

A paper by Dr. Joseph Leidy was read, entitled "Observations on the Extinct Peccary of North America;" and another, by the same author, entitled "Remarks on Saurocephalus and its allies,"—which were referred to a committee consisting of Dr. Le Conte, Mr. Lea and Prof. Frazer.

---

*Stated Meeting, December 5.*

Present, eighteen members.

Judge KANE, Vice-President, in the Chair.

Letters were read:—

From the Royal Society of Sciences, at Upsal, dated Nov. 6, 1855:—from the Imperial Geological Institute at Vienna, dated March 20, 1856:—from the Imperial Academy of Sciences at Vienna, dated July 16, 1856:—and from the Secretary of l'Ecole des Mines, Paris, dated July 2, 1856,—severally announcing donations for the library:—

From the Royal Prussian Society of Sciences, dated Berlin, March 20, 1856, announcing a donation, and acknowledging the receipt of Transactions and Proceedings of this Society: and—

From the Imperial Geological Institute, dated Vienna, Dec. 21, 1855, acknowledging the receipt of Nos. 51, 52 of the Proceedings.

The following donations were announced:—

FOR THE LIBRARY.

Abhandlungen der K. Akademie der Wissenschaften zu Berlin, aus dem Jahre 1854. Erster Supplement Band. Berlin, 1856. Folio.—*From the Academy.*

Monatsbericht der K. Akad. der Wissenschaften zu Berlin, July—Dec. 1855. Berlin. 8vo.—*From the same.*

Sitzungsberichte der K. Akademie der Wissenschaften: Phil. Hist. Classe, XIX. Band, 2 Heft, XX. Band, 1 Heft:—Math. Nat. Classe, XX. Band, 1 Heft. Wien, 1856. 8vo.—*From the Academy.*

- Jahrbuch der K. K. Geologischen Reichsanstalt; VI. Jahrgang, 1856. No. 3. Jul. Aug. Sept. Wien. 8vo.—*From the Geological Institute, Vienna.*
- Nova Acta Societatis Scientiarum Upsaliensis. Seriei Tertix. Vol. I. Upsaliæ, 1855. 4to. *From the Society.*
- Annales des Mines. V. Serie. Tome VIII. 4, 5, 6 livr. de 1855. Tome IX. 1 livr. de 1856. Paris. 8vo.—*From the Engineers of l'Ecole des Mines.*
- Journal of the Franklin Institute. Third Series. Vol. XXXII. No. 5. Nov. 1856. Philadelphia. 8vo.—*From the Institute.*
- Report of the Proceedings of the Geological and Polytechnic Society of the West Riding of Yorkshire, 1854-5. Leeds. 8vo.—*From the Society.*
- On the Claims of the Gigantic Irish Deer to be considered as contemporary with man. By Mr. H. Denny, A.L.S. &c. May 29, 1855. Leeds. 8vo.—*From the Author.*
- The Physiological Effects of Alcohol and Tobacco upon the Human System. By W. A. Hammond, M.D., U. S. Army. (Am. Jour. Med. Sci. Oct. 1856). 8vo.—*From the Author.*
- The American Missionaries in Greece: An Address delivered at St. Luke's Church, in Philadelphia, Oct. 13, 1856. By Henry D. Gilpin. Philadelphia. 8vo.—*From the Author.*
- A Memoir of the Life and Character of James B. Rogers, M.D. Professor of Chemistry in the University of Pennsylvania. By Joseph Carson, M.D. Prof. Mat. Med. and Pharmacy, Univ. Pennsylvania. Philadelphia, Oct. 11, 1852. Philadelphia. 8vo.—*From the Author.*
- The Astronomical Journal. No. 97. (Vol. V. No. 1). Albany, Nov. 26, 1856. 4to.—*From Dr. B. A. Gould, jr., Editor.*

The committee to which were referred the papers by Dr. Leidy, entitled "Observations on the Extinct Peccary of North America," and "Remarks on Saurocephalus and its allies," made report recommending the publication of the papers in the Transactions of the Society; which was ordered accordingly.

Mr. Durand, pursuant to appointment, read an obituary notice of the late Francois André Michaux, a member of the Society. This paper was referred to a committee, as communications intended for the Transactions are referred. The com-

mittee consists of Dr. La Roche, Prof. Coppée and Dr. Le Conte.

In a brief introduction, Mr. Durand enumerated the claims of scientific explorers to the admiration and gratitude of mankind, he portrayed them as deserting their native land and family affections, for the sole object of advancing sciences and benefitting their fellow beings, by adding to the wealth they already possessed, the useful productions which they procured for them from foreign and unexplored regions; he pointed out the fatigues and inconveniences to which those devoted men expose themselves, in order to attain their object; he showed them wending their way through inextricable forests, through pestilential marshes and grounds yet untrodden by the human foot, struggling and panting under the rays of a burning sun, or shivering under heavy showers of rain, and constantly exposed to danger of every sort. He then entered upon the particulars of the life and labours of the subject of his memoir.

Francois André Michaux was born in 1770, at Satory, a royal domain situated near Versailles. He was the son of André Michaux, one of the pioneers of botanical explorations in North America, and accompanied him to this country, when only fifteen years of age. He remained four years with his father, assisting him in his journey, and at the Charleston Nursery. In consequence of an accident, through which his sight was injured, his father sent him back to France, which he reached just at the breaking out of the revolution.

In the year 1800, young Michaux was studying medicine, with the view of returning to the United States, and devoting himself to the healing art, but, animated by the example of his father, and convinced his efforts, employed in other directions, could afford more benefit to mankind, he solicited a commission to return to North America, in order to achieve the work of usefulness, left unfinished by the departure of his father.

This commission he received at last, in 1801, from Mr. De Chaptal, then minister of the interior, with various instructions which he faithfully fulfilled. After visiting Charleston, New York and Philadelphia, he started on a voyage to the States of Kentucky and Tennessee, whence he returned to Charleston through the range of mountains which separates the latter State from that of South Carolina. He had travelled over 1800 miles in three months and a half. After sojourning eighteen months in this country, Michaux returned to France

and published, two years afterwards, an interesting account of this voyage. (“*Voyage à l’ouest des monts Allegheny.*”) He assisted also in the publication of his father’s works, “*The History of the American Oaks* and *Flora Boreali-Americana*; and in 1805, he addressed to the Central Society of Agriculture of Paris, a memoir, entitled “*Sur la naturalization des Arbres forestiers de l’Amérique du Nord.*” In this memoir he endeavoured to prove the great advantage which might accrue to France from the acclimation of certain American trees, susceptible of being cultivated with advantage in certain lands that produce nothing, or which could be a valuable addition to the native trees of France. The means proposed by Michaux to attain this object was simply to send a naturalist to the United States, in order to collect seeds and young trees, and forward them to the national nurseries of France.

Michaux, having been intrusted with this mission, under the patronage of the Duke de Gaëte, embarked at Bordeaux on the fifth of February, 1806, in a vessel bound to Charleston. After three days at sea, he was met by a British man of war, who took him to the Bermuda Islands. While in port he was permitted freely to go ashore, and had thus the opportunity to make some interesting observations, which he communicated to the Professors of the Museum of Natural History, in a memoir entitled “*Notice sur les Isles Bermudes,*” &c.

He was finally permitted to proceed on his voyage to the United States, which he reached towards the end of May. Beginning his explorations at the District of Maine, he travelled over the Atlantic States as far as Georgia, a distance of 1800 miles, and made five different journeys into the interior of the country. His object was not merely the science of botany; but the application of that science to useful purposes. As the knowledge of which he was in need was principally in the possession of artisans, he visited the principal dock-yards, with the view of examining the timber employed in ship-building, and entered the different work-shops in which wood was employed in any way; he paid a particular attention to the trees that formed the bulk of the forests, with reference to the nature of their wood, or as objects of commerce; he ascertained the sources of the different barks that are used in tanning, and formed a complete collection of polished specimens of the species employed in cabinet-work, &c. &c. The range of his observations was unlimited, and could not fail to interest exceedingly the people of the United States, as well as Europeans, and to become one of the main points of the

splendid work which he published almost immediately after his return.

Michaux employed three years in this voyage. During the two years following his return, he was actively occupied in the publication of his great work, "*Histoire des Arbres Forestiers de l'Amérique du Nord*," so anxiously expected by those who took an interest in the flora of the United States, and in the observations of one so well versed in agricultural pursuits. This work, illustrated by 144 copper-plates, executed by the best artists of the day, was published, the first volume, in 1810; the second, in 1812, and the third in 1813. It was translated into English by Augustus L. Hillhouse, and published in Paris in four volumes, under the title of *North American Sylva*, with the addition of several plates, and of new observations by the Author. Mr. Maclure having purchased the plates in Paris, brought them to this country, and to this circumstance is owing the publication of two American editions, which are likely soon to be followed by a third. The first was published in New Harmony, Indiana, in 1842, and the second in Philadelphia, in 1852, with notes, by J. J. Smith, Esq.

Mr. Durand relates the circumstances of his acquaintance with Mr. Michaux in 1824, and gives the following description of his person: "He was rather tall, strongly built, but not corpulent; his complexion was fair; he was slightly pock-marked and possessed prominent features. His light blue eyes had a haggard expression, which startled me at first, and was probably caused by the artificial eye to which, I am assured, he had resorted to disguise his infirmity. His countenance was stern and cold on first approach, but it smoothed off and brightened gradually as he spoke and became more familiar. His utterance, in the beginning slow and cautious, became rapid and impressive, and his conversation gay and even humorous. All his manners were quite simple and unaffected, frank and lively—they were altogether those of a good country gentleman, in whose presence, young as I was at the time, I felt neither embarrassment nor shyness."

Since the appearance of his great work, Michaux has not ceased to devote all his attention to his favourite pursuit—the cultivation and propagation of trees, presenting a special object of public utility. Interested with the direction of the large model-plantation belonging to the Central Society of Agriculture, and owning, himself, a country

place, at a small distance from Paris, he continued his experiments on arboriculture to the very last day of his life.

The main point of those experiments was to turn to advantage those sandy or marshy soils, considered as utterly sterile, and, through forty years of experiments, he was enabled to prove that they might be rendered productive and valuable by the cultivation of certain foreign trees which succeed well in such soils.

In a letter, bearing date of October 24, 1852, and addressed to the President of the American Philosophical Society, Mr. Michaux recommends to the particular attention of the people of the northern and middle States of the Union, the cultivation of the Russian pine, *Pinus Sylvestris*, as thriving well in all the sandy lands upon which scarcely another tree will succeed. With the view to remedy the great scarcity of wood, under which this country is beginning to suffer, through the rapid and improvident destruction of the native forests, he recommends also the cultivation of bushy or spreading trees, producing copses, or taillis, to which he has applied a special mode of culture, more rational and more favourable to the development of vegetation, and, consequently, more profitable to the landholders. He was, at the time, preparing for publication a work in which he intended, succinctly, to expose his ideas on those subjects, and to lay open the result of his observations and practical experience for the particular benefit of the American arboriculturists.

In this same letter, Mr. Michaux informed his colleagues of the Philosophical Society that, wishing to give the American nation a testimonial of his heartfelt gratitude for the hospitality and assistance which his father and himself had received in this country, during the course of their long and toilsome journeys, he had made testamentary provisions in favour of this Society, and also of the Society of Agriculture and Arts of Boston (\$14,000 for the former, \$8000 for the latter), with the view to afford the means of promoting the progress of the science of Sylviculture in the United States.

Mr. Michaux died of a stroke of apoplexy, in the month of November, 1855, at the age of eighty-five years, at his country residence of Vauréal. He had been occupied, the whole day, planting American trees and directing himself his journeymen. He withdrew from his work in good health, dined moderately with good appetite, and went to bed at his usual hour. At about one o'clock his wife heard him move about and calling; she instantly ran to his apartment and found

him struggling on the floor, but on examining him he had breathed his last.

Michaux left no issue. He had lived single to an advanced age, and changed abruptly his condition, by marrying a relation of his, who, for a long time, had been the manager of his house, his attendant in sickness and the companion of his solitude. He has left her a comfortable provision for the remainder of her life.

Mr. Michaux was a member of the Legion of Honour, and a correspondent of the French Institute. He was also a member of the American Philosophical Society, of the Society of Agriculture and Arts of Boston, of the Central Society of Agriculture of Paris, &c.

Mr. Justice made a communication in which he stated that he had recently, in company with two other members of the Society, Prof. E. O. Kendall and Dr. M. F. Longstreth, spent a night at Haverford School, at the request of the Trustees, to examine a Refracting Telescope made for their Observatory by Henry Fitz, of New York. The short period of one night's observations did not admit of testing the instrument fully; but, as far as it was tried, the performance was highly satisfactory.

The Telescope is about 10 feet focal length, and the object glass  $8\frac{1}{4}$  inches clear aperture; it is mounted after the most approved Fraunhofer instruments, and is perfectly free in motion, being well adjusted by counterpoises. It carries magnifying powers varying from 60 to 900 times.

The companion of Polaris was seen immediately after the sun had set. The ring nebula in Lyra was clearly defined, and with the higher powers, its centre appeared slightly misty, approaching in resemblance to a thin veil of gauze stretched across it. The separation of the star Epsilon, in the same constellation, was very clean. The clusters in Hercules, and the sword-handle of Perseus were splendid objects; the stars in the latter being very beautifully defined on a dark ground, thus appearing not only exceedingly brilliant, but rendering the different colours more vivid. Jupiter's belts appeared to be of a light brown colour; this has been heretofore noticed by some observers, but it is believed some instruments do not indicate this. Saturn's rings were clearly separated, the line of division being seen extending entirely around, excepting where the body of the planet intervened. It is supposed by some astronomers, that the dark line

across the disc of Saturn, below the shadow of the rings, is a *third ring*; if this be so, the telescope exhibited that also.

Uranus and Neptune appeared as discs of a faint yellow colour, small but easily to be distinguished from the stars in the same field.

The Treasurer presented his annual report, which was read and referred to the Committee of Finance.

The annual report of the Committee of Publication was read.

Dr. Joseph Carson, having presented for the library of the Society, a printed copy of a Memoir written by him, on the life and character of the late James B. Rogers, M.D., Professor of Chemistry in the University of Pennsylvania, was excused from his appointment to prepare an obituary notice of Dr. Rogers for this Society.

---

*Stated Meeting, December 19.*

Present, thirteen members.

Dr. DUNGLISON, Vice-President, in the Chair.

Letters were read:—

From Dr. J. C. Adamson, dated New York, Dec. 17, 1856, acknowledging the receipt of notice of his election as a member of the Society:—

From the Royal Institution:—from the Statistical Society:—and from the Society of Arts, Manufactures and Commerce,—all dated London, Nov. 22, 1856, and acknowledging the receipt of Proceedings of the Society: and—

From the Editors of the Natural History Review (the Journal of the Zoological and Botanical Association), dated 5, Trinity College, Dublin, Nov. 28, 1856, announcing the transmission of a donation, and expressing their desire for a scientific intercourse and exchange of publications with this Society.

The following donations were announced:—

FOR THE LIBRARY.

Tenth Annual Report of the Board of Regents of the Smithsonian Institution, showing the operations, expenditures and condition of