# **PUBLIC HEALTH REPORTS**

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NO. 13

#### PRODUCTION OF A MALIGNANT GROWTH IN A GUINEA PIG\*

By T. J. GLOVER, M. B., and J. L. ENGLE, M. D.

The purpose of this report is to place on record the production of metastatic malignancy in one of a group of guinea pigs inoculated with a culture containing a spore-bearing microorganism which was isolated, on special medium, from the tissue of a microscopically proved carcinoma of a human breast. The microorganism was again recovered from the malignant tissue of the animal herein reported.

A detailed report will be made at a later date, giving the findings on the remainder of this group of guinea pigs, as well as on a series of other experimental animals inoculated with the same microorganism.

The inoculation of the culture was made in the mammary region of an adult female guinea pig (a discarded breeder) on November 5, 1932. The animal was observed at frequent intervals until sacrificed.

On November 8, a rather evenly distributed infiltration was noted in the region of inoculation. This slowly became localized into a well-defined indurated mass about 2.3 cm in width and 3.4 cm in length. It was noted on December 22 that isolated nodular areas were developing in the region.

On January 9, 1933, the nodules were noted as enlarging and the inguinal glands were distinctly palpable about two weeks later.

On February 20, 1933, the nodular areas in the breast region and the glands in the inguinal region had increased in size. On February 24 weakness of the animal was noted, other conditions remaining substantially the same.

On February 28, the animal was very weak and was chloroformed. The gross postmortem findings were as follows:

Breast area (primary site).—Lobulated, nodular tumor masses in breast region covering an area 3.4 cm in length by 2.5 cm in width and showing invasion of anterior and posterior inguinal fatty structures and involving the musculature of the anterior abdominal wall. The depth of the tumor mass measured approximately 2.5 cm. Section of the primary tumor disclosed a pearly gray, fleshy, myxomatous, diffusely infiltrating tumor mass.

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<sup>\*</sup> From the National Institute of Health, Washington, D. C.

Inguinal area.—Enlarged bulging glands 1.6 cm by 8 mm in diameter, of same gross appearance as primary masses.

Large and small bowel.-Grossly negative.

Stomach.-Grossly negative.

Omentum presents scattered, diffuse, and nodular areas of tissue having the same appearance as the primary growth and varying in size from 1 mm to 8 mm in diameter.

*Kidneys.*—Both kidneys appear essentially normal, except that in one a minute, elongated, grayish focus is seen in a pyramid.

An enlarged gland at the renal level to the right of the spinal column presents the same gross appearance as the primary and omental masses. It is 3 mm in diameter.

Lungs.-Present scattered areas of pneumonic consolidation.

*Chest wall.*—Two enlarged retrosternal glands, 1.4 cm by 5 mm in diameter, presenting same gross appearance on section as primary and metastatic masses.

The following report on the microscopic findings in this guinea pig was submitted by Surg. R. D. Lillie, of the United States Public Health Service, in charge of the work in pathology at the National Institute of Health:

#### (NIH 3161—Guinea pig 117 x 17)

Inguinal mass, primary.—The tumor is composed of lobules and alveoli of large polygonal cells with highly vacuolated, foamy, hydropic, faintly metachromatic cytoplasm and small leptochromatic or oxyphil karyolytic nuclei, the cells frequently disintegrating to form clear spaces containing faintly oxyphilic, markedly metachromatic rings about the size and shape of the nuclei in better preserved cells. The lobules rest in a delicate collagenous reticulum which does not extend into them. Scattered, atrophic, striated muscle fibers are included in parts of the mass, and there is some marginal invasion of the underlying muscle. Some fibrous trabeculae run through the mass and contain ducts lined by cuboidal, stratified cuboidal, and stratified squamous epithelia, often containing pus and surrounded by a variable amount of lymphocyte infiltration.

Lateral inguinal mass, contiguous with primary.—Similar in structure to the primary, except that no ducts are included. No lymphadenoid tissue is identified in this block.

Omentum.—Similar in structure to the primary tumor, but shows less nuclear degeneration and contains no ducts.

Stomach (antrum).-No lesions.

Esophagus.—Normal.

*Liver.*—Slight, irregular periportal fibrosis in left lobe, slight periportal lymphocyte infiltration in both lobes.

Kidneys.—There are occasional small, sometimes intraglomerular, nodules of tumor tissue, similar to that found in the primary growth.

Subdiaphragmatic preaortic lymph node.—Partially replaced and infiltrated by masses of lobules and acini of large, foamy, disintegrating polygonal cells, with karyolyzing nuclei, lying in a delicate collagenous reticulum.

Anterior mediastinal mass.—Confused mass of acinous glandular tissue as in the inguinal tumor, scar tissue, lymphadenoid tissue, recent and encapsulating abscesses and foci of plasma and lymphoid cell infiltration.

Retrosternal lymph nodes.—Largely replaced by masses of large acini lined by disintegrating large polygonal foamy cells with karyolytic nuclei.

Trachea.—Slight lymphocyte infiltration of mucosa and pus in lumen.

Peritracheal lymph gland.—Oedema, an abscess filled with a loose fibrinopurulent exudate and partially walled off by an incomplete zone of epithelioid cells, and reticuloendothelial proliferation in part of the marginal sinus. The oedematous mediastinal fat contains occasional clumps of large cells of epithelial type, lying apparently in lymphatic spaces.

Lung (right lower).—Nodular consolidation characterized by purulent bronchial and alveolar exudation, sometimes associated with septal swelling and proliferation, patches of serous alveolar exudation, moderate focal perivascular lymphocyte infiltration. Single, small, apparently intraalveolar nodule in unconsolidated area composed of loosely packed vacuolated stellate cells with broad cytoplasm containing a few carbon granules and leptochromatic vesicular nuclei with minute nucleoli. On three sides the nodule is surrounded by a thin collagenous lamella which does not penetrate the nodule, the fourth side abuts on a free space. The other lobe sectioned (*left upper*) shows a similar though less extensive purulent bronchitis and bronchopneumonia, focal atelectasis and septal thickening and focal perivascular lymphocyte infiltration.

#### COMMENT

The new growth has apparently arisen in breast tissue, resembles lactating mammary acini in histologic structure, and is identical in structure in the primary and in the various metastatic masses. In the invasion and destruction of muscular tissue and in the production of distant metastases it fulfills two of the criteria of malignancy. Differentiation appears to be of high grade; anaplasia, conversely, slight.

Diagnosis.—Malignant adenoma with metastases in lymph nodes, omentum, and kidneys.

#### SICKNESS AMONG MALE INDUSTRIAL EMPLOYEES DURING THE FINAL QUARTER OF 1932<sup>1</sup>

#### By DEAN K. BRUNDAGE, Statistician, Office of Industrial Hygiene and Sanitation, United States Public Health Service

The influenza epidemic during the fourth quarter of 1932 caused a higher rate of sickness which disabled for eight consecutive calendar days or longer than was recorded for the like period of each of the three preceding years among a sample group of male industrial employees. The industrial establishments included are identical for 1932 and 1931, and for 1929 and 1930 a large majority of the establishments under consideration was the same. If the amount of the excess sickness frequency from influenza or grippe is deducted from the rate of total sickness, one finds that the frequency of sickness exclusive of influenza was just about the same as in the corresponding quarter of 1930 or 1931. Pneumonia as well as influenza increased in frequency in the fourth quarter of 1932, but the pneumonia rate was still below that recorded for the like quarter of 1929.

The frequency of diseases of the digestive system as a whole was practically the same as in the fourth quarter of 1931. The rate for diseases of the skin continued to be favorable. An increase in the frequency of diseases of the heart and arteries and genito-urinary diseases mentioned in the report for the third quarter of 1932 occurred also in the fourth quarter. Whether the indicated increase is real or due merely to a larger proportion of older employees on the pay roll at the present time, it is impossible to say.

These sickness data apply in the main to employed men, although many of them work only on a part-time basis. Only a small proportion are unemployed, as membership usually ceases soon after employment is terminated. The reporting establishments are scattered all over the United States, although a preponderance of them lies east of the Mississippi and north of the Ohio Rivers.

<sup>&</sup>lt;sup>1</sup> The report for the third quarter was published in the Public Health Reports for Dec. 16, 1932.

#### TABLE 1.—Frequency of disability lasting eight calendar days or longer in the fourth quarter of 1932 compared with the same quarter of 1931, 1930, and 1929. (Male morbidity experience of 52 industrial companies which reported their cases to the United States Public Health Service during all four years)<sup>1</sup>

Diseases and disease groups which caused disability. (Numbers in parentheses are disease title numbers from the International List of the Causes of Death, Fourth Revision, Paris, 1929)			disabilitie h quarter o	s per 1,000 f —
List of the Causes of Death, Fourth Revision, Falls, 1929)	1932	1931	1930	1929
Sickness and nonindustrial injuries <sup>2</sup> Nonindustrial injuries Bickness <sup>2</sup>	106. 0 13. 6 92. 4	84. 3 13. 5 70. 8	87. 2 13. 0 74. 2	96. 6 13. 1 83. 5
Respiratory diseases. Influenza and grippe (11) Bronchitis—acute and chronic (106) Pneumonia—all forms (107-109). Diseases of the pharynx and tonsils (115a). Tuberculosis of the respiratory system (23). Other respiratory diseases (104, 105, 110-114)	30.5 3.5 2.8 3.8 .7	25. 2 10. 7 3. 5 1. 7 4. 5 . 8 . 4. 0	27.6 11,6 4.2 2.5 4.3 .8 4.2	37. 1 15. 1 6. 2 3. 1 6. 8 1. 1 4. 8
Nonrespiratory diseases. Diseases of the stomach, cancer excepted (117, 118) Diarrhea and entertits (120). Appendicitis (121). Hernia (122a). Other digestive diseases (115b, 116, 122b-129). Rheumatic group, total. Rheumatismacute and chronic (56-58) Diseases of the organs of locomotion (156b). Neuralpia, neuritis, sciatica (87a). Neurasthenia and the like (pert of 87b). Other diseases of the nervous sytem (78-85, part of 87b) Diseases of the heart and arteries and nephritis (90-99, 102, 130-132). Other genito-urinary diseases (133-138). Diseases of the skin (151-153). Epidemic and endemic diseases except influenza (1-10, 12-18, 33, 37, 38, part of 39 and 44). HI-defined and unknown causes (200). All other diseases (19-22, 24-32, 36, part of 39 and 44, 40-43, 45-65, 59-77, 28, 89, 100, 101, 103, 154-1566, 157, 162)	1.1 3.4 1.7 3.4 10.6 4.7 3.5 2.4 1.1 .8 3.8 2.4 2.6		3.3 2.2 1.2	2.5 12.1 5.0 4.0 3.1
Average number of males covered in the record		7.4 158,090 32	1.5 154, 165 27	160, 023 23

<sup>1</sup> Except that the rates for 1930 and 1929 cover 27 and 23 companies, respectively, instead of 32, as in 1931 and 1932. The rates presented here for the corresponding period of preceding years differ somewhat from those shown in earlier publications because data for additional groups have become available in the meantime.

<sup>2</sup> Exclusive of disability from venereal diseases.

#### COURT DECISIONS RELATING TO PUBLIC HEALTH

Typhoid fever held not compensable under workmen's compensation act.—(Kentucky Court of Appeals; Mills v. Columbia Gas Construction Co., 55 S. W. (2d) 394; decided Dec. 13, 1932.) An action to recover damages was brought by one who alleged that he had contracted typhoid fever while in the employ of the defendant company as a result of drinking impure water furnished him by the defendant. The defense was that the matter came under the workmen's compensation act. The trial court, taking this view, held that it was without jurisdiction of the subject matter of the action and dismissed the plaintiff's petition. On appeal the court of appeals stated that the case turned on whether the alleged injury was compensable under the compensation act.

Under such act compensation was provided for "personal injuries sustained by the employee by accident arising out of and in the course of his employment, or for death resulting from such accidental injury," but the act also contained a provision that "personal injury by accident, as herein defined, shall not include diseases except where the disease is a natural and direct result of a traumatic injury by accident." In holding that the typhoid fever was not a compensable injury, the court differentiated the instant case from a prior decision in which it had held that tularaemia, contracted by a person while dressing rabbits in the course of his employment, was compensable. Speaking with regard to such tularaemia case, the court said that there the germs had "entered into the body through an abrasion or break in its integumentum," but that in the present case "the germs were absorbed into the system through the normal channels of entry." The court reversed the judgment of the lower court, saying:

We are clear, then, that typhoid fever resulting from the absorption of typhoid bacilli into the system through the normal channels of entry is, without more, certainly not a disease resulting naturally or directly, or indeed at all, from a traumatic injury, and, such being the case, is not a compensable injury within the meaning of our compensation act. It follows that the lower court incorrectly overruled the demurrer to the answer pleading lack of jurisdiction. Such demurrer should have been sustained. No other questions are herein decided.

Compensability of pneumonia under workmen's compensation act.— (Kansas City, Mo., Court of Appeals; Rinehart v. F. M. Stamper Co., 55 S. W. (2d) 729; decided Dec. 12, 1932.) In an action for damages based on negligence, the plaintiff alleged that, while employed by the defendant company, he was ordered to work in a refrigerating plant which was maintained by the company. At that particular time, he alleged that he was perspiring freely and that, as a result of his work in the refrigerating plant, his clothing was frozen upon his body and he contracted pneumonia. The trial court, agreeing with the company's contention, held that the petition showed exclusive jurisdiction in the workmen's compensation commission and dismissed it. An appeal to the court of appeals followed.

The compensation law defined "accident" as "an unexpected or unforeseen event happening suddenly and violently, with or without human fault, and producing at the time objective symptoms of an injury." It also defined "injury" and "personal injuries" as meaning "only violence to the physical structure of the body and such disease or infection as naturally results therefrom." The act provided, too, that "The said terms shall in no case be construed to include occupational disease in any form, nor shall they be construed to include any contagious or infectious disease contracted during the course of the employment."

The appellate court affirmed the judgment of the trial court, holding that the plaintiff had alleged facts upon which the workmen's compensation commission could legally find all the elements of a compensable case under the compensation law. Damage action for lead poisoning.—(Washington Supreme Court; Hatcher v. Globe Union Mfg. Co., 16 P. (2d) 824; decided Dec. 14, 1932.) An action to recover damages for lead poisoning was brought by a person who had been employed by the defendant company in its storage battery factory. Judgment went against the company in the trial court and an appeal was taken to the supreme court. Following are certain of the points decided by the appellate court:

Adhering to former decisions, the plaintiff's remedy was held to be an action at law and not a proceeding under the workmen's compensation act.

The admission by the trial court of evidence showing alterations to certain machinery after the plaintiff had become sick and had left the defendant's employ constituted reversible error.

An instruction that the defense of assumption of risk was not available to an employer who failed to comply with the factory act with respect to the place in which he required his employees to work stated the law correctly.

Certain requested instructions which would have advised the jury that the duty imposed by law upon the employer was merely to use reasonable and ordinary care to furnish a safe place to work did not state the law correctly where the action was brought under the factory act and the evidence brought it within its provisions.

Whether the assumption of risk could have been successfully invoked as a defense was dependent primarily upon whether the appellant had made a bona fide effort to comply with the factory act.

What was said with regard to the above-mentioned requested instructions applied with equal force to certain other requested instructions which would have advised the jury that one seeking to recover damages for injuries sustained must use his own faculties and the means afforded him for his own protection and that a failure so to do barred recovery on his part.

#### **DEATHS DURING WEEK ENDED MARCH 11, 1933**

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

	Week ended Mar. 11, 1933	Correspond- ing week, 1932
Data from 85 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 1.         Deaths per 1,000 population, annual basis, first 10 weeks of year.         Data from industrial insurance companies:         Policies in force.         Number of death claims.         Deaths laims per 1,000 policies in force, annual rate.         Deaths claims per 1,000 policies, first 10 weeks of year, annual rate.	8, 505 11. 9 594 51 12. 4 68, 890, 681 14, 326 10. 8 11. 3	9, 410 13. 4 657 54 12. 4 73, 837, 899 15, 338 10. 9 10. 1

1 1933, 81 cities; 1932, 78 cities.

# **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 March 18, 1933, and March 19, 1932

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended March 18, 1933, and March 19, 1932

	Diph	theria	Infi	uenza	Me	asles	Menin men	sococcus ingitis
Division and State	Week ended Mar. 18, 1933	Week ended Mar. 19, 1932	Week ended Mar. 18, 1933	Week ended Mar. 19, 1932	Week ended Mar. 18 1933	Week ended Mar. 19, 1932	Week ended Mar. 18, 1933	Week ended Mar. 19 1932
New England States:								
Maine New Hampshire		32		32	3	307	1	
Vermont		3			4	73	ŏ	
Massachusetts	16	42	6	9	341	479	Ō	
Rhode Island	3	5	2		3	355	0	
Connecticut Middle Atlantic States:	4	8	12	70	150	200	1	
New York	49	110	1 21	1 244	4.041	2, 251	1	12
New Jargev	40	22	22	205	1,536	224	i	
Pennsylvania.	70	104			1,056	2,029	5	
East North Central States:				100				
Ohio Indiana	30 26	38 39	216 65	198 294	507 152	516 65	1	10
Illinois <sup>2</sup>	28	88	104	426	399	346	23	1
Michigan	33	43	6	110	1, 353	942	2	ė
Wisconsin West North Central States:	3	10	90	773	494	574	2	2
Minnesota	3	10	3	2	1, 322	12	•	
Iowa	9	9	•	-	1,346	4	05	2
Missouri	23	39	18	26	275	56	15	č
North Dakota	2	3			70	95	1	<u> </u>
South Dakota	12	5		16	4	25	0	• 2
Nebraska	12	9 27	15	22 3	6	3	<u>o</u>	1
Kansas Bouth Atlantic States:	7	21		3	334	240	2	1
Delaware	11				5	1	0	0
Maryland 3	7	20	36	263	3	53	1	0
District of Columbia	4	11	3	2	3	3	0	0
Virginia. West Virginia.	13 10			378	473 143	626	8	1
North Carolina	15	14 15	81 69	52	506	571	0	
North Carolina South Carolina <sup>2</sup>	4	8	708	1, 477	217	84	ŏ	8
Georgia <sup>2</sup>	9	7	184	266	40	88	1	1
Florida	7	14	13	5	40	4	2	0
East South Central States: Kentucky	11	23	51	1,045	80	96	0	
Tennessee	3	11	100	2,675	30	149	3	62
Alabama <sup>2</sup>	15	9	120	66	25	1	ĭ	ĩ
Mississippi West South Central States:	7	12					Ō	ī
West South Central States:				-				
Arkansas	6 12	8 23	61 7	282 22	112 56	56	2 5	1
Louisiana Oklahoma 4	12	15	104	835	34	12	1	ĩ
Texas 2	63	30	117	460	750	27	3	i
Mountain States:							-	-
Montana	3		10	105	31	95	1	0
Idaho Wyoming	1		1	2	24 8	2	0	0
Colorado	7	12	43		ŝ	82	02	0 1
New Mexico	7	18		690	16	53	1	ô
Arizona	1	2	2	27	15	2	0	0
Utah <sup>3</sup>	2	1			2	1	1	0
Pacific States: Washington	1			1	51	623	0	1
Washington Oregon	1	8	30	201	81	173	.01	1
California	53	92	61	138	1.146	524	ĩ	8
							- 1	

See footnotes at end of table.

	Polion	n yelitis	Scarle	t fever	Sma	llpox	Typhoid fever	
Division and State	Week ended Mar. 18, 1933	Week ended Mar. 19, 1932	Week ended Mar. 18, 1933	Week ended Mar. 19, 1932	Week ended Mar. 18, 1933	Week ended Mar. 19, 1932	Week ended Mar. 18, 1933	Week ended Mar. 19, 1932
New England States:	0	0	13	29	0	0	1	0
Maine New Hampshire	ŏ	ŏ	26	41	ŏ	ŏ	ō	Ó
Vermont.	Ó	Ó	13	8	Ó	4	Ó	0
Massachusetts	0	0	417	504	0	0	3 0	<b>8</b> 1
Rhode Island Connecticut	0	0	46 176	50 125	3	ŏ	ŏ	Ō
Middle Atlantic States:	v	-					-	-
New York	1	2	1,120	1,741	0	6	8	4
New Jersey Pennsylvania	0	0	364 1,071	288 1,050	0	0	1	2 13
East North Central States:	°	v	1,0/1	1,000	, v	v	v	10
Ohio	1	1	1, 095	349	16	38	4	9
Indiana	0	0	128 546	166 443	1 15	11 23	2 0	6 6
Illinois <sup>2</sup> Michigan	1	0 1	590 608	446	10	13	2	14
Wisconsin	ô	Ô	119	69	4	Ō	ī	2
West North Central States:								
Minnesota	0	0	76 35	124 64	0 36	4 39	1	2 2 1
Iowa Missouri	ŏ	ŏ	86	59	6	8	1 I	ĩ
North Dakota	ŏ	0	10	10	2	4	0	0
South Dakota	1	0	9	11	0	14	2 0	1
Nebraska Kansas	0	0	39 57	32 48	1	8	3	0
South Atlantic States:	° I	v		10			-	-
Delaware	0	0	10	16	0	0	0	0
Maryland <sup>2</sup> District of Columbia	0	0	111 28	136 29	0	0	2 1	4
Virginia	ŏ	1	40	29	ŏ	•	10	
West Virginia	i i	ō	27	38	0	0	6	10
North Carolina	1	1	49	62	5 0	3	6	3
South Carolina <sup>1</sup>	2	0	4 12	6 10	10	1	1	4 12
Florida	i	ŏ	5	5	Ő	ó	5	5
Bast South Central States:								
Kentucky	0	0	54 38	117 29	1 2	4 19	3 5	16 7
Tennessee Alabama <sup>1</sup>	8 0	1	38 15	22	ĩ	17	5	ź
Mississippi West South Central States:	ŏ	ĭ	6	11	Ö	31	3	6
West South Central States:			_		8	22	0	1
Arkansas Louisiana	0	0	7 19	11 21	2	3	17	14
Oklahoma 4	ŏ	ŏ	33	22	8	8	2	0
Texas <sup>2</sup>	2	0	39	43	36	72	7	4
Mountain States:	0	1	7	38	0	2	5	0
Montana Idaho	ŏ	ō	6	9	10	4	2	ŏ
Wyoming	Ó	0	11	12	0	0	41	3
Colorado New Mexico	0	0	34 16	37 11	0	0	2	0
New Mexico	0	ö	16	8	i	ŏ	0	0
Utah <sup>1</sup>	ŏ	ŏ	10	7	ō	ŏ	í	ĺ
Pacific States:						10	1	1
Washington	0	0	37 16	29 23	32	13 11	ō	0
Oregon	ĭ,	3	178	162	24	8	7	¥.
California								

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended March 18, 1933, and March 19, 1932—Continued

<sup>1</sup> New York City only. <sup>3</sup> Typhus fever, week ended March 18, 1933, 12 cases: 1 case in Illinois, 1 case in South Carolina, 2 cases in Georgia, 7 cases in Alabama, and 1 case in Texas. <sup>4</sup> Week ended Friday.

• Figures for 1933 are exclusive of Oklahoma City and Tulsa, and for 1932 are exclusive of Tulsa only.

#### 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:

State	Menin- gococ- cus menin- gitis	Diph- theria	Influ- enza	Ma- laria	Mea- sles	Pel- lagra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
February, 1935 Arizona Arkansas Indiana Maine Michigan New Jersey New York New York North Dakota Pennsylvania Tennessee W yoming	4 2 7 3 7 10 19 23 6 1	15 30 160 9 94 78 241 12 323 39	100 631 414 1, 356 93 438 545 727 4	1 42 1   15 	39 148 73 9 3, 148 3, 559 9, 310 465 3, 765 187 44	 	0 1 3 0 4 1 3 1 0 2 0	64 50 554 127 2, 247 1, 301 3, 274 67 3, 530 124 21	0 32 7 0 5 0 0 4 0 4 0	5 13 13 7 16 10 22 0 20 19 0

February, 1933

I

Cincken pox. Arizona	1, 516 3, 397 5, 981 210 36 19 5 5 4 32 2 1 13	Indiana Maine Michizan New Jersey Pennsylvania Tennessee Wyoming Ophthalmia neonatoru:n: Arkansas New Jersey New York Pennsylvania Tennessee Paratyphoid fever: New York Tennessee Puerperal septicemia: Pennsylvania Rabies in animals: New Jersey New York Septic sore throat: Indiana Maine Michigan New York Tennessee Wyoming Tetanus: New Jersey	815	Trachoma—Continued.       Cases         North Dakota
Tennessee Lead poisoning:	1 5 2 5 2 3 79 36	Tetanus:	1	Whooping cough: Arizona

#### WEEKLY REPORTS FROM CITIES

329

#### City reports for week ended March 11, 1933

	Diph-	Infl	uenza	Mea-	Pneu-	Scar-	Small-	Tuber-	Ty-	Whoop	Deaths,
State and city	theria cases	Cases	Deaths	sles cases	monia deaths	let fever cases	pox cases	culosis deaths	phoid fever cases	ing .cough cases	all causes
Maine: Portland New Hampshire:	0		0	0	1	4	0	0	0	9	24
Concord Manchester Nashua	0 0 0		0 1 0	0 0 3	0 0 0	1 4 0	0 0 0	2 0 Ú	0 0 0	0 0 0	8 22
Vermont: Barre Burlington Massachusetts:	0 0		0 0	0 0	1 0	0 0	0 0	3 0	0 0	6 0	· 8 6
Boston Fall River Springfield Worcester	14 2 0 1		1 0 0 1	54 0 1 13	20 4 2 6	97 10 12 32	00000	13 3 1 2	000000000000000000000000000000000000000	61 10 32 6	240 41 47 57
Rhode Island: Pawtucket Providence	1 0 2	2	1 0 1	0 0	1 7	0 16	0	2 0 3	00	0 33	16 76
Connecticut: Bridgeport Hartford New Haven	0 1 0	1 1	000	12 7 2	2 2 4	13 4 1	0 0	1 0 2	1 0 0	0 5 7	25 34 53
New York: Buffalo New York Rochester Syracuse	4 45 1 0	30	1 14 0 0	19 1,867 1 0	0 192 3 3	53 358 34 33	0 0 0	10 87 1 2	0 7 0	28 128 10 46	158 1, 612 68 43
New Jersey: Camden Newark Trenton	1 0 0	1 5 2	0 0 0	1 389 7	1 6 4	12 39 21	0 0 0	1 11 4	0 0 0	0 43 3	24 96 39
Pennsylvania: Philadelphia Pittsburgh Reading Scranton	3 5 0 0	6 4 	5 2 1	82 2 73 0	51 20 1	156 56 15 18	0 0 0 0	32 10 1	2 0 0 0	4 22 1 0	474 180 29
Ohio: Cincinnati Cleveland Columbus Toledo	1 5 1 4	117	9 2 0 0	5 2 107 177	11 16 4 6	41 210 13 89	0 0 0 0	3 8 7 2	0 1 0 0	1 20 0 1	139 213 85 81
Indiana: Fort Wayne Indianapolis South Bend Terre Haute	0 6 0 0		0 1 0 0	0 61 0 0	0 15 0 3	8 19 10 11	0 0 0 0	0 6 0 1	0 0 0	0 10 17 0	18 17 21
Illinois: Chicago Springfield	4 0	11	6 0	236 0	67 2	269 8	0	45 0	0	16 0	656 26
Michigan: Detroit Flint Grand Rapids	16 2 0	1 8	0 0 0	543 82 3	24 3 3	187 5 12	0000	$\begin{array}{c} 22\\1\\1\end{array}$	0 0 0	95 4 36	259 20 37
Wisconsin: Kenosha Madison Milwaukee Racine Superior	0 0 3 3 0	2	0 1 2 0 0	0 85 6 0 0	0 0 9 0 0	1 5 49 8 0	2 0 0 0 0	0 1 4 1 0	0 0 0 0 0	4 0 65 11 11	8 89 8 5
Minnesota: Duluth Minneapolis St. Paul	0 1 1		0 0 0	7 690 319	2 5 2	0 29 21	0 0 0	3 3 4	0 0 0	81 15 46	29 106 60
Iowa: Des Moines Sioux City Waterloo	2 2 1			0 2 0	0	4 2 0	0 0 1		0 0 0	0 6 1	33
Missouri: Kansas City St. Joseph St. Louis	0 2 19	2	0 0	197 6 12	18 8 13	40 1 16	0 0 0	5 0 8	1 0 0	3 7 0	1 <b>22</b> 30 <b>205</b>
North Dakota: Fargo Grand Forks	0		0 0	0 0	1 0	6 0	0	0	0	0	5
South Dakota: Aberdeen,	0		0	0	ol	1	0	0	0	0	

#### City reports for week ended March 11, 1933-Continued

	· · · · ·	-									
	Diph-	Infl	uenza	Mea-	Pneu-	Scar-	Small-	Tuber-	Ту-	Whoop	Deaths.
State and city	theria cases	Cases	Deaths	sles cases	monia deaths	let fever cases	pox cases	culosis deaths	phoid fever cases	ing cough cases	all causes
Nebraska:											
Omaha Kansas:	2		0	9	5	5	0	1	0	1	42
Topeka Wichita	0		01	68 1	32	2 3	0	0	0	3	14 39
Delaware:											
Wilmington Maryland:	0		0	2	1	6	0	1	0	0	26
Baltimore Cumberland	0	6	4	50	27 2	70 2	0	11 0	0	19 0	212
Frederick District of Col.: Washington	0	3	02	0 5	0 17	1 21	0	0 15	0	0	3 145
Virginia: Lynchburg		°	0	1	2	4	0	0	1		9
Richmond	0		1	0	32	11	0	1	0	0	40
Roanoke West Virginia:	1		0	221		1	0	2	1	0	21
Charleston Huntington	0	1	0	11	0	3 0	0	0	0 0	3 0	11
Wheeling North Carolina:	0		9	27	0	0	0	0	0	1	12
Raleigh	0		0	2 56	1	2	0	2	0	2	20
Wilmington Winston-Salem_	01		0 0	50 0	0 1	0 6	0 0	02	0 0	0 5	5 14
South Carolina: Charleston	0	26	2	0	0	1	0	1	0	0	25
Columbia Georgia: Atlanta	0	37	2 1	0 7	2 10	0	0	0	0 0	0	21
Brunswick	50		0	0	0	30	0	Ō	0	18 0	92 3
Savannah Florida:	0	120	4	0	4	0	0	1	0	0	44
Miami Tampa	1 1	2 2	3 2	0 0	1 0	0 1	0 0	4 0	0 0	0 1	37 17
Kentucky:				-							
Ashland Lexington	0	5 5	0 0	7 1	0 2	1 2	0 0	0 1	0	0 0	14
Tennessee: Memphis	1		1	10	9	4	0	7	0	8	80
Nashville Alabama:	0		0	0	6	1	0	0	0	0	38
Birmingham Mobile	2 1	19	1	2 0	5 2	2 0	0	3	0	2 0	54 18
Montgomery	2	1		Ō		Ō	Ŏ		Ŏ	ž	
Arkansas: Fort Smith	0			1		0	0		0	0	
Little Rock Louisiana:	0	2	1	1	4	2	Ó	1	Ő	Ō	6
New Orleans Shreveport	13 0	8	8 0	4	87	11	0	26 4	2 0	4	192 34
Oklahoma: Tulsa	3		0	7	0	1	1	0	0	1	2
Texas: Dallas	9	2	2		8	6	0	1	0	0	55
Fort Worth Galveston	1		2	128 4	63	Ŭ 4	2	2	2	0	36
Houston	16		Ōj	107	17	Ō	0 5	0 3	13	0	18 70
San Antonio	4		6	14	7	3	0	6	0	0	69
Montana: Billings	0		0	2	0	0	0	0	0	0	6
Great Falls Helena	0		0	- 30 0	0	1	0	0	0	8	85
Missoula Idaho:	ŏ		ŏ	ŏ	ŏ	5	ŏ	ŏ	ŏ	ŏ	2
Boise					-						
Colorado: Denver	2	46	0	0	9	15	0	5	1	0	69
Pueblo New Mexico:	0		0	0	1	0	0	0	0	1	11
Albuquerque	0		0	0	0	2	0	4	0	•1	9
PhoenixUtah:	0		0	6	5	10	0	0	0	0	
Salt Lake City Nevada:	0		0	3	0	8	0	2	1	7	34
Reno	0	l	0	0	0	0	0	1	0	ol	3

		Tra	fluenza	1		Scar-			Tv-	Whoop-	
State and city	Diph theri cases	a	1	Mea- sles cases	Pneu- monia deaths	let fever	Small- pox cases	Tuber culosis deaths	phoid fever	ing cough	Deaths, all causes
	Case	° Case	s Deaths	1	deatins	cases		deatins	cases	cases	
Washington:											
Seattle Spokane Tacoma	Ċ	0	0	. 1 0 1	3	8 1 2	0000	0	. 0 . 0	002	42
Oregon:		-	3	5	4	2	2	4	0	0	74
Portland Salem		2		. 53		Ő	ő		. ŏ	ŏ	
California: Los Angeles	21			496	14	70	23	14	3	35	213
Sacramento San Francisco	(	2 3 2 21		0 2	5 12	16 9	0	3 9	0	14 85	29 169
			<u> </u>	<u> </u>	1	<b>2</b>		<u> </u>			
State and city			gococcus ingitis	Polio- mye-		State a	nd city			ococcus ngitis	Polio- mye-
State and city		Cases	Deaths	litis cases		Dialo a			Cases	Deaths	litis cases
					-						
New York: New York		7	1	0					1	0	0
New Jersey: Newark		1	0	0	Kan	sas: Wichita			1	1	0
Pennsylvania: Philadelphia		1	3	1	Mar	yland:					
Pittsburgh Reading	l	2	1	0	1 Nort	h Carol	re lina:	- 1	0	0	1
Indiana:					Geor	อข่อ -		1	0	2	0
Indianapolis		•	0	0	1				2	0	0
Chicago		13	11	0	Loui	siana: New Or	leans		1	0	0
Flint Wisconsin:		1	0	0		rado:			-		
Milwaukee		1	0	0	Utal	Denver.			2	2	0
Iowa: Sioux City		1	0	0	8	alt Lal	ce City.		2	0	0
Missouri:		-		0	Calif	ornia:	eles		2	1	0
Kansas City St. Joseph		2 2	5 1	0		JUS ANS	,e163		2	1	U
			1		_II						

#### City reports for week ended March 11, 1933-Continued

Lethargic encephalitis.—Cases: New York, 2; Trenton, 1; Philadelphia, 1; Chicago, 1; Baltimore, 1. Pellagra.—Cases: Philadelphia, 1; Charleston, S. C., 1; Savannah, 1; Memphis, 1; Birmingham, 1; Dallas, 1; Los Angeles, 1. Typhus fever.—Cases: Charleston, S. C., 1; Savannah, 1.

### FOREIGN AND INSULAR

#### **GREAT BRITAIN**

Scotland—Vital statistics—Quarter ended December 31, 1932.—The Registrar General of Scotland has published the following statistics for the fourth quarter of the year 1932:

Population (estimated)	4, 880, 000	Deaths from—Continued.	
Births	21, 653	Erysipelas	36
Birth rate per 1,000 popu-		Heart disease	2, 509
lation	17.7	Influenza	554
Deaths	16, 812	Lethargic encephalitis_	<b>25</b>
Death rate per 1,000 popu-		Measles	7
lation	13. 7	Nephritis, acute	64
Marriages	8, 262	Nephritis, chronic	308
Deaths under 1 year	1, 895	Paratyphoid fever	1
Deaths under 1 year per		Pneumonia	<b>24</b> 8
1,000 births	88	Pneumonia, lobar	391
Deaths from—		Poliomyelitis	8
Bronchitis	996	Puerperal sepsis	58
Broncho-pneumonia	838	Scarlet fever	71
Cancer	1, 886	Syphilis	21
Cerebrospinal fever	46	Tetanus	2
Diabetes	184	Tuberculosis	914
Diphtheria	100	Typhoid fever	8
Dysentery	1	Whooping cough	138

#### LATVIA

Communicable diseases—November, December, 1932, January, 1933.— During the months of November and December, 1932, and January, 1933, cases of certain communicable diseases were reported in Latvia as follows:

		Cases				Cases	
Disease	Novem- ber, 1932	Decem- ber, 1932	Janu- ary, 1933	Disease	Novem- ber, 1932	Decem- ber, 1932	Janu- ary, 1933
Cerebrospinal meningitis. Diphtheria. Erysipelas Influenza. Leprosy.	4 158 19 191	2 143 19 154	5 81 21 212 1	Paratyphoid fever Poliomyelitis Puerperal septicemia Scarlet fever Tetanus	1 	8 1 12 62	12 4 6 64
Lethargic encephalitis Measles Mumps	107 99		1 490 128	Trachoma. Typhoid fever Whooping cough	88 89 91	93 57 44	74 113 79

#### **PUERTO RICO**

Communicable diseases—Four weeks ended February 25, 1933.— During the four weeks ended February 25, 1933, cases of certain communicable diseases were reported in Puerto Rico as follows:

Disease	Cases	Disease	Cases
Chicken pox. Diphtheria. Dysentery. Erysipelas. Framboesia, tropical. Influenza. Leprosy. Malaria. Measles. Mumps.	50 60 945 8 5 3 241 6 3, 345 226 20	Ophthalmia neonatorum. Pellagra. Puerperal fever. Syphilis. Tetanus. Tetanus, infantile. Trachoma. Tuberculosis. Typhold fever. Whooping cough.	1 14 3 173 7 10 39 486 19 121

#### SWITZERLAND

Communicable diseases—Years 1928-1932.—During the years from 1928 to 1932, inclusive, cases of communicable diseases were reported in Switzerland as follows:

			Cases		
Disease	1928	1929	1930	1931	1932
Cerebrospinal meningitis. Chicken poz. Diphtheria and croup. Dysentery. Erysipelas. German measles. Influenza. Lethargic encephalitis. Measles. Mumps. Paratyphoid fever. Poliomyelitis. Scarlet fever. Smallpox. Tuberculosis. Trachoma. Typhoid fever. Typhois fever.	3, 193 2 123 239 10, 000 46 11, 860 936 66 104 3, 118 1 	68 1,748 3,723 3 142 172 32,632 27 3,606 855 32 229 3,259 	58 1,999 4,545 5 140 62 405 13 3,471 475 97 105 2,983 1 11 130 2,200	53 1, 776 82 37 39, 814 23 9, 152 620 187 351 2, 757 1, 465 127 147	71 2, 218 2, 265 4 102 37 35, 117 8 5, 509 1, 077 92 123 3, 317 9 174 2, 229

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 League of Nations, and other sources. The reports contained in the following tables 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.

•

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

			č							Week	Week ended	. T					
Place	Aug. 21- Sept. 17 1039	Sept. 18-Oct. 15, 1932	0ct. 16- Nov.	13- Dec.		December, 1932	932	°I°	January, 1933	1933		Fe	bruar	February, 1933		March, 1933	, 1933
					17	24	31	7	14	21	প্থ	4	11	18	25	4	11
Baluchistan.																	
	160	34			8												
	988	217		1													
Hong Kong Kwantung Leased Territory-District of Port Arthur O	33																
	<b></b>																
	258 546	82														-	
SwatówO TientsinO	88	730	3														
	ч 8	9															
	17 6, 312	3, 626	2, 411	3, 453	1,094	1,068	. 237	, 125	945	116							
Dombay	3, 477	2,072	1, 336	<u>    i    </u>		555	674	280	50 <del>4</del>	527 	g	Sec.	1	35	1	17	
low):	-													8	1		
Pnom-Penh Saigon and Cholon		ю <del>п</del>					-					5					
		1												~	90	63	6
		11															
Leyte Province	- 1999 -				60	11	14	<b>Ŧ</b> 8	21		58	55 55	17	r-9	នន	28	នដ

	reb. 1-	10, 1933	00	<b>a</b> w				March, 1933	n					
	<u> </u>	1		8				Mai 19	4					
	1933	21-31							32					
	January, 1933	11-20		4				, 1933	18	P4		•		
	Jan	1-10						February, 1933	11		2			+
			- m	13				Ĕ	4					
	, 1932	21-31		<b>~</b> ~~					*		19			
	December, 1932	11-20					1	r, 1933	21					
	Dec	1-10		20			Week ended—	January, 1933	14					
		21-30					Week	5	7					
	r, 1932					lt]			31					-
	November, 1932	11-20				preser		1932	24					
	Ñ	1-10			ł	ths; P,		December, 1932	17		2			
		21-31		69 69	PLAGUE	[C indicates cases; D, deaths; P, present]		Dece	10				Р.	
-	, 1932		-	3	PLA	cases;			3			12		
	October, 1932	11-20				icates		2 2	8	4				
•••	0	1-10	~~~	44		[C indi		November, 1932	19					
	Sep-	tember, 1932	60-4 <b>4</b>	18 16				Oct. 16- Nov. 12, 1932				41		
000	enst.	1932	10	11 8				Sept. 18- Oct. 15, 1932 1						
Moji.		<u> </u>	0A	00							9   0			
tao to								Aug. 21- Sept. 17, 1932						
Slam. Straits Settlements: Singapore. On vessel: S.S. Taisan Maru en route Tsingtao to Moji.		Place	Indo-China (French) (see also table above): Cambodia !	Cochin-China 1.	<sup>1</sup> Reports incomplete.			Place			Chaco-Villa Angela C Cordoba Province C Ininy Province			

<sup>1</sup> Including plague in the United States and its possessions. <sup>2</sup> Several cases of plague with 1 death were reported at Quines, San Luis Province, Argentina, on Dec. 9, 1932.

March 31. 1933

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

PLAGUE-Continued

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

										×	Week ended-	l l							
Place	Aug. 21- Sept. 17, 1932	Sept. 18- Oct. 15, 1932	Oct. 16- Nov. 12, 1932		November, 1932		Десеп	December, 1932	32		Janı	January, 1933	33		February, 1933	ry, 19	8	Ma 19	March, 1933
				19	38	~	10	17	24	31	7 14	21	*	4	п	18	25	+	п
British East Africa (see also table below): Tanganyika	<b>5</b> <b>7</b> <b>7</b> <b>7</b> <b>7</b> <b>7</b> <b>7</b> <b>7</b> <b>7</b> <b>7</b> <b>7</b>	985 44 7 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9	2005 28885 2005 28885 2005 28885		2466 2460 1117 1117	112 128 17 17 20 20 20 20 20 20 20 20 20 20 20 20 20	2000 2000 2000 2000 2000 2000 2000 200	2008 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 334 • 78888	1 3333	<b>8 7 8 8 7 8</b>				46	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		88	10° 14
Hawaii Territory: Hawaii Island- Hamakua-Kukalau	61									60	5								

March 31, 1933

India	3, 775	6,028	5, 422	1, 356 1	811 11,	509 11,	1,428 [1,	1,958 1,	529 11,	529 11.	1, 884 11,	, 590 11, 5	228	-	+	+	-	-		
	4	°.	#10 '0	610					<u>.</u>	_			 8	  -		-	-	-		
Plague-infected rats			•				-	-									•	•		
Bombay	4		3						-											
į			34	3	2	2	20	-	-	9	2			8	7 11	1		ន		
ł	315	343	266	23	174	114	161	23	115		ស្តី	132	88	[]3	+	+	-			
			30	32	3-	47	8	<b>4</b> 8		-	132			2		-		1		
1		2	4	•	•	•				-	<u> </u>	-		:	-	:		•		
Indo-China. (See table below.)					_					_					<u> </u>	;				
Iraq: Baghdad			e0		-									-	;	_				
Madagascar. (See table below.)					9			¢		a	ď						~			
					2			; 4	-	D	:		<u> </u> 	<u> </u>	_	<u> </u>	• •	•		
Siam	œ	-	-	-	ŝ					61	9	2		4		_	13			
South-West Africa.			•	•	,	•					-									
Byria: Beirut	4	4	ß	¢	9	-	-						-	-			+	-		
Stote Claude Alfica: Orange Free		4	ρ	ρ				ρ	ρ	ρ		-	-	-				<b>.</b>		
United States: California-San Benito	•	•	4	•				4	•	•		•	4	•	-	<u> </u>	-	-		
County-Plague-infected ground squir-																				
rels	-						+					-	+	+	+	+	+	-		
S. S. City of Oxford at Liverpool from																				
Alexandria-Plague-infected rats.	-						_	_		_	_				_		_			
S. S. Figuig at Marseille from Bona and	•																			
	-				+		-	+		-	-	-	<u> </u>	<u> </u>  -	<u> </u>	+	-	-	-	
S. S. Patris at Beirut C		-	co.		-						<u> </u>		<u> </u>	<u> </u>  -		-		-	-	
<sup>a</sup> At dock where steamship City of Lor	of London was berthed	berthed.			-			-	-			-	-	·						

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

**PLAGUE**—Continued

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

899	000
Febru- ary, 1933	51         <b>000</b>
Janu- ary, 1933	• 88
Decem- ber, 1932	13
Novem- Decem- ber, ber, 1932 1932	ο 1
Octo- ber, 1932	0000
Sep- tem- ber, 1932	40°E2000044 0
August, 1932	283-183 5138-183
Place	Peru Department- Amendayeque- Amendayeque- Cannabayeque- C
Febru- ary, 1933	N N
Janu- ary, 1933	0 140
Decem- ber, 1932	8 33 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Novem- ber, 1932	5 28 28 28 28 28 28 28 28 28 28 28 28 28 2
Octo- ber, 1932	7 7 11 38 38 38 38 38 38 38 38 38 38 38 38 38
Sep- tem- ber, 1932	4 888 <u>8</u> 11 4 55
August, 1932	8 66 00053-00446688
Place	British East Africa (see also table above): Kenya C Ecuador: Province- Indo-Ohina

Suspicious cases.
 Reports incomplete.

SMALLPOX

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

Aug. 21- 521- 17, 1932         Sept. 58- 15, 1932         Oct. 16- 15, 1932         November, 19- 28         November, 19- 28           Sept. 17, 1932         0.4. 18- 19         19- 11         26- 28         36- 28         19- 26         26- 26         3           14         41         1         1         1         1         1         2         3           2000000         288         11         1         1         1         2         3           14         63         74         11         1												Weel	Week ended—	T							
A     A     A     A     A     A     A       A     A     A     A     A     A     A     A       A     A     A     A     A     A     A     A       A     A     A     A     A     A     A     A       A     A     A     A     A     A     A       A     A     A     A     A     A       A     A     A     A     A     A       A     A     A     A     A     A       A     A     A     A     A       A     A     A     A     A       A     A     A     A       A     A     A     A       A     A     A     A       A     A     A     A       A     A     A     A       A     A     A     A       A     A     A     A       A     A     A     A       A     A     A       A     A     A       A     A     A       A     A     A       A     A       A <th></th> <th>Aug. 21- Sept. 17, 1932</th> <th>_</th> <th></th> <th></th> <th>vember 1932</th> <th></th> <th>Dece</th> <th>December, 1932</th> <th>1932</th> <th></th> <th>Ja</th> <th>January, 1933</th> <th>1933</th> <th></th> <th>ų.</th> <th>February, 1933</th> <th>, 1933</th> <th></th> <th>March, 1933</th> <th>1933</th>		Aug. 21- Sept. 17, 1932	_			vember 1932		Dece	December, 1932	1932		Ja	January, 1933	1933		ų.	February, 1933	, 1933		March, 1933	1933
A     A <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>ŝ</th> <th>10</th> <th>17</th> <th>24</th> <th>31</th> <th>~</th> <th>14</th> <th>21</th> <th>8</th> <th>4</th> <th>:</th> <th>18</th> <th>ង</th> <th></th> <th>=</th>							ŝ	10	17	24	31	~	14	21	8	4	:	18	ង		=
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PP     1     1     1     1     2     3     1     1       PP     1     1     3     1     1     3     1     1       PP     1     1     3     1     1     3     1     1       PP     1     1     3     3     1     1     1     1       PP     1     1     3     1     1     3     1     1       PP     2     3     3     1     1     1     1     1       PP     1     1     3     1     1     3     1     1       PP     1     1     3     1     1     3     1     1	: : :	288					51	F	88												
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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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CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER-Continued

SMALLPOX-Continued

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

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Place	August, 1932	Sep- tember, 1932	Octo- ber, 1932	Novem- Decem- ber, ber, 1932 1932	Decem- ber, 1932	Janu- ary, 1933			Place			August, 1932	Sep- tember, 1932	Octo- ber, 1932	Novem- Decem- ber, ber, 1932	Decem- ber, 1932	Janu- ary, 1933
Chosen	35 35 35 35 35 35 35 35 35 35 35 35 35 3	24 166	33 33 35	53 67	81	17		ey	Turkey	C Soviet Repub- C		238 <sup>33</sup> 30	13 4 796	13			e l

#### March 81, 1933

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TYPHUS FEVER

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

											Week	Week ended	1						
Flace	July 24- Aug. 20, 1932	Aug. 21- Sept. 17, 1932	Sept. 18- Oct. 15, 1932	Oct. 16- Nov. 12, 1932	November, 1932	nber, 12		Decen	December, 1932	932		Jai	January, 1933	1933		Fel.	February, 1933	, 1933	
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Greece. (See table below.) Guatemala. (See table below.) Irish Free State:	<b>P</b>	•	•				<u>.                                    </u>				8	3	<u>।</u> ९			1 2			
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CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER-Continued

# **TYPHUS FEVER**—Continued

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

												Week ended	nded-						
Place		July 24- Aug.	Aug. 21- Sept.	Sept. 18- 0ct.	Oct. 16- Nov.	November, 1932	nber, 12		Decem	December, 1932	32		Jan	January, 1933	833		Febr	February, 1933	83
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Place August, 1932	st, sep- tember, 1032	Octo- ber, 1932	Novem- ber, 1932	Decem- ber, 1932	Janu- ary. 1933	Febru- ary, 1933		H	Place		Au	August, 1932	Sep- ber, 1932	Octo- ber, 1932		<u>A</u>	ber, 1932	Janu- ary, 1933	Febru- ary, 1933
Bolivia. Coquimbo Prov. Chile: Coquimbo Prov. Greece. Guatemala.	14 15 5 5 5	4	60	4 15 10	8°°10 8	13	Peru Turk Unio Re Yugo	Peru Turkey U jun of Socialist Soviet Republics Yugoslavia.	Socialis	t Sov	00500	37 8 2,068 1	50 6 2,639	18 11		15 15 3	11 14	85 23	26

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

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Place	Sept. 17, 1932	Dept. 700. 18- 16- November, 1932 12, 1932	16- Nov. 12, 1932	Novel 1970	mber, 32		Decer	December, 1932	932		Ja	January, 1933	1933		Febi	February, 1933	83	A.
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French West Africa: Guinea			10	-	8			-										
Gold Coast			67	-	7		-	Î						$\frac{1}{1}$	$\frac{1}{1}$			
nds												<b>Ş</b>	$\frac{1}{1}$		$\frac{1}{1}$			
Senegal			80					Ì							$\frac{1}{1}$	$\frac{1}{1}$		
Bakel—KidiraC		9	0									$\frac{1}{11}$			$\frac{1}{1}$	$\frac{11}{11}$		
Upper Gambia		~ ~ ~ ~	•											<u>   </u> 	$\frac{11}{11}$			
Budan (French): KeyesD	<u> </u>	N	44															
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