# Yellow Fever.

By Dr. Rudolph Matas, New Orleans, U.S.A.

I.—Elementary Facts of Educational Value.

1. Yellow fever may be defined as an acute, infectious, febrile disease which is transmitted from the sick to susceptible individuals through the agency of mosquitoes, and, as far as known, by the single species, the Stegomyia Fasciata,* which is the common domestic or cistern mosquito of New Orleans, and, in fact, of all the localities in which yellow fever prevails.

2. The germ or transmissible poison of yellow fever exists in the blood of yellow-fever patients only during the first three days of the disease; afterwards the patient ceases to be a menace to the health of others. Hence the importance of recording the very hour when the attack first began.

3. The mosquito (Stegomyia Fasciata) is powerless to convey the disease to a susceptible person by its bite until at least twelve days have elapsed after biting the yellow fever patient. This period of incubation in the mosquito is the time that is required for the germ of the disease to breed in the body of the mosquito and to migrate from the insect's stomach to its salivary glands. The United States Army Yellow Fever Commission found, in 1900, that in Cuba this period varies from twelve days in the hot summer months, to eighteen days and over in the cooler winter season.

4. After incubating the yellow fever germ in its body during the period above specified, the Stegomyia is ready to transmit the disease during the entire period of its natural life, which may extend over 154 days, provided the insect has access to water. (Guiteras.) Walter Reed was able to inoculate yellow fever with a Stegomyia fifty-seven days old, Guiteras with another 101 days old. [Note.—According to Agramonte, Stegomyia Fasciata in Havana can only be coaxed to bite until four days old. With us in Louisiana, says Dupree, it bites without coaxing within twenty-four hours after emerging from the pupa case. It was believed at one time that: (1) the females of Stegomyia must be impregnated before they will bite; (2) that the female after biting once does not appear to bite a second time, or at least until five or seven days have elapsed; but Dupree says that the Stegomyias in Louisiana that have been isolated and reared apart from the males will bite promptly and frequently. Probably after they have digested their blood meal, and, like Anopheles, within three to five days after.]

5. A period varying from two to five days usually elapses after the bite of an infected mosquito before the symptoms of yellow fever will develop in the human subject. (This is the incubation period of yellow fever, and the United States Army Yellow-Fever Commission found that in thirteen cases of experimental yellow fever obtained by the bites of mosquitoes it varied from forty-one hours to five days and seventeen hours, after mosquito inoculation.)

6. From the above we gather that if an adult Stegomyia Fasciata bites a yellow-fever patient within the first three days of the disease it will have to incubate the poison in its body from twelve to eighteen days (incubation period in the mosquito); then, if it bites a susceptible person at the expiration of this time, two to five days must elapse for the disease to manifest itself in the bitten person. Therefore, in estimating the probable spread of yellow fever from a single individual, to the susceptible persons in his environment, a period of at least twenty-six days must be allowed to elapse before the success or failure of any preventive measures directed towards the destruction of the mosquito can be determined. In view of the fact that several days may elapse before a mosquito infected from the first case may bite a susceptible person, this period of observation should be lengthened to thirty days, which is the time given by the health authorities of New Orleans in the present epidemic to determine if a focus will develop from an infected case after its first appearance in a given locality.

7. The Stegomyia Fasciata cannot convey yellow fever during the time that the poison is incubating in its body (twelve to eighteen days). It may bite freely and repeatedly during this period, but its bite is innocuous; neither does its bite within this period confer any immunity to the bitten person.

8. Yellow fever is not transmitted or conveyed by fomites (*i.e.*, articles or inanimate objects that have come in contact with yellow fever patients or their immediate surroundings). Hence the disinfection of clothing, bedding, or merchandise supposedly soiled or contaminated by contact or proximity with the sick is unnecessary.

9. The bodies, or cadavera, of the dead from yellow fever are incapable of transmitting the disease unless death occurs within the first three days of the disease (a rare occurrence), and then only if mosquitoes are allowed to bite the body before decomposition has set in.

10. There is no possibility of contracting yellow fever from the black vomit, evacuations, or other excretions or secretions of yellow fever patients.

11. An attack of yellow fever caused, as it always

* Stegomyia (pronounced *steg-o-mi'-e-ah*), from the Greek, *Steganós*, covered, and *muia*, a fly. (Gould.) The Stegomyia Fasciata (striped) is also known as the "brindle" or "tiger" mosquito, on account of the striped appearance of its limbs, which readily distinguish it from the common gutter mosquito (Culex Pungens) and the swamp or malaria mosquito (Anopheles). Stegomyia Fasciata is found wherever yellow fever prevails. It is essentially a domestic mosquito, found usually in the neighbourhood of human habitations, and preferably in clean, sweet water.

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