	-	-	-	-	2	3	-	-	-	-	3		5	
	5 Zilinsky kraj							0	-	-	-	-	1	1		1	
	6 Banskobystrický kraj							0	1	-	-	-	-	1		1	
	7 Presovský kraj							0	1	-	-	-	-	1		1	
	TOTAL	2	1	0	0	0	0	3	9	0	0	0	1	10	0	13	
	PER CENT	15.4	7.7	0.0	0.0	0.0	0.0	23.1	69.2	0.0	0.0	0.0	7.7	76.9	0.0	100.0	
UKR U K R A I N E																	
	01 Krym	1	1	3	-	-	-	5	2	-	-	-	-	2		7	
	02 Vinnytsia Region	5	4	-	-	-	-	9	1	-	-	-	-	1		10	
	03 Volyn Region	1	2	1	-	-	-	4	1	-	-	-	-	1		5	
	04 Dnipropetrovsk Region	5	7	1	-	1	-	14	4	1	-	-	-	5		19	
	05 Donetsk Region	-	1	-	-	-	-	1						0		1	
	06 Zhytomyr Region	-	1	-	-	-	-	1	6	-	-	-	-	6		7	
	07 Zakarpattia Region	1	-	-	-	-	-	1	2	-	-	-	-	2		3	
	08 Zaporizhzhia Region	1	-	-	-	-	-	1	1	-	-	-	-	1		2	
	09 Ivano-Frankivsk Region							0	1	-	-	-	-	1		1	
	10 Kiev Region	-	1	1	-	1	-	3						0		3	
	11 Kirovohrad Region	2	5	2	-	1	-	10	3	-	1	-	1	5		15	
	12 Luhansk Region	2	4	7	-	-	-	13	2	-	1	-	1	4		17	
	14 Micolaev Region	3	5	-	-	-	-	8	1	-	-	-	-	1		9	
	15 Odesa Region	-	3	1	-	1	-	5	3	-	1	-	1	5		10	
	16 Poltava Region	7	7	13	1	-	-	28	7	-	-	-	-	7		35	
	18 Sumy Region	9	3	-	-	-	-	12	5	-	-	-	-	5		17	
	20 Kharkiv Region	7	8	3	-	2	-	20	8	-	-	-	-	8		28	
	21 Kherson Region	1	1	2	-	-	-	4	2	-	-	-	-	2		6	
	22 Khmelnytsky Region	1	-	-	-	-	-	1	6	-	-	-	-	6		7	
	23 Cherkasy Region	2	4	3	-	-	-	9	2	-	-	-	1	3		12	
	24 Chernivtsy Region	-	-	1	-	-	-	1						0		1	
	25 Chernihiv Region	7	3	3	-	-	-	13	4	1	2	-	-	7		20	
	TOTAL	55	60	41	1	6	0	163	61	2	5	0	4	72	0	235	
	PER CENT	23.4	25.5	17.4	0.4	2.6	0.0	69.4	26.0	0.9	2.1	0.0	1.7	30.6	0.0	100.0	

6. LIST OF CONTRIBUTORS

ALB Albania

Ass.Prof.Dr.Dragush Mati
Ministry of Agriculture and Food
Directorate of Veterinary Service
Tirana /Albania
Tel. +355 4 222 539
Fax +355 4 222 539
e-mail vetdirector@albaniaonline.com

Prof.Dr.Kristaq Berxholi, Director
Institute of Veterinary Research „Bilal Golemi“
Tirana /Albania
Tel. +355 4 372 912
Fax +355 4 372 912
e-mail instvet@icc.al.eu.org

AUT Austria

Dr. Walter Schuller
Mag. Gabriele Romanek
Bundesanstalt für vet.med. Untersuchungen Mödling
Robert Koch Gasse 17
A-2340 Mödling
Tel. +43-2236 46640
Fax +43-2236 46640
e-mail office@batsb.at
e-mail romanek@batsb.at

BYE Belarus

Dr. A.M. Axenov
Head of the Central Board of Veterinary Medicine
Ministry of Agriculture and Food
Kirova 15
Minsk /Belarus
Fax +375-17-227 42 96 and +375-17-227 57 54
e-mail vetinsp@mshp.minsk.by

BEL Belgium

Dr. L. Lengele, Conseiller Général
Dr. Dechamps
Ministère des Classes Moyennes et de l'Agriculture
Administration de la Santé animale et de la
Qualité des produits animaux (DG5)
Services vétérinaires
WTC III - Boulevard Simon Bolivar 30
5ème étage
B-1000 Bruxelles/Belgique
Tel. +32-2-208 36 48
Fax: +32-2-208 36 12

Responsible expert:

Dr. F. Costy
Institut Pasteur de Bruxelles
Rue Engeland, 642
B-1180 Bruxelles
Tel. +32-2-373 31 11
Fax +32-2-373 31 74

BIH Bosnia and Herzegovina

Dr. Sc. Drago N. Nedic
Ministry Agriculture, Forestry and
Water Management
Milosa Obilica 51
76300 Bijeljina, Republika Srpska
Bosnia and Herzegovina
Tel. ++387-55-401 812, 211 506, 403 508
Fax ++387-55-403 508, 472 353
e-mail nedicd@rstel.net nedicd@vetservice.org
http: www.vetservice.org

Dr. Ramiz Velic
Department of Infectious Diseases
Veterinary Faculty Sarajevo
Zmaja od Bosne 90
Sarajevo 71000 /Bosnia and Herzegovina
Tel. ++387-61-160 361
e-mail vetzar@bih.net.ba

BUL Bulgaria

Dr. L. Lavchev
Ministère de l'Agriculture

CRO Croatia

Dr. Mate Brstilo
Dr. Josip Marković
Ministry of Agriculture, Forestry and Water Management
State Veterinary Service

Dr. Ž. Čač
Croatian Veterinary Institute

CYP Cyprus

Dr. P. Economides
Director of Veterinary Services
Ministry of Agriculture, Natural Resources
and Environment - Veterinary Services -
1417 Nicosia /Cyprus
Tel. +357-2-80 52 0
Fax +357-2-33 28 03
e-mail vet.services@cytanet.com.cy

CZH Czech Republic

MVDr. Josef Vitásek
 State Veterinary Administration CR
 Těšnov 17
 CZ-117 05 Prague 1 /Czech Republic
 Tel. +420-2-2181 2768
 Fax +420-2-2231 2923
 e-mail j.vitasek@svs.aquasoft.cz

Responsible expert:

MVDr Oldrich Matouch, Csc
 National Reference Laboratory for Rabies
 State Veterinary Institute
 U Sila 1139
 CZ-46311 Liberec 30 /Czech Republic
 Tel. +420-48-2751 578
 Fax +420-48-2751 569
 e-mail matouch@volny.cz
 Internet <http://svs.aquasoft.cz>

DEN Denmark

Dr. Preben Willeberg
 Dr. Tina Mørk
 Ministeriet for Fødevarer, Landbrug og Fiskeri
 Danish Veterinary and Food Administration

EST Estonia

Dr. Matti Nautras
 Head of Animal Health Department
 Veterinary and Food Broad of Estonia
 Väike-Paala-Street 3
 11415 Tallinn /Estonia
 Tel. +372-605 1732
 Fax +372-638 0210
 e-mail nautras@vet.agri.ee

Responsible expert:

Dr. Külli Must
 Head of Department
 Veterinary and Food Laboratory
 Kreutzwaldi 30
 51006 Tartu /Estonia
 Tel. +372-742 1246
 Fax +372-742 1730
 e-mail kylli@vetlab.ee

FIN Finland

Dr. Vaana Husu-Kallio
 Dr. Nina Sarén
 Ministry of Agriculture and
 Forestry

FRA France

Dr. Florence Cliquet
 Agence Francaise de Securite Sanitaire des Aliments
 (afssa) - Site de Nancy
 Domaine de Pixérécourt
 Boite Postale 9
 F-54220 Malzéville /Republique Francaise
 Tel. +33-3-83.29.89.50
 Fax +33-3-83.29.89.59
 e-mail f.cliquet@nancy.afssa.fr
 Internet www.afssa.fr

DEU Germany

Dr. M. Kramer
 WHO Collaborating Centre for Rabies Surveillance and
 Research, Wusterhausen
 Seestr. 55
 D-16868 Wusterhausen /Germany
 Tel. +49-33979-80 183
 Fax +49-33979-80 200 and 222
 e-mail matthias.kramer@wus.bfav.de

Dr. W.W. Müller
 WHO Collaborating Centre
 for Rabies Surveillance and
 Research, Tübingen
 PO Box 1149
 D-72001 Tübingen /Germany
 Tel. +49-7071-967 210
 Fax +49-7071-967 105
 e-mail who-rabies@tue.bfav.de
 Internet www.who-rabies-bulletin.org

GRE Greece

Dr. B. Stylias
 Ministry of Agriculture

HUN Hungary

Dr. Tibor Balint
 Dr. Zsolt Földi
 Ministry of Agriculture and Regional Development
 Animal Health and Food Control Department
 H-1860 Budapest 55. Pf. 1
 Tel. +36-1 332 7986
 Fax +36-1 301 4669
 e-mail foldiz@oai.hu

ICE Iceland

Dr. Halldor Runolfsson
 Chief Veterinary Officer
 Ministry of Agriculture, Veterinary Services
 Solvholsgata 7
 150 Reykjavik /Iceland
 Tel. +354-560 9750
 Fax +354-552 1160
 e-mail halldor.runolfsson@lan.stjr.is

IRE Ireland

Dr. J. Melville
 Superintending Veterinary Inspector
 Department of Agriculture, Food and Forestry
 Agriculture House
 Dublin 2/Ireland
 Tel. +353-1-607 2981
 Fax +353-1-661 2440

Responsible expert:

Dr. Patrick Corkery MVB, Ph.D.
 Veterinary Liaison Officer
 Floor 3C, Department of Agriculture,
 Food and Rural Development,
 Kildare Street
 Dublin 2/Ireland
 Tel. +353-1-607 2981
 Fax +353-1-607 2989
 e-mail Paul.Corkery@daff-irlgov.ie
 Internet www.irlgov.ie/daff

ITA Italy

Dr. Franco Mutinelli
 Istituto Zooprofilattico
 Sperimentale delle Venezie
 Via Romea, 14/A
 I-35020 Legnaro (PD) /Italy
 Tel. +39-049-80 84 259
 Fax +39-049-80 84 258
 e-mail fmutinelli@izsvenezie.it

LVA Latvia

Dr. V. Veldre
 Dr. E. Jegers
 Food and Veterinary Service
 Animal Health Division
 Republikas laukums 2
 Riga, LV-1010, Latvija
 Tel. +371 709 52 30
 Fax +371 732 27 27
 e-mail vvd@vvd.vita.gov.lv

LTU Lithuania

Dr. K. Lukauskas
 Dr. A. Dranseika
 State Veterinary Service

LUX Luxembourg

Dr. Arthur Besch, Vétérinaire-inspecteur
 Inspection Vétérinaire
 Grand-Duché de Luxembourg
 Administration des Services vétérinaires
 93, rue d'Anvers
 Boîte postale 1403
 L-1014 Luxembourg
 Tel. +352-478 2539
 Fax +352-407 545
 e-mail Arthur.Besch@asv.etat.lu

MLD Moldova

Dr. V. Bahau, Dr. A. Ganea
 Dr. V. Kilyar
 Ministry of Agriculture

NET Netherlands

Dr. Monique Aalten
 Inspectorate for Health Protection, Commodities and
 Veterinary Public Health, Regional Inspectorate East
 De Stoven 22
 NL-7206 AX Zutphen /Netherlands
 Tel. +31-575-58 8 100
 Fax +31-575-588 8 200
 e-mail Monique.Aalten@kvw.nl

Dr. F.H. Plumiers
 Ministry of Agriculture, Nature Environment and
 Fisheries
 Bezuidenhoutseweg 73 - P.O. Box 20401
 NL-2500 EK's-Gravenhage /Netherlands

Responsible expert:

Dr. R.A.A. van Oosterom
 Inspectorate for Health Protection
 Commodities and Veterinary Public Health
 P.O. Box 16108
 NL-2500 BC The Hague /Netherlands

NOR Norway

Dr. Eivind Liven
 Norwegian Animal Health Authority
 Central Unit

POL Poland

Dr. Piotr Kołodziej
 Chief Veterinary Officer of the Polish
 Veterinary Inspection
 30, Wspólna Street
 00-930 Warsaw /Poland
 Tel. +48-22-6231408 or 6288511
 Fax +48-22-6231408 or 6288511
 e-mail wet@minrol.gov.pl

Dr. Jan F. Zmudzinski
 State Veterinary Institute
 National Rabies Reference Centre
 Department of Virology
 Al. Partyzantów 57
 24-100 Pulawy, Poland
 Tel. +48-81-88630

POR Portugal

Dr.C.A.M.de Andrade
 Fontes
 Direcção-Geral da Pecuária

ROM Romania

Dr. Viorel Andronie, General Director
 Ministry of Agriculture, Food and Forestry
 National Sanitary Veterinary Agency
 Bd. Carol I, nr. 24, sector 3
 Bucuresti, cod 70.033 /Romania
 Tel. +40-21-315.78.75
 Fax +40-21-312.49.67
 e-mail ansv@maa.ro

Responsible experts:

Dr. Romeo Manea - Expert -
 National Sanitary Veterinary Agency

Dr. Cristina Tudoran
 Chief of Section Pathology of Wildlife Animals
 and Pets
 Institute for Diagnosis and Animal Health

RUS Russian Federation

(European part only)
 Prof. V.A. Vedernikov
 WHO Coll. Centre on Prev. and Control of Zoonosis
 The Kovalenko All-Union
 Inst. of Exper. Veterinary Medicine, Moscow
 Dr. V.V. Seliverstov
 Veterinary Dept., Moscow
 Prof. B.L. Cherkasskiy
 WHO Collaborating Centre on Zoonosis, Moscow
 Central Research Institute of Epidemiology,
 Ministry of Public Health, Moscow

SVK Slovak Republic

Prof. Dusan Magic
 Roman Matejčík, DVM
 State Veterinary Administration of the Slovak Republic
 Botanická No 17
 842 13 Bratislava /Slovak Republic
 Tel. +421-2-60 257 227
 Fax +421-2-65 411 159
 e-mail welfare@svssr.sk

Responsible expert:

Miroslav Mojžiš, DVM
 Štátny veterinárny ústav Zvolen
 Pod Dráhami No. 918
 960 86 Zvolen /Slovak Republic

SVN Slovenia

Dr. Zoran Kovač
 Ministry of Agriculture, Forestry and Food
 Veterinary Administration of the Republic of Slovenia
 Parmova 53
 1000 Ljubljana /Slovenia
 Tel. +386-1-300 13 00
 Fax +386-1-436 32 14
 e-mail zoran.kovac.@gov.si
 Internet www.sigov.si/vurs

Responsible expert:

Dr. Peter Hostnik
 Veterinary faculty -
 Virological laboratory
 Gerbičeva 60
 1000 Ljubljana /Slovenia
 Tel. +386-1-477 91 00
 Fax +386-1-283 22 43
 e-mail HostniPe@mail.vf.uni-lj.si

SPA Spain

Ilmo. Sr. D. Oscar González Gutiérrez-Solana
 Subdirector General de Sanidad Exterior y Veterinaria
 Tel. +34-91-596 20 38
 Fax +34-91-596 20 47
 e-mail ogonzalez@msc.es

Sr. D. Carlos Abellán García
 Técnico Superior del Área de Veterinaria de
 Salud Pública
 Tel. +34-91-596 19 45
 Fax +34-91-596 20 47
 e-mail cabellan@msc.es

Ministerio de Sanidad y Consumo
 Dirección General de Sanidad Exterior y Veterinaria
 C/Paseo del Prado, 18-20
 E-28071 Madrid

Responsible expert - Diagnóstico:

Sr. D. Juan E. Echevarria Mayo
 Servicio de Microbiología Diagnóstica
 Centro Nacional de Microbiología
 Instituto de Salud Carlos III
 Ministerio de Sanidad y Consumo
 Ctra. Majadahonda - Pozuelo Km. 2
 E-28220 Majadahonda /Madrid

Epidemiología:

Sra. D^a Luisa Pilar Sánchez Serrano
 Centro Nacional de Epidemiología
 Instituto de Salud Carlos III
 Ministerio de Sanidad y Consumo
 C/ Sinesio Delgado, 6
 E-28029 Madrid
 Tel. +34-91-387 78 02
 Fax +34-91-387 78 16
 e-mail Isanchez@isciii.es

Dr. Ignacio Sanchez Esteban
 Subdirector General de Sanidad Veterinaria
 MAPA
 Ministerio de Agricultura, Pesca y Alimentacion
 Madrid /Spain
 Tel. +34-91-347 82 95
 Fax +34-91-347 82 99
 e-mail isanchez@mapya.es
 Internet www.mapya.es

Responsible expert:

D. Fulgencio Garrido Abellan
 Tel. +34-958-44 03 75
 Fax +34-958-44 12 00
 e-mail fgarrido@moebius.es

Dña. Teresa Rodríguez-Trenchs
 Tel. +34-91-347 83 46
 Fax +34-91-347 82 99
 e-mail trodrigu@mapya.es

SWE Sweden

Dr. Leif Denneberg
 National Board of Agriculture
 Department for Animal Production and Health
 SE-551 82 Jönköping /Sweden
 Tel. +46-36-15 50 00
 Fax +46-36-30 81 82
 e-mail leif.denneberg@sjv.se

Responsible expert:

Professor Anders Engvall
 National Veterinary Institute
 SE-751 89 Uppsala
 Tel. +46-18-67 40 00
 Fax +46-18-67 44 45
 e-mail anders.engvall@sva.se

SWI Switzerland

PD Reto Zanoni
 Dr. Urs Breitenmoser
 University of Bern - Swiss Rabies Centre
 Institute of Veterinary Virology
 Länggass Str. 122
 CH-3012 Bern /Switzerland
 Tel. +41-31-631 23 78
 Fax +41-31-631 25 34
 e-mail zanoni@ivv.unibe.ch
 e-mail breitenmoser@ivv.unibe.ch
 Internet <http://www.cx.unibe.ch/ivv>

TUR Turkey

Dr. Musa Arik
 Head of Animal Health Department
 Ministry of Agriculture and Rural Affairs
 General Directorate of Protection and Control
 Esat cad. No. 3
 06100 Bakanliklar, Ankara /Turkey
 Tel. +90-312-41 82 436
 Fax +90-312-41 78 209
 e-mail musaa@kkgm.gov.tr

Responsible expert:

Dr. Orhan Aylan, Chief of Rabies Laboratory
 Etlik Central Veterinary Control and Research Institute
 06020 Etlik, Ankara /Turkey
 Tel. +90-312-32 60 090 / 154
 Fax +90-312-32 11 755

UKR Ukraine

Dr. P. Verbytskiy
 Ministry of Agrarian Policy
 State Department of Veterinary Medicine
 Khreshchatik 24
 01001 Kiev /Ukraine
 Tel. +7-044-229 12 70
 Fax +7-044-229 85 45
 e-mail uzpr@minapk.kiev.ua

Dr. Liudmyla Grishok
 Institute of Veterinary Medicine
 Head of Laboratory for Rabies
 Donetskaja Street 30
 Kiev-151 /Ukraine
 Tel. +7-044-243 72 38
 Fax +7-044-242-69-81
 e-mail ivm-kiev@akcecc.kiev.ua

UNK United Kingdom

Dr. J.M. Scudamore
 Dr. F. Landeg
 Dr. Anna Guitton
 Ministry of Agriculture,
 Fisheries and Food
 Room 205a, 1A Page Street
 London, SW1P 4PQ
 Tel. ++44-20-7904 6069
 Fax ++44-20-7904 6913
 e-mail fred.Landeg@defra.gsi.gov.uk

FRY Yugoslavia

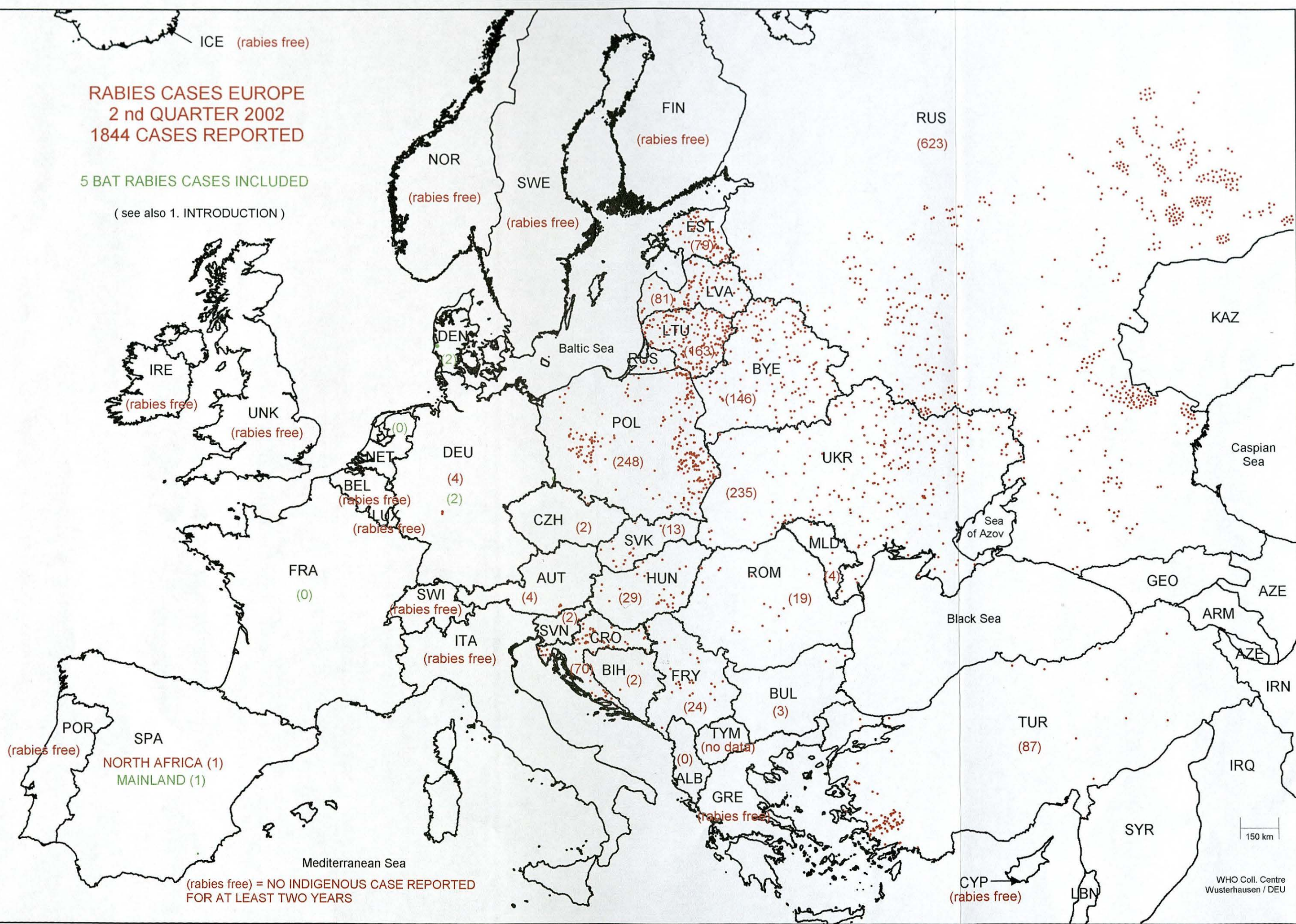
Dr. Živko Davidović
 Fed. Committee Agriculture

 Dr. Dušan Lalošević
 Pasteur Institute, Novi Sad
 Hajduk Veljkova 1 / P.O. Box 208
 21000 Novi Sad /Yugoslavia
 Tel. +381-21-611-003, 420-528
 Fax +381-21-611-003, 420-528
 e-mail pasteuri@eunet.yu

RABIES CASES EUROPE
2 nd QUARTER 2002
1844 CASES REPORTED

5 BAT RABIES CASES INCLUDED

(see also 1. INTRODUCTION)



(rabies free) = NO INDIGENOUS CASE REPORTED FOR AT LEAST TWO YEARS