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 1993**, subsequently referred to as ***"This Quarter"***.

In SECTION 2 a summary of the rabies situation in general is given.

SECTION 3 (3.1-3.36) reflects the situation for individual countries.

In the Miscellaneous SECTION (4) under 4.1 a change of the rabies regulations on cross-border transfer of dogs and cats in Norway and Sweden is described. 4.2 presents the results on a rabies bat surveillance study in Italy. WHO news reflect on intradermal rabies vaccines for human post-exposure treatment under 4.3 and on European cross-border cooperation of oral vaccination of foxes against rabies under 4.4.

The rabies case data are tabulated for the **Fourth Quarter 1993** 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 for the **Fourth Quarter 1993** is shown on maps of Russia, Turkey and Europe in the ANNEX.

2. Summary of Rabies in Europe

2.1. Fourth Quarter 1993

During ***"This Quarter"***, 2707 rabies cases were reported in Europe. Of these were 2067 in wild animals (76.4% of total), 637 in domestic animals and 3 in humans.

Of the cases in wild animals, 1843 were foxes, 79 raccoon dogs, 28 badgers, 35 stone martens, 14 pine martens, 6 polecats, 1 ferret, 1 large weasel, 4 wolves, 1 brown bear, 47 roe deer, 2 red deer, 1 wild boar, 1 squirrel, 1 black rat, 1 house mouse, 1 hare, 1 other wild animal. Of the 637 domestic animals, 155 were dogs (of which Turkey with dog-mediated rabies recorded with 39 the highest number of cases of a single country), 173 cats, 245 cattle, 43 sheep, 8 goats, 11 horses, 1 pig, 1 other domesticated carnivore.

There were 3 human cases reported during ***"This Quarter"***, all of them in the Russian Federation.

There was no bat rabies case reported.

The above data are

presented in TABLES 1 and 3 of SECTION 5 and in the TABLES of the individual countries.

Compared to the previous quarter (2124 cases - corrected figure) an increase is noticed (by 583 caes). That is expected as wildlife rabies is seasonal and the increase in autumn is connected to the dispersal of young foxes born in spring of the year. Most of the countries recorded the increase except for France and Poland. Here the effect of oral vaccination is noticed and for Poland as well a reduction of cases after a long period with a high incidence.

Rabies-free countries in Europe participating in the surveillance were: Finland, Greece, Iceland, Ireland, the mainland of Norway, Portugal, the mainland and islands of Spain, Sweden, and the United Kingdom of Britain and Northern Ireland.

There were no cases reported during *"This Quarter"* from Denmark, Luxembourg, Svalbard of Norway, and the Spanish territory of North Africa, but the last indigenously acquired case (in terrestrial animals or bats) was less than two years ago.

The status of four countries with no data supplied can not be judged.

2.2. Development and Trends in 1993

Summary:

Rabies case data summarizing the year 1993 can be found in TABLES 2, 4 and 5 of SECTION 5.

The number of rabies cases in 1993 totals 9383. The four quarters compare as follows (corrected figures for the first to third quarters):

1st quarter	- 2731
2nd quarter	- 1821
3rd quarter	- 2124
4th quarter	- 2707

The total in 1993 is the lowest figure recorded for one year since the beginning of this surveillance system in 1977, the highest figure being 24.373 in 1989.

Wildlife or fox-mediated rabies:

The wildlife rabies epizootic of central Europe has the red fox as reservoir and this is also the animal that passes the infection most frequently on to other animals (wild and domestic). TABLE 2 with annual figures shows that the fox participates with 66% of all rabies cases in Europe as the principal vector, in spite of a large unknown figure, which we do not have in domestic animals. Approx. 10% of other rabid wild animals share the same habitat with the fox. The same can be said for the greater part of farm animals in summer (cattle participate with 8.1% of the total as animal no. 2).

After the year 1989 with a high rabies incidence in Europe (24,373 rabies cases), a reduction of cases was noticed in 1990 (21,044), 1991 (16,479 cases) and 1992 (11,075) and this year (9383). Reasons are the efforts of many countries to eradicate rabies by oral vaccination. And here especially the countries Austria, Belgium, the Czech Republic, Germany and France had substantial reductions of rabies cases.

The decrease of cases in Europe happened in spite of several other countries recording an increase of different degrees like Croatia, Estonia, Hungary, Italy, Lithuania, Latvia, Romania, Slovakia, Slovenia or Switzerland.

Urban- or dog-mediated rabies:

Unfortunately, Turkey is often counted among the other European countries. However, it is of a different rabies pattern altogether. In 1993 though it accounted only for 3% of the total rabies cases in Europe. Of all animal cases, 98.3% were in domestic animals, the rest in wild animals.

Turkey has continually diminishing annual rabies figures from 1981 with 2260 reported cases to 1993 with 287 cases.

Bat rabies:

There were 18 cases of bat rabies reported in 1993, 10 cases in the Netherlands, 6 cases in Germany and 1 case each in Switzerland and Denmark. Since 1987 (142 cases) there is a diminishing tendency of bat cases registered in Europe.

Human rabies:

There were 8 human cases reported in 1993. One case occurred in Belarus, one in Latvia, one in Lithuania and 5 cases in the Russian Federation.

3. Rabies in Individual Countries

3.1 Albania ALB

No data.

3.2 Austria AUT

by Helmut Schnabl

Of 9906 samples examined for rabies during *"This Quarter"*, 273 cases (2.8%) were diagnosed rabid. There has been an increase of cases compared to the third quarter 1993 (199) by 37.2%.

Of the 273 cases, 243 were in wild animals (225 foxes, 5 badgers, 5 stone martens, 8 roe deer) and 30 were in domestic animals (21 cattle, 4 sheep, 3 goats, 2 cats).

The distribution of cases by Bundesländer (federal provinces) and Bezirke (districts) was as follows:

Burgenland: 10 cases in the Bezirke Neusiedl/See and Oberwart.

Niederösterreich: 13 cases in the Bezirke Bruck/Leitha, Gmünd, Hollabrunn, Korneuburg and Waidhofen/Thaya.

Salzburg: 14 cases in the Bezirke Hallein, Salzburg/Umgebung and Zell/See.

Steiermark: 11 cases in the Bezirke Feldbach, Leibnitz and Radkersburg.

Tirol: 119 cases 43.6% of total) in the Bezirke Imst, Magistrat Innsbruck, Innsbruck/Land, Kufstein, Reutte and Schwaz.

Vorarlberg: 106 cases (38.8% of total) in the Bezirke Bludenz, Bregenz and Dornbirn.

The federal provinces Wien, Oberösterreich and Kärnten reported no rabies.

Summary 1993

The total for 1993 amounted to 675 cses, 442 cases less than in the previous year.

3.3 Belgium BEL

by L. Hallet

During *"This Quarter"*, only one case of rabies was diagnosed in a cat in Bastogne near the border with the Grand Duchy of Luxembourg. This one case brings the annual total to 2 cases in 1993.

An oral fox vaccination campaign was carried out from the end of September to the beginning of October 1993. It covered an area of 5510 km² distributing 85,600 vaccine baits by helicopter.

3.4 Bulgaria BUL

No data.

3.5 Belarus BYE

by S.N. Shpilevsky and P. Rytik

During *"This Quarter"*, 17 animal rabies cases were reported in Belarus. Of these 9 were in domestic animals (2 dogs, 2 cats, 2 cattle, 3 horses) and 8 in wild animals (7 foxes and 1 wolf).

Most affected by the disease was the Mogilev region with 5 cases.

There was no human rabies case.

Summary 1993

The total rabies cases in Belarus amounted to 108 in 1993 (54 foxes, 4 wolves, 1 raccoon dog, 26 dogs, 9 cats, 3 horses, 10 cattle and 1 human case).

The Vitebsk and Mogilev regions were most affected with 39 and 37 cases respectively.

3.6 Croatia CRO

by Mate Brstilo

During *"This Quarter"*, 156 rabies cases were diagnosed in 33 municipalities. Of these, 142 were in foxes, 3 in other wild animals (1 doe and 2 martens) and 11 in domestic animals (5 sheep, 1 bovine, 2 dogs and 3 cats). Rabies was most frequently registered in the following municipalities: Rijeka (31 cases) followed by Zagreb (13), Dugo Selo (12), Cakovec (11), Koprivnica (11) and Kutina (10).

Summary 1993

In 1993, 357 rabies cases were registered in Croatia out of 1457 samples examined.

Most samples were collected in winter - 1st quarter - 427, 2nd quarter - 232, 3rd quarter - 220 and 4th quarter - 578 samples.

983 samples were foxes (67.5%). Of all foxes 325 were rabid (33.1%).

3.7 Czech Republic CZH

by Oldrich Matouch

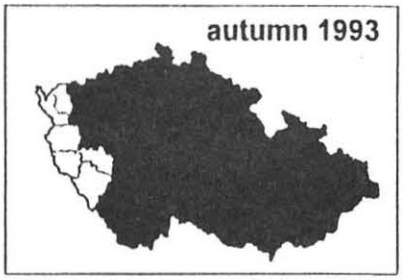
A total of 111 rabies cases were reported on the territory of the Czech Republic during ***"This Quarter"***. Of these 101 were diagnosed in wild animals (91%) and 10 in domestic animals (9%).

Of the wild animals the disease was confirmed in 91 foxes, 1 badger, 6 martens, 1 raccoon dog, 1 ferret and 1 roe deer. Of the domestic animals rabies was observed in 10 cats.

There were 27 cases less compared to the same period in 1992. Cases were most frequent in the region East Bohemia (38), North Moravia (30) and North Bohemia (18).

An oral vaccination of foxes was carried out in October 1993 covering all infected parts of the country. 900,000 doses of Lysvulpen vaccine (SAD Bern strain) were distributed covering an area of 56,000 km² (see dark area of map) in Figure 1.

Figure 1



Summary 1993

In 1993, a total of 11,463 animals was examined for rabies in the Czech Republic. Rabies was diagnosed in 422 cases, 129 less than in the previous year. Mostly affected by the disease were foxes (359 cases = 85.1% of total). The other animals involved were martens (30), roe-deer (4), badgers (2), raccoon dog (1), ferret (1), squirrel (1), muskrat (1), cats (19), dogs (2), horse (1) and domestic rabbit (1). The rabies situation improved in comparison to 1992 due to the very encouraging results of the oral vaccination.

3.8 Denmark DEN

by Eric Stougaard

No case of rabies has been reported in Denmark during ***"This Quarter"***.

3.9 Germany, Federal Republic DEU

by Winfried W. Müller and Thomas Müller

A total of 390 rabies cases was reported during ***"This Quarter"***, more than double as many as during the previous quarter and 81 cases more than during the fourth quarter 1992.

Of the 390 cases, 311 (80%) occurred in three federal states - Bayern, Baden/Württemberg and Rheinland-Pfalz - in mostly reinfected areas. Because of the experience of several reinfected areas followed by fierce outbreaks, efforts are taken at this point to find reasons, if the strategies in connection to oral vaccination of foxes are still sufficient. While the latter research goes on three immediate steps have been recommended: to increase the safety zone around outbreaks from 30 to 50 km, to prolong the vaccination period to 2 years after the last rabies case in the area and to practice preventional cordon vaccinations in threatened border areas.

Seven out of 16 federal states recorded no rabies case: the city states Bremen, Hamburg and Berlin, and the Federal States Schleswig/Holstein, Mecklenburg/Vorpommern and Thüringen.

As expected during the winter months, there were relatively large numbers of farm animals affected by the disease - cattle by 7.9% of the total cases and sheep 4.4%.

Summary 1993

With 845 rabies cases recorded in 1993 there were 580 cases less compared to 1992 (1425).

The reduction of cases is undoubtedly connected to the oral vaccination of foxes practiced in Germany since 1983

(for the new federal states since 1989). The reduction occurred in spite of set-backs namely, the reinfestation of already rabies-free areas.

There was a total of 6 bat rabies cases in 1993. All of them were recorded in northern Germany.

3.10 Estonia EST

by Matti Nautras

During *"This Quarter"*, 46 animal rabies cases were registered in Estonia, 6 cases more than during the previous quarter. 18 cases were noticed in domestic animals (3 dogs, 11 cats, 2 cattle, 2 sheep), 28 cases in wild animals (11 foxes, 1 badger, 15 raccoon dogs, 1 black rat).

There was a concentration of cases in the southeast of the country.

Summary 1993

160 cases in animals were registered in 1993. 136 of these occurred in the eastern half of the country with a concentration in the southeast. The animal species mostly affected was the fox with 64 cases (40% of total) followed by the raccoon dog with 41 cases. 70% of all cases were in wild animals.

3.11 Finland FIN

by Bengt Westerling

The country remained rabies-free.

Surveillance

3rd and 4th Quarter 1993

A total of 94 animals were examined for rabies by immunofluorescence on brain tissue, all with negative result. Amongst them were 11 dogs, 10 cats, 33 foxes, 25 raccoon dogs, 5 wolves and 2 bats.

Summary 1993

During 1993 a total of 280 animals were examined for rabies. Amongst them 23 dogs, 17 cats, 94 foxes, 119 raccoon dogs, 4 badgers, 5 wolves, 2 lynx and 2 bats.

In September 80.000 Tübingen vaccine baits were distributed by air in a 20 km deep and 250 km long zone, corresponding to a land area of approx. 4000 km², along the south-eastern national border against Russia at a total cost of approx. FIM 650,000.

Regardless of the rabies-free status of the country, the vaccination of hunting dogs and dogs put on show is kept compulsory.

3.12 France FRA

by Michel F.A. Aubert

27 rabies cases were registered during *"This Quarter"*, half as many as during the previous quarter. 22 cases were diagnosed in foxes (81.5% of total), 3 in other wild animals and 2 in domestic animals (cattle).

The departments (départements) registering the greatest number of cases were Vosges, Meurthe et Moselle and Meuse with 7, 6 and 5 cases respectively.

Summary 1993

The total of animal rabies cases in 1993 amounted to 261. The rabies incidence diminished by 80% compared to 1992. But not only the case incidence decreased in 1993, the area infected decreased as well. Lately, almost all the cases were located in the area that has been the last one to be included in the programme of oral vaccination (autumn 1992).

The development of rabies in France from 1989 to 1993 can be seen from Figure 2 on the next page.

3.13 Greece GRE

by A. Katsaounis

The country remained rabies-free.

3.14 Hungary HUN

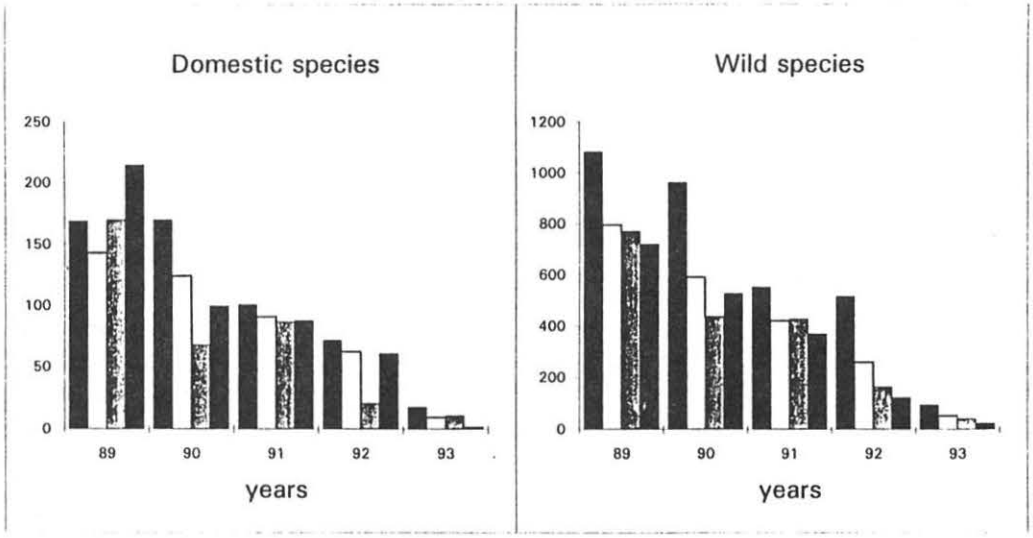
by Balint Kerekes

A total of 272 cases were registered in Hungary during *"This Quarter"*, 52 cases more than during the previous quarter and 83 cases less than in the fourth quarter 1992. All 20 provinces (Komitate) were affected by the disease.

Summary 1993

A total of 1123 animal rabies cases was diagnosed in 1993, 231 cases more than in 1992. The distribution of animal species affected by the disease was typical for fox-

Figure 2
Development of Rabies in France



mediated rabies (76% of the total were foxes). There was more concentration of cases in the western part of the country, except for the area where oral vaccination is practiced. Here a slight improvement of the rabies situation was noticed compared to previous years.

3.15 Iceland ICE

The country remained rabies-free.

3.16 Ireland IRE

The country remained rabies-free.

3.17 Italy ITA

by Santino Prosperi

During ***"This Quarter"***, 28 rabies cases were diagnosed, 9 more than during the previous quarter. 4 cases occurred in the province of Gorizia, all in foxes, and the other cases in the province of Bolzano (7 infected communities) involving 19 foxes, 2 badgers, one pine marten, one roe-deer and one bovine.

Summary 1993

In 1993 surveillance was carried out in the Alpine Regions as follows:

1. 179 wild animals (110 foxes) and 244 domestic animals were examined in Piemonte, Valle d'Aosta and Liguria. All of them were negative.

2. 623 wild animals (562 foxes) and 231 domestic animals were examined in Lombardia. All of them were negative.

3. 4537 wild animals (3833 foxes) and 332 domestic animals were examined in Trentino Alto Adige, Veneto and Friuli Venezia Giulia. Of these were rabid 67 foxes, 7 badgers, 3 pine martens, 2 roe deer, one chamois, one cat and one bovine in the Friuli Venezia Giulia and in the Trentino Alto Adige regions.

On January 15th 1993, an Ordinance of the Ministry of Health made the vaccination of dogs, cattle, sheep, goats and equines of the Friuli Venezia Giulia Region compulsory. ERA vaccine is to be used. The Health Authorities of Piemonte, Valle d'Aosta, Liguria, Lombardia, Veneto and Trentino Alto Adige will consider compulsory vaccination in areas at risk, in connection with the presence of rabies in the bordering countries.

In 1993 the Health Authority of Alto Adige vaccinated 15,000 dogs and 11,000 herbivores against rabies.

Oral vaccination of foxes was carried out in spring 1993 in the provinces of Trieste, Gorizia and Udine covering an area of 1600 km^2. The vaccination of foxes in the newly infected area of the Bolzano province was performed last May in an area of 400 km^2 and repeated in autumn in an area of 600 km^2.

3.18 Lithuania LTU

by K. Lukauskas and A. Dranseika

During *"This Quarter"*, 23 rabies cases were diagnosed in 17 districts (7 cattle, 4 dogs, 5 cats, 4 foxes, 2 raccoon dogs and 1 marten). The districts Salčininkai recorded 5 cases, and Biržai 3 cases. All other infected districts reported 1 case only.

During *"This Quarter"*, more than 15,000 dogs were vaccinated against rabies.

Summary 1993

The total of rabies cases in 1993 amounted to 100. There were 74 domestic animal cases (24 dogs, 19 cats, 31 cattle), 25 wild animal cases (14 foxes, 7 raccoon dogs, 1 wolf, 3 pine martens) and 1 human case.

3.19 Luxembourg LUX

by Joseph Kremer

There was no rabies case recorded during *"This Quarter"*.

Summary 1993

The year 1993 had a very good rabies record. Only one case in a roe deer (and not as reported by mistake in a hind) was registered in the centre of Luxembourg during the second quarter 1993. The last case in a fox was diagnosed more than 2 years ago, on 16 October 1991.

To maintain the status of being free of rabies, the veterinary authorities are going to organize at least one oral vaccination campaign in 1994 covering the whole country. This is to prevent the country from possible reinfection by neighbouring countries.

3.20 Latvia LVA

by Z. Andersons, J. Rimeicans and A. Dedziņš

During *"This Quarter"*, 75 rabies cases in animals were registered in Latvia in 20 administrative districts. Of these cases 52 were in wild animals (69.3%), 23 in domestic animals. There were 6 districts free of rabies during the fourth quarter 1993.

Of the wild animals 28 cases were noticed in foxes, 18 in raccoon dogs, 3 in badgers, 1 in a wolf, 1 in a roe deer and 1 in a polecat. Of 23 domestic animals 10 were dogs, 8 cats, 4 cattle and 1 horse.

The most affected districts of the country were Ventspils with 19 cases, Valmiera with 8 cases and Alūksne with 6 cases. All other affected districts reported 1 to 5 cases.

Summary 1993

The total of rabies cases in 1993 amounted to 194. There were 123 wild animal cases, 70 domestic animal cases and 1 human case.

3.21 Moldova MLD

No data.

3.22 Netherlands NET

by J.H.M. Nieuwenhuijs

During *"This Quarter"*, 143 animals were investigated for rabies; none of them were found positive.

Summary 1993

In 1993, a total of 750 animals was investigated (472 adult foxes, 51 young foxes, 7 dogs, 13 cats, 1 cow, 4 deer, 1 ferret, 1 muskrat, 1 mouse, 1 hedgehog, 61 badgers, 4 squirrels and 133 bats).

Of the investigated bats, 8 originated from the Blijdorp Zoo in Rotterdam, where approximately 250 bats of the species *Rousettus aegyptiacus* are held in an artificial cave.

All rabies positive animals (10) in 1993 were bats. Nine of them were determined as *Eptesicus serotinus*, one as *Myotis dasycneme*.

As in the previous years, all rabid bats were located in the northern provinces of the Netherlands.

3.23 Norway NOR

by Gudbrand Bakken

The mainland of Norway remained rabies-free.

No case of rabies has been reported in Svalbard during *"This Quarter"*.

3.24 Poland POL

by Jozef Maleszewski

During *"This Quarter"*, 578 rabies cases in animals were diagnosed in Poland, 115 cases less than in the previous quarter (693) and 718 cases less than in the 4th quarter 1993 (1296). Of the rabid wild animals 364 were foxes, 40 raccoon dogs, 19 mustelids, 15 roe deer, 1 red deer, 1 wild boar, 1 squirrel and 1 hare. Of 136 domestic animals 24 were dogs, 39 cats, 1 other domesticated carnivore and 72 farm animals.

The most affected provinces (voivodeships) of the country were Koszalin and Poznan with 43 and 30 cases respectively. All other provinces recorded less than 28 cases.

Summary 1993

In 1993 a total of 2645 animal rabies cases were diagnosed, 439 cases less than in 1992. All 49 provinces of the country were affected, with concentration of cases in the north and the west. In 1993 the first two oral vaccination campaigns were started in the western voivodeships along the German and Czech state borders.

3.25 Portugal POR

The country remained rabies-free.

3.26 Romania ROM

by Gheorghe Stratulat

During *"This Quarter"*, 12 rabies cases were diagnosed in Romania, 7 in domestic and 5 in wild animals. The cases were scattered throughout the country, except for 5 cases in one province, Dolj, in the south.

Summary 1993

77 rabies cases were reported in Romania, 38 in domestic animals (49.4% of total) and 39 in wild animals. There were 25 cases more than during the previous year (52).

3.27 Russia RUS (European part only)

by V.A.Vedernikov,B.L.Cherkasskiy, V.A.Semlanova, V.A. Kybasov and P.K.Shumilov

During *"This Quarter"*, 133 rabies cases in animals were reported from the European part of Russia.

Of the total number of cases 104 were in domestic animals - 30 dogs, 16 cats, 52 cattle, 3 horses, 2 sheep, 1 pig. Of 29 wild animals rabies was diagnosed in 25 foxes, 3 raccoon dogs, 1 wolf.

Most affected were the Orenburg region with 21 cases, Bashkortostan with 17 cases, followed by the Voronezh region with 14 cases.

There were 3 human cases, one in the Tula region and 2 in Orenburg region.

Summary 1993

The total in 1993 amounted to 769 cases, 133 less than in the previous year.

3.28 Slovak Republic SVK

by Bohuslav Lovas

During *"This Quarter"*, 168 rabies cases were diagnosed in the Slovak Republic. Of these, 137 cases were in wild animals (81.5% of total) and 31 in domestic animals. Of the total number of wild animals the disease occurred in 129 foxes, 6 martens, 1 badger and 1 roe deer. Of the domestic animals diagnosed rabid 11 were dogs, 15 cats, 4 cattle and 1 goat. Rabies cases were most frequent in the region East Slovakia (76), followed by Central Slovakia (66) and West Slovakia (24).

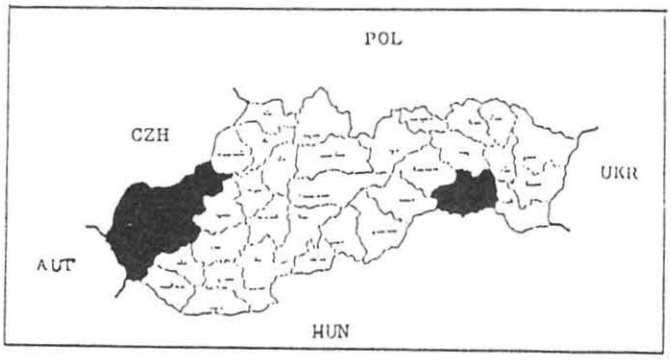
There was no human rabies case reported.

An oral vaccination campaign of foxes against rabies was carried out in October 1993. During this vaccination campaign 100,000 KAMARK vaccine baits, manufactured by Mevak Nitra have been distributed in an area of approx. 7,776 km². The area is shown in Figure 3 (dark zone of the map) on the next page.

Summary 1993

The annual total amounted to 489 rabies cases. There were 168 cases more compared to 1992. More than 230,000 dogs and more than 90,000 cattle were vaccinated against rabies throughout the year.

Figure 3
Vaccination area in the Slovak Republic in 1993



3.29 Spain SPA

by T. Maté Maté

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

There were no cases reported from the Spanish territory of North Africa.

3.30 Slovenia SVN

by Armin Tomašič

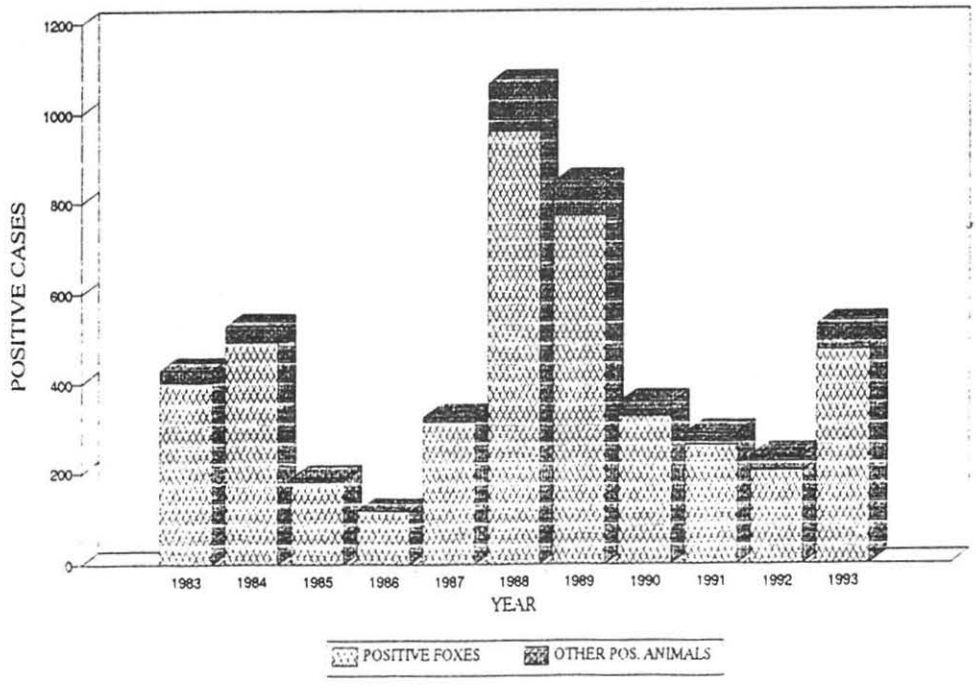
During *"This Quarter"*, 234 rabies cases were registered in Slovenia, 130 more than during the previous quarter. 207 cases occurred in foxes (88.5%), 16 in other wild animals, 4 in dogs, 5 in cats, 1 in a bovine and 1 in a sheep.

Most of the cases were distributed in the north-western part of the country, near the borders with Italy and Austria. The most infected communities were: Ajdovščina, Idrija, Ljubljana Vič-Rudnik, Logatec, Nova Gorica, Radovljica, Skofja Loka, Tolmin and Vrhnika.

Summary graph

The annual development of rabies from 1983 to 1993 can be seen from the following graph, Figure 4.

Figure 4
Annual development of rabies in Slovenia from 1983 to 1993



3.31 Sweden SWE

The country remained rabies-free.

3.32 Switzerland SWI

by Urs Breitenmoser

During ***"This Quarter"***, the Swiss Rabies Centre examined a total of 849 animals, of which 9.2% (78) were positive for rabies. In the previous quarter, 6.3% (56 out of 885) and in the fourth quarter of 1992, 3.6% (26 out of 716) had been recorded positive, respectively. The cases of rabies observed in this quarter involved 64 red foxes, 2 badgers, 1 roe deer, 2 cats, 1 dog, 5 cattle, 1 horse and 2 sheep. As in the previous quarters, the cases recorded came from the larger vicinity of Basel, in the north of Switzerland and from the northwestern part of the Jura Mountains.

17 bats (1 *Eptesicus serotinus*, 3 *Myotis daubentoni*, 1 *Myotis myotis*, 4 *Myotis mystacinus*, 1 *Nyctalus leisleri*, 1 *Pipistrellus pipistrellus*, 1 *Plecotus austriacus*) were examined during the reporting period. None was found to be positive for rabies.

Three persons were bitten by proven rabid animals, two by a cat and one by a horse. The number of people treated for non-bite exposures is not recorded.

Summary 1993

In 1993, a total of 175 animals (6.1% of 2878 examined) were positive for rabies. This was an increase compared to the 1992 figure (4.8% = 127 out of 2642). The area affected by the epizootic was - as in previous years - the Jura Mountains in northern Switzerland.

3.33 Turkey TUR

by A. Nizamettin Güvener

During ***"This Quarter"***, 68 rabies cases were recorded in Turkey, 11 cases less than in the previous quarter. 65 cases were in domestic animals (39 dogs, 7 cats, 19 farm animals) and 3 cases were in wild animals (1 wolf, 1 brown bear, 1 house mouse).

Summary 1993

A total of 287 cases were reported in 1993, 33 less than in the previous year. Turkey has continued diminishing annual figures since 1981 with 2260 cases reported to 1993 with 287.

There were four bordering provinces with the highest incidence of rabies cases in 1993: Istanbul (30), Kocaeli (15), Sakarya (20) and Bolu (31) in the north-west of the country.

98.3% of all cases were noticed in domestic animals, 70.7% in dogs.

3.34 Ukraine UKR

No data.

3.35 United Kingdom UNK

by P.J. Thomas

The country remained rabies-free during ***"This Quarter"***.

Surveillance 1993

3rd and 4th Quarters 1993

Reports of suspect rabies outside quarantine were investigated on 6 occasions during the period, involving 2 dogs, 1 cat, and 3 foxes. Biting, scratching or licking of humans was reported in 3 of these incidents. Veterinary staff resolved 2 incidents at the initial clinical investigation and the remaining 4 following examination of material submitted to the Central Veterinary Laboratory, Weybridge.

85 dogs and cats died whilst in quarantine and in every case material was submitted to the Central Veterinary Laboratory, Weybridge, with negative results in all cases.

113 bats were examined for rabies during the period, all with negative results.

No cases of human rabies occurred during the period.

3.36 Yugoslavia YUG

by Dušan Jakovljević

14 animal rabies cases were reported during ***"This Quarter"***, 13 in Vojvodina and 1 in Montenegro, compared to 17 cases in the previous quarter. 5 cases were in domestic animals (2 dogs, 3 cats) and 9 in foxes.

Summary 1993

The annual total of Yugoslavia amounted to 83 cases. Of these 79 occurred in Vojvodina, 3 in Serbia and 1 in Montenegro.

4. MISCELLANEOUS ARTICLES

4.1 Vaccination and antibody testing replacing quarantine as rabies safety measure for transfer of dogs and cats into Sweden and Norway from EU/EFTA-countries

by Berndt Klingeborn,
National Veterinary Institute, Uppsala, Sweden
and Johan Krogsrud,
Central Veterinary Laboratory, Oslo, Norway

Background

Sweden and the mainland of Norway have been rabies-free for more than 100 years. It is forbidden to take live animals into these countries, unless certain conditions are fulfilled. So far, imported dogs and cats are kept at state quarantine stations for 4 months and thereafter in home quarantine for two months. Animals coming from rabies free countries can be imported on the condition of one month restriction at home. For the time being the rabies free countries as defined by the Swedish and Norwegian authorities include the United Kingdom, Ireland, Iceland, Australia, New Zealand and also the state of Hawaii of the United States of America.

The quarantine condition has worked well as a safety measure. However, the system is expensive to the animal owners and has also other drawbacks considering psycosocial conditions and reduced possibilities for physical training of the animals. Animal owners often object and consider quarantine unjustifiable, as a realistic rabies threat can not be implied. The quarantine system has served to a large extent as a prohibitive factor in the countries on the intake of new animals.

Increased international traffic and the trend of opening national borders for free trade have created a demand for more convenient regulations on transfer of dogs and cats. At the time when alternative measures to quarantine have been presented and discussed, recent experience on the progress of oral vaccination of foxes against rabies in Central Europe has been considered. WHO and OIE have contributed by making relevant knowledge on all aspects of alternatives to quarantine available.

The authorities in Sweden and Norway consider the risk based on vaccination with proved immune response as not being much higher than the traditional procedure of quarantine. However, the changed procedure will increase animals crossing the borders, and this in itself is of course a risk factor of some significance.

Geographical implications

Apart from minor details the new regulations will be identical for Sweden and Norway. The new system will be implemented on the 1st of May 1994, and from that date dogs and cats can travel freely between Sweden and Norway.

Vaccination with follow-up antibody testing will serve as a safety measure against rabies only for the transfer of dogs and cats from EU- and EFTA-countries. Animals from other countries will still have to go into quarantine.

The reason for this differentiation is that in the EU/EFTA-countries only the fox-adapted type of rabies is known to occur, and not the dog-adapted "street-rabies". Dogs have also appeared to be relatively resistant to the fox-adapted type of rabies, and it has never been shown that the fox-type of rabies has been spread into new territories within the EU/EFTA countries via the canine and feline species. Nor does it seem that un-

vaccinated but antibody positive or persistently infected dogs occur in these countries. There is evidence for good rabies surveillance programmes in all of these countries, and there is continuous progress in eradicating fox mediated rabies.

The new programme

There are definite procedures on some "non-rabies-issues".

- animal identification (ear tattooing or microchip injection)
- veterinary certificate
- treatment against tapeworms
- vaccination against leptospirosis
- vaccination against distemper

Vaccination against rabies and follow-up test for antibody response

The dog or cat has to be vaccinated against rabies with an approved vaccine during the last year prior to transfer into Sweden or Norway. Only inactivated vaccines are approved. The first valid vaccination can be given at no less than 3 months of age in dogs and at 14 months of age in cats.

The animal must be tested for the presence of a sufficient level of neutralizing antibodies. Blood for the serological test can be taken no sooner than 4 months after rabies vaccination of dogs which had not been tested earlier. Blood for antibody testing can be taken as early as 1 month after vaccination if the dog has had annual vaccinations and has proven to have a sufficiently high antibody titre before. In cats sample taking for serological testing can not be done until 4 months after vaccination, independent of the previous history of vaccination and testing. The testing for antibodies has to be performed by an approved laboratory. No vaccination or antibody testing is needed in cases of transfer from the U.K., Ireland or Iceland.

The procedure of antibody testing shall be based on reports of good correlation between neutralizing antibody titres and protective immunity experienced in challenge experiments.

In this procedure there will be an observation period of 4 months corresponding well with the quarantine period now in force in Sweden and Norway, and by this programme it will be possible to see if the animal is able to respond to the vaccine and keep the antibodies at an acceptable level. The reason for the stricter regulations on cats than in dogs is based on the higher susceptibility of the cat to fox adapted rabies virus and an increase of protectiveness by age. There is also much less documention of protectiveness through vaccination for the cat compared to the dog.

The antibody test shall be carried out by the rapid fluorescent focus inhibition test (RFFIT), calibrated against an OIE reference dog serum. For a laboratory to be licenced, the Swedish and the Norwegian veterinary authorities demand that the laboratory performs this calibration. The test must show an antibody titre of at least 0,5 international units (IU) per ml of serum for the animal to be accepted into the country. According to most challenge experiments this titre correlates well with a protective immunity.

A relatively high proportion of Swedish and Norwegian dogs which have so far been tested, has not reached the level of 0,5 IU/ml serum after one single vaccine injection. In cases of no history of previous vaccination, it seems recommendable to have two separate vaccinations prior to the testing which, as mentioned, can not be done until 4 months after the last vaccination.

Editors note:

The new ruling found very quickly a response by many holiday makers to travel with their pets to and from Sweden and Norway. The countries involved in the new scheme are now faced with the laboratory logistics to carry out the RFFIT. It is to be expected that it takes some time that a smooth running of serum testing can be facilitated.

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4.2 Bat Rabies Surveillance in Italy

by Franco Mutinelli
Istituto Zooprofilattico Sperimentale delle Venezie, Padova, Italy
and Edoardo Vernier
Dipartimento di Biologia, Università di Padova, Italy (Ext.Coll.)

There has been an interest on bat rabies in Italy since cases increased in Europe in 1985. A bat surveillance programme for Italy has been prepared in 1990 (Istituto Superiore di Sanità: Programma di controllo della rabbia nei chirotteri. Notiziario di sanità publica n° 3, maggio 1990. In: Arch.Vet.Ital. 41, 1990). The aim of this project is to get further information on the distribution of the different bat populations. (Vernier E.: Manuale pratico dei chirotteri italiani. Unione Speleologica Pordenonese - C.A.I. e Assessorato all'Ecologia - Provincia di Pordenone, p. 1-147, 1987), and to investigate the possible presence of *Lyssavirus* in Italian bats.

The cooperation among bat protectionists, zoologists and the Department of Veterinary Services made it possible to provide correct information on these endangered mammals and to examine dead bats from both town habitats and cave nursery colonies.

154 bats belonging to ten species coming from different provinces have been examined for rabies (**Table**). Among them were some specimens of *Eptesicus serotinus*, the species mainly responsible for bat rabies in Europe, and of bat species never or rarely investigated.

All the examined bats in Italy were found negative for rabies.

Bat species examined for rabies in Italy from 1986 to 1993

Genus and species	Province	1986	1987	1988	1989	1990	1991	1992	1993	total
Rhinolophus ferrumequinuum	Treviso					1				1
Rhinolophus hipposideros	Palermo						1			1
Miniopterus schreibersi	Udine						3			3
	Siracusa						1			1
	Palermo						1			1
	Vicenza						1			1
Myotis capaccinii	Agrigento						3			3
Myotis myotis	Trapani						1			1
	Caltanisetta						2			2
	Palermo						1			1
	Catania						4			4
	Vicenza							1		1
Myotis blythi	Vicenza					1				1
Pipistrellus pipistrellus	Bolzano								1	1
Pipistrellus khulii	Padova					15	4	1	5	25
	Pordenone						4			4
	Palermo						3			3
	Ravenna							1		1
Pipistrellus savii	Padova					1		1	1	3
	Verona					1				1
Eptesicus serotinus	Palermo						4			4
	Padova							1		1
	Treviso	1								1
	Verona								1	1
Not determined	Padova		4	2	3					9
	Brescia			2	1	2	4	5	1	15
	Novara								10	10
	Roma				11	14	12	15		52
	Perugia						1			1
	Foggia						1			1
Total		1	4	4	15	35	51	25	19	154

WHO NEWS

4.3 Intradermal rabies vaccines for human post-exposure treatment

In its eighth report, the WHO Expert Committee on Rabies stated that intradermal (ID) administration of cell-culture or purified duck-embryo rabies vaccines (PDEV) with a minimum potency of 2.5 IU per dose can be carried out according to the 2-2-2-0-1-1 schedule (2 sites on days 0, 3, and 7, and 1 site on days 30 and 90). However, a report made early in December 1992, which has subsequently been retracted, found low titres of virus neutralizing antibodies (VNA) in volunteers who had received ID post-exposure prophylaxis with PDEV and equine rabies immune globulin (ERIG) according to this schedule. Informal discussions were held at WHO in Geneva on 22 January 1993 to review the ID administration of post-exposure modern tissue culture and embryonating-egg-derived rabies vaccines. Below are summarized some of the points made by the participants.

• None of the rabies vaccines concerned is licensed in any country for post-exposure ID use. Furthermore, no manufacturer plans to apply for a licence for the post exposure ID use of its vaccine in any developed or developing country or to promote actively such use.

• ID post-exposure prophylaxis should be used only in specialized centres where a number of such treatments are given each day, and not in small clinics where only a few treatments are administered each week.

• The following precautions should be adhered to when using the ID route:
- separate syringes should be used for each intradermal dose of 0.1 ml;
- intradermal injections should be administered only by staff who have been trained in this technique; and
- vaccine vials should be stored at 4-8°C after reconstitution, and the total contents should be used as soon as possible.

• None of the vaccine mentioned here is produced in vials for multiple use and only PDEV contains a preservative (thiomersal). Although the stability of the reconstituted liquid is good, the above-mentioned storage and usage precautions should be adhered to.

Conclusions

The principal conclusions drawn by the participants are outlined below.
- Although PVRV (purified vero-cell rabies vaccine) reconstituted in 0.5 ml, and PDEV as well as PCEC (purified chick-embryo cell) vaccine are reconstituted in 1 ml, the data presented suggest that the immunogenicity of 0.1-ml doses of PVRV, PDEV, and PCEC are comparable. However, this observation is based on a single study in which a small number of volunteers received each vaccine. The Expert Committee's recommendation for ID post-exposure treatment of rabies does not require an erratum or revision at the present time. However, it was suggested that the following studies be conducted.

- More investigations with 0.1-ml ID doses administered using the 2-2-2-0-1-1 schedule plus ERIG should be carried out on those vaccines for which there is less field experience than with PVRV, paying particular attention to the titres on day 14. Wherever possible, a second vaccine (HDCV), applied intramuscularly using the conventional Essen intramuscular schedule with ERIG, should be included for comparison.

- To document that immunogenicity is satisfactory with vaccine lots that fulfil the manufacturer's minimum potency requirements for release, investigators should conduct an immunogenicity study with at least one lot of vaccine known to have a low potency (e.g., 2.5 IU per ml). Ideally the study should be carried out in one institute, comparing the three vaccines plus ERIG with a control group administered HDCV and ERIG according to the Essen schedule.

- To explain further an appa-

rent discrepancy between antigenic content and immunogenicity, and to define clearly the safety margins of the 2-2-2-0-1-1 schedule, a simulated dose-response study using 0.05, 0.1, and 0.2 ml doses and the 2-2-2-0-1-1 schedule should be carried out.

- In view of the uncertainties about the relation between antigenic values and immunogenicity, the presence of some differences between modern vaccines applied using the same schedule, and clear dif ferences when vaccines are administered with and without immune globulin, future recommendations for use of rabies vaccines should be made only after careful review of the data for the specific vaccine and schedule under consideration.

(Taken from Bulletin of the World Health Organization, 71 (6): 805-808 (1993))

4.4 Cross-border cooperation on oral vaccination of foxes against rabies in Europe

by W.W. Müller
WHO Collaborating Centre for Rabies Surveillance and Research,
Tübingen/Germany

The larger an area is in which foxes are vaccinated against rabies, the greater are the chances that the center parts are not reinfected with the disease from still infected areas. An area is immediately enlarged if countries on both sides of their common border vaccinate. Foxes commonly cross these borders.

Nevertheless, this is not the only reason why representatives of different countries meet for a coordinated policy on oral vaccination in Europe. Experience is shared, progress and setbacks are discussed und new technology. Furthermore, there are still questions to be answered: When can vaccination be discontinued in zones where no rabies cases have been registered for some time? What measures should be taken in case an area is threatened? What kind of surveillance should be practiced after an area has become rabies-free? How many follow-up examinations should be carried out to prove the efficacy of the vaccination? Next to the latter questions it is always important how much it is to follow the one or the other strategy, e.g. if hand or aerial distribution (aircraft, helicopter) of vaccine baits is to be used.

Cross-border cooperation on oral vaccination needs a continuous strategic planning and has been practiced over the years by organizing international or bilateral meetings. The last ones were as follows:

- On 26/27 January 1994 the WHO Collaborating Centre for Rabies Surveillance and Research, Tübingen, Germany organized a meeting which was hosted by the National Veterinary Institute, Pulawy, Poland, in Pulawy.

Countries participating were: Austria, Czech Republic, Estonia, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia and the Russian Federation.

- On 1 February 1994 the WHO Collaborating Centre for Research and Management in Zoonoses, Malzéville, France, organized a meeting hosted by the Director of Veterinary Services, Luxembourg, in Luxembourg.

Countries participating were: Belgium, France, Germany, Luxembourg and Switzerland.

- On 28/29 March 1994 the Veterinary Department of Slovenia organized for a subgroup of countries, recommended at the Pulawy conference, a meeting in Ljubljana.

Countries participating were: Austria, Croatia, Czech Republic, Hungary, Italy, Slovakia and Slovenia.

In the above meetings the planned spring and autumn vaccination campaigns of 1994 were presented by the different countries and coordinated with the neighbours in the following discussions.

TABLE 1

EUR EUROPE 4/93 RABIES CASES 1.10.93 - 31.12.93

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	-	2	21	-	7	-	30	225	5	5	8	-	243		273
BEL	BELGIUM	-	1	-	-	-	-	1						0		1
BUL	BULGARIA **							0						0		0
BYE	BELARUS	2	2	2	3	-	-	9	7	-	-	-	1	8		17
CRO	CROATIA	2	3	1	-	5	-	11	142	-	2	1	-	145		156
CZH	CZECH REPUBLIC	-	10	-	-	-	-	10	91	1	7	1	1	101		111
DEN	DENMARK *							0						0		0
DEU	FED.REP. OF GERMANY	3	8	37	2	25	-	75	293	1	10	11	-	315		390
EST	ESTONIA	3	11	2	-	2	-	18	11	1	-	-	16	28		46
FIN	FINLAND *							0						0		0
FRA	FRANCE	-	-	2	-	-	-	2	22	-	3	-	-	25		27
GRE	GREECE *							0						0		0
HUN	HUNGARY	18	35	17	-	1	-	71	196	-	1	4	-	201		272
ICE	ICELAND *							0						0		0
IRE	IRELAND *							0						0		0
ITA	ITALY	-	-	1	-	-	-	1	23	2	1	1	-	27		28
LTU	LITHUANIA	4	5	7	-	-	-	16	4	-	1	-	2	7		23
LUX	LUXEMBOURG *							0						0		0
LVA	LATVIA	10	8	4	1	-	-	23	28	3	1	1	19	52		75
MLD	MOLDOVA **							0						0		0
NET	NETHERLANDS *							0						0		0
NOR	NORWAY *							0						0		0
POL	POLAND	24	39	69	-	3	1	136	364	6	13	16	43	442		578
POR	PORTUGAL *							0						0		0
ROM	ROMANIA	2	1	3	-	1	-	7	3	1	-	-	1	5		12
RUS	RUSSIAN FEDERATION	30	16	52	3	2	1	104	25	-	-	-	4	29	3	136
SPA	SPAIN *							0						0		0
SVK	SLOVAK REPUBLIC	11	15	4	-	1	-	31	129	1	6	1	-	137		168
SVN	SLOVENIA	4	5	1	-	1	-	11	207	5	7	4	-	223		234
SWE	SWEDEN *							0						0		0
SWI	SWITZERLAND + LIECHT	1	2	5	1	2	-	11	64	2	-	1	-	67		78
TUR	TURKEY	39	7	17	1	1	-	65	-	-	-	-	3	3		68
UKR	UKRAINE **							0						0		0
UNK	UNITED KINGDOM *							0						0		0
YUG	YUGOSLAVIA	2	3	-	-	-	-	5	9	-	-	-	-	9		14
TOTAL		155	173	245	11	51	2	637	1843	28	57	49	90	2067	3	2707
PER CENT		5.7	6.4	9.1	0.4	1.9	0.1	23.5	68.1	1.0	2.1	1.8	3.3	76.4	0.1	100.0

* NO CASES ** NO DATA

TABLE 2

EUR EUROPE 1-4/93 RABIES CASES 1. 1.93 - 31.12.93

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 2)							0						0		0
AUT	AUSTRIA	-	5	35	-	17	-	57	562	22	14	20	-	618		675
BEL	BELGIUM	-	1	-	-	-	-	1	-	1	-	-	-	1		2
BUL	BULGARIA 2)	-	-	1	-	1	-	2	1	-	-	-	-	1		3
BYE	BELARUS	26	9	10	3	-	-	48	54	-	-	-	5	59	1	108
CRO	CROATIA	13	10	1	-	5	-	29	325	-	2	1	-	328		357
CZH	CZECH REPUBLIC	2	19	-	1	-	1	23	359	2	31	4	3	399		422
DEN	DENMARK							0	-	-	-	-	1	1		1
DEU	FED.REP. OF GERMANY	6	25	67	5	37	1	141	636	16	18	28	6	704		845
EST	ESTONIA	19	19	8	-	2	1	49	64	3	2	-	42	111		160
FIN	FINLAND *							0						0		0
FRA	FRANCE	4	11	13	-	13	-	41	198	6	14	1	1	220		261
GRE	GREECE *							0						0		0
HUN	HUNGARY	85	116	50	-	5	1	257	854	-	4	7	1	866		1123
ICE	ICELAND *							0						0		0
IRE	IRELAND *							0						0		0
ITA	ITALY	-	1	1	-	-	-	2	67	7	3	2	1	80		82
LTU	LITHUANIA	24	19	31	-	-	-	74	14	-	3	-	8	25	1	100
LUX	LUXEMBOURG							0	-	-	-	1	-	1		1
LVA	LATVIA	32	25	10	2	1	-	70	70	5	4	1	43	123	1	194
MLD	MOLDOVA 2)	-	1	-	-	-	-	1	2	-	-	-	-	2		3
NET	NETHERLANDS							0	-	-	-	-	10	10		10
NOR	NORWAY *							0						0		0
POL	POLAND	133	153	179	4	8	5	482	1803	12	78	68	202	2163		2645
POR	PORTUGAL *							0						0		0
ROM	ROMANIA	10	12	10	2	4	-	38	32	1	-	1	5	39		77
RUS	RUSSIAN FEDERATION	135	58	282	33	73	48	629	115	2	-	-	18	135	5	769
SPA	SPAIN 1)	5	-	-	-	-	-	5						0		5
SVK	SLOVAK REPUBLIC	25	48	5	-	2	-	80	393	4	8	2	2	409		489
SVN	SLOVENIA	8	13	1	-	1	-	23	452	13	11	7	-	483		506
SWE	SWEDEN *							0						0		0
SWI	SWITZERLAND + LIECHT	1	4	8	2	2	-	17	143	11	2	1	1	158		175
TUR	TURKEY	203	21	47	2	3	6	282	-	1	-	-	4	5		287
UKR	UKRAINE **							0						0		0
UNK	UNITED KINGDOM *							0						0		0
YUG	YUGOSLAVIA	5	23	1	-	1	-	30	53	-	-	-	-	53		83
TOTAL		736	593	760	54	175	63	2381	6197	106	194	144	353	6994	8	9383
PER CENT		7.8	6.3	8.1	0.6	1.9	0.7	25.4	66.0	1.1	2.1	1.5	3.8	74.5	0.1	100.0

* NO CASES ** NO DATA 1) NORTH AFRICA 2) FIGURES NOT COMPLETE

TABLE 3: RABIES CASE RATES (% TOTAL) FOR INDIVIDUAL ANIMAL SPECIES AND FOR TOTAL CASES OF 10 EUROPEAN COUNTRIES RANKING HIGHEST IN 1993.

EUR EUROPE 1-4/93														1. 1.93 - 31.12.93	
LOCATION	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN	TOTAL
CODE NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL	CASES	
EUROPE															
TOTAL RABIES CASES	736	593	760	54	175	63	2381	6197	106	194	144	353	6994	8	9383
PER CENT INVOLVEMENT / COUNTRY															
POL POLAND	18.1	25.8	23.6	7.4	4.6	7.9	20.2	29.1	11.3	40.2	47.2	57.2	30.9		28.2
HUN HUNGARY	11.5	19.6	6.6	-	2.9	1.6	10.8	13.8	-	2.1	4.9	0.3	12.4		12.0
DEU FED.REP. OF GERMANY	0.8	4.2	8.8	9.3	21.1	1.6	5.9	10.3	15.1	9.3	19.4	1.7	10.1		9.0
RUS RUSSIAN FEDERATION	18.3	9.8	37.1	61.1	41.7	76.2	26.4	1.9	1.9	-	-	5.1	1.9	62.5	8.2
AUT AUSTRIA	-	0.8	4.6	-	9.7	-	2.4	9.1	20.8	7.2	13.9	-	8.8		7.2
SVN SLOVENIA	1.1	2.2	0.1	-	0.6	-	1.0	7.3	12.3	5.7	4.9	-	6.9		5.4
SVK SLOVAK REPUBLIC	3.4	8.1	0.7	-	1.1	-	3.4	6.3	3.8	4.1	1.4	0.6	5.8		5.2
CZH CZECH REPUBLIC	0.3	3.2	-	1.9	-	1.6	1.0	5.8	1.9	16.0	2.8	0.8	5.7		4.5
CRO CROATIA	1.8	1.7	0.1	-	2.9	-	1.2	5.2	-	1.0	0.7	-	4.7		3.8
TUR TURKEY	27.6	3.5	6.2	3.7	1.7	9.5	11.8	-	0.9	-	-	1.1	0.1		3.1
TOTAL FROM 10 COUNTRIES	610	468	667	45	151	62	2003	5499	72	166	137	236	6110	5	8118
EQUAL % TOTAL	82.9	78.9	87.8	83.3	86.3	98.4	84.1	88.7	67.9	85.6	95.1	66.9	87.4	62.5	86.5

TABLE 4

EUR EUROPE 4/93 RABIES CASES 'OTHER ANIMAL SPECIES' 1.10.93 - 31.12.93

LOCATION		OTHER DOMESTIC ANIMALS		OTHER WILD ANIMALS									TOTAL
CODE	NAME	OTH.DOMESTIC CARNIVORES	PIG	WOLF	RACCOON DOG	BROWN BEAR	WILD BOAR	SQUIRREL	BLACK RAT	HOUSE MOUSE	HARE	OTHERS	
BYE	BELARUS	-	-	1	-	-	-	-	-	-	-	-	1
CZH	CZECH REPUBLIC	-	-	-	1	-	-	-	-	-	-	-	1
EST	ESTONIA	-	-	-	15	-	-	-	1	-	-	-	16
LTU	LITHUANIA	-	-	-	2	-	-	-	-	-	-	-	2
LVA	LATVIA	-	-	1	18	-	-	-	-	-	-	-	19
POL	POLAND	1	-	-	40	-	1	1	-	-	1	-	44
ROM	ROMANIA	-	-	-	-	-	-	-	-	-	-	1	1
RUS	RUSSIAN FEDERATION	-	1	1	3	-	-	-	-	-	-	-	5
TUR	TURKEY	-	-	1	-	1	-	-	-	1	-	-	3
TOTAL		1	1	4	79	1	1	1	1	1	1	1	92
PER CENT		1.1	1.1	4.3	85.9	1.1	1.1	1.1	1.1	1.1	1.1	1.1	100.0

TABLE 5

EUR EUROPE 1-4/93 — RABIES CASES 'OTHER ANIMAL SPECIES' — 1. 1.93 - 31.12.93

COUNTRY	OTHER DOMESTIC ANIMALS						OTHER WILD ANIMALS												TOTAL
	OTH.DOM. CARNIVO	DONKEY	PIG	OTH.DOM. HERBIVOR	DOMESTIC RABBIT	OTHERS	WOLF	RACCOON DOG	WILD CAT	BROWN BEAR	WILD BOAR	CHAMOIS	INSECTIV BATS	SQUIRREL	BLACK RAT	HOUSE MOUSE	MUSKRAT	HARE	OTHERS	
BYE	-	-	-	-	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	5
CZH	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	1	-	-	4
DEN	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
DEU	-	1	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	7
EST	-	-	1	-	-	-	-	41	-	-	-	-	-	-	1	-	-	-	-	43
FRA	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
HUN	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2
ITA	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
LTU	-	-	-	-	-	-	1	7	-	-	-	-	-	-	-	-	-	-	-	8
LVA	-	-	-	-	-	-	2	41	-	-	-	-	-	-	-	-	-	-	-	43
NET	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	10
POL	3	-	1	1	-	-	2	187	-	-	4	-	-	3	1	-	1	4	-	207
ROM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5
RUS	-	1	2	-	-	45	5	12	-	-	-	-	-	-	1	-	-	-	-	66
SVK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
SWI	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
TUR	-	6	-	-	-	-	1	-	-	1	-	-	-	-	-	2	-	-	-	10
TOT	3	8	5	1	1	45	15	290	2	1	4	1	18	4	3	2	2	4	7	416
PER	0.7	1.9	1.2	0.2	0.2	10.8	3.6	69.7	0.5	0.2	1.0	0.2	4.3	1.0	0.7	0.5	0.5	1.0	1.7	100.0

RABIES CASES 1.10.93 - 31.12.93

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**															
107	NEUSIEDL AM SEE							0	6	-	-	-	-	6		6
109	OBERWART							0	4	-	-	-	-	4		4
307	BRUCK AN DER LEITHA							0	6	-	-	-	-	6		6
309	GMUEND							0	2	-	1	-	-	3		3
310	HOLLABRUNN							0	2	-	-	-	-	2		2
312	KORNEUBURG							0	1	-	-	-	-	1		1
322	WAIDHOFEN AN DER THA							0	1	-	-	-	-	1		1
502	HALLEIN							0	1	-	-	-	-	1		1
503	SALZBURG-LAND							0	2	-	-	-	-	2		2
506	ZELL AM SEE	-	-	1	-	-	-	1	7	2	-	1	-	10		11
604	FELDBACH							0	6	-	-	-	-	6		6
610	LEIBNITZ	-	1	-	-	-	-	1	1	-	-	-	-	1		2
615	RADKERSBURG							0	3	-	-	-	-	3		3
701	INNSBRUCK-STADT							0	1	-	-	-	-	1		1
702	IMST							0	1	-	-	-	-	1		1
703	INNSBRUCK-LAND							0	14	-	-	-	-	14		14
705	KUFSTEIN	-	-	1	-	-	-	1	43	-	-	1	-	44		45
708	REUTTE							0	8	-	1	-	-	9		9
709	SCHWAZ	-	-	3	-	3	-	6	37	1	2	3	-	43		49
801	BLUDENZ							0	6	-	-	-	-	6		6
802	BREGENZ	-	1	14	-	3	-	18	60	2	-	3	-	65		83
803	DORNBIRN	-	-	2	-	1	-	3	13	-	1	-	-	14		17
TOTAL		0	2	21	0	7	0	30	225	5	5	8	0	243	0	273
PER CENT		0.0	0.7	7.7	0.0	2.6	0.0	11.0	82.4	1.8	1.8	2.9	0.0	89.0	0.0	100.0
ITA	**ITALY**															
34	TRIESTE E GORIZIA							0	4	-	-	-	-	4		4
39	BOLZANO	-	-	1	-	-	-	1	19	2	1	1	-	23		24
TOTAL		0	0	1	0	0	0	1	23	2	1	1	0	27	0	28
PER CENT		0.0	0.0	3.6	0.0	0.0	0.0	3.6	82.1	7.1	3.6	3.6	0.0	96.4	0.0	100.0

RABIES CASES															1.10.93 - 31.12.93	
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		
BEL BELGIUM															
LX LUXEMBOURG	-	1	-	-	-	-	1						0		1
TOTAL	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
DEU FEDERAL REPUBLIC OF GERMANY															
01 SCHLESWIG-HOLSTEIN							0						0		0
02 HAMBURG							0						0		0
03 NIEDERSACHSEN	-	-	-	1	-	-	1	5	-	-	-	-	5		6
04 BREMEN							0						0		0
05 NORDRHEIN-WESTFALEN	-	-	1	-	-	-	1	19	-	-	1	-	20		21
06 HESSEN	-	1	1	-	1	-	3	16	-	1	1	-	18		21
07 RHEINLAND-PFALZ	1	1	22	1	8	-	33	78	-	2	3	-	83		116
08 BADEN-WUERTTEMBERG	1	3	2	-	4	-	10	51	-	4	3	-	58		68
09 BAYERN	-	1	7	-	12	-	20	102	1	1	3	-	107		127
10 SAARLAND	-	1	4	-	-	-	5	17	-	-	-	-	17		22
11 Berlin							0						0		0
12 Brandenburg							0						0		0
13 Mecklenb.-Vorpommern							0						0		0
14 Sachsen	1	1	-	-	-	-	2	-	-	1	-	-	1		3
15 Sachsen-Anhalt							0	5	-	1	-	-	6		6
16 Thueringen							0						0		0
TOTAL	3	8	37	2	25	0	75	293	1	10	11	0	315	0	390
PER CENT	0.8	2.1	9.5	0.5	6.4	0.0	19.2	75.1	0.3	2.6	2.8	0.0	80.8	0.0	100.0

RABIES CASES 1.10.93 - 31.12.93

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							0	1	-	-	-	-	1		1
02	Vitebsk Region	-	-	2	1	-	-	3						0		3
03	Gomel Region	2	-	-	-	-	-	2	1	-	-	-	-	1		3
04	Grodno Region	-	1	-	-	-	-	1	2	-	-	-	-	2		3
05	Minsk Region	-	1	-	-	-	-	1	1	-	-	-	-	1		2
06	Mogilev Region	-	-	-	2	-	-	2	2	-	-	-	1	3		5
TOTAL		2	2	2	3	0	0	9	7	0	0	0	1	8	0	17
PER CENT		11.8	11.8	11.8	17.6	0.0	0.0	52.9	41.2	0.0	0.0	0.0	5.9	47.1	0.0	100.0
CZH	**CZECH REPUBLIC**															
00	DISTRICT OF PRAGUE							0						0		0
01	CENTRAL BOHEMIA	-	2	-	-	-	-	2	8	-	-	-	-	8		10
02	SOUTH BOHEMIA	-	1	-	-	-	-	1	4	-	1	-	-	5		6
03	WEST BOHEMIA							0						0		0
04	NORTH BOHEMIA	-	2	-	-	-	-	2	14	-	2	-	-	16		18
05	EAST BOHEMIA	-	2	-	-	-	-	2	33	1	1	1	-	36		38
06	SOUTH MORAVIA	-	2	-	-	-	-	2	6	-	1	-	-	7		9
07	NORTH MORAVIA	-	1	-	-	-	-	1	26	-	2	-	1	29		30
TOTAL		0	10	0	0	0	0	10	91	1	7	1	1	101	0	111
PER CENT		0.0	9.0	0.0	0.0	0.0	0.0	9.0	82.0	0.9	6.3	0.9	0.9	91.0	0.0	100.0
SVK	**SLOVAK REPUBLIC**															
10	DISTRICT OF BRATISLAV							0	2	-	-	-	-	2		2
11	WEST SLOVAKIA	1	2	-	-	-	-	3	20	-	1	-	-	21		24
12	CENTRAL SLOVAKIA	5	8	4	-	-	-	17	43	1	4	1	-	49		66
13	EAST SLOVAKIA	5	5	-	-	1	-	11	64	-	1	-	-	65		76
TOTAL		11	15	4	0	1	0	31	129	1	6	1	0	137	0	168
PER CENT		6.5	8.9	2.4	0.0	0.6	0.0	18.5	76.8	0.6	3.6	0.6	0.0	81.5	0.0	100.0

CRO CROATIA RABIES CASES 1.10.93 - 31.12.93

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		
004	BJELOVAR							0	3	-	-	-	-	3		3
009	CRIKVENICA							0	2	-	-	-	-	2		2
011	CAKOVEC							0	11	-	-	-	-	11		11
012	CAZMA							0	1	-	-	-	-	1		1
015	DONJA STUBICA							0	2	-	-	-	-	2		2
020	DUGA RESA	1	-	-	-	-	-	1	1	-	-	-	-	1		2
021	DUGO SELO							0	12	-	-	-	-	12		12
024	DURDEVAC							0	9	-	-	-	-	9		9
034	JASTREBARSKO	-	1	-	-	-	-	1	3	-	-	-	-	3		4
036	KARLOVAC							0	1	-	-	-	-	1		1
040	KOPRIVNICA							0	11	-	-	-	-	11		11
044	KRIZEVCI							0	2	-	-	-	-	2		2
046	KUTINA	-	-	-	-	4	-	4	6	-	-	-	-	6		10
047	LABIN							0	1	-	-	-	-	1		1
049	LUDBREG							0	1	-	-	-	-	1		1
050	MAKARSKA							0	1	-	-	-	-	1		1
052	NASICE							0	1	-	-	-	-	1		1
053	NOVA GRADISKA	-	1	-	-	-	-	1	2	-	-	-	-	2		3
057	OGULIN							0	2	-	-	-	-	2		2
059	OPATIJA							0	4	-	-	-	-	4		4
067	PETRINJA							0	1	-	-	-	-	1		1
073	RIJEKA							0	29	-	1	1	-	31		31
075	SENJ							0	1	-	-	-	-	1		1
076	SINJ							0	3	-	-	-	-	3		3
077	SISAK							0	1	-	-	-	-	1		1
078	POZEGA							0	4	-	-	-	-	4		4
079	SLAVONSKI BROD							0	2	-	-	-	-	2		2
081	SOLIN							0	6	-	1	-	-	7		7
083	SIBENIK	-	1	-	-	1	-	2	2	-	-	-	-	2		4
087	VARAZDIN							0	2	-	-	-	-	2		2
088	VINKOVCI							0	3	-	-	-	-	3		3
089	VIROVITICA							0	1	-	-	-	-	1		1
102	GRAD ZAGREB	1	-	1	-	-	-	2	11	-	-	-	-	11		13
TOTAL		2	3	1	0	5	0	11	142	0	2	1	0	145	0	156
PER CENT		1.3	1.9	0.6	0.0	3.2	0.0	7.1	91.0	0.0	1.3	0.6	0.0	92.9	0.0	100.0

RABIES CASES 1.10.93 - 31.12.93															
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		
EST ESTONIA															
01 Harjumaa	-	2	-	-	-	-	2	1	-	-	-	-	1		3
03 Ida-Virumaa							0	-	-	-	-	1	1		1
04 Jogevamaa							0	-	-	-	-	1	1		1
05 Jaervamaa	-	2	-	-	-	-	2	3	-	-	-	2	5		7
07 Laesene-Virumaa	1	1	-	-	-	-	2	3	-	-	-	2	5		7
08 Polvamaa	-	2	-	-	-	-	2						0		2
10 Raplamaa	-	-	-	-	1	-	1						0		1
11 Saaremaa	-	-	1	-	-	-	1	1	-	-	-	-	1		2
12 Tartumaa	1	2	-	-	-	-	3	1	-	-	-	5	6		9
13 Valgamaa	-	1	-	-	-	-	1	-	1	-	-	1	2		3
14 Viljandimaa	-	-	-	-	1	-	1						0		1
15 Vorumaa	1	1	1	-	-	-	3	2	-	-	-	4	6		9
TOTAL	3	11	2	0	2	0	18	11	1	0	0	16	28	0	46
PER CENT	6.5	23.9	4.3	0.0	4.3	0.0	39.1	23.9	2.2	0.0	0.0	34.8	60.9	0.0	100.0
LTU LITHUANIA															
36 Birzu	-	1	1	-	-	-	2	1	-	-	-	-	1		3
39 Vilkaviskio	-	-	1	-	-	-	1						0		1
41 Vilniaus	1	-	-	-	-	-	1						0		1
47 Joniskio							0	1	-	-	-	-	1		1
53 Kedainiu							0	-	-	-	-	1	1		1
54 Kelmes	1	-	-	-	-	-	1						0		1
56 Kretdingos							0	1	-	-	-	-	1		1
57 Kupiskio	-	1	-	-	-	-	1						0		1
62 Moletu	-	-	1	-	-	-	1						0		1
65 Pakruojo							0	-	-	-	-	1	1		1
66 Panevezio	-	1	-	-	-	-	1						0		1
67 Pasvalio							0	1	-	-	-	-	1		1
68 Plunges							0	-	-	1	-	-	1		1
71 Radviliskio	-	-	1	-	-	-	1						0		1
79 Taku	-	-	1	-	-	-	1						0		1
81 Ukmerges	1	-	-	-	-	-	1						0		1
85 Salcininku	1	2	2	-	-	-	5						0		5
TOTAL	4	5	7	0	0	0	16	4	0	1	0	2	7	0	23
PER CENT	17.4	21.7	30.4	0.0	0.0	0.0	69.6	17.4	0.0	4.3	0.0	8.7	30.4	0.0	100.0

LVA LATVIA	RABIES CASES													1.10.93 - 31.12.93	
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		
01 Aizkraukle	1	1	-	-	-	-	2	-	-	-	-	1	1		3
02 Aluksne							0	3	2	-	-	1	6		6
03 Balvi	-	1	-	-	-	-	1	1	-	-	-	-	1		2
04 Bauska							0	3	-	-	-	-	3		3
05 Cesis							0	3	-	-	-	-	3		3
06 Daugavpils	-	1	-	-	-	-	1						0		1
07 Dobele	-	1	1	-	-	-	2	-	-	-	-	1	1		3
08 Gulbene	-	1	-	-	-	-	1						0		1
10 Jelgava							0	1	-	-	-	3	4		4
11 Kraslava	1	-	1	1	-	-	3	-	-	-	1	-	1		4
12 Kuldiga	1	-	-	-	-	-	1	1	-	-	-	1	2		3
13 Liepaja	-	1	-	-	-	-	1	3	1	-	-	-	4		5
16 Madona							0	1	-	-	-	-	1		1
19 Rezekne	1	-	-	-	-	-	1						0		1
20 Riga							0	-	-	-	-	1	1		1
21 Saldus	-	1	-	-	-	-	1	3	-	-	-	-	3		4
22 Talsi	1	-	-	-	-	-	1						0		1
23 Tukums	1	-	-	-	-	-	1	1	-	-	-	-	1		2
25 Valmiera	1	-	2	-	-	-	3	2	-	1	-	2	5		8
26 Ventspils	3	1	-	-	-	-	4	6	-	-	-	9	15		19
TOTAL	10	8	4	1	0	0	23	28	3	1	1	19	52	0	75
PER CENT	13.3	10.7	5.3	1.3	0.0	0.0	30.7	37.3	4.0	1.3	1.3	25.3	69.3	0.0	100.0

RABIES CASES 1.10.93 – 31.12.93

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		
FRA	**FRANCE**															
08	ARDENNES							0	1	–	–	–	–	1		1
25	DOUBS							0	2	–	–	–	–	2		2
51	MARNE							0	2	–	–	–	–	2		2
54	MEURTHE ET MOSELLE	–	–	1	–	–	–	1	4	–	1	–	–	5		6
55	MEUSE	–	–	1	–	–	–	1	3	–	1	–	–	4		5
68	RHIN (HAUT)							0	2	–	1	–	–	3		3
70	SAONE (HAUTE)							0	1	–	–	–	–	1		1
88	VOSGES							0	7	–	–	–	–	7		7
TOTAL		0	0	2	0	0	0	2	22	0	3	0	0	25	0	27
PER CENT		0.0	0.0	7.4	0.0	0.0	0.0	7.4	81.5	0.0	11.1	0.0	0.0	92.6	0.0	100.0
SWI	**SWITZERLAND AND LIECHTENSTEIN**															
01	AARGAU	–	–	1	–	–	–	1	9	–	–	–	–	9		10
04	BASEL-STADT							0	4	–	–	–	–	4		4
05	BASEL-LAND	–	–	1	1	1	–	3	12	2	–	1	–	15		18
06	BERN	–	1	–	–	1	–	2	12	–	–	–	–	12		14
17	SOLOTHURN							0	5	–	–	–	–	5		5
26	JURA	1	1	3	–	–	–	5	22	–	–	–	–	22		27
TOTAL		1	2	5	1	2	0	11	64	2	0	1	0	67	0	78
PER CENT		1.3	2.6	6.4	1.3	2.6	0.0	14.1	82.1	2.6	0.0	1.3	0.0	85.9	0.0	100.0

HUN HUNGARY — RABIES CASES — 1.10.93 - 31.12.93

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	BUDAPEST							0	2	-	-	-	-	2		2
02	BARANYA	1	2	-	-	-	-	3	23	-	-	1	-	24		27
03	BACS-KISKUN	1	2	3	-	-	-	6	6	-	-	-	-	6		12
04	BEKES	-	4	7	-	-	-	11	9	-	-	-	-	9		20
05	BORSOD-ABAUJ-ZEMPLEN	1	4	-	-	-	-	5	19	-	-	-	-	19		24
06	CSONGRAD	1	3	1	-	-	-	5	12	-	-	1	-	13		18
07	FEJER							0	13	-	-	-	-	13		13
08	GYOER-SOPRON							0	5	-	-	-	-	5		5
09	HAJDU-BIHAR	2	1	2	-	-	-	5	9	-	-	-	-	9		14
10	HEVES	-	2	-	-	-	-	2	4	-	-	-	-	4		6
11	KOMAROM	-	2	-	-	-	-	2	7	-	-	1	-	8		10
12	NOGRAD							0	5	-	-	-	-	5		5
13	PEST	3	-	-	-	-	-	3	18	-	-	-	-	18		21
14	SOMOGY	3	7	2	-	1	-	13	13	-	1	-	-	14		27
15	SZABOLCS-SZATMAR	1	-	1	-	-	-	2	9	-	-	-	-	9		11
16	SZOLNOK	2	4	-	-	-	-	6	4	-	-	-	-	4		10
17	TOLNA	2	-	-	-	-	-	2	3	-	-	-	-	3		5
18	VAS	-	1	-	-	-	-	1	14	-	-	-	-	14		15
19	VESZPREM	-	2	1	-	-	-	3	12	-	-	-	-	12		15
20	ZALA	1	1	-	-	-	-	2	9	-	-	1	-	10		12
TOTAL		18	35	17	0	1	0	71	196	0	1	4	0	201	0	272
PER CENT		6.6	12.9	6.3	0.0	0.4	0.0	26.1	72.1	0.0	0.4	1.5	0.0	73.9	0.0	100.0

RABIES CASES														1.10.93 - 31.12.93	
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		
ROM ROMANIA															
01 ALBA	-	1	-	-	-	-	1	1	-	-	-	-	1		2
07 BOTOSANI							0	-	-	-	-	1	1		1
08 BRASOV	-	-	-	-	1	-	1						0		1
17 DOLJ	2	-	3	-	-	-	5						0		5
20 GORJ							0	1	-	-	-	-	1		1
24 IASI							0	-	1	-	-	-	1		1
31 SATU-MARE							0	1	-	-	-	-	1		1
TOTAL	2	1	3	0	1	0	7	3	1	0	0	1	5	0	12
PER CENT	16.7	8.3	25.0	0.0	8.3	0.0	58.3	25.0	8.3	0.0	0.0	8.3	41.7	0.0	100.0
YUG YUGOSLAVIA															
20 SR CRNA GORA							0	1	-	-	-	-	1		1
61 SAP VOJVODINA	2	3	-	-	-	-	5	8	-	-	-	-	8		13
TOTAL	2	3	0	0	0	0	5	9	0	0	0	0	9	0	14
PER CENT	14.3	21.4	0.0	0.0	0.0	0.0	35.7	64.3	0.0	0.0	0.0	0.0	64.3	0.0	100.0

POL POLAND — RABIES CASES — 1.10.93 - 31.12.93

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		
01	WARSZAWA	-	2	-	-	-	-	2	6	-	-	-	-	6		8
05	BIALYSTOK	1	-	4	-	-	-	5	9	-	1	-	5	15		20
07	BIELSKO-BIALA	-	2	-	-	1	-	3	17	-	1	-	-	18		21
09	BYDGOSZCZ	-	-	1	-	-	-	1	8	-	-	-	1	9		10
11	CHELM							0	1	1	1	-	1	4		4
13	CIECHANOW	-	1	-	-	-	-	1	3	-	-	1	-	4		5
15	CZESTOCHOWA	1	-	-	-	-	-	1	3	-	-	-	-	3		4
17	ELBLAG	1	-	5	-	-	-	6	7	-	-	-	4	11		17
19	GDANSK	-	3	7	-	-	-	10	12	1	1	1	2	17		27
21	GORZOW	-	-	1	-	-	-	1	10	-	-	-	1	11		12
23	JELENIA GORA	-	-	2	-	-	-	2	10	-	-	-	-	10		12
25	KALISZ	-	1	-	-	-	-	1	16	-	-	1	-	17		18
27	KATOWICE							0	5	-	-	-	-	5		5
29	KIELCE							0	2	-	-	-	-	2		2
31	KONIN	-	1	-	-	-	-	1	8	-	-	-	-	8		9
33	KOSZALIN	2	2	3	-	-	-	7	26	-	1	1	8	36		43
35	KRAKOW	-	1	-	-	-	-	1						0		1
37	KROSNO	-	-	2	-	-	-	2	18	-	3	-	-	21		23
39	LEGNICA							0	5	-	-	-	-	5		5
41	LESZNO	-	1	-	-	-	-	1	5	-	-	-	-	5		6
43	LUBLIN							0	4	-	-	-	-	4		4
45	LOMZA	1	-	1	-	-	-	2	10	-	-	-	1	11		13
47	LODZ							0	1	-	-	-	-	1		1
49	NOWY SACZ	1	-	-	-	-	-	1	2	-	-	-	-	2		3
51	OLSZTYN	-	3	7	-	-	-	10	6	1	-	-	4	11		21
53	OPOLE	1	1	-	-	-	-	2	17	-	-	1	-	18		20

POL CONTINUED

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		
55	OSTROLEKA	1	-	-	-	-	-	1	4	-	1	-	-	5		6
57	PILA	-	1	-	-	-	-	1	10	-	-	-	2	12		13
59	PIOTRKOW TRYB							0	8	1	-	-	-	9		9
61	PLOCK							0	7	-	-	2	-	9		9
63	POZNAN	-	4	1	-	-	-	5	24	-	-	1	-	25		30
65	PRZEMYSL	5	-	1	-	1	-	7	-	-	2	-	-	2		9
67	RADOM							0	7	-	-	-	-	7		7
69	RZESZOW	2	-	-	-	-	-	2	2	-	1	-	-	3		5
71	SIEDLCE	1	-	-	-	-	-	1	5	1	-	-	-	6		7
73	SIERADZ	1	-	-	-	-	-	1						0		1
75	SKIERNIEWICE							0	3	-	-	-	-	3		3
77	SLUPSK	1	-	-	-	-	-	1	9	1	1	3	2	16		17
79	SUWALKI	-	-	4	-	1	-	5	10	-	-	-	6	16		21
81	SZCZECIN	1	-	-	-	-	-	1	11	-	-	-	2	13		14
83	TARNOBRZEG	-	1	-	-	-	-	1	13	-	-	-	-	13		14
85	TARNOW	1	1	14	-	-	-	16	3	-	-	2	2	7		23
87	TORUN	-	2	13	-	-	-	15	1	-	-	1	1	3		18
89	WALBRZYCH	1	3	3	-	-	-	7	8	-	-	-	-	8		15
91	WLOCLAWEK	-	2	-	-	-	-	2	4	-	-	-	1	5		7
93	WROCLAW	-	3	-	-	-	-	3	17	-	-	-	-	17		20
95	ZAMOSC							0	4	-	-	-	-	4		4
97	ZIELONA GORA	2	4	-	-	-	1	7	3	-	-	2	-	5		12
TOTAL		24	39	69	0	3	1	136	364	6	13	16	43	442	0	578
PER CENT		4.2	6.7	11.9	0.0	0.5	0.2	23.5	63.0	1.0	2.2	2.8	7.4	76.5	0.0	100.0

RUS RUSSIAN FEDERATION — RABIES CASES — 1.10.93 - 31.12.93

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		
08	Pskov Region							0	2	-	-	-	-	2		2
12	Twer Region	1	-	-	-	-	-	1	1	-	-	-	-	1		2
13	Kaluga Region							0	3	-	-	-	-	3		3
16	Oryol Region	6	1	2	-	-	-	9						0		9
19	Tula Region	-	1	-	-	-	-	1						0	1	2
23	Republic of Mari-El	-	-	2	-	-	-	2						0		2
26	Belgorod Region	3	3	3	-	-	1	10	1	-	-	-	-	1		11
27	Voronezh Region	3	1	7	-	2	-	13	1	-	-	-	-	1		14
28	Kursk Region	1	-	2	-	-	-	3						0		3
29	Lipetsk Region	-	-	1	-	-	-	1						0		1
31	Astrakhan Region	1	1	2	-	-	-	4	-	-	-	-	2	2		6
32	Volgograd Region	3	1	1	-	-	-	5						0		5
33	Samara Region	1	-	2	-	-	-	3	2	-	-	-	-	2		5
34	Penza Region	1	-	-	-	-	-	1	1	-	-	-	-	1		2
35	Saratov Region	2	1	4	-	-	-	7	1	-	-	-	-	1		8
36	Ulyanovsk Region	-	3	-	-	-	-	3						0		3
37	Republic of Kalmykiya	-	-	1	-	-	-	1						0		1
38	Republic of Tatarstan	2	-	3	-	-	-	5	4	-	-	-	-	4		9
40	Stavropol Territory	1	-	1	-	-	-	2	1	-	-	-	-	1		3
41	Rostov Region	-	2	1	-	-	-	3	3	-	-	-	1	4		7
42	Orenburg Region	4	2	8	3	-	-	17	2	-	-	-	-	2	2	21
44	Republic of Bashkorto	1	-	12	-	-	-	13	3	-	-	-	1	4		17
TOTAL		30	16	52	3	2	1	104	25	0	0	0	4	29	3	136
PER CENT		22.1	11.8	38.2	2.2	1.5	0.7	76.5	18.4	0.0	0.0	0.0	2.9	21.3	2.2	100.0

SVN SLOVENIA — RABIES CASES — 1.10.93 - 31.12.93

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	AJDOVSCINA	1	-	-	-	-	-	1	8	-	1	1	-	10		11
04	CERKNICA	-	1	-	-	-	-	1	5	-	-	-	-	5		6
08	GORNJA RADGONA							0	4	-	-	-	-	4		4
09	GROSUPLJE							0	1	-	-	-	-	1		1
11	IDRIJA	-	-	-	-	1	-	1	35	-	1	-	-	36		37
14	JESENICE							0	1	-	-	-	-	1		1
16	KOCEVJE	1	-	-	-	-	-	1	4	-	-	-	-	4		5
18	KRANJ	-	1	-	-	-	-	1	4	1	-	-	-	5		6
19	KRSKO							0	1	-	-	-	-	1		1
21	LENART							0	1	-	-	-	-	1		1
26	LJUBLJANA MOSTE POLJE							0	1	-	-	-	-	1		1
27	LJUBLJANA SISKA							0	2	-	-	-	-	2		2
28	LJUBLJANA VIC RUDNIK							0	18	1	2	1	-	22		22
29	LJUTOMER							0	1	-	-	-	-	1		1
30	LOGATEC							0	10	-	-	-	-	10		10
36	MURSKA SOBOTA							0	3	-	-	-	-	3		3
37	NOVA GORICA							0	8	-	-	-	-	8		8
38	NOVO MESTO							0	1	-	-	-	-	1		1
39	ORMOZ							0	4	-	-	-	-	4		4
41	POSTOJNA							0	7	-	-	-	-	7		7
44	RADOVLJICA	-	-	1	-	-	-	1	27	1	-	2	-	30		31
45	RAVNE NA KOROSKEM							0	1	-	-	-	-	1		1
48	SEZANA							0	5	-	-	-	-	5		5
51	SLOVENSKE KONJICE							0	1	-	-	-	-	1		1
53	SKOFJA LOKA	1	1	-	-	-	-	2	33	2	2	-	-	37		39
55	TOLMIN	1	-	-	-	-	-	1	13	-	-	-	-	13		14
58	TRZIC	-	1	-	-	-	-	1	3	-	-	-	-	3		4
60	VRHNIKA	-	1	-	-	-	-	1	5	-	1	-	-	6		7
TOTAL		4	5	1	0	1	0	11	207	5	7	4	0	223	0	234
PER CENT		1.7	2.1	0.4	0.0	0.4	0.0	4.7	88.5	2.1	3.0	1.7	0.0	95.3	0.0	100.0

TUR TURKEY — RABIES CASES — 1.10.93 - 31.12.93

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	ADANA	1	1	2	-	-	-	4						0		4
03	AFYON	2	1	-	-	-	-	3						0		3
06	ANKARA	1	-	-	-	-	-	1						0		1
09	AYDIN	3	-	3	-	-	-	6						0		6
10	BALIKESIR	2	-	-	-	-	-	2						0		2
11	BILECIK	1	-	-	-	-	-	1						0		1
14	BOLU	3	-	4	-	1	-	8	-	-	-	-	1	1		9
16	BURSA	2	-	-	-	-	-	2						0		2
20	DENIZLI	1	-	-	-	-	-	1	-	-	-	-	1	1		2
21	DIYARBAKIR	1	-	3	-	-	-	4	-	-	-	-	1	1		5
31	HATAY	-	-	1	-	-	-	1						0		1
32	ISPARTA	-	-	-	1	-	-	1						0		1
33	ICEL	-	1	-	-	-	-	1						0		1
34	ISTANBUL	4	-	2	-	-	-	6						0		6
38	KAYSERI	1	-	-	-	-	-	1						0		1
41	KOCAELI	1	-	-	-	-	-	1						0		1
42	KONYA	1	-	-	-	-	-	1						0		1
43	KUETAHYA	1	1	-	-	-	-	2						0		2
45	MANISA	2	-	-	-	-	-	2						0		2
52	ORDU	1	-	1	-	-	-	2						0		2
53	RIZE	-	1	-	-	-	-	1						0		1
54	SAKARYA	6	-	-	-	-	-	6						0		6
57	SINOP	-	-	1	-	-	-	1						0		1
63	SANLIURFA	3	-	-	-	-	-	3						0		3
64	USAK	2	2	-	-	-	-	4						0		4
TOTAL		39	7	17	1	1	0	65	0	0	0	0	3	3	0	68
PER CENT		57.4	10.3	25.0	1.5	1.5	0.0	95.6	0.0	0.0	0.0	0.0	4.4	4.4	0.0	100.0

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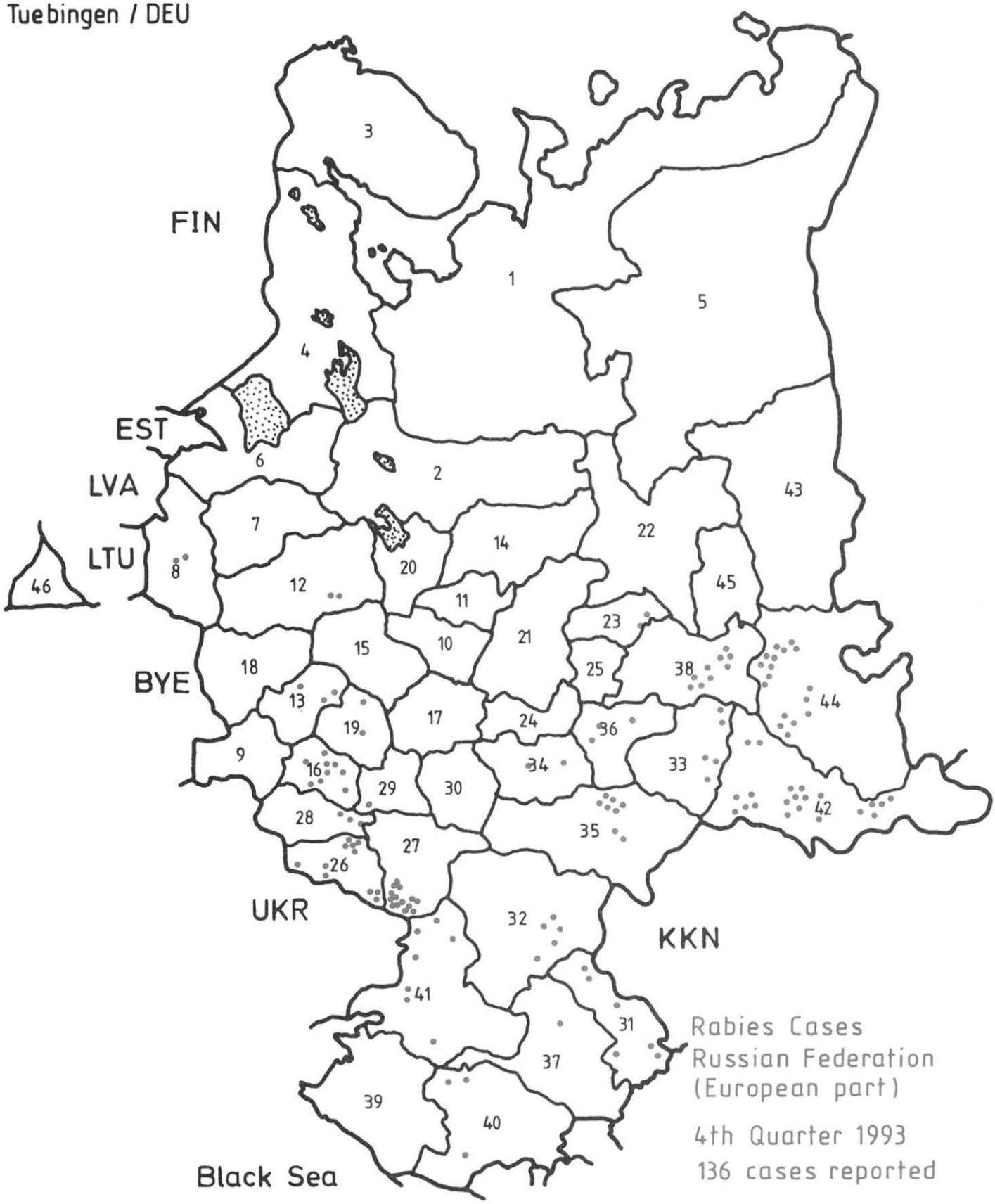
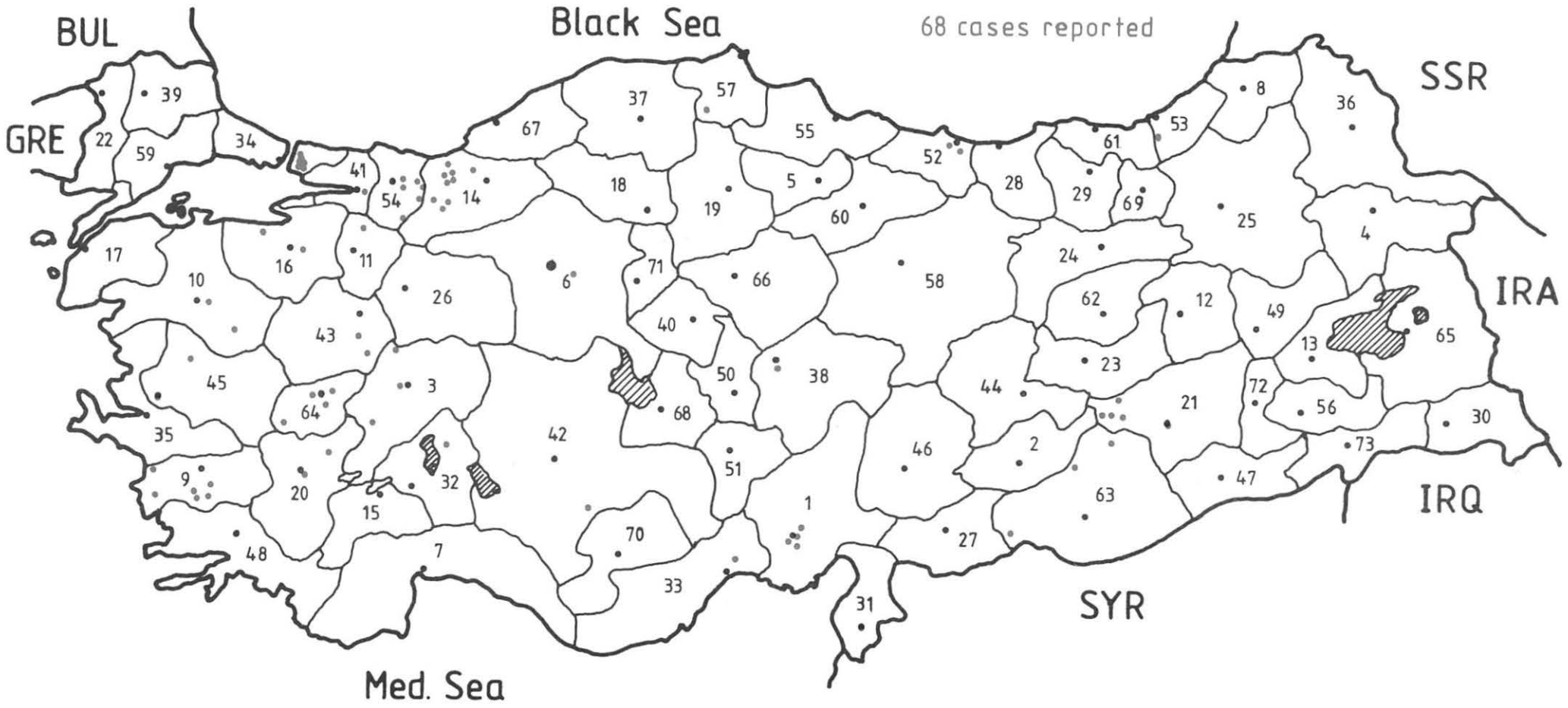


Rabies Cases
Russian Federation
(European part)

4th Quarter 1993
136 cases reported

WHO Coll. Centre
Tuebingen / DEU

Rabies Cases Turkey
4th Quarter 1993
68 cases reported



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Rabies Cases Europe
4th Quarter 1993
2707 cases reported

ICE
(rabies free)

NOR
(mainland
rabies free)

FIN
(rabies free)

EST
(46)

SWE
(rabies free)

LVA
(75)

RUS
(136)

DEN
(0)

LTU
(23)

RUS

BYE
(17)

IRE
(rabies free)

UNK
(rabies free)

NET
(0)

POL
(578)

UKR
(no data)

BEL
(1)

DEU
(390)

(0)

CZH
(111)

SVK
(168)

MLD
(no data)

FRA
(27)

AUT
(273)

HUN
(272)

(78)
SWI

(234)
SVN

CRO (156)

ROM
(12)

ITA
(28)

YUG
(14)

BUL
(no data)

POR
(rabies free)

SPA
(0)

ALB
(no data)

TUR
(68)

GRE
(rabies free)

0 50 100 km

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