we all know that Mary is a "typhoid carrier," and a dangerous one by reason of her occupation as a cook; but she is only one among many such "carriers" and it is scarcely justice to place upon her alone the burden that should be shared by her entire class.

Of all those who recover from typhoid fever something like four per cent. carry about with them the germs of the disease for long periods of time. They are "carriers" in fact, and can, like Mary, become centers for secondary infection. There are at the present moment probably 560 such persons in the state of New York, representing four per cent. of the 14,000 cases of typhoid fever occurring during the past year. How many must be added to that number to allow for the "hold-overs" coming down from previous years it would be hard to guess. Others will be added during the year to come.

We can not keep in detention all these people, then why single out and imprison one.

Typhoid carriers are dangerous when they are possessed of uncleanly personal habits, and they become more so when their occupations have to do with the preparation of food.

It would be eminently wise to instruct a "carrier" as to the danger lurking in human dejecta and to insist upon the necessity for great personal cleanliness. It might be also well for the authorities to direct that such a person should not be engaged in the preparation of food; but beyond "education" and an order for "change of occupation" it is scarcely practical or fair to go.

W. P. Mason
Rensselaer Polytechnic Institute,
July 1, 1909

QUOTATIONS

Mr. Latham's Aeroplane

After a comparatively short training, Mr. Hubert Latham has brought the Antoinette monoplane from obscurity into serious rivalry with the Wright machine as regards duration of flight, while it is easily superior in speed. He has also shown that it can be flown in windy weather, and the ease with which he controls it quite upsets the theory held by the bi-planists that the monoplane is exceedingly difficult to manage. Nevertheless, when the experience of Mr. Latham is placed alongside that of the many other monoplanists, who so far have not been particularly successful, the point is demonstrated that the human element counts for much. It would appear that Mr. Latham is something of a genius in navigating aerial machines.

The Antoinette monoplane, which is designed by M. Levavasseur, consists of a central skiff-like body, from each side of which a main plane springs at a slight upward tilt. The single propeller is mounted in front of the central body, and close behind is the motor. In a well to the rear of this the pilot is comfortably situated, his position allowing him a clear look-out, and affording a certain degree of protection not noticeable in other machines. Indeed, Mr. Latham claims that he is very safe from injury in this machine, being well protected by the planes and the body of the vessel.

At the rear of the main body are vertical equalizing fins, two vertical rudders, and a horizontal elevator for giving upward or downward direction. The lines of the body are very clean, the total bearing surface is remarkably small, and there is an absence of the many stays and members which, in the biplane especially, lead to increased head resistance and consequent loss of speed. At the rear end of each main plane is a flexible extension, which can be given a varying angle of incidence for purposes of stability.

The under-frame is a clever piece of work. The chassis rests on two wheels placed close together, and a forward extension of this frame takes the form of a runner, which is designed to receive the first shock of landing and thus save the wheels from buckling strains. The combination of sledge runner and wheels in the Antoinette enables the aeroplane to be started without the use of extraneous mechanism, whilst it allows landing to be effected at speeds which would smash any ordinary wheel.

The control of the Antoinette machine is by means of side wheels, those at one side

governing the warping planes, and at the other controlling the elevator. There is another controlling agent for the side rudders, and yet another for the fuel supply to the engine. The controlling mechanism is grouped in such a manner as to afford easy mastery over them, and Mr. Latham has shown that he can travel in the air without both hands being busily occupied.

The eight cylinders of the engine are grouped in two banks of four, arranged in V fashion; petrol is injected direct on to the inlet valves, no carburetter being employed. The fuel supply is governed by a pump of variable throw, and the necessary air is supplied through air pipes leading to the valves. The water-cooling arrangement on the Antoinette engine is also unique. Very little water is employed, and it is quickly turned into steam. This is carried away to an effective condenser, the tubes of which line the side of the main body. The condensed water is taken by a pump to the water tank, and thence is pumped to the cylinder jackets. This engine gives one horse power for about every three pounds of weight.—The London *Times*.

SCIENTIFIC BOOKS

Revision of the Mice of the American Genus Peromyscus. By WILFRED H. OSGOOD, Assistant, Biological Survey. Prepared under the direction of C. HART MERRIAM, Chief of Biological Survey, Department of Agriculture. North American Fauna, No. 28. Washington, Government Printing Office. April 17, 1909. Pp. 1–280, text-figs. 1–12, pl. I.–VIII.

Mammalogists have awaited with eagerness the long-delayed publication of Mr. Osgood's monograph of the genus *Peromyscus*. The work consists of a systematic study of all the members of the genus, and includes keys for the identification of the various forms, together with the necessary illustrations, and maps showing the geographical distribution of the species.

Plate I. (colored) illustrates the distribution of the species and subspecies of the *Peromyscus maniculatus* group, plates II. to VIII. depicting the cranial and dental characters of prominent species of the genus, and text-figures 1 to 12 portraying the geographical distribution of the various species and groups.

As stated by the author:

> The American genus *Peromyscus*, including the so-called wood mice, deer mice, vesper mice or white-footed mice, has needed revision for many years. One or more of its numerous species and subspecies inhabit almost every part of North America; moreover, these mice, wherever found, are among the most abundant of small mammals. The group, therefore, is of such importance that it must be dealt with in every work on North American mammals, whether pertaining to classification, geographic distribution or economic relations.

It is now about seven years since Mr. Osgood undertook the revision of this great genus of American murines, which has just been brought to a most satisfactory conclusion. During this time, in spite of many interruptions, he has examined all of the specimens of the genus *Peromyscus* in the great museums of America and in numerous private collections, in the British Museum, and the museums of Europe, having unearthed *Peromyscus* types in the museums of Munich and Zurich.

In 1891, Dr. J. A. Allen, after discussing certain species of *Peromyscus*, made the following statement:

> But the time has not yet come for a satisfactory revision of the group, to attempt which at least 20,000 specimens are requisite, collected so as to fully represent the seasonal phases of pelage obtaining at hundreds of more or less widely separated localities.

Mr. Osgood remarks:

> These conditions are now realized to the fullest degree, for the number of specimens examined in the present revision exceeds 27,000. The majority of these are contained in the extensive collection of the Biological Survey, which, under the direction of Dr. C. Hart Merriam, has been built up with special reference to the various life areas of North America, and without which no satisfactory study of this group would now be possible. . . . This material includes all the types, both of valid forms and of synonyms, known to be in existence.