

In India the rat flea, *Loemopsylla cheopis*, which closely resembles the human flea, *Pulex irritans*, in appearance, is by far the most commonly found species. In England the common rat flea is *Ceratophyllus fasciatus*; a single specimen only of *L. cheopis* has been found up to the present time.

*L. cheopis*, especially if hungry, will bite man; *C. fasciatus* does not take to man with any readiness, but will undoubtedly bite on occasion. This difference in the appetite of the two species for human blood may be of significance in determining the likelihood of the spread of rat plague to human beings.

G. F. PETRIE.

PROF. D. P. PENHALLOW.

WE regret to announce that Prof. D. P. Penhallow, D.Sc., F.R.S. (Canada), president of the American Society of Naturalists, and professor of botany in McGill University, Canada, died on October 20, in consequence of an apoplectic seizure, whilst on board the ss. *Lake Manitoba*, on voyage to Liverpool. His remains were brought to Liverpool, and were, in accordance with his wishes, cremated at Anfield Cemetery on Friday, October 28. Prof. and Mrs. Penhallow were about to begin a year's vacation, and had intended spending the winter in the south of England. In consequence of the severe strain of work which Prof. Penhallow had undergone during the last few years, his previously excellent health had shown signs of giving way, and under medical advice he was about to take a prolonged rest, when the lamentable event of his decease occurred.

Prof. D. P. Penhallow was born in 1854 at Kittery Point, in Maine, where his parents had a summer cottage, but their home was in New Hampshire, and Prof. Penhallow always regarded himself as a New Hampshire man. His family were in the direct line of descent from Governor Wentworth, of pre-Revolutionary days, and Prof. Penhallow was a splendid embodiment of the best type of New Englander. He received his scientific education in Boston University, and after graduation he was offered the post of professor of botany in the Imperial College of Agriculture in Japan. In the same year (1876) he married Miss Sarah Dunlap, who, like himself, could boast of a distinguished New England ancestry, and the first four years of his married life were spent in Japan. He thus enjoyed the distinction of being one of the group of Western students who were chosen by the Reformed Japanese Government to inaugurate the epoch of Meiji (intellectual enlightenment) in Japan.

Returning to America in 1880, he undertook work in connection with the summer school of botany in Harvard University, and in 1883 he was offered the newly-created chair of botany in McGill University, Montreal, where the rest of his professional life was spent. He had a very uphill fight in Montreal, which he manfully fought. There was no botanical laboratory and there were no funds to provide one; but as Prof. Penhallow gained the respect and esteem of the community help was forthcoming, and before he died the botanical laboratory was exceedingly well equipped. When he was appointed obscurantist views prevailed in Montreal, both in the city and in the University, and Prof. Penhallow was one of the very first to teach evolution, and may thus be said to have helped to inaugurate the epoch of "meiji" in Montreal. In his own science he devoted special attention to the anatomy of woods, both recent and fossil; on this subject he published many valuable papers, and in his great work on "Gymnosperms," which appeared in 1908, he summed up the results of twenty years' labour. His eminence in his special department was

cordially recognised by the American scientific world, and when he died he was not only president of the American Society of Naturalists, but vice-president of the American Society of Botanists.

But Prof. Penhallow's activities were by no means limited to teaching in his special subject. He threw himself into every movement calculated to bring a wider intellectual outlook into Montreal and Canada generally. He instituted courses of lectures to teachers, which had for many years a beneficial effect on those engaged in instruction in the public schools of the city. He was a leading member of the Canadian Royal Society, and in 1897, when the British Association met in Toronto, he was appointed a member of a committee to impress on the Canadian Government the desirability of founding a marine biological station. The Government acted in accordance with the advice of this committee, and in 1899 a small floating station was started, which was moved from place to place in eastern Canadian waters.

When in 1907 the Government was persuaded to give a grant towards the foundation of a permanent station at St. Andrews, Prof. Penhallow was deputed by the Biological Board to supervise its erection. When he arrived at St. Andrews it was found to be necessary not only to build the station, but to cut a road through a mile of forest and to build a wharf. No one was ready to undertake the contract for this work, and those who were ready to undertake part of it, when they discovered that it was to be paid for by "Government money," would only do so at exorbitant prices. With characteristic American energy and versatility, Prof. Penhallow threw himself into the breach, became contractor himself, and constructed the road, the station, and the wharf in one-third the time he was told it would require, and at a great saving in cost. Next year he superintended the activities of the station, but a political crisis at Ottawa temporarily stopped supplies, and the anxiety and financial strain which he underwent undermined his health, and, in the opinion of his friends, constituted the first link in the chain of causes which led to his death.

Prof. Penhallow is survived by his wife and by his son, Dr. P. Penhallow, who is engaged in medical practice in Boston. By his death McGill University loses one of its most distinguished professors, the city of Montreal one of its most public-spirited citizens, and the science, not only of botany, but of marine biology generally, a devoted supporter who could ill be spared.

E. W. M.

NOTES.

WE learn with great regret that it has been found necessary to postpone the festivities arranged to take place at Leyden to-day (November 3). On this date Prof. van Bemmelen completes his eightieth year, and he was to have received the personal congratulations of friends and disciples from all parts of the world. Owing to his illness, the ceremony is to be confined to the formal presentation of the jubilee volume by Prof. Lorentz, if, as is hoped, Prof. van Bemmelen is sufficiently recovered to receive him. The jubilee volume is a remarkable testimony to the regard which is felt throughout the world for the distinguished second founder of colloidal chemistry. It contains a portrait, together with a biography and a bibliography of the professor's published works. Sixty papers on subjects connected with the colloidal state have been contributed by workers from all parts of the world. Amongst the authors are le Chatelier, Duhem, Zsigmondy, Liesegang, von Wiemarn, Hissink, Freundlich, Biltz, Spring, Hardy, Svedborg, Jordis, Wolf, Ostwald, Lotter-