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PREVENTION OF INTRANASALLY-INOCULATED POLIOMYE-LITIS OF MONKEYS BY INSTILLATION OF ALUM INTO THE NOSTRILS

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Various agents have been reported as exerting a local influence upon the susceptibility of tissues to various viruses, such as those of vaccinia, encephalitis (St. Louis type), and equine encephalomyelitis, by Ledingham (1), Carnot and his coworkers (2), Le Fevre (3), Rivers (4), Armstrong (5, 6), Olitsky and Cox (7), and others. In view of considerations which indicate that the nasal mucous membranes constitute one, and perhaps the most usual, natural route of infection in poliomyelitis, it was deemed desirable to determine whether the mucous membrane of the nose of monkeys could be rendered less permeable to poliomyelitis virus through treatment with solutions of sodium aluminum sulphate, which have been shown to render mice increasingly resistant to the intranasal administration of encephalitis virus (St. Louis type) (6).

EXPERIMENTAL METHOD

Fresh *Rhesus* monkeys, distributed as to weight, were given identical care and treatment except that the test animals received instillations of 1.5 cc of a 4 percent sodium aluminum sulphate solution into each nostril, at varying times relative to the virus inoculations, by means of a tuberculin syringe from which the needle had been removed,¹ while the control animals received either 1.5 cc of normal sodium chloride solution or, in most instances, no treatment whatever (table 1).

Virus for each test was prepared by grinding portions of cords from several animals which had recently died of poliomyelitis and diluting to the desired concentration with 0.85 percent sodium chloride solution. Centrifugation was carried out at slow speed to remove gross particles and the supernatant fluid used for intranasal inoculation. Concentrations of 2.5, 4, and 5 percent were employed in different tests, three inoculations of 1 cc of the appropriate suspension being administered into each nostril at intervals of 24 hours (table 1).

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^{*} From the National Institute of Health, Washington, D. C.

¹ Gentian violet similarly introduced was found, through frozen preparations, to stain the entire nasal membranes.

Remarks		V=1 cc 5 percent polio cords each	nostril.		$\nabla = 1 \ cc \ 2.6 \ percent \ polio \ cords each mostril.$							V=1 co 5 percent polie cords	eacu nosuu.		
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Onset of days first vii lation	Alum- prepared monkeys														
paralysis ntranasal	Controls		66								80 23				
complete g first i oculation	Saline- prepared monkeys														
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		1/23/35	>>>>	2/6/35	AV AV	2/6/35	^	2/6/35	^	2/6/35	^	3/1/35	AA	AV AV	3/1/35
id inoculat		1/22/35	^^^^	2/5/35	AV AV	2/5/35	>>	2/5/35	^	2/5/35	Å	2/28/35	AV VA VA	ÅV	2/28/35
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TABLE 1.—Details of tests

		V=1 cc 5 percent polio corcas each nostril.			V=1 cc 4 percent pollo cords each nostril.	
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A - Alum, 1.6 cc into each nostril. V-Virus, 1 cc into each nostril. A - Alum, 1.5 cc in morning, virus in atternoon. B - Saline (0.85 percent), 1.5 cc into each nostril. B'V-Saline (0.85 percent), 1.5 cc morning, virus in atternoon. B-Burvived. - Death not due to poliomyelitis. - Died on 28th day atter inoculation of septicesemia; no poliomyelitis.

Temperatures were taken daily. Animals which developed poliomyelitis were allowed to go until complete paralysis developed, when they were etherized and autopsy was performed, and tissues were submitted for pathological confirmation as to cause of death.

RESULTS

One prepared and one control animal died of causes other than poliomyelitis 6 and 5 days, respectively, following their first virus inoculation. Among the remaining 23 alum-prepared animals 17 survived the virus inoculations, while among 19 control monkeys there were but 3 survivals, or 74 and 16 percent, respectively (table 2).

	Total number of mon- keys	Monkeys dead of polio- myelitis	Monkeys dead of other causes (ex- cluded)	Survived polio- myelitis inocula- tions	A verage number of days, first inocula- tion to complete paralysis	A verage number of days, first inocula- tion to onset fever	A ver- age num- ber of days of illness	Percent sur- vived
Alum-prepared	24	6	1	17	· 1435	635	8	74
Controls	20	16	1	3	9%10	4 ¹³ 16	5	16

TABLE 2.—Summary of results

In some of our tests (table 1) the alum administrations varied in their time relationship to the virus instillations, and so in certain instances one group of animals was permitted to serve as controls for more than one test group; consequently the controls and test groups of animals were not exactly equal in number. In view of the fact that the virus dosage varied in different tests, it appears that this variation in the number of monkeys in the two groups in some instances tended to favor the test groups; for, if we render the test and control groups of monkeys equal in each test, by supplying animals and attributing the same incidence of poliomyelitis to these theoretical groups as developed in the actual groups which were duplicated, it is found that 63 percent of the alum-prepared animals would have lived as compared with 24 percent for the controls (27 animals each group).

In addition to their higher survival rate, the alum-prepared animals which developed poliomyelitis tended to develop the disease later and the ailment tended to run a slower course than was the case in the control groups. For instance, the average interval from the first intranasal virus inoculation to onset of fever (40° C.+) in the prepared animals which died of poliomyelitis was 6% days as compared with $4^{1}\%_{6}$ days for the control groups. The average interval from first virus inoculation to complete paralysis in the two groups was 14% days and 9% days, respectively.

Amaig the 17 survivals from the alum-prepared group there were 8 monkeys which ran a course of fever, beginning from 5 to 21 days following the first inoculation and lasting from 6 to 13 days, which seemed probably due to poliomyelitis (table 3). Monkey 951 developed partial paralysis in the hind legs; the others showed no detectable crippling. The three survivals from the control group developed no febrile response.

Monkey no.	Interval from first inoculation to onset fever	Duration of fever	Remarks
873 899 911 918 919 919 911 919 911 911	Days 19 20 17 13 21 11 5 9	Days 6 6 7 12 8 6 6 13	Complete recovery. Do. Do. Do. Do. Do. Do. Do. Do. Do. Do
Average	143%	8	

TABLE 3.—Surviving animals that developed fever but recovered

IMMUNITY

The fact that there were 8 alum-prepared animals which developed fever but survived, while in the control group all those developing fever went on to complete paralysis, together with the fact that among the group which died the alum-prepared animals tended to develop symptoms later and to live longer than the controls, led us to feel that the alum-treated surviving animals might tend to develop a specific immunity. This result had been previously shown for alumprepared white mice inoculated intranasally with the virus of encephalitis (St. Louis type) (Armstrong (8)).

Seven surviving animals were consequently inoculated intracerebrally with what was estimated to be about 10 minimal infectious doses of poliomyelitis virus. Four of these 7 animals and one of the control group of 2 animals withstood the inoculation. Thus no obvious increase of immunity was apparent from this test. The sera from surviving animals have not been tested for protective properties. After sufficient time has elapsed to allow the mucous membranes of other surviving animals to return to normal, it is planned to retest them by the intranasal route, as it is felt that this is a more practical test for immunity in such animals.

ACTION OF ALUM

The mechanism by which alum exerts its protective effect against poliomyelitis is not definitely determined; however, it has been shown (5) that diphtheria toxin exerted a local inhibitory action against vaccine virus through the cellular response which it engendered. Since 6 alum-prepared monkeys died of poliomyelitis while

8 ran a fever but recovered, and since animals in which the virus inoculations followed the last alum instillation by 24, 48, and 72 hours survived in excess of the controls, it is indicated that the protection is probably not due to an antiscptic action of the alum.

The authors have sprayed a 1-percent alum solution into their nostrils on 3 successive days. The treatment produced some temporary tickling and stinging which resulted in an occasional sneeze, and there was increased secretion for perhaps an hour, followed by a feeling of dryness which disappeared after several hours.

The search in mice for solutions more protective than alum against the virus of encephalitis (St. Louis type) is being continued and preliminary results indicate that such solutions exist. These tests, if confirmed, will be applied to poliomyelitis in monkeys.

The results here reported are not recommended for human use, but offer a hopeful avenue of approach which may lead to effective methods against poliomyelitis and possibly against other diseases contracted by way of the nasal mucous membranes.

SUMMARY

1. The instillation of sodium aluminum sulphate, 4 percent, into the nostrils of monkeys resulted in the survival of 17 from a group of 23 animals, while only 3 from a group of 19 nonprepared controls survived similar intranasal inoculation with poliomvelitis virus.

2. Poliomyelitis tended to develop later and to run a slower course in the alum-prepared group than in the nonprepared controls.

3. The protective action of the alum solution is believed to be due to an alteration which decreases the permeability of the mucous membrane of the nose rather than to an antiseptic action.

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TULARAEMIA

Susceptibility of the White-tailed Prairie Dog, Cynomys leucurus Merriam 1

By GORDON E. DAVIS, Bacteriologist, United States Public Health Service, Rocky Mountain Laboratory, Hamilton, Mont.

During the latter part of May 1933, 7 white-tailed prairie dogs (3 adult females, 1 adult male, and 3 young animals), captured in northwestern Colorado, were brought to the Rocky Mountain Laboratory to be tested for susceptibility to tularaemia. On June 9 each animal was injected subcutaneously with 0.0000002 cc of a 500 turbidity suspension of *Bacterium tularense*. Two domestic rabbits and two guinea pigs each received the same dose, administered in the same manner. Since the prairie dogs were infested with lice, they were placed in cloth bags.

Six days following the injection the adult male, 1 female and 2 of the young dogs were found dead. In each case the spleen, liver, and inguinal lymph nodes were suggestive of tularaemia. Blood-stained fluid was present in the abdominal cavity. As this was a period of extreme heat, the *post mortem* changes were so marked that no cultures were attempted. The remaining 2 adult females and the single remaining young one were definitely ill and were bled for culture. Two days later these prairie dogs also died, and each showed numerous discrete white foci in the liver and spleen. The peritoneal cavity of the young prairie dog contained a large amount of clear fluid. A pure culture of *Bact. tularense* was recovered from the heart blood of this animal. Cultures from the other prairie dogs showed typical *tularense* colonies but were overgrown by a mold.

Six sucking lice (*Neohaematopinus laeviusculus* (Grube))², recovered from the bags in which the prairie dogs had been placed, were ground in saline and injected intraperitoneally into a guinea pig. This guinea pig died on the fifth day of typical tularaemia, and a pure culture of *Bact. tularense* was recovered from the heart blood.

The control rabbits and guinea pigs died of typical acute tularaemia, the former on the sixth and seventh days, respectively, and both the latter on the fifth day. A pure culture of *Bact. tularense* was recovered from the heart blood of one rabbit. Cultures from the other control animals were not attempted.

SUMMARY

Seven prairie dogs, 4 adults and 3 young, when injected with *Bact. tularense*, died showing gross lesions suggestive or typical of acute tularaemia, and a pure culture of the organism was isolated from the

¹ Contribution from the Rocky Mountain Laboratory, United States Public Health Service, Hamilton, Mont.

^{*} Determination was made by Assistant Bacteriologist W. L. Jellison, of the Rocky Mountain Laboratory.

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heart blood of one shortly before death. The specific organism was also isolated from the guinea pig injected with lice which had fed on the infected prairie dogs.

USE OF BELOW-FREEZING TEMPERATURES FOR MAIN-TENANCE OF MENINGOCOCCUS CULTURES (Neisseria intracellularis Weichselbaum)

By ANNA M. PABST, Junior Bacteriologist, United States Public Health Services National Institute of Health

This paper reports the preservation of meningococci by simple storage in pure undiluted neutral glycerin at -15° C.

It has long been known that below-freezing temperatures are not necessarily destructive to the viability of pathogenic organisms. Numerous reports have been made of the tolerance to cold of viruses, yeasts, and the hardier bacteria, but few investigations have been reported of the tolerance of meningococci to cold; in fact the literature is full of statements that meningococci are easily killed by low temperatures.

Meningococci are undoubtedly delicate microorganisms and often difficult to maintain in stock cultures. It is generally stated that the optimum temperature requirements of these organisms lie between 36° and 38° C., though most workers are agreed that the tolerance range extends much farther below than above the optimum. Many authors (1-5) have reported that meningococcus cultures remained alive in the refrigerator (6° to 8° C.) from 3 days to a week. Bettencourt and Franca (6) have reported the survival of some strains in the refrigerator for a month. Flexner (7) placed cultures in the refrigerator, not only at 2° above freezing, but also at 5° below freezing. He observed that thick suspensions in salt solution survived for 5 days. At the same time, his report that such saline solution is somewhat injurious to meningococci suggested the importance of the menstruum used.

Other authors have reported storage of meningococci at temperatures lower than those just cited. Von Lingelsheim (1), in 1906, observed the survival of meningococci at -10° and -20° C. for short periods. Murray (9) scraped the growth from agar plates, smeared it on the walls of tubes, and subjected these to temperatures of -63° and -78° C. for 15 to 20 minutes. He obtained good rapid growth on subsequent subculture. Elser and Huntoon (8) later reported that "meningococci may remain alive for years if dried rapidly under freezing temperatures and kept frozen." Their work was done according to the method originally described by Shackell (10), in which the material was frozen and then dehydrated in vacuum, a method later used by Rogers (11) in preserving mass cultures of lactic acid-forming bacilli, as well as by Hammer (12), and Shattock and Dudgeon (13). Swift (14) made special application of this desiccation-after-freezing method to the preservation of meningococci, and he has reported viability after a period of at least 2 months. Reichel (15) has more recently used this method with some modifications and has found meningococci viable after a period of at least 6 months. During the preparation of the author's report, Rake (16) has described the preservation of meningococci for several months by a different technique of freezing and drying. Other authors (17, 18) have reported viability of bacteria other than meningococci when stored at temperatures considerably below freezing, without desiccation.

Recently, Francis (19) has reported the maintenance of virulence of *B. pestis* in a guinea pig spleen when suspended in pure undiluted neutral glycerin at -15° C. for 7 years; and also its survival in pure culture when suspended in undiluted neutral glycerin for a period of 2 years and 7 months. He has also found that *B. tularense* maintained its virulence in infected guinea pig spleens which had been suspended in pure glycerin at -15° C. for 6½ years. *B. tularense* in frozen rabbit tissue, not suspended in glycerin but stored at -15° C., was virulent for 6 to 36 months (depending on the tissue involved), whereas the pure culture growth when scraped off and suspended in glycerin at -15° C. was found viable after 2½ years.

It was decided to apply the simple method reported by Francis to an investigation of the survival of meningococci when stored in pure undiluted neutral glycerin at -15° C. In making this study, 10 strains, representing different serological groups and various periods of laboratory maintenance, were chosen from a large stock collection of meningococci. Four of these, nos. 123, 55, 57, and 60, were very old strains which had originally been received from the Rockefeller collection in 1916. They had been carried on artificial media for over 16 years and had been used for a long time as the 4 standard type strains representing the Gordon-Murray groups of meningococci. The other 6 varied in age from 2 months to 3 years. Four of them, nos. 331, 173, 302, and 158, were recently chosen as the strains representing most nearly the 4 meningococcus type strains described by Gordon and Murray; the other 2 strains, nos. 198 and 479, had been found especially suitable for the preparation of toxic filtrates by the method of Ferry (20). It was particularly interesting to use strain 302 in this study, because it had been especially difficult to cultivate on laboratory media.

These strains were planted on glucose agar slants and incubated at 36.5° C. for 24 hours. Sixteen well-grown, 24-hour cultures were made from each strain. They were divided into 2 groups of 8. In group A, the growth was scraped off the slants, and suspended in small vials of glycerin, and the vials were tightly stoppered and

immediately stored at -15° C. In group B, glycerin was poured over the growth on the entire slant. The tubes were tightly stoppered and immediately stored at -15° C. After a period of 2 months, 1 tube and 1 vial of each strain were taken out of storage and transfers were made to freshly prepared glucose agar slants and blood agar slants. After incubation at 36.5° C., the cultures were examined. Every culture was found to grow well. Similar tests were made after periods of 3 months, 6 months, 12 months, 18 months, and 24 months. In each instance viability was demonstrated by transfer to glucose agar slants. After the 2-year period, the transplants grew more slowly and the growth seemed more delicate than previously. In a few instances it was necessary to make cultures from two vials, or tubes, before obtaining growth. Morphologically, the organisms appeared unchanged in size, shape, and grouping. Their staining reactions were normal.

After storage for 2 years under these conditions it was decided to study these strains serologically and biochemically. Table 1 is a report of the agglutination reactions of these strains with monovalent sera before and after the 2-year storage. It indicates that the serological characteristics have remained unchanged. Table 2 shows the fermentation reactions before and after the 2-year storage period.

TABLE 1.—Serological reactions of 10 strains of meningococci before and after 2 years' storage at -15° C

Antigen	Serum 331 (I)	Serum 173 (II)	Serum 302 (III)	Serum 158 (IV)	Serum 123 (I)	Serum 55 (11)	Serum 57 (III)	Serum 60 (IV)
331 (D	444443 110000 432100 000000 443321 000000 433321 000000 444300 000000	000000 444421 000000 000000 210000 432100 000000 100000 000000 000000	431100 000000 444431 000000 444442 222100 333332 000000 432100 433200	000000 000000 442200 000000 100000 442100 000000 442100 000000 000000	443100 321000 433221 000000 444322 110000 442211 000000 443100	000000 431100 210000 000000 322100 444321 321100 000000 221100	321000 211000 321000 000000 443200 110000 433221 000000 211000	000000 000000 442100 000000 000000 000000 443300 000000
		AFTE	R STOR	AGE				·
331 (I)	444310 000000 110000 000000 333100 000000 000000 000000 442100 000000	110000 444321 100000 210000 442100 111100 000000 000000 000000	110000 000000 444310 000000 321100 000000 431000 000000 310000 443110	000000 000000 443210 000000 000000 000000 441000 000000 000000	432100 000000 332200 100000 432100 100000 321000 000000 331100 211000	100000 432100 210000 110000 443200 431100 000000 431000 000000	110000 000000 432100 000000 321000 100000 444310 000000 211000 333200	000000 000000 433100 000000 000000 431000 000000 431000 000000 000000

BEFORE STORAGE

NOTE.-Above agglutinations were made with serum dilutions in series of 1:50, 1:100, 1:200, 1:400, 1:800, and 1:1600. 0=no agglutination.

varying degrees of agglutination.

4-complete agglutination.

	В	efore storag	ge at -15°	σ.	After storage at -15° O.					
Number of strain	Dextrose	Levulose	Maltose	Saccha- rose	Dextrose	Levulose	Maltose	Saccha- rose		
831	++++a++++		++++===+++		******		****			

 TABLE 2.—Sugar fermentation by 10 strains of meningococci before and after storage

 at -15° C. for 2 years

These studies show that the viability of these 10 meningococcus strains was maintained by storage in pure, undiluted, neutral glycerin at -15° C. for a period of 2 years, with no demonstrable change in morphology or in biochemical or serological reactions.

After these 10 strains of meningococci had been in storage for more than a year it was decided to store all 223 cultures of our stock collection at -15° C. Three sets of transplants were prepared—1 set on 0.15 percent semisolid agar and 2 sets on glucose agar slants. These were all incubated at 37° C. for 24 hours. One set of the glucose agar slant cultures (set C) was then prepared as in group B described above (glycerin poured over the slant to cover the entire growth). Set D (glucose agar slants) and set E (the 0.15 percent semisolid agar) were prepared for storage without the addition of glycerin or any other agent. They were all tightly stoppered and stored at -15° C.

After 8 months' storage these cultures were tested for viability. Transfers to glucose agar slants and to blood agar slants were made immediately after removal from the freezing compartment *before the culture had thawed out*. When transferring from a slant culture to which no glycerin had been added it was usually necessary to lift a small frozen block of culture from the top of the slant and transfer it to the new fresh slant.

After transplanting all three sets it was found that 92.8 percent of the strains were viable after 8 months' storage at -15° C. Most of these were recovered from the glucose agar slant cultures; very few were from the 0.15 percent semisolid agar cultures.

It is interesting to note that the percentage of cultures recovered from set D (glucose agar slants stored without the addition of glycerin) was similar to the percentage of cultures recovered from set C (glucose agar slants covered with glycerin). Set D appeared to be in as good condition as set C and equal in viability after the 8 months' storage. It therefore appears that the addition of glycerin is unnecessary for the preservation of meningococci at -15° C. for 8 months. Its effect, however, on the ultimate longevity of this organism has not been determined.

On the other hand, very few strains were recovered from the 0.15 percent semisolid agar cultures (set E). As reported above, these cultures had been made at the same time and under the same conditions as cultures in sets C and D. They had been transplanted from the same parent cultures, had been incubated for 24 hours and then stored in the -15° C. compartment at the same time. The only difference lay in the media. This observation is in accord with the observation of Flexner (7) and of Elser and Huntoon (21) that viability of organisms at low temperatures is influenced by the menstruum used. Murray (9) has called attention to the importance of the medium used, not only during the cold-storage period, but also used for recovering the strain after removal from the freezing compartment. Murray (9) and Swift (14) both endorse the use of freshly prepared blood agar for this purpose. Otten (22) stresses the need of a "favorable medium, especially the blood-agar plate, to bring the organism to development from its latent life."

In recovering the meningococcus after storage at -15° C. at this laboratory, it has appeared that glucose agar and blood agar were equally favorable, provided they were freshly prepared. Further studies are being made on this point.

From the above reported studies it appears that the meningococcus may be preserved in pure, undiluted, neutral glycerin at -15° C. for at least 2 years. It also appears that the meningococcus may be preserved equally well when stored at -15° C. in pure culture form without the addition of glycerin for a period of 8 months, which is the longest period of observation to date.

Our results indicate, in part, that preservation of meningococci at -15° C. is not only a question of temperature but is influenced by age and condition of culture when stored, medium used during storage period, and medium used for recovery of cultures. The prompt placing of cultures directly in the -15° C. compartment as well as the prompt transplanting of cultures after removal from the below-freezing compartment appear to be essential to the successful recovery of meningococci after cold storage.

In making these studies, it has not been possible to test for maintenance of virulence, since all strains had become avirulent before the experiments began.

This method is presented because of its relative simplicity and its apparent efficiency in maintaining large stock collections of meningococci over long periods of time. Every bacteriologist knows how great is the expenditure of time, labor, and materials in maintaining large stock collections of meningococci by frequent transfers, and of the dangers of contamination or degeneration or sudden loss of strains. The use of below-freezing temperatures, under controlled conditions, seems to offer a means of preserving unchanged the delicate meningococcus over long periods of time.

SUMMARY

Ten chosen strains of meningococci have been stored in neutral glycerin at -15° C. for 2 years with no apparent change in viability, in morphology, or in serological or biochemical characteristics. Two hundred and twenty-three strains have been stored at this temperature on glucose agar slants, both with and without glycerin, with no appreciable loss of viability in the 8 months during which they have been under observation.

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DEATHS DURING WEEK ENDED MAY 11, 1935

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended May 11, 1935	Correspond- ing week, 1934
Data from 86 large cities of the United States: Total deaths. Deaths per 1,000 population, annual basis. Deaths under 1 year of age. Deaths under 1 year of age per 1,000 estimated live births Deaths per 1,000 population, annual basis, first 19 weeks of year Data from industrial insurance companies: Policies in force. Number of death claims. Death claims per 1,000 policies in force, annual rate Death claims per 1,000 policies, first 19 weeks of year, annual rate	8, 582 12. 0 587 54 12. 6 67, 734, 320 12, 858 9. 9 10. 7	8, 493 11. 8 639 59 12. 5 67, 788, 091 13, 538 10. 4 11. 0

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for weeks ended May 18, 1935, and May 19, 1934

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended May 18, 1935, and May 19, 1934

	Diphtheria		Infi	uenza	Me	asles	Meningococcus meningitis	
Division and State	Week ended May 18, 1935	Week ended May 19, 1934						
New England States: Maine New Hampshire	5	1	2	1	178	10 79	0	0
Vermont					49	60	0	0
Massacnuseus	1				423	1, 201	Ŭ	Ű
Connectiont	4				1 909	150	, v	U U
Middle Atlentic States	-	0		•	1, 202	100	-	1
New York	39	56	18	18	2,876	1.089	35	,
New Jersey	30	15	1 11	27	2 166	817	3	ี เ
Pennsylvania	23	61			3,438	4.014	2	1
East North Central States:		•-			-,		-	-
Ohio	35	12	73	10	2,056	1,689	10	6
Indiana	20	9	14	12	229	1, 391	6	i
Illinois	42	33	47	21	1,861	2,346	24	4
Michigan	11	14	1	2	4, 217	322	0	2
Wisconsin	2	1	89	30	1,505	2,934	1	1
West North Central States:								
Minnesotaj	12	7	2	1	520	340	0	0
Iowa	9	11	8		331	368	2	3
Missouri	25	21	37	31	448	520	20	4
North Dakota	4	2			15	122	0	0
South Dakota		3			37	362	0	0
Nebraska	5	9			295	286	2	0
Kansas	6	8	4	2	821	641	1	0
Bouth Atlantic States:		,				0.5		•
Delaware	2				-0	80	N N	Ů,
District of Columbia	10		•		13	4,410		v v
Vinginio 1	10	10			10	1 275	~	v v
West Virginio	10	10		19	294	1, 3/3	20	, v
North Caroline 4	23	16	6	11	150	1 992		3 1
South Caroline	2	1	72	150	13	300	8	1
Georgie 4	3	5	"	100	10	395	il	Ň
Florida	2	2	2		23	320	a	Ň
F IVE IUG	A 1			!	200 1	0001	01	v

See footnotes at end of table.

	Diph	theria	Influenza		Measles		Meningococcus meningitis	
Division and State	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934
East South Central States: Kentucky Alabama 4 Mississippi 3 West South Central States:	7 6 8 6	4 3 3 4	24 18 26	8 54 29	283 18 122	369 220 834	2 7 0 0	0 5 1 1
Arkansas Louisiana 4 Oklahoma 4 Texas 4 Mountain States:	8 17 2 85	5 14 6 39	87 6 65 86	6 6 26 115	73 56 67 117	54 205 175 530	0 1 1 3	1 0 1 0
Montana ³ Idaho ³ Wyoming ³ Colorado New Mexico A trico	5 8 1 0	2 1 6 2	45 3 9	6 	592 2 23 405 9	97 34 91 590 164	0 1 0 0	1 0 0 0
Utah ³ Pacific States: Washington Oregon ³ California	1 7 3 24	2 4 	 15 47	24 26	524 210 1.714	17 83 132 75 746	0 2 2 5	0 0 1 0
Total	502	463	789	638	28,603	29, 434	179	
First 20 weeks of year	13, 029	15, 211	99, 537	44, 166	550, 132	533, 467	2, 843	1, 123
	Polion	yelitis	Scarle	t fever	Sma	llpox	Typhoi	d fever
Division and State	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934
New England States: Maine	0 0 0 0 0 0	0 0 0 0 0 0 0	9 17 2 210 19 104 1,020	13 15 11 261 18 59 791	0 0 0 0 0 0	0 0 0 0 0 0 0	1 0 1 4 0 1 8	4 0 3 3 0 1 7
New Jersey Pennsylvania East North Central States: Ohio Indiana	0 0 0	0 1 0 0	179 598 638 96	186 617 478 92	0 0 0 2	0 0 0 1	1 10 7 3	2 4 5 6
Michigan Wisconsin West North Central States:	0 0 1	0 1 0	1, 131 5.)4 467	544 804 741	2 0 17	1 1 21	7 3 1	5 2 1
Minnesota Iowa Missouri North Dakota South Dakota Nebraska Kanses	0 1 0 0 0 0	1 0 0 0 0	364 79 34 43 25 56 44	65 56 55 58 13 26 35	3 10 4 1 2 17 18	9 16 2 1 9 4	1 5 0 0 0	2 1 17 0 0 0 2
South Atlantic States: Delaware. Maryland ³ 3. District of Columbia. Virginia ³ West Virginia. North Carolina ⁴ South Carolina. Georgia ⁴ Hoorida.	0 0 1 0 2 0 0 1	0 0 0 0 0 0 0 0	10 103 43 17 62 17 3 6 1	3 50 17 25 93 17 2 4	0 0 0 0 0 0 0 0 0 0	0 0 0 2 0 0 0 0 0	0 5 9 2 11 1 12 14 6	0 10 2 5 3 1 16 20 8

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended May 18, 1935, and May 19, 1934—Continued

See footnotes at end of table.

	Polior	nyelitis	Scarle	et fever	Sm	llpox	Typho	Typhoid fever	
Division and State	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934	Week ended May 18, 1935	Week ended May 19, 1934	
East South Central States:				·					
Kentucky	0	0	21	81	0	0	8	5	
Tennessee	1	0	16	15	0	0	8	4	
Alabama 4	0	0	7	9	3	0	6	6	
Mississippi	0	0	7		0	0	3	5	
West South Central States:			Ι.	1 -	· _		I .		
Arkansas	U U		1 1	3		8	4		
Louisiana	4	l 0	2	10	0	1 1	13	19	
Oklahoma *	1	0	6	2		l . <u>4</u>	0	· 1	
Texas	1	1	28	38	8	47	22	8	
Mountain States:				I .					
Montana	O O	0	6	3	8	2	1	0	
Idaho 3	0	2	8	1	0	1 1	0	0	
W yoming *	0		15	17	. 2	. 0	2	1	
Colorado	Ő	0	167	23	0	1	1	0	
New Mexico	Ő	0	5	14	0	0	3	2	
Arizona	0	2	24	1 7	0	0	8	0	
Utah 3	0	0	131	7	0	1	0	0	
Pacific States:	-				l			-	
Washington	2	1	48	56	34	0	1	3	
Oregon ³	0	0	15	32	8	. 0	5	4	
California	3	36	241	180	ш	1	9	18	
Total	19	46	6, 452	5, 597	155	140	192	202	
First 20 weeks of year	478	474	142, 869	119, 493	3, 778	3, 028	2, 732	3, 236	

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended May 18, 1935, and May 19, 1934-Continued

¹ New York City only. ² Week ended earlier than Saturday.

Week studie earner than obtingly.
Rocky Mountain spotted fever, week ended May 18, 1935, 11 cases, as follows: Maryland, 1; Virginia, 2; Montana, 3; Idaho, 2; Wyoming, 1; Oregon, 2.
Typhus fever, week ended May 18, 1935, 23 cases, as follows: North Carolina, 4; Georgia, 4; Alabama, 4; Louisiana, 2; Texas, 9.
Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

									a second data to the second data to	
State	Menin- gococ- cus menin- gitis	Diph- theria	Influ- enza	Malaria	Measles	Pel- lagra	Polio- mye- litis	Scarlet fever	Smali- pox	Ty- phoid fever
April 1935										
Georgia Idaho Illinois Maryland Michigan Mic	1 1 88 16 5 13 6 11 2 77 9 4 4 2 1 11 15	17 1 194 45 18 43 49 79 18 183 15 3 64 412 160 55	189 19 178 15 38 8 7 55 43 250 171 250 171 963 45 1,254 195	116 7 2 1 1 477 838	131 105 12, 581 3, 393 303 25, 808 2, 604 7, 412 144 9, 129 951 1, 193 196 262 2822 1, 726	29 2 99 44	20 30 14 45 52 10 00 50	21 25 5,574 370 520 1,507 1,488 799 66 3,550 226 40 255 64 229 277	4 2 1 220 1 250 0 14 5 11 0 0 555 126 0	30 2 38 3 15 17 9 6 10 18 18 4 2 11 1 0 49 26

741

		-
An	thrax:	Cases
÷	Georgia	1
CP	icken pox:	
	Georgia	230
	Idano	14
	IIIInois	1,740
	10Wa	201
	Maryland	1 405
	Minneeote	1,040
	New James	9 360
	New Merico	A 000
	Ohio	2 120
	Oregon	251
	Rhode Island	102
	South Carolina	103
	South Dakota	34
	Texas	822
	West Virginia	119
Co	iunctivitis:	
	New Mexico	1
De	ngue:	
	Texas	6
Dis	rrhea:	
	Maryland	8
	South Carolina	309
	Ohio (under 2 years)	8
Dy	sentery:	-
	Georgia (amoebic)	.0
	Georgia (Dacillary)	18
	Illinois (amoebic)	
	Illinois (amoebic car-	07
		20
	Iowa (bacillary)	1
	Maryland (Dacillary)	° A
	Michigan (hogillery)	
	New Jargey (unspeci-	•
	fied)	1
	New Jersey (amoebic).	3
	New Jersey (bacillary).	Ĩ
	New Mexico (amoebic)	Ī
	Ohio (amoebic)	Ž
	Texas	60
Epi	demic encephalitis:	
	Illinois	18
	Iowa	1
	Michigan	8
	Minnesota	1
	New Jersey	5
	Ohio	5
	Oregon	1
	Concline	Â
	South Carolina	¥
_	10x8s	-
FO	d poisoning:	
	Ohio	12
Ger	man measles:	
	Illinois	5, 210
	Iowa	479
	Maryland	434
	New Jargev	2.530
	Now Marian	- 04
	Obio	A 184
	Outo	3,105
	Knode Island	20
Ho	kworm disease:	
	Georgia	692
	South Carolina	78

April	1935-	Cont	inued

Impetigo contegiose:	Cases
Tilinois	1
Mamland	- ÷ 🌲
Maryland	
Uregon	
Jaundice:	
Maryland	1
Oregon	1
Lead noisoning:	
Tilinois	K
Michigan	ž
Michigan	
UII0	
Mumps:	
Georgia	218
Idaho	3
Illinois	664
lows	1 381
Mamband	142
	1 202
Michigan	1, 383
New Jersey	928
New Mexico	144
Ohio	2,031
Oregon	764
Rhode Island	78
South Caroline	362
South Debate	924
South Dakota	301
Texas	494
West Virginia	121
Ophthalmia neonatorum:	
- Illinois	12
Maryland	1
Minnesota	ī
Now Jorger	÷
New Jersey	-
Ощо	14
South Carolina	10
South Dakota	1
Paratyphoid fever:	
Georgia	1
Maryland	1
New Jersey	1
South Carolina	1
Teras	2
Puerperal continemia:	-
Tilineia	•
Innois	
New Mielico	, o
Uhio	4
Oregon	1
Rabies in animals:	
Illinois	60
Maryland	4
Now Jorgow	10
Now Marias	1
New Mexico	
Oregon.	
South Carolina	- 10
Rabies in man:	
Illinois	2
Michigan	2
Rocky Mountain spotted	
fever:	
Idaho	- 4
Oregon	Ř
See bios	
	90
Olegon	<u>ک</u> نت
Septic sore throat:	
Georgia	16
Illinois	8
Town	1
TOM8	1
Maryland	25
Michigan	29

April 1935-Continue	đ
Septic sore throat-Con.	Cases
Ohio	308
Oregon	10
South Dakota	2
West Virginia	13
Illinois	. 4
Maryland Michigan	. 2
New Jersey	2
Ohio Trachoma:	. 2
Illinois	61
Minnesota New Jersey	2
Ohio	4
South Dakota	2
Trichinosis:	
Michigan	ĩ
Minnesota	2
Ohio	i
Tularaemia:	A
Illinois	ĭ
Ohio	3
Georgia	13
Texas Undulant fever:	10
Georgia	7
IIIIII015 Iowa	6
Maryland	7
Minnesota	10
New Jersey	2
Oregon	2
Rhode Island	3
Texas	- Ă
Vincent's infection: Illinois	13
Iowa	2
Maryland Michigan	22
Oregon	8
Georgia	169
Idaho Illinois	1.034
Iowa	78
Maryland Michigan	1, 337
Minnesota	242
New Mexico	134
Ohio	690 71
Rhode Island	41
South Carolina	258 32
Texas	424
west Virginia	109

CASES OF VENEREAL DISEASES REPORTED FOR MARCH 1935

This statement is published monthly for the information of health officers in order to furnish current data as to the prevalence of the venereal diseases. The figures are taken from reports received from State health officers. They are preliminary and are, therefore, subject to correction. It is hoped that the publi-cation of these reports will stimulate more complete reporting of these diseases.

	1		1	
	8y1	bilis	Gon	orrhea
State	Cases re- ported dur- ing month	Monthly case rates per 10,000 population	Cases re- ported dur- ing month	Monthly case rates per 10,000 population
Alabama.	362	1.34	49	0.18
Arbancas	942	1.92	152	▲ <u>60</u>
California	1 572	2.50	1 415	0.22
Colorado 1	1,014	2.00	1, 110	2.00
Connecticut	179	1.09	118	. 72
Delaware	149	6.18	30	1.24
District of Columbia	144	2.91	148	2,99
Florida	617	3.97	193	1.24
Georgia	1, 213	4.17	855	2.94
Idaho	. 0		0	
Illinois	1,320	1.69	1,072	1.37
Indiana	245	.74	242	.74
Iowa 1	121	. 49	140	. 56
Kansas.	104	. 55	65	. 34
Kentucky.	207	. 78	273	1.03
Louisiana	166	.77	106	. 49
Maine	40	. 50	37	. 46
Maryland	748	4.50	194	1. 17
Massachusetts	556	1. 29	513	1, 19
Michigan	537	1.06	467	. 98
Minnesota	311	1.20	289	1.11
Mississippi	1,065	5. 20	1,775	8.67
Missouri	910	2.48	298	. 81
Montana 1	36	. 67	39	. 72
Nebraska	39	. 28	52	. 37
Nevada 1				
New Hampshire	14	. 30		. 23
New Jersey	7/3	1.94	20/	. 64
New Mexico *	4.5	. 99	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. 53
New I OF	5,992	4.02	1,000	1. 16
North Carolina	1, 544	4. 10	100	1. 32
Obio	005	1 07	207	
Oklahama 1	177	1. 2/	192	. 10
	1,,	- 00	401	. 5/
Deprevivenie	210	.10	217	.00
Phode Jelend	05	1 25	57	. 22
South Caroline 1	218	1.00	431	.01
South Dekote	4	1.06	16	A 1/ 92
Tennegges 1	682	2 56	340	1 28
Targe	561	- 03 I	152	1.40
Utah 1				
Vermont.	19	. 53	23	. 64
Virginia 3	393	1.61	264	1.08
Washington	181	1.13	207	1.29
West Virginia 4				
Wisconsin 4	11	.04	137	. 46
Wyoming 1				
.1.0181	22,885	1.89	13, 303	1.09
	1			

¹ Not reporting.

I noomplete.
Has been reporting regularly but no report received for current month.
Only cases of syphilis in the infectious stage are reported.

NOTE.—Surveys in which all medical sources have been contacted in representative communities throughout the United States have revealed that the monthly rate per 10,000 population is 6.6 for syphilis and 10.2 for gonorrhea.

PLAGUE-INFECTED GROUND SQUIRRELS IN MODOC COUNTY, CALIF.

The director of public health of California has reported 7 plagueinfected ground squirrels received at the laboratory May 9 and 16, 1935, from ranches in Modoc County, Calif., 4 miles south and 12 to 16 miles west of Alturas.

WEEKLY REPORTS FROM CITIES

City reports for week ended May 11, 1935

This table summarizes the reports received regularly from a selected list of 121 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference

State and site	Diph-	Inf	luenza	Mea-	Pneu-	Scar- let	Small-	Tuber-	Ty- phoid	Whoop-	Deaths,
State and city	cases	Cases	Deaths	cases	deaths	fever, cases	cases	deaths	fever. cases	cough, cases	catuses
Maine: Portland	0		0	2	6	0	0	0	0	3	31
Concord Manchester	1 0		0	0	3 3	1 0	0	00	0	000	15 18
Vermont: Barre	o		0	4	0	0	0	0	0	0	1
Massachusetts: Boston	1		1	30 57	7	44	o o	11	1	14	212
Fall River Springfield Worcester Phode Jelend:	2 0 0		000000000000000000000000000000000000000	3 122 6	2 2 11	4 13 19	0000	0 1 4	0 0 3	1 6 5	31 33 53
Pawtucket Providence Connecticut:	<u>0</u>		0	265	1	6	0	2	0	16	56
Bridgeport Hartford New Haven	0 1 0		0 0 0	3 28 376	3 5 2	9 13 1	0 0 0	2 1 0	0 0 0	0 0 0	35 56 40
New York: Buffalo New York Rochester	0 29 0	10	0 5 0	0 1, 595 97	10 184 5	55 655 33	0	8 114 0	030	0 238 13	131 1,607 82
Syracuse New Jersey: Camden Newark	0 1 0	2	0	522 2 507	6 5 9	23 1 20	0	2 1 3	0	8 0 51	51 38 105
Trenton Pennsylvania: Philadelphia Pittsburgh Reading	0 4 4 0	4 3	0 1 5 0	93 405 118	2 35 23 1	9 126 43 10	0000	32 7 0	3 0 0	65 17 3	30 527 152 20
Scranton	0	•••••		10		8	0	•••••	0	2	
Cincinnati Cleveland Columbus Toledo	4 4 0 2	27 3 2	2 1 3 2	11 468 75 172	10 30 1 9	23 61 30 16	000000	7 17 4 4	0000	4 39 0 9	152 214 91 67
Fort Wayne Indianapolis South Bend Terre Haute	2 4 0 0	 	0 0 0	4 105 0 0	1 20 1 0	0 15 4 0	0 0 0 0	0 0 1 1	0 0 0 0	1 24 1 0	22 104 18 18
Illinois: Chicago Springfield	31 0	3	1 0	1, 262 17	62 5	655 8	0 0	49 1	8	61 2	705 25
Michigan: Detroit Flint Grand Rapids_	5 0 0	1	3 0 0	1, 766 8 156	40 2 1	129 32 15	0 0 0	19 3 0	0 0 1	105 0 41	287 23 28
Wisconsin: Kenosha Milwaukee Racine Superior	0 0 0 0		0 0 0 0	15 369 141 21	0 6 0 0	15 113 30 1	1 0 0 0	0 6 1 0	0 0 0	2 15 17 3	5 101 14 10

City reports for week ended May 11, 1935-Continued

				1		· · · · · ·				_	
State and city	Diph theris	- Ini	luensa	Mea- sles, cases	Pneu- monia, deaths	Scar- let fever,	Small- pox, cases	Tuber- culosis, deaths	Ty- phoid fever,	Whooping cough,	Deaths, all causes
		Case	Deating			C84866			Cases	Cases	
251	-				<u> </u>						
Minnesota:										.	1 10
Minneepolie	- 10			110		3	1 2				19
St Davi	-1 10			101		199			l i	07	141
Towe:	- "	'		10	0	04		U	1	1 1	
Devenport	1 .		1	1			1 0		•	l .	
Des Moines	-1 8			900		5	l X		Ň		
Sion Oity	-l ĭ			~		ĩ	l ă		ŏ		5
Waterloo	- â	1	i ăl	ĭ	Ň	11	Ĭ	ŏ	ň	Ň	
Missouri:	- *			•	, v	••	ľ		v	, v	
Kansas City	. 8		0	69	9	15	1	8	0	0	98
St. Joseph	Ī		l i	5	4	ī	Õ	ŏ	Ŏ	i	19
St. Louis	. 0		1	15	10	20	Ó	10	Ō	6	201
North Dakota:											
Fargo	. 0		0	2	2	11	0	0	0	1	8
Grand Forks	. 0			0		0	0		0	0	
South Dakota:			l i								
Aberdeen	. 0			8		0	0		0	1	
Nebraska:											
Umana	- 2		U U	06	10	11	0	4	0	0	00
Kansas:			1 1								
Topeka	· ;;	•									
wichita			"	50	0	2	U	1		Z	32
Deleware			1 1								
Wilmington	1 0		ام ا	•	•	2	•	6	•		98
Marvland	· •		ı v	•		•	Ū	, v			20
Baltimore	1 1	8	1 0	88	18	55	0	10	6	11	204
Cumberland	'l â	1 i	1 il	3	- 6	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	ŏ	Ĩ		- 1	18
Frederick	ŏ		l õl	ŏ	ĭ	õ	ŏ	ŏ	ŏ	ŏ	2
District of Colum-	'l *			•	- 1	•		· · ·	×	, i	-
bia:		1 1								1	
Washington	8	1 1	1	73	11	64	0	18	0	1	162
Virginia:										_	
Lynchburg	1		0	6	2	1	0	2	0	24	17
Richmond	0		2	40	5	4	0	3	1	0	55
Roanoke	1		0	26	2	0	0	0	0	7	11
West Virginia:	1								1		
Charleston	1		0	9	1	0	0	1	0	0	14
Huntington	1			13		4	0		0	0	
wneeung	0		0	- 44	3	8	0	0	0	1	21
North Caronna:											
Wilmington				8	3	2	N N	2	v l	3	10
Winston So			•	U I	v I			- 1	0	- 1	13
lem	<u>ہ</u>							1			10
South Carolina:	l v		U U	-	•	۷I	•	- 1	•		10
Charleston	6	6	0	പ	6	0	0	5	0	2	22
Columbia	Ň	۳ I	ň	ň	i l	Ň	ň	ŏ	Ň	ă l	12
Greenville	ŏ		ŏl	2	2	ŏl	ŏ	ŏl	ŏ	ŏl	15
Georgia:	l i		-	- 1	- 1	•	- T	-	· ·	- 1	
Atlanta	8	6	3	1	7	4 1	0	3	0	2	99
Brunswick	Ó		Ó	Ō	Ó	Ō	Ó	Ő	Ó	6	7
Savannah	0		0	1	2	0	0	1	2	0	27
Florida:			1	1				1		1	
Miami	2		0	1	2	2	0	2	0	4	23
Tampa	2		0	29	2	0	0	1	0	0	20
									1		
Kentucky:									1		
Ashiand			-	::- -	-			-			
	U P			10 -			v l		N I	101	18
Louisville		0	0	320	12	20		•	"	101	70
Momphie					I	.				10	04
Nechrille	, Å			N N			×1	31	×1	14	40
A labama					•	-	v I	•	v	1	40
Birmingham	6		<u></u>	61	ام	- 1	•	ĸ	- 1	ĸ	50
Mobile	2	- 1	Ň I	3	Ϊĺ	1	Ň	21	- 11	ň	16
Montgomery	2		ň	ĩ	ā l	N I	Ň	ឹ	â l	ĭ	10
	- 1		×	- I	×	۳I	~	. *	~ I	- I-	
Arkansas:				1	1	1				1	
Fort Smith		I				 _					
Little Rock	0		1	7	2	3	0	0	0	20	6
Louisiana:			-								
New Orleans	13	1	1	36	8	5	0	10	1	1	126
Shreveport	0		0	18	5	0	0	4	1	0	35

6 4-4	Diph- thoris	uenza	Mea-	Pneu-	Scar-	Small-	Tuber-	Ty- phoid	Whoop-	Deaths	
State and city	cases	Cases	Deaths	slee, cases	monia, deaths	fever, cases	Cases	deaths	fever, cases	cough, cases	all Causes
Texas:											
Dallas				0	4	3		5	U U	9	60
Galveston	5		Ň	0	i i	ō	l ă	1 3	Ň	6	1
Houston	11 II		l ŏ	2	6	ŏ	Ĭ	2	ĭ	ŏ	
San Antonio	4		Ž	Ō	4	Ŏ	Ō	7	Õ	Ŏ	Ğ
Montana: Billings											
Great Falls	0		0	9	5	2	0	0	0	15	15
Helena	0		0	1	0	0	0	0	0	21	6
Missoula	0		0	17	0	0	0	0	0	0	0
Idano:	1					•	0	•	•	•	
Coloredo:	1		U	l v	-	v	v	•	v	U	1
Denver	6	81	0	207	4	97	1	5	1	3	90
Pueblo	ŏ		Ŏ	66	3	3	Õ	ĭ	ō	ī	15
New Mexico:	-					-			-	_	
Albuquerque	0		0	7	2	1	0	5	0	0	14
Utah:						-					
SaltLakeCity	2		1	8	2	90	0	0	0	89	43
Nevada: Reno	0		0	2	0	0	0	0	0	0	
				-	-			Ť		•	•
Washington:				100		10					
	v v		0	183	1	19	1	0	8	0	97
Tecome	Ň		Ň	14	2	7	8		1 I	1	81 98
070000	v		U U	•	-	•	0	v	- 1	-	40
Portland	0		0	103	8	16	0	2	0	1	89
Salem	ŏ	4		3		2	1		ŏ	ō	
California:	-	_		-						-	
Los Angeles	10	17	6	88	12	49	7	14	0	16	334
Sacramento	0		0	275	2	11	4	1	0	0	27
San Francisco.	0	•	0	49	8	21	0	6	2	28	163
								1			

City reports for week ended May 11, 1935-Continued

State and city	Meningococcus meningitis		Polio- mye-	State and city	Mening meni	Polio- mye-	
	Cases	Deaths	litis cases		Cases	Deaths	litis cases
Rhode Island: Providence New York: Pennsylvania: Philadelphia Ohio: Cincinnati	1 18 2 12	1 9 1 6	0 4 0 0	Missouri: St. Joseph St. Louis Nebraska: Omaha Maryland: Baltimore District of Columbia:	1 3 1 9	0 0 0 3	0 0 0
Cleveland Columbus Toledo	1 1 1	1 0 0	0 0 0	Washington Virginia: Lynchburg	11 0	5 1	0
Indiana: Indianapolis Terre Haute	3 0	0 1	0 0	Georgia: Atlanta Kentucky: Louisville	2	0	0
Michigan:	10 0	2	0	Tennessee: Memphis	2	0	0
Wisconsin: Milwaukee Minnesota:	0	0	1	Little Rock Louisiana: New Orleans	0 0	1 0	1
Minneapolis Iowa: Sioux City	0 2	1 2	0 0	California: Los Angeles San Francisco	3 1	0 1	4

Epidemic encephalitis.—Cases: New York, 1; Columbus, 1; St. Louis, 2. Pellagra.—Cases: Washington, 1; Charleston, S. C., 5; Atlanta, 1; New Orleans, 4; Los Angeles, 1.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended April 20, 1935.— During the 2 weeks ended April 20, 1935, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada, as follows:

Disease	Prince Ed- ward Island	Nova Scotia	New Bruns- wick	Quebec	On- tario	Mani- toba	Sas- katch- ewan	Al- berta	Brit- ish Colum- bia	Total
Cerebrospinal menin- gitis		22 8 75 1 117 88 39 5 	2 4 1 1009 1 9 28 3 1 	1 2855 222 8 7 23 1,419 200 112 24 1 89	3 407 7 3 34 5,426 460 1 1 42 1 200 78 8 6 6 304	1 56 11 	49 5 	28 2 4 1 10 35 26 7 26	145 3 2288 1244 47 21 37 20 	7 9566 599 8 19 4422 27,582 683 1 72 7,582 7,582 1 72 1 003 287 29 9 704

CEYLON 1

*Malaria.*²—The malaria epidemic in Ceylon, which began in October 1934, reached its peak in the third week of December; and it is estimated that, by the second week of the latter month, 500,000 persons had been attacked. The area affected was within the southwest quadrant (wet zone) of the island, the most densely populated part, comprising one-fifth the area but with 3,500,000 people out of a total population of 5,500,000. During 1934 a prolonged drought prevailed over a large part of this area. The drying up of the streams provided ideal conditions for the breeding of *Anopheles culicifacies*, which transmitted the infection; 21 percent of this species collected from the houses of one area were found to harbor oocysts or sporozoites. *Plasmodium vivax* was the predominating parasite.

¹ For earlier reports on the malaria outbreak in Ceylon see pp. 34, 113, 356, 499, and 631 of prior issues of the PUBLIC HEALTH REPORTS.

³ From extracts of a report of the director of medical and sanitary services, Ceylon, published in the annual report (1934) of the director of the eastern bureau of the health organization of the League of Nations, Singapore.

The case fatality rate generally was not high, considering the intensity of the epidemic. Among 2,223 hospitalized patients in the Kegalla district the rate was 2.87 percent; but in a hospital in Colombo, with a preponderance of subtertian malaria, the rate among 1,200 admissions was 6.75 percent. No infections were recorded at altitudes above 2,400 feet.

The common complications were (1) a dysenteric form of diarrhea, which yielded to quinine therapy; (2) convulsions in children; and (3) edema of the face and feet, during convalescence, especially in illnourished children. This latter condition was very prevalent and is under investigation.

The measures adopted were (1) mass treatment by quinine and (2) the supplying of food where destitution and malaria coexisted. The standard treatment for adults was 7½ grains of quinine sulphate or bisulphate in solution 3 times a day. Plasmochin and atabrine were used extensively in hospitals, but not in dispensaries or for mass treatment. Drug prophylaxis was not attempted on a large scale. Antilarval measures were intensified in Colombo and other towns but could not be applied in the rural areas.

CUBA

Habana—Communicable diseases—4 weeks ended May 11, 1935.— During the 4 weeks ended May 11, 1935, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria Malaria Poliomyelitis	1 114 12		Tuberculosis Typhoid fever	43 1 6	10 3

¹ Includes imported cases.

Provinces—Notifiable diseases—4 weeks ended May 4, 1935.—During the 4 weeks ended May 4, 1935, cases of notifiable diseases were reported in the Provinces of Cuba, as follows:

Disease	Pinar del Rio	Habana	Matan- zas	Santa Clara	Cama- guey	Oriente	Total
Cancer Chicken pox	1 133 21 	1 1 15 10 11	1 35 4 1 23 7	3 2 6 4 191 18 4 1 43 22	 35 2 18 24	1 219 4 26 19	4 3 8 4 6 614 5 2 124 83

May 81, 1935

748

ITALY

Communicable diseases—4 weeks ended March 31, 1935.—During the 4 weeks ended March 31, 1935, cases of certain communicable diseases were reported in Italy, as follows:

	Mar. 4-10		Mar. 11-17		Mar. 18-24		Mar. 25-31	
Disease	Cases	Com- munes affected	Cases	Com- munes affected	Cases	Com- munes affected	Cases	Com- munes affected
Anthrax. Cerebrospinal meningitis. Chicken pox. Diphtheris and croup. Dysentery. Lethargic encephalitis. Measlee Poliom yelitis. Scarlet fever. Typhoid fever.	5 19 312 460 1 3 2,782 4 229 166	5 15 119 289 1 3 337 4 108 98	5 20 449 547 3 6 3,709 7 230 160	5 17 123 280 3 6 325 7 88 109	4 28 879 550 4 3 3,149 4 282 169	4 22 114 289 4 3 372 4 118 106	8 15 438 563 3 2 3, 427 3 330 166	6 13 136 287 3 2 367 3 110 115

PERU

Callao—Plague.—A report dated May 3, 1935, states that according to the Director General of Public Health, Ministry of Public Works, in Lima, Peru, the last case of human plague in the port of Callao occurred during the latter part of March 1935. CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Hygiene, Pan American Sanitary Bureau, health section of the Learne of Nations, and other sources. The reports contained in the following table must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

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[C indicates cases; D, deaths; P, present]

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Place	ž~°,	0 1034 1034 3	28- 28- 28- 28- 28- 28- 28- 28- 28- 28-	26- 26- 26- 26- 26- 26- 26- 26- 26- 26-	Dec. 30, 1934- Jan.		Februa	ry 1935			M	arch 19	13			April	1935	
	i					7	6	16	83	9	8	16	R	8	ø	18	8	ŭ
Ceylon: Colombo Peliyagoda India. Assam As		6 6 7 110 030 030 030 030 030 030 030	8,559 1337 1337 1337 1333 1333 1333 1333 133	2,5,12,000 1,2,5,12,000 1,2,5,12,000 1,2,4,12,12,000 1,2,4,12,12,000 1,2,4,12,12,000 1,2,4,12,12,000 1,2,4,12,12,000 1,2,4,12,12,12,12,12,12,12,12,12,12,12,12,12,	8,822 4,7,102 4,100 4,000	3, 949 1, 949 1, 949 1, 116 1,	71 23 8288 11 151 151 160 200 866 4 11 151 160 170 100 100 100 100 100 100 100 100 10	1, 1, 1, 288, 288, 288, 288, 288, 288, 2	7 - 18 7 - 18	480 10 10 10 10 10 10 10 10 10 1	555 552 552 552 552 552 552 552	3, 358 1, 741 1, 741 251 164 164 866 800 800 300 300 300	2,2557 2,2557 157 157 157 157 157 157 157	2000 11 2000		80.04 P		
India (French): Chandernagor Ratikal. Pondichery.		04 FT	10 2	189	32	15	84	9 the	00	1901 1	άο	1	40	10	7 6			

FEVER-Continued	
YELLOW	
AND	
FEVER.	Continued
TYPHUS	A DIA TODO
SMALLPOX,	
PLAGUE,	
CHOLERA,	

CHOLERA-Continued [C indicates cases; D, deaths; P, present]

1					81		
	· .	Fi		8	17		
	1 1935	8		arch 19	11-20		
	Apri	13		Ŵ	1-10	10 10 mm	
		•			1-28		1
		8	1	y 1985			e e
		8		bruar	11-2		comp
Debu	1935			Fe	1-10	11	orts in
Veek ei	March	16			31	00	1 Rep
Δ		0		1935	21-		-
		R	in the second	nuary	11-20		
		8		'n	1-10		
	ry 1935	16		4	21-31		1
	Februa	3	I	aber 193	1-20		ъ.
		8		Decen			uspect
5	हें कि मंद्र	OCAT	8		1		-
<u>م</u>	우고 명 <u>카그램</u>	LOAT		1934	51-33		
2	ZAD S	3 2		ember	11-20		
		- \$		Not	1-10		
4400	28 8 8 8 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9	LOAT		1		DADA	
	Place		Indo-China (eee also table below): Kandai From-Panh Blangton B	Vlea		Indo-China (French) (see also table above): Cambodia ³ Cochin-China ³	¹ Imported.

PLAGUE 1-Continued

[O indicates cases; D, deaths; P, present]

	Comt Comt	ţ	1	,						Wee	k ended	L					
Place	060-27, 1934	28- Nov.	26 - 26	1934- 00, 1934- 00, 1925		Februar	y 1936			M	urch 193	8			April	1935	
					5	6	91	ន	8	°.	16	ន	8	•	13	8	2
Argentina (see also table below): Santiago de Estaro Provinca-Frias			1														
Azores. (See table below.) Belgian Congo		14		4								μ					
Bolivia: Tomina Province. (See table below.) Brasil:				_													
Alagoas State D			50														
Cears StateO British East Africa (see also table below):			8														
Kenya. Tanganyika.	-	9	4											Ť			
Uganda. D	88	62 22	112	62 S	0.0	91	29	15	ৰাৰ	==	90	29	•	82	15	នន	
Canary Islands: Las Palmas		3	1	1	-				8	67	-					-	
D Plague-infected rats		69 FO	-			~			64	63	*			2	80		1
China (see also table below): AmoyC									1,								
Kangping. ³ Manchuria.4			•														
Including piague in the Unived States at Imported.		ISSESSIONS.			1											5	

¹ A report dated Jan. 29, 1926, states that up to Jan. 23, 79 cases of plague with 78 deaths were reported near Kangping. China; the report also states that up to Jan. 21, 50 deaths from plague were reported in 6 villages of the Fe Wang Fu District, northwest of Kangping. How plague were reported for 06: 30, 1934, states that from June to Oct. 30, 1934, deaths from Plague Hod Dean reported in Manchurla, China, as follows: Fengtien Province-Liakoyuan 30, Ehnangbian 21, Tungliko 41, Kriin Province-Changling 12, Chinana 30, Ruyu 33, Hainking City 1, Nungan 168.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER-Continued

PLAGUE-Continued

[O indicates cases; D, deaths; P, present]

										Week	ended-	1					
Place	Bept. 30 ⁻ Oct. 27,	Nov.	Nov. 25- Dec.	Dec. 30,- 1934 - 1934 - 1935 - 1935 -	P	ebruary	7 1935			Ma	rch 1935				April 1	28	
	LOGT	1000T 417	LOAT 'A		8	•	16	ន	8	•	16	ន	8		13	8	8
Dutch East Indice: Oberibon0	•																
Java-Batavia	1,684 1,684	1,668	2, 905 905	2,425		89	88	098	340								
Ecuador (see also table below): Celica Demosts and Theor /					5	8	1 2	8									
Egypt: Level and Lizau (uear)	Ч	Ъ'ы С	р.	Å	Р.		ц р.		<u>р</u> -		ρ.		<u>д</u> 6		A-		
Beni-Suaf Girea		-		1											•		
Hawaii Territory: Hawaii Island—Hamakua district ^{4—} Kalora—Plarue-infected rats	1	ŝ															
Pasuhau 0												-	-				
Plague-infected rata. Pohakea-Plague-infected rata													5		$\frac{1}{1}$	Ī	
Rabul Island-Makawao district- Rahului (9-10 miles from) Plague- infected rats	81									,							-
raia-riague-infected rats. Ddia.	5, 642 3, 114 3, 114	4, 167 2, 424	4, 549 2, 875	5, 862 3, 503	1, 279	1,545	1,628	2,411	1, 713	1,915	1, 528	886					
Bassein	2,759 1,759	2,003	1, 331	1, 074	88	262 1	588	345	88	388	187 - 29 193 - 29	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<u>ي</u> قا ي	20	- 82	a 25	
Bombay O Plague-infected rats			3	3-1								:	8		3	8	
Madras Presidency	ŝ	ន្តន	1288	110	88,	89	88	22	82	89	87	610	<u>. : :</u> 80		$\overline{ }$		
Mandalay U																	

158 100 00 -----] ---------------...... -----...... 40 -----88 ----------..... 82 2 1-10 -: -----..... ----------101 -----38 -----..... -----80 82 ------------------...... ---------- Imported.
 For 2 weeks.
 For 1985.
 For 1985.
 For May 8, 1985.
 For May 9, 1985.
 For May 22 1 ----------..... ---------35-38 ----------------...... ----------87 18 == ---------------...... ----------39 --------------------...... ---------------..... -----23 --..... នៃន --------------------...... -----1812 ------------------------------..... 10 39 --------------...... ----------~ -----1933 2 -----leo ---------------4 83 ------------ 01 ŝ 88 2 ------------------------------~ ******* 85 000 00 000000 ODO ODODODO Madagascar. (See table below.) Morocco: Saigon and Cholon..... (See table below.) Rangoon Plague-infected rats Orange Free State. United States: California-Plague-in-Moulmein Saff Region Indo-China (see also table below): Northwest Frontier Province. Punjab..... Peru. (See table below.) Senegal. (See table below.) Siam: fected ground squirrels-Modoc County 11 Tanghai Island. Cape Province. Tangler Bentre.

10 For 4 weeks. 11 For the period Apr. 28 to May 16, 1925, 18 plague-infected ground squirrels were reported in Modoo County, Calif.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER-Continued

PLAGUE-Continued

[C indicates cases; D, deaths; P, present]

Maroh 1985	208 14 208 14
Febru- ary 1935	428 478 158 69 178 60
Janu- ary 1935	610 603 61 1 1 2 3 2 1 1 1 2 3 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1
Decem- ber 1934	888 888 199 199
Novem- ber 1934	401 101 8 4 8 4 1 8 4 8 4 1
October 1934	20 8 113 8 20 8 113 8 8 123 8 12 8 12
Place	Madagascar (central region). C Peru Lima department
March 1935	1 4 17 17
Febru- ary 1935	
Janu- ary 1935	64
Decem- ber 1934	
Novem- ber 1934	10* 0000 H
October 1684	
Place	rgentina (see also table above): Banta Fro- olives. Stress. Artica fee also trittan East Artica (see also trittan East Artica (see also Dinas. Ewangchowah D Chimborato Province Chimborato Province Chimborato Province Chimborato Province Chimborato Province Chimborato Province Contro-China above): Reaction Docothin-China Contro-China

¹⁸ Reports incomplete.

SMALLPOX [O indicates cases; D, desths; P, present]

	Sept.	Oet.	Nov.	ļ						M	ek end						I
Place	ងខ្លួន	\$20 \$0	¥ ^S 8	0, 1934- Jan.		Februar	y 1935			Mar	ch 1935				April	1935	
	1934	1934	1934		3	6	91	ន	5	•	16	ន	8	•	13	ิส	5
Algeria: Algeria: Belgran Conge (see also table below) Belgran Conge (see also table below) Brail: Brand: Bredfa. British East Africa: Tanganyika Argine State Tanganyika Canada: Northern Rhodesia. Canada: Northern Rhodesia. Canada: Alberta British South Alfrica: Canada: Alberta British Santa Oruz de Tenerite. Canada: Alberta Canada: Santa Oruz de Tenerite. Canada:	1 P.A. 0 P. 7 4200	P P 102 102 11 1 1 1 2 3 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1	111 1 888 1 1 1 1 888 1 1 1 1 1 1 1 1 1	199 11 198 11 11 12 コレル ^の びのだ ₁ u		<u>я</u> оюдндоюд	200-10 20 00 10 10 10 10 10 10 10 10 10 10 10 10		100 A00		aon∞a a 2000 a 200	а - - а - розданна				↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	

¹ For 2 weeks.

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FEVER —Continued
ND YELLOW
US FEVER, A
POX, TYPHI
UE, SMALL
HOLERA, PLAC

SMALLPOX-Continued

[O indicates cases; D, deaths; P, present]

	Sent.	0et.	Nov	1						We	ek ende	Ļ					
Place	ងខ្លួង	a No a	ล่อีส	Dec. 30, 1934- Jan.		Februar	y 1935			Mar	zh 1935				April	193.6	
	1934	1934	1934		2	•	16	ส	8	•	9		8	8	81	8	R
China-Continued. Bhanghai	5	1	90		8	-		-					- m	-		-	
Tileatsu. Taingtao Chosen. (See table below.) Colombia.	1	200 2	- 01	°I I	» 8	9 1	°=	N 01	8 M	41- 10	81	69 Qin	-	10 4 0			
Dahomey. (See table below.) Dutch East Indies: Balei				4													
Gharbiuya Bharbiya C	74				8	9	2		-100			N	-		1	2	
Buez Provinces Formes	46	69	2	440				8	- 0		9	6					
France. (See table below.) French Somaliland Great Britain:				. 11	9	•	61	61	69	60	20						
England and Wales		1				Ī	Ī	Ī			ÌÌ	Ť		$\frac{1}{1}$	Ť	T	
Greece: Salouika	- 69			1		İ	-	-	-	-	-	-	-			İ	
Honduras: Tela. 0 India. 0	4, 421	7, 163	7 17, 082	2,522 2,522	7, 336	8, 195	7, 389	8, 614	8, 164	8, 745	9, 173	9, 246				•	
Assam Bassein	3 8	1, 431	4, 189	5, 44 27 1	1, 577	1, 761	7 60	1, 784	1, 648 9 9	1, 756 12	1, 891 6	1, 763	11	13	-	-	П
Bombay Presidency.	628 132	1,245	2, 834	4, 816 1, 019	1, 879	1, 979	2,050	1,870	2, 222	2,128	2,456	2,053	2,834	Ī	2,730	2.631	
Bombay	8	10 4	91	24	28	\$8	128	88	28	22	28	122	35	100	338	198	35

May 31, 1985

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Calcutta	OF	~	4.	12	2	8:	93	2	23	83	8:	2:	28	140	125	22	2	22
Chittagong			-	20	20	9	8		2	: ??	7	 }	8	8		3	8	5
Cochin	00				64	-	•		64			0	;		64 9			
Madras Presidency.	206	2,708	2, 753	2,727	5, 324	1,389	1, 415	1, 041	18	1,246	- - 	1	1	218	1			
Madras	200	191	, , ,	9 9	38	31	1	39;	81~	2 10	12	22	017		16	18	10	
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Fundaro Rangoon	200	0 69 6	8	0.00	28	200	32	35	ç «	83	812	82	27	8 8.	88	128	58	হ ম
Visionalister Visionalister Tradis (Fermeh).	00	8	16	าส	-8	8	8	ន	5	88	21	21	8	-18	4	138 138	8	8
Chandernagor	00	ľ	ŀ			-	•		•					-				
Marika Maho Dendrohom		- 8	- 60	2	4	ľ	<u>, 1</u>		0	•	- -	18	0 8	•	<u> </u> -		$\frac{1}{1}$	
rounded y	A	85	83	38	12	38	12	39	12	32	323	នន	38	82	82			
Indo-Unina (see also table below): Haiphong	0				-						-	; 77				1	61	-
Pnom-Penh. Sairon and Cholon	00						İ				ŝ	-	1	; ;;	+			
Tourane.	00	41	ю т	10 F	61 4	6	-		~~~		-	61-						
Teheran	DD F	•	• 69 •	• 63	•	•	Ī	•	•			•						
Iraq	20	- 00		33	34	69		İ	10		3	-	3					
Arbil. Baghdad	00	84		~	1	5	6									; 7		
Basta Mosul Nue	00			8	d							•					-	
Japan (see also table below)	000		1	141						•		-	<u> </u> •	$\frac{1}{1}$		-		
Nagasaki.	00						-	-		3								
Lithuania. (See table below.)	a			61						-					-	-		
Mexico: Allende. ³	(1														
Chihuanua. Mazatlan	20		7	17	7		-	ŝ	5	3			12	-			-	-
Mexico, D. F. Monterrey	00	9		2	37	24	31	88	17	-				•				
San Luis Potosi. Vera Cruz	AO			1						•								
I For 2 weeks.	•											Ī	•					

) Imported... • A report dated Dec. 28, 1934, states that about 48 cases of smallpox with 5 or 6 deaths had been reported at Allende, Mexico. • For 3 weeks.

May 31, 1935

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CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER-Continued

SMALLPOX-Continued

[C indicates cases; D, deaths; P, present]

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¹ For 2 weeks.
³ Imported.

Kutawa at Hong Kong
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Tatawa Maru at San Francisco
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R Andu at Singapore from Hong Kong
Van Heuka at Singapore from Kong
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 1 cas

 8. S. Rhorn at Penang from Madras.
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 8. S. Kuarn-Si at Jibuti.
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 8. S. Varia at Bang on from Madras.
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 8. S. Varia at Bang Nong Nong.
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 8. S. Varia at Bang Nong Nong.
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 8. S. Varia at Bang Nong Nong.
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 8. Advang at Singapore from Gopalpore.
 1 cas

 8. Advang at Singapore from Madras.
 1 cas

 8. Advang at Singapore from Madras.
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 8. Rhona at Port Swettenban from Madras.
 1 cas

 8. Rhong at Singapore from Australia.
 1 cas

 8. S. Rhong at Singapore from Madras.
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 8. S. Suffergo at Singapore from Madras.
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 8. S. Suffergo at Singapore from Madras.
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 8. S. Suffergo at Singapore from Madras.
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May 81, 1985

FEVER-Continued
YELLOW
AND
FEVER,
TYPHUS
SMALLPOX,
PLAGUE,
CHOLERA,

TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

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May 21, 1985

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FEVER-Continued
ND YELLOW
PHUS FEVER, /
МАЦЦРОХ, ТҮІ
, PLAGUE, SI
CHOLERA

TYPHUS FEVER-Continued

[C indicates cases; D, deaths; P, present]

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YELLOW FEVER

[C indicates cases; D, deaths; P, present]

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1 For the period Apr. 21 to May 11, 1935, 14 deaths from yellow fever were reported in 8 localities of Goyaz State, Brazil. During the month of October 1934, 1 case of yellow fever was reported at Coronel Ponce, Mato Grosso State, Brazil. For the period Apr. 28 to May 11, 1385, 9 deaths from yellow fever were reported in 5 localities of Minas Geraes State, Brazil. Supported.