finding himself in command of a company of grenadiers—on account of the death of all of the officers and by virtue of his nobility, fought on in a brilliant action which will be too long to describe, and which earned for him the epaulets of sub-lieutenant on the field of battle. It was a good commencement for his military career; but peace was made soon afterwards and he had to return to France and begin garrison life. I will not continue; he was forced to sell his grade of lieutenant of infantry on account of a tumor which appeared on his neck.

It was then that he made a complete change in his career. No, I am mistaken: he first remained for a while with his mother at the paternal manor; this was a time of forced inactivity, which one would be glad to drop out of his life. But finally his mother died. He had to sell the estate of Bazantin. There remained to my father only a very meager income. He had to live, he had to make a career. My father went to Paris. He first studied medicine, then abandoned this for botany. This science pleased him, he had a taste for it, he gave himself up to it ardently. One day, as he was walking with other students in the botanical school of the Jardin des Plantes, he laid a wager that he could identify whatever plant was presented him, any one at all, provided they informed him in advance the principal characters which distinguished the fruit (végétaux). He asked, in order to prepare himself, a certain delay, which was granted him, and on the day fixed, in this same school of botany, in the midst of a numerous assembly, the trial took place, succeeded, and the wager was won. Such was the origin of the Flore Française. The means devised by my father consisted in the successive elimination of two opposed characters, which is the method of dichotomy employed to-day in all classifications of natural history. The success of the Flore Française was truly prodigious. It was printed at the expense of the king and opened to my father the gates of the Academy of Sciences.

I pass without comment several other works which he published on botany and which put the seal to his reputation as a botanist. To come to those of his works to which he himself attached the greatest value.

The museum was about to be reorganized. Several new chairs were added to those already existing. The mammals, birds, fishes and reptiles were given to Géoffroy Saint-Hilaire and all of the mass of lower animals were given to my father. No one, Linné excepted, had then thrown light into the chaos formed by these beings. My father undertook to disentangle them. He established at once the great distinction which divides the animal kingdom into two classes, vertebrate and invertebrate. And the latter class, which up to then had been nearly despised, became of such importance, when my father had brought into it the order which remains there at present, that it has been judged too large to be in the charge of a single professor, and it has been made to-day the object of two different chairs.

It is in his zoological works that the genius of my father had its full scope. To appreciate them properly one should have a knowledge which I do not possess. I can only cite the *Philosophie Zoologique* and the *Histoire des Animaux sans Vertèbres*. These are the two monuments which will appeal to posterity from the coldness of his contemporaries.

Will this appeal ever be heard? I doubt it. Nothing is more difficult to uproot than a preconceived opinion. Men are like sheep; they follow blindly their leader without inquiring the road where he is leading them. They judge rarely by themselves, and find it most convenient to adopt without examination the judgments which time has given them.

It seems that this ingratitude of mankind has been the penalty inflicted upon my father for his neglect of the fulfilment of his duties as head of the family.

I can not deny, indeed, that his conduct in this regard is not reproachless. Undoubtedly it is ideal to devote one's self to science without the slightest regard to worldly ambition or to fortune, but this is the very condition which the interests of the family will not suffer.

My father was three times married—from the first marriage he had six children, from the second two and from the third none.

* * * * * * * *

The conclusion of the letter contains the history of the five sons of the naturalist, only one married, the author of this letter. Of Lamarck's three daughters, the eldest, Rosalie, was his devoted secretary in the days of his blindness.

BASHFORD DEAN,
Treasurer of the American Branch of the Lamarck Memorial Committee
COLUMBIA UNIVERSITY,
NEW YORK

EDWARD GARDINER GARDINER

EDWARD GARDINER GARDINER was the son of Edward Gardiner, of Boston, and of Sophia

Harrison Mifflin, of Philadelphia. On his father's side he traced his descent from George Gardiner, who settled in Aquidneck, Rhode Island (the site of the present town of Narragansett), in 1635. On both sides his ancestors had distinguished themselves by services to their respective communities and to their common country. He was born in New York City July 29, 1854, and died in Boston November 4, 1907. He was married April 6, 1895, to Miss Jane Greene Hooper, who, with two children, a boy and girl, survives him.

He was educated at the Boston Latin School and intended, as a matter of course, to enter Harvard, but a trouble with his eyes cut him off for several years from all studies. During this time he made the acquaintance of Professor Alpheus Hyatt, and his association with this distinguished naturalist awoke in him a love of science destined to be lifelong. He assisted Professor Hyatt sorting scientific material in the Museum of Natural History of Boston, and with him made repeated cruises for collection of material as far north as Labrador. His interest in biology and his warm affection for Professor Hyatt led him to pursue his studies at the Massachusetts Institute of Technology, at first as a special student, which was all his eyes made possible. In 1882 he graduated with the degree of Ph.B. and went abroad for two years to carry on his scientific studies. In 1884 he received the degree of Ph.D. from the University of Leipzig, the subject of his thesis being "Beiträge zur Kenntniss des Epitrichiums und der Bildung des Vogelschnabels," published separately and also in *Archiv für Mikroskopische Anatomie,* Vol. XXIV., 1885. Leuckart, for whom he often expressed great admiration, was his principal teacher in Leipzig, but he also attended the lectures of Rauber, Zirkel, Credner, Schenk, Marshall, Fraisse and Chun.

On his return from Leipzig, he entered the laboratory of Professor W. T. Sedgwick in the Massachusetts Institute of Technology and was welcomed as a well-trained zoologist. After a year as graduate student in Professor Sedgwick's laboratory, he was appointed successively assistant and instructor, in which capacities he served from 1885 to 1892. Professor Sedgwick writes that "Gardiner was always a devoted friend of the laboratory and left us because teaching had become irksome to him and interfered greatly with the original work which he hoped and expected to do at Woods Hole."

In 1888 Dr. Gardiner was elected a member of the original board of trustees of the Marine Biological Laboratory, which included also William G. Farlow, Alpheus Hyatt, Susan Minns, Charles S. Minot, William T. Sedgwick and Samuel Wells. Dr. Gardiner, who had consented to enter the board to fill a temporary vacancy, soon withdrew, but it was for a year only, and in 1890 he was again elected a member of the board and served continuously to the time of his death, when he was the only member of the original board remaining on it. He shared in the work of the first session of the laboratory, 1888, and was instructor in 1889, 1890 and 1891. He served as clerk of the corporation from 1895 to 1902 and again from 1906 to the time of his death. He also acted as secretary of the board of trustees from 1896 to 1902 and was again elected to the same office only three months before death deprived the board of his valuable and efficient services.

It is impossible in a brief sketch to even mention the numerous services rendered by Dr. Gardiner, as officer and never-failing friend, to the Marine Biological Laboratory. His long connection with laboratory affairs and intimate knowledge of its history made him one of the most important members of the board of trustees, and his high standing in Boston enabled him to secure valuable assistance for the promotion of the interests of the laboratory.

The board of trustees of the Marine Biological Laboratory record their sorrow at his untimely death, their sense of great loss, and their admiration for the fine sense of honor and loyalty that characterized his life. And they order this record spread upon the minutes of the board of trustees, and recommend that it be published, and that copies be sent to his family, near relatives and friends to express

the sympathy of the board in their bereavement.

ORIGINAL PUBLICATIONS OF EDWARD G. GARDINER

"Beiträge zur Kenntniss des Epitrichiums und der Bildung des Vogelschnabels," Inaugural-Dissertation, Leipzig, 1884. Also in *Archiv für Mikroskopische Anatomie*, Bd. XXIV., 1885, pp. 289–338, Taf. XVII.–XVIII.

"Notes on the Structure of the Quills of the Porcupine," *Technology Quarterly*, Vol. I., p. 392, 1889.

"The Origin of Death," *Technology Quarterly*, Vol. IV., p. 178, 1891.

"Weismann and Maupas on the Origin of Death," Biological Lectures delivered at the Marine Biological Laboratory of Woods Hole, Vol. I., Ginn & Co., Boston.

"Early Development of *Polychœrus caudatus*, Mark," *Journal of Morphology*, Vol. XI., No. 1, pp. 155–171, 1895.

"The Growth of the Ovum, Formation of the Polar Bodies and Fertilization in *Polychœrus caudatus*," *Journal of Morphology*, Vol. XV., No. 1, pp. 73–110, Plates 9–12, 1898.

For a number of years prior to his death Dr. Gardiner had been engaged upon a monograph of the *Turbellaria acœla*, which was to have been his principal scientific work, but which was never completed.

SCIENTIFIC NOTES AND NEWS

As we have already announced would be the case, Sir E. Ray Lankester relinquished the directorship of the Natural History Departments of the British Museum on December 31. The trustees have not yet appointed a new director of these departments and it appears to be very uncertain whether they have any intention of doing so. The keepership of the Zoological Department, which was also held by Sir Ray Lankester, likewise remains unfilled.

M. BOURGET, of the Toulouse Observatory, has been appointed director of the Marseilles Observatory, to succeed M. Stephan, who has retired.

THE council of the Institution of Electrical Engineers has elected Lieutenant-Colonel R. E. B. Crompton, C.B., to the presidency of the institution, vacant by the death of Lord Kelvin.

PROFESSOR R. S. LULL, curator in vertebrate paleontology, Peabody Museum, Yale University, was elected president of the American Society of Vertebrate Paleontologists at the meeting in New Haven on December 28.

PROFESSOR MARSTON T. BOGERT, of Columbia University, has been elected president of the Chemists' Club, New York.

THE council of the Geological Society of London has made the following awards: the Wollaston medal to Dr. Paul Groth, professor of mineralogy in the University of Munich; the Murchison medal to Mr. A. C. Seward, professor of botany in the University of Cambridge; the Lyell medal to Mr. R. D. Oldham, formerly of the Geological Survey of India; the Wollaston Fund to Mr. H. H. Thomas, of the Geological Survey of England; the Murchison fund to Miss Ethel G. Skeat, while the Lyell fund is divided between Mr. H. J. Osborne White and Mr. T. F. Sibly for their respective work on the Cretaceous and Carboniferous rocks of England.

THE Liverpool School of Tropical Medicine has decided to confer the Mary Kingsley memorial medal on Mr. Joseph Chamberlain "in recognition of the great work he inaugurated by the establishment of schools of tropical medicine."

MR. MORRIS K. JESUP, president of the American Museum of Natural History, has been made a corresponding honorary member of the Senckenbergische Naturforschende Gesellschaft in appreciation of his gift of the Diplodocus skeleton to the Senckenberg Museum at Frankfurt on the Main, Germany.

DR. EMIL FISCHER and Dr. J. H. van't Hoff, professors of chemistry in the University of Berlin, have been given the honorary degree of doctor of engineering by the Technical Institute at Brunswick.

WE learn from *Nature* that Sir Norman Lockyer has been unanimously elected president and an honorary member of the Penzance Natural History and Antiquarian Society in recognition of his services to the study of the circles and other prehistoric remains in west Cornwall.