

Rabies in South Africa. Occurrence and Distribution of Cases during 1933.

By W. O. NEITZ, B.V.Sc., and A. D. THOMAS, D.V.Sc.,
Veterinary Research Officers, Onderstepoort.

IN comparing the number of positive cases of rabies diagnosed in 1933 with those for the previous year Neitz and Thomas (1932), it will be found that there is a remarkable increase in the incidence of the disease not only in small wild carnivora (*Viverridae*) but also in human beings and domestic animals. The material sent in for laboratory examination is more than double that submitted in 1932. Out of the 48 specimens submitted for laboratory examination from various parts of the Union, 26 proved to be positive for rabies. In our previous report (1932) we were inclined to ascribe this rapid increase in the incidence of rabies more to realisation by the public of the potential danger of viverrids as carriers of rabies and hence more material being sent in for laboratory examination than to a definite spread of the disease. From the observations made during 1933, however, there is little doubt that rabies has spread to an extent that cannot be regarded as other than serious.

It is true that the country has been experiencing more than usually dry seasons lately which culminated this year in one of the worst droughts known. We have little or no knowledge of the habits, food supplies, and other factors affecting the life of our smaller wild carnivora, but it would certainly be very strange if they did not react in some way or other to such unprecedented adverse conditions. It is thus more than probable that migration in search for food must have taken place to a greater or lesser extent and so account for the greater spread of the disease.

It will be interesting in this respect to note the effects of the general and soaking rains which fell after November, 1933. It has been reported that numbers of meercats were drowned in their burrows as a result of the rains. Starvation, disease, possibly cannibalism may have accounted for a considerable additional number. With the return of normal food supplies more stable conditions may again prevail. If the drought has had anything to do with this increased incidence of rabies during the last two years it is probably safe to predict a corresponding decrease in rabies with the return to normal climatic conditions. This should in no way affect the very urgent need for research into the life-history and means of controlling the *Viverridae* in those areas known to be infected.

DISCUSSION OF THE CASES.

For the sake of convenience the relevant data are tabulated as in our previous report. In Table I will be found all available details of each positive case. Table II gives a summary of the distribution of the disease in the provinces and the species of animal affected. In Table III are given the details of cases examined with negative results.

It will be seen from Table I that whenever suitable material for histo-pathological examination was received Negri bodies were demonstrated with the exception of three cases, namely, 18, 25 and 26. It will be noted, however, that all three these animals were destroyed. The fact that the disease was not allowed to run its course may explain the difficulty or impossibility of finding Negri bodies. This illustrates once again the necessity of controlling by biological inoculation all suspected cases giving negative findings histologically.

The disease in human beings was transmitted once by a dog, twice by the domestic cat, twice by the yellow mungoose, and once by a wild cat (species not determined). The incubation period varied from 3 weeks to 3 months. The mode of transmission to the domestic animals in most cases was not determined, but it can be assumed that one or other member of the family *Fiverridae* was responsible.

The incubation period in rabbits used for the biological test varied from 8 to 21 days, usually with an average of 14 days. Cases 1 and 3 show rare exceptions in which the incubation period was 65 and 76 days respectively. Rabbit R. 1013 in Case 1 and Rabbit R. 1415 in Case 25 did not develop rabies in spite of the fact that their mates injected with the same material succumbed to the disease. Two rabbits R. 1362 (Case 23) and R. 1416 (Case 26), showed typical symptoms of the dumb form of rabies, but histologically no Negri bodies were demonstrated.

Case No. 18 is of special interest. The Government Veterinary Officer, Rustenburg, who sent this material from a calf examined by him investigated this outbreak on the farm Leliefontein approximately 60 miles from Rustenburg in the Ventersdorp district. He reports that this farmer had lost 9 calves and three cows over a period of 6 months. These animals were stated to have shown a peculiar gait, in some cases became aggressive, bellowing, frothing from the mouth and exhibiting increased sexual excitability. Later paralysis, coma and then death followed. The symptoms described by the owner of these animals are so typical that there is little doubt that they all contracted rabies and died from it in that period. It appears further that several colonies of meercats were established in close proximity to the kraal in which the cattle in question were kept.

DIFFERENTIAL DIAGNOSIS.

The reason for including Table III in the present report is to show as far as possible what other conditions have been encountered and have to be considered in differential diagnosis. Acute forms of

Case Number. Month.	LOCALITY.			Specimen No.	File No.	Material from.	Animal concerned in transmission.
	Province.	District.	Town or farm.				
Case 1..... February, 1933	O.F.S...	Boshof.....	Dealesville (Townlands)...	13846 G. 13847 F.	141/1393	<i>Cynictis penicillata</i>	—
Case 2..... February, 1933	O.F.S...	Boshof.....	Dealesville.....	14233 G. 14234 F.	141/19	<i>Cynictis penicillata</i>	—
Case 2..... March, 1933	O.F.S...	Edenburg.....	Edenburg (Townlands)...	15318 MS. 15319 G.	141/1146	<i>Cynictis penicillata</i>	—
Case 4..... March, 1933	O.F.S...	Trompsburg.....	Trompsburg (Townlands)..	15417 F. 15418 G.	141/310	<i>Cynictis penicillata</i>	—
Case 5..... April, 1933	O.F.S...	Bloemfontein.....	Bloemfontein (Townlands).	6 G. 7 F.	141/19	<i>Cynictis penicillata</i>	—
Case 6..... April, 1933	O.F.S...	Senekal.....	Maria.....	—	258/283	Native male, 8 years...	<i>Cynictis penicillata</i>
Case 7..... May, 1933	O.F.S...	Bloemfontein.....	Glen School of Agriculture.	2644 G. 2653 F.	141/18	<i>Cynictis penicillata</i>	—
Case 8..... June, 1933	O.F.S...	Trompsburg.....	Hamelfontein (Farm).....	3437 F. 3438 G.	141/310	Dog.....	—
Case 9..... June, 1933	O.F.S...	Trompsburg.....	Hamelfontein (Farm).....	—	141/310	Native male, 7 years...	Dog.....
Case 10..... June, 1933	O.F.S...	Fauresmith.....	Abrahamskraal (Farm)...	—	258/283	Native male.....	Wild cat, species not mentioned
Case 11..... June, 1933	Tvl.....	Lichtenburg.....	Damaskus, near Delarey- ville	3626 G.	128/179	<i>Cynictis penicillata</i>	—
Case 12..... June, 1933	Tvl.....	Ventersdorp.....	Kafferskraal (Farm).....	4038 G. 4039 F.	133/44	<i>Cynictis penicillata</i>	—
Case 13..... June, 1933	Tvl.....	Brakpan.....	Van Dyk Compound.....	—	—	European male.....	<i>Cynictis penicillata</i>
Case 14..... July, 1933	C.P.....	Mafeking.....	Knowle Park (Farm).....	4336 F.	126/2	<i>Genetta felina</i>	—
Case 15..... July, 1933	O.F.S...	Senekal.....	Heliophila (Farm).....	—	—	Native male (aged 12 years)	Cat (domestic).....
Case 16..... July, 1933	O.F.S...	Hoopstad.....	Wesselsbron (Townlands)..	4115 G. 4116 F.	141/2474	<i>Cynictis penicillata</i>	—
Case 17..... July, 1933	O.F.S...	Senekal.....	Resida (Farm).....	4679 G. 4680 F.	141/303	<i>Cynictis penicillata</i>	—
Case 18..... August, 1933	Tvl.....	Ventersdorp.....	Leliefontein (Farm).....	5098 F. 5099 G.	135/5	Calf.....	?
Case 19..... August, 1933	Tvl.....	Schweizer Renecke	Jalala (Farm).....	5458 F. 5459 G.	134/103	<i>Cynictis penicillata</i>	—
Case 20..... August, 1933	C.P.....	Vryburg.....	Crondale (Farm).....	5460 G. 5461 F.	144/82	Domestic cat.....	?
Case 21..... August, 1933	C.P.....	Vryburg.....	Crondale (Farm).....	5464 G. 5465 F.	144/82	Domestic cat.....	?
Case 22..... August, 1933	O.F.S...	Trompsburg.....	Trompsburg (Townlands)..	5738 F. 5739 G.	141/310	<i>Cynictis penicillata</i>	—
Case 23..... Sept., 1933	O.F.S...	Edenburg.....	Edenburg (Townlands)...	5862 G. 5863 F.	141/1146	<i>Cynictis penicillata</i>	—
Case 24..... October, 1933	O.F.S...	Hoopstad.....	Jeanette (Farm).....	—	—	European female.....	Domestic cat.....
Case 25..... Nov., 1933	O.F.S...	Kroonstad.....	Graspan (Farm).....	7842 (A) F. 7843 (A) G.	141/19	Sheep.....	?
Case 26..... Nov., 1933	O.F.S...	Kroonstad.....	Graspan (Farm).....	7842 (B) F. 7843 (B) G.	141/19	Sheep.....	?

TABLE I. (cont.)

Histo-Patho. Examination of original material.	BIOLOGICAL TESTS.							Remarks.
	Expt. No.	Lab. animal.	Inoculated from.	Method.	Incub. period in days.	Duration of disease in days.	Histo-Path. examination.	
Too decomposed.....	S 4694	R 1003 R 1004 R 1013	13846 G. " "	Subdural " "	65 — —	2 — —	Positive... — —	— Died sequel to operation. Did not show symptoms. Killed 4 months later.
Positive.....	S 4968	R 1014 R 1015	14233 G. "	Subdural "	13 13	5 2	Positive... Positive...	— —
Positive.....	S 4986	R 1028 R 1029	15319 G. "	Subdural "	16 76	7 3	Positive... Positive...	— —
Positive.....	S 4990	R 1030 R 1031	15418 G. "	Subdural "	15 15	4 6	Positive... Positive...	— —
Positive.....	S 5000	R 1040 R 1041	6 G. 6 G.	Subdural "	20 17	4 4	Positive... Positive...	— —
—	—	—	—	—	—	—	—	Three months after being bitten on the finger, symptoms developed. Laboratory examination by the South African Institute of Medical Research, Johannesburg, confirmed diagnosis of rabies.
Positive.....	S 5031	R 1083 R 1084	2644 G. "	Subdural "	14 12	3 4	Positive... Positive...	— —
No hippocampus available for examination	S 5055	R 1246 R 1247	3438 G. "	Subdural "	18 18	5 3	Positive... Positive...	— —
—	—	—	—	—	—	—	—	Child bitten by Dog, Case 8. Post mortem not held.
—	—	—	—	—	—	—	—	Native bitten on outer edge of left eyebrow. Five weeks later symptoms developed, and death followed 3 days later. Laboratory examination by South African Institute for Medical Research, Johannesburg, diagnosis; rabies.
No material available...	S 5064	R 1248 R 1249	3626 G. "	Subdural "	12 12	2 3	Positive... Positive...	— —
Positive.....	S 5079	R 1308 R 1309	4038 G. "	Subdural "	14 14	4 4	Positive... Positive...	— —
—	—	—	—	—	—	—	—	Three months after being bitten, symptoms developed, and death followed 2 days later. Laboratory examination by South African Institute for Medical Research confirmed diagnosis of rabies.
Positive.....	—	—	—	—	—	—	—	No material for biological test was sent. Histo-pathological examination of anterior cervical ganglion did not show Negri-bodies.
—	—	—	—	—	—	—	—	Three weeks after being bitten, symptoms developed, and death followed 4 days later. Laboratory examination by South African Institute for Medical Research confirmed the diagnosis of rabies.
Too decomposed.....	S 5088	R 1311 R 1318 R 1319	4115 G. " "	Subdural " "	15 15 15	2 3 5	Positive... Positive... Positive...	— — —
To decomposed.....	S 5110	R 1328 R 1329	4679 G. "	Subdural "	11 17	1 3	Positive... Positive...	See Case No. 7, Table III. —
Negative.....	S 5115	R 1335 R 1336	5099 G. "	Subdural "	13 6	3 7	Positive... Positive...	The owner of this farm lost 3 cows and 9 calves, showing symptoms of rabies.
Positive.....	S 5123	R 1344 R 1345	5459 G. "	Subdural "	— 8	— 5	— Positive...	Died sequel to operation. —
Positive.....	S 5124	R 1346 R 1347	5460 G. "	Subdural "	13 16	3 4	Positive... Positive...	A Genet cat fought with a dog which developed symptoms of rabies 10-12 days later. There is a possibility that this cat as well as the one in Case 21 was bitten by the dog. No laboratory examination was carried out on this dog or Genet cat.
Too decomposed.....	S 5125	R 1348 R 1349	5464 G. "	Subdural "	11 —	2 —	Positive... —	— Died sequel to operation. See remarks on Case 20.
Positive.....	S 5136	R 1360 R 1361	5739 G. "	Subdural "	12 13	5 3	Positive... Positive...	— —
Positive.....	S 5139	R 1362 R 1363	5862 G. "	Subdural "	13 12	3 7	Negative... Positive...	— —
—	—	—	—	—	—	—	—	Five weeks after being bitten in the right hand by a domestic cat symptoms of rabies developed and death followed 5 days later. Laboratory examination carried out by South African Institute for Medical Research at Johannesburg confirmed the diagnosis of rabies.
Doubtful.....	S 5196	R 1410 R 1415	7843 (A) G. "	Subdural "	17 —	2 —	Positive... —	— Remained healthy for 3 months and destroyed. This case occurred at the same time and on same farm as Case 26.
Doubtful.....	S 5196	R 1412 R 1416	7843 (B) G. "	Subdural "	11 21	7 4	Positive... Negative...	— Clinically R 1416 showed dumb rabies. This case occurred at same time and on same farm as Case 25.

TABLE I.

Case Number, Month.	LOCALITY.			Specimen No.	File No.	Material from.	Animal concerned in transmission.	Histology, Examination of original material.	Expt. No.	Inoculated from.	Incubation period in days.	Duration of disease in days.	Histopath. examination.	Remarks.
	Province.	District.	Town or farm.											
Case 1, February, 1933	O.F.S.	Boshof	Dreksville (Townlands)	1344 G. 1347 F.	141/1393	<i>Cynoptera penicillata</i>	—	Too decomposed	S 4694	13816 G.	66	2	Positive	Died sequel to operation. Did not show symptoms. Killed 4 months later.
Case 2, February, 1933	O.F.S.	Boshof	Dreksville	14239 G. 14234 F.	141/19	<i>Cynoptera penicillata</i>	—	Positive	R 1013 R 1014 R 1015	Substratum	13	5	Positive	—
Case 3, March, 1933	O.F.S.	Eidenburg	Eidenburg (Townlands)	15318 MS. 15319 G.	141/1146	<i>Cynoptera penicillata</i>	—	Positive	S 4968	Substratum	16	7	Positive	—
Case 4, March, 1933	O.F.S.	Trompsburg	Trompsburg (Townlands)	15417 F. 15418 G.	141/310	<i>Cynoptera penicillata</i>	—	Positive	S 4969	Substratum	15	6	Positive	—
Case 5, April, 1933	O.F.S.	Bloemfontein	Bloemfontein (Townlands)	0 G. 7 F.	141/110	<i>Cynoptera penicillata</i>	—	Positive	S 5000	Substratum	20	4	Positive	—
Case 6, April, 1933	O.F.S.	Senekal	Matia	—	258/283	Native male, 8 years	<i>Cynoptera penicillata</i>	—	—	—	—	—	—	Three months after being bitten on the finger, symptoms developed. Laboratory examination by the South African Institute of Medical Research, Johannesburg, confirmed diagnosis of rabies.
Case 7, May, 1933	O.F.S.	Bloemfontein	Glen School of Agriculture	2014 G. 2013 F.	141/7R	<i>Cynoptera penicillata</i>	—	Positive	S 5031	Substratum	11	3	Positive	—
Case 8, May, 1933	O.F.S.	Trompsburg	Hamelfontein (Farm)	3437 F. 3438 G.	141/310	Dog	—	No hippocampus available for examination	R 1249 R 1247	Substratum	18	5	Positive	—
Case 9, June, 1933	O.F.S.	Trompsburg	Hamelfontein (Farm)	—	141/310	Native male, 7 years	Dog	—	—	—	—	—	—	Child bitten by Dog, Case 8. Post mortem not held.
Case 10, June, 1933	O.F.S.	Faersmith	Abrahamskraal (Farm)	—	258/283	Native male	Wild cat, species not mentioned	—	—	—	—	—	—	Native bitten on outer edge of left eyebrow. Three weeks later symptoms developed, and death occurred. Examination by South African Institute for Medical Research, Johannesburg, diagnosis of rabies.
Case 11, June, 1933	TVI	Lichtenburg	Davanskus, near Dearey-ville	3620 G.	128/179	<i>Cynoptera penicillata</i>	—	No material available	S 5064	Substratum	12	3	Positive	—
Case 12, June, 1933	TVI	Ystersdorp	Kulera-kraal (Farm)	4038 F. 4039 F.	135/44	<i>Cynoptera penicillata</i>	—	Positive	R 1248 R 1249	Substratum	12	3	Positive	—
Case 13, June, 1933	TVI	Beekpan	Van Dyk Compound	—	—	European male	<i>Cynoptera penicillata</i>	—	—	—	11	4	Positive	—
Case 14, July, 1933	C.P.	Matieling	Kuowle Park (Farm)	4338 F.	126/2	<i>Trachta felina</i>	—	Positive	—	—	—	—	—	No material for histological test was sent. Histopathological examination of anterior cerebral ganglion did not show Negri-bodies.
Case 15, July, 1933	O.F.S.	Senekal	Hedlophia (Farm)	—	—	Native male (aged 12 years)	Cat (domestic)	—	—	—	—	—	—	Three weeks after being bitten, symptoms developed, and death followed 4 days later. Examination by South African Institute for Medical Research confirmed diagnosis of rabies.
Case 16, July, 1933	O.F.S.	Hoopstad	Wasselsbron (Townlands)	4115 G. 4118 F.	141/2474	<i>Cynoptera penicillata</i>	—	Too decomposed	S 5088	Substratum	15	2	Positive	—
Case 17, July, 1933	O.F.S.	Senekal	Beeldia (Farm)	4679 G. 4681 F.	141/303	<i>Cynoptera penicillata</i>	—	Too decomposed	R 1311 R 1318 R 1319	Substratum	15 15	3	Positive	—
Case 18, August, 1933	TVI	Ventersdorp	Lelidfontein (Farm)	5098 F. 5099 G.	135/6	Cal.	?	Negative	S 5110	Substratum	17	3	Positive	See Case No. 7, Table III.
Case 19, August, 1933	TVI	Schweizer Bemecke	Jahra (Farm)	5453 F. 5459 G.	134/103	<i>Cynoptera penicillata</i>	—	Positive	S 5115	Substratum	13	7	Positive	The owner of this farm lost 2 cows and 9 calves, showing symptoms of rabies.
Case 20, August, 1933	C.P.	Vryburg	Crondale (Farm)	5403 G. 5403 F.	144/92	Domestic cat	?	Positive	S 5123	Substratum	8	5	Positive	Died sequel to operation.
Case 21, August, 1933	C.P.	Vryburg	Crondale (Farm)	5484 G. 5405 F.	144/92	Domestic cat	?	Too decomposed	R 1344 R 1349	Substratum	11	2	Positive	A Great cat fought with a dog which developed symptoms of rabies 10-12 days later. There is a possibility that this cat as well as the one in Case 21 was bitten by the dog. No laboratory examination was carried out on this dog or Great cat.
Case 22, August, 1933	O.F.S.	Trompsburg	Trompsburg (Townlands)	5734 F. 5739 G.	141/310	<i>Cynoptera penicillata</i>	—	Positive	S 5136	Substratum	12	5	Positive	Died sequel to operation. See remarks on Case 20.
Case 23, Sept., 1933	O.F.S.	Eidenburg	Eidenburg (Townlands)	5803 G. 5803 F.	141/1146	<i>Cynoptera penicillata</i>	—	Positive	R 1362 R 1365	Substratum	12	7	Negative	—
Case 24, October, 1933	O.F.S.	Hoopstad	Jeunette (Farm)	—	—	European female	Domestic cat	—	—	—	—	—	—	Five weeks after being bitten in the right hand the animal showed symptoms of rabies. Laboratory examination carried out by South African Institute for Medical Research, Johannesburg confirmed the diagnosis of rabies.
Case 25, Nov., 1933	O.F.S.	Kroonstad	Groenjan (Farm)	7843 (A) F. 7843 (A) G.	141/19	Sheep	?	Doubtful	S 5106	Substratum	17	2	Positive	Remained healthy for 3 months and destroyed. This case occurred at the same time and on same farm as Case 26.
Case 26, Nov., 1933	O.F.S.	Kroonstad	Groenjan (Farm)	7842 (B) F. 7843 (B) G.	141/19	Sheep	?	Doubtful	R 1412 R 1413	Substratum	11	7	Positive	Clinically R 1412 showed dumb rabies. This case occurred at same time and on same farm as Case 25.

nervous distemper, particularly when accompanied with fits, are of course very commonly and naturally regarded with suspicion. In Case 21 (Table III) the peculiar behaviour of the dog was readily explained when the brain was found to harbour numerous "measles" identified as *Cysticercus cellulosae*.

Incidentally, also it will be noted how often brains useless for histo-pathological examination are submitted. The animals in such cases are evidently killed by stoning or clubbing and the brain and skull unnecessarily battered and pulped as a result, so that it is impossible to find a suitable piece for microscopic preparation.

THE SPREAD OF THE DISEASE.

The appended map shows the districts in which rabies is known to have occurred. The remarks made in our previous article regarding the limits of the infection still hold. Comparison of this map with that for 1932 brings out clearly and significantly how districts adjacent to the ones in which rabies has previously been diagnosed are being progressively included in the known infected area. New outbreaks in the Transvaal are: Brakpan, Ventersdorp, and Schweizer Rencke; in the Orange Free State: Fauresmith, Senekal and Edenburg. These newly infected districts are shaded black in the map.

CORRECTION.

Through an oversight the district of De Aar, an old infected area, was not marked accordingly in the map in our previous report for 1932. It is shown correctly shaded in the present one.

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RABIES IN SOUTH AFRICA.

TABLE II.

Rabies Diagnosed in.	Transvaal.	Orange Free State.	Cape Province.	Total Number of Cases in the Union.
Humans.....	1	5	—	6
Dogs.....	—	1	— (1)	1 (1)
Cats (Domestic).....	—	2	2	4
Cattle.....	1 (11)	—	—	1 (11)
Sheep.....	—	2	—	2
<i>Cynictis penicillata</i>	4	11	—	15
<i>Genetta felina</i>	—	—	1 (1)	1 (1)
Wild Cat (species not mentioned).	—	1	—	1
TOTALS FOR THE YEAR 1933.	6 (11)	22	3 (2)	31 (13)

The figures in brackets refer to clinically positive cases of rabies, material from which was not available for confirmation of diagnoses.

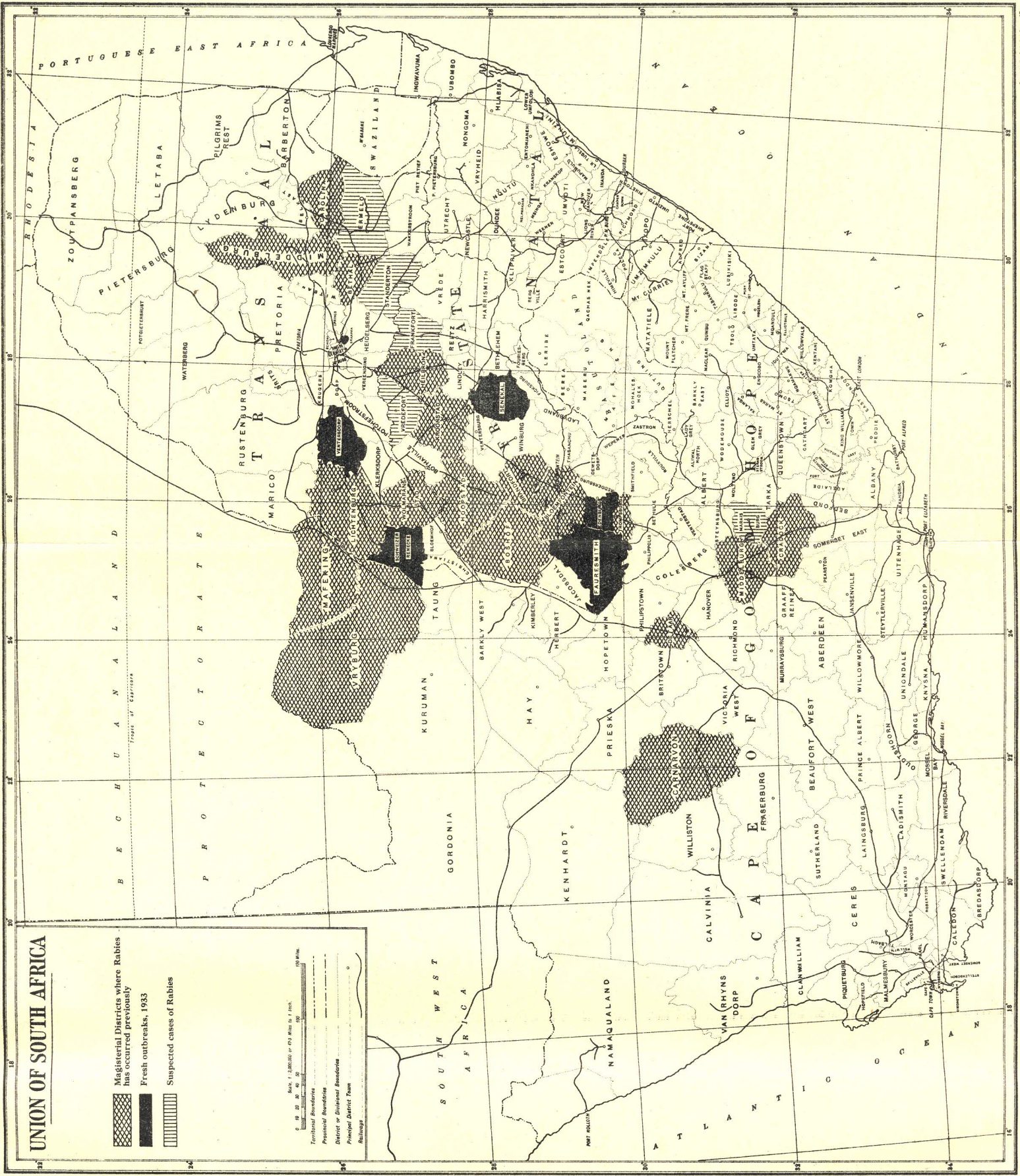
TABLE III.

Month and Year.	LOCALITY.		Specimen No.	File No.	Material from.	Disease suspected.	Laboratory Examination for Rabies.	Remarks.
	Province.	District.						
Case 1. January, 1933	O.F.S.	Hoopstad.	11455 11452	141/2474	<i>Cynictis penicillata</i>	Rabies.	—	Skull badly battered. No brain material available for examination.
Case 2. January, 1933	O.F.S.	Retz.	12384	141/300	Domestic Cat (Kitten)	Rabies—Aggressive.	—	Skull badly battered. No brain material available for examination.
Case 3. February, 1933	O.F.S.	Trompsburg.	13927	141/310	<i>Cynictis penicillata</i>	Rabies.	—	Skull badly battered. No brain material available for examination.
Case 4. March, 1933	Tvl.	Johannesburg.	15261 15282	126/2	Dog.	Rabies.	Negative	Probably a case of nervous distemper.
Case 5. March, 1933	S.W.A.	Grooifontein.	15439 15540	151/—	Dog (Dobberman bitch)	Rabies: Symptoms: convulsions, yawning, staggering, foaming at the mouth. Bitch apparently recovered and two months later the same symptoms developed. Animal was shot	Negative	—
Case 6. April, 1933	Tvl.	Pretoria.	446 447	134/66	Cow.	Rabies.	Negative	—
Case 7. June, 1933	O.F.S.	Senekal.	3890	141/303	<i>Cynictis penicillata</i>	Rabies.	—	No brain material available in July owner of farm sent in another <i>C. penicillata</i> . See Case No. 17, Table I, which proved to be rabies.
Case 8. June, 1933	C.P.	Grahamstown.	3961 3962	144/54	Dog.	Rabies.	Negative	Probably a case of nervous distemper.
Case 9. June, 1933	O.F.S.	Edenburg.	4036 4037	141/1146	Dog.	Rabies: Three weeks after fighting two sick meercats, dog became stiff, paralysed, and started at owner	Negative	—

RABIES IN SOUTH AFRICA.

TABLE III—(continued).

Month and Year.	LOCALITY.			Specimen No.	File No.	Material from.	Disease suspected.	Laboratory Examination for Rabies.	Remarks.
	Province.	District.	Town or Farm.						
Case 10, July, 1933	Tvl.	Pretoria,	Balmoral,	4329 4330	131/151	Dog,	Rabies: Two weeks after whipping, bitch developed fits. Death set in 3 days later	Negative	—
Case 11, August, 1933	Tvl.	Johannesburg,	Modder B Mine	5513 5514	126/451	<i>Saricada sari-cada</i>	Rabies,	Negative	—
Case 12, August, 1933	Natal	Richmond,	Greenhill,	5690 5691	155/26	Dog,	Rabies,	Negative	—
Case 13, Sept., 1933	Tvl.	Ermelo,	Shepstone,	6301 6302	124/12	Dog,	Rabies,	Negative	Probably a case of nervous distemper.
Case 14, Sept., 1933	Tvl.	Johannesburg,	Johannesburg,	6428 6429	126/2	<i>Saricada sari-cada</i>	Rabies,	Negative	—
Case 15, Oct., 1933	C.P.	Vryburg,	Illaura Farm,	6753 6754	144/474	Heifer,	Rabies,	Negative	—
Case 16, Oct., 1933	C.P.	Vryburg,	Illaura Farm,	6921 6922	144/474	Bovine,	Rabies,	Negative	—
Case 17, Oct., 1933	O.F.S.	—	Zwarttranddam,	7321 7322	144/1964	Horse,	Rabies,	Negative	—
Case 18, Oct., 1933	Tvl.	Potgietersrust,	Klippgat,	7324 7325	138/611	Jackal,	Rabies,	Negative	—
Case 19, Nov., 1933	O.F.S.	Dealesville,	Dealesville,	8132 8133	—	Nagapie,	Rabies,	Negative	—
Case 20, Nov., 1933	Tvl.	Wolmaranstad,	Klippan farm,	8337 8338	139/71	Dog,	Rabies,	Negative	—
Case 21, Dec., 1933	Tvl.	Johannesburg,	Braamfontein,	8375 8376	126/2	Dog,	Rabies: Dog found walking about aimlessly on outskirts of town	—	Large number of <i>Cysticercus cellulosae</i> were found in the brain.
Case 22, Dec., 1933	O.F.S.	Trompsburg,	Trompsburg,	9130 9131	141/310	Dog,	Rabies,	Negative	—



Map prepared at the Government Printing Works, Pretoria.