

planation why this construction was so often made. I had ascribed it to savage fetish, but is there not a better reason for it? I suspect that the film acts as a sympathetic drum, like that of the *nyasataranga* of India, the onion flute of Europe, and its late reproductions in the *kazoo* and *zobo*. In that case, it increases the volume of sound and adds a different timbre to the *marimba*, as it does to the other instruments mentioned. The same reasons may also be ascribed for the use of the membrane over a lateral hole of the Chinese flute (*ti-tzü*) and other flutes of the far east.

E. H. HAWLEY.

U. S. NATIONAL MUSEUM,
November 15, 1904.

QUOTATIONS.

SCIENCE IN THE BRITISH WEST INDIES.

THE American Consul at Bermuda describes in a United States Consular Report the steps which have been taken to establish there a biological station which will be to North America what the Naples station is to Europe. For several years American naturalists have carried on investigations of the natural history of the Bermudas and the surrounding sea, and have made efforts to establish a biological station in these islands. Upon the advice of the Royal Society, our government has given its assent to the project. The Colonial Government has expressed its willingness to purchase the land and erect the building, and grants toward equipment and support of tables have been made by the Royal Society and the Carnegie Institution. Harvard University and New York University, in connection with the Bermuda Natural History Society, have already commenced work in a temporary laboratory close to what will be the permanent quarters of the station, and the United States Government has been asked to give generous support to the station. America has already founded a tropical botanical laboratory in buildings of the government of Jamaica at Cinchona, and has now secured a biological station, so that it appears as if the Americans are rapidly getting the control of the scientific interests of our western tropical possessions. While we can not

but admire the interest shown in the establishment of these stations by universities and colleges in the United States, it is impossible not to regret the apathy with which our home and colonial governments regard such matters. Surely it is the duty of the state to encourage the pursuit and cultivation of natural knowledge throughout the Empire, and to realize the richness of its possessions in material for scientific study as well as in precious minerals. It is a reproach to our nation that a biological station has not been established by us in the Bermudas; for now, instead of American investigators carrying on their work in a British station, we have to face the fact that, though the station will be on British soil, it will belong to the United States, and our own countrymen will be guests in it. So far as the interests of science are concerned, probably this does not matter; for, as Mr. Balfour wrote a few days ago to the translator of his British Association address, community of aim 'binds together the scientific men throughout the world into one international brotherhood.' But it should be evident to some of our ministers, at least to Mr. Balfour, who has often expressed sympathy with scientific progress, that it can not be to the advantage of the state for another nation to accept responsibilities which belong to us. Mr. Balfour is gratified at the success of the translation of his address into German, but apparently he does not consider that the interest shown in scientific matters in Germany is due to the active and practical part played by the state in helping scientific education and research. What we want here and in all parts of the Empire is more practical help of the kind given by the United States and Germany to save us from the future regret of lost opportunities.—*Nature*.

ECONOMIC ENTOMOLOGY AT THE WORLD'S FAIR.

THERE prevails in Europe a very proper idea that the United States takes the lead in economic entomology. It must, therefore, have been somewhat surprising to our foreign friends, upon visiting St. Louis, to have found our station collections of insects so poorly

represented. The government exhibit of insects, in the government building, of course, was excellent, and in the forestry building the exhibit of Dr. Felt, and Dr. Smith's collection of mosquitoes were admirable, but in the station exhibits in the Palace of Education there was a woeful lack of representative matter from the various stations. Professor Gillette tells me that he had for the exhibit contributions from California, Connecticut, Colorado, Hawaii, Kansas, Kentucky, Indiana, Idaho, Louisiana, Maine, Maryland, Minnesota, Missouri, Montana, Nebraska, New York (Geneva, Cornell), New Mexico, New Hampshire, New Jersey, Ohio, Oregon, Pennsylvania, Rhode Island, Texas and Virginia. In many instances these representative collections were extremely small. Professor Gillette is by no means to be blamed for this lack of representation, for he has, with the limited means at his command, certainly done all he could to forward this work and both he and Mr. Farmer have installed the material with great care and with resulting good effect. Nor does the writer believe it is due to apathy on the part of the station entomologists, but rather to the fact that the time of the entomologists is so crowded with other exacting work, that no time is left for preparation of any such exhibit as was called for in this connection, nor were funds available. Whatever may have been the cause, the result was an inadequate representation of the interest in economic entomology, and as such it is to be deplored.

In connection with Dr. Smith's exhibit of mosquitoes in the forestry building, which was certainly one of the most complete that has ever been placed before the public, illustrating not only a large number of species, but different phases in the work against the mosquito, we must remark on a colored illustration labeled 'Anopheles in the Act of Biting' or words to that effect. It represents an enlarged figure of a mosquito filled with blood, and with beak inserted, *but the beak and body are at right angles to each other*. While we may be mistaken, we are under the impression that this genus, in biting, always so raises the body that it and the beak are on

the same line. In the education building, Professor Stedman had, in addition to his station exhibit of insects and photographs, a good show collection in Missouri's state educational exhibit, and Dr. Fernald had an interesting and instructive exhibit of insects (largely specimens of the gypsy moth and its enemies), insecticides and photographs in the Massachusetts educational exhibit, but the latter exhibit would never be found by an entomologist unless he were guided to it.

F. L. WASHBURN.

MINNESOTA STATE EXPERIMENT STATION,
November 8, 1904.

MEDALS OF THE ROYAL SOCIETY.

THE council of the Royal Society have made the following awards of medals for this year: The Copley medal to Sir William Crookes, F.R.S., for his long-continued researches in spectroscopic chemistry, on electrical and mechanical phenomena in highly rarefied gases, on radio-active phenomena, and other subjects. The Rumford medal to Professor Ernest Rutherford, F.R.S., for his researches on radio-activity, particularly for his discovery of the existence and properties of the gaseous emanations from radio-active bodies. A Royal medal to Professor William Burnside, F.R.S., for his researches in mathematics, particularly in the theory of groups. A Royal medal to Colonel David Bruce, R.A.M.C., F.R.S., for his researches in the pathology of Malta fever, nagana and sleeping sickness, and especially for his discoveries as regards the exact causes of these diseases. The Davy medal to Professor William Henry Perkin, jr., F.R.S., for his discoveries in organic chemistry. The Darwin medal to Mr. William Bateson, F.R.S., for his contributions to the theory of organic evolution by his researches on variation and heredity. The Sylvester medal to Professor Georg Cantor for his researches in the theories of aggregates and of sets of points of the arithmetic continuum, of transfinite numbers, and Fourier's series. The Hughes medal to Mr. Joseph Wilson Swan for his invention of the electric incandescent lamp and various improvements in the practical applications of electricity.