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C O N T E N T S

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1. INTRODUCTION

This issue describes the reported rabies cases in Europe for the fourth quarter 1983. The situation in general appears under 2., and in individual countries under 2.1 to 2.27.

Rabies data for the 3rd and 4th quarter 1983 have not yet been received for the European part of the Union of Soviet Socialist Republics (USSR); the rabies situation in the European part of the USSR in the second quarter 1983 is included in this Bulletin.

In the miscellaneous section "A case of canine rabies in France" is described, which happened in the west of the country and could be clearly differentiated from the fox rabies epizootic in the east of the country applying the monoclonal nucleocapsid antibody technique. An article on "Recent developments of human anti-rabies vaccines" expresses hope on how to reduce costs of the present in use still rather expensive HCD rabies vaccine.

The rabies case data are tabulated for the fourth quarter 1983 under 4.

The last part lists the official contributors to this Bulletin.

The geographical distribution of cases in Europe of the fourth quarter 1983 is shown on the maps of Europe and Turkey in the Annex.

2. RABIES IN EUROPE, 4TH QUARTER 1983

During the fourth quarter 1983, 6223 cases of rabies were diagnosed in Europe. There were 4832 cases (77.6% of total) in wild animals of which 4358 were foxes (70% of total), 74 badgers, 105 other mustelids, 241 deer and 54 in other species or unspecified animals. Of the 1391 cases in domestic animals (22.4% of total), 284 were dogs (of which 255 were reported from Turkey), 299 cats, 538 cattle, 34 horses, 226 small ruminants, 8 donkeys, 1 pig and 1 rabbit.

In comparison with the previous quarter (4934 cases) an increase of 26.1% is noted, when compared to the 4th quarter 1982 (6132 cases) an increase of 1.5%.

Bulgaria, Finland, Great Britain, Ireland, Norway, Portugal, Sweden and the mainland of Spain continued to remain rabies-free. With Iceland joining the European rabies surveillance one other country can here be added. There were no cases reported for this quarter from Denmark, Greece and the northern part of Africa of Spain. The Netherlands being newly infected along the German (DEU) border with one case each in the first and third quarter 1983 have 13 cases this quarter. For all other countries with more rabies cases the geographical distribution remained approximately in the borders of the previous quarters.

With 22.390 cases as a European total for 1983 the figure for 1982 (22.759 cases) is not quite reached.

Though several countries had an increase over 1982 (Austria, Czechoslovakia, Germany Democratic and Federal Republics, Italy, Netherlands and Poland) the reduction of cases in the other countries (Belgium, France,

Hungary, Luxembourg, Rumania, Switzerland, Turkey and Yugoslavia) was slightly higher.

Nevertheless, it should be mentioned that in the two years with the highest figures for animal rabies in Europe ever, 1982 and 1983, there were no cases of rabies reported in man.

Individual country reports follow:

2.1 Rabies in Austria (AUT)

by W. Krocza and E. Scharfen

During the fourth quarter 1983, 329 rabies cases were diagnosed: 281 in foxes, 31 in other wild animals and 17 in domestic animals; this results in a 25% increase of rabies cases compared to the previous quarter.

The Bundesländer (federal provinces) Vienna and Upper Austria were rabies-free, Burgenland had one case at the eastern border of the country. There were scattered cases in the districts (Bezirke) of Lower Austria to the north of the river Danube in the Wald- and Weinviertels (Zwettl, Waidhofen an der Thaya, Horn, Hollabrunn); to the south of the river was one case in the district Scheibbs and several ones in the districts Neunkirchen and Wiener Neustadt/Land - remnants of an epizootic in 1974 which advanced from Salzburg eastwards.

Heavily affected by the disease were the Bundesländer Styria (Bezirke Hartberg, Weiz, Graz-Umgebung, Voitsberg, Leoben, Knittelfeld, Judenburg, Murau), Salzburg (Bezirke Tamsweg, St. Johann im Pongau, Zell am See) and adjacent to the latter, Kärnten (Bezirke St. Veit an der Glau and Feldkirchen, to a less degree the Bezirke Klagenfurt/Land and Stadt, Spittal an der Drau, Villach/Land and Stadt, Hermagor). The Bundesland Tyrol had rabies in the Bezirke Kitzbühel, Kufstein, Reutte at the northern state border. There were isolated cases in Vorarlberg in the Bezirke Bregenz and Bludenz.

In 1983 Austria registered 1374 rabies cases in animals, an increase by 43% compared to 1982. Of these were 1174 in foxes (1982-794), 60 in badgers (64), 60 in roe deer (42) and 27 (15) in other wild animals. The rabies cases in domestic animals increased from 48 in 1982 (20 cats, 18 cattle, 5 sheep, 5 dogs) to 52 (by 10%) in 1983 (20 cattle, 17 cats, 7 sheep, 2 goats, 5 dogs, 2 horses).

2.2 Rabies in Belgium (BEL)

by R. Depierreux

During the fourth quarter 1983, 109 rabies cases were reported in 74 communities in 51 foxes, 39 cattle, 7 sheep, 3 horses and 9 cats.

As anticipated the number of rabies cases in the province of Namur have continued to go up: from 25 in the previous quarter to 36. The enzootic though remains in the districts to the right of the river Meuse.

However, one case was diagnosed in a fox in the province of Hainant in a community close to the border with France: this part of the province of Hainant known as "Between Sambre and Meuse" is located to the left of the

river Meuse and to the south of the river Sambre. The case in this region indicates the reappearence of rabies in 1972, nevertheless it is most likely that the case bears a direct relation to the very active rabies focus in the departement Ardennes in France.

2.3 Bulgaria (BUL)

The country remained rabies-free.

2.4 Rabies in Czechoslovakia (CZE)

by M. Čapka and J. Neumann

During the 4th quarter of 1983 rabies was diagnosed in 537 cases, of these 427 cases in the CSR (79.5%) and 110 cases in the SSR (20.5%).

Wildlife species accounted for the majority of rabies occurrence (94.8%) and here the fox allone, with 491 cases (91.4%). In domestic animals rabies was diagnosed in 6 dogs (1.1%), 20 cats (3.7%), 1 bull (0.2%) and 1 sheep (0.2%).

It has been found in the past year that the disease is continuing to spread over the whole territory of the country. A new case occurred in the district Břeclav in the 4th quarter. The most affected areas are the west Bohemian and north Bohemian region bordering with the Federal Republic of Germany and the German Democratic Republic.

During 1983 a total of 2090 cases of rabies were ascertained which were by 10.6% more then in 1982.

Rabies has been confirmed in a total of 1888 foxes, 20 badgers, 24 martens, 3 polecats, 33 roe deer, 33 dogs, 71 cats, 7 cattle, 7 sheep, 1 goat, 1 muskrat, 1 moufflon and 1 wild cat.

On December 31st, 1983, rabies was recorded in 1023 foci involving 87 districts.

No case of rabies was recorded in man.

2.5 Rabies in Germany Democratic Republic (DDR)

During the fourth quarter 1983, 496 cases of rabies were reported. 382 of these (77%) were in wild animals (341 foxes, 5 badgers, 10 stone marten, 1 polecat, 19 roe deer, 1 stag, 4 wild boars, 1 squirrel) and 114 in domestic animals (9 dogs, 21 cats, 33 cattle, 3 horses, 47 sheep, 1 rabbit).

10 departments (Bezirke) had a slide rise of cases compared to the previous quarter, but the remaining 5 departments had a reduction of cases resulting in an overall reduction of 22 cases (from 518 to 496).

In comparing the figures of 1982 (1955 cases) and 1983 (2227 cases) we state an increase by 13.9%.

The distribution of rabies cases throughout the country remained fairly much the same during the year.

2.6 Rabies in Denmark (DEN)

There were no cases reported during the fourth quarter 1983.

2.7 Rabies in Germany, Federal Republic (DEU)

A total of 2031 rabies cases were reported during the fourth quarter 1983. 1672 of these (82.3%) were in wild animals, and 359 (17.7%) in domestic animals. Compared to the previous quarter (1495 cases) there is an increase by 35.9%.

The increase can be noticed in all federal provinces (Bundesländer), leaving out the city states Berlin, Hamburg, Bremen and, at the moment, Schleswig-Holstein. On the lower administrativ level there are departments (Regierungsbezirke) were the rabies cases are more than doubled: Hannover in Lower Saxony; Cologne in Nordrhein-Westfalen; Niederbayern, Mittel- and Unterfranken in Bavaria. A strong upward tendency we can see at this point in Nordrhein-Westfalen and Bavaria.

The annual figure for 1983 is 6933 cases. This is the second highest figure ever after 1976 (8826) in the Federal Republic of Germany. Comparing rabies cases for 1982 and 1983 we notice in domestic animals (1061 to 959) a reduction by 10.6% and in wild animals (5490 to 5974) an increase by 8.8%. Judging a rabies situation the density of cases is a more reliable comparison. The following are a listing of the federal provinces with annual rabies cases over 100 km^2.

	1982	1983
Niedersachsen	0.9014	1.3345
Nordrhein-Westfalen	2.2081	1.5445
Hessen	8.1946	8.3575
Rheinland-Pfalz	4.4714	3.7556
Baden-Württemberg	4.8643	4.6852
Bayern	1.4495	2.1842
Saarland	2.8042	4.5957

Still the cases need additional plotting on the map to see areas without or little rabies alltogether (see as well the article in our Bulletin 3/82, pp. 8-14).

2.8 Finland (FIN)

The country remained rabies-free.

2.9 Rabies in France (FRA)

by J. Blancou

During the fourth quarter 1983, 760 rabies cases were reported, 123 cases more than the previous quarter (an increase of 19.3%). 544 cases were in foxes (71.6%), 26 in other wild animals and 190 in domestic animals (8 dogs, 43 cats, 53 cattle, 79 small ruminants and 7 horses). The department (département) Ardennes has the highest figure with 134 cases registered.

The general tendency with regards to the geographical spread of the disease remains a stabilisation of the front, except for little advances in the departments Aisne, Nièvre and Oise.

There was no new case of canine rabies in the Vendée and it is intended to lift control measures in the beginning of 1984.

2.10 Rabies in Greece (GRE)

There was no case reported during the fourth quarter 1983.

2.11 United Kingdom (GBR)

The country remained rabies-free.

2.12 Rabies in Hungary (HUN)
by L. Koltai

The number of rabies cases in the fourth quarter 1983 (260) was reduced by 23.3% in comparison with the same quarter 1982 (339). The reduction was noticed throughout the country, except for two departments (Komitats) in the southwest: Somogy and Vas.

The involvement of the animal species affected resembled the one of last year. The fox dominated, taking 90.8% of all cases. Amongst the domestic animals the highest figure is found in cats (5.4% of total). The three cases in dogs derive from unvaccinated strays.

There was one interesting case in a fish otter. This is a rare animal in Hungary and rabies in this species had not been diagnosed before.

2.13 Rabies in Iceland (ICE)*
by P.A. Palsson

First report for the Bulletin

Iceland is very fortunate to be free of rabies. Strict import regulations on dogs and cats are inforced. Vaccination is required two to four months prior to importation and a quarantine of 4 months after arrival has to follow.

It is generally assumed that there was an outbreak of rabies during 1765/66 in the eastern part of Iceland. There is a rather detailed description of this epizootic and the clinical signs found in the affected animals: dogs, cats, foxes, sheep and cattle.

There were restrictions on import of dogs to Iceland since 1905, and exceptions are rarely given.

Vaccination of animals against rabies is not allowed in Iceland.

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* The editors are pleased to announce that Iceland has joined our European Rabies Surveillance System.

2.14 Ireland (IRE)

The country remained rabies-free.

2.15 Rabies in Italy (ITA)
by S. Prosperi

During the 4th quarter of 1983, 113 cases of rabies were diagnosed. Of these, 3 cases were in unvaccinated domestic animals: a 1 year old dog, a cat and a foal slaughtered for clinical signs of tetanus. The remaining 110 cases involved wild animals: 104 foxes and 6 badgers. Fifty municipalities were affected for the first time, involving a total of 314 km^2.

In 1983, a total of 448 cases of rabies were reported: 439 in wild and 9 in domestic animals. Ten provinces of 4 Regions (Lombardia, Trentino Alto Adige, Veneto and Friuli V.G.) covering an area of 1356 km^2 were involved. Sixty-six municipalities were affected for the first time.

During the year 1983 a strict epidemiological surveillance was carried out in all the Regions of the Alpine zone. In Piemonte and Liguria none of the 52 domestic and 249 wild animals examined proved positive. In Lombardia, of 484 domestic and 2470 wild animals examined, 3 dogs, 3 cats, 1 foal, 325 foxes, 18 mustelides and 1 rodent proved positive. In Veneto, Trentino Alto Adige and Friuli V.G., of 513 domestic and 3405 wild animals examined, 1 dog, 1 lamb, 78 foxes, 11 badgers, 4 roe-deer, 1 pine-marten and 1 stone-marten resulted positive.

The Ministry of Health made the vaccination of all dogs and grazing herbivores at risk of infection in the Alpine zone compulsory under the Ordinance of 3/17/83. The vaccines employed are Flury LEP and ERA respectively and free of charge for the animal owners.

A plan of oral vaccination of foxes with SAD-B 19 in Val Camonica has been proposed by the authorities of the Lombardia Region and is pending approval of the "Consiglio Superiore di Sanità".

Presently, it is affirmed that rabies is under control in the north-eastern Regions, while the incidence has increased in the Alpine zone of Lombardia and Trentino. The persistence of a higher incidence in these areas seems due to the National Park of Stelvio where rabies is endemic. As in all national parks, the control of the fox population by hunting is prohibited and therefore this park constitutes a continuing source of infection to the adjacend areas.

2.16 Rabies in Luxembourg (LUX)
by R. Frisch

During the fourth quarter 1983, 36 new rabies cases were registered in the Grand Duchy of Luxembourg of these 26 in domestic and 10 in wild animals. The part mostly affected was again the east of the country (80% of all cases).

Indirectly responsible for the rabies situation in Luxembourg seems now as before the high fox population. For an intensive hunting of the fox the bounty was quadrupled.

In 1983 the rabies cases totaled 106, ca. 50% less than the previous year. The 106 cases are in the following animal species:

1. Rabies in domestic animals:

24 cattle	2 dogs
22 sheep	7 cats
2 horses	

2. Wildlife rabies:

47 foxes	1 roe deer
	1 weasel

2.17 Rabies in the Netherlands (NET)
by C.J. Vermeulen

During the fourth quarter 1983, there have been 13 cases of wildlife rabies in the Netherlands. All these cases were found in foxes and they were located very close to the German border. One fox was found in the south-east part of Groningen again, the other twelve are all from the south-east part of the province of Limburg.

2.18 Norway (NOR)

The country remained rabies-free.

2.19 Rabies in Poland (POL)

A total of 343 rabies cases were reported for Poland during the fourth quarter 1983, i.e. 85 cases (33%) more than the previous quarter, and 153 cases (80%) more than the fourth quarter 1982.

There is a general upward tendency in all departments, and 11 departments were newly infected with 1-4 cases registered.

It can be noticed that the figure for cattle is rather high (17.5% of total). With 7 cattle recorded during the first half of the year and 92 cattle during the second half, we see the effect of cattle being exposed to rabid wild animals (especially foxes and racoon dogs) during the pasture season.

The annual figure amounts to 835 cases. In comparison with 1982 (627 cases) this is an increasy by 33.2%.

2.20 Portugal (POR)

The country remained rabies-free.

2.21 Rabies in Rumania (RUM)

15 cases (8 in domestic and 7 in wild animals) were reported from Rumania during the fourth quarter 1983, 6 cases more than the previous quarter and 4 less than in the last quarter 1982.

Six provinces were newly infected with 1-4 cases registered, 5 previously infected provinces had no cases this quarter.

A total of 59 cases were registered for 1983, 32 cases less than 1982.

The picture of rabies in Rumania is not that of most of the European countries determined by the fox. 57.6% of the grand total of cases in 1983 are, f.e., in domestic animals. Still, the fox is the single most species involved (32.2%), followed by the domestic (mostlikely stray) cat (23.7%) and cattle (20.3%). The latter two species having no doubt a connection to the wild animals.

2.22 Rabies in Spain (SPA)

There were no further reports from Melilla (North Africa).

The mainland of Spain remained rabies-free.

2.23 Sweden (SWE)

The country remained rabiesfree.

2.24 Rabies in Switzerland (SWI)
by A. I. Wandeler

During the last quarter of 1983, the Swiss Rabies Diagnostic Center received 1190 animals for examination. 296 (25%) of these were positive for rabies, compared to 256 (25% of 1011) in the previous quarter and 258 (19% of 1373) in the 4th quarter of 1982. 64% were observed in foxes, 11% in cattle, and 8% in cats. An additional 75 foxes, 2 roe deer and 1 chamois were diagnosed histologically in canton Vaud. They bring the total of proven rabies cases to 374 (269 in the previous quarter).

During the period of observation only one significant movement of rabies was observed. The small Gürbe-Valley southeast of the city of Berne became infected. In consequence of oral fox vaccination the canton Schwyz and Uri and large parts of canton Graubünden became free of rabies.

In the last quarter of 1983, 11 persons were bitten by proven rabid animals, 8 by cats, 2 by stone martens, and 1 by a fox. The number of people treated for none-bite exposures is not recorded.

2.25 Rabies in Turkey (TUR)

With 389 rabies cases during the fourth quarter 1983, Turkey reports 160 cases less than the previous quarter and 106 cases less than the fourth quarter 1982. Of the 389 cases are 382 (98.2%) in domestic animals (225 dogs, 45 cats, 88 cattle, 1 horse, 10 sheep, 4 goats, 8 donkeys and 1 pig) and 7 (1.8%) in wild animals (1 fox, 1 wolf and 5 house mice).

The annual rabies figure for Turkey is 1932 cases in 1983, 240 cases less than 1982. Rabies is present in the whole country, except for very few provinces (ca. 5) without reported cases in 1983. In the west of the country cases are more concentrated, they diminish in the centre parts and become scattered in the eastern parts.

2.26 Rabies in Yugoslavia (YUG)

by M. Petrovic

i) Fourth quarter 1983

During the fourth quarter 1983, a total of 414 rabies cases were registered in Yugoslavia. Of these were 405 in wild animals (97.8%) and 9 (2.2%) in domestic animals.

In comparison with the previous quarter (103 cases) the rabies cases are quadrupled, compared to the fourth quarter 1982 (210 cases) nearly doubled.

The distribution of cases resembles the previous quarters of the year: there is the infected northern strip of Yugoslavia, scattered cases through Bosnia making a connection to the Dalmatian coast with a high density of cases.

ii) Evolution of rabies in Yugoslavia 1983

The statement given in previous reports (see BULLETIN 4/82) is valid today too, i.e. in SFR Yugoslavia there are two forms of rabies present but on separate territories: urban rabies in dogs and domestic animals in the southern parts, and sylvatic rabies with the fox as main reservoir in the northern parts of the country. Thus Yugoslavia represents the border line of the great sylvatic rabies epizootic in central and western Europe and the urban rabies in southern Europe and the Near East.

There is only one new situation: it seems that on the territory of Bosnia and Hercegovina both forms of rabies were present at the same time in 1983, although only urban rabies had been registered here before. In our report for 1982 we pointed to the appearence of a new focus of sylvatic rabies in 2 communities, Livno and Bosansko Grahovo, in southwestern Bosnia and Hercegovina as well as in one community in Croatia (Sinj) with a remark that the occurrence of rabies at the distance of about 400 km from the existing epizootic in Croatia and Vojvodina is very difficult to explain. During 1983 rabies in Bosnia and Hercegovina spread intensively and was registered in 27 communities. The focus established in 1982 expanded to the neighbouring communities so that rabies reached in 1983 the northern parts of our country already infected with sylvatic rabies. However, on the basis of the number of animal cases registered in Bosnia and Hercegovina in 1983 (14 dogs, 7 cattle, 3 wolves and 68 foxes), it is noticeable that the number of dogs is rather high and that the wolf is also involved and this animal is usually regarded a virus reservoir for urban rabies too. On the other hand the number of positive foxes is no doubt remarkable. It is our opinion that the two forms of rabies "met" on that territory. This would mean that two types of rabies exist under practically identical ecological conditions. Hence, it would be very interesting to know, if there are biological and antigenic differences which could possibly be demonstrated by making use of the monoclonal antibody technique, cross protection or other modern laboratory methods. In 1983 urban rabies was registered in only 1 community in Kosovo (Istok, 1 dog) being quite enough to remind us that the virus of our, autochtonic urban rabies is still present, and that it is a form of rabies typical for Mediterranian countries.

In Vojvodina and Slovenia sylvatic rabies has been present covering almost the whole territory but it is slightly decreasing if figures are compared to the previous year and the number of infected communities.

In Croatia sylvatic rabies reached its peak regarding animal cases and territorial involvement. The reasons are the expansion of rabies in new uninfected territories and the presence of it in the earlier infected areas.

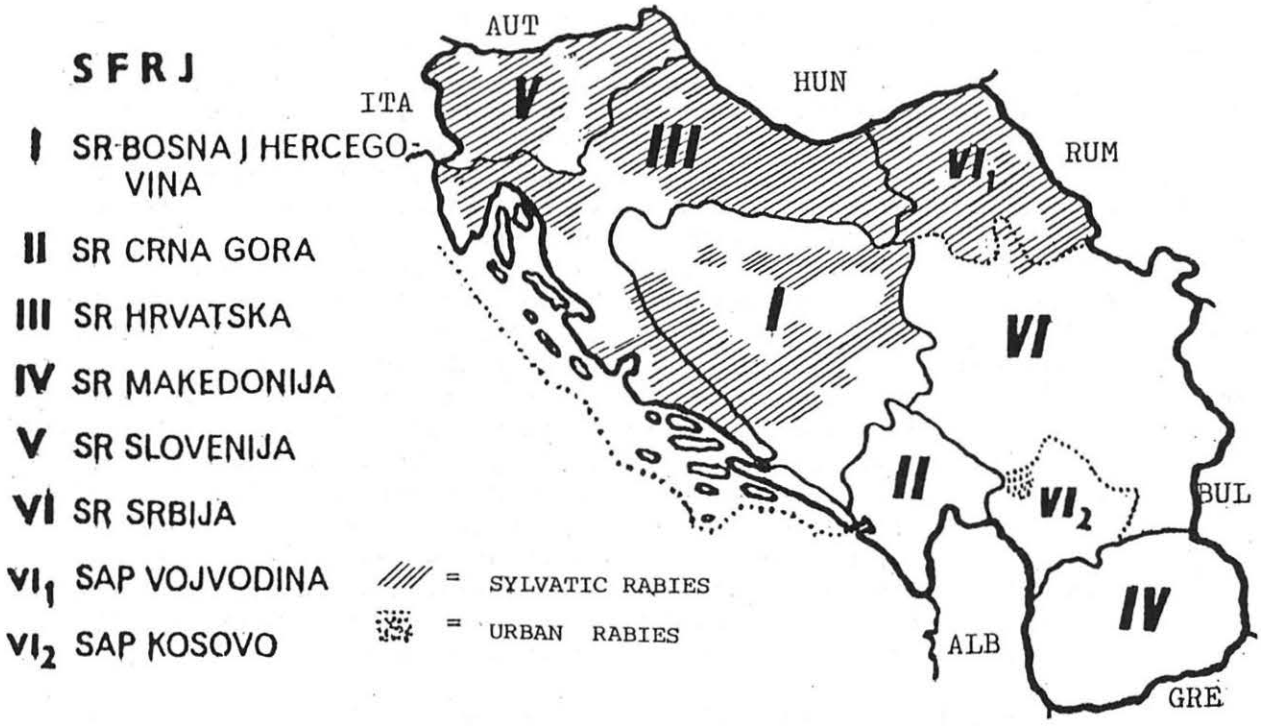
In Serbia silvatic rabies is present only in Belgrade and surroundings, i.e. regions bordering with SAP Vojvodina.

In 1983 rabies was registered in SFR Yugoslavia in 161 communities, 29 more than in 1982. This was the highest number of infected communities ever during one year, representing the worst epizootiological situation in our country.

During 1983 there were 1149 animal cases, 127 (10%) less than in 1982. Apparently, the number of rabid animals is decreasing (2118 animals in 1981), but the territorial distribution is increasing ever since rabies entered the country. In 1983 rabies was found in 27 dogs (2.3%), 21 cats (1.8%), 11 cattle (1%), 2 sheep (0.2%), 1 goat (0.1%), and 1062 foxes (92.4%), 10 roe-deer (0.9%), 5 badgers (0.4%), 4 martens (0.3%), 3 wolves (0.2%) and in 1 polecat, 1 wild cat and 1 hare. Accordingly, there were altogether 1087 wild animals (94.6%) and only 62 domestic animals (5.4%). The fox is the main vector of rabies virus and the animal most frequently affected among other wild animals.

Finally, we want to underline that in the current very poor epizootiological situation in Yugoslavia, after 10 years (1971-1980) with registered human cases, 1983 is the third year without human victims of rabies.

RABIES IN YUGOSLAVIA, 1983



2.27 Rabies in the Union of the Soviet Socialist Republics (USSR)

by V. Pokrovskiy and B. Cherkasskiy

2nd Quarter 1983

During the second quarter of 1983, 117 cases of rabies in animals were recorded in the European part of the USSR. These are 36 cases less than in the previous quarter of the year and 21 cases less as compared to the second quarter of 1982.

As previously reported, the majority of rabies cases (40.2%) were again in the Ukraine, 17.9% in Povoljye and the Ural regions and 11.1% in Belorussia and in the Latvian SSR. In other areas of the European part of the USSR single cases were recorded, and there were no cases in the north and north-west of the country.

A decrease of rabies cases in the European part of the USSR in the second quarter of 1983 is associated with a decrease of 14 cases in the Ukraine, 15 cases in the Povoljye and Urals and 12 cases in the North Caucasus. In the other territories the rabies situation remained as in the previous quarter.

3. MISCELLANEOUS

3.1 A case of canine rabies in the Vendee, France

by J. Blancou

THE FACTS

On 23rd June 1983 at 5 a.m. Mrs. Francine Guillet, a habitant of "La Parnière" in Aizenay, Vendee, prepared herself to leave for work. She noticed a dog in her garden rather wet and dirty eating from a feeding dish of a dog of the house. She thought it might have spend the night in the near-by forest. It had rained. She let the animal alone which ran in the garden. A bit later she went down to see what happened: the straying dog bit her and disappeared. The investigation of the persons concerned thereafter did not allow to identify the dog with certainty as statements were contradictory. This point played an important role for the future, as the dogs owner became more and more cautious "if it was really his dog". But a favourable factor furnished proof.

The investigators consider it very likely that the animal in question is a golden Cocker bitch, the same causing disorder during a whole day in Aizenay. This presumption lead to the immediate anti-rabies treatment of Mrs. Guillet.

In the beginning it was not easy to reconstitute the way the straying bitch had taken in detail, but at an information stand, opened in the morning of the 29th June at the town hall, veterinary and medical staff collected evidence from witnesses thus the way the bitch had taken could be reconstructed fairly well. She seemed to have run circling the town and caused disturbances at farms: altogether four. She was finally killed with an iron rod by the owner of a small sheep pasture-ground in front of his house.

The report of Drs. P. Bonnaud and E. Poudelet, directors of the Department of Veterinary Services, Vendee, (Bulletin Epidémiologique Mensuel de Nancy, September 1983) gives more detailed information of this rabies case and its consequences.

These details can be summarized as follows:

1. The rabid animal was a Cocker bitch, six years old, which escaped from the house of her owner on 22nd June in the afternoon after she had bitten the owner and his daughter and had otherwise exhibited unusual conduct "resembling the behaviour of an animal in heat".

The following day 13 other dogs and cats were bitten, also 5 people and a sheep, before the shepherd killed her.

A second rabies case was registered in Aizenay on 15th July in the evening; the sick dog killed himself with his chain, which he did not want to let go. This dog stayed 40-50 metres away from the house of Mrs. Guillet. The contact to the first case can certainly be dated the 23rd June.

This second case caused the killing of 5 exposed dogs and one cat and the treatment of 22-23 people, of these one person bitten. Mostly children were exposed (20).

A third case occured in the centre of a residential area in a watchdog two days later, at the entry of a private way to a small firm. The gate was open day and night: the Cocker bitch had passed here too.

2. Prevential measures following the rabies case were enforced on 29th June by prefectural order.

They consisted of a tie-up order for dogs in the 12 neighbouring communities of Aizenay, or restrain of movement (dog-lead, muzzle, delay of the opening of hunting season) and the euthanasia of all dogs not vaccinated and suspected to be exposed (15 altogether).

Incidentally, many dogs of the region were vaccinated on request of the owners.

The prevential measures were efficient as none of the 50 people, which were suspected to be exposed fell ill and the number of rabid dogs remained three.

THE VIRUS

Isolation and typing

From the Ammon's horn of the Cocker bitch, which was sent for rabies diagnostic to the Institute Pasteur, Paris, street virus was isolated and typed with monoclonal antibodies of the Wistar Institute, Philadelphia, U.S.A.

According to the Institute Pasteur this typing revealed a virus type of African origin, it reacted positive with the antibody No. 590-2 like other African rabies isolates whilst the European isolates react negative.

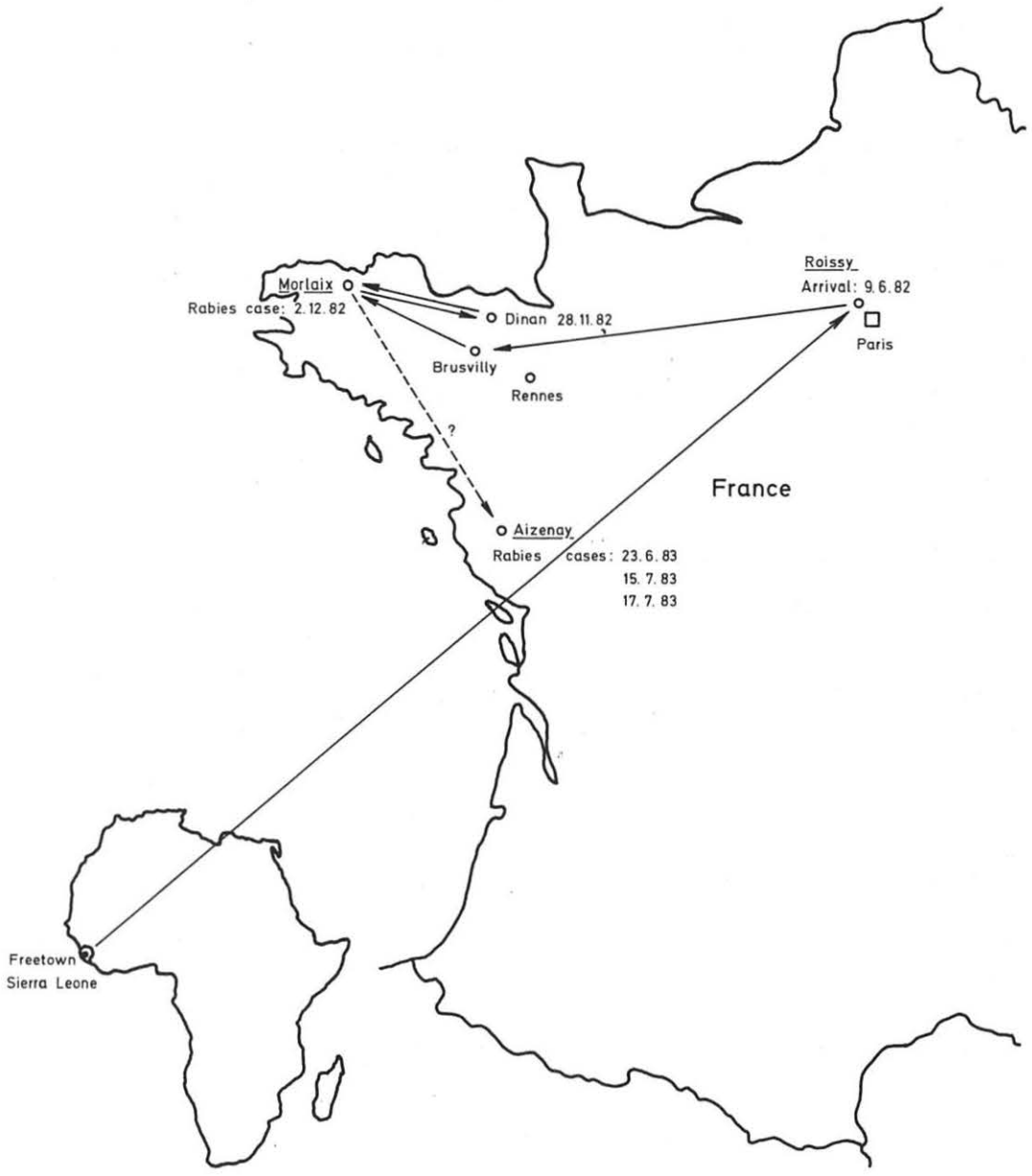
Epidemiological consequences

The isolate is a virus of canine African origin, which indicates that it is of maximal pathogenic strength to dogs and this was the case: the two dogs bitten on 23rd June, which were not killed, became rabid on 15th and 17th July (i.e. 23 and 25 days incubation time respectively).

A contact of the rabid dogs to healthy foxes in the close-by forest of Aizenay was possible, which revealed a surveillance of the latter species; several foxes were sent to Nancy for rabies diagnostic. These samples were all negative, be it the foxes had no contact to the dog, be it that they did not get infected. The latter was expected as there were difficulties infecting foxes with canine African virus experimentally (Ann. Virol. Inst. Pasteur, 1983, 134E: 523-531).

Origin of the virus

Where did the Cocker bitch get contaminated with the virus of African origin? There is no certain answer to this question. Though there is a strong suggestion that there is a connection to another canine rabies case in Morlaix (in the Bretagne, 200 km away from Aizenay), which happened on 2nd December 1982. A dog had been brought to France by plane from Freetown, Sierra Leone, on 9.6.1982, supposed to have been vaccinated. It travelled within France to Brusvilly and Dinan and finally developed rabies in Morlaix 6 months after its arrival from Africa.



Indeed, the owner of the Cocker bitch was in Morlaix during this time ..... (but whithout his animal, he says, ...).

The virus isolate from Morlaix shows the same antigenic profile as the isolate from the Cocker bitch in Aizenay, still, the latter was never in Africa. Anyway, it may well have happened that the source of infection originates from Sierra-Leone (see map), which means of course a contamination with prolonged incubation time.

Acknowledgements: We acknowledge the help of our colleagues of the Departments of Veterinary Services Vendée and Côtes du Nord as well as Drs. Sureau and Rollin, Institute Pasteur, for information, reports and documents which we cite and publish here.

3.2 Recent developments on human anti-rabies vaccines

With the Human Diploid Cell Vaccine (HDCV) developed at the Wistar Institute in Philadelphia, U.S.A., more than eleven years ago, an anti-rabies vaccine was produced of a very high quality. During the last decade numerous clinical trials and evaluations of the HDCV have proven it's inocuity and to efficiently induce high titres of rabies virus neutralizing antibodies in man.

However large scale production of rabies virus in human diploid cell strain tissue culture is difficult and the virus yield is low compared to that of other cell systems. In consequence there are high production costs and a limited output of vaccine. Both factors prevent using the vaccine in those countries where it is most needed. At present the HDCV is produced in the U.S.A., The Federal Republic of Germany and France only.

There are efforts to overcome the problem of high production cost, on one hand trying the application of the HDCV at reduced schedules and on the other hand replacing the human diploid cell culture by other cell culture substrates.

Reduced schedule for post-exposure treatment by tissue culture vaccines

In 1977 the WHO/IABS Symposium on the Standardization of Rabies Vaccines for Human Use produced in Tissue Culture (Developments in Biological Standardization, Vol. 40, S. Karger, Basel) has summarized the full course of post-exposure vaccination by HDCV to be 6 inoculations of 1 ml doses, of which 4 doses can be considered as initial inoculation and 2 as booster inoculation.

The recommended full course of vaccination by HDCV was six injections on days 0, 3, 7, 14, 30 and 90 for post-exposure, no matter if anti-rabies hyperimmunserum is used or not, and 3 injections for pre-exposure on days 0, 7 and 21 or 0, 28 and 56, the single dose being 1 ml.

Only recently, in reviewing past experiences the WHO Expert Committee on Rabies (Sept. 1983, 7th Report, to be published) has recommended the following vaccination schedule:

> Tissue culture vaccine (concentrated, minimum potency 2.5 IU):
> Five doses on days 0, 3, 7, 14 and 30. The 90 day booster dose is optional.

This recommendation concerns not only HDCV but cell culture vaccines for human use of a documented minimum potency.

Field evaluation of pre-exposure regimen with 0.1 ml HDCV applied intradermally

Following a case of human rabies in a Peace Corps volunteer in Kenya in August 1983, the Centers for Disease Control (CDC), in cooperation with the Office of Medical Services, US Peace Corps, conducted serosurveys of 333 volunteers to assess the adequacy of rabies pre-exposure prophylaxis. Initial results indicated a lower-than-expected antibody response at different intervals following primary immunization.

All volunteers had been immunized outside the United States between 1979 and 1983 using a 3-dose regimen (days 0, 7 and 28) of 0.1 ml intradermal doses of human diploid cell rabies vaccine (HDCV) purchased from the same producer. Serum specimens were collected by either CDC or the Peace Corps medical staff, and the rapid fluorescent focus inhibition test for rabies-neutralizing antibody was performed at CDC on all specimens. The time from the initial immunization to sera collection ranged from 42 days to 2 years (see Table).

TABLE: Rabies antibody titres at indicated times after primary intradermal immunization with HDCV

Time after first dose	No. of sera	Geometric mean titre (IU/ml) (range)
KENYA PEACE CORPS VOLUNTEERS		
45 days	25	0.4 (<0.05-2.8)
307-481 days	31	0.1 (<0.05-0.5)
652-695 days	28	0.3 (0.05 -1.5)
OKLAHOMA VETERINARY STUDENTS		
49 days	26	7.4 (1.5-25.7)
365 days	24	1.6 (0.3-10.0)
730 days	11	1.7 (0.4- 5.6)

The investigators come to the following recommendations:

Because the nature and extent of the problem are not completely delineated, certain precautions appear to be indicated. If intradermal pre-exposure rabies prophylaxis is given, routine serological testing should be done 2-3 weeks after immunization. Any individual with a post-immunization titre lower than 1:16 (approximately 0.5 IU/ml) should receive an additional dose of vaccine and have serum retested 2-3 weeks later. Persons whose only experience with rabies vaccine has been intradermal pre-exposure prophylaxis and whose antibody response is unknown should, if immunized within the past 12 months, have serum tested for rabies antibody; if immunized more than 12 months previously, such persons should receive a single booster dose of vaccine and have serum retested 2-3 weeks later. Serological testing does not appear to be necessary for persons receiving intramuscular rabies pre-exposure prophylaxis with 1 ml doses.

For post-exposure prophylaxis, persons who have had 3x1.0 ml intramuscular doses of HDCV or who have received intradermal vaccine and have a documented rabies titre of 1:16 or higher continue to receive 2x1.0 ml intramuscular doses of HDCV - 1 dose each on days 0 and 3, as currently recommended. Any person who has received intradermal vaccine and who has not had a documented rabies antibody titre of 1:16 or higher should be treated with a single 20 IU/kg dose of human rabies immune globulin and 5x1 ml intramuscular doses of HDCV-1 each on days 0, 3, 7, 14, and 30.

It should be re-emphasized that all persons who have received adequate pre-exposure prophylaxis with HDCV should, following a rabies exposure, receive 2x1.0 ml IM post-exposure booster doses of vaccine to ensure protection.

(Based on: Morbidity and Mortality, 1983, 32, No. 46, US Centers for Disease Control).

Comparative study using reduced amounts of HDCV with and without adjuvant

The antirabies human diploid cell vaccine produced by the Institut Mérieux, Lyon, France, was administered to 180 volunteers using diluted or undiluted vaccine with or without adjuvant and two routes of inoculation. The vaccine was given according to WHO recommendations for a pre-exposure regimen on days 0, 7 and 21. The volunteers were divided into four groups and vaccinated as follows: Group 1, 1.0 ml intramuscularly (i.m.); Group II, 0.1 ml intramuscularly (i.m.); Group III, 1.0 ml i.m. from a 10-fold diluted vaccine plus alumine hydroxide as adjuvant; Group IV, 0.1 ml intradermaly (i.d.). Serum samples were collected on days 0, 7, 21 and 35. Neutralizing antibodies against the rabies virus were determined in the rapid-fluorescent-focus-inhibition (RFFI) test. A further group of 9 persons previously immunized with various antirabies vaccines received one booster inoculation of 1.0 ml i.m. from the 10-fold diluted vaccine plus adjuvant and serum samples were taken on the day of treatment and 14 days later.

On day 21 all volunteers, regardless of which group, showed a 100% seroconversion with titers ranging from 1:250 (3.1 IU/ml) to 1:31.250 (390.6 IU/ml). On day 35 the final mean titers measured for each group were as follows: Group 1 = 1:12.000 (150 IU/ml), Group II = 1:3162 (39.5 IU/ml), Group III = 1:7943 (99.3 IU/ml) and Group IV = 1:3981 (49.8 IU/ml). The group which received the booster inoculation of diluted vaccine plus adjuvant showed a known immunological phenomenon. If the residual titer was high there was no booster effect observed. If the residual titer was low then the booster resulted in an, at least, five-fold increase of antibody titer within two weeks.

9 patients with a full post-exposure regimen were vaccinated on days 0, 3, 7, 14, 28 and 90 with 1.0 ml of the same lot of vaccine. All patients had the same final titer on day 104 of 1:6250 (78.1 IU/ml). Adverse side effects during the course of vaccination were not observed.

(Source: Klietmann et al. at Tunis-Conference, 3-6 October 1983).

Purified chick embryo cell (PCEC) rabies vaccine

This vaccine developed by the Behring-Werke, Federal Republic of Germany, is based on the Flury LEP-C25 strain which was adapted to grow in primary chick fibroblast cells. The vaccination schedule is like the full course of HDCV.

The PCEC vaccine has been tested in several hundred healthy volunteers and in some patients after exposure to proven rabid animals and was well tolerated.

The antigenicity tested in laboratory animals had the same protection rate as the HDCV and was superior to those of a suckling mouse brain vaccine.

(Source: Barth et al., at Tunis-Conference, 3-6 October 1983).

Other cell type cultures

At the Tunis conference in October 1983, several other vaccines were described.

The Institut Mérieux, France, has been cultivating a virus on a VERO cell line. This vaccine too has been tested in persons bitten by rabid animals on a post-exposure schedule with 6 injections. No significant side-effects were noticed.

The Institut Pasteur de Paris, Institut Pasteur de Tunis and Rabies Centres of Metz and Verdun have conducted clinical trials for post exposure treatment with a fetal bovine kidney cell vaccine. There was no failure in all cases where the exposure to rabies was proven.

In the Netherlands work is in progress on a vaccine produced on primary dog kidney cells.

TABLE 1

EUR EUROPE **4/83** RABIES CASES 1.10.83 - 31.12.83

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	-	8	7	1	1	-	17	281	10	5	16	-	312		329
BEL	BELGIUM	-	9	39	3	7	-	58	51	-	-	-	-	51		109
BUL	BULGARIA *							0						0		0
CZE	CZECHOSLOVAKIA	6	20	1	-	1	-	28	491	6	3	9	-	509		537
DDR	GERMAN DEM. REPUBLIC	9	21	33	3	47	1	114	341	5	11	20	5	382		496
DEN	DENMARK *							0						0		0
DEU	FED.REP. OF GERMANY	16	75	195	17	56	-	359	1431	21	64	151	5	1672		2031
FIN	FINLAND *							0						0		0
FRA	FRANCE	8	43	53	7	79	-	190	544	14	-	3	9	570		760
GBR	UNITED KINGDOM *							0						0		0
GRE	GREECE *							0						0		0
HUN	HUNGARY	3	14	4	-	-	-	21	236	-	2	1	-	239		260
ICE	ICELAND *							0						0		0
IRE	IRELAND *							0						0		0
ITA	ITALY	1	1	-	1	-	-	3	104	6	-	-	-	110		113
LUX	LUXEMBOURG	1	4	15	-	6	-	26	10	-	-	-	-	10		36
NET	NETHERLANDS							0	13	-	-	-	-	13		13
NOR	NORWAY *							0						0		0
POL	POLAND	12	29	60	-	2	-	103	186	4	7	22	21	240		343
POR	PORTUGAL *							0						0		0
RUM	RUMANIA	1	-	7	-	-	-	8	5	-	1	1	-	7		15
SPA	SPAIN *							0						0		0
SWE	SWEDEN *							0						0		0
SWI	SWITZERLAND + LIECHT	1	25	34	1	12	-	73	266	8	12	18	1	305		378
TUR	TURKEY	225	45	88	1	14	9	382	1	-	-	-	6	7		389
YUG	YUGOSLAVIA	1	5	2	-	1	-	9	398	-	-	-	7	405		414
TOTAL		284	299	538	34	226	10	1391	4358	74	105	241	54	4832	0	6223
PER CENT		4.6	4.8	8.6	0.5	3.6	0.2	22.4	70.0	1.2	1.7	3.9	0.9	77.6	0.0	100.0

* NO CASES.

TABLE 2

EUR EUROPE **1983** RABIES CASES 1. 1.83 - 31.12.83

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	5	17	20	2	9	-	53	1174	60	27	60	-	1321		1374
BEL	BELGIUM	6	37	106	14	47	-	210	295	2	6	3	-	306		516
BUL	BULGARIA *							0						0		0
CZE	CZECHOSLOVAKIA	33	71	7	-	8	-	119	1888	20	27	33	3	1971		2090
DDR	GERMAN DEM. REPUBLIC	60	117	85	5	112	4	383	1691	14	52	71	16	1844		2227
DEN	DENMARK *							0						0		0
DEU	FED.REP. OF GERMANY	78	229	379	45	225	3	959	5169	113	281	397	14	5974		6933
FIN	FINLAND *							0						0		0
FRA	FRANCE	58	127	153	22	176	2	538	2017	46	-	23	39	2125		2663
GBR	UNITED KINGDOM *							0						0		0
GRE	GREECE	1	-	-	-	-	-	1						0		1
HUN	HUNGARY	23	50	12	-	-	1	86	878	1	4	6	1	890		976
ICE	ICELAND *							0						0		0
IRE	IRELAND *							0						0		0
ITA	ITALY	4	3	-	1	1	-	9	404	22	9	3	1	439		448
LUX	LUXEMBOURG	2	7	24	2	22	-	57	47	-	1	1	-	49		106
NET	NETHERLANDS							0	15	-	-	-	-	15		15
NOR	NORWAY *							0						0		0
POL	POLAND	48	86	99	4	4	-	241	476	8	13	55	42	594		835
POR	PORTUGAL *							0						0		0
RUM	RUMANIA	4	14	12	1	2	1	34	19	1	2	1	2	25		59
SPA	SPAIN 1)	2	-	-	-	-	-	2						0		2
SWE	SWEDEN *							0						0		0
SWI	SWITZERLAND + LIECHT	4	74	78	3	48	1	208	749	26	33	46	2	856		1064
TUR	TURKEY	1204	160	392	10	79	53	1898	5	1	-	-	28	34		1932
YUG	YUGOSLAVIA	27	21	11	-	2	1	62	1063	-	-	-	24	1087		1149
TOTAL		1559	1013	1378	109	735	66	4860	15890	314	455	699	172	17530	0	22390
PER CENT		7.0	4.5	6.2	0.5	3.3	0.3	21.7	71.0	1.4	2.0	3.1	0.8	78.3	0.0	100.0

* NO CASES, 1) IN NORTH AFRICA.

TABLE 3 RABIES CASE RATES (% TOTAL) FOR INDIVIDUAL ANIMAL SPECIES AND FOR TOTAL CASES OF 10 EUROPEAN COUNTRIES RANKING HIGHEST IN 1983.

EUR E U R O P E **1983** 1. 1.83 - 31.12.83

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		
EUROPE															
TOTAL RABIES CASES	1559	1013	1378	109	735	66	4860	15890	314	455	699	172	17530	0	22390
PER CENT INVOLVEMENT / COUNTRY															
DEU FED.REP. OF GERMANY	5.0	22.6	27.5	41.3	30.6	4.5	19.7	32.5	36.0	61.8	56.8	8.1	34.1		31.0
FRA FRANCE	3.7	12.5	11.1	20.2	23.9	3.0	11.1	12.7	14.6	-	3.3	22.7	12.1		11.9
DDR GERMAN DEM. REPUBLIC	3.8	11.5	6.2	4.6	15.2	6.1	7.9	10.6	4.5	11.4	10.2	9.3	10.5		9.9
CZE CZECHOSLOVAKIA	2.1	7.0	0.5	-	1.1	-	2.4	11.9	6.4	5.9	4.7	1.7	11.2		9.3
TUR TURKEY	77.2	15.8	28.4	9.2	10.7	80.3	39.1	0.0	0.3	-	-	16.3	0.2		8.6
AUT AUSTRIA	0.3	1.7	1.5	1.8	1.2	-	1.1	7.4	19.1	5.9	8.6	-	7.5		6.1
YUG YUGOSLAVIA	1.7	2.1	0.8	-	0.3	1.5	1.3	6.7	-	-	-	14.0	6.2		5.1
SWI SWITZERLAND + LIECHT	0.3	7.3	5.7	2.8	6.5	1.5	4.3	4.7	8.3	7.3	6.6	1.2	4.9		4.8
HUN HUNGARY	1.5	4.9	0.9	-	-	1.5	1.8	5.5	0.3	0.9	0.9	0.6	5.1		4.4
POL POLAND	3.1	8.5	7.2	3.7	0.5	-	5.0	3.0	2.5	2.9	7.9	24.4	3.4		3.7
TOTALS FROM 10 COUNTRIES	1540	952	1236	91	663	65	4547	15110	289	437	691	169	16696	0	21243
EQUAL % TOTAL	98.8	94.0	89.7	83.5	90.2	98.5	93.6	95.1	92.0	96.0	98.9	98.3	95.2	0.0	94.9

TABLE 4

EUR EUROPE **4/83** RABIES CASES 'OTHER ANIMAL SPECIES' 1.10.83 - 31.12.83

LOCATION CODE	NAME	OTHER DOM. ANIMALS			OTHER WILD ANIMALS											UNSPEC	TOTAL
		DONKEY	PIG	DOMES. RABBIT	WOLF	RACOON DOG	WILD CAT	RACOON	WILD BOAR	CHAMOIS	SQUIRREL	BLACK RAT	HOUSE MOUSE	MUSKRAT	HARE	OTHER	
DDR	GERMAN DEM.REP.	-	-	1	-	-	-	-	4	-	1	-	-	-	-	-	-	6
DEU	FED.REP GERMANY	-	-	-	-	-	1	1	-	-	1	-	-	-	1	-	1	5
FRA	FRANCE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	9
POL	POLAND	-	-	-	-	16	-	-	1	-	-	1	-	1	2	-	-	21
SWI	SWITZERLAND + L	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
TUR	TURKEY	8	1	-	1	-	-	-	-	-	-	-	5	-	-	-	-	15
YUG	YUGOSLAVIA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	7
TOTAL		8	1	1	1	16	1	1	5	1	2	1	5	1	3	16	1	64
PER CENT		12.5	1.6	1.6	1.6	25.0	1.6	1.6	7.8	1.6	3.1	1.6	7.8	1.6	4.7	25.0	1.6	100.0

TABLE 5

EUR EUROPE **1983** RABIES CASES 'OTHER ANIMAL SPECIES' 1. 1.83 - 31.12.83

LOCATION CODE	NAME	OTHER DOMESTIC ANIMALS							OTHER WILD ANIMALS														UNSPECIFIED	TOTAL
		OTH.DOM. CARNIVOR	DONKEY	MULE	PIG	OTH.DOM. HERBIVOR	DOMESTIC RABBIT	OTHERS	WOLF	RACOON DOG	WILD CAT	RACOON	WILD BOAR	MOUFLON	CHAMOIS	HEDGEHOG	SQUIRREL	BLACK RAT	HOUSE MOUSE	MUSKRAT	HARE	OTHERS		
CZE	CZECHOSLOVAKIA	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	-	-	-	3
DDR	GERMAN DEM. REP.	1	-	-	2	-	1	-	-	-	-	-	10	2	-	1	2	-	-	-	1	-	-	20
DEU	FED.REP. GERMANY	-	1	-	1	-	1	-	-	-	1	4	4	2	-	-	1	-	-	-	1	-	1	17
FRA	FRANCE	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	-	41
HUN	HUNGARY	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
ITA	ITALY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
POL	POLAND	-	-	-	-	-	-	-	1	28	-	-	1	-	-	-	3	2	-	4	3	-	-	42
RUM	RUMANIA	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3
SWI	SWITZERLAND + LI	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	3
TUR	TURKEY	-	47	2	1	3	-	-	3	-	-	-	-	-	-	-	-	-	25	-	-	-	-	81
YUG	YUGOSLAVIA	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	25
TOTAL		1	48	2	8	3	2	2	4	28	3	4	15	5	1	1	7	2	25	5	5	66	1	238
PER CENT		0.4	20.2	0.8	3.4	1.3	0.8	0.8	1.7	11.8	1.3	1.7	6.3	2.1	0.4	0.4	2.9	0.8	10.5	2.1	2.1	27.7	0.4	100.0

AUT AUSTRIA — RABIES CASES — 1.10.83 - 31.12.83

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		
104	GUESSING							0	1	-	-	-	-	1		1
201	KLAGENFURT-STADT							0	2	-	-	-	-	2		2
202	VILLACH-STADT							0	2	-	-	-	-	2		2
203	HERMAGOR							0	1	-	-	-	-	1		1
204	KLAGENFURT-LAND							0	2	-	-	1	-	3		3
205	SANKT VEIT AN DER GL							0	53	-	-	-	-	53		53
206	SPITTAL AN DER DRAU	-	2	-	-	-	-	2	8	1	1	-	-	10		12
207	VILLACH-LAND							0	9	1	-	-	-	10		10
209	WOLFSBERG							0	1	-	-	-	-	1		1
210	FELDKIRCHEN	-	3	2	-	1	-	6	42	6	2	5	-	55		61
310	HOLLABRUNN							0	2	-	-	-	-	2		2
311	HORN							0	4	-	-	-	-	4		4
318	NEUNKIRCHEN	-	1	-	-	-	-	1	6	-	-	1	-	7		8
320	SCHEIBBS							0	1	-	-	-	-	1		1
322	WAIDHOFEN AN DER THA							0	2	-	-	-	-	2		2
323	WIENER NEUSTADT-LAND							0	1	-	-	-	-	1		1
325	ZWETTL							0	2	-	-	-	-	2		2
504	SANKT JOHANN IM PONG							0	1	-	-	-	-	1		1
505	TAMSWEG	-	-	2	-	-	-	2	13	1	-	3	-	17		19
506	ZELL AM SEE							0	7	-	-	-	-	7		7
606	GRAZ-LAND							0	5	-	-	-	-	5		5
607	HARTBERG							0	14	-	-	1	-	15		15
608	JUDENBURG	-	1	-	-	-	-	1	8	-	-	-	-	8		9
609	KNITTELFELD							0	3	-	-	-	-	3		3
611	LEOBEN							0	7	-	-	1	-	8		8
613	MUERZZUSCHLAG							0	2	-	-	-	-	2		2
614	MURAU	-	-	2	1	-	-	3	32	1	1	1	-	35		38
616	VOITSBERG							0	8	-	-	-	-	8		8
617	WEIZ	-	1	-	-	-	-	1	18	-	1	-	-	19		20
704	KITZBUEHEL							0	5	-	-	-	-	5		5
705	KUFSTEIN							0	4	-	-	3	-	7		7
708	REUTTE							0	11	-	-	-	-	11		11
801	BLUDENZ							0	2	-	-	-	-	2		2
802	BREGENZ	-	-	1	-	-	-	1	2	-	-	-	-	2		3
TOTAL		0	8	7	1	1	0	17	281	10	5	16	0	312	0	329
PER CENT		0.0	2.4	2.1	0.3	0.3	0.0	5.2	85.4	3.0	1.5	4.9	0.0	94.8	0.0	100.0

RABIES CASES 1.10.83 - 31.12.83

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															
HH	HAINHAUT							0	1	-	-	-	-	1		1
LG	LIEGE	-	2	19	1	1	-	23	19	-	-	-	-	19		42
LX	LUXEMBOURG	-	6	8	2	1	-	17	13	-	-	-	-	13		30
NA	NAMUR	-	1	12	-	5	-	18	18	-	-	-	-	18		36
TOTAL		0	9	39	3	7	0	58	51	0	0	0	0	51	0	109
PER CENT		0.0	8.3	35.8	2.8	6.4	0.0	53.2	46.8	0.0	0.0	0.0	0.0	46.8	0.0	100.0
LUX	LUXEMBOURG															
00	LUXEMBOURG-VILLE							0	1	-	-	-	-	1		1
03	ESCH	-	-	2	-	-	-	2	2	-	-	-	-	2		4
04	LUXEMBOURG-CAMPAGNE	-	-	6	-	-	-	6	1	-	-	-	-	1		7
07	DIEKIRCH	-	-	1	-	-	-	1						0		1
08	REDANGE							0	1	-	-	-	-	1		1
11	ECHTERNACH	-	-	1	-	-	-	1						0		1
12	GREVENMACHER	-	1	1	-	3	-	5	3	-	-	-	-	3		8
13	REMICH	1	3	4	-	3	-	11	2	-	-	-	-	2		13
TOTAL		1	4	15	0	6	0	26	10	0	0	0	0	10	0	36
PER CENT		2.8	11.1	41.7	0.0	16.7	0.0	72.2	27.8	0.0	0.0	0.0	0.0	27.8	0.0	100.0
NET	NETHERLANDS															
04	GRONINGEN							0	1	-	-	-	-	1		1
05	LIMBURG							0	12	-	-	-	-	12		12
TOTAL		0	0	0	0	0	0	0	13	0	0	0	0	13	0	13

CZE C Z E C H O S L O V A K I A R A B I E S C A S E S 1.10.83 - 31.12.83

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		
00	DISTRICT OF PRAGUE							0						0		0
01	CENTRAL BOHEMIA	-	1	-	-	-	-	1	52	-	1	2	-	55		56
02	SOUTH BOHEMIA	-	4	-	-	-	-	4	60	1	-	1	-	62		66
03	WEST BOHEMIA	-	2	1	-	-	-	3	89	2	-	-	-	91		94
04	NORTH BOHEMIA	3	4	-	-	-	-	7	87	-	1	3	-	91		98
05	EAST BOHEMIA							0	20	-	-	2	-	22		22
06	SOUTH MORAVIA	1	2	-	-	-	-	3	69	3	-	1	-	73		76
07	NORTH MORAVIA							0	15	-	-	-	-	15		15
0	CSR	4	13	1	-	-	-	18	392	6	2	9	-	409		427
10	DISTRICT OF BRATISLAV							0						0		0
11	WEST SLOVAKIA	-	1	-	-	-	-	1	2	-	1	-	-	3		4
12	CENTRAL SLOVAKIA	1	2	-	-	-	-	3	40	-	-	-	-	40		43
13	EAST SLOVAKIA	1	4	-	-	1	-	6	57	-	-	-	-	57		63
1	SSR	2	7	-	-	1	-	10	99	-	1	-	-	100		110
TOTAL		6	20	1	0	1	0	28	491	6	3	9	0	509	0	537
PER CENT		1.1	3.7	0.2	0.0	0.2	0.0	5.2	91.4	1.1	0.6	1.7	0.0	94.8	0.0	100.0

DDR GERMAN DEMOCRATIC REPUBLIC — RABIES CASES — 1.10.83 - 31.12.83

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	HAUPTSTADT BERLIN							0						0		0
02	COTTBUS	-	-	1	-	-	-	1	12	-	-	-	-	12		13
03	DRESDEN	-	-	2	1	9	-	12	18	-	1	1	-	20		32
04	ERFURT	2	-	3	-	2	-	7	43	-	1	-	-	44		51
05	FRANKFURT/ODER	-	1	-	-	-	-	1	15	-	2	-	1	18		19
06	GERA	-	1	5	-	5	-	11	32	1	1	2	1	37		48
07	HALLE	2	4	1	-	-	-	7	32	-	2	4	1	39		46
08	KARL-MARX-STADT	1	9	4	-	24	-	38	28	-	2	4	2	36		74
09	LEIPZIG	-	1	1	-	1	-	3	8	-	-	-	-	8		11
10	MAGDEBURG	-	1	6	1	-	1	9	39	1	-	1	-	41		50
11	NEUBRANDENBURG	2	-	1	-	2	-	5	18	1	1	-	-	20		25
12	POTSDAM	2	3	2	-	-	-	7	32	1	-	3	-	36		43
13	ROSTOCK	-	-	2	-	1	-	3	25	-	-	3	-	28		31
14	SCHWERIN	-	1	4	1	-	-	6	21	1	1	1	-	24		30
15	SUHL	-	-	1	-	3	-	4	18	-	-	1	-	19		23
TOTAL		9	21	33	3	47	1	114	341	5	11	20	5	382	0	496
PER CENT		1.8	4.2	6.7	0.6	9.5	0.2	23.0	68.7	1.0	2.2	4.0	1.0	77.0	0.0	100.0

DEU FEDERAL REPUBLIC OF GERMANY — R A B I E S C A S E S — 1.10.83 - 31.12.83

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		
010	SCHLESWIG-HOLSTEIN							0	2	-	-	1	-	3		3
020	HAMBURG							0						0		0
031	BRAUNSCHWEIG	-	-	2	-	-	-	2	10	-	-	1	-	11		13
032	HANNOVER	-	6	10	3	4	-	23	48	1	1	12	-	62		85
033	LUENEBURG	4	2	14	1	-	-	21	70	1	3	4	-	78		99
034	WESER-EMS							0	9	-	-	-	-	9		9
040	BREMEN							0						0		0
051	DUESSELDORF							0						0		0
053	KOELN	-	2	13	2	4	-	21	110	1	-	5	-	116		137
055	MUENSTER							0						0		0
057	DETMOLD	-	1	2	-	-	-	3	5	-	-	2	-	7		10
059	ARNSBERG	-	4	8	2	-	-	14	25	-	-	4	1	30		44
061	DARMSTADT	-	8	7	2	5	-	22	115	1	4	19	2	141		163
062	KASSEL	4	17	32	-	4	-	57	113	1	9	27	-	150		207
071	KOBLENZ	1	4	13	1	12	-	31	76	-	1	11	-	88		119
072	TRIER	1	2	19	2	2	-	26	39	-	-	3	-	42		68
073	RHEINHESSEN-PFALZ	1	5	1	-	1	-	8	47	1	2	1	1	52		60
081	STUTTGART	1	-	2	-	1	-	4	102	5	4	12	-	123		127
082	KARLSRUHE	1	3	3	-	5	-	12	54	1	3	5	-	63		75
083	FREIBURG	-	5	8	1	5	-	19	80	1	7	8	-	96		115
084	TUEBINGEN	-	2	11	-	6	-	19	108	1	4	14	-	127		146
091	OBERBAYERN	-	3	24	-	3	-	30	122	5	8	4	-	139		169
092	NIEDERBAYERN							0	17	-	1	1	-	19		19
093	OBERPFALZ	-	5	-	-	1	-	6	46	-	1	-	-	47		53
094	OBERFRANKEN	-	-	-	1	-	-	1	44	1	4	3	-	52		53
095	MITTELFRANKEN	-	1	-	-	-	-	1	41	-	-	1	-	42		43
096	UNTERFRANKEN	1	1	-	-	1	-	3	42	-	1	6	-	49		52
097	SCHWABEN	1	3	23	1	1	-	29	79	1	9	4	1	94		123
100	SAARLAND	1	1	3	1	1	-	7	27	-	2	3	-	32		39
110	BERLIN (WEST)							0						0		0
TOTAL		16	75	195	17	56	0	359	1431	21	64	151	5	1672	0	2031
PER CENT		0.8	3.7	9.6	0.8	2.8	0.0	17.7	70.5	1.0	3.2	7.4	0.2	82.3	0.0	100.0

FRA FRANCE — RABIES CASES — 1.10.83 - 31.12.83

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	AIN	1	-	-	-	-	-	1	24	3	-	-	-	27		28
02	AISNE	-	4	1	1	1	-	7	74	1	-	1	1	77		84
08	ARDENNES	2	5	24	-	44	-	75	57	-	-	1	1	59		134
10	AUBE	-	2	-	-	3	-	5	23	-	-	-	1	24		29
21	COTE D'OR	-	3	4	1	14	-	22	28	-	-	-	1	29		51
25	DOUBS	1	3	2	-	-	-	6	21	1	-	-	2	24		30
38	ISERE							0	2	-	-	-	-	2		2
39	JURA	-	-	1	-	1	-	2	57	3	-	-	-	60		62
51	MARNE							0	6	-	-	-	-	6		6
52	MARNE (HAUTE)	-	3	5	1	4	-	13	20	-	-	-	-	20		33
54	MEURTHE-ET-MOSELLE	-	2	1	-	1	-	4	9	-	-	-	-	9		13
55	MEUSE	-	1	3	1	2	-	7	11	-	-	-	-	11		18
57	MOSELLE	-	3	4	-	-	-	7	17	-	-	-	-	17		24
58	NIEVRE							0	7	-	-	1	-	8		8
60	OISE							0	8	-	-	-	-	8		8
67	RHIN (BAS)	1	3	2	1	1	-	8	37	1	-	-	-	38		46
68	RHIN (HAUT)							0	2	-	-	-	-	2		2
70	SAONE (HAUTE)	1	3	1	-	5	-	10	69	-	-	-	-	69		79
71	SAONE-ET-LOIRE							0	8	-	-	-	-	8		8
73	SAVOIE	-	1	2	-	-	-	3	11	1	-	-	1	13		16
74	SAVOIE (HAUTE)	-	5	2	2	-	-	9	22	2	-	-	1	25		34
88	VOSGES	2	5	-	-	2	-	9	20	2	-	-	-	22		31
89	YONNE	-	-	1	-	1	-	2	6	-	-	-	1	7		9
90	TERR.DE BELFORT							0	5	-	-	-	-	5		5
TOTAL		8	43	53	7	79	0	190	544	14	0	3	9	570	0	760
PER CENT		1.1	5.7	7.0	0.9	10.4	0.0	25.0	71.6	1.8	0.0	0.4	1.2	75.0	0.0	100.0

HUN HUNGARY — RABIES CASES — 1.10.83 - 31.12.83

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	6	-	-	-	-	6		6
02	BARANYA	-	3	-	-	-	-	3	12	-	-	-	-	12		15
03	BACS-KISKUN	-	-	1	-	-	-	1	4	-	-	-	-	4		5
04	BEKES							0	5	-	-	-	-	5		5
05	BORSOD-ABAU-ZEMPLEN	-	1	-	-	-	-	1	9	-	-	-	-	9		10
06	CSONGRAD	-	2	-	-	-	-	2	2	-	-	-	-	2		4
07	FEJER	1	-	-	-	-	-	1	29	-	-	-	-	29		30
08	GYOER-SOPRON							0	4	-	-	-	-	4		4
09	HAJDU-BIHAR	-	1	-	-	-	-	1	5	-	-	-	-	5		6
10	HEVES							0	13	-	1	-	-	14		14
11	KOMAROM	-	1	-	-	-	-	1	13	-	-	-	-	13		14
12	NOGRAD							0	5	-	-	1	-	6		6
13	PEST	-	2	-	-	-	-	2	24	-	-	-	-	24		26
14	SOMOGY	-	1	-	-	-	-	1	28	-	-	-	-	28		29
15	SZABOLCS-SZATMAR	1	1	-	-	-	-	2	3	-	-	-	-	3		5
16	SZOLNOK							0	2	-	1	-	-	3		3
17	TOLNA	-	-	2	-	-	-	2	11	-	-	-	-	11		13
18	VAS	-	1	1	-	-	-	2	21	-	-	-	-	21		23
19	VESZPREM	1	-	-	-	-	-	1	21	-	-	-	-	21		22
20	ZALA	-	1	-	-	-	-	1	19	-	-	-	-	19		20
TOTAL		3	14	4	0	0	0	21	236	0	2	1	0	239	0	260
PER CENT		1.2	5.4	1.5	0.0	0.0	0.0	8.1	90.8	0.0	0.8	0.4	0.0	91.9	0.0	100.0

RABIES CASES 1.10.83 - 31.12.83

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		
ITA	ITALY															
22	COMO							0	1	-	-	-	-	1		1
23	SONDRIO	1	-	-	1	-	-	2	86	5	-	-	-	91		93
25	BRESCIA	-	1	-	-	-	-	1	7	-	-	-	-	7		8
33	UDINE							0	2	1	-	-	-	3		3
34	TRIESTE E GORIZIA							0	3	-	-	-	-	3		3
38	TRENTO							0	5	-	-	-	-	5		5
TOTAL		1	1	0	1	0	0	3	104	6	0	0	0	110	0	113
PER CENT		0.9	0.9	0.0	0.9	0.0	0.0	2.7	92.0	5.3	0.0	0.0	0.0	97.3	0.0	100.0
RUM	RUMANIA															
05	BIHOR							0	1	-	-	-	-	1		1
08	BRASOV	-	-	2	-	-	-	2						0		2
10	BUZAU	-	-	2	-	-	-	2						0		2
11	CARAS-SEVERIN							0	2	-	-	-	-	2		2
15	COVASNA							0	1	-	-	-	-	1		1
21	HARGHITA	1	-	-	-	-	-	1						0		1
24	IASI	-	-	2	-	-	-	2	-	-	1	1	-	2		4
32	SALAJ	-	-	1	-	-	-	1						0		1
40	VRANCEA							0	1	-	-	-	-	1		1
TOTAL		1	0	7	0	0	0	8	5	0	1	1	0	7	0	15
PER CENT		6.7	0.0	46.7	0.0	0.0	0.0	53.3	33.3	0.0	6.7	6.7	0.0	46.7	0.0	100.0
YUG	YUGOSLAVIA															
I	SR BOSNA I HERCEGOVI	-	-	1	-	-	-	1	13	-	-	-	-	13		14
III	SR HRVATSKA	1	4	1	-	1	-	7	202	-	-	-	3	205		212
V	SR SLOVENIJA							0	151	-	-	-	4	155		155
VI1	SAP VOJVODINA	-	1	-	-	-	-	1	32	-	-	-	-	32		33
TOTAL		1	5	2	0	1	0	9	398	0	0	0	7	405	0	414
PER CENT		0.2	1.2	0.5	0.0	0.2	0.0	2.2	96.1	0.0	0.0	0.0	1.7	97.8	0.0	100.0

POL POLAND — RABIES CASES — 1.10.83 - 31.12.83

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	WARSZAWA	1	-	-	-	-	-	1	-	-	-	1	-	1		2
03	BIALA PODLASKA	-	-	1	-	-	-	1	6	-	-	-	1	7		8
05	BIALYSTOK							0	-	-	-	-	1	1		1
09	BYDGOSZCZ	3	-	11	-	-	-	14	4	1	-	-	-	5		19
11	CHELM							0	4	-	-	-	-	4		4
13	CIECHANOW							0	3	-	-	-	-	3		3
15	CZESTOCHOWA	1	1	-	-	-	-	2	6	-	-	1	-	7		9
17	ELBLAG	2	2	4	-	-	-	8	7	-	-	1	1	9		17
19	GDANSK	-	1	-	-	1	-	2	11	-	1	1	-	13		15
21	GORZOW							0	4	-	-	-	-	4		4
23	JELENIA GORA	-	1	2	-	-	-	3	19	-	-	-	-	19		22
25	KALISZ							0	4	-	-	-	-	4		4
27	KATOWICE	-	2	-	-	-	-	2	2	-	1	-	-	3		5
29	KIELCE							0	1	-	1	-	-	2		2
31	KONIN	-	1	1	-	-	-	2	1	-	-	-	-	1		3
33	KOSZALIN	2	6	4	-	1	-	13	13	1	-	8	2	24		37
35	KRAKOW							0	3	-	-	-	-	3		3
39	LEGNICA							0	6	-	-	-	-	6		6
41	LESZNO	-	1	-	-	-	-	1	6	-	-	-	-	6		7
43	LUBLIN							0	3	-	-	-	-	3		3
45	LOMZA							0	-	-	-	-	1	1		1
51	OLSZTYN	-	1	16	-	-	-	17	6	1	3	1	6	17		34
53	OPOLE	-	4	-	-	-	-	4	9	-	-	-	-	9		13
55	OSTROLEKA							0	-	-	-	1	-	1		1
57	PILA							0	7	1	-	-	2	10		10
61	PLOCK							0	3	-	-	-	-	3		3
63	POZNAN	1	-	-	-	-	-	1	8	-	-	-	-	8		9
67	RADOM							0	1	-	-	-	-	1		1
69	RZESZOW							0	-	-	-	1	-	1		1
71	SIEDLCE	-	1	1	-	-	-	2	7	-	1	-	-	8		10
77	SLUPSK	-	5	1	-	-	-	6	4	-	-	3	-	7		13
79	SUWALKI	2	1	1	-	-	-	4	-	-	-	-	3	3		7
81	SZCZECIN	-	1	-	-	-	-	1	7	-	-	2	1	10		11
85	TARNOW							0	1	-	-	-	-	1		1
87	TORUN	-	-	13	-	-	-	13	5	-	-	1	2	8		21
89	WALBRZYCH	-	-	1	-	-	-	1	9	-	-	-	-	9		10
91	WLOCLAWEK	-	-	1	-	-	-	1	3	-	-	-	1	4		5
93	WROCLAW	-	-	1	-	-	-	1	3	-	-	1	-	4		5
95	ZAMOSC							0	1	-	-	-	-	1		1
97	ZIELONA GORA	-	1	2	-	-	-	3	9	-	-	-	-	9		12
TOTAL		12	29	60	0	2	0	103	186	4	7	22	21	240	0	343
PER CENT		3.5	8.5	17.5	0.0	0.6	0.0	30.0	54.2	1.2	2.0	6.4	6.1	70.0	0.0	100.0

TUR TURKEY — RABIES CASES — 1.10.83 - 31.12.83

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		
001	ADANA	12	2	2	-	-	1	17	-	-	-	-	1	1		18
002	ADIYAMAN	1	-	1	-	-	-	2						0		2
003	AFYON	7	2	3	-	2	-	14						0		14
004	AGRI							0	-	-	-	-	1	1		1
005	AMASYA	7	-	3	-	-	-	10						0		10
006	ANKARA	6	-	-	-	1	1	8						0		8
007	ANTALYA	2	-	5	-	1	-	8						0		8
008	ARTVIN	-	1	-	-	-	-	1						0		1
009	AYDIN	5	-	2	1	-	-	8						0		8
010	BALIKESIR	4	1	-	-	-	1	6	-	-	-	-	1	1		7
011	BILECIK	2	-	-	-	-	-	2						0		2
014	BOLU	4	1	5	-	-	-	10						0		10
015	BURDUR	3	-	-	-	-	-	3						0		3
016	BURSA	16	1	2	-	2	-	21	-	-	-	-	1	1		22
017	CANAKKALE	1	2	1	-	1	-	5						0		5
019	CORUM	4	-	3	-	-	-	7						0		7
020	DENIZLI	18	3	2	-	1	2	26	-	-	-	-	1	1		27
021	DIYARBAKIR	1	-	1	-	1	-	3						0		3
022	EDIRNE	3	-	2	-	-	-	5						0		5
023	ELAZIG	4	-	-	-	-	-	4						0		4
025	ERZURUM	2	-	1	-	-	-	3	1	-	-	-	-	1		4
026	ESKISEHIR	3	-	2	-	1	1	7						0		7
027	GAZIANTEP	5	1	2	-	1	-	9	-	-	-	-	1	1		10
028	GIRESUN	1	1	2	-	-	-	4						0		4
031	HATAY	3	-	1	-	-	-	4						0		4
032	ISPARTA	1	-	-	-	-	-	1						0		1
033	ICEL	4	3	2	-	1	-	10						0		10
034	ISTANBUL	8	3	4	-	1	-	16						0		16
035	IZMIR	17	6	-	-	-	-	23						0		23
036	KARS	4	-	2	-	-	-	6						0		6

TUR 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		
037	KASTAMONU	6	1	5	-	-	-	12						0		12
038	KAYSERI	5	-	1	-	1	-	7						0		7
039	KIRKLARELI	3	-	-	-	-	-	3						0		3
040	KIRSEHIR	1	-	-	-	-	-	1						0		1
041	KOCAELI	3	-	4	-	-	1	8						0		8
042	KONYA	4	6	3	-	-	-	13						0		13
043	KUETAHYA	2	-	-	-	-	-	2						0		2
044	MALATYA	-	1	-	-	-	-	1						0		1
045	MANISA	7	4	1	-	-	-	12						0		12
046	KAHRAMAN MARAS	1	1	-	-	-	-	2						0		2
047	MARDIN	1	-	-	-	-	-	1						0		1
050	NEVSEHIR	5	1	1	-	-	-	7						0		7
051	NIGDE	1	-	1	-	-	-	2						0		2
052	ORDU	5	1	1	-	-	-	7						0		7
054	SAKARYA	5	-	3	-	-	-	8						0		8
055	SAMSUN	9	3	5	-	-	-	17						0		17
057	SINOP	1	-	1	-	-	-	2						0		2
058	SIVAS	2	-	3	-	-	-	5						0		5
060	TOKAT	3	-	3	-	-	-	6						0		6
061	TRABZON	3	-	1	-	-	-	4						0		4
062	TUNCELI	1	-	-	-	-	-	1						0		1
063	URFA	-	-	-	-	-	1	1						0		1
065	VAN	1	-	-	-	-	-	1						0		1
066	YOZGAT	-	-	2	-	-	1	3						0		3
067	ZONGULDAK	8	-	5	-	-	-	13						0		13
TOTAL		225	45	88	1	14	9	382	1	0	0	0	6	7	0	389
PER CENT		57.8	11.6	22.6	0.3	3.6	2.3	98.2	0.3	0.0	0.0	0.0	1.5	1.8	0.0	100.0

SWI SWITZERLAND AND LIECHTENSTEIN — R A B I E S C A S E S — 1.10.83 - 31.12.83

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	AARGAU	-	-	2	-	-	-	2	21	-	-	6	-	27		29
02	APPENZELL A.RH.	-	1	-	-	2	-	3	1	1	1	2	-	5		8
03	APPENZELL I.RH.	-	1	-	-	-	-	1	1	-	-	-	-	1		2
05	BASEL-LAND	-	1	-	-	-	-	1	3	-	1	1	-	5		6
06	BERN	-	2	-	-	-	-	2	23	-	-	1	-	24		26
07	FRIBOURG	-	2	4	-	3	-	9	22	-	-	-	-	22		31
08	GENEVE							0	14	-	-	-	-	14		14
09	GLARUS	-	2	3	-	-	-	5	39	2	1	-	-	42		47
10	GRAUBUENDEN							0	1	-	-	-	-	1		1
15	SCHAFFHAUSEN	-	1	1	-	2	-	4	4	3	1	1	-	9		13
17	SOLOTHURN	-	-	3	-	4	-	7	8	1	2	-	-	11		18
18	ST.GALLEN	-	6	8	1	1	-	16	12	-	2	-	-	14		30
20	THURGAU	-	3	1	-	-	-	4	3	-	-	1	-	4		8
22	VAUD	-	1	2	-	-	-	3	78	-	-	2	1	81		84
25	ZUERICH	-	5	4	-	-	-	9	33	1	4	4	-	42		51
26	JURA	-	-	4	-	-	-	4	2	-	-	-	-	2		6
LI	LIECHTENSTEIN	1	-	2	-	-	-	3	1	-	-	-	-	1		4
TOTAL		1	25	34	1	12	0	73	266	8	12	18	1	305	0	378
PER CENT		0.3	6.6	9.0	0.3	3.2	0.0	19.3	70.4	2.1	3.2	4.8	0.3	80.7	0.0	100.0

USR UNION OF SOVIET SOCIALIST REPUBLICS (EUROPEAN PART)

R A B I E S C A S E S IN ANIMALS

1. 4.83 - 30. 6.83

LOCATION CODE	NAME	DATES 1. 4. - 30. 4.	1. 5. - 31. 5.	1. 6. - 30. 6.	TOTAL
01	RSFSR				
011	REGIONS OF THE NORTH AND THE NORTH-WEST	-	-	-	-
012	REGIONS OF THE CENTRE	2	2	4	8
013	REGIONS OF THE NORTH CAUCASUS	2	1	2	5
014	REGIONS OF THE POVOLJE AND THE URALS	8	5	8	21
02	THE MOLDAVIAN SSR	2	1	1	4
03	THE UKRAINIAN SSR	21	12	14	47
04	THE BYELORUSSIAN SSR	5	4	4	13
05	THE LITHUANIAN SSR	2	-	1	3
06	THE LATVIAN SSR	4	6	3	13
07	THE ESTONIAN SSR	1	1	1	3
TOTAL		47	32	38	117

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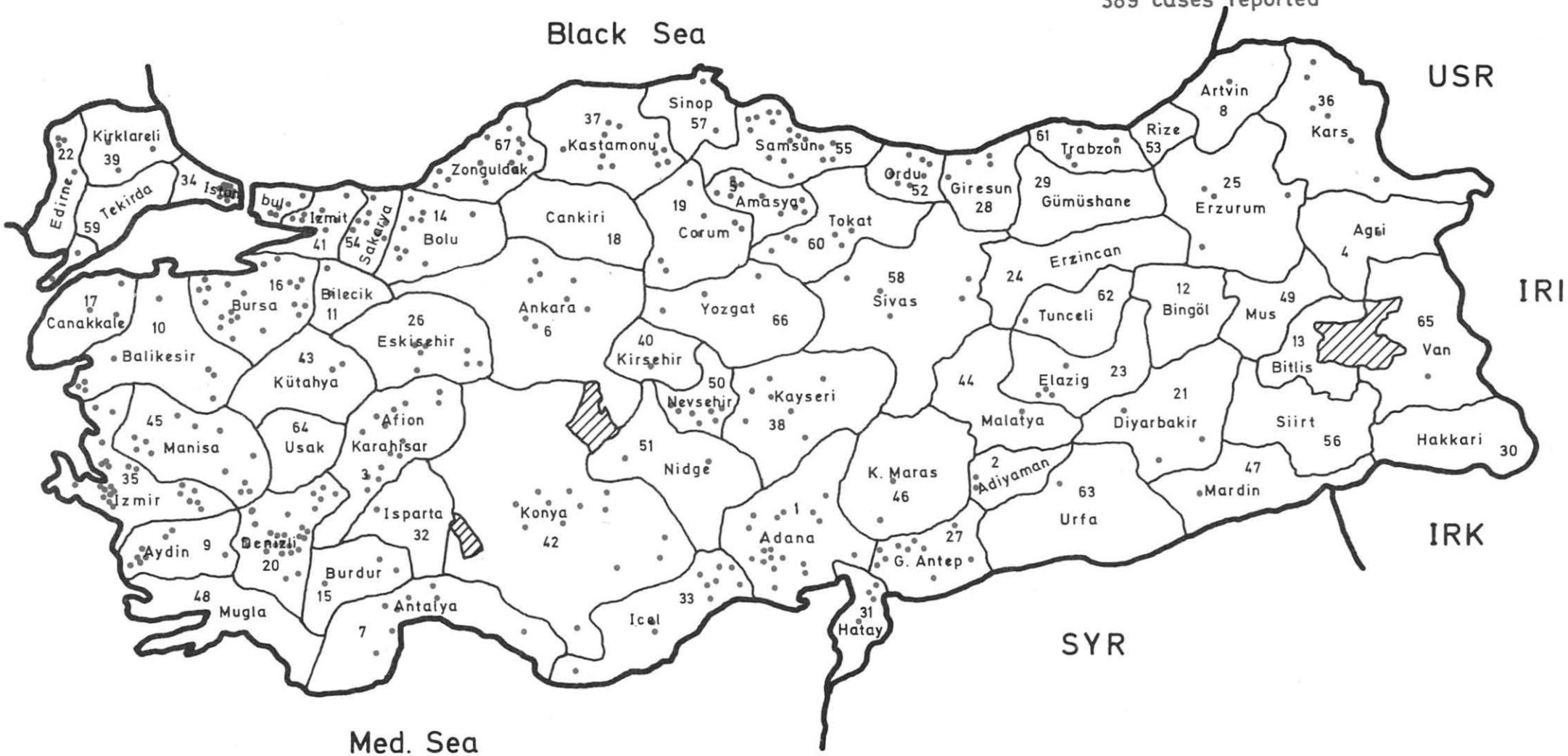
WHO Coll. Centre
Tuebingen / DEU

Rabies Cases Turkey
4th Quarter 1983
389 cases reported



WHO Coll. Centre
Tuebingen / DEU

Rabies Cases Europe
4th Quarter 1983

6 223 cases reported

(rabies free)

NOR
(rabies free)

FIN
(rabies free)

SWE
(rabies free)

DEN
(0)

IRE
(rabies free)

GBR
(rabies free)

NET
(13)

(2031)

DDR
(496)

POL
(343)

(109)
BEL

DEU

CZE
(537)

FRA
(760)

AUT
(329)

HUN
(260)

SWI (378)

RUM
(15)

ITA
(113)

YUG
(414)

BUL
(rabies free)

POR
(rabies free)

SPA
(mainland rabies free)

ALB
(no data)

TUR
(389)

GRE
(0)

0 50 100 km