RABIES BULLETIN EUROPE 1/1/77

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1. PREFACE

Following the recommendations made by the WHO European Conference on the Surveillance and Control of Rabies in 1968, and in line with recommendations of the WHO Expert Committee on Rabies, a European Rabies Surveillance System is presently being established. During Informal Consultations held at the WHO Centre in Tübingen in March 1976, the Directors of Veterinary Services of some European countries discussed together with representatives of WHO and OIE the technical feasibility of a surveillance system and expressed their willingness for international cooperation.

In the meantime, data collection in a computer-compatible form has entered a preparatory stage. Much more time will elapse, however, before computerized rabies data for regular reporting will be available for most parts of Central Europe.

Until this goal will be reached it seemed necessary to gather routinely available information from national authorities and to combine and display national rabies data and other relevant information in a joint Rabies BULLETIN.

For the first issue, contributions have been asked from the Veterinary Services of 14 European countries, 13 of which responded by submitting the requested rabies data.

The 1st issue of the BULLETIN tries to give a picture of the present rabies situation in Europe by having individual countries describe their own rabies situation with special emphasis of the border situation to neighbouring countries. This text is supplemented by Tables providing information on rabies cases by geographical location and by type of animal separately for the 1st and 2nd quarter of 1977. Miscellaneous information regarding rabies is dealt with in a third part.

Most of the information is primarily intended for the use of Veterinary und Public Health officials responsible for disease control activities. Preliminarily it is planned to issue the BULLETIN at quarter-year intervals. It is considered for the next Bulletin to visualize rabies case data by mapping, in order to facilitate orientation. Contributions to the BULLETIN as well as suggestions to improve the contents are most welcome and should be submitted directly to the WHO Centre at Tuebingen.

2. RABIES SITUATION IN EUROPE

Since the beginning of the present wildlife rabies epidemic in the early forties the disease has invaded most European countries and is still progressing. With the fox as the vector and the main transmitter, rabies has crossed national and natural borders in either direction and apart from exceptional examples could not be stopped in anyone country.

In the first half of 1977 exceptional high rabies frequencies were noted in parts of Austria, France, Germany and Switzerland, leading to the infection of new territories but also to re-infection of formerly infected areas. Via Austria, fox rabies has crossed the Alpes into Northern Italy. The disease is heading southward in France and Switzerland. Northwardbound rabies in Schleswig-Holstein/Germany is threatening Denmark in a third episode.

On the other hand, a significant decrease of the disease is presently noted in the three Benelux countries.

In the first half of 1977 a total of 7079 rabies cases have been reported by the participating countries in Europe (see pages 12-13). Cases of wildlife rabies accounted for 87.6 % (6200), and 74.2 % (5255) of all cases occurred in foxes. The percentage of badgers was 3.7 % (217) of small mustelides 2.1 % (149) and of deer 6.5 % (461).

Among domestic animals (877 = 12.4 %) cat rabies was leading with 4.7 % (334) followed by cattle with 3.3 % (231) and dogs with 2.5 % (174) of all reported cases.

Inter-country variation: Domestic animal rabies varied in individual countries from 5.5 % (AUT) to 26.9 % (POL) if BEL (59.2 %) is excepted. With the exception of LUX (12.5 %) dog rabies varied from 0.4 % (AUT) to 7.5 % (POL); cat rabies from 2.9 % (AUT) to 14.6 % (POL), and cattle rabies from 1.1. % (AUT) to 8.2 % (FRA).

The variation of wildlife rabies among countries ranges between 73.1 % (POL) to 94.5 % (AUT) if BEL, LUX and ITA are omitted because of their low rabies figures. Rabies in the fox ranges from 51.6 % (POL) to 89.5 % (CSR), in badgers from 0.3 % (HUN) to 7.8 % (AUT), in small mustelides from 0.5 % (HUN, CSR) to 3.8 % (DEU), and in deer from 0.8 % (FRA) to 11.9 % (AUT).

The incidence of rabies decreased from 4249 cases during the 1st quarter to 2830 cases during the 2nd quarter of 1977 (minus 33.4 %). This decrease is regularly observed each year. In 1977 the decrease from the 1st to the 2nd quarter was highest in the Benelux countries (minus 60 %) followed by DEU (minus 43 %), FRA and SWI (minus 37 %), HUN (minus 25 %), CSR (minus 23 %), AUT (minus 20 %) and POL (minus 15 %).

No rabies was recorded in Denmark and Great Britain.

2.1. Rabies in Austria.

by W. Krocza and E. Scharfen

In 1966, rabies crossed the Northern border of Tirol via Sonthofen/DEU and lead to a heavy epidemic in western Austria. In 1977, the epidemic nuclei are located in Salzburg and Osttirol (LIENZ). Rabies which spreads mainly in an eastern direction shows an average movement of 26 km per year. During the 1st quarter of 1977 rabies crossed the Austrian-Italian border via the Krimmler-Tauern pass into the Ahrn valley/Italy.

In eastern Austria rabies is prevalent in the Burgenland (border area to Hungary) since 1975. From here, 2 Bezirke (Neunkirchen and Wiener Neustadt) of Niederösterreich became infected during the 1st half of 1977.

Human rabies did not occur between 1966 and June, 1977. Of the recorded animal rabies cases, 6-8 % on average account for domestic animals, 78 % occurred in foxes. Control of rabies is primarily carried out by hunters using shooting, trapping, poisoning of foxes and gassing of fox dens.

The diagnosis and surveillance of rabies is centrally handled at the Federal Institute for Animal Disease Control, Mödling, Niederösterreich. For 1977 case data see pages 14/15, 24/25.

2.2. Rabies in Belgium. by R. Depierreux

After an increasing rabies incidence in 1976 up to a number of 465 positive cases (including 163 in domestic animals) the enzootic decreased step by step up to the beginning of 1977.

The number of recorded cases decreased monthly to two cases in June and only one case in July 1977.

This spectacular reduction is due to several factors:

- (a) Eradication and/or drastic reduction of fox population by the disease itself.
- (b) Gassing of fox dens in the spring time of 1977.
- (c) The extremely strong snow-falls in the Ardennes during the winter 1976/77 which restricted the mutual contact of foxes and thus reduced the risk of spreading rabies.
- (d) The disease has reached the forest-margin where the enzootic of 1966 to 1972 had stopped.

Despite of these facts, all legal control measures are enforced:

- (a) Obligatory eradication of foxes in the region "Sud du Sillon Sambre et Meuse" including granting of shooting rewards of 200/- F. per fox. The shooting-reward is increased to 500/- F. per fox during the first three months of each year.
- (b) Compulsory vaccination of dogs in the region "Sud du Sillon Sambre et Meuse"; strong restriction of uncontrolled roving of dogs and cats; compulsory wearing of collar tags showing name and address of the dogowner.
- (c) Compulsory vaccination of dogs a n d cats imported to camping or caravanning grounds of all Belgium.
- (d) Eradication of dogs and cats running loose.
- (e) Gassing of fox dens whenever the situation calls for.
- (f) Information and education of persons concerned with rabies problems.

For 1977 case data see pages 16-17.

2.3. Rabies in the Czech Socialist Republic *). by L. Polák

The diagnosis of rabies in the Czech Socialist Republic has mainly been performed in the specialised diagnostic laboratory at Vratislavice n. N. and on a smaller scale in the State Veterinary Institute at Jihlava and in the Central State Veterinary Institute in Prague.

In the period from January to the end of June, a total of 1255 foxes, 207 dogs, 91 cats and a smaller number of other domestic and wild-living animals were examined.

Rabies was diagnosed in laboratories in all months of the first semester of 1977. The positive findings reveal quite clearly that the fox (Vulpes vulpes) maintains a priority position in the epizootiology of rabies in our country. 179 confirmed cases of rabies occurred in foxes and only 8 cases in other wild-living animals. In domestic animals 7 cases occurred in dogs and 6 cases in cats (see pages 27-29).

^{*)} No rabies data available from the Slovakian Socialist Republic (SSR).

The pattern of positive findings is in conformity whith that of the first semester of 1976, but the total number of cases is lower by almost 20 per cent. The dynamics of rabies incidence retains its characteristic course with a maximum occurrence towards the end of the winter period. The highest incidence was found in March, the lowest in June.

From the geographical point of view, the incidence of rabies continues to be limited to the border districts in the neighbourhood of the German Federal Republic (O2), German Democratic Republic (O1) and Poland (O5/O7). Compared to the first semester of 1976, rabies extended inland to some districts which were up to then free of the disease (Rokycany, Beraun, Pribram located in Central Bohemia (O3) northeast and east of Plzen). On the other hand, the situation has improved in the North Moravian region (O5). There are now only 2 districts with rabies occurrence compared with 7 rabies districts in 1976. In 1977 no rabies occurred in South Moravia, border province to Niederösterreich.

The highest incidence of rabies was found in the districts of Tachov and Domazlice (border districts to Oberpfalz, DEU), followed by Karlovy Vary (border district to DDR), Liberec (Sudenten), etc.

Rabies in domestic animals occurred always in districts where there was also a high incidence of rabies in foxes.

According to the report of the epidemiological service of the Czech Ministry of Health no case of rabies has been reported in man.

Numbers in parenthesis indicate the respective administrative units. For case data see also pages 27, 29.

2.4. Rabies in Denmark.

Rabies, which has not been registered in Denmark since 1889 reappeared in the beginning of 1964 in the eastern and western region of Jutland bordering Germany and finally spread to a point 60 km from the frontier.

43 foxes, 4 roe-deer, 5 cats and 3 sheep - out of 552 specimen submitted for laboratory diagnosis - proved positive during a period from February 1964 to March 1965. The epidemic lasted in the western region from February to August 1964 and in the eastern outbreak area from November 1964 to September 1965.

In winter 1968/69 a second wave of rabies crossed the frontier from South to North, but the disease was not able to spread freely within the area where fox the population has been thinned by gassing of fox dens and shooting for bounty. Abortive outbreaks were registered north-western of the main outbreak area of 1964/65.

Gassing of fox dens and compulsory and free vaccination of all dogs within an area of 10 to 30 km width north of the frontier have been the best proven control measures. Shooting of foxes for bounty as initially performed in the main outbreak area of 1964/65 resulted in a 25 % reduction of foxes only and was, therefore, abandoned as to uneconomic and inefficient.

2.5. Rabies in Germany.

In the Federal Republic of Germany the first wildlife rabies cases were recorded in the fall of 1950 in southern Schleswig-Holstein. In the following year rabies spread into Niedersachsen via DDR, and into Bavaria via CSSR. Further spread occurred in western and south western direction. The Rhine river was reached in 1954, however, served as a natural barrier until the early sixties. In 1969, about 80 % of the German territory was covered by rabies.

From 1950-1976 a total of 83636 rabies cases were recorded. On average, domestic animals accounted for 18.4 %, dogs for 3.9 %, cats for 5.5 %, and cattle for 7.3 %. Rabies of foxes accounted for 63.3 %, badgers for 1.2 %, other mustelides for 2.6 % and deer for 8.9 % of the recorded cases.

Fox control operations carried out locally from the middle sixties, and on large scale from 1970-1973, significantly reduced the incidence of rabies. The total stop of control operations in early 1964 resulted in an enormous upward-sweep of rabies with its peak in 1976 (8842 cases).

Though a reduction of the total cases can already be seen, 1977 is expected to have the 2nd highest incidence of rabies of the last 27 years. Increasing rabies is seen in northern Schleswig-Holstein, threatening Denmark, in western Rheinland-Pfalz, in Karlsruhe, in the South of the Black Forest as well as in parts of Bayern. In Hessen and the eastern parts of Baden-Württemberg a significant decrease of rabies is noted.

Human rabies has not occurred during the first 6 month of 1977.

For 1977 case data see pages 18-19.

2.6. Rabies in France.

<u>Past:</u> In March 1968 rabies crossed the German-French border from the Saarland (DEU) into the Department of Moselle (FRA). From here the disease has spread at an average of 30-60 km/year mainly in south-western direction and covered the territory of 21 Departments in 1976. Departments with high rabies incidences are Vosges, Meurthe-et-Moselle, Haute-Marne, Meuse, Haute-Saône and Aube.

<u>Present:</u> During the first half of 1977 rabies was concentrated at the French-Swiss border which was crossed into SWI during 1976. Newly infected areas are the Departments of Nièvre and Ain. High incidences of rabies were recorded for T. Belfort, Jura, Haut-Rhin, Oise, Meurthe-et-Moselle and Meuse (see pages 20-21).

The incidence rate among domestic animals (172) equivalent to 18.6 % is above European average, mainly caused by cattle (8.2 %), whereas the rates for dogs (2.6 %) and cats (4.4 %) are within average values. Among wildlife cases the fox (77 %) dominates whereas deer (0.8 %) is rather low (see page 13). Compared to the first 6 months of 1976 the number of rabies cases decreased by 36.2 %.

2.7. Rabies in Great Britain. by A.C.L. Brown

Past: Rabies was first eradicated from Great Britain in 1902. Thereafter the country remained free from the disease until 1918 when it was reintroduced in an illegally landed dog. After a total of 328 cases in animals had been confirmed rabies was re-eradicated in 1922.

From 1922 until 1969 no case of rabies outside quarantine premises occurred, although during that same period 27 cases were confirmed in imported animals in quarantine.

The first case of rabies outside quarantine since 1922 was confirmed in October 1969, in a dog, imported from Germany, which had completed its 6 months quarantine period 10 days previously. A second case of rabies outside quarantine was confirmed in Februar 1970 in a dog, imported from Pakistan, which had completed its 6 months quarantine period almost 3 months previously. These two, most recent, cases of rabies in Great Britain were unrelated and neither resulted in any secondary cases.

<u>Present:</u> No case of rabies in any animal, either in or out of quarantine, has occurred in Great Britain since February 1972.

Rabies Control in Great Britain.

The Government's policy on rabies is based on two aims:

- (i) The Primary Aim: to keep rabies out of Great Britain by means of stringent import controls, compulsory quarantine requirements, severe penalties for offenders and the active awareness and support of the public.
- (ii) The Contingency Aim: should an outbreak nevertheless occur, to contain it and to stamp it out swiftly and effectively, to prevent the disease becoming enzootic.

The necessary legislation exists to impose strict controls over importations and to give wide powers to deal with any outbreak which might occur.

Depending upon the epizootiological circumstances of the outbreak, powers exist to declare a Rabies Infected Area and to impose any or all of the following measures:

- (a) Restriction of movement of animals into and out of the area;
- (b) Control and confinement of dogs and cats in the area;
- (c) Seizure, detention and disposal of animals not under proper control (ie. strays) in the area;
- (d) Prohibition of gatherings of animals and sporting and recreational activities involving animals, including hunting, the shooting of game or other wild life, the racing or coursing of hounds or dogs, and point-to-point horse-race meetings, in the area;
- (e) Compulsory vaccination against rabies of animals in the area, and
- (f) Destruction of foxes in the area.

Vaccination against rabies of animals in Great Britain is not allowed, except that a licensed, inactivated vaccine is used for vaccinating imported dogs and cats entering quarantine kennels (where it is mandatory, in order to provide an additional safeguard against the unlikely possibility of accidental cross infection), and also may be used for vaccinating animals being exported to countries where their import regulations require it. So long as the country remains free of rabies the Government do not propose to permit the use of rabies vaccine in any other circumstance.

2.8. Rabies in Hungary. by Lajos Dénes

Hungary has been free of rabies -from 1937 to 1954-, except for 2 years after the second World War. Between 1954-1967, the disease was observed only sporadically in border provinces to Czechoslovakia amongst foxes.

Since 1967, rabies became endemic in Hungary. During the last ten years, between 1967-1976, a total of 4808 cases were recorded, 90.5 % of them in foxes. The epidemic appeares to be characteristically cyclic. Two years of low incidence are followed by two years of high incidence. The annual cycle is constant: most cases occur in March and April, and a minimum is recorded in July and August.

Measures for control of rabies:

- (a) Annual compulsory vaccination of dogs.
- (b) Vaccination of cats on a voluntary basis is propagated in affected areas.
- (c) Annual gassing of fox dens in infected areas.
- (d) Increased rewards for shooting of foxes.
- (e) More public information and education campaigns on the disease.

For 1977 case data see pages 22-23.

2.9. Rabies in Italy. by A. Mantovani

Italy has been free from urban rabies since March 1973, when last cases were reported in Calabria (Southern Italy). Northern Italy has been free since 1957 and Central Italy since 1970. Cases of rabies were reported in foxes in Sicily in 1960 and 1963; no other reports were made since then following an energetic fox control campaign (see Bellani et al., 1976, XLIVth General Session of the O.I.E. Committee. Paris, 17-22 May 1976. Report N $^{\circ}$ 225).

Sylvatic rabies entered Italy in February 1977, when first cases were observed in the municipality ("Comune") of Predoi bordering with the infected area of LIENZ/Austria. The infection gained access during a period of heavy snow, at an altitude of about 2.800 m. Since then, 26 cases were reported in foxes and 3 in roe deer, involving 3 municipalities in the province of Bolzano.

Control measures consist mainly of enforcement of the control of stray dogs and cats throughout the Country: in the northern border Regions (Pedmont, Val d'Aosta, Lombarida, Veneto, Trentino-Alto Adige, Friuli-Venezia Giulia) all dogs are vaccinated as well as domestic ruminants on pasture in the infected areas of the following provinces: Como, Sondrio, Novara, Belluno, Bolzano, Udine, Pordenone, Trieste, Gorizia, Trento. In the rest of Italy, dogs are vaccinated in the Regions of Abruzzo, Molise, Campania, Calabria, Sicily and in the province of Rome. Vaccination on a voluntary basis is performed in other Regions.

A better control of foxes and other wild carnivores (including dogs and cats run wild) is being studied.

The Istituti Zooprofilattici of Padua, Brescia and Turin, serving the northern border Regions, have facilities to perform diagnostic tests by immunofluorescence and mouse inoculation.

2.10. Rabies in Luxembourg. by Al. Schiltges

Control measures presently in effect are the following:

- (a) The whole country is declared observation zone.
- (b) Dogs must be tied up and cats may not ramble around. Dogs may be kept on leash. Exceptions are granted for police-, hunting- and for sheepdogs.
- (c) Dogs older than 3 months have to be vaccinated against rabies.
- (d) Stray dogs and cats are captured. If this is impossible they may be shot off.
- (e) Virus vectors such as foxes are killed by gas under the supervision of the administration.
- (f) Carcasses of suspicious animals must be transported to the veterinary diagnostic laboratory.
- (g) Dogs and cats imported from other countries must be vaccinated at least since 30 days and not more than 12 months for dogs and 6 months for cats.
- (h) Holdings where a suspect or sick animal was held have to be desinfected.
- Quarantine time is 100 days for dogs, cats, sheep and goats, and 6 months for horses and bovines.

The rabies trend for 1977 is significantly decreasing. For case data see pages 16-17.

2.11. Rabies in the Netherlands.

In August 1974, the first case of fox rabies was confirmed in Sellingen, Province of Groningen, only a few hundred meters from the German border, Kreis Aschendorf-Hümmling. During 1975, 17 foxes were found rabid in the same and a neighbouring province (Groningen and Overijssel). In 1976, another outbreak started in southern Limburg (border area of Kreis Aachen, DEU) involving 20 foxes, 9 mustelides and 1 sheep (total 32 cases). In 1977, only 1 case of fox rabies was reported in Limburg (page 16).

2.12. Rabies in Poland. by Jan Kołacz

<u>Past:</u> In the beginning of 1945, rabies was spread among domestic animals, mostly dogs. In 1949, state regulations were issued for the compulsory mass vaccination of dogs all over the country. This program has still been in operation. The number of rabid dogs and domestic animals decreased markedly from 3744 cases in 1949 to 65 in 1956.

During the years 1948-1956 sporadic outbreaks of rabies were recorded among wild life animals (1-7 cases per year). Since 1957 the incidence has become more serious, especially in foxes. In the years 1957-1967 there were about 100 cases of rabies per year. Since that time the number of outbreaks among wild animals increased and in 1975 reached its highest peak with 1328 cases.

Present: In the first half of 1977 the rabies incidence was highest in the provinces of Torun, Warszawa, and Bydgoszcz (Bromberg). Proportionally, more rabies was recorded in the western and southern provinces (border areas to DDR, CSR and SSR) than in Central or south east Poland. No rabies occurred in the provinces of Konin, Lodz, Piotrkow, Przemysl and Sieradz. See pages 26-29.

The counteract such a situation we put into operation a special state regulation. Since 1962 in areas where rabid animals have been found the official veterinarian, taking into consideration the individual living patterns of particular species of wild animals existing in the area concerned, sets up infected and suspected zones of control areas. In an infected zone we order to keep perfectly calm, it means no shooting, no hunting, no trapping etc. In a suspected zone that surrounds an infected area we permit individual shooting of suspected animals.

2.13. Rabies in Switzerland. by F. Steck

After being free of wildlife rabies since the middle of the last century, Switzerland was invaded in 1967 by epizootic fox rabies moving through Germany. The proportion of rabid animal species remained more or less the same through the last ten-year period: 83 % in foxes, 12 % in other wildlife (3 % badgers, 3 % stone martens, 6 % roe deer and small numbers of other wild animals) and 10 % in domestic animals (cattle, sheep, cats, rarely in dogs and other animals).

Dog vaccination is compulsory at the owner's expense and has proven to offer very good protection. Of a total of 30 rabid dogs in 10 years, only 3 were vaccinated. Even with as few as 200 rabid feline cases in 10 years, cats are the most important danger for man.

The rabies front invading Schaffhausen in 1967 and spreading in a ring-like fashion, was stopped in its westward movement between 1969 and 1974 by drastic fox reduction. A second move westward swept through the Jura in 1975/1976. In the same time rabies reached the western parts of Switzerland through France. Today only four cantons (Fribourg, Wallis, Ticino and Geneva) have not been reached yet by rabies. Certain alpine valleys became free again of rabies after a short epizootic. In the other areas rabies incidence fluctuates in three to five-year cycles.

For 1977 case data see pages 24-25.

4. MISCELLANEOUS

Rabies in North America.

<u>USA:</u> A total of 995 rabies cases were reported from July to September 1976. Wildlife rabies represented 91.3 % (908) of all cases. Bats accounted for 45.5 % (453), skunks for 32.5 % (328), raccoons for 7.5 % (75) and foxes for 4.4 % (44), dogs for 1.6 % (16) cats for 3.3 % (33) and cattle for 3.1 % (31). Skunks, the species most often reported as having rabies were placed 2nd by the dramatic increase of bat rabies in 1976 (1st quarter 15 bats, 2nd quarter 138 bats, and 3rd quarter 453 bats).

Canada: The data for the same time period read as follows. Total rabies cases: 374. Wildlife cases 78.1 % (292), foxes 47.9 % (179), skunks 17.1 % (64), bats 12 % (45), dogs 3.2 % (12), cats 4.5 % (17), cattle 9.1 % (34), horses 3.5 % (13). (quoted from CDC: Rabies Surveill., March 1977).

Rabies in a pre-immunized Laboratory Worker.

New York has recently reported a case of rabies in a pre-immunized laboratory technician, possibly infected with an attenuated strain of rabies virus by the inhalation route. The technician appears to be improving.

On April 14, 1977, the patient, 32-year-old male technician who worked in the rabies laboratory of the New York State Department of Health, developed malaise and headache and was sent home from work. Over the next 4 days he felt well in the morning but by afternoon had chills, fever, and nausea. On April 18, he felt weak and was febrile. On April 19, the patient was lethargic and intermittently delirious.

On April 21, the patient fell into deep coma. Between April 22 and May 3, the patient was treated with anticonvulsants and provided with intravenous fluids, mechanical respiratory assistance, and intensive medical care. Since May 4, the patient has shown gradual but noticeable improvement.

The diagnosis of rabies was made on the basis of antibody level rise. Serum antibody rabies titers by tissue culture neutralization test were, on April 21-1:16, April 25-1:32, and May 5-1:64,000. Cerebrospinal fluid rabies antibody titer on May 12 was 1:16,225.

This patient had been pre-immunized against rabies in 1968. After that he had annual boosters. The most recent booster was given in November 1976; 2 weeks later he had an antibody titer of 1:32.

No accidental exposure to rabies is known to have occurred with one exception. During the 3-day period March 30-April 1, the patient was engaged in research which involved spraying suspensions of modified live rabies virus in a pharmaceutical manufacturing machine. It is known that some leakage occurred during the operation of the machine and that the patient probably inhaled an unknown quantity of the virus between March 30-April 1. (quoted from Morbid. Mortality, Vol. 26, No. 22, June 1977).

Research Reports.

It is a widespread experience that fox control operations such as gassing of dens have usually a more pronounced effect on the badger than on the fox. It was repeatedly expressed that this type of rabies control operations may eventually result in an extinction of this animal species. In this context a very recent study by MOEGLE, H. and KNORPP, F. (On the Epidemiology of Wildlife Rabies: Observations about the Badger (Meles meles). Zbl. Vet. Med., Reihe B, in press) has brought into evidence some interesting facts.

- (a) Rabies itself reduced the badger population, as estimated from hunting records in Baden-Würtemberg, to 10 % of the original density.
- (b) Gassing of fox dens without existing rabies reduced the badger population less severely.
- (c) Rabies plus den gassing also resulted in an average reduction to 10 %, in some areas occasionally more. Persistent rabies epidemics and continuous gassing operations regularly leave the badger population at a constant level amounting to 10 to 13 % of the original population.
- (d) In the epidemiology of wildlife rabies the badger is more of a victim than an active participant.

HDC Vaccine licenced in Germany.

Since January 20, 1977, the inactivated Antirabies Human Diploid Cell Vaccine of Mérieux, Lyon, France, has been licenced for human use in the Federal Republic of Germany. For pre-exposure immunization 3 subcutaneous injections are recommended on days 0, 7, and 21. For post-exposure treament, 4 injections on day 0, 3, 7 and 14 plus two booster inoculations on days 30 and 90 are recommended. The vaccine is the supernatant from rabies virus infected cell cultures, inactivated by BPL and concentrated approximately 10fold by ultrafiltration.

A similar product, however, concentrated and partially purified by continuous, high-speed density gradient centrifugation is presently prepared by Behringwerke, Marburg, Germany.

Rabies Meetings.

25.8.1977 / Muttenz, Switzerland Tollwut und Tollwutbekämpfung.

Two recent human rabies cases occuring in Switzerland stirred the public and raised concern among physicians. The meeting sponsored by medical societies of Basel and surroundings is held to discuss recent progress achieved in the field of rabies.

26.-28. October, 1977 / Bozen-Südtirol-Italy European Congress on "Wildlife Rabies".

Programme: 1. Presence and importance of rabies in different European countries.

- 2. The role of the fox and national control programmes.
- 3. Vaccination of foxes.
- 4. New methods of pre- and post-exposure treatment in man. The meeting is held by the Italian Society of Veterinary Medicine and is organized by Prof. L. Nardelli, Brescia and Dr. A. Ruatti, Bozen.

15.-19. November 1977 / Frankfurt am Main, Germany 2nd European Conference on the Surveillance and Control of Rabies. Provisional Programme:

- 1. The problem of rabies in the European Region.
- 2. Epidemiology and ecology of rabies.
- Surveillance of rabies.
- Control of rabies in wildlife, domestic animals, and prevention in man.
- 5. Economic aspects of rabies and its control.

The conference is organized by the WHO Regional Office for Europe, Copenhagen/Denmark in co-operation with the German Federal Ministry of Youth, Family and Health.

21.-23. November 1977 / Marburg, Germany WHO/IABS Joint Symposium on Standardization of Rabies Vaccines for Human Use Produced in Tissue Cultures.

Scientific Programme:

- 1. New developments in rabies vaccines for human use.
- 2. Results of human trials.
- 3. The testing of vaccines.
- 4. Reference preparations.

The meeting is the 3rd in line following the International Symposium on Rabies, Talloires (France) May 27-30, 1965 and the 2nd International Symposium on Rabies, Lyon (France) December 9-11, 1972.

Organizing Committee: F.T. Perkins, Geneva, M. Majer, Marburg and R. Lang, Lyon.

Europe: Rabies Cases (a) 1.1. - 31. 3. 1977

1.4. - 30. 6. 1977

СО	D E			D C	MES	тіс	ANIMA	LS			WILI	W	ANIMAL	S		CASES	
	NAME		DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDE	DEER	OTHERS	TOTAL	HUMAN CAS	TOTAL
AUT		(a) (b)	3	32 13	6 11	1 1	6 8	1 -	49 36	630 492	42 78	10 13	120 63	1	803 647	-	852 683
BEL		(a) (b)	-	5 3	13 4	2	1 1	-	21 8	14 5	-	-	1	-	15 5		36 13
CSR		(a) (b)	3 4	3	-	-	-	-	6 7	105 74	1 3	- 1	1	- 1	107 80	-	113 87
DEN	Denmark (a +	b)							0		I I				0		0
DEU		(a) (b)	47 32	62 36	47 29	13 10	16 8	1 1	186 116	1396 770	22 23	64 43	119 65	28 17	1629 918	-	1815 1034
FRA		(a) (b)	13 11	21 20	48 28	5 3	12 11	-	99 73	451 263	11 4		6 1	4 15	472 283		571 356
GBR	Great Britain(a +	b)							0			1			0		0
HUN		(a) (b)	4	7 18	1 5	-	2 5	2	16 34	202 127	- 1	1	-	2	205 132		221 166
ITA		(a) (b)				 	 		0	3 23	-	-	- 3	-	3 26		3 26
LUX		(a) (b)	1 1	= -		-	-	-	1	9 5	-	-	-	-	9 5		10 6
NET		(a) (b)							0	1	_	-	New C	-	1 0		1
POL		(a) (b)	24 17	29 51	7 17	-	1 2	-	61 87	190 93	4 6	2 5	26 32	14 29	236 165		297 252
SWI		(a) (b)	3 2	17 14	12 3	_	14 9	2 -	48 28	249 153	6 16	4 5	18 5	3 -	280 179	2 -	330 207
	Total	(a)	98	176	134	21	52	6	487	3250	86	81	291	52	3760	2	4249
	Total	(b)	76	158	97	14	44	1	390	2005	131	68	170	66	2440		2830

Europe: Rabies Cases 1.1. - 30.6.1977 (a) Totals

(b) Percent

											TAXABLE CONTRACTOR					
C 0 D F			D O	MES	тіс	ANIM	ALS			WIL	D S	ANIMA	LS		CASES	
CODE		DOGS	CATS	CATTLE	HORSES	SHEEP GOATS	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CAS	TOTAL
AUT Austria	(a		45 2.9	17 1.1			1	85 5.5	1122 73.1	120 7.8	23 1.5	183 <i>11.9</i>	2	1450 94.5		1535
BEL Belgium	(a <i>(b</i>		8 16.3	17 34.7	2 4.0	2 4.0	-	29 59.2	19 38.8	-	-	1 2.0	-	20 40.8		49
CSR Czechoslova	kia (a <i>(b</i>		3.0	-	=	-	-	13 6.5	179 89.5	2.0	1 0.5	2 2.0	1	187 <i>93.5</i>	-	200
DEU Fed.Rep.Ger	many (a		98	76 2.7		24 0.8	2	302 10.6	2166 76.0	45 1.6	107 3.8	184 6.5	45	2547 89.4		2849
FRA France	(a <i>(b</i>	2.1	41	76 8.2		23 2.5	-	172 18.6	714 77.0	15 1.6		7 0.8	19	755 <i>81.5</i>		927
HUN Hungary	(a <i>(b</i>	(I)	25 6.5	6 1.6		7 1.8	2	50 12.9	329 85.0	1 0.3	2 0.5	-	5	337 87.1		387
ITA Italy	(a <i>(b</i>			!				0	26 89.7	-	-	3 10.3	-	29 100.0		29
LUX Luxembourg	(a <i>(b</i>		-	-	-	-	-	2 12.5	14 87.5		-	-	-	14 87.5		16
NET Netherlands	(a <i>(b</i>				! !			0	1	-	=	-	-	1		1
POL Poland	(a <i>(b</i>			24 4.4		1	-	148 26.9	283 51.6		7 1.3	58 10.6	43 7.8	401 73.1		549
SWI Switzerland	(a		1	15 2.8		23 4.3	2	76 14.2	402 74.9	22 4.1	9 1.7	23 4.3	3	459 <i>85.5</i>	2	537
Total		174 2.5	334	231		96	7	877	5255 74.2	217 3.7	149 2.1	461 6.5	118	6200	2	7079
tercent Average		2.5	i 4./	1 0.0	0.5	1.3	i <i>0.1</i>	12.4	74.2	0.7	4.1	0.5	1.7	87.6		

CODE		D O	MES	TIC	ANIMA	LS				WIL		ANIM	ALS		CASES	HATE
NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL		FOXES	BADGERS	OTHER	DEER	OTHERS	TOTAL	HUMAN CA	TOTAL
V 2 Bregenz V 3 Feldkirch V 4 Dornbirn	-	1 1	-	-	 	-	1 0		6 2 4	1 1	1	3 -	-	9 4 6		10 4 7
T 2 Innsbruck T 3 Kitzbühel T 4 Kufstein T 5 Landeck	-	2	-	-	-	-	0 0 2		5 2 - 1	2	-	1 1 5	-	6 3 7 1		6 3 9 1
T 6 Lienz T 7 Reutte T 8 Schwaz	1 -	4	-	-	-	1	5 0 2		53 6 11	1 1 2	1 -	8 2 1	-	63 9 14		68 9 16
S 1 Hallein S 2 Salzburg-Land S 3 St. Johann	-	2 1 10	1 - 2	- - 1	- - 4	-	3 1 17		60 31 184	4 5 16	2 3 2	13 7 42	1 -	79 47 244		82 48 261
S 4 Tamsweg S 5 Zell am See K 1 Hermagor	-	1	3	-	2	-	6		6 22 1	1 -		14	-	7 36		7 42 1
K 4 Spittal/Drau ST 11 Liezen	=	2	-	-	-	-	2		64 38	2	-	14	-	80 42		82 43
O 1 Braunau O 4 Gmunden O 14 Vöcklabruck	_	3	- 	-	- 	-	3 0 0		15 32 1	1 -	1 -	3 2 -	-	18 36 1		21 36 1
N 14 Neunkirchen N 19 WR.Neustadt B 1 Eisenstadt			 		 		0		1 1 7	-	-	- -	-	1 1 7		1 1 7
B 2 Güssing B 3 Jennersdorf	1	1	-	-	-	-	2		10 2	2	_	-	-	12		14 2
B 4 Mattersburg B 5 Neusiedler See B 6 Oberpullendorf B 7 Oberwart	1	1 -	-	-	-	-	1 1 0		1 10 42 12	- - 1	-	- - - 1	-	1042		2 11 42
Total	3	32	6	1	6	1	49	-	630	42		120	1 1	803		15 852

CODE		DO	MEST	IC	ANIMA	LS			WIL		ANIM	ALS		ES	
NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
V 1 Bludenz V 2 Bregenz V 4 Dornbirn	-	- 1	1	-	-	-	0 1	2 8 4	- 2 1	-	- 2 -	-	12 5		2 13 5
T 1 Imst T 2 Innsbruck T 4 Kufstein							0 0	- - 2	1 1 -	-	- 1	-	1 1 3		1 1 3
T 6 Lienz T 7 Reutte T 8 Schwaz	1 -	3 1 1	2 -	-	- - -	-	6 1 1	77 4 3	9 1 1	1 -	9 3 -	-	95 9 4		101 10 5
S 1 Hallein S 2 Salzburg/Umg. S 3 St. Johann S 4 Tamsweg	-	2 - 3	1 2	- 1	- 8	-	2 1 14	24 17 105 34	2 22 4	1 1 2	9 1 19	-	42 21 148 39		44 22 162
S 5 Zell am See O 1 Braunau		2	 -	-	<u> </u>	-	0 2	11 18	2	3	1 1 -	- - -	14		39 14 24
0 4 Gmunden 014 Vöcklabruck K 1 Hermagor				! ! !	<u> </u>		0	49 1 1	5	-	4 -	-	62		62
K 4 Spittal/Drau ST 11 Liezen ST 13 Murau	<u> </u>	1	5	-	-	-	0	25 67 8	11	1 - -	10 2 -	1 -	39 80 8		45 80 8
N 14 Neunkirchen N 19 Wr. Neustadt B 1 Eisenstadt	-	! !		i !	<u> </u>		0	2 2	1 -	- -	- - -	- -	2 2		1 2 2
B 2 Güssing B 3 Jennersdorf B 4 Mattersburg B 5 Neusiedler See	1	-	-	-	-	-	0 0 1	8 - 1 1	1 1 1	-	-	-	9 1 2 1		9 1 3
B 6 Oberpullendorf B 7 Oberwart	1	-	-	-	-	-	0 0	9	1	-	1 -	-	10		1 10 11
Total	3	13	11	1	8	-	36	492	78	13	63	1	647		683

		D (MES	TIC	C ANIM	IALS			WIL		ANIM	ALS		S	-
CODE	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
BEL BELGIUM Lg Liége Lug Luxembourg Nr Namur Total	-	- 4 1	1 6 6	1 1 -	- 1 -	1 1 1	2 12 7	5 7 2		-	- 1 -	-	5 8 2		7 20 9
NET NETHERLANDS Limburg	=====			==== 	+=====================================		0	1	====== 			-	1		1
LUX LUXEMBOURG 0609 Troisvierges 0404 Niederanven 0001 LuxbgLand 0601 Asselborn 0402 Contern 0908 Mecher Total	1 1		-			-	0 0 0 0 0 1	1 3 3 1 1	-		-		1 3 3 1 1 0		1 3 3 1 1 1 1
ITA ITALY 39030 H- Predoi 39032 Campo tures T o t a 1							0 0	2 1	-	-	-	-	2 1		2 1 3

CODE		D (MES	TIC	C ANIM	MALS			WIL		ANIM	IALS		S	
NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
BEL BELGIUM Lg Liége Lug Luxembourg Nr Namur	1 1 1	1 2 -	1 2 1	-	1		2 5 1	1 4	-	-	-	-	1 4 0		3 9 1
Total	-	3	4	-	1	-	8	5	-	_	-	-	5		13
LUX LUXEMBOURG 0911 Wiltz 0001 Luxembourg-Land 0404 Niederanven 0406 Schuttrange 1303 Lenningen 1300 Bous	1	-	-	-	-	-	1 0 0 0 0 0	1 1 1 1		- - - -		- - - -	0 1 1 1 1		1 1 1 1 1
Total	1	-	-	-	-	-	1	5	-	-	-	-	5		6
ITA ITALY 39030 H- Predoi 39030 S- Valle Aurina 39032 Campo Tures							0 0	1 20 2	-	-	- 3 -	-	1 23 2		1 23 2
Total	-	-	-	_	-	-	0	23			3		26		26

C (DE		D O	MES	TIC	C ANII	MALS			WIL	S	ANIM	ALS		ES	
	NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
010	Schleswig-Holstein	3	1	2	1	-	-	7	76	1	1	4	4	83		90
020	Hamburg				į			0		i	1			0		0
031	Hannover	-	1	2	i –	-	-	3	17	-	-	1	3	21		24
032	Hildesheim	3	-	1	1	2	-	7	23	-	-	5	3	31		38
033	Lüneburg	2	4	6	-	i -	-	12	43	-	1	3	3	50		62
034	Stade	1	-	2	i -	-	-	3	4	-	1	-	-	5		8
035	Osnabrück	-	-	2	i -	i -	-	2	49	-	-	-	2	51		. 53
036	Aurich			į	į	į	i	0	1	-	i -	-	-	1		1
037	Braunschweig	1		į	į	į		0	2	-	-	4	-	6		6
038	Oldenburg				į	i		0	9	-	-	1	-	10		10
040	Bremen							0						0		0
051	Düsseldorf							0	1	-	-	-	-	1		1
053	Köln	1	-	1	2	1	-	5	13	-	1	1	-	15		20
055	Münster				į			0	10	-	-	-	-	10		10
057	Detmold	1	3	-	i -	-	-	4	16	-	1	1	1	19		23
059	Arnsberg			į	ĺ	1		0	23	2	3	11	-	39		39
061	Darmstadt	8	8	10	6	. 3	-	35	163	-	7	25	2	197		232
062	Kassel	4	5	3	-	1	-	13	66	-	6	7	1	80		93
071	Koblenz	2	12	4	1	9	-	28	71	3	-	2	-	76		104
072	Trier	2	3	-	i -	-	-	5	13	1	1	2	5	22		27
073	Rheinhessen-Pfalz			į				0	1	-	-	3	-	4		4
081	Stuttgart	5	2	-	1	-	-	8	91	3	1	-	-	95		103
082	Karlsruhe	2	4	1	-	-	-	7	123	3	3	9	-	138		145
083	Freiburg	- 1	3	-	-	-	-	3	105	2	4	5	-	116		119
084	Tübingen	-	2	4	i -	-	-	6	51	-	1	5	-	57		63
091	Oberbayern	3	2	3	1	-	-	9	114	5	7	18	1	145		154
092	Niederbayern	3	2	-	-	- 1	-	5	79	1	6	2	-	88		93
093	Oberpfalz	2	3	-	-	-	-	5	66	-	4	3	-	73	X 4	78
094	Oberfranken	1	2	1	-	-	-	4	35	-	4	-	-	39		43
095	Mittelfranken		V-37			1	100	0	18	-	-	-		18		18
096	Unterfranken	3	-	-	-	-	-	3	38	-	3	3	2	46		49
097	Schwaben	1	5	5	-	-	1	12	70	1	8	7	1	87		99
100	Saarland							0	5	-	1	-	-	6		6
110	Berlin				!			0			1	!	!	0		0
	Total	47	62	47	13	16	1	186	1396	22	64	119	28	1629		1815

			D	OMES	STI	C ANIM	MALS			WIL	D	ANIM	ALS			
СО	NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
010	Schleswig-Holstein	2	-	6	+	1 -	1 1	1 9	48	-	3	_	2	53		62
020	Hamburg	12	-	1 -	1	+	1	10	10		!		-	! 0	-	0
031	Hannover	+	 	i	1	 	!	1 0	9	-	-	-	1	10		10
032	Hildesheim	_	-	1	1	i -	i -	2	8	1	1	2	2	14		16
033	Lüneburg	3	2	_	2	-	i -	7	39	_	1	5	5	.50		57
034	Stade	1	-	i -	1	i -	į -	2	1	-	-	-	-	1		3
035	Osnabrück	_	-	-	-	j -	i -	-	5	-	-	-	-	5		5
036	Aurich		1	į	Ì	į	į		T	į						0
037	Braunschweig		1	i	į	į	į		9	-	-	-	-	9		9
038	Oldenburg		i i	1	į	į	i	. 0	3	-	-	-	-	3		3
040	Bremen		1	1	1		1	0			!			0		0
051	Düsseldorf				T	1	1	0						0		0
053	Köln	-	3	5	-	-	¦ -	8	11	1	1	3	-	16		24
055	Münster		1	1	!	1	1	0	3	-	i -	1	-	4		4
057	Detmold	1	-	-	! -	-	- 1	1	16	-	1	-	1	18		19
059	Arnsberg	-	-	2	-	4	-	6	10	-	-	13	<u> </u>	23		29
061	Darmstadt	3	5	2	1	-	T -	11	46	2	5	10	-	63		74
062	Kassel	4	2	4	1 1	1 2	¦ -	13	46	2	1 3	4	2	57		70
071	Koblenz	3	3	2	-	1	-	9	30	2	2	1	-	35		44
072	Trier	1	-	-	-	-	-	1	12	-	i -	1	1	14		15
073	Rheinhessen-Pfalz	_	<u> </u>	-	<u> - </u>	1	l -	1	2	<u> </u>				2		3
081	Stuttgart	4	4	1	1	-	-	10	44	4	2	4	-	54		64
082	Karlsruhe	-	2 3	1	-	-	-	3	75	3	3	5	-	86		89
083	Freiburg	3	3	2	i -	! -	-	8	87	4	5	6	-	102		110
084	Tübingen	1	i -	1	1	<u> </u>	-	3	31	1	3	2		37		40
091	Oberbayern	2	3	-	2	-	-	7	81	1	7	3	-	92		99
092	Niederbayern	-	1	-	-	-	-	1	33	1	1	-	-	35		36
093	Oberpfalz	2	3	i -	i -	-	i -	, 5	32	-	4	2	-	38		43
094	Oberfranken	1	1	-	i -	-	i -	2	18	-	i -	-	3	21		23
095	Mittelfranken		İ	i	į	1	į	0	12	-	-	-	-	12		12
096	Unterfranken	-	1	i -	-	-	-	1	25	-	-	1	-	26		27
097	Schwaben	1	i 3	2	-	-	-	6	33	1	1	2		37		43
100	Saarland		<u> </u>		<u> </u>	1	i	0	1	-	-	-	-	1		1
110	Berlin		-		<u> </u>		<u> </u>	0						0		0
	Total	32	36	29	10	8	1	116	770	23	43	65	17	918		1034

F R A N C E : Rabies Cases 1.4. - 30.6.1977

	e = 2		D	OMES	TIC	C ANIM	ALS			WI	L D	ANIM	IALS		ES	
0 1	NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAI
01	Ain	1	_	-	_	-	-	1	14	2	-	-	-	16		17
02	Aisne	1	1	1	_	1	-	4	40	_	- !	_	-	40		44
08	Ardennes	1	_	2	-	1	-	4	3	-	.	_	1	4		8
10	Aube							0						0		0
21	Côte d'Or	- !	1	-	-	-	-	1	4	-		_	1	5		6
25	Doubs	2	3	_	1	-	-	6	9	-	. !	-	2	11		17
39	Jura	-	5	1	-	1	-	7	49	1		-	2	52		59
51	Marne	-		2	-	-	-	2	7	-	-	1	-	8		10
52	Marne (Haute)	1	-	-	-	į -	-	1	3	-	. !	-	1	4		5
54	Meurthe-et-Moselle	2	1	4	-	2	-	9	24	-	. !	-	1	25		34
55	Meuse	1	2	14	1	1	-	19	14	-	-	-	-	14		33
57	Moselle	- 1	1	2	-	1	-	4	13	-	-	-	-	13		17
58	Nièvre	į			i	İ		0	1	-	-	-	-	1		· 1
60	Oise	- 1	1	-	1	-	-	2	10	-	-		-	10		12
67	Rhine (Bas)	- }	1	-	-	-	-	1	3	-	. :	-	1	4		5
68	Rhine (Haut)	- 1	1	1		! -	-	2	28	1	.	-	3	32		34
70	Saône (Haute)	-	-	1	-	-	-	1			1			0	T	1
71	Saône-et-Loire	-	1	-	-	3	-	4	6		-	-	-	6		10
77	Seine-et-Marne			! !	l L			0	7	-	-	-	-	7		7
80	Somme	-	1	-	-	-	-	1	5	-	-	_	-	5		6
88	Vosges	-	1	-	l -	1	-	2	6	-	-	-	-	6		8
89	Yonne	2	-		<u> </u>	<u> </u>	<u> </u>	2	7	-			2	9		11
90	T. Belfort			3				0	10	-		-	1	11		11
	Total	11	20	28	3	11	-	73	263	4		1	15	283		356

2 0 D E			D	OMES	TI	C ANIM	IALS			WI	L D	ANI	MALS		S	
NA	МЕ	DOGS	CATS	CATTLE	HORSES	SHEEP GOATS	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDE	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAI
O1 Ain		,						0	1	1	-	_	-	2		2
02 Aisne		4	3	2	-	-	- !	9	31	-	- 1	-	-	31		40
08 Ardenn	es	1	-	5	-	-	-	6	8	-	-	-	-	8		14
10 Aube							1	0	6	-	- 1	-	7 - 1	6		6
21 Côte d	'Or	2	2	-	-	-	-	4	9	1	- 1	_	-	10		14
25 Doubs		-	2	1	-	5	- !	8	38	1		4	2	45		53
39 Jura								0	113	2	-	-	-	115		115
51 Marne		-	1	1	-	-	-	2	9	-	- 1	-	-	9		11
52 Marne	(Haute)						-	0	2	-	-	_	-	2		2
54 Meurth	e-et-Moselle	2	3	7	_	3	- 1	15	53	1	- 1	_	-	54		69
55 Meuse		. 1	3	25	3	2	- 1	34	38	_		-	1	39		73
57 Mosell	е	-	2	1	-	_	- 1	3	4	-	.	-	1	5		8
58 Nièvre							ŀ	0	5	-	- 1	-	-	5		5
60 Oise								0	6	-	- 1	-	-	6		6
67 Rhin (1	Bas)						i	0	5	-	-	-	-	5		5
68 Rhin (1	Haut)	2	-	4	-	1	- 1	7	50	1	-	2	-	53		60
70 Saône	(Haute)	-	2	-	-	1	- 1	3	5	-	- 1	-	-	5		8
71 Saône-	et-Loire						- 1	0	8	1	-	-	-	9		9
77 Seine-	et-Marne						- 1	0	4	-	-	-	-	4		4
80 Somme								0	2	-	- 1	-	-	2		2
88 Vosges		1	-	2	1		-	4	12	-	-	-	-	12		16
89 Yonne		-	1	-	1-1		-	1	18	1	-	-	-	19		20
90 T. Bel	fort	-	2	-	1	-	-	3	24	2	-	-	-	26		29
Tot	a l	13	21	48	5	12	-	99	451	11		6	4	472		571

HUN

HUNGARY: Rabies Cases 1.4. - 30.6.1977

сог	. F		D	OMES	TIC	ANIM	ALS			WIL	S	ANIM	IALS		ES	- 4
C 0 1	NAME	DOGS	CATS	CATTLE	HORSES	SHEEP GOATS	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDE	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16.	Baranya Bács Békés Borsod Csongrád Fejér Györ Hajdu Heves Komárom Nógrád Pest Somogy Szabolcs Szolnok Tolna Vas Veszprém	2 - 1 1 3	2 1 1	- 3 - 1 - - -		2	-	13 3 0 3 0 0 0 3 1 0 0 7 1 1 0	18 16 3 7 2 7 3 3 6 5 4 2 6 4 1 2 5 29	1	- - - - 1 - - - - -		1 1 1 - 1	19 16 3 7 2 7 3 3 7 5 4 2 7 4 1 3 5		32 19 3 10 2 7 3 6 8 5 4 2 14 5 2 3 5
19. 20.	Zala Budapest	-	1	-	-	-	-	1	4	-	-	i – ! !	-	4		4 1
	Total	6	18	5		5	-	34	127	1	1	-	3	132		166

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HUN

HUNGARY: Rabies Cases 1.1. - 31.3.1977

COI) F		D C	MES	TIC	ANIM	ALS			MITI	S	ANIMA	ALS	2	CASES	
	NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDE	DEER	OTHERS	TOTAL	HUMAN CAS	TOTAL
1.	Baranya	_	_	1	-	1	1	3	6	_	-	-	_	6		9
2.	Bács		į			i		0	31	-	- 1	_	-	31		31
3.	Békés		į		i	į		0	3	-	- 1	-	-	3		3
4.	Borsod	1	2	-	-	-	-	3	23	-	i - i	-	-	23		26
5.	Csongrád	-	1	-	-	-	-	1	4	-	-	-	-	4		5
6.	Fejér		1			į		0	14	-	-	-	-	14		14
7.	Győr		!			1		0	29	-	-	-	-	29	1	29
8.	Hajdu	1	1	-	-	-	_	2	12	-		-	-	12		14
9.	Heves	1	1		1	- 1		0	12	-	-	-	1	13		13
10.	Komárom	1	-	-	-	-	-	1	5	-	-	-	-	5		6
11.	Nógrád		1		1	- 1		0	10	-	-	-	-	10		10
12.	Pest		l					0	16	-	-	-	-	16		16
13.	Somogy	1	1	-	-	1	-	3	-	-	1	-	-	1		4
14.	Szabolcs	-	1	-	-	-	-	1	4	-	-	-	1	5		6
15.	Szolnok	-	1	-	-	-	-	1	7	-	-	-	-	7		8
16.	Tolna					- 1		0	4	-	-	-	-	4		4
17.	Vas		į					0	10	-	-	-	-	10		10
18.	Veszprém	-	-	-	-	-	1	1	11	-	-	-	-	11		12
19.	Zala							0	1	-	-	-	-	1		1
20.	Budapest		į					0						0		0
	Total	4	7	1	-	2	2	16	202	-	1	_	2	205		221

Rabies Cases: 1.1. - 31.3.1977

								11							
CODE		DO	MEST	ric	ANIMA	LS			WI		ANII	MALS		CASES	
NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER	DEER	OTHERS	TOTAL	HUMAN CA	TOTAL
AUT AUSTRIA										 					
I. Burgenland II. Kärnten III. Niederösterreich	2	3 2	-	-	-	-	5 2	84 65 2	3 2	- - - -	1 14	-	88 81 2		93 83 2
IV. Oberösterreich V. Salzburg VI. Steiermark	-	3 14 1	6	- 1 -	6	-	3 27 1	48 303 38	1 26	1 7	5 76 2	1	55 413 42		58 440 43
VII. Tirol VIII. Vorarlberg IX. Wien	1 -	7 2	-	-	-	1 -	9 2	78 12	6 2	1	18	-	103		112 21
Total	3	32	6	1	6	1	49	630	42	10	120	1	803		852
SWI SWITZERLAND					 	 	== 		†===== ! ! ! !		T===== ! ! !	 	†=====: ! ! !	=====	
1 Aargau 3 Appenzell AI	-	1	-	-	-	-	1 0	8 -	2	-	-	-	10	1	12
5 Basel-Land 6 Bern 9 Glarus	1	5	1 7	-	3 10	2	25	3 72 1	1	1 -	9	2	84		8 109
10 Graubünden 11 Luzern	1	1	-	-	-	-	1 3	82 7	-	-	2	-	84 7	1	1 85 11
12 Neuenburg 17 Solothurn	-	4	1 1	-	-	-	5	25 7	1 -	- 1	4	1 -	31		36 9
18 St. Gallen 20 Thurgau 22 Waadt	-	2 2	- 2	-	-	-	2 4	12 7 13	-	1 1	2	-	12 10 15		12 12 19
24 Zug 25 Zürich	1	1	-	-	-	-	0 2	1 1 11	1 -	-	-	-	2		19 2 13
Total	3	17	12		14	2	48	249	6	4	18	3	280	2	330

CODE		D O	MES	TIC	ANIM	ALS			WIL	D S	ANIMA	LS		CASES	
NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CA	TOTAL
AUT AUSTRIA		! ! !			 						 				
I. Burgenland II. Kärnten III. Niederösterre IV. Oberösterreich V. Salzburg VI. Steiermark VII. Tirol VIII. Vorarlberg IX. Wien		1 2 5 5 -	- 5 - 3 2 1	- - 1	- - 8	-	2 6 0 2 17 0 8 1	30 26 2 68 191 75 86 14	4 2 1 6 38 11 13	- 1 - 7 4 - 1	1 10 - 4 31 2 13 2	- 1 - - - -	35 40 3 85 264 88 113 19		37 46 3 87 281 88 121 20
Total	3	13	11	1	8	-	36	492	78	13	63	1	647		683
SWI SWITZERLAND					 - - - - -										
1 Aargau 3 Appenzell AI 4 Basel-Stadt 5 Basel-Land 6 Bern 10 Graubünden 11 Luzern 12 Neuenburg 17 Solothurn 18 St. Gallen 20 Thurgau 22 Waadt 24 Zug 25 Zürich	1 1	1 1 2 3 - - 2 - 1 3	1 1		- 1 3 2 - 1 1 - 1	-	1 2 0 3 7 2 1 2 1 1 1 4	4 2 1 1 33 56 4 7 4 10 6 20	- - 2 3 4 1 - - 2 - 2 1 1	- - . 2 1 - 1 - 1	- - 1 1 2 - - 1	-	4 2 1 3 39 62 7 8 4 12 6 24 1		5 4 1 6 46 64 8 10 5 13 7 28 1
Total	2	14	3	-	9	-	28	153	16	5	5	-	179		207

	Ra	bie	s Ca	se	s: 1.1	31.3	.1977								·
		D C	MES	TIC	ANIMA	LS			WIL		ANIM	ALS		w	
CODE	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
POL POLAND		i !							į			į			
O1 Warszawa O3 Biala Podlaska O5 Bialystok O7 Bielsko Biala O9 Bydgoszsz 11 Chelm 13 Ciechanow 15 Czestochowa 17 Elblag 19 Gdansk 21 Gorzow 23 Jelenia Gora 25 Kalisz 27 Katowice 29 Kielce 31 Konin 33 Koszalin 35 Krakow 37 Krosno 39 Legnica 41 Leszno 43 Lublin 45 Lomza 47 Lodz 49 Nowy Sacz	1 2 4 3	1 8 - 1 2 1 1 2 1	- 4 - - - -	-			3 0 3 0 16 3 0 0 0 0 0 0 2 0 0 1 3 3 1 2 1 0 0	25 1 4 6 2 1 1 6 3 4 10 3 7 1 5 2 5 3 6	1 2	1	1 - 1 2	1 1 1	25 1 5 6 8 2 1 1 6 3 5 10 3 7 1 0 8 2 6 4 10 0 0 0 0 0 0		28 1 8 6 24 5 1 1 6 3 5 10 3 9 1 0 9 5 12 1
51 Olsztyn 53 Opole 55 Ostroleka 57 Pila 59 Piotrkow 61 Plock 63 Poznan 65 Przemysl	3 - 1	1 1 -	-	-	-	-	0 3 1 1 1 0 0	6 4 6	-	- -	4 -	2 -	6 11 6 0 1 0 6 0		6 14 7 1 2 0 0

Rabies Cases: 1.1.-31.3.1977

		D O	MES	TIC	ANIMA	LS		W	ILD		NIMALS	S		ES	
CODE	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
POL POLAND cont'd													1		
67 Radom 69 Rzeszow 71 Siedlce 73 Sieradz 75 Skierniewice 77 Slupsk 79 Suwalki 81 Szcecin 83 Tarnobrzeg 85 Tarnow 87 Torun 89 Walbrzych 91 Wloclawek 93 Wroclaw 95 Zamosc 97 Zielona Gora	1 - 3 1	- 1 2 3	3 -	-	- - - 1		0 0 0 0 1 4 5 0 0 4 0 0 1 0 1	1 1 7 5 12 1 3 3 12 - 7	- - 1 - - - -	-	- 4 - 8 - 4 -	- - 1 - - 7 - 1	1 0 1 1 11 6 21 1 3 14 12 1 7 0		1 0 1 1 12 10 26 1 3 18 12 1 8 0
Total	24	29	7	0	11	0	61	190	4	2	26	14	236		297
CSR CZECHOSLOVAKIA +) OO District of Prague O3 Central Bohemia O4 South Bohemia O2 West Bohemia O1 North Bohemia O5 East Bohemia O6 South Moravia O7 North Moravia	1 - 2	- 1	-	-	-	-	0 0 1 1 0 0	2 1 69 16 9	- 1 - -	-	- - - 1	-	0 2 1 70 16 10		0 2 1 71 17 10 0
Total	3	3	-	- I	-		6	105	1		1	-	107		113

⁺⁾ CSR only

CODE	y	D O	MES	T.I.C	ANIMA	ALS	11.		WII		ANIM	ALS		ES	
NAME	DOGS	CATS	CATTLE	HORSES	SHEEP	OTHERS	TOTAL	FOXES	BADGERS	OTHER MUSTELIDES	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
POL POLAND													l		
01 Warszawa 03 Biala Podlaska 05 Bialystok 07 Bielsko Biala 09 Bydgoszsz 11 Chelm	8 -	24 1	8 -	_			0 0 0 0 40	2 - 3 6 11	2	- - - 1	- - - 7	2 - 1 9	2 2 3 7 30 0		2 2 3 7 70 1
13 Ciechanow 15 Czestochowa 17 Elblag 19 Gdansk 21 Gorzow	1	2	-	-	-	-	0 2 0 1	1 1 3		-	- 1 -	-	0 1 2 3		0 2 1 3 3
23 Jelenia Gora 25 Kalisz 27 Katowice 29 Kielce 31 Konin	-	1 2	-	-	-	-	1 2 0	7 2 1		1 -	1 1 -	-	9 3 1 0		9 4 3 0
33 Koszalin 35 Krakow 37 Krosno 39 Legnica	1 -	- - 1	-	-	1 -	-	1 1 0 1	1 2 3 3	1	1 - - -	2 -	- - -	5 2 3 3		6 3 3 4
41 Leszno 43 Lublin 45 Lomza 47 Lodz 49 Nowy Sacz	_		-					1 6	-	-	-	1	4 0 2 0 6		4 0 2 0 7
51 Olsztyn 53 Opole 55 Ostroleka 57 Pila	1		1	1=	-	-	2 0	5	-	-	2	2	9 0 3		11 0 0 3
59 Piotrkow 61 Plock 63 Poznan 65 Przemysl		1	-	-	-	-	0 1	- 8	1 -		1	-	0 2 8 0		0 2 9

Rabies Cases: 1.4. - 30.6.1977

		D	OMES	TIC	ANIN	MALS			WI	Z D w	ANIM	IALS		S S	
CODE	DOGS	CATS	CATTLE	HORSES	SHEEP GOATS	OTHERS	TOTAL	FOXES	BADGERS	OTHER	DEER	OTHERS	TOTAL	HUMAN CASES	TOTAL
POL POLAND cont'd															
67 Radom 69 Rzeszow 71 Siedlce 73 Sieradz 75 Skierniewice 77 Slupsk 79 Suwalki 81 Szcecin 83 Tarnobrzeg 85 Tarnow 87 Torun 89 Walbrzych 91 Wloclawek 93 Wroclaw 95 Zamosc 97 Zielona Gora	1 - 1 2 - 2	- 1 1 15	2 - 5 - 1	-	- - 1	11 111	1 1 0 0 0 2 2 2 0 0 22 1 4 0	3 1 - 2 4 3 - 1 1 4	1	- - - 2 - -	- 1 1 14 - 1 -	1 1 1 1 - 11 -	2 0 0 0 4 3 2 0 3 31 3 1 1 1 1 4		3 1 0 0 4 5 4 0 3 53 4 5 1 1
Tota 1	17	51	17	-	2	-	87	93	6	5	32	29	165		252
CSR CZECHOSLOVAKIA +) OO District of Prague O3 Central Bohemia O4 South Bohemia O2 West Bohemia O1 North Bohemia O5 East Bohemia O6 South Moravia O7 North Moravia	2 1	2 -	-	-	-		0 0 4 1 0 0	6 1 27 26 2	- 1 1 1	- 1 - -	1	- - 1 - -	0 6 1 31 27 2 0		0 6 1 35 28 2 0
Total	4	3	-	-	-	-	7	74	3	1	1	1	80		87

⁺⁾ CSR only

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