RABIES BULLETIN EUROPE

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Contents

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1. INTRODUCTION

This BULLETIN describes the **reported rabies cases in Europe** for the **Fourth Quarter 2001**, subsequently referred to as ***"This Quarter"***.

In SECTION 2 a **summary of the rabies situation of the fourth quarter 2001** is given and the development in the year 2001.

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 a scientific article is commenting on the European Bat Lyssavirus Infection in Spanish Bat Populations. 4.2 reports on a WHO position paper in regard to rabies vaccines. Under 4.3 rabies in a vaccinated dog imported from Azerbaijan to Germany is described. 4.4 elaborates on a projected change in editorship of the Rabies Bulletin Europe.

The **rabies case data** are tabulated for the **Fourth Quarter 2001** 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 **Fourth Quarter 2001** is shown on maps of the Russian Federation, Turkey and Europe in the ANNEX.

2. SUMMARY OF RABIES IN EUROPE

During ***"This Quarter"***, 2200 rabies cases were reported in Europe (without Ukraine as data were only annually available). Of these, 1361 were wild animals, 837 domestic animals, and 2 humans.

Of the 1361 cases in wild animals, 1066 (48.5% of total) were foxes, 211 raccoon dogs, 1 jackal, 2 wolves, 1 wild cat, 1 lynx, 10 badgers, 1 stone marten, 28 pine martens, 12 polecats, 1 ferret, 6 roe deer, 1 hedgehog, 5 bats, 1 hamster, 1 black rat, 1 hare, 3 other wild animals, 9 unspecified animals. Of the 837 cases in domestic animals, 183 were dogs, 234 cats, 18 horses, 367 bovines, 19 sheep, 5 goats, 7 pigs, 1 domestic rabbit, 3 dogs living wild.

The 2 human cases were reported in the Russian Federation.

All data above are presented in TABLES 5.1 and 5.3 of SECTION 5 and in the TABLES of the individual countries.

Compared to the previous quarter (1716 cases - corrected figure) - without the Ukraine - an increase is noticed (by 484 cases) during ***"This Quarter"***. That is expected **as wildlife or more exactly fox-mediated rabies is seasonal** and, the increase in autumn/winter is connected to the dispersal of young foxes born in spring of the year which causes an increased contact rate and thus, the possibility to pass on the disease. Most of the countries recorded this increase.

The **5 bat rabies cases** occurred in Germany (2), France (1), and Poland (2). The bat in France was specified as *Eptesicus serotinus*.

The **dog-mediated rabies** is only found in an obvious pattern in Turkey. Of 31 cases during ***"This Quarter"*** there were the following animal species involved: 14 dogs, 10 bovines, 2 horses, 1 goat, and only 4 wild animals (2 foxes, 1 jackal and 1 stone marten). 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.

Rabies-free countries in Europe during ***"This Quarter"*** were: Belgium, Cyprus, Finland, Greece, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Sweden, Switzerland, the United Kingdom of Britain and Northern Ireland.

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

The status of the countries with data supplied irregularly cannot be judged.

2.2 Development and Trends in 2001

Summary

Rabies case data summarizing the year 2001 can be found in TABLES 5.2, 5.4, 5.5 and 5.7 of SECTION 5, and here is the Ukraine included (for the first time after several years).

The year 2001 totals 10,435 cases.

The figure can not be used to indicate an obvious trend for Europe as the cases for the Ukraine are many (1611 cases). The recorded cases for 2000 totalled 8155.

Contrary to the increase of cases a fortunate event can be reported for the year: the countries Belgium and Luxembourg became rabies-free.

Wildlife or fox-mediated rabies

Oral vaccination of foxes remains the best method to combat rabies. However, it is often hampered by two facts: to have the financial resources available and the extreme efforts during the final eradication of the disease when fox populations are very dense (see articles in RBE issues 1/95, pp. 14-15; 4/95, pp. 13-16; 1/96, pp. 10-13; 2/98, pp. 9-12; 4/2000, pp. 20-23). Over the recent years success and failure have been reported by several countries.

A successful example can be given during this year for the 15 countries of the European Union by comparing figures to the previous year. In 2000, 212 rabies cases were reported including 26 bat rabies cases. During this year 76 cases were reported including 23 bat rabies cases. Nine countries are rabies-free at this point, 3 are rabies-free of terrestrial animals, however, they record bat rabies frequently and the remaining 3 countries have a fair chance to become rabies-free soon.

A country with setbacks in 2000 was Poland. Formerly freed areas became reinfected and the cases increased in general. This experience had several European countries previously.

Urban or dog-mediated rabies

The rabies in Turkey follows the urban or dog-mediated rabies pattern. The country is usually listed with the wildlife rabies countries as the cases are few, during this year only 1.8% of the total cases in Europe. The country reported 189 cases (127 dogs, 4 horses, 2 donkeys, 31 bovines, 8 sheep, 1 goat, 9 red foxes, 2 jackals, 1 wolf, 4 stone martens).

In 2000 there were 297 cases.

Certain areas in the south of the European Part of the Russian Federation indicate a not so obvious dog-mediated rabies or the mixed type of dog- and fox-mediated rabies.

Bat rabies

Bat rabies has again its own epidemiological pattern and is therefore separately presented wherever possible. Bat cases in the maps are drawn in a different colour.

During the year, 39 bat rabies cases were reported, 6 more than in the previous year. The countries affected were: Denmark (2), Germany (9), France (3), Netherlands (9), Poland (14), and Ukraine (2).

For the first time there was a report of a stone marten, which was infected with the European bat virus in Germany.

From an article under 4.1 we learn that bats in Spain were investigated for rabies antibodies. A fairly high percentage was positive, indicating that these animals survive an infection.

Human rabies

There were 12 human cases in 2001, 10 indigenous cases in the Russian Federation, and 2 imported cases in the United Kingdom.

3. RABIES IN INDIVIDUAL COUNTRIES

3.1 Albania ALB

by Kristaq Berxholi

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

Surveillance

22 animals (21 foxes, 1 cat) were examined for rabies during ***"This Quarter"***, but all revealed negative results.

3.2 Austria AUT

by Walter Schuller and Helmut Schnabl

Out of 4189 animals examined for rabies during ***"This Quarter"***, there was 1 dog diagnosed rabid. The case was located in Vienna. The case history of the animal indicates that the dog was infected in the vicinity of Belgrade, Federal Republic of Yugoslavia.

3.3 Belgium BEL

by L. Lengele and Pierre Dechamps

The country remained **rabies-free**.

Surveillance

During the third quarter 2001 the country became **rabies-free** according to a WHO recommendation. The last case in a bovine had occurred at Bastogne in July 1999. Details of how Belgium became rabies-free are being presented in the publication ‚Elimination de la rage en Belgique par la vaccination du renard roux (*Vulpes vulpes*)', Ann.Med.Vet., 2001, 145, pp 293-305, by B. Brochier et al.

In 2001, the Institut Louis Pasteur in Bruxelles examined 950 samples for rabies with negative results: 450 foxes (47%), 383 bovines (40%), 24 cats, 10 dogs, 49 small ruminants, 2 horses, 1 pig, 2 stone martens, 12 badgers, 1 wild boar, 9 deer, 1 mouflon, 2 polecats, 2 ferrets, 1 wild cat, and 1 Norwegian rat.

Three oral vaccination campaigns were carried out in 2001:

- In April, an area of 4051 km² was vaccinated. 73,000 vaccine baits were distributed by helicopter (18 vaccine baits/km²).
- In May, an area of 4600 km² was vaccinated. 45,090 vaccine baits were distributed manually to immunize young foxes at the den. Vaccine baits were deposited in 17,041 entrances of 4398 dens.
- In October, an other aerial distribution campaign with the helicopter was carried out. It covered 4069 km². 70,400 vaccine baits were distributed (17,3 vaccine baits/ km²).

3.4 Bosnia and Herzegovina BIH

by Ramiz Velic

During ***"This Quarter"***, there were 12 rabies cases reported. Ten of these were in foxes, 1 in a dog and 1 in a goat.

Summary 2001

Altogether 31 rabies cases were reported in 24 foxes, 1 badger, 1 pine marten, 2 dogs, 1 bovine, 1 sheep, 1 goat.

3.5 Bulgaria BUL

by L. Lavchev

During ***"This Quarter"***, 9 rabies cases were reported in Bulgaria. They were all located in the north of the country. The animal species affected was not supplied.

Summary 2001

The annual total amounted to 62. There were 22 cases in 2000.

3.6 Belarus BYE

by A.M. Axenov

A total of 142 rabies cases were reported in all 6 administrative regions. The following animals were diagnosed rabid: 77 foxes, 1 wolf, 11 raccoon dogs, 1 badger, 1 pine marten, 1 polecat, 1 hamster, 15 dogs, 15 cats, 6 horses, 13 bovines.

Summary 2001

The total cases amounted to 540 cases, 234 cases more compared to the previous year.

3.7 Croatia CRO

by Mate Brstilo and Josip Marković

During ***"This Quarter"***, of 1278 animals (196 domestic and 1082 wild animals) investigated for rabies a total of 120 were diagnosed positive.

Nineteen counties (42 municipalities respectively) were affected by the disease. There were 123 cases less compared with the same period in 2000 and 49 cases more than in the previous quarter.

Out of the total number of cases rabies has been diagnosed in 110 foxes (91.7% of total) and 10 domestic animals (3 dogs, 1 cat, 1 bovine, 5 sheep).

Summary 2001

A total of 489 cases were reported in 2001, 428 less than in the previous year and 553 less than in 1999.

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 2694 animals was examined for rabies in the Czech Republic. Only three fox rabies cases (0.11%) were diagnosed.

There was a decrease of cases compared to the 4th quarter 2000 by 63 cases as well as to the 3rd quarter 2001 by 1 case.

All cases were reported from the district Náchod bordering the district Rychnov nad Kněžnou where we had a very active focus a year ago.

An oral vaccination campaign of foxes was carried out during autumn 2001 covering an area of 45,705 km² in 51 districts. 930,000 Czech made (SAD-Bern) vaccine baits were used for both manual and aerial distribution.

Summary 2001

In 2001, a total of 8676 animals belonging to 45 species were examined for rabies in the Czech Republic. Rabies was diagnosed in 35 cases, 130 less than in 2000. This is the lowest figure since 1960; the peak was recorded in 1984 with 2232 cases.

3.10 Denmark DEN

by Preben Willeberg and Tina Mørk

The country remained rabies-free in terrestrial animals.

Summary 2001

Out of 16 animals examined for rabies (11 bats, 1 fox, 1 mink, 1 squirrel, 1 dog, 1 cat) only 2 bats revealed a positive result.

3.11 Germany, Federal Republic DEU

by Winfried W. Müller and Matthias Kramer

During ***"This Quarter"***, 7 rabies cases in animals were reported. There were 2 bat rabies cases in the northern-most federal state Schleswig-Holstein and 5 fox rabies cases in the federal state of Hessen.

Summary 2001

A total of 50 rabies cases were recorded. Of these 9 were bat rabies cases and 1 stone marten infected with the EBL1 bat virus. There were 40 cases in terrestrial animals - 35 foxes, 2 roe deer, 1 cat, 1 horse, 1 bovine.

The cases for 2000 totalled 192, 182 in terrestrial animals and 10 bat cases.

3.12 Estonia EST

by Matti Nautras

A total of 56 rabies cases was reported during ***"This Quarter"***, 4 cases more than during the previous quarter.

Editors note

Missing data for the previous quarter were received and are included in the annual summary.

Summary 2001

The total amounted to 167 cases, 38 cases more than in the previous year.

3.13 Finland FIN

by Sirpa Kemilä

The country remained **rabies-free.**

Surveillance

The following animals were examined for rabies during ***"This Quarter"*** with negative results: 40 foxes, 105 raccoon dogs, 3 badgers, 1 brown bear, 3 pine marten, 1 fish otter, 6 other wild carnivores, 1 dog, 1 cat.

3.14 France FRA

by Florence Cliquet

The country remained rabies-free in terrestrial animals.

There was 1 bat rabies case in an *Eptesicus serotinus*. The case was located in the community of Valon en Sully in the département Allier.

Surveillance

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

Summary 2001

During this year 4 bat rabies cases were reported. In 2000, 5 bat rabies cases were reported.

3.15 Federal Republic of Yugoslavia FRY

by Nenad Ivančev

A total of 55 animal rabies cases (41 red foxes, 3 other wild animals, 3 dogs, 8 cats) were registered during ***"This Quarter"*** in the Federal Republic of Yugoslavia.

Summary 2001

The annual total amounted to 254 rabies cases, 76 more than in 2000.

3.16 Greece GRE

The country remained **rabies-free.**

3.17 Hungary HUN

by Antal Németh and Zsolt Földi

During ***"This Quarter"***, there were 50 rabies cases in animals. Only 3 of the cases were located west of the river Danube in the western half of the country. Of the total number of cases, 40 were in wild animals (6 cats, 2 bovines, 1 horse and 1 pig).

Summary 2001

During this year rabies cases totalled 310 (231 foxes, 1 raccoon dog, 1 wild cat, 1 stone marten, 1 roe deer, 1 black rat, 14 dogs, 42 cats, 1 horse, 1 pig, 15 bovines, 1 goat). 7 cases occurred in the western part of the country in Transdanubia. Here oral vaccination of foxes against rabies is practised. There were 514 cases in 2000.

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

719 wild animals (659 foxes) and 62 domestic animals from Trentino Alto Adige, Veneto and Friuli Venezia Giulia Regions (northeastern Italy) were tested for rabies with negative results.

No bats were submitted for rabies examination.

Summary 2001

2827 wild animals (2564 foxes) and 224 domestic animals were examined for rabies with negative result in Trentino Alto Adige, Veneto and Friuli Venezia Giulia Regions (north-eastern Italy).

No bats were submitted for rabies examination.

The wildlife rabies surveillance programme is maintained at the Austrian and Slovenian border.

The compulsory vaccination of dogs and domestic herbivores at pasture is no longer in force (since January 2000).

Differently from the year 2000, in 2001 the oral vaccination of foxes was not carried out in the provinces of Trieste, Gorizia and Udine.

3.21 Lithuania LTU

by Kasimieras Lukauskas and A. Dranseika

During ***"This Quarter"***, there were 230 cases of rabies. 67 cases (29.1%) were in domestic animals (39 bovines, 9 dogs, 17 cats, 1 horse, 1 goat) and 163 cases (70.9%) in wild animals (57 foxes, 95 raccoon dogs, 7 pine martens, 4 polecats).

40 districts were affected. Most affected were Ignalina and Klaipėda.

During ***"This Quarter"***, 18,163 dogs, 3089 cats and 2567 bovines were vaccinated against rabies.

No human rabies case was registered in the country.

Summary 2001

The annual total amounted to 680 cases, 175 less than in the previous year.

3.22 Luxembourg LUX

by Arthur Besch

The country remained **rabies-free**.

Summary 2001

The Grand Duchy of Luxembourg became rabies-free during the first quarter of 2001. To maintain this status, 3 oral vaccination campaigns were carried out during the year.

A total of 47 animals were examined for rabies with negative results (24 foxes, 1 roe deer, 9 bovines, 3 sheep, 4 dogs, 6 cats). Furthermore, 100 foxes from Luxembourg were examined with negative results in Saarbrücken (Germany) in connection with an echinococcosis trial.

3.23 Latvia LVA

by V. Veldre and E. Jēgers

90 rabies cases were registered during ***"This Quarter"*** in 25 districts and Riga city. 76 cases were diagnosed in wild animals (84.4% of total). 34 of the cases in wild animals were foxes, 35 raccoon dogs, 3 pine martens, 2 badgers, 1 polecat and 1 hedgehog. Of 14 rabies cases in domestic animals, 9 were cats, 4 dogs and 1 bovine. The most affected districts were Liepaja with 9 cases, Riga 11 cases, Madona and Rezekne 7 cases each.

Summary 2001

The annual total amounted to 477 cases, 39 cases less than in 2000.

3.24 Moldova MLD

by E. Renita and A. Ganea

Out of 15 animals examined for rabies during ***"This Quarter"*** (6 dogs, 3 foxes, 1 bovine, 1 goat, 2 cats, 2 rats), 2 foxes, 1 dog, 1 cat, 1 bovine and 1 goat were diagnosed rabid.

Summary 2001

The annual total of rabies cases amounted to 16, six cases less than in the previous year (22).

3.25 Netherlands NET

by Monique Aalten

During ***"This Quarter"***, 22 animals (16 bats, 1 dog, 2 foxes, 3 cats) were investigated for rabies, all with negative results.

Summary 2001

In 2001 a total of 152 animals were investigated for rabies (131 bats, 9 foxes, 1 muskrat, 3 dogs, 1 deer and 7 cats).

Nine bats were diagnosed rabid.

3.26 Norway NOR

by Eivind Liven

The country remained **rabies-free.**

3.27 Poland POL

by Andrzej Komorowski

A total of 542 cases was registered in Poland during ***"This Quarter"***. 465 were in wild animals - 393 foxes, 40 raccoon dogs, 5 badgers, 16 pine martens, 2 polecats, 1 ferret, 4 roe deer, 2 bats, 1 black rat, 1 hare - and 77 in domestic animals - 8 dogs, 34 cats, 34 bovines, 1 sheep.

Summary 2001

The total of cases amounted to 2958, 747 more than in the previous year (2211), and 1811 more than in 1999 (1147).

Due to oral vaccination which was started in 1993, great parts in the western half of the country had been freed and the total cases (3084 in 1992) of the country reduced. At this time there is a tendency of reinfecting previously freed parts and a general increase of cases.

There was a reinfected area previously rabies-free along the Czech border in the south-west of the country.

3.28 Portugal POR

The country remained **rabies-free.**

3.29 Romania ROM

by Gabriel Predoi

A total of 21 cases of rabies was reported during ***"This Quarter"***, 25 cases less than during the previous quarter and 24 cases less than in the fourth quarter 2000. There were 12 cases in foxes, 2 in dogs, 5 in cats and 2 in bovines.

Summary 2001

The annual total amounted to 386 cases (293 wild and 93 domestic animals), 288 cases more than in 2000.

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"***, 756 rabies cases in animals were reported. Of the total number of cases 531 were in domestic animals - 117 dogs, 128 cats, 258 bovine, 7 horses, 14 sheep, 6 pigs, 1 rabbit.

Of 225 wild animals rabies was diagnosed in 208 foxes, 8 raccoon dogs, 2 badgers, 1 wolf, 4 polecats, 1 pine marten, 1 roe deer.

Most affected were the Kursk Region with 119 cases, Belgorod Region and Volgograd Region with 79 cases each, Voronezh Region with 75 cases, Stavropol Territory with 46 cases, Rostov Region with 43 cases, Krasnodar Territory with 41 cases.

There were 2 humans cases reported - in the Rostov Region and Arkhangelsk Region each.

Summary 2001

The annual total amounted to 1919 cases in animals and 10 in humans. There were 1232 cases in animals and 7 in humans in 2000.

3.31 Spain SPA

by Carlos Abellan Garcia

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

There were 3 dogs reported rabid in Melilla, the Spanish territory of North Africa.

There was no further bat rabies case in the country.

Summary 2001

There were 10 dog rabies cases in Melilla during the year. In 2000 there were 2 dog rabies cases in Melilla and 5 bat rabies cases in the mainland.

3.32 Slovak Republic SVK

by Dušan Magic

A total of 29 rabies cases in animals was reported in the Slovak Republic during ***"This Quarter"***. Of these, 24 (82.8%) were in wild animals (22 foxes, 1 wild cat, 1 lynx) and 5 in domestic animals (2 dogs, 3 cats).

Summary 2001

The annual total amounted to 87, 264 cases less than in the previous year.

3.33 Slovenia SVN

by Zoran Kovač

There were 34 rabies cases during ***"This Quarter"***. 32 cases of the total were in foxes, 1 each in a roe deer and a dog. The cases were mainly distributed in the south-east of the country. Only 2 cases were recorded in the north-east.

Summary 2001

A total of 135 cases was reported in 2001, 21 cases more than in the previous year, and 129 cases more than in 1999.

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"***, 51 animals were examined for rabies with negative results: 42 foxes, 1 stone marten, 1 brown rat, 1 bat, 3 dogs, 2 cats and 1 bovine. The bat (in brackets the community where the sample was taken) was specified as *Pipistrellus nathusii* (Genève).

3.36 Turkey TUR

by Hüseyin Sungur

During ***"This Quarter"***, 31 rabies cases in animals were reported in Turkey. The disease occurred in 14 dogs, 10 bovines, 2 horses, 1 goat, 2 foxes, 1 jackal and 1 stone marten. 12 of 73 provinces (Il) were affected by the disease. The province Aydin recorded 10 cases, all other provinces less than 6.

Summary 2001

The total of cases amounted to 189, 108 cases less than in the previous year.

3.37 Macedonia TYM

No data.

3.38 Ukraine UKR

by P. Verbitskiy and Liudmyla Grishok

Summary 2001

In 2001, 1611 rabies cases in animals were registered in the Ukraine. Of these 973 cases were domestic animals (217 dogs, 377 cats, 23 horses, 342 bovines, 12 sheep and 2 pigs) and 638 in wild animals (582 red foxes, 6 wolves, 6 raccoon dogs, 4 badgers, 22 pine martens, 1 weasel, 7 raccoons, 1 roe deer, 1 wild boar, 2 insectivorous bats, 1 suslik, 3 Norway rats, 2 muskrats. All of 25 districts were affected by the disease.

Editors note:

The report was received late and, no quarterly data were presented. Therefore, the annual data are considered in TABLE 5.2 and, there is a detailed annual summary of the Ukraine in TABLE 5.7. There can not be a case distribution on a map yet. This is planned for the next issue.

3.39 United Kingdom UNK

by Fred Landeg

The country remained **rabies-free.**

4. MISCELLANEOUS ARTICLES

4.1 European Bat Lyssavirus Infection in Spanish Bat Populations

With the above title the following authors have published an article in the USA Centers for Disease Control (CDC) journal **Emerging Infectious Diseases, Vol. 8, No. 4, April 2002: Jordi Serra-Cobo, Blanca Amengual, Carlos Abellán and Hervé Bourhy.**

Three institutions carried out the work: the Universitat de Barcelona, Barcelona, Spain, the Institut Pasteur, Paris, France, and the Ministerio de Sanidad y Consumo, Madrid, Spain.

The following is the summary of the article:

From 1992 to 2000, 976 sera, 27 blood pellets, and 91 brains were obtained from 14 bat species in 37 localities in Spain. Specific anti-*European bat lyssavirus 1* (EBL1)-neutralizing antibodies have been detected in *Myotis myotis, Miniopterus schreibersii, Tadarida teniotis,* and *Rhinolophus ferrumequinum* in the region of Aragon and the Balearic Islands. Positive results were also obtained by nested reverse transcription-polymerase chain reaction on brain, blood pellet, lung, heart, tongue, and esophagus-larynx-pharynx of *M. Myotis, Myotis nattereri, R. ferrumequinum* , and *M. schreibersii.* Determination of nucleotide sequence confirmed the presence of EBL1 RNA in the different tissues. In one colony, the prevalence of seropositive bats over time corresponded to an asymmetrical curve, with a sudden initial increase peaking at 60% of the bats followed by a gradual decline. Banded seropositive bats were recovered during several years indicating that EBL1 infection in these bats was nonlethal. At least one of this species (*M. schreibersii*) is migratory and thus could be partially responsible for the dissemination of EBL1 on both shores of the Mediterranean Sea.

Editors note:

Here is the first comprehensive work on bat rabies of a country in Europe. It is furthermore a good summary of where we stand with the bat rabies in Europe at this moment.

New is the great percentage of seropositive bats collected over a lengthy period in bat populations indicating that the pathogenic quality of the virus leaves a great deal of survivors in contrast to the classical rabies virus (Serotype 1).

In the past, the RABIES BULLETIN EUROPE usually receives data regarding rabid bat cases, but few reports of negative diagnosis and even less data concerning the bat species involved.

Therefore, it is commendable that the authors have made the effort to combine their own results with published data from Europe (Table 5 of the article) and show that 12 bat species to date have been involved in bat rabies in Europe.

Next to the many serum samples investigated by the authors epidemiological results were increased by techniques of banding of animals and diagnosing and characterizing the virus by PCR.

4.2 Rabies Vaccines

WHO offers information and recommendations on the vaccines represented in the Expanded Programme on Immunization (EPI). According to its global mandate, the Organization is issuing a series of regularly-up-dated position papers on other vaccines and vaccine combinations against diseases that have an international public health impact.

A lengthy article in the Weekly Epidemiological Record, WHO-5 April, 2002, 77, pp. 109-120, http://www.who.int/wer elaborates on rabies vaccines.

Background information refers to public health impact of rabies, the pathogen and disease, protective immune response, justification for rabies vaccination, the development of rabies vaccines, the current strategies for rabies vaccination, and the WHO position.

This issue of the RBE reports on the development of rabies vaccines and the vaccines presently in use. It is intended to review the current strategies for rabies vaccination in the next issue of the RBE.

Rabies Vaccines

More than 100 years ago, Louis Pasteur and his colleagues developed the first crude rabies vaccine based on attenuated virus from desiccated nerve tissue. Unfortunately, the majority of post-exposure immunizations against rabies are still performed with vaccines of crude nerve tissue origin. Although continuously improved over the years, inactivated vaccines produced in sheep or goat brains (Semple) or suckling mouse brain (Fuenzalida) may be associated with serious adverse events. Possible post-vaccinal neurological reactions may include meningoencephalitis, meningoencephalomyelitis, mono-neuritis multiplex, dorsolumbar transverse myelitis and ascending paralysis of the Landry type, usually occurring between 1 and 2 weeks after the first injection. With the Semple-type vaccines, the incidence of neurological reactions varies between 1 in 200 and 1 in 1,600 recipients, with a lethality of up to 14%. Vaccines of the Fuenzalida type are associated with neurological complications in about 1 in 8,000 to 1 in 27,000 courses. Furthermore, in terms of protective potency these vaccines are inferior to modern cell-derived vaccines. A complete post-exposure treatment using nerve tissue vaccines involves a prolonged and painful immunization course of up to 23 injections. Obviously, these vaccines are not recommended for pre-exposure immunization.

The human diploid cell rabies vaccine was introduced in 1967 and is regarded as the gold standard for rabies vaccines. However, the more recently developed and less expensive purified chick embryo cell vaccine and purified Vero cell rabies vaccine have comparable characteristics. They are all lyophilized and must be reconstituted. The potency of all cell-derived vaccines is assessed using a National Institutes of Health test and the WHO requirement is a potency of at least 2.5 IU per intramuscular dose.

Human diploid cell rabies vaccines are based on the Pitman-Moore L503 strain or, in one case, the Flury strain of rabies virus. Human diploid cell rabies vaccines have been given to more than 1.5 million people worldwide. Its protective efficacy in situations of heavy exposure has been shown in the Islamic Republic of Iran where none of 45 persons who received post-exposure treatment with this vaccine developed rabies following severe bites by rabid dogs or wolves.

The purified Vero cell rabies vaccine contains the Wistar strain of the virus, but with the Vero cell line as substrate. Clinical studies with the purified Vero cell vaccine show neutralizing antibody responses both after primary and sec-

ondary immunizations that are fully comparable to those seen after vaccination with the human diploid cell vaccines. In Thailand, post-exposure treatment using purified Vero cell vaccine and rabies immune globulin has been shown to be protective.

Purified chick embryo cell rabies vaccine is prepared from inactivated rabies virus of the Flury LEP-25 strain. No clinically important differences were observed when this vaccine was evaluated together with human diploid cell vaccines in studies on post-exposure protection of animals and humans and in pre-exposure immunogenicity studies. More than 30 million doses of the purified chick embryo cell vaccine have been administered worldwide.

Purified duck embryo rabies vaccine showed similar qualities as the other cell-derived rabies vaccines, but is no longer manufactured.

Despite applying potent, modern, cell-derived vaccines, about 1 "failure" in 1 million post-exposure treatments does occur. Careful analyses show that such failures are almost always associated with severe lesions on or near the head and/or inappropriate administration of treatment.

There are no contraindications to any of these vaccines being used for post-exposure treatment. Should an allergic reaction occur, the modern vaccines of different cell substrate origin may replace each other. Pregnancy is not a contraindications to post-exposure treatment.

Although associated with mild and transient reactions, all the cell-derived rabies vaccines are considered safe. With human diploid cell vaccines, which are most thoroughly investigated, pain, erythema and swelling or itching at the injection site occur among 30%-74% of the recipients. Systemic reactions involving headache, nausea, abdominal pain, muscle aches or dizziness are reported among 5%-40% of vaccinees, and allergic edema in 0.1%. One study reports fever among 3.6% of recipients of the human diploid cell vaccine. Systemic allergic reactions characterized by generalized urticaria accompanied in some cases by arthralgia, angioedema, fever, nausea and vomiting have been reported. They are uncommon in persons receiving primary vaccination, but have occurred in up to 6% of persons receiving a booster dose, with onset after 2-21 days. These reactions have been shown to follow the development of IgE antibodies to β-propiolactone altered human serum albumin in the vaccine (β-propiolactone is used as an inactivating agent). According to the manufacturers of purified Vero cell rabies vaccine and purified chick embryo cell vaccine, allergic reactions are very rare after both primary and booster doses with these vaccines. Studies on the purified Vero cell rabies vaccine report local and general reactions in 10.6% and complaints of mild to moderate reactions in 7% of post-exposure treatment patients. Also, among intradermal or intramuscular recipients of this vaccine, low-grade fever was the only significant systemic event, occurring in 8% of all subjects and most frequently following intramuscular vaccination. In the same study, pruritus at the injection site was the only significant local reaction. Among 88 healthy adults receiving a total of 292 doses of purified chick embryo cell vaccine, 16.4% reported local side effects, whereas 15.1% reported general symptoms.

Other cell-derived vaccines are available on a national scale only. For example, in the United States the Kissling rabies strain has been adapted to replication in lung fibroblasts of fetal rhesus monkeys. The resulting vaccine, which is given according to the same pre- and post-exposure schedules as the human diploid cell vaccine, is considered equally effective and may less often cause allergic reactions. In Japan, a vaccine type similar to the purified chick embryo cell vaccine, but based on the Flury HEP strain, has reached limited distribution. A primary hamster kidney-cell rabies vaccine is mainly used in China where it was licensed in 1989. Each year more than 5 million doses of

this vaccine are administered in China, where it has now completely replaced the Semple-type rabies vaccine. A chromatographically purified version of the purified Vero cell rabies vaccine is about to be licensed in Europe.

4.3 Rabies in a Vaccinated Dog Imported from Azerbaijan to Germany

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A 56-year-old man had been working for some months for a German company as a fitter in Azerbaijan, close to the capital Baku. In November 2001 he found an approximately one-month old puppy (male mongrel) which he took home. The fitter arranged the dog to be vaccinated on 10 November 2001. The vaccine used was a six-fold combination (vaccine antigens: distemper virus, CAV-2, canine parvovirus, LO. Canicola, L. icterohaemorrhagiae and rabies virus). On 18 December 2001 a government veterinary officer undertook an examination during which no indications were found of a transmissible disease or the suspicion of such a disease. This fact was recorded in the vaccination certificate. Three days later, on 21 December 2001, the fitter flew back to his home town in northern Bavaria and took the dog with him on the plane.

On 23 December 2001 the dog suddenly showed signs of a disturbed general condition and anorexia. In an emergency veterinary clinic treatment was initiated which led to an improvement in the clinical symptoms. Ten days later the general condition of the dog worsened steadily, connected with anorexia and diarrhoea. Furthermore, the animal increasingly scratched its ears and howled loudly. When the dog was stroked in the head-neck-back region, it reacted aggressively and it bit the owner's right hand. The clinical picture of the animal worsened. On 7 January 2002 the dog exhibited marked exsiccosis, optic dysfunctions and disruptions of the central nervous system. The animal tried to bite anyone who came near it. The dog bit the bars of the cage into which it had been placed for stationary treatment to such an extent that some of its teeth fell out or broke off. The dog was then put to sleep by the attending veterinarian on 9 January 2002 and a post-mortem examination was carried out. This revealed that all incisors and eyeteeth had broken off or had fallen out. Furthermore, the dog's stomach contained unusual contents like tufts of hair, wood particles and wood shavings. The fluorescence microscopy examination of the brain for rabies was positive. The brain material concerned was sent for virus typing to the National Reference Laboratory, Federal Research Institute for Viral Diseases in Animals, Wusterhausen. As a consequence of the rabies diagnosis, a total of ten persons, who had varying degrees of contact with the dog were informed and the situation with reference to the dog explained to them by their general practitioner, with the backup of the public health authorities. Corresponding rabies post-exposure treatment was given to the owner, to two veterinarians and their assistants (three persons).

Assessing the risk of rabies exposure is part of medical advice for global travelling. This case shows that rabies must be expected not only during trips and stays in African and Asian regions but also in countries in the former Russian Federation. In these regions rabies has spread extensively in recent years and has largely switched from wildlife rabies to dogs.

Unfortunately, at present no official information is available on the incidence of rabies in the region of Azerbaijan or in neighbouring

Iran. This observation applies, although in the above case according to the vaccination certificate, there had been no case of rabies in the last twelve months within a radius of 25 km from the building site where the dog was found. There have already been reports about the risk of rabies in Germany from dogs imported from abroad, for instance from Nepal (Epidemiol. Bull. 9, 66, 2001) or Turkey (Epidemiol. Bull. 48, 3, 1995).

This case also shows that the vaccination involving the six-fold combination vaccine was neither carried out professionally nor at the right time. As a rule, basic immunization against rabies is given in the 8th to 12th week of life according to the manufacturer's instructions. Re-vaccination is advisable ten to fourteen days after the basic immunization. In this case the basic immunization was undertaken earlier, i.e. already in the 4th to 6th week of life.

(Prof. Dr. J. Süss, Federal Institute for Health Protection of Consumers and Veterinary Medicine, Berlin; Prof. Dr. Dr. A. Weber, Bavarian Regional Office for Health and Food Safety, Nuremberg branch; Dr. H. Berg, District Administration Forchheim; Dr. B. Keller, Bavarian Regional Office for Health and Food Safety, Oberschleissheim branch; Prof. Dr. W. Schmahl, Chair for General Pathology and Neuropathology, Munich University).

4.4 Projected Change in Editorship of the Rabies Bulletin Europe (RBE)

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In 2003, the editorship of the RBE will change staff as well as the location where the Bulletin is produced, due to the pending retirement of the staff in Tübingen.

At this point there are efforts to establish the editorship at its new location. New staff and partly new techniques will need some time to develop. Therefore, it is not sure if the next issue will be produced in Tübingen or at the new location. We shall announce the new address and responsible personnel as soon as we are sure everything is functioning well.

It is planned to continue the policy of providing a hardcopy as well as an Internet version of the RBE.

It is hoped and expected that this change will improve the data supply where needed. It would be a welcome change for all countries participating in the surveillance system to reconsider their practices if improvement is necessary.

We think that the past 25 years of the RBE published in Tübingen have been successful and have helped many countries in the planning and implementation of control programmes such as the oral vaccination of foxes against rabies in Europe.

As for now it should only be noted:

- there will be a change of staff and locality for the RBE in 2003;
- the responsible staff and the address will be notified soon;
- suggestions to improve the RBE are welcome.

Table 5.1

EUR EUROPE **4/2001** RABIES CASES 1.10.01 - 31.12.01

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
ALB ALBANIA *							0						0		0
AUT AUSTRIA	1	-	-	-	-	-	1						0		1
BEL BELGIUM *							0						0		0
BIH BOSNA I HERCEGOWIN	1	-	-	-	1	-	2	10	-	-	-	-	10		12
BUL BULGARIA							0	-	-	-	-	9	9		9
BYE BELARUS	15	15	13	6	-	-	49	77	1	2	-	13	93		142
CRO CROATIA	3	1	1	-	5	-	10	110	-	-	-	-	110		120
CYP CYPRUS *							0						0		0
CZH CZECH REPUBLIC							0	3	-	-	-	-	3		3
DEN DENMARK *							0						0		0
DEU FED.REP.OF GERMANY							0	5	-	-	-	2	7		7
EST ESTONIA	2	7	6	1	-	-	16	18	-	-	-	22	40		56
FIN FINLAND *							0						0		0
FRA FRANCE							0	-	-	-	-	1	1		1
FRY FED.REP.OF YUGOSLA	3	8	-	-	-	-	11	41	-	-	-	3	44		55
GRE GREECE *							0						0		0
HUN HUNGARY	-	6	2	1	-	1	10	40	-	-	-	-	40		50
ICE ICELAND *							0						0		0
IRE IRELAND *							0						0		0
ITA ITALY *							0						0		0
LTU LITHUANIA	9	17	39	1	1	-	67	57	-	11	-	95	163		230
LUX LUXEMBOURG *							0						0		0
LVA LATVIA	4	9	1	-	-	-	14	34	2	4	-	36	76		90
MLD MOLDOVA	1	1	1	-	1	-	4	2	-	-	-	-	2		6
NET NETHERLANDS *							0						0		0
NOR NORWAY *							0						0		0
POL POLAND	8	34	34	-	1	-	77	393	5	19	4	44	465		542
POR PORTUGAL *							0						0		0
ROM ROMANIA	2	5	2	-	-	-	9	12	-	-	-	-	12		21
RUS RUSSIAN FEDERATION	117	128	258	7	14	7	531	208	2	5	1	9	225	2	758
SPA SPAIN 1)	-	-	-	-	-	3	3						0		3
SVK SLOVAK REPUBLIC	2	3	-	-	-	-	5	22	-	-	-	2	24		29
SVN SLOVENIA	1	-	-	-	-	-	1	32	-	-	1	-	33		34
SWE SWEDEN *							0						0		0
SWI SWITZERLAND + LIEC*							0						0		0
TUR TURKEY	14	-	10	2	1	-	27	2	-	1	-	1	4		31
TYM MAKEDONIJA **							0						0		0
UKR UKRAINE 2)							0						0		0
UNK UNITED KINGDOM *							0						0		0
TOTAL	183	234	367	18	24	11	837	1066	10	42	6	237	1361	2	2200
PER CENT	8.3	10.6	16.7	0.8	1.1	0.5	38.0	48.5	0.5	1.9	0.3	10.8	61.9	0.1	100.0

* no cases ** no data 1) in North Africa 2) data only annually available, see Table 5.7

Table 5.2

EUR EUROPE **2001** RABIES CASES 1. 1.01 - 31.12.01

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
ALB ALBANIA	1	-	-	-	-	-	1						0		1
AUT AUSTRIA	1	-	-	-	-	-	1						0		1
BEL BELGIUM *							0						0		0
BIH BOSNA I HERCEGOWIN	2	-	1	-	2	-	5	24	1	1	-	-	26		31
BUL BULGARIA							0	-	-	-	-	62	62		62
BYE BELARUS	63	46	48	8	2	-	167	332	2	6	2	31	373		540
CRO CROATIA	9	4	5	-	15	-	33	449	3	2	2	-	456		489
CYP CYPRUS *							0						0		0
CZH CZECH REPUBLIC	-	2	-	-	-	-	2	29	1	2	1	-	33		35
DEN DENMARK							0	-	-	-	-	2	2		2
DEU FED.REP.OF GERMANY	-	1	1	1	-	-	3	35	-	1	2	9	47		50
EST ESTONIA	6	12	11	1	-	-	30	74	2	-	1	60	137		167
FIN FINLAND *							0						0		0
FRA FRANCE 1)	1	-	-	-	-	-	1	-	-	-	-	3	3		4
FRY FED.REP.OF YUGOSLA	13	38	8	-	3	-	62	188	-	-	-	4	192		254
GRE GREECE *							0						0		0
HUN HUNGARY	14	42	15	1	1	1	74	231	-	1	1	3	236		310
ICE ICELAND *							0						0		0
IRE IRELAND *							0						0		0
ITA ITALY *							0						0		0
LTU LITHUANIA	34	57	91	7	1	1	191	199	6	38	1	245	489		680
LUX LUXEMBOURG *							0						0		0
LVA LATVIA	33	37	12	-	2	-	84	241	7	15	2	128	393		477
MLD MOLDOVA	3	1	3	-	1	-	8	8	-	-	-	-	8		16
NET NETHERLANDS							0	-	-	-	-	9	9		9
NOR NORWAY *							0						0		0
POL POLAND	97	177	100	-	4	1	379	2223	20	97	16	223	2579		2958
POR PORTUGAL *							0						0		0
ROM ROMANIA	30	23	17	5	14	4	93	282	1	2	2	6	293		386
RUS RUSSIAN FEDERATION	346	306	526	16	23	8	1225	631	7	7	2	47	694	10	1929
SPA SPAIN 2)	4	-	-	-	-	6	10						0		10
SVK SLOVAK REPUBLIC	4	8	-	-	-	-	12	70	1	1	-	3	75		87
SVN SLOVENIA	7	3	-	-	-	-	10	117	2	3	3	-	125		135
SWE SWEDEN *							0						0		0
SWI SWITZERLAND + LIEC*							0						0		0
TUR TURKEY	127	-	31	4	9	2	173	9	-	4	-	3	16		189
TYM MAKEDONIJA **							0						0		0
UKR UKRAINE	217	377	342	23	12	2	973	582	4	23	1	28	638		1611
UNK UNITED KINGDOM 3)							0						0	2	2
TOTAL	1012	1134	1211	66	89	25	3537	5724	57	203	36	866	6886	12	10435
PER CENT	9.7	10.9	11.6	0.6	0.9	0.2	33.9	54.9	0.5	1.9	0.3	8.3	66.0	0.1	100.0

* no cases ** no data 1) dog imported from Morocco 2) in North Africa 3) imported from Nigeria and Philippines

Table 5.3

EUR E U R O P E **4/2001** R A B I E S C A S E S 'OTHER ANIMAL SPECIES' 1.10.01 - 31.12.01

LOCATION CODE	OTHER DOMESTIC ANIMALS			OTHER WILD ANIMALS											UNSPEC.	TOTAL
	PIG	DOMEST. RABBIT	DOG LIV. WILD	JACKAL	WOLF	RACCOON DOG	WILD CAT	LYNX	HEDGE HOG	INSECT. BAT	HAMSTER	BLACK RAT	HARE	OTH.W. ANIMAL		
BUL BULGARIA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9
BYE BELARUS	-	-	-	-	1	11	-	-	-	-	1	-	-	-	-	13
DEU F.R.GERMANY	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2
EST ESTONIA	-	-	-	-	-	22	-	-	-	-	-	-	-	-	-	22
FRA FRANCE	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
FRY F.R.YUGOSLA	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	3
HUN HUNGARY	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LTU LITHUANIA	-	-	-	-	-	95	-	-	-	-	-	-	-	-	-	95
LVA LATVIA	-	-	-	-	-	35	-	-	1	-	-	-	-	-	-	36
POL POLAND	-	-	-	-	-	40	-	-	-	2	-	1	1	-	-	44
RUS RUSSIAN FED	6	1	-	-	1	8	-	-	-	-	-	-	-	-	-	16
SPA SPAIN	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	3
SVK SLOVAK REP.	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	2
TUR TURKEY	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
TOTAL	7	1	3	1	2	211	1	1	1	5	1	1	1	3	9	248
PER CENT	2.8	0.4	1.2	0.4	0.8	85.1	0.4	0.4	0.4	2.0	0.4	0.4	0.4	1.2	3.6	100.0

Table 5.4

EUR EUROPE **2001** RABIES CASES 'OTHER ANIMAL SPECIES' 1. 1.01 - 31.12.01

COUNTRY	OTHER DOMESTIC ANIMALS						OTHER WILD ANIMALS																		UNSPECI-FIED	TOTAL
	DONKEY	PIG	DOMESTIC RABBIT	DOG STRAY	DOG LIV. WILD	OTH.DOM. ANIMALS	JACKAL	WOLF	RACCOON DOG	WILD CAT	LYNX	RACCOON	WILD BOAR	HEDGEHOG	INSECTIV BAT	SQUIRREL	SUSLIK	BEAVER	HAMSTER	BLACK RAT	NORWAY RAT	MUSKRAT	HARE	OTH.WILD ANIMAL		
BUL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	62
BYE	-	-	-	-	-	-	-	2	26	-	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	31
DEN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
DEU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	9
EST	-	-	-	-	-	-	-	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
FRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	3
FRY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4
HUN	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	4
LTU	-	-	-	1	-	-	-	2	239	-	-	-	-	2	-	-	-	-	-	1	-	1	-	-	-	246
LVA	-	-	-	-	-	-	-	1	126	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	128
NET	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	-	9
POL	-	1	-	-	-	-	-	-	202	-	-	-	2	-	14	1	-	1	-	1	-	-	2	-	-	224
ROM	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	10
RUS	-	7	1	-	-	-	1	19	23	-	-	-	-	1	-	1	-	-	2	-	-	-	-	-	-	55
SPA	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
SVK	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
TUR	2	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
UKR	-	2	-	-	-	-	-	6	6	-	-	7	1	-	2	-	1	-	-	-	3	2	-	-	-	30
TOT	2	11	1	1	6	4	3	31	683	3	2	7	3	4	39	2	1	1	3	3	3	4	2	10	62	891
PER	.2	1.2	0.1	0.1	0.7	0.4	.3	3.5	76.7	.3	.2	.8	0.3	.4	4.4	.2	.1	.1	.3	0.3	0.3	.4	.2	1.1	7.0	100.

Table 5.5: RABIES CASE RATES (% TOTAL) FOR INDIVIDUAL ANIMAL SPECIES AND FOR TOTAL CASES OF 10 EUROPEAN COUNTRIES RANKING HIGHEST IN 2001.

EUR E U R O P E **2001** 1. 1.01 - 31.12.01

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
E U R O P E															
TOTAL RABIES CASES	1012	1134	1211	66	89	25	3537	5724	57	203	36	866	6886	12	10435
PER CENT INVOLVEMENT / COUNTRY															
POL POLAND	9.6	15.6	8.3	-	4.5	4.0	10.7	38.8	35.1	47.8	44.4	25.8	37.5		28.3
RUS RUSSIAN FEDERATION	34.2	27.0	43.4	24.2	25.8	32.0	34.6	11.0	12.3	3.4	5.6	5.4	10.1	83.3	18.5
UKR UKRAINE	21.4	33.2	28.2	34.8	13.5	8.0	27.5	10.2	7.0	11.3	2.8	3.2	9.3		15.4
LTU LITHUANIA	3.4	5.0	7.5	10.6	1.1	4.0	5.4	3.5	10.5	18.7	2.8	28.3	7.1		6.5
BYE BELARUS	6.2	4.1	4.0	12.1	2.2	-	4.7	5.8	3.5	3.0	5.6	3.6	5.4		5.2
CRO CROATIA	0.9	0.4	0.4	-	16.9	-	0.9	7.8	5.3	1.0	5.6	-	6.6		4.7
LVA LATVIA	3.3	3.3	1.0	-	2.2	-	2.4	4.2	12.3	7.4	5.6	14.8	5.7		4.6
ROM ROMANIA	3.0	2.0	1.4	7.6	15.7	16.0	2.6	4.9	1.8	1.0	5.6	0.7	4.3		3.7
HUN HUNGARY	1.4	3.7	1.2	1.5	1.1	4.0	2.1	4.0	-	0.5	2.8	0.3	3.4		3.0
FRY FED.REP.OF YUGOSLA	1.3	3.4	0.7	-	3.4	-	1.8	3.3	-	-	-	0.5	2.8		2.4
TOTAL FROM 10 COUNTRIES	856	1107	1164	60	77	17	3281	5358	50	191	29	715	6343	10	9634
EQUAL % TOTAL	84.6	97.6	96.1	90.9	86.5	68.0	92.8	93.6	87.7	94.1	80.6	82.6	92.1	83.3	92.3

Table 5.6.1

RABIES CASES 1.10.01 - 31.12.01																
LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
AUT AUSTRIA															
901 WIEN	1	-	-	-	-	-	1						0		1
CZH CZECH REPUBLIC															
05 East Bohemia							0	3	-	-	-	-	3		3
DEU FED.REP.OF GERMANY															
01 Schleswig-Holstein							0	-	-	-	-	2	2		2
06 Hessen							0	5	-	-	-	-	5		5
TOTAL	0	0	0	0	0	0	0	5	0	0	0	2	7	0	7
PER CENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	0.0	28.6	100.0	0.0	100.0
FRA FRANCE															
03 Allier							0	-	-	-	-	1	1		1
SPA SPAIN															
52 MELILLA (NORTH AFRICA	-	-	-	-	-	3	3						0		3

Table 5.6.2

R A B I E S C A S E S 1.10.01 - 31.12.01

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 BOSNA I HERCEGOWINA															
02 Posavski	1	-	-	-	-	-	1						0		1
03 Tuzlanski	-	-	-	-	1	-	1	4	-	-	-	-	4		5
04 Zenicko-Dobojski							0	2	-	-	-	-	2		2
06 Srednje Bosanski							0	2	-	-	-	-	2		2
10 Herceg-Bosanski							0	2	-	-	-	-	2		2
TOTAL	1	0	0	0	1	0	2	10	0	0	0	0	10	0	12
PER CENT	8.3	0.0	0.0	0.0	8.3	0.0	16.7	83.3	0.0	0.0	0.0	0.0	83.3	0.0	100.0
BUL B U L G A R I A															
04 V.TARNOVO							0	-	-	-	-	2	2		2
05 VIDIN							0	-	-	-	-	1	1		1
11 LOVETCH							0	-	-	-	-	1	1		1
15 PLEVEN							0	-	-	-	-	3	3		3
25 TARGOVITCHE							0	-	-	-	-	2	2		2
TOTAL	0	0	0	0	0	0	0	0	0	0	0	9	9	0	9
FRY FED.REP.OF YUGOSLAVIA															
01 Beograd							0	3	-	-	-	-	3		3
03 Novi Sad							0	9	-	-	-	1	10		10
04 Zrenjanin	-	3	-	-	-	-	3	1	-	-	-	-	1		4
05 Subotica	-	1	-	-	-	-	1	1	-	-	-	-	1		2
06 Sombor	-	1	-	-	-	-	1	1	-	-	-	-	1		2
07 Sabac	-	1	-	-	-	-	1	1	-	-	-	-	1		2
08 Pozarevac	2	-	-	-	-	-	2	5	-	-	-	-	5		7
09 Jagodina	1	-	-	-	-	-	1	2	-	-	-	-	2		3
10 Zajecar							0	-	-	-	-	2	2		2
11 Kraljevo	-	2	-	-	-	-	2	13	-	-	-	-	13		15
12 Nis							0	2	-	-	-	-	2		2
13 Podgorica							0	3	-	-	-	-	3		3
TOTAL	3	8	0	0	0	0	11	41	0	0	0	3	44	0	55
PER CENT	5.5	14.5	0.0	0.0	0.0	0.0	20.0	74.5	0.0	0.0	0.0	5.5	80.0	0.0	100.0

Table 5.6.3

RABIES CASES 1.10.01 - 31.12.01

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
BYE	BELARUS															
01	Brest Region	4	4	2	1	-	-	11	14	1	-	-	1	16		27
02	Vitebsk Region	2	3	5	3	-	-	13	16	-	-	-	8	24		37
03	Gomel Region	3	2	1	-	-	-	6	7	-	-	-	-	7		13
04	Grodno Region	-	-	1	2	-	-	3	6	-	-	-	-	6		9
05	Minsk Region	3	2	2	-	-	-	7	22	-	2	-	2	26		33
06	Mogilev Region	3	4	2	-	-	-	9	12	-	-	-	2	14		23
TOTAL		15	15	13	6	0	0	49	77	1	2	0	13	93	0	142
PER CENT		10.6	10.6	9.2	4.2	0.0	0.0	34.5	54.2	0.7	1.4	0.0	9.2	65.5	0.0	100.0
LVA	LATVIA															
01	Aizkraukle							0	4	-	-	-	1	5		5
02	Aluksne							0	1	-	-	-	-	1		1
03	Balvi	-	1	-	-	-	-	1	1	-	-	-	1	2		3
04	Bauska	1	1	-	-	-	-	2	-	-	1	-	3	4		6
05	Cesis	-	-	1	-	-	-	1	1	-	-	-	2	3		4
06	Daugavpils							0	-	-	-	-	2	2		2
07	Dobele							0	1	-	-	-	1	2		2
08	Gulbene							0	2	-	-	-	-	2		2
09	Jekabpils							0	1	-	-	-	-	1		1
10	Jelgava	-	1	-	-	-	-	1						0		1
11	Kraslava	-	1	-	-	-	-	1						0		1
12	Kuldiga							0	1	-	-	-	-	1		1
13	Liepaja							0	2	1	2	-	4	9		9
15	Ludza							0	2	-	-	-	1	3		3
16	Madona	-	2	-	-	-	-	2	4	-	-	-	1	5		7
17	Ogre							0	2	1	-	-	3	6		6
18	Preili							0	1	-	-	-	4	5		5
19	Rezekne	2	1	-	-	-	-	3	2	-	-	-	2	4		7
20	Riga	1	1	-	-	-	-	2	5	-	1	-	3	9		11
21	Saldus							0	1	-	-	-	2	3		3
22	Talsi	-	1	-	-	-	-	1	1	-	-	-	2	3		4
23	Tukums							0	-	-	-	-	1	1		1
24	Valka							0	-	-	-	-	1	1		1
25	Valmiera							0	1	-	-	-	1	2		2
26	Ventspils							0	1	-	-	-	1	2		2
TOTAL		4	9	1	0	0	0	14	34	2	4	0	36	76	0	90
PER CENT		4.4	10.0	1.1	0.0	0.0	0.0	15.6	37.8	2.2	4.4	0.0	40.0	84.4	0.0	100.0

Table 5.6.4

RABIES CASES 1.10.01 - 31.12.01

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
CRO CROATIA															
01 Zagrebacka							0	11	-	-	-	-	11		11
02 Krapinsko-Zagorska							0	1	-	-	-	-	1		1
03 Sisacko-Moslavaca	-	-	-	-	2	-	2	20	-	-	-	-	20		22
04 Karlovacka							0	3	-	-	-	-	3		3
05 Varazdinska							0	1	-	-	-	-	1		1
06 Koprivnicko-Krizevack	-	1	-	-	-	-	1	2	-	-	-	-	2		3
07 Bjelovarsko-Bilogorsk							0	2	-	-	-	-	2		2
08 Primorsko-Goranska							0	1	-	-	-	-	1		1
09 Licko-Senjska							0	1	-	-	-	-	1		1
10 Viroviticko-Podravska	1	-	-	-	-	-	1	5	-	-	-	-	5		6
11 Pozesko-Slavonska							0	2	-	-	-	-	2		2
12 Brodsko-Posavska							0	1	-	-	-	-	1		1
13 Zadarska	-	-	-	-	1	-	1						0		1
14 Osijecko-Baranjska	1	-	-	-	-	-	1	7	-	-	-	-	7		8
15 Sibensko-Kninska	-	-	-	-	1	-	1	2	-	-	-	-	2		3
16 Vukovarsko-Srijemska							0	9	-	-	-	-	9		9
17 Splitsko-Dalmatinska							0	14	-	-	-	-	14		14
18 Istarska	1	-	1	-	-	-	2	24	-	-	-	-	24		26
19 Dubrovacko-Neretvansa	-	-	-	-	1	-	1	1	-	-	-	-	1		2
21 Zagreb							0	3	-	-	-	-	3		3
TOTAL	3	1	1	0	5	0	10	110	0	0	0	0	110	0	120
PER CENT	2.5	0.8	0.8	0.0	4.2	0.0	8.3	91.7	0.0	0.0	0.0	0.0	91.7	0.0	100.0
HUN HUNGARY															
01 Budapest							0	1	-	-	-	-	1		1
02 Baranya							0	2	-	-	-	-	2		2
03 Bacs-Kiskun	-	3	-	-	-	-	3	3	-	-	-	-	3		6
04 Bekes	-	1	-	-	-	-	1	8	-	-	-	-	8		9
05 Borsod-Abauj-Zemplen							0	1	-	-	-	-	1		1
06 Csongrad	-	1	-	-	-	1	2	4	-	-	-	-	4		6
09 Hajdu-Bihar	-	1	1	1	-	-	3	4	-	-	-	-	4		7
12 Nograd							0	1	-	-	-	-	1		1
13 Pest							0	3	-	-	-	-	3		3
15 Szabolcs-Szatmar-Bere							0	6	-	-	-	-	6		6
16 Jasz-Nagykun-Szolnok	-	-	1	-	-	-	1	6	-	-	-	-	6		7
18 Vas							0	1	-	-	-	-	1		1
TOTAL	0	6	2	1	0	1	10	40	0	0	0	0	40	0	50
PER CENT	0.0	12.0	4.0	2.0	0.0	2.0	20.0	80.0	0.0	0.0	0.0	0.0	80.0	0.0	100.0

Table 5.6.5

RABIES CASES 1.10.01 - 31.12.01

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
EST ESTONIA															
01 Harjumaa	-	1	3	-	-	-	4	4	-	-	-	6	10		14
03 Ida-Virumaa							0	-	-	-	-	2	2		2
05 Jaervamaa							0	1	-	-	-	3	4		4
06 Laeaenemaa	-	1	-	-	-	-	1						0		1
07 Laeaene-Virumaa	1	1	-	-	-	-	2	1	-	-	-	4	5		7
08 Polvamaa	-	2	1	-	-	-	3	1	-	-	-	5	6		9
09 Paernumaa	-	-	1	-	-	-	1	2	-	-	-	-	2		3
10 Raplamaa	-	-	1	-	-	-	1	2	-	-	-	-	2		3
12 Tartumaa	1	-	-	1	-	-	2	1	-	-	-	2	3		5
13 Valgamaa	-	1	-	-	-	-	1						0		1
14 Viljandimaa	-	1	-	-	-	-	1	3	-	-	-	-	3		4
15 Vorumaa							0	3	-	-	-	-	3		3
TOTAL	2	7	6	1	0	0	16	18	0	0	0	22	40	0	56
PER CENT	3.6	12.5	10.7	1.8	0.0	0.0	28.6	32.1	0.0	0.0	0.0	39.3	71.4	0.0	100.0
MLD MOLDOVA															
02 Cahul							0	1	-	-	-	-	1		1
07 Soroca	-	-	1	-	1	-	2						0		2
10 Chisinau Municipil	-	1	-	-	-	-	1	1	-	-	-	-	1		2
12 Dubasari	1	-	-	-	-	-	1						0		1
TOTAL	1	1	1	0	1	0	4	2	0	0	0	0	2	0	6
PER CENT	16.7	16.7	16.7	0.0	16.7	0.0	66.7	33.3	0.0	0.0	0.0	0.0	33.3	0.0	100.0
SVK SLOVAK REPUBLIC															
1 Bratislavsky kraj							0	10	-	-	-	-	10		10
2 Trnavsky kraj	2	-	-	-	-	-	2	1	-	-	-	-	1		3
3 Trenciansky kraj	-	1	-	-	-	-	1						0		1
4 Nitriansky kraj	-	1	-	-	-	-	1	4	-	-	-	-	4		5
5 Zilinsky kraj							0	1	-	-	-	-	1		1
6 Banskobystricky kraj	-	1	-	-	-	-	1	5	-	-	-	2	7		8
7 Presovsky kraj							0	1	-	-	-	-	1		1
TOTAL	2	3	0	0	0	0	5	22	0	0	0	2	24	0	29
PER CENT	6.9	10.3	0.0	0.0	0.0	0.0	17.2	75.9	0.0	0.0	0.0	6.9	82.8	0.0	100.0

Table 5.6.6

LTU L I T H U A N I A R A B I E S C A S E S 1.10.01 - 31.12.01

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		
32	Akmenes	-	1	-	-	-	-	1						0		1
33	Alytaus							0	4	-	-	-	2	6		6
34	Anyksciu							0	-	-	-	-	1	1		1
36	Birzu	-	1	2	-	-	-	3						0		3
38	Varenos							0	1	-	-	-	1	2		2
39	Vilkaviskio							0	1	-	-	-	1	2		2
41	Vilniaus	1	1	1	-	-	-	3	4	-	-	-	2	6		9
43	Zarasu							0	1	-	-	-	7	8		8
45	Ignalinos	1	-	11	-	-	-	12	9	-	1	-	14	24		36
46	Jonavos							0	-	-	3	-	-	3		3
47	Joniskio							0	-	-	-	-	1	1		1
52	Kauno	1	-	-	-	-	-	1	-	-	-	-	1	1		2
53	Kedainiai	-	1	-	-	-	-	1	2	-	-	-	6	8		9
54	Kelmes	-	-	-	1	-	-	1	2	-	-	-	1	3		4
55	Klaipedos	3	-	-	-	-	-	3	4	-	-	-	14	18		21
56	Kretdingos							0	1	-	-	-	-	1		1
57	Kupiskio	-	1	-	-	-	-	1						0		1
59	Lazdiju							0	4	-	1	-	3	8		8
61	Mazeikiu	-	1	-	-	-	-	1						0		1
65	Pakruojo	-	1	1	-	-	-	2	2	-	1	-	1	4		6
66	Panevezio	1	1	2	-	-	-	4	3	-	-	-	1	4		8
67	Pasvalio	-	1	2	-	-	-	3						0		3
68	Plunges	-	-	3	-	-	-	3	1	-	1	-	-	2		5
69	Prienu	-	1	1	-	-	-	2						0		2
71	Radviliskio	-	-	2	-	-	-	2	1	-	-	-	1	2		4
72	Raseiniai	-	1	-	-	1	-	2	-	-	-	-	1	1		3
73	Rokiskio	-	1	-	-	-	-	1						0		1
75	Skuodo							0	1	-	-	-	-	1		1
77	Taurages	-	-	1	-	-	-	1	3	-	-	-	6	9		10
78	Telsiu							0	-	-	-	-	2	2		2
79	Traku							0	-	-	-	-	2	2		2
81	Ukmerges	-	3	1	-	-	-	4	1	-	1	-	-	2		6
82	Utenos	1	-	-	-	-	-	1	-	-	-	-	5	5		6
84	Sakiu	-	-	4	-	-	-	4						0		4
86	Svencioniu							0	4	-	1	-	8	13		13
87	Silales	-	-	1	-	-	-	1						0		1
88	Silutes	-	1	2	-	-	-	3	2	-	-	-	7	9		12
89	Sirvintu	-	1	3	-	-	-	4	2	-	-	-	4	6		10
91	Siauliu	-	-	1	-	-	-	1	2	-	1	-	3	6		7
94	Jurbarko	1	-	1	-	-	-	2	2	-	1	-	-	3		5
TOTAL		9	17	39	1	1	0	67	57	0	11	0	95	163	0	230
PER CENT		3.9	7.4	17.0	0.4	0.4	0.0	29.1	24.8	0.0	4.8	0.0	41.3	70.9	0.0	100.0

Table 5.6.7

RABIES CASES 1.10.01 - 31.12.01

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
POL POLAND															
02 Dolnoslaskie							0	3	-	1	-	-	4		4
04 Kujawsko-Pomorskie	-	2	3	-	-	-	5	18	-	-	-	3	21		26
06 Lubelskie	1	8	-	-	1	-	10	127	1	6	-	7	141		151
10 Lodzkie							0	2	-	-	-	-	2		2
12 Malopolskie	1	3	1	-	-	-	5	22	-	2	-	-	24		29
14 Mazowieckie							0	8	-	-	-	-	8		8
16 Opolskie							0	1	-	-	-	-	1		1
18 Podkarpackie	2	6	1	-	-	-	9	70	-	5	2	1	78		87
20 Podlaskie	-	3	6	-	-	-	9	22	-	2	-	4	28		37
22 Pomorskie							0	2	-	-	-	-	2		2
24 Slaskie							0	2	-	-	-	-	2		2
26 Swietokrzyskie							0	14	1	-	-	1	16		16
28 Warminsko-Mazurskie	1	2	22	-	-	-	25	12	2	-	-	13	27		52
30 Wielkopolskie	3	10	1	-	-	-	14	87	-	3	2	12	104		118
32 Zachodniopomorskie							0	3	1	-	-	3	7		7
TOTAL	8	34	34	0	1	0	77	393	5	19	4	44	465	0	542
PER CENT	1.5	6.3	6.3	0.0	0.2	0.0	14.2	72.5	0.9	3.5	0.7	8.1	85.8	0.0	100.0
TUR TURKEY															
09 AYDIN	1	-	7	2	-	-	10						0		10
16 BURSA	1	-	-	-	-	-	1						0		1
21 DIYARBAKIR	-	-	1	-	-	-	1						0		1
25 ERZURUM	1	-	-	-	-	-	1	1	-	-	-	-	1		2
29 GUEMUESHANE	1	-	-	-	-	-	1						0		1
31 HATAY	1	-	-	-	-	-	1						0		1
34 ISTANBUL	1	-	2	-	1	-	4	-	-	-	-	1	1		5
35 IZMIR	2	-	-	-	-	-	2	1	-	1	-	-	2		4
41 KOCAELI	1	-	-	-	-	-	1						0		1
44 MALATYA	1	-	-	-	-	-	1						0		1
45 MANISA	3	-	-	-	-	-	3						0		3
63 SANLIURFA	1	-	-	-	-	-	1						0		1
TOTAL	14	0	10	2	1	0	27	2	0	1	0	1	4	0	31
PER CENT	45.2	0.0	32.3	6.5	3.2	0.0	87.1	6.5	0.0	3.2	0.0	3.2	12.9	0.0	100.0

Table 5.6.8

RABIES CASES 1.10.01 - 31.12.01

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
ROM ROMANIA															
01 ALBA	-	2	1	-	-	-	3						0		3
03 ARGES	1	-	1	-	-	-	2						0		2
08 BRASOV	-	1	-	-	-	-	1	2	-	-	-	-	2		3
13 CLUJ	-	1	-	-	-	-	1	1	-	-	-	-	1		2
14 CONSTANTA							0	1	-	-	-	-	1		1
27 MURES	1	-	-	-	-	-	1	2	-	-	-	-	2		3
28 NEAMT							0	1	-	-	-	-	1		1
30 PRAHOVA							0	1	-	-	-	-	1		1
32 SALAJ	-	1	-	-	-	-	1	1	-	-	-	-	1		2
34 SUCEAVA							0	3	-	-	-	-	3		3
TOTAL	2	5	2	0	0	0	9	12	0	0	0	0	12	0	21
PER CENT	9.5	23.8	9.5	0.0	0.0	0.0	42.9	57.1	0.0	0.0	0.0	0.0	57.1	0.0	100.0
SVN SLOVENIA															
008 BREZOVICA							0	1	-	-	-	-	1		1
009 BREZICE							0	1	-	-	-	-	1		1
051 KOZJE							0	1	-	-	-	-	1		1
054 KRSKO							0	1	-	-	-	-	1		1
057 LASKO							0	2	-	-	-	-	2		2
060 LITIJA							0	3	-	-	1	-	4		4
092 PODCETRTEK							0	2	-	-	-	-	2		2
104 RIBNICA	1	-	-	-	-	-	1	4	-	-	-	-	4		5
110 SEVNICA							0	4	-	-	-	-	4		4
120 SENTJUR PRI CELJU							0	3	-	-	-	-	3		3
121 SKOCJAN							0	1	-	-	-	-	1		1
124 SMARJE PRI JELSAH							0	1	-	-	-	-	1		1
130 TREBNJE							0	1	-	-	-	-	1		1
142 ZAGORJE OB SAVI							0	2	-	-	-	-	2		2
157 DOLENJSKE TOPLICE							0	2	-	-	-	-	2		2
172 PODLEHNIK							0	1	-	-	-	-	1		1
178 SELNICA OB DRAVI							0	1	-	-	-	-	1		1
193 ZUZEMBERK							0	1	-	-	-	-	1		1
TOTAL	1	0	0	0	0	0	1	32	0	0	1	0	33	0	34
PER CENT	2.9	0.0	0.0	0.0	0.0	0.0	2.9	94.1	0.0	0.0	2.9	0.0	97.1	0.0	100.0

Table 5.6.9

RUS RUSSIAN FEDERATION — RABIES CASES — 1.10.01 - 31.12.01

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
01	Arkhangelsk Region							0						0	1	1
08	Pskov Region	1	1	5	-	1	-	8	6	1	-	-	3	10		18
09	Bryansk Region	1	2	-	-	-	-	3	1	-	-	-	-	1		4
10	Vladimir Region	1	-	-	-	-	-	1						0		1
12	Twer Region							0	1	-	-	-	2	3		3
13	Kaluga Region							0	3	-	-	-	-	3		3
15	Moscow Region	1	-	-	-	-	-	1	1	-	-	-	-	1		2
16	Oryol Region	3	3	7	-	-	-	13	17	-	-	1	-	18		31
17	Ruazan Region	3	1	-	-	-	-	4	2	-	-	-	-	2		6
18	Smolensk Region							0	6	1	3	-	2	12		12
19	Tula Region							0	3	-	-	-	-	3		3
21	Nizhniy Novgorod Reg.	1	-	1	-	-	-	2	2	-	-	-	-	2		4
24	Rep. of Mordoviya	1	-	10	-	-	-	11						0		11
26	Belgorod Region	16	19	18	-	1	-	54	23	-	1	-	1	25		79
27	Voronezh Region	14	14	31	-	1	2	62	12	-	1	-	-	13		75
28	Kursk Region	11	28	41	2	-	2	84	35	-	-	-	-	35		119
29	Lipetsk Region	2	-	21	-	-	-	23	6	-	-	-	-	6		29
30	Tambov Region	-	-	2	-	-	-	2	2	-	-	-	-	2		4
31	Astrakhan Region	7	4	10	-	-	-	21	1	-	-	-	1	2		23
32	Volgograd Region	14	17	23	-	3	-	57	22	-	-	-	-	22		79
33	Samara Region	1	1	-	-	1	-	3	2	-	-	-	-	2		5
34	Penza Region	-	1	-	-	-	-	1	1	-	-	-	-	1		2
35	Saratov Region	5	2	5	-	-	-	12	8	-	-	-	-	8		20
36	Ulyanovsk Region	1	-	-	-	-	-	1						0		1
37	Rep. of Kalmykiya	3	4	11	-	2	-	20	1	-	-	-	-	1		21
38	Rep. of Tatarstan	-	1	1	-	-	-	2	4	-	-	-	-	4		6
39	Krasnodar Territory	7	6	14	-	-	1	28	13	-	-	-	-	13		41
40	Stavropol Territory	6	9	17	1	1	-	34	12	-	-	-	-	12		46
41	Rostov Region	7	10	15	-	3	2	37	6	-	-	-	-	6	1	44
42	Orenburg Region	7	4	5	1	1	-	18	6	-	-	-	-	6		24
44	Rep. of Bashkortostan	3	1	20	3	-	-	27	12	-	-	-	-	12		39
46	Kaliningrad Region	1	-	1	-	-	-	2						0		2
TOTAL		117	128	258	7	14	7	531	208	2	5	1	9	225	2	758
PER CENT		15.4	16.9	34.0	0.9	1.8	0.9	70.1	27.4	0.3	0.7	0.1	1.2	29.7	0.3	100.0

Table 5.7

UKR U K R A I N E — R A B I E S C A S E S — 1. 1.01 - 31.12.01

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
01	Krym	3	2	-	-	-	-	5	9	-	-	-	-	9		14
02	Vinnytsia Region	4	14	1	-	-	-	19	4	-	-	1	-	5		24
03	Volyn Region	-	1	2	-	-	-	3	4	-	-	-	1	5		8
04	Dnipropetrovsk Region	5	19	8	-	-	-	32	19	1	1	-	-	21		53
05	Donetsk Region	6	12	5	-	-	-	23	22	-	-	-	2	24		47
06	Zhytomyr Region	1	2	-	-	-	-	3	62	2	1	-	1	66		69
07	Zakarpattia Region	3	1	1	-	-	-	5	1	-	-	-	-	1		6
08	Zaporizhzhia Region	4	6	10	-	-	-	20	19	-	1	-	2	22		42
09	Ivano-Frankivsk Regio	1	1	-	-	-	-	2	4	-	-	-	-	4		6
10	Kiev Region	3	5	-	-	-	-	8	12	1	-	-	-	13		21
11	Kirovohrad Region	14	19	8	-	-	-	41	10	-	1	-	-	11		52
12	Luhansk Region	44	57	69	2	3	1	176	40	-	3	-	3	46		222
13	Lviv Region	8	-	-	-	-	-	8	1	-	2	-	-	3		11
14	Micolaev Region	1	2	1	-	-	-	4	2	-	-	-	-	2		6
15	Odesa Region	12	5	3	-	1	-	21	29	-	1	-	1	31		52
16	Poltava Region	16	39	66	1	1	-	123	54	-	1	-	2	57		180
17	Rivne Region	1	1	2	-	-	-	4	11	-	-	-	-	11		15
18	Sumy Region	23	57	47	2	1	-	130	38	-	1	-	3	42		172
19	Ternopil Region	3	4	-	-	-	-	7	11	-	-	-	-	11		18
20	Kharkiv Region	18	40	61	-	4	-	123	44	-	1	-	2	47		170
21	Kherson Region	3	5	4	1	-	-	13	11	-	-	-	-	11		24
22	Khmelnytsky Region	8	8	11	1	-	1	29	30	-	3	-	-	33		62
23	Cherkasy Region	7	20	14	11	-	-	52	21	-	-	-	2	23		75
24	Chernivtsy Region	2	1	1	-	-	-	4	1	-	-	-	-	1		5
25	Chernihiv Region	27	56	28	5	2	-	118	123	-	7	-	9	139		257
TOTAL		217	377	342	23	12	2	973	582	4	23	1	28	638	0	1611
PER CENT		13.5	23.4	21.2	1.4	0.7	0.1	60.4	36.1	0.2	1.4	0.1	1.7	39.6	0.0	100.0

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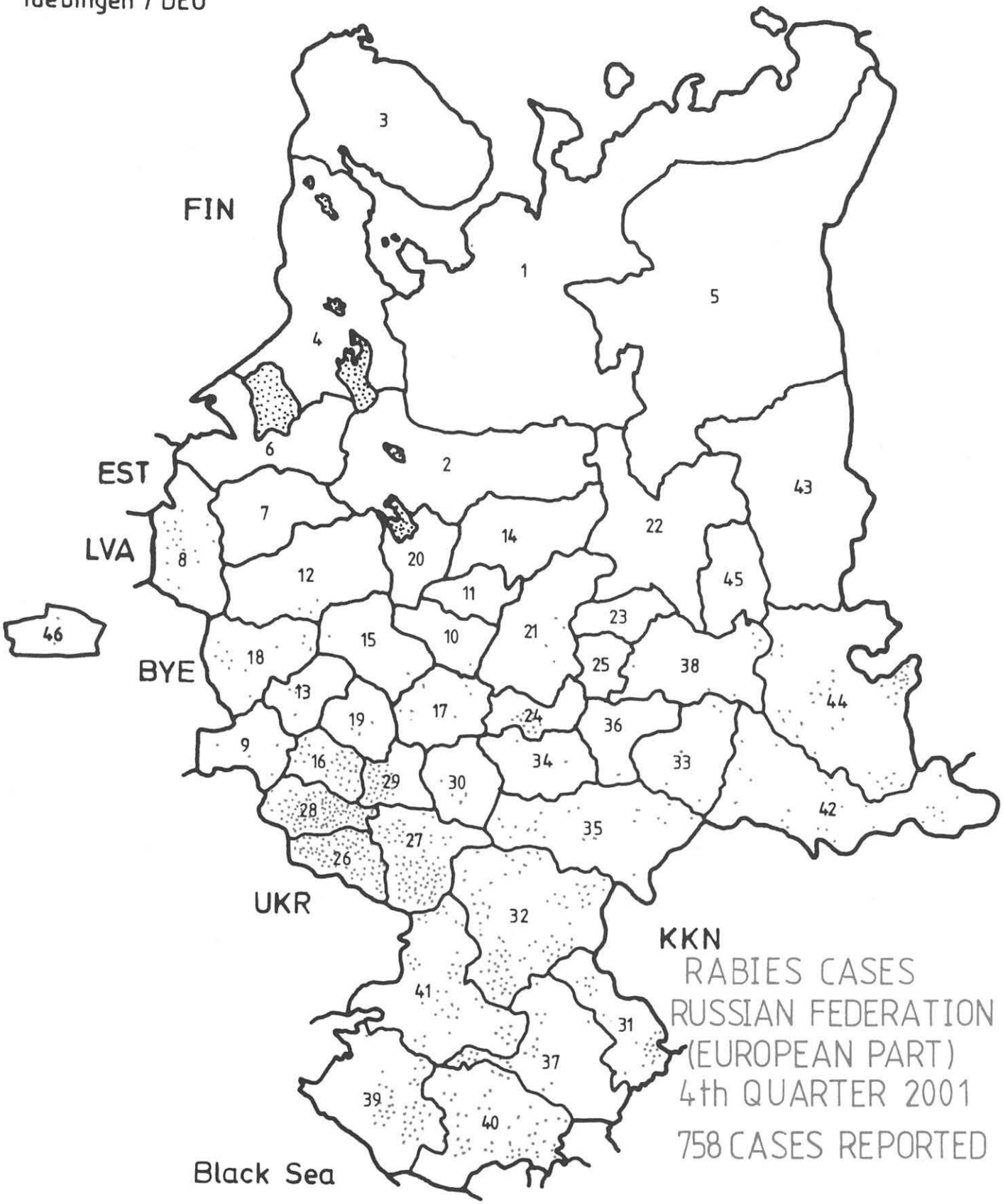

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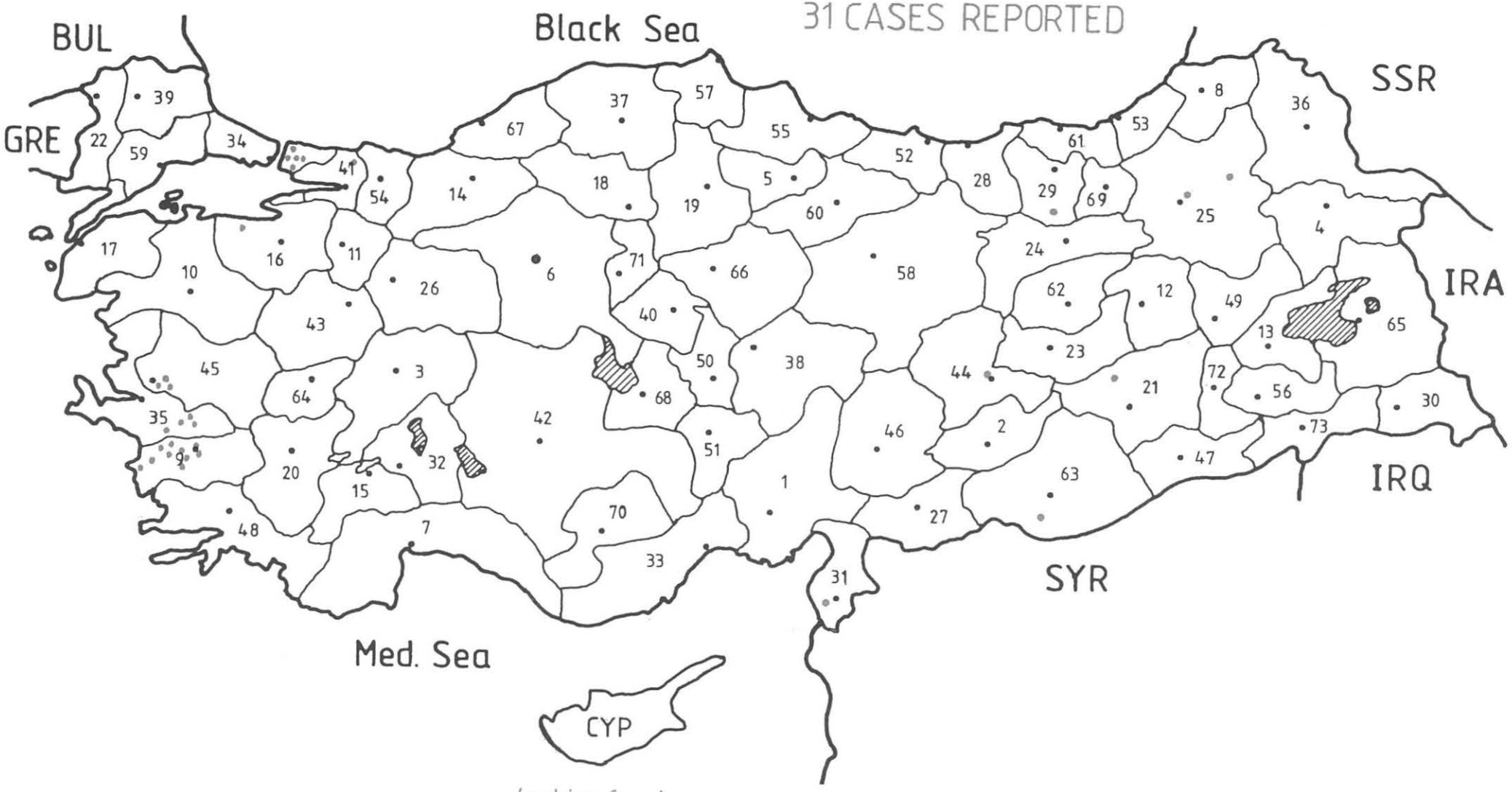
RABIES CASES TURKEY
4 th QUARTER 2001
31 CASES REPORTED



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RABIES CASES EUROPE

4th QUATER 2001

2200 CASES REPORTED

(without Ukraine)

5 Bat Rabies Cases Included

ICE
(rabies free)

NOR
(rabies free)

SWE
(rabies free)

FIN
(rabies free)

EST
(56)

RUS
(758)

LVA
(90)

LTU
(230)

RUS

BYE (142)

DEN
(0)

IRE
(rabies free)

UNK
(rabies free)

NET
(0)

BEL
(rabies free)

LUX
(rabies free)

DEU
(5)
(2)

POL
(540)
(2)

UKR
(data only annually available)

CZH
(3)

SVK (29)

MLD
(6)

FRA
(1)

AUT
(1)
Imported Dog Case

HUN
(50)

SWI
(rabies free)

SVN
(34)

CRO
(120)

ROM (21)

ITA
(rabies free)

BIH
(12)

FRY
(55)

BUL
(9)

TYM
(no data)

POR
(rabies free)

SPA
North Africa (3)
Mainland (0)

ALB
(0)

TUR
(31)

GRE
(rabies free)

(rabies free) = No indigenous case reported for at least two years

0 50 100 km