tion between the muddy discharge of the Mississippi, following the right or west bank, and the clear water from the Ohio along the left or east bank, is apparent at times to the eye for twenty or thirty miles, and to the sediment trap for ten times this distance. At Columbus, twenty miles below Cairo, the amount of sediment per unit of measure has been observed three or four times greater on the west than on the east side of the river. But these comparative surveys show that the caving on the right or west bank, washed by the muddy water, is greater, both in length of bank and in area and bulk, than it is on the opposite shore, where the water is undercharged with sediment. The length of river from which this conclusion is drawn (230 miles) is thought to be great enough to eliminate any local or abnormal influences on velocity, or material of bank.

B. M. HARROD.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

THE second annual session of the American climatological association was held at the hall of the Academy of medicine in New York, May 27 and 28; the president, Dr. A. L. Loomis, in the chair. This association was organized a year ago in Washington, for the study of climatology and diseases of the respiratory organs.

In the opening address, on the afternoon of the 27th, the president expressed the opinion that the scope of the society's work ought to be enlarged, so as to include the study of affections of the vascular system and other diseases, as well as to investigate more systematically the subjects of sanitaria and of mineral springs. This suggestion was afterwards adopted.

In Europe the study of these subjects had gone much farther than in America, and it was becoming more and more common for European physicians to treat their patients by prescribing residence for greater or less time at sanitaria especially adapted to their diseases. That such was not the case in America was not due to the lack in this country of the climates which possessed the necessary beneficial qualities, but to the lack of systematic study of the subject by the medical profession, as well as to the imperfect provision for the wants of invalids at our health resorts. The attempt to remedy these deficiencies was one of the main objects of the association.

As a model of what was desirable to encourage in the way of sanitaria, the president described one in the Adirondacks, devised to meet the wants of invalids of limited means, where, for a small sum, accommodation is provided in cottages for two or four patients, with a common dining-hall; also tents, etc., for those who are able to camp out; the whole under the charge of a medical board and an attending physician.

After speaking of the causes of pulmonary phthisis, Dr. Loomis said that the objects to be accomplished in the treatment of the disease are two, — to improve the general condition of the patient; and to stop the local disorder in the lungs, preventing the entrance and multiplication of the bacilli tuberculosis. Good climate is a potent means of accomplishing both these ends. Good climate means pure air, and it must be determined by clinical experience.

The amount of moisture in the atmosphere is not an index; for the only dampness injurious to the phthisical patient is that exhaled from the soil, laden as it is with organic matter. The nature of the soil is therefore of prime importance. It must be light and porous, admitting of good drainage. A clayey soil is necessarily bad.

Dr. Beverly Robinson of New York read a paper on antiseptic inhalations, instancing cases in which he had obtained decided benefit, especially in the way of alleviating cough by this method of treatment. The vapor of antiseptics was applied by means of a respirator worn over the nose or mouth, or both, from one to two hours a day in some cases, and nearly all the time in others.

'Catarrhal affections of the nasal cavities as a cause of pulmonary phthisis,' was the title of a paper by Dr. W. C. Jarvis of New York. The position taken was, that consumption can be traced, in many instances, to a catarrhal condition of the larynx, which in its turn is induced by the irritating effect of the discharges from the pharynx and nasal cavities, the catarrhal condition in this situation being due to a deflected nasal septum. In the discussion which followed, it became evident that the members present were not in accordance with Dr. Jarvis's novel views.

The event of the evening session was the presentation, by Dr. H. F. Williams of Brooklyn, of his pneumatic cabinet, with histories of cases of consumption treated therewith. The cabinet consists of an air-tight iron safe, with a plate-glass front, perforated near the middle with an opening about an inch in diameter, through which passes a rubber tube, so arranged that the patient can hold the end of it in his mouth as he sits upon a low stool in the cabinet. When the cabinet is closed, this tube forms the only means of communication with the external atmosphere. The patient having taken his seat, and placed the end of the tube in his mouth, the door of the cabinet is closed, and the air within slightly rarified by means of a few strokes of an air-pump. By this process the body is surrounded by a rarified atmosphere, while the respiratory passages are in communication with the outer air: the patient is therefore breathing from an atmosphere of greater density than that surrounding his body, with the effect of expanding the chest, bringing the lower part of the respiratory organs into play, and affording valuable exercise of muscles of respiration. Dr. Williams also claims that with its aid antiseptic sprays and vapors can be carried much deeper into the lungs than by any other method. The paper and demonstrations excited much interest, and a number of gentlemen expressed them-

selves as deeply impressed with its value as a therapeutic agent.

Dr. F. C. Shattuck followed with an exceedingly interesting and scholarly paper upon the home treatment of consumption.

The morning session on the 28th was opened by a paper from Dr. Ch. Dennison of Denver, Col., upon a rule for the even division of climate. The ground was taken that dryness and elevation are the most important elements of climate in the treatment of consumption.

'The problem of acclimatization' was the title of a paper read by Dr. I. H. Platt of Brooklyn. The question of acclimatization, although a long-vexed one, had never been satisfactorily dealt with, partly, no doubt, because most of the discussion antedated the advances of recent years in the sciences of biology and anthropology, especially as developed by the great principle of evolution. Facts were adduced to show the perfect adaptation of races to climates widely differing from their own, and which are at first injurious to them. The acclimatization of the Spanish race in Peru, and of the French in Algiers, were cited as examples. The whole subject was but an application of the fundamental law of biology enunciated by Herbert Spencer, — that of adaptation to environment. In the adaptation of a race to new surroundings, the principle of natural selection would play an important part. And the author took the ground, that, even in the acclimatization of an individual, the same law would find application, as the protoplasmic elements of the body would be subject to it in their growth and development. The author called attention to the exceedingly complicated nature of the problems presented by the action of the many elements of climate upon the human organism, and the modifications and reactions effected therein, and the importance of their more thorough and systematic study.

The public session in the afternoon was opened by Dr. J. C. Wilson of Philadelphia, with a paper upon the climate of Florida; and Dr. Keating, also of Philadelphia, followed with a paper upon the same subject. Both gentlemen took substantially similar views, Dr. Keating dwelling principally upon the climate of southern central Florida. This region is characterized by sandy soil, pine woods, and continual sunshine. The climate is more equable than that of the northern portion of the state. The counties of Orange and Orlando are the most favorable spots. There are good hotels, fine drives, and all the facilities for comfortable living. The summer as well as the winter climate is desirable. The doctor much preferred the central portion of the peninsula to either coast as a health resort.

Dr. E. Darwin Hudson, jun., treated of the results of the home treatment of consumption, contrasted with those of changed residence and climate, and presented cases in his own experience in which he had obtained favorable results where, for some reason, change of climate was inadmissible.

'Hay-fever and allied affections' was the title of the contribution of Dr. F. H. Bosworth of New York. A brief sketch was presented of the history of the various theories in regard to the causation of hay-fever, — first, that it is caused by the pollen of ragweed and other plants; second, Dr. Beard's theory of a nervous tendency, which he claimed was hereditary; third, the theory of Dr. Daily of Pittsburgh, that it was caused by hypertrophy of the nasal mucous membrane. Neither of these elements alone is capable of producing the disease: it is the effect of all three acting together; and the removal of any one is sufficient to cure the disease. The most practical and radical method, however, is by attacking the hypertrophied mucous membrane. The doctor explained the action of the hypertrophied membrane in causing the disease by its tendency to cause partial occlusion of the anterior nasal passages, in consequence of which the effort of inspiration produces a rarefaction of the air behind the partially occluded portion of the passage, thus, by a process analogous to dry-cupping, producing turgescence of the local blood-vessels.

Dr. D. M. Cammann closed the proceedings with a history of the stethoscope, and the presentation of a modification of the Cammann stethoscope devised by himself.

A reception was given in the evening by the New-York members to the non-resident members. The papers read before the association will be published in full at an early date in the *New-York medical journal*.

The following officers were elected for the coming year. President, Dr. William Pepper of Philadelphia. First vice-president, Dr. Frank Donaldson, Baltimore. Second vice-president, Dr. Beverly Robinson, New York. Secretary and treasurer, Dr. J. B. Walker of Philadelphia. Council, Dr. E. D. Hudson, jun., New York; Dr. E. T. Bruen, Philadelphia; Dr. J. H. Tindale, New York; Dr. J. C. Wilson, Philadelphia; Dr. F. H. Bosworth, New York.

CURVED BACILLI IN AIR AND WATER.

MR. J. HERICOURT (*Comptes rendus*, 1885, p. 1027) gives some interesting results of his investigations on the nature of curved bacilli, and their presence in the atmosphere. The researches were made during the recent cholera epidemic; and the following are his results: —

1°. In all water, no matter what its source (spring-water, from cisterns, running, or stagnant), there are curved bacilli of varying form and size, among which those of the same type as the cholera bacillus are constantly found.

Of the various waters examined, some were taken from localities absolutely free from cholera; others were examined very lately, when the disease no longer existed; and most of them were used for drinking-purposes, and were of perfect quality.

2°. The constant presence of these micro-organisms in all kinds of water can only be explained by supposing the existence of their germs in the air; and to test this, atmospheric dust was collected from dif-