

RABIES BULLETIN EUROPE

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1. Introduction

This BULLETIN describes the reported rabies cases in Europe for the **First Quarter 1995**, 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 of individual countries.

In the Miscellaneous

SECTION (4) under 4.1 there is a summary article on **Rabies in Latvia** in 1994. 4.2 reports on **Rabies in Bulgaria** with figures from 1984 to 1994. **Oral Vaccination and High Density Fox Populations** under 4.3 is a statement on a critical situation we are facing at the moment with rabies control in wildlife.

The rabies case data are tabulated for the **First Quarter**

1995 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 **First Quarter 1995** is shown on maps of Turkey and Europe in the ANNEX.

2. Summary of Rabies in Europe

During "*This Quarter*", 2622 rabies cases were reported in Europe. Of these were 2076 in wild animals (79.2% of total), 543 in domestic animals and 3 in humans.

Of the cases in wild animals, 1915 were foxes, 1 other fox species, 42 raccoon dogs, 1 lynx, 12 badgers, 15 stone martens, 25 pine martens, 5 polecats, 1 fish otter, 26 roe deer, 24 reindeer, 2 bats, 2 black rats, 1 hare and 4 other unspecified wild animals. Of the 543 domestic animals 176 were dogs, 134 cats, 11 horses, 2 pigs, 158 cattle, 59 sheep, 2 goats, and 1 other domesticated animal.

There were 3 **human cases** reported from the Russian Federation.

The two **bat cases** which are caused by a different

rabies serotype occurred in Denmark and the Netherlands.

Another epidemiological type of **rabies** present in Turkey as the only country of Europe is **dog-mediated**. During "*This Quarter*", 36 rabies cases in dogs were reported in Turkey, with a concentration of cases in Istanbul province.

In the Netherlands 1 case of **imported rabies** occurred in a grey fox. It is important to point out the way it was introduced. It came with animals of a trader who supplies zoological show set-ups.

For the countries of **fox-mediated rabies** there is usually an increase expected during the first quarter of a year when compared to the last quarter of the previous year; the reason being the increased contact rate in the mating sea-

son of the fox. This pattern is no longer valid due to oral vaccination of foxes. In fact, there were less cases during "*This Quarter*" compared to the previous one (2785). But, considering that the oral vaccination leads to eradication, and most European countries participate in it, one would expect as well that the figure for "*This Quarter*" would be lower than the first quarter 1994 (2534). This is not the case and is related with setbacks of the oral vaccination programmes most-likely due to the high fox population at present in Europe (see as well the article 4.3 of this BULLETIN).

Rabies-free countries in Europe participating in the surveillance were during "*This Quarter*": Finland, Greece,

Iceland, Ireland, Norway, Portugal, Sweden and the United Kingdom of Britain and North-

ern Ireland.

The status of countries

irregularly supplying data can not be judged.

3. Rabies in Individual Countries

3.1 Albania ALB

No data.

3.2 Austria AUT

by Helmut Schnabl

Of 8347 samples examined for rabies during "*This Quarter*", 40 cases (0.5%) were diagnosed rabid. There was a decrease of 29 cases compared to the previous quarter in spite of two new foci, which developed in the federal provinces Niederösterreich near the Czech border and Salzburg near the German border.

In the newly developed foci of the fourth quarter 1995 in the federal provinces of Kärnten and Steiermark along the Slovenia border, cases were reduced during "*This Quarter*".

Austria follows a strict policy of oral vaccination.

3.3 Belgium BEL

by L. Hallet

During "*This Quarter*", 79 rabies cases have been diagnosed, of which 52 were

foxes, 13 cattle, 8 sheep, 3 horses and 3 cats.

11 foxes, 4 cattle and 1 sheep have been found in Neufchateau. Six foxes, 2 sheep, 1 bovine, 1 horse and 1 cat have been noticed in Paliseul. Six foxes and 2 sheep have been reported in Bievre. 6 foxes have been found in Bouillon. Two foxes, 2 cattle and 2 sheep have been found in Libin. Four foxes and 1 cat have been found in Musson. One fox, 3 cattle and 1 sheep have been found in Bertrix. 2 foxes and 1 horse have been found in Libramont. Two foxes each have been found in the communities of Aubange, Chiny, Vresse sur Semois, Gedinne and Arlon. One fox and one bovine have been found in Leglise. One fox each has been found in the communities of Florenville, Meix-devant-Virton and Etalle. One cat has been found in Nasogne. One bovine each has been found in the communities of Herbeumont and Sainte-Ode. One horse has been found in Rouvroy.

An antirabies vaccination campaign of foxes has been executed during the month of March. It covered an area of 5193 km² and 89,400 vaccine baits have been drop-

ped by a helicopter.

The spring vaccination campaign has been advanced one month this year in order to benefit from a repetition effect on the area which was vaccinated in urgency in December 1994 and in order to reach the foxes before parturition.

A vaccination of the cubs in the den should be tested in the beginning of June in an area of about 1000 km² north of the infected zone.

Note of correction: In the previous issue (4/94) a rabies case was placed incorrectly for Belgium on the map of Europe. The isolated case to the north-west of the infected area should have been placed about 30 km in south-eastern direction (THE EDITOR).

3.4 Bulgaria BUL

During "*This Quarter*", 4 animal rabies cases not specified in 3 provinces (Plovdiv, Pleven, Sliven) were reported from Bulgaria.

Note of the editor: There was no report received for the month of February 1995.

3.5 Belarus BYE

No data.

3.6 Croatia CRO

by Mate Brstilo

During "*This Quarter*", a total of 168 animal rabies cases were registered in Croatia, almost the same number that was recorded during the previous quarter and 23 cases less than during the 1st quarter 1994. Of these, 161 were in wild animals and 7 in domestic animals. Of the 161 wild animals 159 were in foxes, 1 in a doe and 1 in a marten. In domestic animals rabies was reported in 4 dogs, 2 cats and 1 goat. There was a decrease of rabies cases in domestic animals compared to the 1st quarter of 1994.

All Adriatic islands remained rabies-free.

3.7 Czech Republic CZH

by Oldrich Matouch

A total of 42 cases of rabies were reported in the Czech Republic during "*This Quarter*", 53 cases less than in the first quarter 1994.

40 cases were registered in wild animals (95.2%) and 2 cases (4.8%) in domestic animals. Of the wild animals the disease was noticed in 39 foxes and 1 roe-deer, of the domestic animals in 1 cat and 1 dog.

Rabies cases were most frequent in the regions of North Bohemia (18) and North Moravia (12).

There was no reported case of human rabies.

3.8 Denmark DEN

by Eric Stougaard

There was one bat rabies case reported from Denmark in Arden in the north of Jutland.

3.9 Germany, Federal Republic DEU

by Winfried W. Müller
and Thomas Müller

A total of 375 rabies cases was reported during "*This Quarter*", 80 cases less than in the previous quarter and 4 less than in the first quarter 1994.

The distribution of cases was as in the previous quarter: there were the coherent infected areas of the federal states Nordrhein-Westfalen, Hessen, Rheinland-Pfalz and Saarland and an infected belt in Bayern along the southern state border. Again, for the second time 10 federal states recorded no cases.

Oral vaccination was not only practiced in the infected areas of the country, but in areas as well where the last cases reported could not yet be back dated for at least two years.

3.10 Estonia EST

by Matti Nautras

During "*This Quarter*", 12 rabies cases were registered in Estonia, 9 cases less than in the previous quarter and 19 less than in the first quarter 1994. The cases were diagnosed in 6 foxes, 3 raccoon dogs, 1 domestic dog and 2 cats.

Four cases occurred in the Harjumaa district in the very north of the country, 7 in 3 districts of the south-east and 1 on the island of Saaremaa in the west.

3.11 Finland FIN

by Bengt Westerling

The country remained rabies-free.

Surveillance: 10 animals (4 foxes, 3 raccoon dogs, 1 dog and 2 cats) were examined for rabies but revealed negative results.

3.12 France FRA

by Michel F.A. Aubert

21 rabies cases were registered during "*This Quarter*", 11 cases more than during the previous quarter. The cases were diagnosed in 13 foxes, 1 stone marten, 1 bovine and 6 sheep.

Six departments (départements) were affected by the

disease. There were 6 and 11 cases respectively in the départements Ardennes and Moselle and 1 case each in Doubs, Meuse, Haute-Saone and Vosges.

3.13 Greece GRE

by I. Koykidis

The country remained rabies-free.

3.14 Hungary HUN

by Balint Kerekes

During "*This Quarter*", 373 rabies cases in animals were registered in Hungary, 128 cases more than during the first quarter 1994. 315 cases occurred in foxes (84.5% of total), 4 in other wild animals, 21 (5.6%) in dogs, 27 (7.2%) in cats and 6 in farm animals.

The Komitate (provinces) registering most of the cases were Baranya (50 cases), Borsod Abanij-Zemplén (33), Somogy (33), Pest (30), Bács-Kiskun (28) and Tolna (28).

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*", 5 rabies cases were diagnosed in Italy, all in the Friuli Venezia Giulia region, bordering Slovenia. Of these, 3 cases were diagnosed in foxes, one in a roe deer and one in a dog. The dog was an unvaccinated puppy, 4 months old, infected by a fox. The dog received a single dose of inactivated vaccine after exposure. Nonetheless, clinical signs of rabies developed 10 days later.

3.18 Lithuania LTU

by K. Lukauskas and A. Dranseika

During "*This Quarter*", rabies was diagnosed in 11 districts.

Of 15 diagnosed cases 9 were in wild animals and 6 in domestic animals. Of the wild animals 6 were foxes and 3 raccoon dogs. Of the domestic animals 2 were cattle, 2 dogs, 1 cat, 1 goat.

The most affected districts were Joniškis - 3 foxes and Panevėžys - 2 raccoon dogs and 1 goat.

There was no human rabies case reported in the country.

During this quarter more than 46.000 dogs were vaccinated against rabies parenterally.

3.19 Luxembourg LUX

by Joseph Kremer

During "*This Quarter*", 2 foxes were diagnosed rabid of 11 samples examined (10 foxes, 1 stone marten). The cases occurred in the center and the east of the country.

The cases might originate from residual foci.

To avoid the worsening of the rabies situation it is intended to orally vaccinate foxes twice during the year covering the entire country. The vaccination campaigns are planned for the beginning of May and the second half of September 1995. Each time 49.000 vaccine baits are going to be distributed by helicopter covering an area of 2586 km².

3.20 Latvia LVA

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

60 rabies cases were registered during "*This Quarter*" in 20 districts, 19 cases less than during the previous quarter. 48 cases were diagnosed in wild animals (80% of total). Of the cases in wild animals 40 were foxes, 7 raccoon dogs, 1 pine marten. Of 12 rabid domestic animals 6 were dogs and 6 cats.

The most affected districts were Liepāja with 9 cases, Ogre with 6 cases and Saldus with 6 cases.

3.21 Moldova MLD

No data.

3.22 Netherlands NET

by G. Visser

During "This Quarter", 30 animals were investigated for rabies. 14 of these were imported. One imported grey fox and one bat (an *Eptesicus serotinus* from the province Utrecht) were rabid. The rabid fox belonged to a group of 8 foxes (2 American grey foxes and 6 Egyptian foxes) that were imported by a dealer of wild animals to the province of Gelderland, along with other animals (1 Liberian mouse weasel, several ringtail cats and several porcupines), in January of this year.

As a result of the rabies finding, the Egyptian foxes and the mouse weasel were investigated also. These animals were rabies negative. The ringtail cats and 4 of the imported porcupines were sold to two persons. The 4 porcupines were investigated for rabies, with negative results. The ringtail cats were put into quarantine, along with other animals of the owners premises. Six weeks after the order was taken, a corsac fox from that location, that had been imported a few months earlier, died and was investigated. This fox was rabies negative. The above circumstances make clear that there is a serious risk involved

with the import of wild animals, especially when these are captured in areas where rabies is endemic. Within short a proposal from the Ministeries of Welfare and Agriculture will be presented to the European Commission in order to minimize the risks that are connected to such imports.

3.23 Norway NOR

by Gudbrand Bakken

The country remained rabies-free.

3.24 Poland POL

by Bogdan Twarowski

A total of 558 rabies cases was registered in Poland during "This Quarter", 133 cases less than during the previous quarter and 17 cases more than during the first quarter 1994.

Of the total cases 469 (84.1%) were in wild animals (413 foxes, 27 raccoon dogs, 19 pine martens, 3 polecats, 1 fish otter, 5 roe deer, 1 black rat) and 89 in domestic animals (31 dogs, 39 cats, 19 cattle).

There was a marked decrease of cases in the west of the country where oral vaccination of foxes against rabies is practiced.

3.25 Portugal POR

The country remained rabies-free.

3.26 Romania ROM

by Gheorghe Stratulat

16 cases of rabies in animals were reported in Romania during "This Quarter". They occurred in 9 foxes, 4 dogs, 2 sheep and 1 other domesticated animal.

The cases were scattered throughout the country with 1 to 4 cases in 8 provinces.

**3.27 Russia RUS
(European part only)**

by V.A.Vedernikov, B.L.Cherkasskiy, V.E.Semlianova, P.K.Shumilov, S.A.Kolomycev, A.E.Khairushev and V.V.Pinaev

During "This Quarter", 274 rabies cases in animals were reported from the European Part of Russia. Of the total number of cases 194 were in domestic animals - 57 dogs, 24 cats, 82 cattle, 5 horses, 24 sheep and 2 pigs. Of 80 wild animals rabies was diagnosed in 53 foxes, 2 raccoon dogs, 1 rat and 24 reindeer.

There were 3 human cases reported one each of the Kaluga region, the Kursk region and the Lipetsk region.

Most affected areas of the European part of the country were the Orenburg region with 44 cases, Astrakhan region with 22 cases, Bashkortostan with 54 cases, Arkhangelsk region with 25 cases.

3.28 Spain SPA

by Carlos Abellán García

During "*This Quarter*", four dogs were diagnosed rabid in Melilla in the Spanish territory of North Africa.

The mainland and islands of Spain remained rabies-free of terrestrial animals.

There was no case in bats reported.

3.29 Slovak Republic SVK

by Bohuslav Lovas and Jozef Sokol

A total of 63 cases in animals was reported in the Slovak Republic during "*This Quarter*". Of these were 49 (77.8%) in wild animals (48 foxes, 1 lynx) and 14 in domestic animals (9 cats, 5 dogs). Compared to the first quarter 1994 there was a decrease by 107 cases.

An oral vaccination of foxes with 650,000 vaccine baits was carried out in March 1995. Vaccine baits were distributed in 37 districts covering an area of 49,000 km².

3.30 Slovenia SVN

by Armin Tomašič

A total of 435 animal rabies cases was noticed in Slovenia during "*This Quarter*", 147 cases more than during the first quarter 1994. Of the 435 cases 412 (94.7%) were foxes, 14 other wild animals and 9 domestic animals (2

dogs, 7 cats).

In Murska Sobota in the very north-east of the country 159 cases were registered, in Smarje pri Jelsah 33 cases, in Ljubljana-Vic-Rudnik 22 cases. All other communities (Občina) reported less than 20 cases.

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 699 animals, of which 2% (14) were positive for rabies. In the previous quarter, 5.3% (36 out of 683) and in the first quarter of 1994, 10.6% (100 out of 945) had been recorded positive, respectively. The cases of rabies observed in this quarter involved 9 red foxes, 2 badgers, 2 stone martens, and 1 sheep. The cases recorded came primarily from the Jura Mountains south-east of Basel. Although the number of animals found positive declined, the vaccinated area had to be expanded as a consequence of the distribution of the cases. In the south-east of the enzootic area (canton of Solothurn), two foxes and a sheep positive for rabies were found south of the river Aare, which forms a natural barrier between the Jura Mts. and the Swiss Plateau. In the west (canton of Neuchâtel), a rabid stone marten was killed

just outside the area of oral vaccination. This case was isolated from all cases during this quarter and occurred in a region where no rabies was diagnosed for the last three years.

3 bats (1 *Pipistrellus pipistrellus*, 2 *Pipistrellus kuhlii*) were examined during the reporting period. None was found to be positive for rabies.

No one was known to have been bitten by a rabid animal. The number of people treated for non-bite exposures is not recorded.

3.33 Turkey TUR

by A. Nizamettin Güvener

During "*This Quarter*", 36 cases of rabies (all in dogs) were reported in Turkey. Of these 22 occurred in the province (il) of Istanbul, 7 in Bursa, 3 in Izmir and 2 each in Adana and Demizli.

3.34 Ukraine UKR

No data.

3.35 United Kingdom UNK

by P.J. Thomas

The country remained rabies-free.

3.36 Yugoslavia YUG

by Dušan Jakovljević

20 rabies cases (18 foxes, 2 cats) were registered during "*This Quarter*". All cases occurred in Vojvodina.

4. MISCELLANEOUS ARTICLES

4.1 Rabies in Latvia in 1994

by Jurijs Perevoščikov
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7, Klijānu str., LV-1012 Riga, Latvia

Epizootic situation and animal rabies control

In 1994, 676 samples were examined for rabies. 278 of these (41.1%) were diagnosed rabid. In 1993, 194 rabies cases were reported.

The distribution of animal species involved in rabies in 1994 is shown in FIGURE 4.1.1.

There was a concentration of rabies cases in Kurzeme und Vidzeme. Altogether 242 communities were affected by the disease throughout the country.

Preventive vaccination was applied to 994 farm animals, 107,600 dogs and 10,000 cats.

5474 stray dogs and 5733 stray cats were removed.

Human rabies exposure and anti-rabies treatment

In 1994, 7112 humans (including 2926 children) asked for medical help because of exposure to rabid or rabies suspected animals (6129 in 1993).

The exposure was caused by the following animals: 5535 dogs (77.8% of total), 942 cats, 93 other domestic animals, 414 wild animals and 128 rodents.

Of the 7112 humans:

742 had contact to laboratory confirmed cases of rabies (271 dogs, 131 cats, 46 other domestic animals, 294 wild animals).

The type of contact to the rabid animals was as follows:

- 34 x bites
- 14 x scratches
- 516 x the saliva of the animal
- 178 x the dead animal or contaminated objects.

1673 had contact to strays or other animals which ran away thus, the diagnoses rabies could not be confirmed. 85.4% of the patients were bitten, 14.5% had contact to saliva.

4569 had contact to animals which did not fall ill during veterinary-medical observation.

128 had contact to rodents.

FIGURE 4.1.2 shows the sex and age distribution of the people who were exposed to rabid or rabies suspected animals.

In 1994 5811 humans received rabies post-exposure

treatment (81.7% of 7112). FIGURE 4.1.3 shows how soon the treatment was applied after exposure and FIGURE 4.1.4, if vaccine or serum was applied alone or together.

Complications (local or general reactions) during the post-exposure procedure were registered in 22 cases, including 8 cases after immunoglobulin administration.

93 persons refused immunization and 102 interrupted the course of vaccination willfully.

Only 22 veterinarians and 3 helpers to catch stray animals received pre-exposure vaccination.

The following preparation were used in 1994 in Latvia.

- inactivated antirabies vaccine Rabivax-Vnu-kovo-32, made in Moscow and Ufa, Russian Federation);
- Imovax RABIES, made by Pasteur Merieux;
- antirabies immunoglobulin of horse origin, made by Kharkov Plant of Bacteriological Preparations, Ukraine.

FIGURE 4.1.1: Rabies in animals in 1994

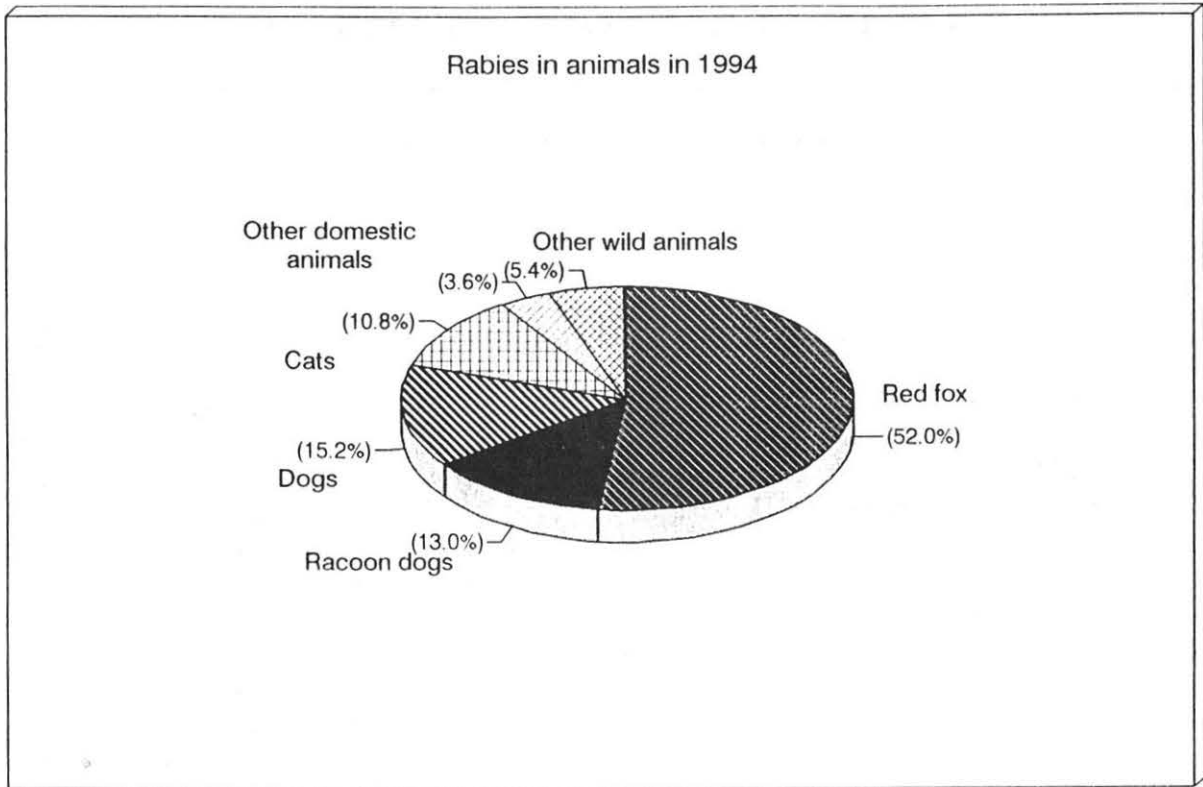


FIGURE 4.1.2: Age and sex distribution of persons exposed to rabid and rabies suspected animals in 1994

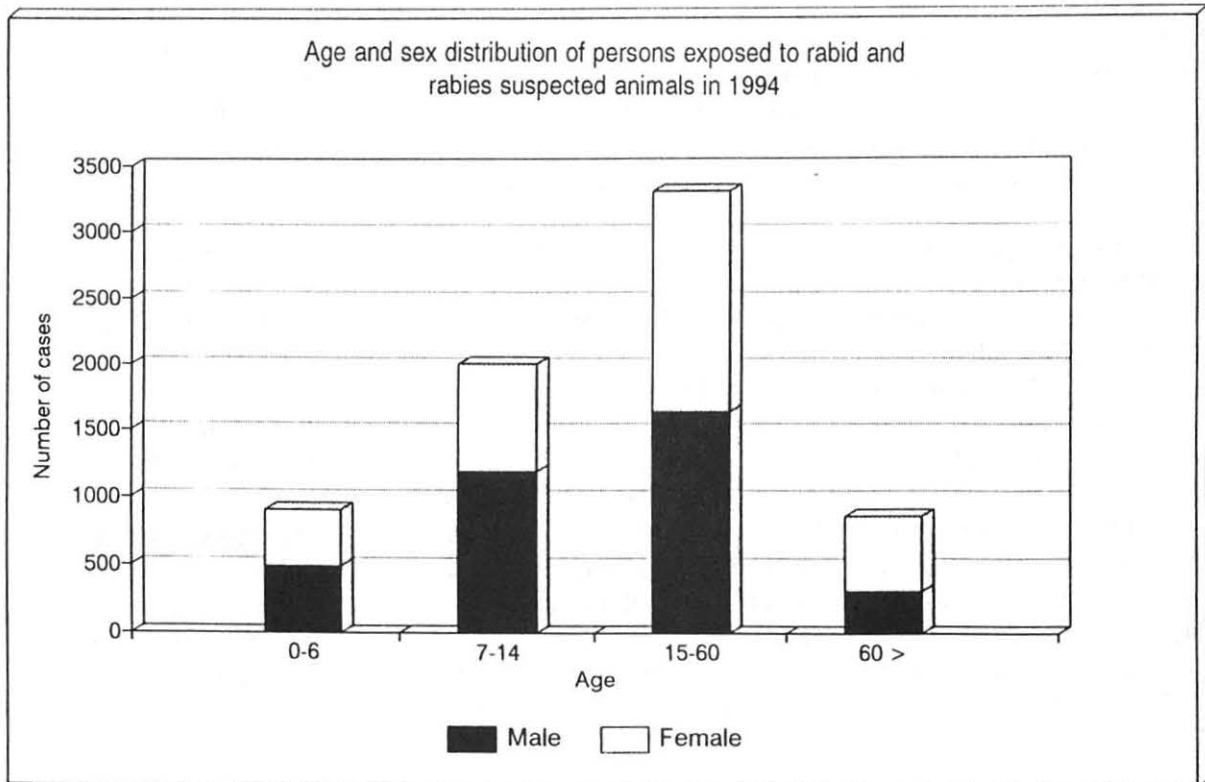


FIGURE 4.1.3: Post-exposure treatment of 5811 contacts in 1994

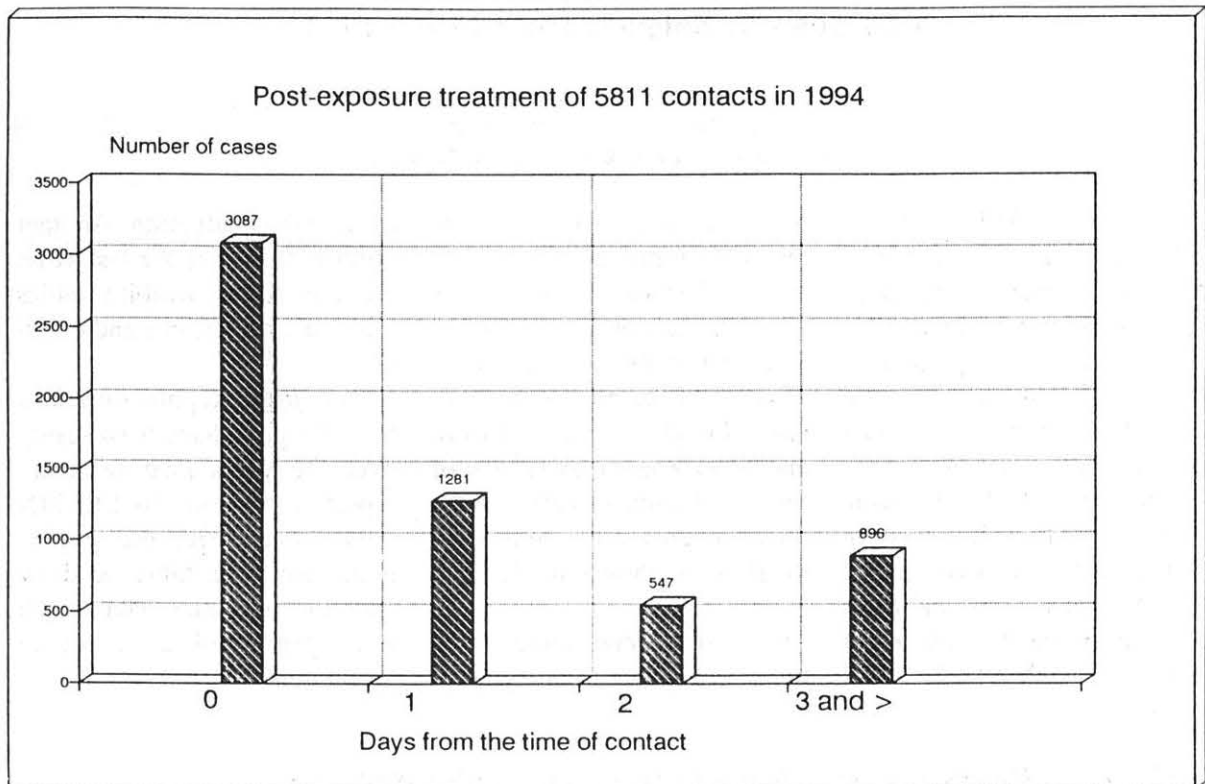
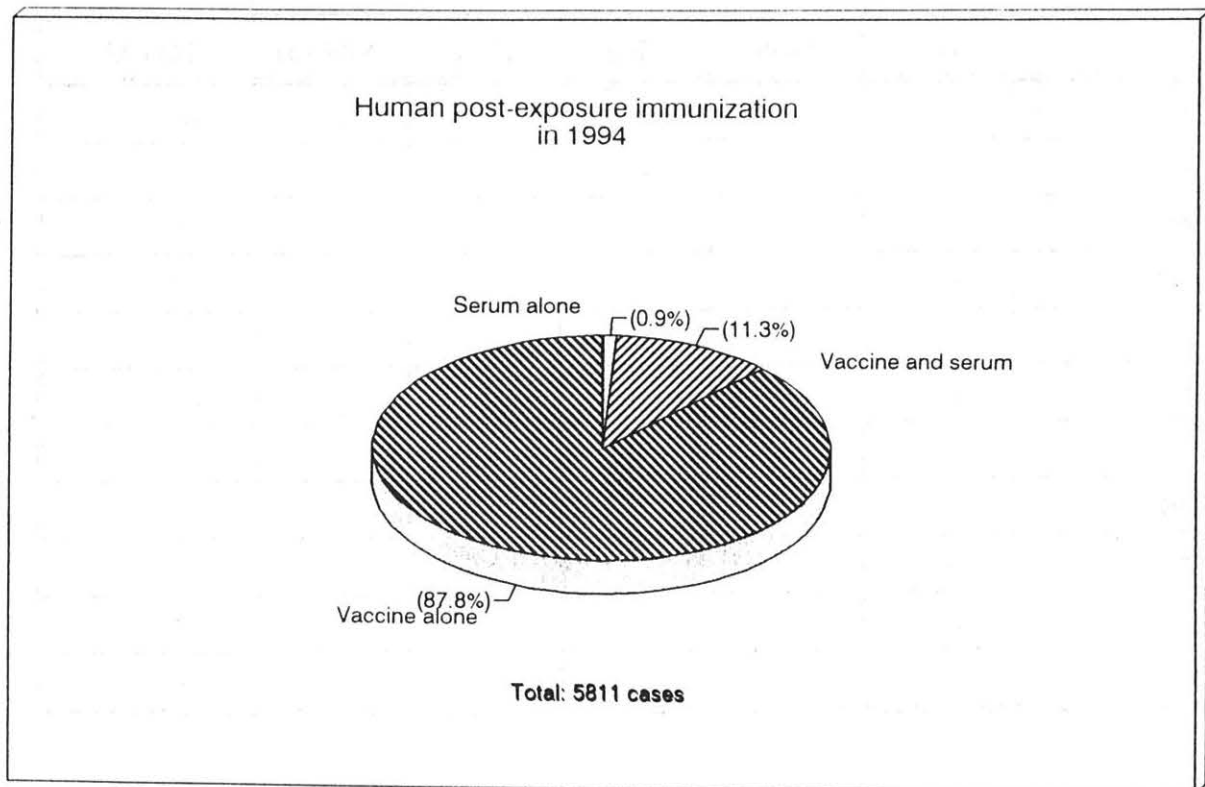


FIGURE 4.1.4: Human post-exposure immunization in 1994



4.2 Rabies in Bulgaria from 1984 - 1994

by Rumén Valtchovski
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15A P. Slaveikov Blvd., BG-1606 Sofia, Bulgaria

From 1984 to 1994, 489 rabies cases in domestic and wild animals were diagnosed in Bulgaria. The distribution of animal species is shown in TABLES 4.2.1 and 4.2.2. Of the wild animals affected, more than 90% were in foxes and of the domestic animals more than 70% were in farm animals with easy access to wild animals. That indicates that in Bulgaria wildlife rabies prevails though of the total rabies cases the

domestic animal often outdo the wild animals.

Rabies occurs more often in the north of Bulgaria. There has been a concentration of cases in the provinces Montana, Lovetch, Vidin, Vratza and Stara Zagora. A review of the distribution of cases in the different provinces from 1984 to 1994 is shown in TABLE 4.2.3.

In general, there seems to be a tendency of worsening

of the rabies situation. Another point is that over the last years the picture of wildlife rabies has come out clearer and clearer.

Editors note: Reports on rabies from Bulgaria have been scanty over the years (see summary report of previous BULLETIN 4/94). Therefore, the opportunity has been taken to draw attention to better data which were presented at a recent WHO conference.

TABLE 4.2.1: Rabies cases in Bulgaria by type of animal for 1984-1994

WILD ANIMALS

	Fox	Wolf	Hog	Hare	Wild cat	TOTAL
1984	57	1		1	1	60
1985			1			1
1986	7			1	2	10
1987	36	3	1		4	44
1988	41					41
1989	40	1				41
1990	17					17
1991	7					7
1992	8					8
1993	13	2				15
1994	3					3

TABLE 4.2.2: Rabies cases in Bulgaria by type of animal for 1984-1994

DOMESTIC ANIMALS

	Dog	Cat	Cattle	Sheep	Goat	Swine	Horse	Total
1984	5	5	16	5	4	2	1	38
1985			3					3
1986		1	4	13	1			19
1987	4	3	10	11				28
1988	3	7	9	15	5		1	40
1989	2	7	17	14	1			41
1990	5	1	5	5	8			24
1991	3	4	2	3				12
1992		5	5	1	3			14
1993	3	4	8	5	3	1		24
1994	6	1	1		1			9

TABLE 4.2.3: Rabies cases in Bulgaria by province for 1984-1994

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	
	total	total	total	total	total	total	total	total	total	total	total	total
Location name												
Lovetch				1	12	28	8	1	2	6	3	61
Vratza			2	9	15	9	4	11	8	7	1	66
Vidin						23	8		1	2	1	35
Montana					34	13	10	3	9	11		80
Bfurgas						1						1
Targovichte						2				1	2	5
Pleven	1	1	8	7	4	5	1	1	1	6	1	36
V.Tarnovo	19	1	2	7	9	2				1	1	42
Russe	4		5	3		1	1			3	1	18
Razgrad						1						1
Silistra	6		3	1	2	1	1				1	15
Sofia				7	2	1	1	3	3			17
Gabrovo	4			3						2		9
Dobritch	2									1	1	4
St.Zagora	29	2	6	7							1	45
Sliven	28											28
Iambol	4											4
Plovdiv				21								21
Kustendil	1											1
total	98	4	26	66	78	87	34	19	24	40	13	489
	20%	1%	5%	13%	16%	18%	7%	4%	5%	8%	3%	100%

4.3 Oral Vaccination and High Density Fox Populations

by W.W. Müller

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Oral vaccination of foxes against rabies which was started in Switzerland as a field trial in 1978 has since had a tremendous impact on the rabies situation of Europe. There have since been examples making large areas or even countries (Finland, Italy, Luxembourg, the Netherlands) completely or for lengthy intervals rabies-free. The beginning years soon nurtured the idea that with oral vaccination of foxes we can speak of rabies eradication rather than control.

First set-backs occurred with the method when areas could not be vaccinated comprehensively, residual foci initiated new outbreaks or reinfections occurred from infected neighbouring areas. Quite often money could not be secured to guarantee the regular bi-annual vaccinations, large enough and long enough.

A problem of the more recent years is the in Europe wide-spread high density fox population for which examples are given in FIGURES 4.3.1 and 4.3.2 of Germany and Switzerland (see next page) considering the fox hunting bag as an approximate indication of the fox population density. In case rabies hits formerly rabies-free areas of high fox density, outbreaks of high incidence develop. Several countries

vaccinating regularly and all infected areas recorded a rabies incidence in 1994 higher than in the previous year.

How can we deal with rabies in high density fox populations? Do we need alternative methods compared to the "classical" method? There is no doubt an adjustment needed, and there have been efforts in trying some. The aim is: to improve the percentage of immunized foxes within the population to interrupt the chain of infection.

Often the seroconversion rate can be improved sufficiently by increasing the vaccine baits per km². When originally 15 per km² were used, the number can be increased up to 30, for example.

In Bavaria and Baden-Württemberg of Germany experience has been gained to practice an additional third or sommer vaccination. With the latter vaccination especially the rabies susceptible young foxes of the spring were to be reached and the vaccination was to be solidified in the autumn campaign.

To improve the seroconversion of the young foxes was the aim of a field trial in Switzerland in as much as they were vaccinated in an additional third May/June campaign with hand-placing vaccine baits

around the fox den.

Today in Baden-Württemberg of Germany a method is used, for very resistant foci, which makes use of three campaigns a year but, as required, some of them are repeated within a short time span.

None of the latter strategies are well established yet, but success has been achieved and the testing of these methods with accurate evaluation is recommended.

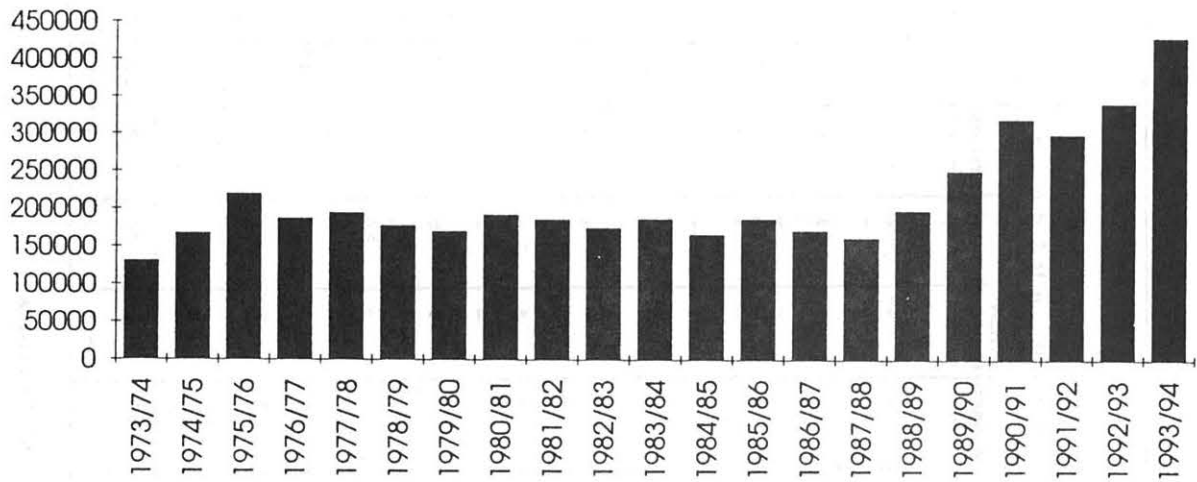
There is no doubt an important task to support the vaccination campaigns: namely the reduction of fox populations. This can be done by intensive hunting, but as well as by the reduction of food resources for the fox to decrease the carrying capacity of the habitat.

With the situation of high fox densities, research is recommended to face the new challenge. Here, especially, the wildlife biologists are asked in regard to population dynamics. Amongst others mathematical models should be applied to explain deficiency of methods and policies.

Editors note: The subject of high density fox population was discussed at the WHO-meeting European Cooperation on Oral Vaccination of Foxes against Rabies in Budapest, Hungary, 31.3./1.4.1995. The above is a summary.

FIGURE 4.3.1

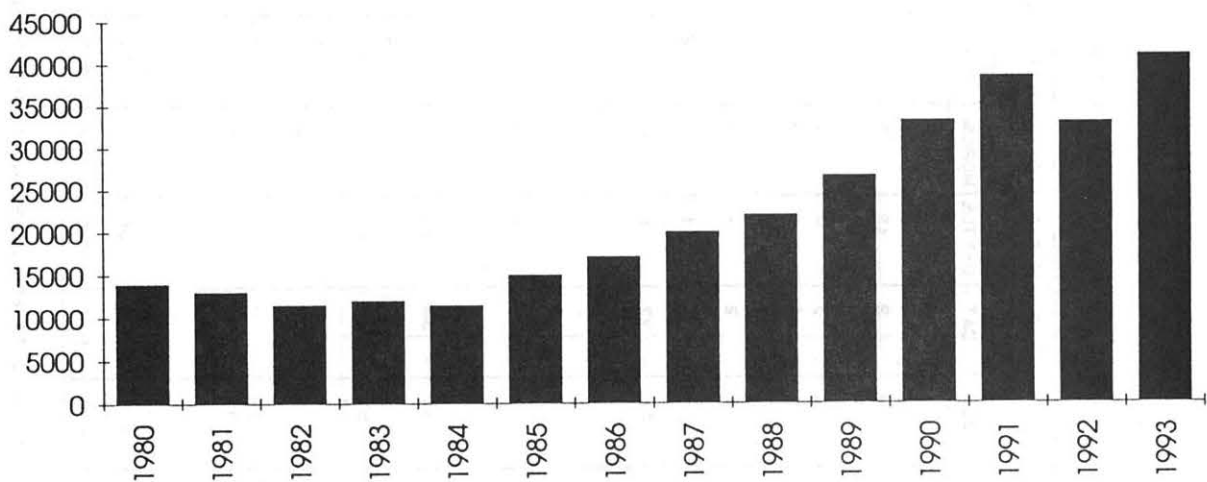
WEST-GERMANY - FOX HUNTING BAG



Source: DJV-Handbuch 1995

FIGURE 4.3.2

SWITZERLAND - FOX HUNTING BAG



Source: Bundesamt Bern / WHO Geneva

Rabies Case Data from Europe
are tabulated on the following pages
of Section 5

TABLE 1

EUR		EUROPE		1/95		RABIES CASES										1. 1.95 - 31. 3.95	
LOCATION		DOMESTIC ANIMALS						WILD ANIMALS						HUMAN CASES	TOTAL		
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL	
ALB	ALBANIA	**						0						0	0		
AUT	AUSTRIA		1	-	-	-	-	1	35	1	1	2	-	39	40		
BEL	BELGIUM		-	3	13	3	8	27	52	-	-	-	-	52	79		
BUL	BULGARIA	1)						0	-	-	-	-	4	4	4		
BYE	BELARUS	**						0						0	0		
CRO	CROATIA		4	2	-	-	1	7	159	-	1	1	-	161	168		
CZH	CZECH REPUBLIC		1	1	-	-	-	2	39	-	-	1	-	40	42		
DEN	DENMARK							0	-	-	-	-	1	1	1		
DEU	FED. REP. OF GERMANY		-	11	36	3	17	67	283	8	7	10	-	308	375		
EST	ESTONIA		1	2	-	-	-	3	6	-	-	-	3	9	12		
FIN	FINLAND	*						0						0	0		
FRA	FRANCE		-	-	1	-	6	7	13	-	1	-	-	14	21		
GRE	GREECE	*						0						0	0		
HUN	HUNGARY		21	27	5	-	1	54	315	-	1	3	-	319	373		
ICE	ICELAND	*						0						0	0		
IRE	IRELAND	*						0						0	0		
ITA	ITALY		1	-	-	-	-	1	3	-	-	1	-	4	5		
LTU	LITHUANIA		2	1	2	-	1	6	6	-	-	-	3	9	15		
LUX	LUXEMBOURG							0	2	-	-	-	-	2	2		
LVA	LATVIA		6	6	-	-	-	12	40	-	1	-	7	48	60		
MLD	MOLDOVA	**						0						0	0		
NET	NETHERLANDS	2)						0	-	-	-	-	2	2	2		
NOR	NORWAY	*						0						0	0		
POL	POLAND		31	39	19	-	-	89	413	-	23	5	23	469	558		
POR	PORTUGAL	*						0						0	0		
ROM	ROMANIA		4	-	-	-	2	7	9	-	-	-	-	9	16		
RUS	RUSSIAN FEDERATION		57	24	82	5	24	194	53	-	-	24	3	80	277		
SPA	SPAIN	3)	4	-	-	-	-	4						0	4		
SVK	SLOVAK REPUBLIC		5	9	-	-	-	14	48	-	-	-	1	49	63		
SVN	SLOVENIA		2	7	-	-	-	9	412	1	9	3	1	426	435		
SWE	SWEDEN	*						0						0	0		
SWI	SWITZERLAND + LIECHT		-	-	-	-	1	1	9	2	2	-	-	13	14		
TUR	TURKEY		36	-	-	-	-	36						0	36		
UKR	UKRAINE	**						0						0	0		
UNK	UNITED KINGDOM	*						0						0	0		
YUG	YUGOSLAVIA		-	2	-	-	-	2	18	-	-	-	-	18	20		
TOTAL			176	134	158	11	61	3	543	1915	12	46	50	53	2076	3	2622
PER CENT			6.7	5.1	6.0	0.4	2.3	0.1	20.7	73.0	0.5	1.8	1.9	2.0	79.2	0.1	100.0

* NO CASES ** NO DATA 1) NO DATA FOR FEBRUARY 1995 2) 1 CASE IMPORTED 3) NORTH AFRICA

TABLE 2

EUR		EUROPE		1/95		RABIES CASES 'OTHER ANIMAL SPECIES'				1. 1.95 - 31. 3.95	
LOCATION		OTHER DOMESTIC ANIMALS		OTHER WILD ANIMALS					UNSPECIFIED	TOTAL	
CODE	NAME	PIG	OTH.DOMESTIC ANIMALS	OTH.FOX SPECIES	RACCOON DOG	LYNX	INSECTIVOR. BATS	BLACK RAT			HARE
BUL	BULGARIA 1)	-	-	-	-	-	-	-	-	4	4
DEN	DENMARK	-	-	-	-	-	1	-	-	-	1
EST	ESTONIA	-	-	-	3	-	-	-	-	-	3
LTU	LITHUANIA	-	-	-	3	-	-	-	-	-	3
LVA	LATVIA	-	-	-	7	-	-	-	-	-	7
NET	NETHERLANDS	-	-	1	-	-	1	-	-	-	2
POL	POLAND	-	-	-	27	-	-	1	-	-	28
ROM	ROMANIA	-	1	-	-	-	-	-	-	-	1
RUS	RUSSIAN FEDERATION	2	-	-	2	-	-	1	-	-	5
SVK	SLOVAK REPUBLIC	-	-	-	-	1	-	-	-	-	1
SVN	SLOVENIA	-	-	-	-	-	-	-	1	-	1
TOTAL		2	1	1	42	1	2	2	1	4	56
PER CENT		3.6	1.8	1.8	75.0	1.8	3.6	3.6	1.8	7.1	100.0

1) NO DATA FOR FEBRUARY 1995

1st Quarter: January - March 1995

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R A B I E S C A S E S																1. 1.95 - 31. 3.95	
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	
AUT A U S T R I A																	
107	NEUSIEDL AM SEE	1	-	-	-	-	-	1	7	-	-	1	-	8		9	
204	KLAGENFURT-LAND							0	2	-	-	-	-	2		2	
207	VILLACH-LAND							0	4	1	-	-	-	5		5	
309	GMUEND							0	2	-	-	-	-	2		2	
503	SALZBURG-LAND							0	7	-	-	1	-	8		8	
604	FELDBACH							0	1	-	-	-	-	1		1	
615	RADKERSBURG							0	1	-	-	-	-	1		1	
703	INNSBRUCK-LAND							0	2	-	-	-	-	2		2	
705	KUFSTEIN							0	1	-	-	-	-	1		1	
708	REUTTE							0	7	-	-	-	-	7		7	
709	SCHWAZ							0	1	-	-	-	-	1		1	
803	DORNBIRN							0	-	-	1	-	-	1		1	
TOTAL		1	0	0	0	0	0	1	35	1	1	2	0	39	0	40	
PER CENT		2.5	0.0	0.0	0.0	0.0	0.0	2.5	87.5	2.5	2.5	5.0	0.0	97.5	0.0	100.0	
CZH C Z E C H R E P U B L I C																	
01	CENTRAL BOHEMIA							0	3	-	-	-	-	3		3	
02	SOUTH BOHEMIA							0	4	-	-	-	-	4		4	
04	NORTH BOHEMIA							0	18	-	-	-	-	18		18	
05	EAST BOHEMIA	1	-	-	-	-	-	1	2	-	-	-	-	2		3	
07	NORTH MORAVIA	-	1	-	-	-	-	1	12	-	-	1	-	13		14	
TOTAL		1	1	0	0	0	0	2	39	0	0	1	0	40	0	42	
PER CENT		2.4	2.4	0.0	0.0	0.0	0.0	4.8	92.9	0.0	0.0	2.4	0.0	95.2	0.0	100.0	
SVK S L O V A K R E P U B L I C																	
10	DISTRICT OF BRATISLAV							0						0		0	
11	WEST SLOVAKIA	3	1	-	-	-	-	4	9	-	-	-	-	9		13	
12	CENTRAL SLOVAKIA	1	3	-	-	-	-	4	6	-	-	-	-	6		10	
13	EAST SLOVAKIA	1	5	-	-	-	-	6	33	-	-	-	1	34		40	
TOTAL		5	9	0	0	0	0	14	48	0	0	0	1	49	0	63	
PER CENT		7.9	14.3	0.0	0.0	0.0	0.0	22.2	76.2	0.0	0.0	0.0	1.6	77.8	0.0	100.0	

RABIES CASES

1. 1.95 - 31. 3.95

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
BEL BELGIUM															
LX LUXEMBOURG	-	3	13	3	6	-	25	42	-	-	-	-	42		67
NA NAMUR	-	-	-	-	2	-	2	10	-	-	-	-	10		12
TOTAL	0	3	13	3	8	0	27	52	0	0	0	0	52	0	79
NET NETHERLANDS															
03 GELDERLAND							0	-	-	-	-	1	1		1
09 UTRECHT							0	-	-	-	-	1	1		1
TOTAL	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2
SWI SWITZERLAND AND LIECHTENSTEIN															
01 AARGAU							0	1	-	1	-	-	2		2
05 BASEL-LAND							0	4	1	-	-	-	5		5
12 NEUCHATEL							0	-	-	1	-	-	1		1
17 SOLOTHURN	-	-	-	-	1	-	1	3	1	-	-	-	4		5
26 JURA							0	1	-	-	-	-	1		1
TOTAL	0	0	0	0	1	0	1	9	2	2	0	0	13	0	14
PER CENT	0.0	0.0	0.0	0.0	7.1	0.0	7.1	64.3	14.3	14.3	0.0	0.0	92.9	0.0	100.0

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R A B I E S C A S E S																1. 1.95 - 31. 3.95	
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	
BUL B U L G A R I A																	
14	PLEVEN						0	-	-	-	-	1	1		1		
15	PLOVDIV						0	-	-	-	-	2	2		2		
19	SLIVEN						0	-	-	-	-	1	1		1		
TOTAL		0	0	0	0	0	0	0	0	0	0	4	4	0	4		
PER CENT		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0		
TUR T U R K E Y																	
01	ADANA	2	-	-	-	-	2						0		2		
16	BURSA	7	-	-	-	-	7						0		7		
20	DENIZLI	2	-	-	-	-	2						0		2		
34	ISTANBUL	22	-	-	-	-	22						0		22		
35	IZMIR	3	-	-	-	-	3						0		3		
TOTAL		36	0	0	0	0	36	0	0	0	0	0	0	0	36		
PER CENT		100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0		
YUG Y U G O S L A V I A																	
61	SAP VOJVODINA	-	2	-	-	-	2	18	-	-	-	-	18		20		
TOTAL		0	2	0	0	0	2	18	0	0	0	0	18	0	20		

BULGARIA NO DATA FOR FEBRUARY 1995

R A B I E S C A S E S															1. 1.95 - 31. 3.95	
LOCATION CODE NAME		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL	
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL
DEN D E N M A R K																
080 NORDJYLLAND							0	-	-	-	-	1	1		1	
TOTAL		0	0	0	0	0	0	0	0	0	0	1	1	0	1	
DEU F E D E R A L R E P U B L I C O F G E R M A N Y																
05 NORDRHEIN-WESTFALEN		-	7	28	2	9	-	46	130	5	3	4	-	142	188	
06 HESSEN		-	-	-	-	2	-	2	29	-	2	1	-	32	34	
07 RHEINLAND-PFALZ		-	-	4	-	-	-	4	26	-	-	1	-	27	31	
08 BADEN-WUERTTEMBERG		-	-	-	-	2	-	2	10	-	-	-	-	10	12	
09 BAYERN		-	-	1	-	-	-	1	16	2	-	-	-	18	19	
10 SAARLAND		-	4	3	1	4	-	12	72	1	2	4	-	79	91	
TOTAL		0	11	36	3	17	0	67	283	8	7	10	0	308	375	
PER CENT		0.0	2.9	9.6	0.8	4.5	0.0	17.9	75.5	2.1	1.9	2.7	0.0	82.1	100.0	
LUX L U X E M B O U R G																
07 DIEKIRCH							0	1	-	-	-	-	1	1		
13 REMICH							0	1	-	-	-	-	1	1		
TOTAL		0	0	0	0	0	0	2	0	0	0	0	2	2		
PER CENT		0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	100.0		

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CRO CROATIA		RABIES CASES												1. 1.95 - 31. 3.95		
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
004	BJELOVAR							0	4	-	-	-	-	4		4
006	BUJE							0	8	-	-	-	-	8		8
007	BUZET							0	15	-	-	-	-	15		15
009	CRIKVENICA							0	2	-	-	1	-	3		3
010	CABAR							0	1	-	-	-	-	1		1
011	CAKOVEC							0	4	-	-	-	-	4		4
013	DARUVAR							0	1	-	-	-	-	1		1
014	DELNICE							0	6	-	-	-	-	6		6
015	DONJA STUBICA							0	1	-	-	-	-	1		1
017	DONJI MIHOLJAC							0	2	-	-	-	-	2		2
018	DRNIS							0	1	-	-	-	-	1		1
020	DUGA RESA							0	2	-	-	-	-	2		2
031	IMOTSKI	1	-	-	-	-	-	1						0		1
032	IVANEC							0	2	-	-	-	-	2		2
034	JASTREBARSKO							0	1	-	-	-	-	1		1
038	KLANJEC	-	1	-	-	-	-	1	1	-	-	-	-	1		2
040	KOPRIVNICA							0	4	-	-	-	-	4		4
043	KRAPINA							0	1	-	-	-	-	1		1
044	KRIZEVCI							0	13	-	-	-	-	13		13
046	KUTINA	-	1	-	-	-	-	1	3	-	-	-	-	3		4
047	LABIN							0	1	-	-	-	-	1		1
049	LUDBREG							0	10	-	-	-	-	10		10
053	NOVA GRADISKA							0	4	-	-	-	-	4		4
054	NOVI MAROF							0	1	-	-	-	-	1		1
058	OMIS	1	-	-	-	-	-	1	1	-	-	-	-	1		2
062	OTOCAC							0	3	-	-	-	-	3		3
063	OZALJ							0	2	-	-	-	-	2		2

CRO

CONTINUED

LOCATION		DOMESTIC ANIMALS						WILD ANIMALS						HUMAN CASES	TOTAL	
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL
066	PAZIN						0	3	-	1	-	-	4		4	
068	PODRAVSKA SLATINA						0	1	-	-	-	-	1		1	
069	POREC	-	-	-	-	1	1	3	-	-	-	-	3		4	
070	PREGRADA						0	1	-	-	-	-	1		1	
074	ROVINJ						0	2	-	-	-	-	2		2	
075	SENJ						0	1	-	-	-	-	1		1	
077	SISAK						0	1	-	-	-	-	1		1	
078	POZEGA						0	1	-	-	-	-	1		1	
079	SLAVONSKI BROD						0	4	-	-	-	-	4		4	
081	SOLIN						0	1	-	-	-	-	1		1	
083	SIBENIK	1	-	-	-	-	1	4	-	-	-	-	4		5	
085	TROGIR						0	1	-	-	-	-	1		1	
086	VALPOVO						0	1	-	-	-	-	1		1	
087	VARAZDIN						0	3	-	-	-	-	3		3	
088	VINKOVCI						0	3	-	-	-	-	3		3	
089	VIROVITICA						0	2	-	-	-	-	2		2	
092	VRBOVEC						0	4	-	-	-	-	4		4	
098	ZADAR	1	-	-	-	-	1	2	-	-	-	-	2		3	
099	SVETI IVAN ZELINA						0	3	-	-	-	-	3		3	
100	ZLATAR BISTRICA						0	1	-	-	-	-	1		1	
101	ZUPANJA						0	3	-	-	-	-	3		3	
102	GRAD ZAGREB						0	20	-	-	-	-	20		20	
TOTAL		4	2	0	0	1	0	7	159	0	1	1	0	161	0	168
PER CENT		2.4	1.2	0.0	0.0	0.6	0.0	4.2	94.6	0.0	0.6	0.6	0.0	95.8	0.0	100.0

1st Quarter: January - March 1995

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R A B I E S C A S E S															1. 1.95 - 31. 3.95	
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
EST E S T O N I A																
01	Harjuma	-	2	-	-	-	-	2	2	-	-	-	-	2		4
08	Polvamaa							0	2	-	-	-	-	2		2
11	Saaremaa	1	-	-	-	-	-	1						0		1
12	Tartumaa							0	1				3	4		4
15	Voruma							0	1	-	-	-	-	1		1
TOTAL		1	2	0	0	0	0	3	6	0	0	0	3	9	0	12
PER CENT		8.3	16.7	0.0	0.0	0.0	0.0	25.0	50.0	0.0	0.0	0.0	25.0	75.0	0.0	100.0
LVA L A T V I A																
01	Aizkraukle							0	1	-	-	-	1	1		1
02	Aluksne							0	2	-	-	-	1	2		2
04	Bauska							0	2	-	-	-	1	2		2
05	Cesie							0	3	-	-	-	1	3		3
06	Daugavpils	-	1	-	-	-	-	1	3	-	-	-	1	3		4
08	Gulbene							0	1	-	-	-	1	1		1
10	Jelgava							0	1	-	-	-	1	1		1
11	Kraslava							0	3	-	-	-	1	4		4
12	Kuldiga	1	-	-	-	-	-	1	2	-	-	-	1	2		3
13	Liepaja	1	1	-	-	-	-	2	5	-	-	-	2	7		9
14	Limbazi							0	3	-	-	-	1	3		3
15	Ludza	-	1	-	-	-	-	1					0			1
16	Madona							0	1	-	-	-	1	1		1
17	Ogre	1	-	-	-	-	-	1	4	-	-	-	1	5		6
20	Riga	1	1	-	-	-	-	2	2	-	-	-	1	2		4
21	Saldus	-	1	-	-	-	-	1	3	-	1	-	1	5		6
22	Talsi							0	2	-	-	-	1	2		2
23	Tukums	-	1	-	-	-	-	1	1	-	-	-	1	1		2
25	Valmiera	2	-	-	-	-	-	2	1	-	-	-	1	1		3
26	Ventspils							0	2	-	-	-	1	2		2
TOTAL		6	6	0	0	0	0	12	40	0	1	0	7	48	0	60
PER CENT		10.0	10.0	0.0	0.0	0.0	0.0	20.0	66.7	0.0	1.7	0.0	11.7	80.0	0.0	100.0

R A B I E S C A S E S															1. 1.95 - 31. 3.95	
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
FRA F R A N C E																
08	ARDENNES	-	-	1	-	1	-	2	3	-	1	-	-	4		6
25	DOUBS							0	1	-	-	-	-	1		1
55	MEUSE							0	1	-	-	-	-	1		1
57	MOSELLE	-	-	-	-	5	-	5	6	-	-	-	-	6		11
70	SAONE (HAUTE)							0	1	-	-	-	-	1		1
88	VOSGES							0	1	-	-	-	-	1		1
TOTAL		0	0	1	0	6	0	7	13	0	1	0	0	14	0	21
PER CENT		0.0	0.0	4.8	0.0	28.6	0.0	33.3	61.9	0.0	4.8	0.0	0.0	66.7	0.0	100.0
ITA I T A L Y																
33	UDINE							0	-	-	-	1	-	1		1
34	TRIESTE E GORIZIA	1	-	-	-	-	-	1	3	-	-	-	-	3		4
TOTAL		1	0	0	0	0	0	1	3	0	0	1	0	4	0	5
PER CENT		20.0	0.0	0.0	0.0	0.0	0.0	20.0	60.0	0.0	0.0	20.0	0.0	80.0	0.0	100.0
SPA S P A I N																
52	MELILLA (NORTH AFRICA)	4	-	-	-	-	-	4						0		4
TOTAL		4	0	0	0	0	0	4	0	0	0	0	0	0	0	4

1st Quarter: January - March 1995

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HUN HUNGARY		RABIES CASES												1. 1.95 - 31. 3.95		
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	5	5	1	-	1	-	12	37	-	-	1	-	38		50
03	BACS-KISKUN	3	3	-	-	-	-	6	21	-	-	1	-	22		28
04	BEKES	1	3	-	-	-	-	4	10	-	-	-	-	10		14
05	BORSOD-ABAUJ-ZEMPLEN	-	1	1	-	-	-	2	31	-	-	-	-	31		33
06	CSONGRAD	-	1	1	-	-	-	2	15	-	-	-	-	15		17
07	FEJER							0	28	-	-	-	-	28		28
08	GYOER-SOPRON	-	1	-	-	-	-	1	6	-	-	-	-	6		7
09	HAJDU-BIHAR	-	-	1	-	-	-	1	5	-	-	-	-	5		6
10	HEVES							0	8	-	1	1	-	10		10
11	KOMAROM							0	16	-	-	-	-	16		16
12	NOGRAD							0	4	-	-	-	-	4		4
13	PEST	3	3	-	-	-	-	6	24	-	-	-	-	24		30
14	SOMOgy	3	4	-	-	-	-	7	26	-	-	-	-	26		33
15	SZABOLCS-SZATMAR	2	-	1	-	-	-	3	18	-	-	-	-	18		21
16	SZOLNOK							0	7	-	-	-	-	7		7
17	TOLNA	3	2	-	-	-	-	5	23	-	-	-	-	23		28
18	VAS							0	5	-	-	-	-	5		5
19	VESZPREM	-	1	-	-	-	-	1	23	-	-	-	-	23		24
20	ZALA	1	3	-	-	-	-	4	6	-	-	-	-	6		10
TOTAL		21	27	5	0	1	0	54	315	0	1	3	0	319	0	373
PER CENT		5.6	7.2	1.3	0.0	0.3	0.0	14.5	84.5	0.0	0.3	0.8	0.0	85.5	0.0	100.0

RABIES CASES

1. 1.95 - 31. 3.95

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
LTU LITHUANIA															
36 Birzu	-	1	-	-	-	-	1						0	1	
46 Jonavos	-	-	1	-	-	-	1						0	1	
47 Joniskio							0	3	-	-	-	-	3	3	
53 Kedainiu							0	1	-	-	-	-	1	1	
57 Kupiskio	1	-	-	-	-	-	1						0	1	
66 Panevezio	-	-	-	-	1	-	1	-	-	-	-	2	2	3	
67 Pasvalio	1	-	-	-	-	-	1						0	1	
69 Prienu							0	1	-	-	-	-	1	1	
89 Sirvintu							0	-	-	-	-	1	1	1	
91 Siauliu							0	1	-	-	-	-	1	1	
94 Jurbarko	-	-	1	-	-	-	1						0	1	
TOTAL	2	1	2	0	1	0	6	6	0	0	0	3	9	0	15
PER CENT	13.3	6.7	13.3	0.0	6.7	0.0	40.0	40.0	0.0	0.0	0.0	20.0	60.0	0.0	100.0
ROM ROMANIA															
04 BACAU	1	-	-	-	-	1	2	2	-	-	-	-	2	4	
10 BUZAU	1	-	-	-	-	-	3	1	-	-	-	-	1	4	
24 IASI	1	-	-	-	-	-	1	1	-	-	-	-	1	2	
25 MARAMURES							0	2	-	-	-	-	2	2	
27 MURES							0	1	-	-	-	-	1	1	
31 SATU-MARE							0	1	-	-	-	-	1	1	
39 VILCEA	1	-	-	-	-	-	1						0	1	
40 VRANCEA							0	1	-	-	-	-	1	1	
TOTAL	4	0	0	0	2	1	7	9	0	0	0	0	9	0	16
PER CENT	25.0	0.0	0.0	0.0	12.5	6.3	43.8	56.3	0.0	0.0	0.0	0.0	56.3	0.0	100.0

1st Quarter: January - March 1995

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POL		RABIES CASES												1. 1.95 - 31. 3.95		
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	1	2	-	-	-	-	3	1	-	-	-	-	1	4	
03	BIALA PODLASKA	-	-	-	-	-	-	0	1	-	-	-	-	1	1	
05	BIALYSTOK	1	-	1	-	-	-	2	5	-	1	-	1	7	9	
07	BIELSKO-BIALA	-	3	-	-	-	-	3	1	-	6	1	-	8	11	
09	BYDGOSZCZ	2	2	-	-	-	-	4	23	-	-	-	5	28	32	
11	CHELM	-	-	-	-	-	-	0	1	-	1	-	-	2	2	
13	CIECHANOW	-	-	-	-	-	-	0	-	-	-	-	1	1	1	
15	CZESTOCHOWA	-	1	-	-	-	-	1	4	-	-	-	-	4	5	
17	ELBLAG	-	-	2	-	-	-	2	14	-	-	-	1	15	17	
19	GDANSK	6	7	1	-	-	-	14	39	-	4	1	6	50	64	
23	JELENIA GORA	1	1	1	-	-	-	3	16	-	-	-	-	16	19	
25	KALISZ	1	3	-	-	-	-	4	15	-	-	-	-	15	19	
27	KATOWICE	-	2	-	-	-	-	2	8	-	2	-	-	10	12	
29	KIELCE	-	-	-	-	-	-	0	2	-	-	-	-	2	2	
31	KONIN	-	-	-	-	-	-	0	16	-	-	-	-	16	16	
33	KOSZALIN	1	-	-	-	-	-	1	1	-	-	-	-	1	2	
37	KROSNO	1	1	-	-	-	-	2	8	-	1	-	-	9	11	
39	LEGNICA	-	-	-	-	-	-	0	4	-	-	-	-	4	4	
41	LESZNO	1	-	6	-	-	-	7	20	-	-	2	1	23	30	
43	LUBLIN	-	-	-	-	-	-	0	3	-	-	-	-	3	3	
45	LOMZA	-	-	-	-	-	-	0	1	-	-	-	-	1	1	
47	LODZ	1	1	-	-	-	-	2	2	-	-	-	-	2	4	
49	NOWY SACZ	-	-	-	-	-	-	0	2	-	-	-	-	2	2	
51	OLSZTYN	-	-	-	-	-	-	0	4	-	1	-	4	9	9	
53	OPOLE	1	3	-	-	-	-	4	36	-	-	-	-	36	40	
57	PILA	-	-	-	-	-	-	0	3	-	-	-	-	3	3	
59	PIOTRKOW TRYB	1	1	-	-	-	-	2	18	-	-	-	1	19	21	
63	POZNAN	2	3	-	-	-	-	5	32	-	1	-	1	34	39	
65	PRZEMYSL	1	-	-	-	-	-	1	6	-	-	-	-	6	7	
67	RADOM	1	-	-	-	-	-	1	7	-	-	-	-	7	8	
69	RZESZOW	3	2	-	-	-	-	5	14	-	1	-	-	15	20	
71	SIEDLCE	-	-	1	-	-	-	1	1	-	-	-	-	1	2	
73	SIERADZ	-	1	-	-	-	-	1	7	-	-	-	-	7	8	
75	SKIERNIEWICE	-	-	-	-	-	-	0	13	-	-	1	-	14	14	
77	SLUPSK	1	-	-	-	-	-	1	4	-	-	-	-	4	5	
79	SUWALKI	3	1	5	-	-	-	9	5	-	3	-	4	12	21	
83	TARNOBRZEG	-	-	-	-	-	-	0	4	-	-	-	-	4	4	
87	TORUN	1	3	2	-	-	-	6	12	-	1	-	2	15	21	
89	WALBRZYCH	-	2	-	-	-	-	2	7	-	-	-	-	7	9	
93	WROCLAW	1	-	-	-	-	-	1	37	-	-	-	-	37	38	
95	ZAMOSC	-	-	-	-	-	-	0	13	-	1	-	1	15	15	
97	ZIELONA GORA	-	-	-	-	-	-	0	3	-	-	-	-	3	3	
TOTAL		31	39	19	0	0	0	89	413	0	23	5	28	469	0	558
PER CENT		5.6	7.0	3.4	0.0	0.0	0.0	15.9	74.0	0.0	4.1	0.9	5.0	84.1	0.0	100.0

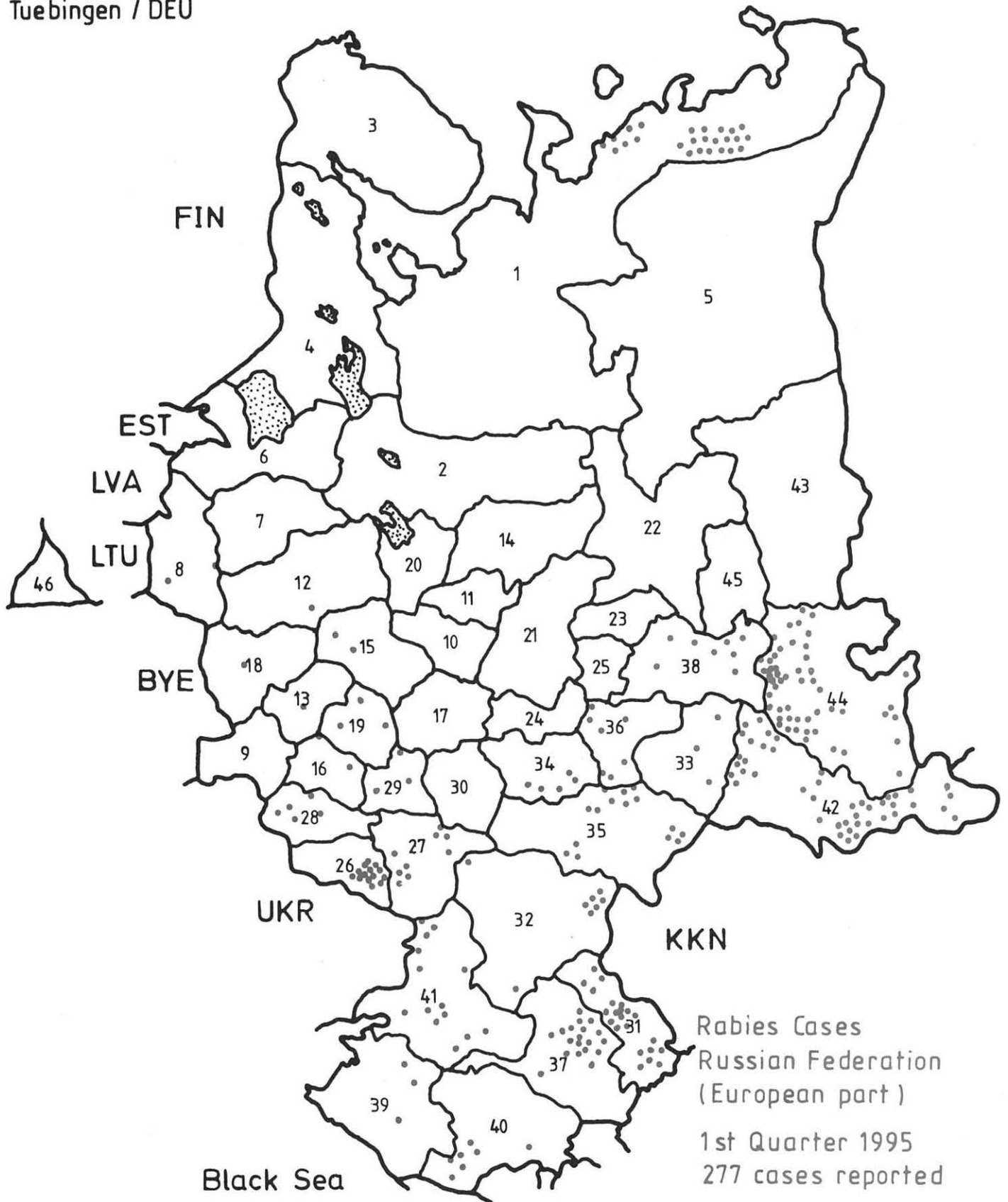
RUS		RUSSIAN FEDERATION											R A B I E S C A S E S				1. 1.95 - 31. 3.95	
LOCATION		D O M E S T I C A N I M A L S						W I L D A N I M A L S						HUMAN CASES	TOTAL			
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS			TOTAL		
01	Arkhangelsk Region	1	-	-	-	-	-	1	-	-	-	24	-	24	-	25		
08	Pskov Region	2	-	-	-	-	-	2	-	-	-	-	-	0	-	2		
12	Tver Region	-	-	-	-	-	-	0	-	-	-	-	1	1	-	1		
13	Kaluga Region	-	-	-	-	-	-	0	-	-	-	-	-	0	1	1		
15	Moscow Region	-	-	-	-	-	-	0	2	-	-	-	-	2	-	2		
16	Oryol Region	-	1	1	-	-	-	2	-	-	-	-	-	0	-	2		
18	Smolensk Region	1	-	-	-	-	-	1	-	-	-	-	-	0	-	1		
19	Tula Region	-	1	-	1	-	1	3	-	-	-	-	-	0	-	3		
26	Belgorod Region	3	2	4	-	1	-	10	4	-	-	-	-	4	-	14		
27	Voronezh Region	6	1	2	-	-	-	9	-	-	-	-	-	0	-	9		
28	Kursk Region	1	-	-	1	-	-	2	2	-	-	-	-	2	1	5		
29	Lipetsk Region	1	-	-	-	-	-	1	1	-	-	-	-	1	1	3		
31	Astrakhan Region	2	2	16	-	2	-	22	-	-	-	-	-	0	-	22		
32	Volgograd Region	2	-	5	-	1	-	8	-	-	-	-	-	0	-	8		
33	Samara Region	1	-	1	-	-	-	2	1	-	-	-	-	1	-	3		
34	Penza Region	3	2	-	-	-	-	5	-	-	-	-	-	0	-	5		
35	Saratov Region	2	6	2	1	-	-	11	3	-	-	-	1	4	-	15		
36	Ulyanovsk Region	2	3	2	-	-	-	7	-	-	-	-	-	0	-	7		
37	Republic of Kalmykiya	-	-	2	-	17	-	19	-	-	-	-	-	0	-	19		
38	Republic of Tatarstan	-	1	4	-	1	-	6	2	-	-	-	-	2	-	8		
39	Krasnodar Territory	-	-	2	-	-	-	2	1	-	-	-	-	1	-	3		
40	Stavropol Territory	3	-	4	-	-	-	7	-	-	-	-	-	0	-	7		
41	Rostov Region	4	2	4	1	1	1	13	-	-	-	-	1	1	-	14		
42	Orenburg Region	11	3	16	-	-	-	30	14	-	-	-	-	14	-	44		
44	Republic of Bashkorto	12	-	17	1	1	-	31	23	-	-	-	-	23	-	54		
TOTAL		57	24	82	5	24	2	194	53	0	0	24	3	80	3	277		
PER CENT		20.6	8.7	29.6	1.8	8.7	0.7	70.0	19.1	0.0	0.0	8.7	1.1	28.9	1.1	100.0		

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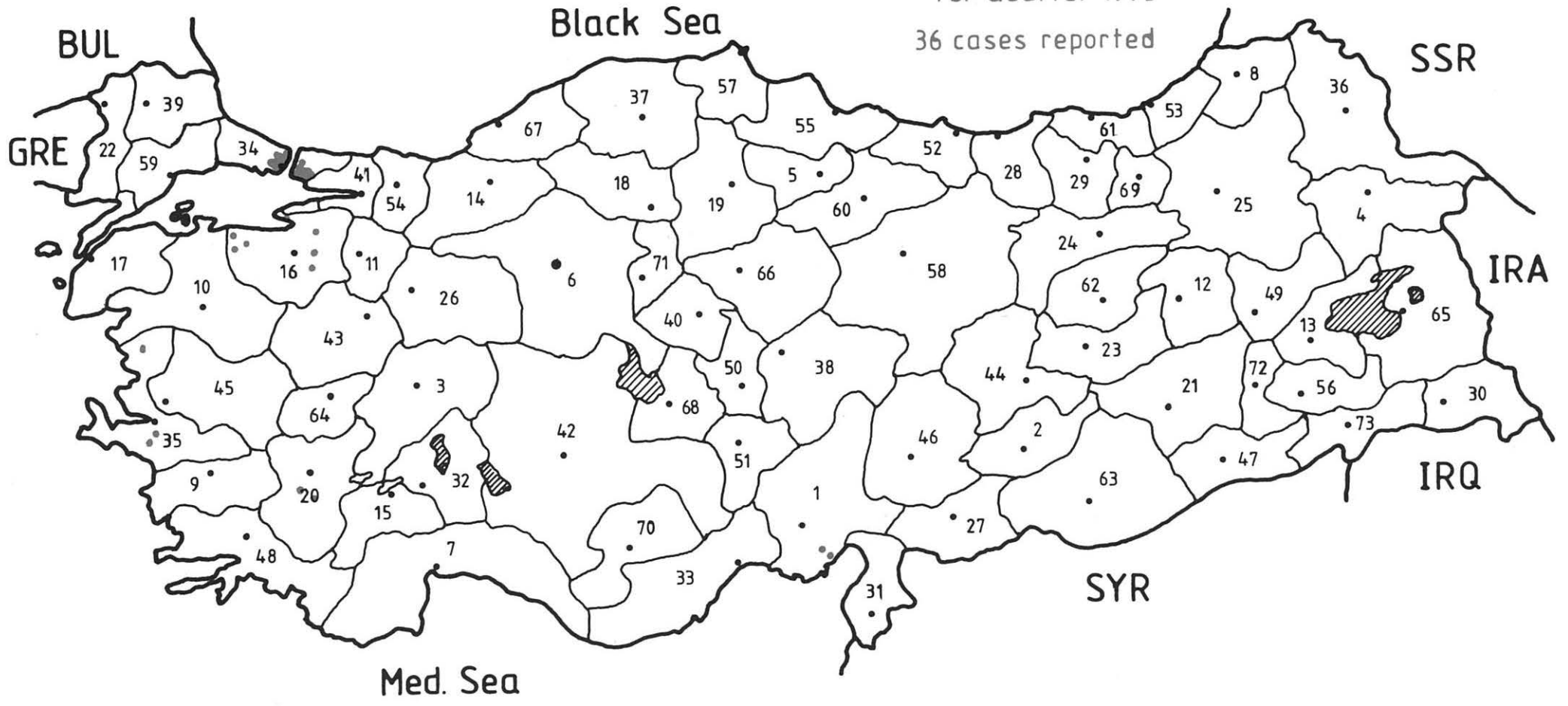
SVN SLOVENIA		RABIES CASES												1. 1.95 - 31. 3.95		
LOCATION		DOMESTIC ANIMALS						WILD ANIMALS						HUMAN CASES	TOTAL	
CODE	NAME	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
01	AJDOVSCINA							0	1	-	-	-	-	1		1
02	BREZICE							0	9	-	1	-	-	10		10
03	CELJE	-	1	-	-	-	-	1	3	-	-	-	-	3		4
05	CRNOMELJ							0	9	-	-	-	-	9		9
06	DOMZALE							0	10	-	-	-	-	10		10
08	GORNJA RADGONA							0	1	-	-	-	-	1		1
09	GROSUPLJE							0	17	-	1	-	-	18		18
11	IDRIJA							0	-	-	1	-	-	1		1
12	ILIRSKA BISTRICA							0	1	-	1	-	-	2		2
13	IZOLA							0	1	-	-	-	-	1		1
15	KAMNIK	-	1	-	-	-	-	1	18	-	-	-	-	18		19
16	KOCEVJE							0	4	-	-	-	-	4		4
17	KOPER							0	12	-	-	-	-	12		12
18	KRANJ							0	13	-	-	-	-	13		13
19	KRSKO							0	3	-	-	-	-	3		3
21	LENART							0	3	-	-	-	-	3		3
22	LENDAVA							0	10	-	-	-	-	10		10
23	LITIJA							0	16	-	-	-	-	16		16
26	LJUBLJANA MOSTE POLJE	-	1	-	-	-	-	1	14	-	-	-	-	14		15
27	LJUBLJANA SSKA							0	12	-	-	-	-	12		12
28	LJUBLJANA VIC RUDNIK							0	20	-	1	-	1	22		22
29	LJUTOMER							0	8	-	1	-	-	9		9
35	MOZIRJE							0	2	-	-	-	-	2		2
36	MURSKA SOBOTA	2	3	-	-	-	-	5	152	1	-	1	-	154		159
37	NOVA GORICA							0	2	-	-	-	-	2		2
38	NOVO MESTO							0	8	-	-	1	-	9		9
39	ORMOZ	-	1	-	-	-	-	1	2	-	-	-	-	2		3
42	PTUJ							0	6	-	-	1	-	7		7
44	RADOVLJICA							0	-	-	1	-	-	1		1
45	RAVNE NA KOROSKEM							0	-	-	1	-	-	1		1
46	RIBNICA							0	2	-	-	-	-	2		2
48	SEZANA							0	2	-	-	-	-	2		2
50	SLOVENSKA BISTRICA							0	7	-	-	-	-	7		7
53	SKOFJA LOKA							0	3	-	1	-	-	4		4
54	SMARJE PRI JELSAH							0	33	-	-	-	-	33		33
55	TOLMIN							0	4	-	-	-	-	4		4
60	VRHNIKA							0	1	-	-	-	-	1		1
64	MARIBOR							0	1	-	-	-	-	1		1
65	MARIBOR PESNICA							0	1	-	-	-	-	1		1
68	MARIBOR RUSE							0	1	-	-	-	-	1		1
TOTAL		2	7	0	0	0	0	9	412	1	9	3	1	426	0	435
PER CENT		0.5	1.6	0.0	0.0	0.0	0.0	2.1	94.7	0.2	2.1	0.7	0.2	97.9	0.0	100.0

WHO Coll. Centre
Tuebingen / DEU



WHO Coll. Centre
Tuebingen / DEU

Rabies Cases Turkey
1st Quarter 1995
36 cases reported



WHO Coll. Centre
Tuebingen / DEU

↑
ICE
(rabies free)

Rabies Cases Europe
1st Quarter 1995
2622 cases reported
2 bat rabies cases included



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

0 50 100 km