

THE GOVERNMENT OF THE PHILIPPINE ISLANDS
DEPARTMENT OF PUBLIC INSTRUCTION

MONTHLY BULLETIN
OF THE
BUREAU OF HEALTH

VOL. XV

JUNE, 1935

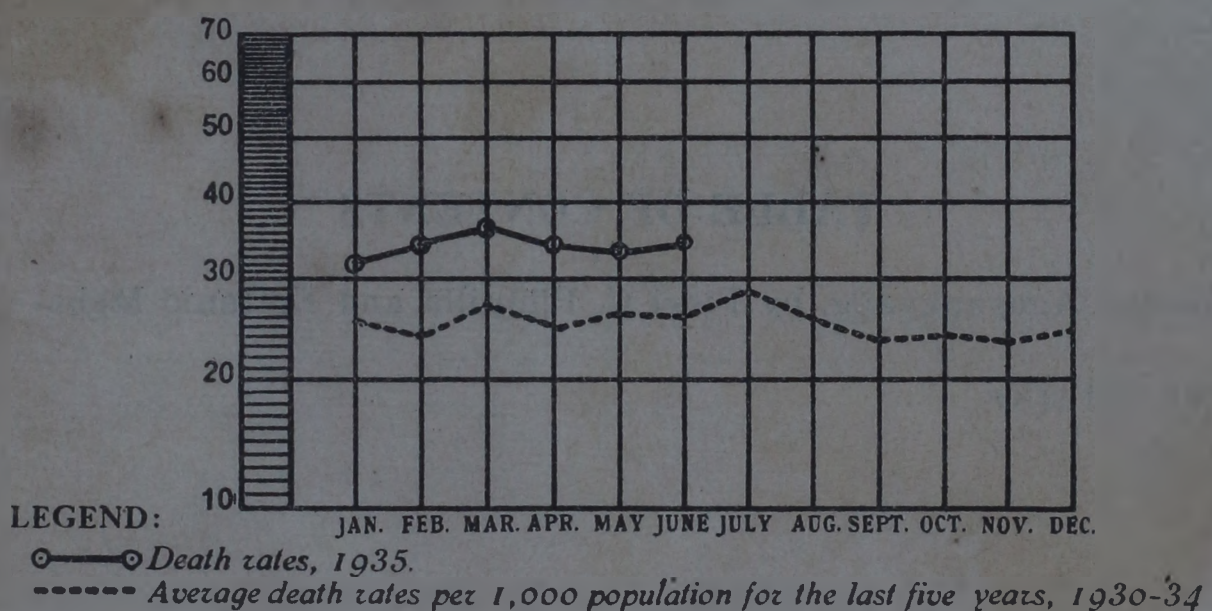
No. 6

Entered at the Manila Post Office as Second-Class Matter on January 16, 1925

"Se me antoja imperdonable olvido, que la protección de la salud pública, el mantenimiento de la capacidad física del pueblo no se hayan mencionado, por equivocación siquiera, entre los graves problemas de la nueva e histórica era y solamente se hayan acotado el desarrollo económico y la defensa nacional."—JOSE ALBERT, M.D.



ANNUAL DEATH RATE BY MONTH, CITY OF MANILA
(Residents only)



MANILA
BUREAU OF PRINTING
1935

BUREAU OF HEALTH

STAFF OFFICERS

1. JACOBO FAJARDO, *Director of Health.*
2. LEONCIO LOPEZ-RIZAL, *Chief, Division of Administration.*
3. EUSEBIO D. AGUILAR, *Chief, Division of Hospitals.*
4. GABRIEL INTENGAN, *Chief, Division of Sanitation.*
5. EUSEBIO H. HERNANDO, *Chief, Division of Epidemiology.*
6. TRANQUILINO ELICAÑO, *Chief, Division of Maternal and Child Hygiene.*

COUNCIL OF HYGIENE, ADVISORY BOARD TO THE DIRECTOR OF HEALTH

Dr. BENITO VALDES, *President.*
Dr. GERVASIO OCAMPO, *Member.*
Dr. JOSE ALBERT, *Member.*
Dr. PROCESO GABRIEL, *Member.*
Dr. HILARIO LARA, *Member.*
Hon. EULOGIO P. REVILLA, *Member.*
Mr. VICENTE P. GENATO, *Member.*
Dr. JOSE P. BANTUG, *Member and Secretary.*

TABLE OF CONTENTS

	Page
Latrodectus Agoyangyang, by Fidel C. Plantilla and Epifanio Mabalay	187
General statistics	199

MONTHLY BULLETIN
OF THE
BUREAU OF HEALTH

VOL. XV

JUNE, 1935

No. 6

LATRODECTUS AGOYANGYANG

PRELIMINARY NOTES ON THE ENTOMOLOGICAL, CLINICAL AND EXPERIMENTAL STUDIES

By FIDEL C. PLANTILLA and EPIFANIO MABALAY¹

Cebu Skin Dispensary, Bureau of Health

INTRODUCTION

In the island of Cebu abounds a species of spider that is poisonous to men. The clinical entity produced by its bite is not familiar to us, principally because most of the victims are living on the farms, and the cases are not brought to the attention of physicians.

Arachnidism, or spider poisoning, is not infrequent in Cebu, and probably it occurs in many regions of the Philippine Islands. Its study in the Philippines, however, dates back only recently and Philippine literature on the subject is very scarce. (1) Otanes of the Plant Sanitation Division of the Bureau of Plant Industry reported, in 1932, a venomous spider found in Isabela, Occidental Negros, and in Tayabas. He remembered that in 1927, a certain American submitted to the then Bureau of Agriculture, a specimen from Cotabato similar to that found in Negros and Tayabas. Otanes sent some specimens for identification to Ewing, of the United States National Museum, who reported that they are very near *Latrodectus hasselti* Thorell, but

¹ From the Division of Epidemiology, Bureau of Health

are not this latter species. Otanes had a white rat and two birds, known in Tagalog as "mayang costa" (*munia oryzidora* L.) bitten by the spider and all died. He, therefore, shared the opinion of the farmers from Negros where the specimens came from, that the spider was poisonous to cattle. He proceeded to point out the possibility of its being poisonous to man.

(2) Cesareo Asis, in 1933, reported four cases of red back spider bites in Cayan de Misamis. He described the symptomatology of the spider poisoning, consisting mostly of neurotoxic manifestations, and claimed that 25 per cent magnesium sulphate solution intravenously is almost a specific treatment.

(3) Sivickis and Filoteo have had this spider previously identified at the United States National Museum at Washington, as *Latrodectus hasseltii*. They followed up the development of the egg until hatching, but they did not give any description of the adult spider. De Asis described the body of his spider as dark gray, and distinguished it from *Latrodectus mactans* which has a shiny black appearance. The description of the spider was given in his paper apparently not to identify the insect; not even the characteristic features of the genus *Latrodectus* were given.

Our spider is black like the spider of Otanes. The description, however, of Otanes, is very short and like De Asis, he did not even touch the features which would place the spider in the genus *Latrodectus*. Although Ewing placed it under genus *Latrodectus*, he did not arrive to classify it into species. Because of the above considerations, and because of the inaccessibility of descriptive literature of the different species of *Latrodectus* we beg to be excused to present the following description of the spider found in Cebu to which we propose the name of *Latrodectus agoyangyang*, *agoyangyang* being the local name.

ENTOMOLOGY OF *LATRODECTUS AGOYANGYANG*

(4) Comstock gives the following generic features of *Latrodectus*, belonging to the family *Theridiidae*:

Family *Theridiidae*. The tarsi of the fourth pair of legs armed on the inside with a series of from six to ten strong, curved setae arranged in a single series and diminishing in length toward the tip of the tarsus.

Genus *Latrodectus*. Lateral eyes of each side widely separate. Abdomen globose.

The female *agoyangyang*, when full grown, and when in its natural crawling position extends its legs over about 3.5 centime-



Proposed name: **LATRODECTUS AGOYANGYANG**

ters. The body itself measures about 1 centimeter in length and 0.5 centimeter in width. The cephalathorax is 0.35 centimeter in length and 0.3 centimeter in width. There are four pairs of eyes, arranged in two rows. Both the anterior and posterior rows are slightly procurved. There are two median eyes—the posterior medians. *The lateral eyes are widely separated* by 170 μ . The anterior median eyes each measures 187 μ by 204 μ and distant from each other by 51 μ . The posterior median eyes each measures 204 μ by 238 μ and distant from each other by 187 μ . The anterior lateral eyes each measures 187 μ by 170 μ , and is separated from the anterior median eye by 119 μ . The posterior lateral eyes each measures 204 μ by 238 μ and distant from the posterior median by 187 μ . The distance between the anterior median and the posterior median is 102 μ .

The pair of chelicerae have no lateral condyles. Each has a furrow in the basal segment. The claw, on its concave surface, has two delicate keels, of which the lower is toothed. The chelicera is uncate. It measures about 0.15 centimeter. Each of the pair of pedipalps measures 0.25 centimeter. It is provided by a single claw armed with teeth.

The leg formula is 1-4-2-3. The first pair measures 2.2 centimeters, the second 1.5 centimeters, the third 1.1 centimeters and the fourth 2.15 centimeters. The tarsus has a paired claws and a third claw, all armed with a series of teeth. There are also accessory claws at the tip of the tarsus. *On the undersurface of the tarsus of the fourth pair of legs there is a distinct comb, consisting of a row of strong, curved, and toothed setæ.*

The abdomen is globose and measures 0.7 centimeter from the projecting anterior end to the caudal tip. Measured from the pedicel it is 0.55 centimeter in length. The width is 0.5 centimeter. The abdomen and the rest of the body and legs of the spider are black, and shiny. The abdomen is marked by red areas on both the dorsal and ventral surfaces. The red area on the dorsal surface is longitudinal, with a marked constriction at the anterior portion, and narrowing backward to the caudal end. It measures about 3 millimeters by 6 millimeters. The red mark on the ventral surface is hour-glass shape, 2 by 2 millimeters, situated on the central portion of the abdomen, not covering the four spinnerets, but immediately in front of them. In the center of this red ventral mark is the abdominal median muscle impression. Besides the above red marks, one or more red spots may be present in front of the dorsal marking.

The egg sac is round, of about 33 millimeters circumference. It is whitish, yellow and thick. An egg sac contains around 200 whitish eggs. The legs of the young spiderlings present bands of alternating black and white colors. After a series of moultings the white bands of the legs entirely disappear. The body of the spiderlings is white at the beginning, then becomes streaked with black lines. More of the white color disappears as the spiderlings grow older. Streaks of red appear later, then the white color disappears and the body of the full grown spider becomes black and red as described. In males, however, streaks of white remain on each side of the abdomen, the rest of the body being black with similar red marks described in the females.

The web of the *agoyangyang* is not artistic, being composed of coarse fibers laid out irregularly—across the holes of old stone and dried leaves or stumps of woods on or near the surface of the ground. It is found in the stony farms of Cebu.

Besides the black and red spider described above, there was caught a spider that seems to be similar or identical with the former. The body and legs, instead of black, are brown with red markings on the ventral and dorsal surfaces of the abdomen. It is also poisonous.

The complicated genital organs and other entomological details are left for the future to be described. Specimens are sent thru Dr. Hilario A. Roxas for comparison with the rich material in the Berlin museum.

CLINICAL MANIFESTATIONS

The writers have not attended any person with actual manifestations of the *agoyangyang* bite poisoning. Interviews, however, were carefully secured with many persons who have been bitten. The symptoms that they felt were narrated with sincerity, they resemble the symptoms of experimental animals, and were so uniform that we believe it is worth reporting them.

The disease usually runs a course of five days. The bite itself elicits a little pain that is not different from a light prick of a needle, and it does not last long. No unusual reddening or swelling appears at the site of the bite. A few minutes after the bite the lower extremities become numb, and painful, general debility ensues, then sensation of fullness and pain is felt on the abdomen. The abdomen becomes distended and rigid. Respiration becomes labored. Thirst is complained of. After one or two days, the symptoms begin to subside. The principal symptoms

in the mind of the people familiar with the clinical features of the *agoyangyang* poisoning are the distention with the accompanying pain and rigidity of the abdomen, and the pain and paresis of the extremities. Rigidity of the abdomen, however, is pointed by De Asis as absent in the case of his red back spider bite, but present in cases of bites by *Latrodectus mactans*. This is the typical course of the disease. Even the small boys in *agoyangyang* infested districts would readily describe these characteristic features. The patient, however, may feel only slight numbness of the legs. On the other hand, vomiting, headaches, fever, and pain in the regions of the superficial lymphatic glands may be present, and cyanosis and death may ultimately ensue. A fatal case occurred in Balamban, Cebu, on July, 1934. Dr. Jose T. Tirona writes the history of the case:

A FATAL CASE OF ARACHNIDISM

Shortly after noon of July 20, 1934, Felix Subang, a 51 years old laborer of Balamban, Cebu, while on his way home along a stony farm in barrio Pitogo, felt a little pain on his left foot. On looking down he saw a red back spider, which he was able to catch. He rubbed the insect on the site of the bite. He did not feel anything unusual until he reached home. Then he felt numbness and pain going up the leg until the inguinal region. He told his wife what was the matter with him and that an *agoyangyang* bite was the cause of it all. He had insomnia and felt tired that night. The following day, he called his wife and complained of chills. He felt the pain going up the abdomen and chest. He was very weak, the legs were paretic and finally he could not keep standing and had to lie down. Gasoline was rubbed on the site of the bite and macerated herbs of unknown nature rubbed on the rest of the body. Pain rendered him sleepless that evening. Shortly after noon of the following day, the wife on returning from a store found him lying dead. On post-mortem examination the abdomen was found hard and enlarged and the skin markedly cyanotic.

Doctor Tirona's case is not the only fatal case that we come to know of. The fatal cases rarely occur, barrio folks will testify to the deadly nature of the *agoyangyang* bite, and legends have been passed from generation to generation about this notorious spider.

There is a common belief among the people in *agoyangyang* infested districts, that drinking water after the bite aggravates the disease, and renders the abdomen very much distended. Hence, in spite of the thirst the patient suffers, he is not allowed to drink water. In certain districts it is believed that *agoyangyang* is very deadly on Fridays. People bitten on this day invariably die.

The treatments used by the laymen are briefly mentioned here, not much for its scientific interest but for curiosity:

- (1) Catch the spider and rub it on the site of the bite.
- (2) Rub garlic on the site of the bite.
- (3) Irritating leaves macerated in oil and applied as cataplasm.

(4) Hot-moist compress with water.

(5) Thermocautery.

(6) Infusion of the roots of "goyangyang" by mouth. *Goyangyang* is the local name of a vine *Abrus Precatorium*, L. (*saga* in Tagalog). The seed is small, oval, and it is of red and black color resembling the abdomen of the spider *agoyangyan*. The similarity in color and the similarity in name suggested to the mind of the common people the use of the vine in the treatment of the spider bite.

Needless to say, the advocates of each mode of treatment claim theirs is an effective one.

Much as we desired to present observations on actual cases, not only waiting but looking for a patient, we are only able to report here subscientific data and hearsay, satisfied, however, with the expectation that some of you will become interested in this subject and report to this same assembly your personal observations on actual cases.

EXPERIMENTAL STUDIES

(5) Bogen reviewed the reports on experimental studies of poisonous spiders and found them conflicting. Walchenner, Blackwell, Duges, Doleschall, Bertkau, McCook, and Simon allowed themselves to be bitten by various spiders, and Lucas and Bordas reported bites by *Latrodectus*; all stated that they did not feel any sign of poisoning. Baerg, however, who was bitten by a spider in the laboratory, reported severe symptoms that followed. George Marx reported in 1889 that rabbits and guinea pigs were not affected by injections of extracts, and transplants of the poison glands of *Latrodectus mactans*. Frost allowed *Latrodectus scelia* to bite one rat and died, but it did not affect a dog. Infinitesimal doses of the poison of *Latrodectus karakurt* was sufficient to cause death in warm blooded animals according to Breeger. In 1914 Castelli in Italy stated that an extract of *Latrodectus tredecimguttatus* injected into rabbits and guinea pigs produced death very quickly. Otanes, as stated in the early part of this paper, allowed a male white rat and two birds, *munia*

oryzidora, L., to be bitten by *Latrodectus*—very near *hasselti*—and all died.

Because of the apparently contradictory findings of the above workers, to ascertain what effects the poison of *Latrodectus agoyangyang* has on laboratory animals, and for the purpose of studying the nature of its poison with the hope of finding an antidote, we decided to make a series of experiments, the results of the first ones we are submitting in this paper.

THE EFFECT OF AGOYANGYANG BITE ON LABORATORY ANIMALS

Agoyangyang is poisonous to many animals. It produced symptoms in all the animals that we experimented on including chicken, parrot, cat, dog, guinea pig, white rat, and monkey. It is claimed to have killed carabaos, pigs, and goats. The symptoms in each animal are summarized below.

1. *Parrot*: Five minutes after the *agoyangyang* bite on the abdomen, the bird began to show restlessness, always on the go, moving sideways most of the time, with the head turned to one side. Soon it showed efforts to vomit. Then it became weak and staggered. Ten minutes after the bite, it vomited out undigested food for the first time. For about the ten minutes succeeding, vomiting was almost continuous, the bird became very weak, and settled itself most quietly in a dark corner. One hour after the onset of the symptoms the bird began to move slowly around, it resumed its normal gait, but it continued to be weak, and after a day of drowsiness, the bird breathed its last 39 hours after the bite.

2. *White rat*: Soon after the bite the rat became restless, respiration rapid, then it turned sluggish, weak and finally laid down. Respiration became difficult, salivation became evident, and after a few convulsions died after twenty-four hours.

Autopsy findings: Distention of the stomach and the large intestines.

Half a dozen rats died of the bite, but an old rat survived after three repeated bites. It developed, however, weakness and respiratory distress after every bite.

3. *Cat*: Five minutes after the bite the hind legs began to show paresis which became marked twenty minutes later. The front legs soon became affected tho slightly, the cat weakened, and laid down. It could hardly stand up and could keep on its feet for only a few seconds. Respiration was rapid and shallow at the beginning, then it became slow and deep. Half to one hour

after the onset the symptoms began to improve, but the cat remained weak and the hind legs slightly paretic. This condition of the hind legs persisted for several days and in one case for about a month. A cat was forced to swallow an *agoyangyang*. It soon began to show paresis of the hind legs and only slight weakness which lasted only for a day.

4. *Monkey*: A female monkey was allowed to be bitten on the abdomen. The monkey soon turned apathetic, drowsy, but able to jump now and then. It often touched its head, suggesting headache. The most conspicuous symptom was a series of vomiting which set in two hours after the bite. Drowsiness lasted for several hours, but the monkey was able to jump now and then and it resumed its activity in a day.

A week after, the same monkey was allowed to be bitten again. Scarcely a second after the bite, the monkey grabbed the spider and directly it was swallowed. Again the same drowsiness set in, the same gesture of touching the head was observed. One hour and twenty minutes after the bite, plenty of fresh blood came out from the vagina. After another hour and twenty minutes the monkey vomited several times, the vomitus smeared with fresh blood. Then the monkey lapsed into silence and drowsiness to resume its activity the following day.

Another monkey, male, grabbed the spider before it could bite, and swallowed it. Only slight drowsiness which did not last long was observed.

5. *Dog*: Received two successive bites on the abdomen. On the second bite it moaned with pain. Twenty minutes elapsed before the first symptoms appeared, the dog began to drag its hind legs limply after it, the palsy crept up the body to the front legs, then it became weak that it had to lie down on its side. The dog was so weak it could not keep itself standing for a minute. The front legs were relatively less affected. In a few minutes foamy salivation showed up, the abdomen became distended and rigid, and respiration labored. During all this time the dog was moaning hard almost continuously. The dog moved its bowels one hour after the bite, and vomited for the first time half an hour later. Vomiting was repeated several times during the eight hours that followed. The vomitus consisted of solid materials at the beginning, later it became liquid, foamy and tinged with faint pinkish brown color. This liquid vomitus was found positive for blood by the Benzidin test. The dog became exhausted, kept quietly lying down, moved sluggishly

only when it wanted to give way to momentary moans which became more and more widely apart as time went by. The dog suffered most two hours after the bite, respiration improved first, the dog became strong in a day, but the paralysis of the hind legs remained for 4 days.

6. *Guinea pig*: Guinea pig is the most susceptible of all animals tested. The symptoms developed rapidly, restlessness and rapid respiration becoming evident soon after the bite. The paresis of the hind legs set in, which soon developed into frank paralysis. The front legs became only slightly involved. The animal rapidly sank low and became unable to stand up. Respiration became slow and labored, salivation showed up. The animal became cyanotic and after several hiccoughs, convulsed into death. Death may ensue one hour after the bite, usually within 24 hours.

Autopsy findings: Marked cyanosis of the mucosa around the mouth and nose, and distention of the stomach and large intestine are constant findings. In one case there were hemorrhagic patches on the large intestine and stomach, and marked congestion on the lungs, liver, spleen and kidney.

7. *Chicken*: The least susceptible of the animals tested is chicken. It showed only a momentary paresis lasting for not more than five minutes. Besides the paresis, the chicken moved bowels several times, mostly consisting of liquid material.

This observation seems to confirm the belief common among the people in *agoyangyang* infested districts, that where there are many chickens the spider becomes scarce or exterminated. The chickens readily pick up and eat the spider, and it seems we have in them the best help in exterminating the poisonous *agoyangyang*.

8. *Frog*: A few minutes after the bite the frog was unable to jump and after two hours died. The skin became bluish with slight congestion on the abdomen. Respiration ceased first, the circulation as observed in the capillaries, continued long after the cessation of respiration.

9. An *agoyangyang* was allowed to bite a monkey and the monkey showed symptoms of poisoning. The same spider was allowed to bite a dog twenty-six days after and the dog developed the characteristic symptoms. One hour after the last bite, the same spider was allowed to bite a guinea pig. The guinea pig did not show even the slightest sign of poisoning. Three days after, this same guinea pig was allowed to be bitten again now

by a spider fresh from the fields. The guinea pig developed the characteristic symptoms and died. This experiment showed that the venom of the spider is not restored soon after the bite, and together with the fact that not all white rats die of the bite, may explain in part the variable results in single animal experimentations of previous observers.

SUMMARY AND CONCLUSIONS

1. The outstanding anatomic features of a poisonous spider found in Cebu are described. It belongs to the genus *Latrodectus* and the name of *Latrodectus agoyangyang* is proposed. In future studies on Philippine spiders, it is suggested that the principal features of the insect be described for identification. It is possible that several varieties of poisonous spiders exist in the Philippines. Already two Philippine specimens were identified in the United States National Museum, one as *L. Hasselti* and the other as *Latrodectus* very very near *Hasselti*, but are not this latter species.

2. *Latrodectus agoyangyang* is poisonous to man and fatal cases occur. No local reaction is produced by the bite. The symptoms consist of neuro-toxic manifestations. Practitioners are enjoined to take interest in the further study of this neglected clinical entity which is not at all infrequent.

3. Analysis of the symptoms in animals produced by the bite and ingestion of *agoyangyang* points to the presence in its venom of a neurotoxin and hemorrhagin and probably semolysin. The neuro-toxic substance must be the chief poison and attacks the brain and the peripheral nerves. It affects the respiratory center in the medulla first by temporary stimulation and finally depression. It paralyzes the stomach and intestines, and the muscles especially of the lower extremities. The poison probably affects the nerve end-plates and travel thru the lymphatics causing numbness to spread by contiguity.

The poison is probably eliminated mostly thru the gastrointestinal tract causing redness and hemorrhages. Once in the stomach or intestines, the poison serves as an afferent impulse to produce vomiting. The profuse hemorrhage from the vagina of the monkey, and the blood on the vomitus of same and of the dog suggest the presence of a hemorrhagin or cytolsin which damage the walls of the capillaries allowing increased amount of transudation.

Death in *agoyangyang* bite is probably due to respiratory failure.

4. The paper is preliminary in nature. Our excuse in presenting it now is the frequent calls of our secretary urging us to read whatever little we have done. Further clinical observations, analysis of the poison, and studies on the treatment will be the subject of future reports.

ACKNOWLEDGMENT

Thanks are due to Mr. Florentino Inocando of Balamban, Cebu who supplied most of the spiders used in this study, to Dr. Jose T. Tirona for placing at our disposal the records of his case, and to our coworkers in the dispensary whose coöperation and enthusiasm were valuable in carrying out certain observations.

REFERENCES

1. OTANES, F. Q. "Notes on a venomous spider in the Philippines. (*Latrodectus* sp., near *hasselti* Thorell,)" the Phil. Journal of Agriculture, Vol. 3, 1932.
2. DE ASIS, CESAREO. "Redback" spider bite and magnesium sulphate treatment, a clinical study of four cases," The American Journal of Trop. Med., Vol. XIV, No. I, Jan., 1934.
3. SIVICKIS, F. B., and FILOTEO, R. S. "The development of the spider, *Latrodectus hasselti*," Trans. Amer. Microscopical Sec., Jan., 1928, XLVII, No. 1.
4. COMSTOCK, JOHN HENRY. (1913.) "The Spider Book," Doubleday, Page and Company, New York.
5. BOGEN, E. "Arachnidism, spider poisoning," Arch. Internal Med. 1926, XXXVIII, 623-632.

198

BUREAU OF HEALTH

SECTION ON VITAL STATISTICS, CITY OF MANILA

MORTALITY STATISTICS FOR THE MONTH OF JUNE, 1935

(Unless otherwise specified, all the data are for June, 1935)

	1934	1935	Male	Female
Estimated population as of July 1st.....	349,290	353,418	182,850	170,568
Births.....	1,755	1,705	911	794
Birth rate per 1,000 population.....	61.17	58.74	60.66	56.67
Stillbirths (not included elsewhere).....	44	41	18	23
Deaths estimated expectancy (1926-1932).....	758	767	.....	.....
Deaths (residents only).....	743	1,023	528	495
Death rate per 1,000 population.....	25.90	35.24	35.16	35.33
Death of nonresidents occurring in the City of Manila.....	132	^a 148	83	65
Deaths under 1 year (including transients).....	245	348	191	157
Infant mortality rate per 1,000 births.....	139.60	204.11	209.66	197.73

^a Includes one male permanent residence unknown.

IMPORTANT DISEASES ACCORDING TO THE AGE AND SEX

(Residents only.)

Inter- national list No.	Causes of deaths	Total				Under 1 year	1 to 4 years	5 to 14 years	15 to 24 years	25 to 44 years	45 to 64 years	65 and over
		1934	1935	Male	Female							
	<i>Total, all causes</i>	742	1,023	528	495	316	325	39	64	111	88	80
1	Typhoid fever.....	4	7	2	5	.....	.....	2	4	1	.....	.....
	Typhoid fever estimated expectancy ¹	5	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
11	Influenza.....	8	23	17	6	6	8	2	3	3	.....	1
14	Asiatic cholera.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	Dysentery.....	10	17	9	8	2	8	2	1	1	3	.....
	Dysentery estimated expectancy ¹	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
31	Tuberculosis of the lungs.....	112	122	62	60	1	13	3	24	50	27	4
	Tuberculosis of the lungs estimated expectancy ¹	177	180	.....	.....	.....	.....	.....	.....	.....	.....	.....
43-49	Cancer.....	16	19	5	14	.....	.....	.....	2	8	7	2
55	Beriberi.....	2	23	13	10	18	.....	.....	1	2	2	.....
71	Meningitis.....	.....	5	2	3	4	.....	1	.....	.....	.....	.....
99	Bronchitis.....	107	81	42	39	44	36	.....	.....	.....	.....	1
100	Broncho-pneumonia.....	161	236	122	114	92	134	8	.....	2	.....	.....
101	Pneumonia.....	33	35	16	19	2	6	1	4	9	7	6
128-129	Nephritis.....	31	41	25	16	6	13	1	1	7	9	4

¹ Experience 1926-1932.

**PERCENTAGE DISTRIBUTION OF DEATHS BY AGE-GROUP IN JUNE OF THE YEAR
1934 AND 1935 AMONG RESIDENTS IN THE CITY OF MANILA**

TABLE—A

Age group	June			
	1934		1935	
	Death	Per cent	Death	Per cent
Under 1 year.....	221	29.74	316	30.89
1-4 years.....	176	23.69	325	31.77
5-14 years.....	31	4.17	39	3.81
15-24 years.....	56	7.54	64	6.26
25-44 years.....	93	12.52	111	10.85
45-64 years.....	76	10.23	88	8.60
65 and over.....	90	12.11	80	7.82
Total.....	743	.....	1,023	.....

**PREVALENCE OF DISEASES IN JUNE OF THE YEARS 1934 AND 1935 FOR THE
AGE-GROUP UNDER 1 YEAR AND 1 TO 4 YEARS AMONG RESIDENTS IN THE
CITY OF MANILA.**

TABLE—B

Disease	June			
	1934		1935	
	Under 1 year	1 to 4 years	Under 1 year	1 to 4 years
Measles (7).....	.....	1	2	6
Influenza (11).....	1	1	6	8
Dysentery (16).....	1	6	2	8
Beriberi (55).....	2	.....	18	.....
Bronchitis (99).....	71	33	44	36
Broncho-pneumonia (100).....	63	92	92	134
Pneumonia (101).....	3	1	2	6
Diarrhea (113-114).....	7	21	57	77

NOTE.—Numbers in parenthesis are the corresponding numbers in the International List of Causes of Death. (Revision of 1920.)

CAUSES OF DEATHS ARRANGED BY GROUPS AND SEX

Groups	Causes of deaths (Numbers in parenthesis are those of the International List, revision of 1920)	1934				1935			
		Residents		Tran- sients		Residents		Tran- sients	
		M.	F.	M.	F.	M.	F.	M.	F.
I	(1-42) Epidemic, endemic, and infectious diseases.....	69	86	22	10	112	99	22	18
II	(43-69) General diseases not included in class I.....	11	15	3	2	20	28	2	6
III	(70-86) Diseases of the nervous system and of the organs of special sense.....	8	7	2	....	11	14	5	1
IV	(87-96) Diseases of the circulatory system....	14	3	6	4	11	15	2	4
V	(97-107) Diseases of the respiratory system...	165	145	16	15	187	176	17	11
VI	(108-127) Diseases of the digestive system ...	26	19	18	8	98	78	26	14
VII	(128-142) Non-venereal diseases of the genito-urinary system and annexa.....	12	24	4	2	28	22	2	4
VIII	(143-150) The puerperal state.....	....	6	....	8	....	5	....	3
IX	(151-154) Diseases of the skin and of the cellular tissue.....	1	1	3	1	4	3	2	1
X	(155-158) Diseases of the bones and of the organs and locomotion.....	....	....	....	....	....	....	....	....
XI	(159) Malformations.....	....	1	....	....	1	....	....	....
XII	(160-163) Early infancy.....	31	29	....	....	33	32	1	1
XIII	(164) Old age.....	23	32	....	....	12	22	....	1
XIV	(165-203) External causes.....	11	4	7	1	10	1	4	1
XV	(204-205) Ill-defined diseases.....	....	..	....	....	1	....	....	....
		371	372	81	51	528	495	a 83	65
Totals.....		743		132		1,023		148	
Grand total.....		875				1,171			

^a Includes one male permanent, residence unknown. (Diag. No. 31.)

NOTE.—M.=male, F.=female.

POPULATION, BIRTHS, DEATHS UNDER 1 YEAR AND TOTAL DEATHS, BY MUNICIPAL DISTRICTS

Municipal districts	Population	Births		Deaths under 1 year		Total deaths	
		1934	1935	1934	1935	1934	1935
1. Tondo.....	89,065	503	423	78	118	262	416
2. San Nicolas.....	32,176	64	62	13	13	44	47
3. Binondo.....	19,441	57	56	6	2	15	15
4. Santa Cruz.....	57,622	194	262	22	45	87	117
5. Quiapo.....	17,494	53	49	8	11	26	27
6. San Miguel.....	4,890	35	20	3	7	9	19
7. Sampaloc.....	43,794	295	307	49	53	145	189
8. Port Area.....	5,312	5	....	....	2	1	2
9. Intramuros.....	16,129	93	63	3	8	18	24
10. Ermita.....	17,803	116	120	4	7	13	12
11. Malate.....	18,167	131	126	18	17	60	67
12. Paco.....	17,693	127	137	9	16	29	37
13. Pandacan.....	6,469	44	28	5	6	13	21
14. Santa Ana.....	7,363	38	52	3	11	21	30
Total.....	353,418	1,755	1,705	221	316	743	1,023.

POPULATION, BIRTHS AND DEATHS BY NATIONALITIES

Nationalities	Population	Births		Deaths	
		1934	1935	1934	1935
Americans.....	1,952	16	8	2	1
Filipinos.....	316,158	1,654	1,613	718	983
Spaniards.....	1,754	6	1	2	5
Other Europeans.....	841	2	....	1	4
Chinese.....	29,991	65	71	18	27
All others.....	2,722	12	12	2	3
Total.....	353,418	1,755	1,705	743	1,023

(Unless otherwise stated all data are for residents only.)

INFANT MORTALITY FROM IMPORTANT CAUSES AND SMALL AGE-GROUP
(Transients included)

Grand total		Age at death																	
Years		Days under 1 month					Months under 1 year												
		Under 1 day	1 to 7 days	8 to 14 days	15 to 21 days	22 to under 30	Total under 1 month	1 month +	2 months +	3 months +	4 months +	5 months +	6 months +	7 months +	8 months +	9 months +	10 months +	11 months +	Total from 1 month to under 1 year
1934	1935																		
245	348	22	18	19	10	6	75	27	20	21	30	21	25	31	24	32	17	25	273
Causes of death																			
Communicable diseases:																			
Typhoid and paratyphoid fever (1)																			
Smallpox (6)																			
Measles (7)																			
Whooping cough (9)																			
Diphtheria (10)																			
Influenza (11)																			
Asiatic cholera (14)																			
Dysentery (16)																			
Meningococcus meningitis (24)																			
Other epidemic and endemic diseases (25)																			
Tetanus (29)																			
Other infectious diseases (1-42)																			
Beriberi (55)																			
Diseases of the nervous system (70; 71; 80; 85)																			
Respiratory diseases (99; 100; 101; 107)																			
Gastro-intestinal diseases (108; 109; 113; 115; 116; 127)																			
Congenital malformations (159)																			
Early infancy (160; 161; 162; 163)																			
All other causes (43-205)																			

¹ Other than those specified above.
NOTE.—Numbers in parenthesis are the corresponding numbers in the International List of Causes of Deaths.

**METEOROLOGICAL REPORT FOR MANILA CENTRAL OBSERVATORY
DEDUCED FROM HOURLY OBSERVATIONS JUNE, 1935**

Date	Pres- sure mean ¹	Temperature				
		Mean	Absolute maxi- mum	Day	Absolute mini- mum	Day
	<i>mm.</i>	<i>°C.</i>	<i>°C.</i>		<i>°C.</i>	
1-10.....	758.37	28.2	34.3	1	23.0	9
11-20.....	58.46	28.6	33.9	20	24.6	13
21-30.....	57.87	27.8	34.7	25	22.8	26

Date	Relative humidity				
	Mean	Daily mean maxi- mum	Day	Daily mean mini- mum	Day
	<i>Per cent</i>	<i>Per cent</i>		<i>Per cent</i>	
1-10.....	78.4	83.0	9	75.6	6
11-20.....	78.8	84.9	18	72.3	12
21-30.....	78.0	81.7	26	75.3	25

Date	Wind				Atmidometer ² (open air)		
	Prevailing direction	Velocity			Total	Daily maxi- mum	Day
		Total	Daily total maxi- mum	Day			
1-10.....	W quad.	<i>Kms.</i> 2,049.0	<i>Kms.</i> 257.5	2, 10	<i>mm.</i> 38.4	<i>mm.</i> 5.0	2, 4
11-20.....	SW quad.	3,058.5	474.0	12	39.8	5.2	12
21-30.....	E quad.	1,850.0	272.0	27	35.4	4.5	25

Date	Sunshine			Rainfall	
	Total	Daily maxi- mum	Day	Total	Rainy days
	<i>h. m.</i>	<i>h. m.</i>		<i>mm.</i>	
1-10.....	77-35	10-25	3	15.8	4
11-20.....	69-35	10-00	13	41.0	4
21-30.....	64-20	9-50	15, 27	172.2	6

¹ Corrected for temperature, instrumental error and reduced to sea level. Correction to standard gravity, -1.72 mm.

² These values are taken from instruments mounted in the Observatory Park, 1.5 meters above ground.

CONSOLIDATED ANTISMALLPOX VACCINATIONS REPORTED FROM THE PROVINCES SINCE JANUARY, 1935

Provinces	Vaccinations				Inspection of persons vaccinated							
	Total vaccinations	Previously vaccinated			Under 1 year		1 to 4 years		5 years and over		Total	
		Never		Unsuccessfully	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
		1 year	1 year and over									
Abra.....	5,606	970	19	4,523	702	222	1,690	590	1,097	421	3,489	1,233
Agusan.....	3,526	706	152	2,228	288	783	208	313	1,184	307	680	1,403
Albay.....	13,134	2,616	267	3,315	1,416	446	1,379	516	3,455	1,931	6,250	2,893
Antique.....	43,192	2,681	3,140	1,799	2,262	321	3,544	1,789	11,825	15,021	17,631	17,131
Bataan.....	4,855	1,594	689	967	1,480	223	1,041	179	748	579	3,269	981
Batanes.....	1,796	130	6	1,105	168	97	254	211	353	443	775	751
Batangas.....	15,029	3,692	2,166	4,743	3,337	700	1,846	928	2,994	2,582	8,177	4,210
Bohol.....	79,362	3,583	2,167	7,703	2,732	714	7,213	2,097	33,203	13,989	43,148	16,800
Bukidnon.....	2,642	334	198	1,325	267	115	264	162	368	392	899	669
Bulacan.....	81,160	4,608	3,780	4,796	4,126	487	7,839	1,982	34,968	12,955	46,933	15,424
Cagayan.....	65,705	4,302	672	8,288	2,820	2,187	4,862	2,633	25,511	13,554	33,193	18,374
Camarines Norte.....	1,794	345	81	616	292	73	226	43	422	477	940	593
Camarines Sur.....	15,762	2,556	559	6,544	2,453	835	3,061	1,122	4,071	2,706	9,585	4,663
Capiz.....	15,940	2,626	2,451	7,975	2,187	539	3,125	913	4,719	1,838	10,031	3,290
Catanduanes.....	5,257	900	466	2,668	655	136	1,091	203	1,148	407	2,894	746
Cavite.....	14,273	2,295	252	1,971	1,692	807	1,592	669	3,194	3,053	6,478	4,529
Cebu.....	55,786	7,388	1,022	11,436	5,309	2,153	3,835	2,008	13,058	14,764	22,202	18,925
City of Baguio.....	537	77	14	115	72	4	64	17	152	196	288	217
Cotabato.....	11,367	510	3,510	3,542	276	128	1,203	325	3,517	1,527	4,996	1,980
Davao.....	6,779	845	540	3,507	299	628	505	826	938	1,262	1,742	2,716
Ilocos Norte.....	3,942	704	151	858	665	115	372	115	884	1,223	1,921	1,453
Ilocos Sur.....	5,839	1,223	347	2,327	893	354	818	480	1,238	979	2,949	1,813
Iloilo.....	26,750	6,468	2,346	6,043	1,987	2,729	1,801	1,890	2,852	9,271	6,640	13,890
Isabela.....	36,507	2,249	3,089	5,258	1,845	710	3,730	2,178	6,835	17,007	12,410	19,895
Laguna.....	16,982	2,690	432	4,100	1,983	826	1,051	793	3,293	7,046	6,327	8,665
Lanao.....	6,446	861	1,452	2,177	486	155	555	196	1,028	588	2,069	939
La Union.....	10,982	2,407	32	8,488	1,707	1,126	1,668	898	1,984	1,980	5,359	4,004
Leyte.....	22,397	3,974	3,212	13,055	4,267	2,108	5,981	2,353	7,304	3,187	17,552	7,648
Marinduque.....	4,416	558	33	685	182	69	398	226	1,227	914	1,807	1,209
Masbate.....	41,582	1,900	7,011	4,812	1,388	261	4,445	633	15,608	5,896	21,441	6,790

Mindoro.....	31,363	978	2,831	24,598	2,961	653	266	2,268	1,245	10,315	8,336	13,236	9,847
Mountain Province.....	1,440	136	239	556	509	34	17	68	74	107	201	209	292
Nueva Ecija.....	14,624	2,974	649	8,027	2,974	2,553	412	2,239	910	3,102	2,568	7,894	3,890
Nueva Vizcaya.....	1,684	688	63	134	799	443	396	170	151	122	219	735	766
Occidental Misamis.....	10,937	1,629	1,033	1,532	6,743	997	314	1,275	462	2,880	1,098	5,152	1,874
Occidental Negros.....	23,008	4,800	2,795	7,856	7,557	4,081	1,243	4,539	1,738	4,397	3,250	13,017	6,231
Oriental Misamis.....	6,244	927	350	1,483	3,484	783	401	999	396	1,705	1,032	3,487	1,829
Oriental Negros.....	56,742	1,539	7,870	42,598	4,735	1,307	238	5,146	1,160	19,950	15,691	26,403	17,089
Palawan.....	2,132	258	186	545	1,143	198	96	225	133	384	275	807	504
Pampanga.....	11,284	4,505	250	4,788	1,741	3,513	961	1,066	496	1,438	2,102	6,017	3,559
Pangasinan.....	19,235	5,890	765	6,925	5,655	4,508	1,440	2,267	985	1,767	3,968	8,542	6,393
Rizal.....	14,753	3,023	376	9,208	2,146	2,150	584	1,100	692	2,124	3,470	5,374	4,746
Romblon.....	2,120	347	376	230	1,167	320	96	558	191	646	146	1,524	483
Samar.....	7,811	1,105	1,243	2,147	3,316	656	234	1,159	488	1,784	1,255	3,599	1,977
Sorsogon.....	3,382	947	545	11	1,879	831	154	768	131	879	159	2,478	444
Sulu.....	9,841	492	2,961	2,631	3,757	150	388	652	1,039	600	1,947	1,402	3,374
Surigao.....	32,065	1,000	2,016	24,638	4,411	563	254	2,660	882	14,323	6,556	17,546	7,692
Tarlac.....	9,392	1,885	366	5,430	1,711	1,369	587	870	463	1,761	2,182	4,000	3,232
Tayabas.....	7,338	1,964	656	2,543	2,175	1,467	858	782	710	1,174	1,358	3,423	2,926
Zambales.....	2,303	1,390	50	.....	863	762	1,102	95	143	16	18	873	1,263
Zamboanga.....	10,286	501	2,251	6,528	1,006	205	180	618	706	1,460	3,217	2,283	4,103
Total.....	897,329	102,765	68,137	539,041	187,386	75,779	30,272	95,185	40,483	259,112	195,543	430,076	266,298

NOTE.—Reports from other provinces have not as yet been received.
Vaccinations performed by vaccinating parties are included in the above table.

REPORT OF ANTISMALLPOX VACCINATIONS IN THE CITY OF MANILA DURING THE MONTH OF JUNE, 1935

Health districts	Municipal districts	Vaccinations			Inspection of persons vaccinated					
		Total vaccinations	Previously vaccinated		Under 1 year		1 to 4 years		5 years and over	
			Never	Success-fully	Unsuc-cessfully	Positive	Negative	Positive	Negative	Total
No. 1	Tondo	533	357	1	175	462	170	8	5	470
	San Nicolas	167	110		57	138	60		1	138
	Binondo	627	14	600	13	18	16		334	352
No. 2	Santa Cruz	1,026	244	636	146	236	131	9	3	274
	Quiapo	135	71		64	95	63	2		101
	San Miguel	34	23	3	8	17	12	1		18
	Sampaloc	426	287		139	351	135	8	7	367
No. 3	Port Area									
	Intramuros	130	75	14	41	38	29			38
	Ermita	53	28		25	36	30	2		38
	Malate	211	130		81	126	80	2	1	128
	Paco	204	117		87	146	89	5	4	153
	Pandacan	40	28		12	37	13		1	37
	Santa Ana	79	53		26	56	22	1		57
	Total	3,665	1,537	1,254	874	1,756	850	38	22	2,171
									831	1,703

VACCINE VIRUS:

Remainig from last month	4,670
Received during the month	1,000
Used during the month	2,401
Remainig for next month	3,269

**MIXED CHOLERA-DYSENTERY VACCINATIONS REPORTED FROM
THE PROVINCES SINCE JANUARY, 1935**

Provinces	First injection		Second injection		Total	
	V.	R.	V.	R.	V.	R.
Abra.....	399	10,468	257	7,772	656	18,240
Agusan.....	1,647	7,875	1,400	6,460	3,047	14,335
Albay.....	15,395	845	11,803	483	27,198	1,328
Antique.....	9,225	17,200	5,806	13,625	15,031	30,825
Bataan.....	3,199	5,265	2,598	4,201	5,797	9,466
Batanes.....	1,091	1,698	910	1,450	2,001	3,148
Batangas.....	10,809	8,997	8,132	7,979	18,941	16,976
Bohol.....	31,076	54,358	23,426	46,162	54,502	100,520
Bukidnon.....	1,379	11,206	396	10,239	1,775	21,445
Bulacan.....	10,588	35,546	9,766	32,351	20,354	67,897
Cagayan.....	10,364	1,406	10,076	811	20,440	2,217
Camarines Norte.....	6,356	1,661	6,158	1,239	11,514	2,900
Camarines Sur.....	10,125	9,235	8,369	7,778	18,494	17,013
Capiz.....	26,854	13,641	21,824	11,656	48,678	25,297
Catanduanes.....	3,448	244	5,983	263	9,431	507
Cavite.....	4,545	14,389	2,666	8,522	7,211	22,911
Cebu.....	2,638	6,746	2,046	5,285	4,684	12,031
City of Baguio.....	101	504	.....	691	101	1,195
Davao.....	3,203	5,016	2,712	4,042	5,915	9,058
Ilocos Norte.....	1,584	9,960	1,646	7,112	3,230	17,072
Ilocos Sur.....	2,403	4,883	1,860	4,175	4,263	9,058
Iloilo.....	15,296	34,940	12,563	29,164	27,859	64,104
Isabela.....	3,592	10,433	2,585	7,310	6,177	17,743
Laguna.....	9,101	2,721	6,484	2,265	15,585	4,986
Lanao.....	1,358	15,745	1,092	13,337	2,450	29,082
La Union.....	9,369	8,375	8,280	7,315	17,649	15,690
Leyte.....	14,335	11,658	15,448	8,557	29,783	20,215
Marinduque.....	16,731	4,512	14,107	3,816	30,838	8,328
Masbate.....	619	14,096	406	11,044	1,025	25,140
Mindoro.....	2,718	4,296	1,829	3,221	4,547	7,517
Misamis Occidental.....	24,819	15,092	20,992	12,255	45,811	27,347
Misamis Oriental.....	13,391	.....	11,979	.....	25,370	.....
Mountain Province.....	476	1,207	376	985	852	2,192
Negros Occidental.....	13,785	41,704	11,742	36,804	25,527	78,508
Negros Oriental.....	9,170	12,681	8,668	10,194	17,838	22,875
Nueva Ecija.....	3,752	17,114	3,331	14,814	7,081	31,928
Nueva Vizcaya.....	8,047	200	7,353	193	15,400	393
Palawan.....	2,375	2,007	615	2,777	2,990	4,784
Pampanga.....	18,263	12,280	13,063	7,714	31,326	19,994
Pangasinan.....	22,372	10,518	16,331	8,687	38,703	19,205
Rizal.....	7,395	7,355	7,213	4,721	14,608	12,076
Romblon.....	1,189	1,093	1,099	988	2,288	2,081
Samar.....	5,531	3,202	3,744	2,545	9,275	5,747
Sorsogon.....	2,589	1,889	2,143	1,800	4,732	3,689
Sulu.....	4,939	5,208	3,231	3,612	8,170	8,820
Surigao.....	3,655	1,933	1,318	1,301	4,973	3,234
Tarlac.....	696	5,002	582	3,670	1,278	8,672
Tayabas.....	2,340	7,963	1,350	5,066	3,690	13,029
Zambales.....	4,529	2,692	3,710	2,147	8,239	4,839
Zamboanga.....	2,990	4,416	2,092	4,261	5,082	8,677
Total.....	381,851	481,475	310,560	392,859	692,411	874,334

NOTE.—Incomplete; reports from other provinces not yet received.

“V” in persons never vaccinated before; “R” revaccinations.

**MIXED CHOLERA, TYPHOID AND PARATYPHOID VACCINATIONS REPORTED
FROM THE PROVINCES SINCE JANUARY, 1935**

Provinces	First injection		Second injection		Third injection		Total	
	V.	R.	V.	R.	V.	R.	V.	R.
Abra.....	194	1,347	512	786	321	788	1,027	2,921
Albay.....	7,498	629	6,489	546	4,854	410	18,841	1,585
Batanes.....	218	544	209	519	193	504	620	1,567
Batangas.....	150	99	144	99	133	97	427	295
Bulacan.....	5	.....	5	.....	.....	.....	10	.....
Cagayan.....	449	.....	389	28	21	19	859	47
Camarines Norte.....	808	16	762	9	672	8	2,242	33
Camarines Sur.....	1,355	371	1,284	339	1,215	295	3,854	1,005
Capiz.....	2,670	.....	1,761	.....	1,406	.....	5,837	.....
Catanduanes.....	2,578	135	2,138	129	1,865	131	6,581	395
Cavite.....	1,396	8,156	1,297	7,139	1,173	4,494	3,866	19,789
Cotabato.....	.....	354	.....	350	.....	330	.....	1,034
Ilocos Norte.....	.....	36	.....	23	.....	.....	.....	59
Iloilo.....	8,627	9,615	7,576	8,202	936	2,145	17,139	19,962
Isabela.....	145	.....	82	.....	.....	.....	227	.....
Laguna.....	6,556	3,396	6,013	2,044	3,900	2,114	16,469	7,554
Leyte.....	150	21	199	28	181	13	530	62
Misamis Occidental.....	769	.....	580	.....	101	.....	1,450	.....
Misamis Oriental.....	4,236	5	3,781	.....	1,874	.....	9,891	5
Negros Oriental.....	4,118	2,906	4,028	2,502	3,939	1,938	12,085	7,346
Nueva Ecija.....	1,128	2,328	1,102	2,074	563	335	2,793	4,737
Nueva Vizcaya.....	33	.....	28	.....	28	.....	89	.....
Palawan.....	1,239	497	424	400	76	1,817	1,789	2,714
Pampanga.....	134	23	103	20	77	18	214	61
Pangasinan.....	13,295	2,793	9,932	2,083	6,085	1,594	29,262	6,470
Rizal.....	3,949	907	2,993	755	301	384	7,243	2,046
Sorsogon.....	510	124	508	120	497	115	1,515	359
Sulu.....	109	137	85	113	.....	.....	194	250
Tarlac.....	4,002	7,633	3,587	6,249	3,305	4,894	10,894	18,776
Tayabas.....	3,489	5,421	2,511	3,657	1,103	273	7,103	9,351
Zambales.....	1,034	10	764	7	420	1	2,218	18
Zamboanga.....	743	104	297	18	12	3	1,052	125
Total.....	71,587	47,607	59,583	38,239	35,201	22,720	166,371	108,566

NOTE.—Incomplete; reports from other provinces not yet received.
“V” in persons never vaccinated before; “R” revaccinations.

**ANTITYPHOID VACCINATIONS REPORTED FROM THE PROVINCES
SINCE JANUARY, 1935**

Provinces	First injection		Second injection		Third injection		Total	
	V.	R.	V.	R.	V.	R.	V.	R.
Agusan.....	1,204	1	1,066	7	127	449	2,397	457
Batangas.....	1,102	685	773	320	811	481	2,686	1,486
Bohol.....	731	6	516	6	225	6	1,472	18
Bulacan.....	836	377	827	276	749	216	2,412	869
Camarines Sur.....	38	93	37	91	46	91	121	275
Cebu.....	789	89	286	70	.....	57	1,075	216
City of Baguio.....	206	2,814	519	2,290	420	1,938	1,145	7,042
Ilocos Norte.....	.....	38	.....	19	.....	.....	.....	57
Ilocos Sur.....	1,056	1,299	828	1,240	569	321	2,453	2,860
Iloilo.....	503	448	418	399	5,902	4,109	6,823	4,956
Lanao.....	2,009	.....	1,817	.....	1,616	.....	5,442	.....
La Union.....	981	123	911	135	866	89	2,758	347
Leyte.....	183	11	36	4	.....	.....	219	15
Marinduque.....	379	.....	211	.....	.....	.....	590	.....
Masbate.....	103	3	.....	.....	.....	.....	103	3
Mountain Province...	700	50	531	45	396	45	1,627	140
Negros Occidental....	2,309	1,902	1,926	1,689	1,197	1,851	5,432	4,942
Nueva Ecija.....	134	41	117	104	41	862	292	1,007
Pampanga.....	352	32	141	76	32	.....	525	108
Pangasinan.....	173	39	109	37	65	34	347	110
Rizal.....	8	3,091	6	2,554	6	1,592	20	7,237
Surigao.....	353	40	322	9	304	.....	979	49
Zamboanga.....	10	.....	.....	.....	.....	.....	10	.....
Total.....	14,159	11,182	11,397	9,371	18,372	11,641	38,928	32,194

NOTE.—Incomplete; reports from other provinces not yet received.
"V" in persons never vaccinated before; "R" revaccinations.

**ANTICHOLERA VACCINATIONS REPORTED FROM THE PROVINCES
SINCE JANUARY, 1935**

Provinces	First injection		Second injection		Third injection		Total	
	V.	R.	V.	R.	V.	R.	V.	R.
Agusan.....	67	1,630	56	1,105	.....	.....	123	2,735
Batangas.....	.....	139	.....	.....	.....	.....	.....	139
Bohol.....	120	766	56	306	.....	.....	176	1,072
Cebu.....	25	316	20	341	.....	.....	45	657
Leyte.....	8,318	10,112	7,636	8,438	.....	.....	15,954	18,550
Mindoro.....	.....	56	.....	.....	.....	.....	.....	56
Misamis Oriental.....	386	.....	306	.....	.....	.....	692	.....
Negros Oriental.....	2,300	595	2,128	537	.....	.....	4,428	1,132
Pangasinan.....	1,484	1,346	1,127	1,255	.....	.....	2,611	2,601
Samar.....	452	882	344	697	26	17	822	1,596
Surigao.....	.....	8	.....	.....	.....	.....	.....	8
Total.....	13,152	15,850	11,673	12,679	26	17	24,851	28,546

NOTE.—Incomplete; reports from other provinces not yet received.
"V" in persons never vaccinated before; "R" revaccinations.

**ANTIDYSENTERY VACCINATIONS REPORTED FROM THE PROVINCES
SINCE JANUARY, 1935**

Provinces	First injection		Second injection		Total	
	V.	R.	V.	R.	V.	R.
Bohol.....	120	766	56	306	176	1,072
Cotabato.....		140		110		250
Pangasinan.....	447		346		693	
Total.....	567	906	402	416	969	1,322

NOTE.—Incomplete; reports from other provinces not yet received.
“V” in persons never vaccinated before; “R” revaccinations.

**MIXED DYSENTERY AND CHOLERA VACCINATIONS PERFORMED IN
THE CITY OF MANILA DURING THE MONTH OF JUNE, 1935**

Health districts	Municipal districts	First injection		Second injection		Total	
		V.	R.	V.	R.	V.	R.
No. 1.....	Tondo.....	672	1,440	480	895	1,152	2,335
	San Nicolas.....	418	1,049	345	792	763	1,841
	Binondo.....	47	29	40	32	87	61
No. 2.....	Santa Cruz.....	833	1,988	672	1,332	1,505	3,320
	Quiapo.....	75	94	75	102	150	196
	San Miguel.....	23	798	13	12	36	810
	Sampaloc.....	295	471	249	423	544	894
No. 3.....	Port Area.....		1	1		1	1
	Intramuros.....	210	381	79	143	289	524
	Ermita.....	169	547	122	215	291	762
	Malate.....	356	724	289	551	645	1,275
	Paco.....	330	804	206	415	536	1,219
	Pandacan.....	7	42	4	5	11	47
	Santa Ana.....	66	341	64	331	130	672
	Total.....	3,501	8,709	2,639	5,248	6,140	13,957

NOTE.—“V” in persons never vaccinated before; “R” revaccinations.

**MIXED CHOLERA, TYPHOID AND PARATYPHOID VACCINATIONS PERFORMED IN
THE CITY OF MANILA DURING THE MONTH OF JUNE, 1935**

Health districts	Municipal districts	First injection		Second injection		Third injection		Total	
		V.	R.	V.	R.	V.	R.	V.	R.
No. 1.....	Tondo.....	475	854	402	706	410	837	1,287	2,397
	San Nicolas.....	250	33	153	27	110	44	513	104
	Binondo.....	422	969	357	811	317	670	1,096	2,450
No. 2.....	Santa Cruz.....	342	567	272	413	258	340	872	1,320
	Quiapo.....	257	508	215	322	141	227	613	1,057
	San Miguel.....	209	585	230	452	186	353	625	1,390
	Sampaloc.....	634	1,640	355	900	411	905	1,400	3,445
No. 3.....	Port Area.....	1	5	2	4	2	2	5	11
	Intramuros.....	230	413	237	400	298	382	765	1,195
	Ermita.....	329	625	225	281	155	250	709	1,156
	Malate.....	33	38	27	21	26	24	86	83
	Paco.....	59	83	56	62	46	50	161	195
	Pandacan.....	10	3	6	5	3	4	19	12
	Santa Ana.....	138	500	116	351	112	339	366	1,190
	Total....	3,389	6,823	2,653	4,755	2,475	4,427	8,517	16,005

NOTE.—Mixed cholera, typhoid and paratyphoid vaccine used for the first and second injections.

Typhoid and paratyphoid vaccine used for the third injection.
“V” in persons never vaccinated before; “R” revaccinations.

DIVISION OF EPIDEMIOLOGY

MONTHLY REPORT OF COMMUNICABLE DISEASES IN THE CITY OF MANILA, RESIDENTS ONLY, FOR THE MONTH OF JUNE, 1935

Health districts	Typhoid and paratyphoid				Malaria				Smallpox ¹				Measles				Whooping cough				Diphtheria				Asiatic cholera			
	M		F		M		F		M		F		M		F		M		F		M		F		M		F	
I. { No. 1. No. 2. No. 3.	3	2	2	1	6	1	5						3	1	2	2					2		2					
II. { No. 4. No. 5. No. 6. No. 7. No. 8. No. 9. No. 10. No. 11. No. 12. No. 13. No. 14.	1	1		2	1		4						1		3	1					1		1					
III. { No. 1. No. 2. No. 3. No. 4. No. 5. No. 6. No. 7. No. 8. No. 9. No. 10. No. 11. No. 12. No. 13. No. 14.	1	1	1	1	1	1	1						2	1	1	1					1		1					
Grand total.	10	2	8	5	30	1	12						13	4	11	5					8		3					

TYPHOID FEVER

REMARKS:

Cases confirmed as typhoid	18
Cases confirmed as paratyphoid	0
By autopsy	1
By blood culture	1
By Widal reaction	8
By blood culture and Widal reaction	2
By feces examination	0
By feces and blood culture	0
By feces and Widal reaction	0
By urine examination	0
By clinical symptoms	6
Cases reported among non-resident persons not included in the table	16
Deaths reported among non-resident persons not included in the table	8
Typhoid carriers	0

¹ Smallpox—No case nor death reported since May, 1931.
Plague—No case nor death reported since October, 1914.

NOTE.—M= male, F= female; C=cases, D=deaths.

Health districts	Influenza			Dysentery			Poliomyelitis			Lethargic encephalitis			Meningococcus meningitis			Varicella			Tuberculosis of the respiratory system		
	M		F	M		F	M		F	M		F	M		F	M		F	M		F
	C	D	C	C	D	C	C	D	C	C	D	C	C	D	C	C	D	C	C	D	C
I. { No. 1.....	7	3	6	8	2	6	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 2.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 3.....	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
II. { No. 4.....	6	3	12	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 5.....	3	2	2	4	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 6.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 7.....	11	4	10	7	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 8.....	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 9.....	8	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 10.....	3	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 11.....	8	1	3	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 12.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 13.....	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
No. 14.....	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Grand total.....	61	17	42	25	9	18	8	6	17	42	6	8	25	9	18	8	6	17	42	6	8

DYSENTERY

Amoebic dysentery (cases—0 deaths—1)	1
Bacillary dysentery (cases—24 deaths—17)	41
Unspecified dysentery (cases—0 deaths—1)	1
Cases reported among non-resident persons not included in the table	16
Deaths reported among non-resident persons not included in the table	6

CHOLERA

Cases reported among non-resident persons not included in the table	3
Deaths reported among non-resident persons not included in the table	1
Cholera carriers	34

DIPHTHERIA

Cases reported among non-resident persons not included in the table	10
Deaths reported among non-resident persons not included in the table	2
Diphtheria carriers	16

MONTHLY REPORT OF COMMUNICABLE DISEASES IN THE CITY OF MANILA, RESIDENTS ONLY, FOR THE MONTH OF JUNE, 1935—Ctd.

Health districts	Tuberculosis of the other organs				Beriberi, adults				Beriberi, infantile				Tetanus				Leprosy				Pneumonia (101-A & B)				Total			
	M		F		M		F		M		F		M		F		M		F		M		F		Male		Female	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
I.	No. 1	6	4	4	1	1	4	2	5	5	4	4	...	...	...	...	...	...	...	...	6	6	8	6	101	51	94	49
	No. 2	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	15	8	8	9	
	No. 3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	2	11	4	
II.	No. 4	...	2	2	3	...	4	1	4	4	1	1	...	...	2	1	...	...	...	...	...	...	...	60	16	63	19	
	No. 5	1	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	1	...	19	9	16	2	
	No. 6	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	3	4	2	
III.	No. 7	2	5	5	3	...	5	...	2	2	1	1	...	...	1	1	...	...	...	...	4	4	...	79	31	60	23	
	No. 8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	No. 9	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19	1	12	3	
III.	No. 10	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	1	11	...	
	No. 11	...	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	40	9	38	6	
	No. 12	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	2	...	16	1	18	5	
III.	No. 13	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	5	3	6	1	
	No. 14	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	1	5	5	
Grand total		12	12	11	11	1	30	4	12	12	6	6	...	...	3	2	...	...	...	...	19	16	22	19	410	136	346	128

NOTE.—M= male, F= female; C=cases, D=deaths.

**CHOLERA REPORTS FROM THE PROVINCES RECEIVED DURING
THE MONTH OF JUNE, 1935**

Province and towns		Cases	Deaths
Rizal:			
Navotas.....		1	1
Caloocan.....		1	0
Mandaluyong.....		1	0
Total.....		3	1

**SMALLPOX REPORTS FROM THE PROVINCES RECEIVED DURING
THE MONTH OF JUNE, 1935**

No case and no death reported during the month.