RECENT PROCEEDINGS OF SCIENTIFIC SOCIETIES.

Academy of natural sciences, Philadelphia.

March 11. — Professor Thomas Meehan made a communication upon a root said to be that of Conium maculatum, which was so virulently poisonous as to have quickly caused the death of a number of children who had eaten of it. In consequence of the rarity of Conium in the neighborhood, he was inclined to believe the species to be Cicutum maculatum, a common local plant, the root of which resembles that of Conium, but is not so dense. He proposed planting the roots with a view to making a further report on the subject when the leaves are sufficiently developed to place the specific characters beyond question. —— Mr. Edward Potts stated that the stems of Urnatella gracilis on the dry sponge-crusts recently collected had germinated after being placed in a life-case, showing that life persists in the stems during the winter, and makes itself manifest in the spring. He had found it somewhat difficult to work out the complete life-history of the polyp, in consequence of its being the prey of several associated forms of life. —— In a paper on the rufous or thatching ant of Dakota and Colorado, the Rev. Dr. H. C. McCook recorded the finding of the hills made by the species on the entire rolling prairie lying between the Cheyenne and the James Rivers. Specimens of the insect had also been sent to him from Iowa Gulch, near Leadville, taken from an elevation of 11,300 feet above the level of the sea. In its power to resist the vigor of the winter at high elevations, the American form resembles the Formica rufa of Switzerland, which is found as far up the Alps as the line of vegetation, farther progress being apparently limited by the lack of vegetable growth rather than by the cold. They may therefore be reckoned, both on this continent and in Europe, as among the most hardy of the ant-fauna, and best adapted to contend with severities of cold. Their hills in Dakota are, for the most part, conical elevations somewhat flattened at the top. Some present the peculiarity of a square base, giving the hill the appearance of a pyramid with a rounded top. Their height ranges from eight inches to a foot and a half. The largest mound observed was found near the summit of the Ute Pass. It was a conical heap, four feet long, and about one foot high, and looked like a small hay-stack, in consequence of its being covered or thatched, in common with all the others about Leadville and in Dakota, with bits of wood and broken sprigs of pine. As the colony increases its numbers, and the necessities of internal domestic economy require the enlargement of the formicaries, the excavated soil is brought up and laid on the thatching. In course of time a new roof of chips and clipped grass is overlaid; and thus, in the ordinary growth of a mound, there would be an alternation of earth and vegetable substance. The marriage-flight of the species takes place in the spring, with the first appearance of vegetation; and the swarms are a source of annoyance to the workers in the fields, although they do not get angry and rush at parties, attacking them, as bees do. The annoyance produced by such swarms is more than compensated for by a curious insectivorous habit of the ants, of which the settlers avail themselves to rid their clothing of lice. Garments so infected, left in the vicinity of the formicaries, are quickly and perfectly cleaned of both parasites and eggs, — a fact which was formerly well known to the Indians of the plains and to old pioneers and campers.

Natural science association, Staten Island.

March 8. — Mr. Seehusen read a paper upon gems, giving a description and history of the principal stones used as gems, with specimens to illustrate the notes. —— Mr. Leng read a paper upon the Coccinellidae of Staten Island, of which he recorded eleven species. —— Mr. Hollick remarked, that numerous specimens of the common seal (Phoca concolor) had visited the shores of Staten Island during the past month. If not disturbed, they would, no doubt, again return to the locality, and remain permanently with us, as do the sea-lions on the 'seal rocks' of San Francisco harbor, where they are protected by law. The speaker also remarked, that a single specimen of the great northern diver (Colymbus torquatus) had been noted in the bay, not far from the Staten Island shore.

Biological society, Washington.

March 8.—Dr. J .H. Kidder, U.S.N., exhibited specimens of Bacillus tuberculosus, and summarized the existing state of knowledge and opinions concerning its relation to tuberculosis. Dr. D. E. Salmon called attention to the claims of Toussaint as the discoverer of Micrococcus in tuberculosis, and remarked that the relation of Koch's B. tuberculosus to the disease is not yet certainly ascertained to be more essential than that of Micrococcus. —— Dr. D. E. Salmon exhibited specimens of infectious tuberculosis from cattle, in which he had been able to discover no traces of bacillus. —— Mr. C. W. Smiley read a paper on what fish-culture has first to accomplish. Fish-culture, he remarked, cannot be expected to perform what is impossible; namely, to fill the waters of a continent to overflowing with an inexhaustible supply of fish: on the contrary, it will have to put forth the utmost effort to prevent the entire annihilation of the fish-supply through the uncontrollable activity of the fishermen. —— Col. Marshall McDonald read a paper on the influence of temperature upon the movements of fish in rivers, in which the fluctuations of the catch of shad in the Potomac in 1881–83 were explained by reference to the varying temperature of the waters of ocean, bay, and river, at the time of their anadromous movements.

March 22. — Col. Marshall McDonald exhibited a chart showing the natural and restricted river-distribution of the shad. —— Dr. R. W. Shufeldt, U.S.A., offered some remarks on the patella, describing the position of this bone, which he considered to be a true sesamoid in various forms of mammals and

birds. —— Mr. Romyn Hitchcock exhibited a series of specimens of Orbitolites, and made some remarks upon the results of the work of Dr. William B. Carpenter as finally set forth in vol. vii. of the report of H. M. S. Challenger. —— Prof. C. V. Riley presented some personal reminiscences of the late Dr. George Engelmann, which were supplemented by remarks from Dr. George Vasey and Professor Lester F. Ward. —— Mr. Richard Rathbun exhibited a large mass of coral (Oculina, sp.) recently obtained from Key West, growing on the end of a crowbar, which, when further studied, would probably yield some clew to the rate of growth of the species. —— Mr. M. G. Ellzey spoke on the prepotency of the male parent, giving the results of twenty-five years' experience in breeding horses, dogs, and other kinds of live-stock. The male parent he believes to be prepotent in the transmission of hereditary traits, except where some extraordinary circumstance intervened. In the case of hybrids between the horse and the ass, a cross is always marked by prepotency of the ass; and in all crosses of two species the male is always prepotent. Mr. Dall called attention to the danger of drawing conclusions from observations upon the external characters of the products of the union of two species. —— Dr. Leonard Stejneger exhibited two magnificently mounted specimens of the great Kamtchatkan sea-eagle, Thalassaetus leucopterus; also a specimen of the bald eagle, Haliaetus leucocephalus, and a specimen in immature plumage of another species, probably undescribed, and probably in the adult state entirely white. The rivers of Kamtchatka abound greatly in salmon, and eagles are in consequence particularly numerous.

Mathematical section, Philosophical society, Washington.

Feb. 20. — Mr. H. Farquhar showed the application of two kinds of empirical formulae to observations of the diminution of amplitude of a freely oscillating pendulum at different atmospheric pressures. When the amplitude and the time were connected by the equation of a hyperbola with four constants (the term involving the amplitude square being omitted), the observations could always be perfectly satisfied. The chief advantage of this form, however, was the ease with which the constants could be calculated from the observations by least squares. A formula more convenient in practical application gave for the time a constant, divided by the nth power of the amplitude; where n was a fraction proportional to the square root of the atmospheric pressure, and equal to about one-third for a pressure of thirty inches. The initial time, or time of an infinite amplitude, was a third constant to be determined; and it should be determined separately for all intervals within which the correction for amplitude is desired. Great nicety in the calculation of n was not necessary: the nearest tenth, or reciprocal, of a whole number, would suffice. The accuracy of this formula was shown by tables to be quite as close as the observations called for. When n became zero, the nth power was replaced by the logarithm of the amplitude, and the initial time was that of amplitude unity. The use of an empirical formula, of higher practical convenience than those usually adopted, — resulting from application of the theory that the diminution results from two resistances, proportional respectively to the velocity (or amplitude) and to its square, — was defended on the ground that this theory is itself empirical, and is well known to fail altogether for very high velocities. The proposed formula supposed in effect one resistance proportional to the $1 + n$ power of the velocity of the pendulum.

NOTES AND NEWS.

From *Nature* we learn that Sir Joseph Hooker has been nominated one of the vice-presidents for the Montreal meeting of the British association. Instead of Mr. Crookes, Prof. W. G. Adams will give one of the public lectures. For the Aberdeen meeting in 1885, Sir Lyon Playfair will be proposed as president. A well-attended meeting of the organizing committee of the chemical section has been held under the presidency of Professor Roscoe. Promises of papers were received from several well-known chemists, and a small executive committee was formed to draw up a list of papers, and to communicate with Canadian and American chemists. Section G has been particularly active. The committee has prepared a list of subjects for papers which it is thought would be interesting to English visitors if treated by engineers and mechanicians in Canada: a good supply of papers is expected, both from this country and America. Sir J. H. Lefroy has accepted the presidency of the geographical section. We regret to learn that Professor Williamson, the general treasurer, will be unable to be present; and the council have decided to engage the services of Mr. Hamy Brown as 'financial officer,' while Professor Burdon Sanderson has virtually consented to act as deputy for the treasurer at Montreal.

— The last number of the *Harvard university bulletin* contains further instalments of Mr. Winsor's bibliography of Ptolemy's geography and the Kohl collection of early maps; the former containing some very interesting comments on the knowledge of America about the middle of the sixteenth century, the latter relating exclusively to maps of the new world issued in the first half of the same century. Mr. Bliss's classed index to the maps in *Petermann's mittheilungen* will be completed in the next issue, and we may expect its separate publication in a few weeks. It will prove a great convenience.

— At the request of the navy department, the fish-commission steamer Albatross, Capt. Tanner commanding, was fitted out during the winter for the purpose of carrying on a series of deep-sea soundings and dredgings in the Caribbean Sea, a region very little known in respect to its depths. The vessel left Washington Jan. 1, and reached St. Thomas on the 17th, and, after coaling, proceeded on her voyage, making the following ports: Curaçoa, Trinidad, the Island of Oruba, Alta Vela, Jacmel, Gonaives, Santiago de Cuba, Navaza, and Kings-