

Anal.

PROCEEDINGS

OF THE

(Mass.)

Boston Society of Natural History.

VOL. I.

1841 TO 1844.

G.
BOSTON:

PRINTED FOR THE SOCIETY

BY DUTTON AND WENTWORTH.

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1844.

TORY.

CORRECTIONS.

Page	Line	Correction	Original
8,	1st line from top,	for 1843	read 1841.
" 9,	13th "	" subcarbonate	" subacetate.
" "	21st "	" carbonate	" coal.
" 11,	9th "	" bottom, height	" length.
" 14,	4th "	" top, Hudsonianus	" Hudsonius.
" 17,	19th "	" "	" species.
" 23,	6th "	" "	" clodulus.
" 29,	14th "	" bottom, Bark	" Yark.
" 30,	16th "	" top, Society	" Secretary.
" 40,	10th "	" bottom, Coracius	" Coracius.
" 45,	10th "	" "	" variety Phrynosoma
" 53,	7th "	" "	" Merluccius
" "	17th "	" "	" Scolopoides
" "	24th "	" "	" diaphanus
" 59,	7th "	" top, Prof. F. Hall	" D. A. Hall, Esq.
" 60,	14th "	" bottom, Moretis	" Mantis.
" 62,	14th "	" "	" proventriculum.
" 64,	5th "	" top, Bucca	" Bucco.
" "	9th "	" "	" marilla.
" "	" "	" "	" melodia.
" 86,	12th "	" bottom, armatus	" auratus.
" 88,	11th "	" top, from the salts	" from the alumi- na, the salts.
" 89,	2d "	" "	" Fitzinger.
" 90,	10th "	" bottom, 3,9000	" 3,900.
" 92,	14th "	" top, 100	" 118.
" 93,	2d "	" bottom, achæna	" achænia.
" 94,	5th "	" "	" Partula.
" 95,	16th "	" top, aricari	" aracari.
" 104,	9th "	" bottom, Cervus,	" Corvus.

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DONATIONS TO THE LIBRARY.

Essay on the Culture and Commerce of Tobacco. By Wm. Tatham. 8vo. Lond. 1800. From Dr. H. Storer.

PROCEEDINGS
OF THE
BOSTON SOCIETY OF NATURAL HISTORY.

TAKEN FROM THE SOCIETY'S RECORDS.

Regular Meeting, January 6, 1841.

DR. GAY in the Chair.

Dr. Storer read extracts of a letter from Dr. Kirtland of Ohio, making corrections of his paper published in our last number, and promising to forward to us descriptions of the following new species, the result of his late labors :

Luxilus erythrogaster,
Luxilus Kentuckiensis,
Leuciscus chrysoleucas,
Salmo fontinalis,
Semotilus dorsalis,

Semotilus diplema,
" dubius,
Rutilus compressus,
" plagurus,
Acipenser platyrinchus.

Voted, That an invitation be given to the members of the Executive department and Legislature of the State to visit the Society's room, and inspect the collections, particularly the collection of minerals and fossils belonging to the Commonwealth there deposited.

Some conversation arose on the desirableness of better accommodations for our minerals. Most of them are in drawers out of sight; and those of the State Collection are not readily accessible for examination. The subject was referred to the Curators, to report at the next meeting.

DONATIONS TO THE LIBRARY.

Essay on the Culture and Commerce of Tobacco. By Wm. Tatham. 8vo. Lond. 1800. *From Dr. H. Storer.*

First Report of the Liverpool Nat. Hist. Society. 8vo. pam. Liverpool. 1836. *From Francis Alger.*

Catalogue of Plants found in the vicinity of Milwaukee, Wisconsin. By J. A. Lapham. 18mo. pam. 1838. *From the Author.*

Proceedings of the Geological Society of London. 8vo. 3. vols. 1834—40. *From the Society.*

Manual; or, Easy Method of Managing Bees. By John M. Weeks. 18mo. Bost. 1840. *From Henry Colman.*

T. BULFINCH, *Rec. Sec. pro tem.*

January 20, 1841.

G. B. Emerson, President, in the Chair.

The President exhibited the seed vessel of the *Nelumbium luteum*, from the Missouri river.

The *N. luteum* belongs to the natural order Nymphæacæ of Decandolle, (Nelumbiaceæ of Lindley, and of Torrey and Gray,) of which the number of species is small. *N. luteum* is mentioned by Pursh as occurring in ponds in the neighborhood of Philadelphia, where, from its isolated situation, he supposed it must have been carried by the Indians. It is also mentioned by Professor Hitchcock as occurring in Haddam, Ct. The seed vessel is of a conical shape, the disk being perforated by about twenty orifices opening into as many cells, each containing a single seed resembling an acorn in its shape. The flower of the *N. luteum* is described by Mr. Nuttall as the largest of American flowers, that of the *Magnolia* excepted.

Dr. Eddy stated that, from descriptions given him by others, he was induced to believe that this plant existed in Smithfield, R. I.

The Secretary, Dr. Wyman, made a verbal report on the cranium of a Seal, referred to him at a previous meeting.

This proved to be a rare specimen, the *Stenorhincus leptoniæ* of Frederick Cuvier. It is characterized by the presence of four incisors in each jaw, all the molars being deeply trified. The cranium of this species is figured by Sir E. Home in his Comparative Anat-

omy, and in the Philosophical Transactions for 1822. But little is known of the habits of the animal, it being exceedingly rare, and an inhabitant of the Southern Pacific Ocean.

The Secretary presented to the Cabinet of the Society the following anatomical preparations, viz :

Skeleton of the *Emysaurus serpentina*, Lin.

“ “ “ *Raia batis*, Lin. common skate.

“ “ “ *Boa*.

Cranium of the *Crotalus durissus*, Kalm, rattlesnake.

Cranium of an eagle, the outer table of the skull being removed to show the existence of air cells communicating with the cavity of the tympanum.

Cranium of a Panther, showing the bones of the ear, *in situ*, and the cavity of the tympanum.

He also added, that the Society had, since the last meeting, received from D. T. McCauley, Esq., U. S. Consul at Tripoli, three living specimens of the four-horned variety of sheep, and one specimen of the Fezzan variety. The former, in addition to the four horns, were characterized by broad tails, which sometimes acquire a weight of 10 to 15 lbs. They are covered with a long, coarse wool, which is of but little value. The Fezzan variety is covered entirely with a coarse hair, forming a mane on the shoulders, and also acquiring a length of several inches on the dewlap. This variety is of no value as an article of food. The President of the Society was authorized to make such disposition of them as he deemed expedient.

Mr. Teschemacher exhibited the following specimens of minerals, lately received from Dr. Monticelli, of Naples, some of which were probably new to the members of this Society—all from Vesuvian localities :

Thomsonite, Gismondine, which is considered by Brooke, (*Annals of Philos.* 1837,) as synonymous with Phillipsite and Aricite; Christianite crystallized, according to the Berlin mineralogists identical with Fosterite; Humite; Biotine in brilliant white crystals; Monticellite undescribed; Hauyne in dodecahedral crystals; and chloride of copper.

Mr. Teschemacher had also received from Dr. Monticelli specimens of sulphuret of lead and zinc in Vesuvian lava; their occurrence in this situation was singular, particularly the latter, which would volatilize in a heat probably less than that of melted lava.

In order to secure a more full attendance of the members of the Society, to ensure a greater number of communications on the different departments of Natural History, and more effectually to promote the objects of the Society, it was proposed by the President to divide the members into committees on the following subjects, viz: Botany, Ichthyology and Herpetology, Conchology, Ornithology, Geology, Mineralogy, Entomology, Zoology, Books and the Library; the different committees in turn to be responsible for reports and communications at each meeting.

The proposition was unanimously adopted; and the following gentlemen were elected to fill the different committees:

1. BOTANY.—Messrs. Teschemacher, Eddy, Tuckerman, J. H. Abbot, Gould, T. A. Greene.
2. ICHTHYOLOGY and HERPETOLOGY.—Drs. Storer, S. L. Abbot, J. B. S. Jackson, Wyman, Bigelow.
3. CONCHOLOGY.—Gould, Binney, E. S. Dixwell.
4. ORNITHOLOGY.—Abbot, Brewer, Bryant, Wyman.
5. GEOLOGY.—C. T. Jackson, Bulfinch, Williams, Alger, Bouvé.
6. MINERALOGY.—Gay, Bouvé, Channing, Hayes, Bacon.
7. ENTOMOLOGY.—Harris, Bowditch, Randall, Gould.
8. COMPARATIVE ANATOMY.—J. B. S. Jackson, Wyman, Shurtleff, Bigelow.
9. ZOOLOGY.—Wyman, Bigelow.
10. BOOKS AND THE LIBRARY.—Dillaway, Sherwin, Robinson.

Dr. Storer stated that Dr. C. T. Jackson, in reference to the subject introduced at the last meeting, had signified his intention of removing his collection of mineralogical and geological specimens.

The President remarked that it was desirable that the Geology and Mineralogy of our own State should be represented in preference to that of any other State or country.

He also believed that the mineralogical cabinet of the Society would be much more rapidly increased than heretofore, when it was known that a place had been appropriated for such specimens as should be presented to the Society. He had specimens in his own cabinet which he would deposit in the Society's collection whenever a suitable place should be assigned for their exhibition.

J. D. Whitney was elected a member.

Adjourned,

J. WYMAN, *Rec. Sec.*

February 3, 1841.

The President in the Chair.

Present, twelve members.

Dr. Binney laid on the table two beautiful specimens of *Cypræa aurantia*, to be deposited in the Cabinet on behalf of a lady; also a number of land shells from Major Barton. The thanks of the Society were voted to the lady for this most valuable deposit.

The President read a letter from T. J. Whittemore, in which was an extract from a letter from J. G. Anthony, Esq. of Cincinnati, stating that the *Anculotus Kirtlandianus* of Anthony was identical with the *Melania Rogersii* of Conrad; also an extract from a letter of N. T. True, Esq. of Maine, in relation to the transferring of fish from one pond to another, and from salt water to fresh.

Mr. Teschemacher made a report on specimens of plants from Illyria, sent to him by Dr. Tommasini.

The geographical situation of Illyria is between 13° and 16° E. long. and 44° and 45° N. lat. The country is traversed by the Carinthian and Julian Alps, which are chiefly calcareous, and is watered by two or three rivers, which fall into the Adriatic Gulf by which its coast is washed. On the coast of Dalmatia are numerous islands, abounding in vegetation. The climate is mild and soft; the valleys rich in soil; but the mountains are dry and very

stony. The great obstacle to vegetation is the north wind, called the Bora, which is very drying, and destructive to vegetable life. In such a territory, the vegetation is of course various. The Alpine plants are of great variety; some of them, as the *Anemone alpina* and *Geranium argenteum*, cannot exist when brought from the height of 5000 or 6000 feet above the level of the sea. Mr. T. exhibited dried specimens of the following species: *Anemone stellata*; *Pulsatilla montana*, from an elevation of 6000 feet; *Helleborus agamenticus*, the character of the seed vessels of which elucidates a section of *Ranunculacæ*; *Peonia ferruginea*; *Dentaria digitata*, Lamk. There are said to exist four species of the *Dentaria* in the United States, the *D. maxima*, resembling the *digitata*, except that the former has ternate leaves, and the latter quinate. *Iberis umbellata* or candy tuft; *Acer opalus*; *Spartium junceum*; *Genista sericea*; *Medicago marina*; *Gladiolus myricus*; *G. boncheanus*; *Crocus variegatus*; *Romulea columnæ*; *Orchis apifera*; *Orchis rubra* and *militaris*; the latter exceedingly interesting; the manner in which the new bulb is produced on one side being exhibited in this instance, so that, as the old bulb dies, the position of the plant is necessarily changed at each reproduction, and it is found to move in a curve; *Orchis nigra* and *camphora*; *Carpinus duinensis*, much resembling our *C. Americana*; *Quercus suber* or Cork oak; *Q. ilex*; *Pedicularia Fred. Augusti*; *Gentiana Pannonica* and *acaulis*; *Aronia rotundifolia*; *Erica carnea*; *Satureja Illyrica*; *Primula venusta* and *multiceps*; *Statice cancellata*.

Dr. Gould gave results of his investigations concerning the Testacea of Massachusetts.

The whole number now catalogued is 268, of which there belong to Cirripedes, 12; Conchifera, 97; Brachiopoda, 2; Gasteropoda, 154. Of these, 29 belong to the land, 42 to fresh water, and 197 are marine. Seventy of these have been discovered and described within the last five years. The Catalogue in Professor Hitchcock's Report of 1833 enumerates 126 species; that of 1835 named 165 species, so that the number of shells at present known is more than double the number known eight years ago. Cape Cod is found to exercise a great influence upon the geographical distribution of species. Of the 197 marine species, 83 do not pass to the south of the Cape; and 50 have been found only on the north

shore. At least 70 of our species are found also on the other side of the Atlantic.

Dr. Bacon made a verbal report on the Treatise on Bees by J. M. Weeks, referred to him at the last meeting.

This book gives a popular account of the natural history of the bees. The only new fact which the author has observed is, that a living queen bee is not essential to the operations of the hive. If a dead queen is fastened in the hive they continue to work as usual. If, however, this is removed from its proper situation, all work ceases.

The Secretary exhibited a cocoon which was somewhat remarkable.

It consisted of a silk cocoon externally enclosing a second, perfectly loose and unattached to the first, but of a more dense structure, the latter containing the pupa. Between the two were the exuviae of the larva, the inner case seeming to have been formed after the exuviae had been cast.

John H. Eastburn was elected a member.

Dr. Binney was elected Curator of the Crustacea and Radiata.

ADDITIONS TO THE LIBRARY.

Elements of Botany. By Benjamin S. Barton, M. D. 8vo. Philad. 1803. *From C. P. Curtis, Jr.*

Annals and Mag. of Nat. History. Dec. 1840. *Curtis Fund.*

Silliman's American Journal of Science, Vol. XL. No. 1. 8vo. *The Editors.*

Introduction à l'Etude de Botanique, par Alph. De Candolle. 8vo. 2. Paris, 1835. *From G. B. Emerson.*

Annual Report of the Superintendent and Inspector of Salt in Onondago County. 8vo. pam. 1841. *From J. P. B. Storer.*

Naturalist's Library, conducted by Sir Wm. Jardine, 12mo. Vol. I—VI. Mammalia; Vol. I. Ichthyology; Vols. III. IV. V. Ornithology. *Curtis Fund.*

Description of Several New Electro-magnetic and Magneto-Electric Instruments and Experiments. By Jos. Hale Abbot. 8vo. pam. 1840.

Attempt to determine the True Theory of the Pneumatic Paradox. 8vo. pam. By J. H. Abbot. *From the Author.*

Adjourned,

J. WYMAN, *Rec. Sec.*

February 17, 1842.

The President in the Chair.

Dr. Storer read a report on the Indian Cyprinidæ, being a notice of the Report on this family of fishes prepared and published in the Asiatic Researches by Geo. McClelland, Surgeon in the Bengal service. (See Silliman's Journal, XLI. 92.)

Mr. S. L. Abbot made a verbal report on the stuffed specimen of an Albatross belonging to the Cabinet.

There is some difficulty in identifying birds on account of the difference of plumage at different periods of life. Those species which are white when adult, are generally darker when young. The present specimen is probably the young of the *Diomedea exulans*. The Diomedæ strongly resemble the gulls in their habits and external characters; the upper mandible strongly hooked at its extremity, the lower one truncated; the orifices of the nostrils terminating in a horny tube. They are in the habit of wandering to a great distance from the shore; sometimes met with at the distance of 600 or 700 leagues. The nest is constructed on the earth, principally of sedge, in which a single egg is deposited; and the male is said to provide food for the female during the period of incubation. At this time the female is said to be inoffensive, though ordinarily fierce and unmanageable. The Albatross is exceedingly voracious, and is in the habit of disgorging food for its young. It is said to perform long migrations from the southern to northern latitudes, appearing in Kamschatka at the same time with the salmon.

Dr. Gay offered a verbal report on a notice of Liebig's Agricultural Chemistry, published in the January number of Silliman's Journal, 1841, in which he compared the condition of Agricultural Chemistry, as laid down in that work, and the progress it had made in this country.

Dr. C. T. Jackson stated that, since allusion had been

made to his labours in Agricultural Chemistry, he would state here some of the results at which he had arrived.

He had, in 1839 and 40, detected the presence of crenic and apocrenic acids in soils and peats ; and, since then, other substances of an important character. In the Report on the Geology and Agriculture of Rhode Island, he announced the discovery of an undescribed substance, which he had, during the past winter, examined more thoroughly. It was obtained from a solution of organic matters in the soil, the crenic and apocrenic acids having been previously separated ; the copper of the solution was precipitated by sulph. hydrogen, and from the remainder an extractive-like mass was obtained, soluble in distilled water, which yielded an ash grey precipitate on addition of sub-carbonate of lead, which consisted of 15 parts of an oxide of lead, and 6 parts of a new substance. While examining this substance, he received the information that the same substance had been discovered by Berzelius, and denominated by him Humic acid, the same tests having been used as in the present analysis.

The following substances were now known to exist in all fertile soils ; apocrenic acid, crenic acid, humic acid, Humin, extract of Humus, and carbonate of Humus. To these Dr. J. thought Glairin might be added, as he had discovered it in three fertile soils. Thus we have the bodies formerly known as ulmic acid, Ulmin, Geine, and Apotheme resolved into seven distinct substances.

Dr. J. stated that he had noticed the fact that glasses in which Hyacinth bulbs had been grown, were corroded. He had also noticed the same effects on bottle glass, which had lain in garden mould. He supposed that the plants had the power of decomposing glass as well as the felspar of granite, and of appropriating to their use the potash contained in it, and that this was the source of the potash contained in the ashes of plants.

Dr. J. thinks that Liebig's work contains many interesting observations, and some important errors. With regard to the existence of ammonia in the rain, he thought it was to be regretted that Liebig had not experimented on water taken from the interior of a mountainous country, where it would have been less liable to derive this substance from the combustion of coal and other substances. Carbonate of ammonia has long been distinguished for

its fertilizing powers, but it is too expensive for general use. The best method at present known for generating it is by skilful composting of manures, the different steps of which are detailed in the Report on the Geology and Agriculture of Rhode Island.

Dr. J. stated that Guano, a remarkable manure, found on the islands near the coast of Peru, had been found by Mr. M. B. Williams to contain the usual amount of organic matters found in fertile soils.

A correspondent of the Journal of Commerce, under date of Valparaiso (South America) April 2, 1842, thus speaks of this article, known as *bird lime*.

The Chincha Islands, from which the present exportations are made, bid fair to become more valuable than all the gold and silver mines on the coast, combined. They are said to be inexhaustible. That is doubtful, however, as the Huano is evidently the deposit of the numerous water-fowl of the coast, which has been probably accumulating ever since the flood, as there are no rains, or none sufficient to wash it away, on the coast of Peru. A French gentleman obtained the exclusive privilege of exporting the article about the time I came to the coast, on the payment to the Peruvian Government of \$80,000. He introduced it into England as an experiment—and was so successful as to have cleared, it is said, within a few months, about \$1,000,000. The Government then interposed, and withdrew from the contract, and entered into a new one with a company of merchants, by which it secured to itself one-third of the profits, after the deduction therefrom of all expenses. I understand that it brings, in England, about \$120 per ton. It is embarked on board the ships with as much facility, and with as little expense, as if it were sand from the most convenient banks. Specimens of the Huano have recently been forwarded to the United States.

Dr. Bacon made a report on the descriptions of new Electro-magnetic apparatus referred to him at the last meeting, and exhibited some of the experiments which are usually performed with it.

Mr. Bulfinch offered a report on some of the characteristic fossils of the valley of the Ohio, presented to the Society by Dr. Jarvis of Louisville, consisting of Madreporas, Favosites, Turbinolia, Cyathophylla, &c. Report on file.

Rev. Dr. Greenwood made a verbal report on the Catalogue

of the Leverian Museum, a book which is interesting in showing the past condition of science. He also made a donation of the following volumes to the Library :

Philosophical Account of the Works of Nature, by Richard Bradley, 4to, Lond. 1721.

Historia Animalium et Mineralium Novæ Hispaniæ ; auctore Francisco Fernandez, 4to.

Natural History of Animals, and Descriptions of Creatures dissected in Paris, 4to, Lond. 1702.

Mr. T. A. Greene made a verbal report on a work giving an account of the cultivation, preparation, and vending of Tobacco, referred to him at a previous meeting.

It was stated that the room over the Franklin Library was now vacant, and might be had for the use of the department of Comparative Anatomy.

Drs. Wyman, Jackson and Storer were appointed a committee to ascertain on what terms this could be had.

J. I. Bowditch was elected a member.

Adjourned,

J. WYMAN, *Rec. Sec.*

March 3, 1841.

Mr. SHERWIN in the Chair.

Nineteen members present.

Mr. Whittemore made a written report on the Third Report of the Agricultural Commissioner, on Wheat and Silk. Report on file.

Mr. Teschemacher exhibited specimens of Ferns from Taheite, the *fronds* of some of which acquire a height of 30 feet. Many of them were probably undescribed species ; scarcely any were figured in the works of Jackson and Greville.

Mr. T. A. Greene made a verbal report on a number of the Annals and Magazine of Natural History referred to him at a previous meeting.

The Secretary, Chairman of the Committee on Zoology, made a verbal report on the following animals, stuffed skins

of which were in the Society's collection, viz: *Mangusta Ichneumon*, *M. tetradactyla*, and *Sciurus petaurista*.

Mr. Sherwin made a verbal report on the pamphlet entitled "An Attempt to determine by experimental research the true theory of the Pneumatic Paradox, by Jos. H. Abbot." He exhibited the different experiments by which the explanation offered by Mr. Abbot was supported.

The Secretary laid before the Society a communication for the Society's Journal by the Rev. J. H. Linsley of Connecticut, on Tornados, Waterspouts, &c.

A communication was read from Mr. Alger, laying before the Society a proposition of Mr. Archer of Liverpool to send the Society casts of the *Cheirotherium* footprints, desiring in exchange casts and drawings of the *Ornithicnites giganteus*.

Voted, to send casts of *O. giganteus* to Mr. Archer at the expense of the Society.

Dr. Storer read a letter from Spencer F. Bird of Cumberland County, Pennsylvania, offering to make exchanges with members of the Society. He also read extracts from a letter from J. P. Couthouy, dated Hawaii, giving an account of the Volcano at that island.

A Discourse on the objects of the National Institution for the promotion of Science at Washington, by J. R. Poinsett, was presented to the Library by Hon. R. C. Winthrop.

Adjourned,

J. WYMAN, *Rec. Sec.*

March 17.

The President in the Chair.

Eighteen members present.

The following Donations were laid on the table :

An Address on the Study of Natural History, by J. G. Morris.

Four volumes of the Naturalist's Library, viz : *Mammalia*, Vols. III and IV; *Ornithology*, Vol. V; *Ichthyology*, Vol. I. Referred to the Committees on their respective subjects.

Monograph of the Limniades, by S. S. Haldeman, No. 2, from the author.

A Crab from Mr. John Warren.

Specimens of Lava from Hawaii from Mr. Emerson of Auburn.

A specimen of the *Paspalum Carolinianum*, supposed to be a new species, from W. A. Curtis, Esq., of Carolina.

An *Echinus* from Chalk presented by Mr. J. P. Preston.

A letter was read from J. Amos, accompanying which were two specimens of stuffed birds, viz: a Bird of Paradise and an Indian Jay, donations to the Cabinet from Hon. A. Amos, member of Supreme Council of Bengal.

Voted, that the thanks of the Society be presented to the Hon. A. Amos for his acceptable donation.

Mr. Tuckerman from the Committee on Botany, read a paper entitled "Further notices of some New England Lichenes." Placed on file for the use of the Publishing Committee, and afterwards published in the Journal. The two following, described in that paper, are considered as new:

PARME`LIA Halsey`ana: thallo substellato pallide flavo-virescente nigro-punctato, subtus albo fusciscente fibrilloso, laciniis angustis imbricatis ad centrum rugosis concretis; scutellis badiis margine integro. Mountain rocks.—Notch of the White Mountains, abundant.

CETRA`RIA Oakesi`ana: thallo subcoriaceo expanso glabro viridiflavescente, subtus pallide castaneo, laciniis planis adscendentibus marginibus elevatis nigro-ciliatis demum pulverulentis; peltis rufofuscis margine integro.—On trees; mountain woods. White Mountains.

Rev. J. L. Russell of Chelmsford read a paper entitled "An Attempt to ascertain some of the Hepatic Mosses of Massachusetts." Placed on file for the use of the Publishing Committee, and afterwards published in the Journal.

The President exhibited dried specimens of the following marine plants found on our coasts, viz: *Fucus vesiculosus*; *F. nodosus*; *Alaria esculenta*; *Agarum cribrosum*; *Laminaria digitata*; *Desmarestia aculeata*; *Dichloria viridis*; *Chorda filum*; *Asperococcus echinatus*; *Punctaria latifolia*; *Delesseria sinuosa*; *Rhodomenia cristata*; *Chondrus crispus*; *Pti-*

lota plumosa; *Porphyra*, several species; *Ulva latissima* and other species.

Mr. H. J. Bigelow made a verbal report on the stuffed skins of the following animals; *Sciurus Hudsonianus*, Hudson's Bay squirrel, or common red squirrel; *Sciurus volucella*, flying squirrel; *Condylura cristata*, star-nosed mole; and the Cougar.

He also exhibited specimens of *Menopoma* and *Menobranchus*; the *Menobranchus* is one of the true *Amphibia*, with persistent branchiæ, in this respect resembling the *Siren*, *Proteus* and *Axolotl*. The *Menopoma* has no external branchiæ, but a branchial orifice behind the angles of the jaws.

Mr. T. A. Greene presented for the Cabinet two specimens of *Janthina fragilis*, found at Nantucket.

The President made a verbal report on the Proceedings of the Geological Society of London, containing papers and addresses read between the years 1826 and 1833.

Mr. Robinson made a verbal report on the addresses of the same society delivered between the years 1838 and 1840.

Dr. Gould read a letter from Frederick Stoud Stallknecht, dated at Paris, in relation to procuring exchanges of the Society's Journal with the different Natural History Societies in London and Paris.

W. J. Loring, Esq., was elected a member.

The Secretary and Cabinet keeper gave notice of their resignation of their respective offices.

Drs. Gould, Storer and Wyman were appointed a Committee to take into consideration the subject of nominating candidates to fill the vacancies.

The thanks of the Society were voted to the Secretary for the services done the Society in the performance of the duties of his office.

Adjourned,

J. WYMAN, *Rec. Sec.*

April 7, 1841.

DR. GOULD in the Chair.

Ten members present.

Mr. Bulfinch was elected Secretary pro tempore.

Mr. Teschemacher read a paper "On the Occurrence of Phosphate of Uranium in the Tourmaline locality of Chesterfield."

In examining specimens of the green and red Tourmaline, Mr. T. observed a few minute yellow crystalline plates of a cubic form. Possessing, himself, but few facilities for chemical analysis, he sent the specimens to Mr. A. A. Hayes of Roxbury, with a suggestion that the external characters agreed entirely with those of the salts of Uranium. Mr. H. confirms this suggestion, and describes the mineral "to contain phosphoric acid and Oxide of Uranium as essential constituents only." The quantity found was small. There were, however, two or three well defined cubic crystals, from two to three lines in diameter, varying in color from straw yellow to light green. Some exist in the red centre of the Tourmaline, and are exposed on splitting the crystals; others are on the Quartz, and on the Albite forming the mass.

Mr. E. S. Dixwell communicated a letter from Mr. J. I. Bowditch, containing notices of a paper on Hurricanes from Mr. Linsley of Connecticut, offered for insertion in our Journal.

Mr. Linsley supposes the cause of Hurricanes to be within the earth, connected with the phenomena of Earthquakes. Earthquakes and Volcanoes have, in several instances, been coincident in point of time, or nearly so, with Hurricanes. But facts in sufficient number have not yet been recorded to justify any conclusion, and Mr. Bowditch recommends that the paper be returned to the author, with every mark of respect, acknowledging that his views are new, and the subject one of great interest. On motion of Dr. Wyman, it was voted, that the paper be returned accordingly.

Dr. Gould read a paper on Ellis's work on Corallines.

It is little more than a century since the Zoophytes were considered the undoubted subjects of the vegetable kingdom. The only dissenters from this opinion were the mineralogists, some of whom held that they were composed of the calcareous sediments of the ocean, moulded into form by crystallization. Ferrante Imperato, an apothecary of Florence in 1600, has the honor of first announcing the theory that Corals and Madrepores are of animal origin. The idea excited so little attention that when Peyssonnel, in France, 127 years after, arrived at the same conclusion, it was with him an original discovery, and received as not entitled to credit. Himself and his discoveries were forgotten and neglected, till Abraham Trembley in 1741 demonstrated the reproductive powers of polypes found in fresh water. Jussieu and Reaumur pursued the investigation, and declared their belief in the animal theory. The theory was not, however, generally admitted till John Ellis published his work in 1752. Of this work, the highest opinion is pronounced by competent critics, as one nearly complete in itself and of great accuracy. His proofs are drawn from the actual existence of the polypes, their union with their solid residences, the animal odor yielded on burning them, and their mode of reproduction. His inference that sponges and corallines (*Corallina*) are also of animal origin is not fully confirmed by late observations. Paper on file.

Mr. S. L. Abbot made a report on specimens of birds presented to the Society by the Hon. Mr. Amos of Bengal.

Of the one, he remarks, it is not an Indian Jay, as Mr. Amos styles it, but a Bee-eater or *Merops*. Its specific name he had not ascertained, not having found it described by Buffon, Cuvier or Latham. This genus of birds, *Merops*, is, with the exception of one species, confined to Asia, Africa, and the islands of tropical latitudes. They feed on wasps and bees, which they take on the wing. In this specimen the bill is curved from the base, and is $1\frac{1}{2}$ inches long to the feathers at base. Superior mandible dark-colored and grooved nearly throughout its whole extent. Inferior yellow, darker at tip, with a stripe of dark along the centre from base one half its length. Nostrils oval, pervious, partly covered by feathers at base of bill. General color of plumage above, olive

green; head, neck, and outer vanes of quill feathers the same; outer vanes of quill feathers inclining to brown, inner edge of these vanes brownish yellow.

The other specimen was of the Greater Paradise bird, *Paradisea apoda* of Linneus. Introduced into Europe by Ant. Pigafetta. It is a native of New Guinea. Furnished by nature with powerful claws, which are removed by the natives in preparing the birds for sale. Hence arose the story from which the specific name is derived, that they were by nature destitute of feet. On which opinion are founded the further fables that they live and breed on the wing, feed on dew and the odor of flowers, have no digestive apparatus, &c.

Mr. Abbot also made a report from the Committee on Ornithology, on the condition of that department.

The birds in cases and those in drawers were carefully examined, and their condition found to be good. No injury from insects or dampness was detected. A different arrangement is desirable, and is contemplated as soon as more room can be obtained for that purpose. The cabinet contains specimens of 70 varieties of American birds.

The Chair announced the following donations to the Library:

Transactions American Philosophical Society of Philadelphia, from the *Society*.

Silliman's Journal, Vol XL. No. 2, from the *Editors*.

Annals and Magazine of Natural History. No. 41. Lond. 1841. *Courtis Fund*.

Constitution and By-laws of National Institution for promotion of Science, Washington.

Mr. Poinsett's Discourse pronounced before that Institution.

Directions for making collections in Natural History, by H. King. 8vo. 1841; from the *Institution*.

Naturalist's Library, 12mo. 8. Lond. 1833-6. *Audubon Fund*.

Reports of the Meetings of the Brit. Association for the Advancement of Science, 8vo. 4. Lond. 1825-36. *From the Sons of Nathaniel Bowditch*.

Stuffed specimens of *Corvus Americanus* and *Emberiza nivalis*, prepared and presented by Mr. Bryant.

Ant Eater from South America, by S. Abbot Lawrence.

The following gentlemen were unanimously elected corresponding members of the Society :

Edward Doubleday, Esq., of Epping, England.

Francis Archer, Esq., President of Geological Society, Liverpool.

Mr. Richard Soule, Jr. was elected a member.

Adjourned,

T. B. Sec. *pro tem.*

April 21, 1841.

The President in the Chair.

Eleven members present.

Dr. Gay made some remarks on a paper in the last number of Silliman's Journal "On detecting arsenic in the animal body," by Dr. J. Lawrence Smith.

He indicated an imperfection in the statement of the experiments of Orfila for the detection of arsenic in the peroxide of iron, in its not being stated, with sufficient clearness, whether the processes pursued would discover arsenic if any existed. The reader may infer this; but it should have been distinctly stated. The hydrated oxide of iron, which is usually employed as an antidote to arsenic, does sometimes contain a small portion of arsenic. This the writer states is not hurtful, "being slowly absorbed and eliminated by the urine." Dr. Gay expressed his doubts whether this process would take place. It requires strong evidence, which it is not stated has been obtained. The writer says: "little difficulty will be found in procuring zinc of the necessary purity to be used in Marsh's apparatus." Dr. Gay remarks on this, that it is both highly important and extremely difficult to procure zinc and other materials for reagents which are themselves entirely free from arsenic. In zinc, for instance, arsenic may be contained in atoms in certain parts of the mass, while other parts may be wholly free from it. Therefore testing one portion will not give grounds for a certain inference with regard to another portion. Dr. G. spoke of Marsh's apparatus as ingenious, but liable to certain objections,

which this writer has examined and attempted to remove, but not with entire success.

Dr. J. B. S. Jackson reported on a specimen of the Ant Eater of South America.

There are three species of these animals; the great Ant Eater or Ant Bear. *Myrmecophaga jubata*, is as large as the largest greyhound. Of this species the Society possesses a cranium. The specimen before us is of the second size, *M. Tamandua*, as large as a good sized cat. The smallest species is of the size of a squirrel. Of this last we have a specimen preserved in spirits. This, as completing the series, is particularly valuable to us.

The Great Ant Bear lives on the ground, feeding exclusively on ants, which he captures by breaking open their hills, and drawing over the insects his long flexible tongue, to which they adhere. The species before us lives on the trees, for which its prehensile tail qualifies it. The food is wild honey and bees and insects. This species has four toes on the front and five on the hind feet. The toes of the front feet are bent inwards, as in the sloths, so that they walk on the sides of their feet. It is a true Edentate animal, having no teeth. The Sloth, also reckoned among Edentata, has back teeth.

Dr. J. also remarked upon a volume of the Naturalist's Library on Mammalia, committed to him. The work is a compilation, and appears to be well executed.

Mr. Bryant reported upon another volume of the same work, on Gallinaceous birds.

It is a compilation, but not only so, for some species are added to those previously described. The statement that the wild Turkey is extinct in the North Eastern parts of North America is not correct. One was shot in Springfield within three years. The weight of this bird is also overstated as being 80 lbs. Audubon states 36 lbs. to his knowledge; which is probably beyond the usual weight.—The two specimens of birds prepared and presented by Mr. Bryant on a former evening, were *Corvus Americanus*, resembling but not identical with *Corvus corone*, an European species; and *Emberiza nivalis*, the snow bunting. This last is found in immense flocks.

Dr. Storer exhibited a specimen of an undescribed species of *Lota* from Lake Winnipiseogee, which, from its resemblance to the Cusk, by which name it is commonly known by the fishermen, he has denominated *Lota Brosmiana*.

The Cusk is a sea fish. Dr. S. remarked that there are many points of resemblance between this fish and a species taken by Le Sueur in Lake Erie in 1816, and described by him under the name of *Gadus maculosus*. But the moment the figure in Le Sueur's description is examined, all doubts of their being distinct species are removed. Dr. S., after a minute description of the specimen, feels compelled to consider it a new species, and has designated it by the name above recorded.

Dr. C. T. Jackson having announced that at the late meeting in Philadelphia of the Association of State Geologists, it had been determined to hold the next meeting of that association in this city, in the month of April, 1842, it was *Voted*, "That this society invite the Association of State Geologists to make use of the Hall of this Society for the meetings of that Association contemplated to be held in this city in April 1842, and tender the use of the Cabinet and Library for the purposes of the Association."

A Committee to nominate Officers for the Society for the ensuing year was chosen, viz: Dr. Storer, Mr. Bulfinch, Dr. Eddy.

A Committee of arrangements for the Annual Meeting, Mr. S. L. Abbot, Jr., Mr. Bacon.

Adjourned,

T. B. *Rec. Sec. pro tem.*

May 19, 1841.

The Vice President, Dr. Binney, in the Chair.

Fourteen members present.

Mr. Bulfinch reported upon two specimens of *Janthina*

fragilis, the ocean snail, from the coast of Nantucket, presented by Mr. Greene.

The operculum of the animal is modified into a vesicular appendage, which serves to suspend it on the surface of the water. According to Dr. Coates of Philadelphia, who had an opportunity of studying the animal, while crossing the ocean, the float has no anatomical connexion with the animal. The membrane enclosing the cells is secreted by the foot, which the animal throws back upon the water, expanded to the utmost; then by contracting the edges it is formed into the shape of a hood, enclosing a globule of air, which is applied to the float. When the foot is withdrawn, the globule is found enclosed in its newly made envelope. Mr. B. quoted several interesting facts from authors concerning the habits and structure of this animal.

On motion of Dr. Storer, it was *Voted*, That the President of the Society be requested to make known to the Secretary of the Navy, the past history and present condition of this Society, to show what it has done for the advancement of natural science and national honor, and to point out its claims to national patronage; and respectfully to petition that a portion of all the specimens which may be received from the Exploring Expedition may be set apart for the cabinet of this Society; and that said petition be given to our distinguished associate, Hon. Robert C. Winthrop, for presentation, and that he be requested to use his influence to further the views of the Society in obtaining a part of said specimens.

On motion of Dr. Storer it was *Voted*, that the thanks of the Society be presented to Mr. John Warren for his gentlemanly conduct in throwing open his entire collection of shells for the examination of a special committee; and for the very liberal manner in which he offered and urged upon that committee the acceptance of all the species he possessed, not already belonging to the Society's cabinet, not even withholding those upon which he placed the greatest value.

DONATIONS TO THE LIBRARY.

Remarks relating to the New Brunswick Tornado, by W. C. Redfield. New York, 1841.

Report of the Geological Survey of the State of New York. 1841.

The Fifty-fourth Annual Report of the Regents of the University of New York. From *W. C. Redfield*.

Historia Naturalis de Serpentina, Libri duo. Joannes Jonstonus. fol. Heilbronnæ, 1757. *Hon. Jno. Pickering*.

Monograph of the genus *Sciurus*, with descriptions of New Species existing in North America. By Rev. J. Bachman. 8vo. Lond. 1839. From the *Author*.

Natural System of Botany, by John Lindley. 8vo. Lond. 1836.

Botanical Miscellanies, 8vo. 3. Lond. 1830. From the *Audubon Fund*.

Votes of thanks were presented to Messrs. Redfield and Pickering for their donations of books.

Messrs. S. J. May, Chs. Stodder, J. B. Fenno, and Omen S. Keith were elected members of the Society.

Adjourned,

F. A. EDDY, *Rec. Sec.*

June 2, 1841.

The President in the Chair.

Seventeen members present.

Mr. Teschemacher exhibited specimens of an undescribed species of *Rafflesia* sent from Manilla by Padre Manuel Blanco, and promised the Society a paper upon it at the next meeting.

He also exhibited specimens of perfectly silicified wood from the same place. The vessels and structure of the wood were very distinct. In some parts the wood was opalized, and in others changed into volcanic glass.

Dr. C. T. Jackson, from the Committee on Geology, read a written report on specimens of lava presented to the Soci-

ety by the Secretary of American Board of Foreign Missions from the volcano Kilauea in Hawaii, the crater of which is said to be the largest in the world.

He quoted from writers who had visited the volcano some glowing accounts of its size, appearance, &c., and inquired of Mr. Couthouy if these observations were correct. Mr. Couthouy said that most of them were exaggerations, and promised the Society a paper on the subject.

Dr. Jackson stated that a writer in Silliman's Journal had said that vast quantities of native sulphur existed in the neighborhood of the volcano, and observed that since the discussion of the sulphur monopoly in Sicily it was an interesting question for commerce, if it were true. Mr. Couthouy replied that the sulphur merely existed as a thin covering on the rocks in the vicinity of the crater, and that there was not a ship-load of sulphur on the whole island.

Mr. Abbot reported on some specimens of Birds in the Cabinet. They were :

Alcedo bicolor.	Alcedo alcyon.
Alcedo Smyrnensis.	Charadrius Helveticus.
Alcedo rudis.	Tringa Islandica.
Alcedo Bengalensis.	

The two last species were not before in the Cabinet of the Society.

Dr. Gay reported on some minerals presented by Hon. R. C. Winthrop from Gov. Winthrop's collection, and proposed that a part of them should be retained, and the others which were not suitable for exchange, should be given away where they would be acceptable. On motion of Mr. Bouvé, it was *Voted*, that Dr. Gay be authorized to dispose of them as he thinks best for the interest of the Society.

A vote of thanks was passed to Mr. Winthrop for his donation.

The President read the following communication :

JUNE 2, 1841.

The Committee appointed to audit the treasurer's accounts for the past year, have attended to the duty assigned them, and report

that they have found the accounts correctly kept, accurately cast, and properly vouched.

GEO. DARRACOTT, *Chairman*.

DONATIONS TO THE LIBRARY.

Geological Survey of the State of New York, 1841, from *Dr. Emmons*.

Transactions of the American Philosophical Society, Vol VII. No. 3. 1841. From the *Society*.

Synopsis Luzularum ritè cognitarum. Edidit, Ernestus Henr Fridr. Meyer. 8vo. Gottingæ, 1823.

De Talpæ Europæe Oculo, Auct. Augus. Guliel. Koch. 12mo. pam. Regimontii, 1826.

Compendium Florum Philadelphix. By Wm. P. C. Barton, M. D. 2 vols. 12mo. Philadelphia, 1818.

Memoires sur les Dipsacées, par Thomas Coulter, 4to. pam. Genève, 1823.

Recueil de Memoires sur la Botanique. Par M. A. P. De Candolle, 4to. Paris, 1813.

Synopsis Plantarum, curante Dr. C. H. Persoon, 12mo. 2 vols. Parisiis. 1805.

Fragments of the Natural History of Pennsylvania. By B. S. Barton. 4to. pam. Philadelphia, 1799.

Synopsis Juncorum ritè cognitorum. Edidit Ernestus Henr. Fridd. Meyer. 8vo. Gottingæ, 1822.

Monographie de la Famille des Anonacées : par Michel-Felix Duval. 4to. Paris, 1817.

Flora Virginica ; exhibens plantas quas Johannes Claytonus in Virginia crescentes obtulit, D. Joh. Fred. Gronovio. 4to. Lugduni Bat. 1762.

Vue générale des Progrès de plusieurs branches des Sciences Naturelles, par M. Le Compte de Lacepède. 12mo. Paris. 1818.

Enumeratio Euphorbiarum quæ in Germania et Pannonia gignuntur. Auctore Joanne Roeper. 4to. pam. Gottingæ. 1820.

Descriptions of some rare Indian Plants, by N. Wallich. 4to. pam. 1818.

Epistola de Balænopteris quibusdam ventre sulcato distinctis, auctoribus D. F. Rosenthal, D. F. Hornschuch. 4to. pam. Gryphia. 1825.

De Rubiaceis Capensibus, præcipuè de genere Anthospermo. Auctore Gulielmo Cruse. 4to. pam. Berolini, 1825.

De Lege Zonarum, principio, evolutionis systematum crystallinorum. pars prior. Auctore Francisco E. Neumann. 4to. pam. 1826.

Proceedings of the Society for the Encouragement of Horticulture and Agriculture in Jamaica. 4to. pam. Jamaica. 1825.

Musci Exotici ; containing figures and descriptions of foreign Mosses, and other Cryptogamic Plants. By Wm. Jackson Hooker. 8vo. pam. Nos. 9 to 16. London. 1819. 2 copies.

Do. 4to. London. 1818, with colored plates. pam. Nos. 9 to 16. 2 copies.

Esquisse d'une Monographie du genre Aconitum, 4to. pam. 1822.

Tentamen Synopseos Potentillarum, auc. Alberto von Haller Fil. 4to. pam.

Generis Asparagi Historia Naturalis atque Medica. Auct. M. Bresler. 12mo. pam. Berolini.

Révue de la Famille des Lythraires. Par M. le Prof. De Candolle. 4to. pam. Genève. 1826.

Plantæ Cryptogamicæ quas in plaga Orbis Novi Æquinoctiali collegerunt A. de Humboldt et Amat. Bonpland. descriptæ a G. Jackson Hooker. 4to. pam. Londini. 1816.

Compendium Floræ Britannicæ, auctore J. E. Smith. 12mo. pam. Londoni. 1800.

Memoire sur la Famille des Violacées, par M. Fred. De Gingins de Lassaray. 4to. pam. Genève. 1823.

Expériences sur les différentes parties du Marronnier de'Inde. Par M. Vauquelin. 4to. pam. 1808.

De Plantarum Classificatione Naturali, Commentatio. Auc. Dr. Aug. Frid. Schweigger. 12mo. pam. Regiomonti, 1820.

Essai Monographique sur le genre Scrofularia, par Henri Wydler. 4to. 1828. Genève.

Monographie des Céréales de la Suisse, par N. C. Seringe. 12mo. pam. Berne. 1818.

Description of a Fragment of the Head of a new Fossil Animal. By Isaac Hays. 4to. pam.

Description of a New Genus and New Species of Extinct Mammiferous Quadruped. By John D. Godman. 4to. pam.

Essai d'un Monographie des Saules de Suisse, par N. C. Seringe. 12mo. pam. Berne. 1815.

Rapport sur les Plantes rares et nouvelles dans le Jardin de Botanique de Genève. 4to. pam. Genève. 1824.

Floræ Italicæ Fragmenta, a D. Viviani, 4to. pam. Genæ.

Histoire Naturelle et Medicale des Digitales, par Joseph Elmi-ger. 4to. pam. Montpellier, 1812.

Analyse des Travaux de la Classe des Sciences Mathematiques et Physiques de l'Institut Imperial de France, par M. le Chevalier. Partie Physique, 4to. pam. Paris. 1813.

Memoire sur le Cuviera, par M. Decandolle. 4to. pam. 1806.

From Dr. Jacob Bigelow.

DONATIONS TO THE CABINET.

Specimens of Flexible Sandstone, from *T. J. Whittemore.*

Two Eggs of the Pelecanus Aquila, the Frigate bird, which are in no cabinet in the country. They were found at Bellinghausen Island, one of the Society group. Mr. C. had examined more than one hundred nests, and found but a dozen eggs. The nests consist of only two or three sticks of drift wood, placed in the fork of a tree.

Cyrena Keraudrenii, from one of the Fejee Islands.

Unio cucumoides, from Paramatta, New South Wales.

Unio atratus, Swains. From the River Maypo, Chili.

Chiton variabilis, from Terra del Fuego.

A shell of a new genus, found only on the *Fucus giganteus*, which he has named *Gaimardia fucicola*.

Siphonaria pileiformis, Couth. from Terra del Fuego.

A *Patelloidea*, from Orange Harbour.

Helix, from the Fejee group.

Serolis, from Terra del Fuego.

Seeds of a tree from Hawaii, resembling an *Acacia*, supposed to be an undescribed species. *From Jos. P. Couthouy.*

The Librarian was authorized to transmit a copy of the Address, delivered at the last annual meeting, to each member of the Society, and to give additional copies wherever they might serve the cause of science.

Frederick Miller of New Bedford was elected a corresponding member of the Society.

Adjourned,

F. A. EDDY, *Rec. Sec.*

June 16.

The President in the Chair.

Twelve members present.

Mr. Teschemacher read a paper on a new species of *Rafflesia* from Manilla, for which he proposed the specific name of *R. Manilana*. Its characters are as follows :

Bud, before expansion, $2\frac{1}{2}$ inches in diameter, arising from a cup $\frac{3}{4}$ in. high, formed by the thickened bark of the root of the *Cissus* : the bractæe originating from the inner side of the upper edge of the cup : no appearance of reticulation under the base : disc of column convex, processes on surface eleven, one of which is in the centre, the rest arranged around it, their summits entire and hispid : lower part of the tube of perianth studded with thick, glandular hairs : anthers 10, with cells and pores, as in other species : no moniliform cord at base of column : sporiferous cavities not apparent, flowers examined probably male ; interior of perianth covered with various formed tubercles.

The President read extracts from a report transmitted by Dr. Harris from the Committee on Entomology, on a collection of insects from Cape Palmas in Africa presented by Dr. Savage to the Society.

In this collection there were 31 species of Coleoptera, 10 of Orthoptera, 2 of Neuroptera, 6 of Hemiptera, 6 of Hymenoptera, 4 of Lepidoptera, and a few miscellaneous specimens.

Dr. Harris also presented to the Society a box containing some African Butterflies received from Dr. Westerman of Copenhagen.

Dr. Gould reported upon Mr. Lea's descriptions of 19 species of Colimacea from the Philippine Islands.

Many of them were new shells, unknown till recently. Dr. Gould also reported upon some land shells from Cuba ; and remarked that the West Indian shells were less known, and more difficult to collect than those of most other countries.

Dr. Storer read a Report on the following Fishes presented by the Rev. Zadoc Thompson of Vermont :

Lepisosteus oxyurus ; *Acipenser oxyrinchus* ; *Centrarchus æneus* ; *Lota maculosa* ; *Esox reticulatus* ; *Coregonus albus* ; *Catostomus oblongus* and *teres* ; *Lucio-perca Americana* ; *Corvina oscula* ; *Leuciscus pulchellus* ; *Hiodon elodulus* ; *Pimelodus nebulosus*.

The thanks of the Society were presented to Mr. Thompson for his donation.

Dr. Storer laid on the table the lower jaw of a rare and remarkable species of *Galeus*, sent by C. W. Dabney, Esq., U. S. Consul at Fayal, to Messrs. A. & C. Cunningham, and by them presented to the Society. The thanks of the Society were voted to the Messrs. Cunningham for their donation.

A communication was received from a committee appointed at a public meeting in this city held in furtherance of Mr. Vattermare's project, requesting the concurrence of the Society in his plan. A motion to have the communication read was not sustained, and the subject was referred to a committee, consisting of the President, Mr. Teschemacher, and Mr. Sherwin.

Dr. Storer stated that Mr. Ayres of Long Island had sent a collection of Fishes to the society ;—among which were *Prionotus strigatus* ; *Umbrina nebulosa* ; *Tetraodon turgidus* ; and *Temnodon saltator* ;—and he desired an additional case for their reception. Referred to the Board of Curators.

Dr. Gould presented from Mr. Couthouy some shells, which he observed were "rare shells from rare localities."

DONATIONS.

Nest and Eggs of the *Hirundo riparia*—from H. J. Bryant.

Tetraodon mathematicus—taken forty miles off the Leeward Islands. From Mr. G. L. Perkins, of Plymouth.

The Entomologist, Nos. 1, 2, 3, edited by Edward Newman. 8vo. London. 1840. From the Editor.

Flora of North America by Torrey and Gray, Vol. II. Part I. New York, 1841. *From Mr. Thomas Lee.*

Etwas über die Natur-Wunder in Nord Amerika, zusammengetragen von Charles Cramer, 8vo. St. Petersburg. 1840. *Author.*

A Collection of Plants from Cambridge. *From Dr. T. W. Harris.*

Voted, that the thanks of the Society be presented to Messrs Edward Newman and C. L. Perkins for their donations.

The Committee on Ichthyology, Comparative Anatomy, and Ornithology were instructed to report at the next meeting.

Adjourned,

F. A. EDDY, *Rec. Sec.*

July 7, 1841.

The President in the Chair.

Thirteen members present—T. Bulfinch was chosen Secretary *pro tem.*

Dr. Shurtleff made a written report on the skeleton of *Orycteropus Capensis*, Aard Bark or Earth Pig of the Dutch colonists, lately added to the Society's Collection.

The report was long and minute, embracing an account of the bones which compose the skeleton of the animal, accompanied by a statement of the rank it holds in the scale of animated nature, its external appearance, and its habits in its native wilds. In alluding to the *Ornithorynchus*, the reporter having remarked that this animal is stated, on good authority, to be oviparous, yet nevertheless giving suck to its young, Mr. Couthouy remarked that one of these animals was examined in the pregnant state, when Mr. C. was in New Holland, which settles the question that it is viviparous.

Mr. Abbot made a verbal report on some Oriental Birds, designating the species, and remarking on the habits of each, viz :

Upupa eops,
 Merops Javanicus,
 Merops viridis,

Certhia Zeylonica,
 Certhia erythronotus,

They were beautiful specimens, and in fine order for examination.

Mr. Bouvé presented, in the name of Dr. Edward Jarvis of Louisville, a variety of Fossils, Insects and Shells from that vicinity. Dr. Gould presented, from the same gentleman, specimens of plants, with pamphlets, &c.

On motion of Mr. Bouvé who remarked that Dr. Jarvis had repeatedly favored our Society with valuable specimens, which, there was reason to fear, had not been, in all cases, duly acknowledged, it was *Voted*, That the thanks of the Society be presented to Dr. E. Jarvis for this and former instances of his friendship and coopération, and that the Society be directed to inform him of the receipt of the specimens, and to communicate this vote.

DONATIONS TO THE LIBRARY.

Natural History of the Tea-tree, by J. C. Lettsom, 4to. London. 1799. *From T. Bulfinch.*

Organic Chemistry, in its application to Agriculture and Physiology, by Justus Liebig, with Notes by J. W. Webster, 12mo. 1841. *From J. Owen.*

Transactions of the American Philosophical Society, 4to. Vol. VII. Part 3, 1841. *From the Society.*

Reports on the Herbaceous Plants and Quadrupeds of Massachusetts, by Chester Dewey and Ebenezer Emmons. 8vo. Cambridge. 1841.

Report on the Invertebrata of Massachusetts, by A. A. Gould. 8vo. Cambridge, 1841. *From the Legislature of Massachusetts.*

First Annual Report on the Geology of New Hampshire, by Charles T. Jackson. 8vo. Concord, 1841. *From the Author.*

Report relative to the Geological Survey of New York. 8vo. 1841. *From the New York Lyceum of Natural History.*

Mr. Couthouy presented some minerals from California which had been sent to the Sandwich Islands for the inspection of the gentlemen attached to the Exploring Expe-

dition, as ores of the precious metals, but in reality only sulphuret of copper, &c., of no value.

Mr. C. presented specimens of *Succinea* from Terra del Fuego, where he represented them as found in the greatest abundance. Also, seven specimens of woods from New Holland, and some Gourds of remarkable size and form from the Sandwich Islands, used by the natives for a variety of purposes, as cooking utensils, trunks for baggage, packages for goods, bottles, drinking vessels, &c.

Two tin cases, containing specimens of Bread Fruit presented by T. B. Park, Esq., of California; and on motion, it was *Voted*, That the thanks of the Society be presented to T. B. Park, Esq., for this acceptable donation.

Mr. Whittemore presented a specimen of copper ore from Coquimbo.

Adjourned,

T. B. *Rec. Sec. pro tem.*

July 21, 1842.

The President in the Chair.

Dr. Storer communicated from Dr. Brewer, an Egg of the Rose-breasted Grosbeak, (*Fringilla Ludoviciana* of Audubon, *Loxia rosea* of Wilson,) with a written notice of the bird, and the circumstances under which the egg was produced.

It was laid in confinement, the parent bird having been engaged for three years previously without a mate. A year ago, last spring, from indications she gave of a desire to build a nest, a male Bobolink was mated with her. Shortly after, without constructing any nest, she laid three eggs on the floor of the cage. The egg is peculiar in color and form, a description of which, with notices of the habits of the bird, were furnished in the communication, which is on file.

Dr. Storer mentioned an instance which he had lately met with of a Paroquet in confinement, without a mate, producing several eggs.

Dr. Brewer requested, through Dr. Storer, leave to take from the Cabinet, an egg of *Sylvia Delafieldii*, lately presented by Dr. Kirtland.

The President communicated a letter from Hon. R. C. Winthrop, in reply to our application made through him, for a portion of the collections sent home by the Exploring Expedition.

Enclosed was a letter from the Secretary of the Navy, promising that when a final disposition of the articles is made, the application of the Boston Society shall have very respectful attention.

The President mentioned an incident of late occurrence at Hingham, which he had learned from Rev. Dr. Greenwood.

A countryman at work in the fields heard a sound which proceeded from the bushes near by. Approaching, he saw a black snake in a coil round a victim. He threw a stone, which, hitting the snake, induced him to relax his hold and make off, leaving a rabbit, which had been enfolded in his coil, severely crushed. The snake was pursued and killed, and in its body were found fifteen eggs of the quail, whole, and some of them containing the young bird. The snake was seven feet long.

The President also mentioned having made the acquaintance at Hingham of Mr. Sprague, a modest and very ingenious man, who had, for the gratification of his taste, made a collection of many species of birds, prepared and set up in the most skilful manner by himself, with drawings, beautifully colored, of the same.

They were particularly commended for their freedom from exaggeration, a charge which has sometimes been thought to lie against the figures of Audubon.

Dr. Gould presented a shell received by him from Dr. Kirtland of Ohio.

It is the *Paludina ponderosa*, a reversed specimen; the same shell which Dr. Kirtland formerly designated as the *Paludina heterostropha*, and described as such in Silliman's Journal.

Mr. Dillaway, in behalf of Mr. Travelli, presented a

beautiful specimen of the *Myristica moschata*, (Nutmeg,) also specimens of Granite and other minerals from Singapore.

The thanks of the Society were voted to Mr. Travelli for this donation.

At Dr. Storer's suggestion, a two-headed snake belonging to the Society's Collection, was presented to the Society for Medical Improvement.

DONATIONS TO THE LIBRARY.

Monograph of Limniades, No. 3, 8vo. Philad. 1841. Presented by the Author, *S. S. Haldeman*.

Transactions of the American Philosophical Society, 1789 to 1809. 4to. 6. and New Series, 1818-34. 4to. 6. Philad. *Courtis Fund*.

Silliman's Journal of Science, Vol. XLI. No. 1. 1841. *From the Editors*.

First Report of the Liverpool Natural History Society. 8vo. pamph. 1836. *From the Society*.

Suggestions relating to the size of the page in future Nos. of our Journal, and also the expediency of publishing a Bulletin of Proceedings monthly or oftener, were referred to the Publishing Committee.

Mr. J. J. Dixwell communicated a letter received from an artist in London, with the sketch of a Seal for the Society of suitable size for diplomas, and not too large for letters. Letter referred to the Committee which has the subject in charge.

Dr. Gay, from the Committee on Mineralogy, was prepared to report; but, on account of the lateness of the hour, his report was postponed, and assigned for the next meeting.

A letter was read from Francis Archer, Esq., President of the Liverpool Society of Natural History, acknowledging the compliment of his election as a corresponding member of this Society, tendering his services in aid of our objects, and presenting two casts of impressions on the New Red Sandstone of Cheshire, England, one of *Cheirotherium*,

and the other of an unknown animal, and of a vegetable.

Mr. E. D. Brigham was elected a member.

Adjourned,

T. B. *Rec. Sec. pro. tem.*

August 4, 1841.

The President in the Chair.

The President reported on three of the seven specimens of wood from the South Sea Islands, presented by Mr. Cou-thouy.

The first is the "yellow wood" of New Holland, *Oxleya Xanthoxyla*, a tree often 100 feet high, and three in diameter. It has been found useful in the Arts, though, from its recent discovery, all its properties are not known. The second is erroneously called the cherry, although it has no affinity to that family. It is the *Exocarpus cupressiformis*, a light wood resembling the common cherry, and very abundant. The third is the Iron wood, which is of greater specific gravity than any of the woods of North America.

Mr. Teschemacher reported on the plants from Kentucky, presented by Dr. Jarvis.

He exhibited the rarest and most interesting specimens, among which were *Stylipus vernus* of Rafinesque, formerly *Geum vernum*. Rafinesque erected this into a new genus from the torus being pedicelled, not being aware that *Geum rivale*, an undoubted *Geum*, has a similar character.

2d. *Schizandra coccinea*, the only representative of its family in North America.

3d. *Aster Shortii* of Hooker, a new *Aster*, named in honor of Dr. Short of Kentucky.

4th. *Buchnera Americana*. A series of blunders has been made in describing this plant, originating with Linnæus. He, by mistake, gave to *Buchnera*, the characters of *Erinus* of Persoon, and Willdenow added the true characters of *Buchnera* to his description, causing a woful confusion. Bentham detected the error and described it anew.

Dr. Gay reported on that portion of the Donation of Mr. Winthrop which was selected for the Cabinet.

Of these there were 85 specimens of the Silicides, 25 of the Carbonides, 15 Chlorides, and 30 miscellaneous. Dr. Gay reported at length on the most interesting of these.

Mr. Dillaway reported on the "Address of the President of the Liverpool Society of Natural History" referred to him at the last meeting.

Mr. Whittemore presented to the Society the following shells :

Helix labyrinthica,	Say.	Helix lineata,	Say.
" electrina,	Gould.	Pupa modesta,	Say.
" chersina,	Say.	Planorbis dilatatus,	Gould.

The President announced for the Library :

Prodromus Systematis Vertebratorum, 12mo. pamph.

Prodromus Systematis Ornithologiæ, 12mo. pamph.

Prodromus Systematis Ichthyologiæ, 12mo. pamph.

Prodromus Systematis Mastozöologiæ, 12mo. pamph.

Presented by the author, *Charles Lucien Bonaparte.*

Proceedings of the Academy of Nat. Sciences, Philadelphia, Vol. I. No. 3. *From the Academy.*

Annals and Magazine of Nat. History, Nos. 43 and 44. 8vo. Lond. 1841. *Courtis Fund.*

On suggestion of the President, the following names were added to the several committees :

To the Com. on Botany, O. S. Keith.

" " Ornithology, S. Cabot, Jr. M. S. Scudder.

" " Conchology, T. J. Whittemore.

" " Geology, Dr. Gay.

" " Mineralogy, T. Bulfinch.

" " Books, W. J. Adams.

Adjourned,

F. A. EDDY, *Rec. Sec.*

August 18, 1841.

The Vice President, Dr. Binney, in the Chair.

Thirteen members present.

Dr. Eddy presented to the Society a collection of plants from the banks of the Hudson, and different parts of New England, not previously in the Cabinet.

Among the more interesting of these were *Aster graminifolius*, from the Gulf of Queechee, the rarest and smallest of our native Asters. *Lobelia Kalmii*, from the same locality; *Aralia hispida*, from the summit of Mt. Ascutney; *Lygodium palmatum*, from Mendon, Mass. But one other locality of this rare fern has hitherto been found in New England. *Andromeda mariana*, from Staten Island. *Struthiopteris Germanica*, Beck. This plant was described by Willdenow as a new species, *S. Pennsylvanica*, until Beck ascertained its identity with the European plant. *Hepatica triloba*, another plant accredited to Willdenow, until Dr. Torrey restored it to the original discoverer, Chaix. *Nuphar Kalmiana*, (Pk.) *N. lutea* var. *Kalmiana*, (Torrey.) Dr. Eddy had observed that this plant has submerged, large, waved, orbicular, membranaceous, root leaves, which distinguishes it from all other plants of that family. It is sufficient to establish it as a distinct species, instead of being a variety, according to Torrey. *Aspidium spinulosum* from R. I.; *A. bulbiferum* and *goldianum*, Norwich, Vt. *Scutellaria integrifolia*, and *pilosa*, Long Island. *Vaccinium tenellum* of Bigelow, a species which, though every New England botanist knows it to be a distinct, is denied by all other authors. The remainder of the collection was promised at a future meeting.

Dr. Storer read a long and interesting paper on the fishes of Massachusetts, in which he added many new facts respecting the species already known; and minutely described *Trichiurus lepturus*; *Tetraodon mathematicus*; and *Zygæna malleus*, as new to our Fauna, together with the following new species:

Pomotis rubri-cauda. General color rusty-brown, more marked above the lateral line, in consequence of ferruginous spots densely

distributed among the scales; body upon the sides golden; in front of the anal fin beneath, blood-red. *Head*, between and in front of the eyes, naked; a bluish line runs from just beneath the eye across the operculum to its posterior extremity; and another arises just above this, and being interrupted by the eye, then passes over the operculum, so that the two include the black, membranous appendage of the operculum. Bluish-white blotches are irregularly distributed upon the pre-operculum. *Eyes*, three lines in diameter, pupils black, irides red.

Dorsal fin dark brown anteriorly, red posteriorly, the spinous portion not quite so high as the soft rays. Ventral fins red at base and black at tip. Pectoral, yellowish brown. Anal, yellowish at base, dusky at margin. Caudal, blood-red during life. Rays, D. 11-9; P. 11; V. 1-5; A. 3-9; C. 18.

Length five inches; depth across the base of the pectorals, two inches. Taken in Concord River.

DONATIONS TO THE CABINET.

Trichas Delafieldii (Audubon.) From Dr. J. P. Kirtland, of Cleveland, Ohio.

Three very beautiful casts of Encrinites and a Trilobite were presented from Mr. Samuel T. Carley, of Cincinnati. The thanks of the Society were presented to Mr. Carley for his donation, and Dr. Storer was instructed to request him to communicate his observations on fossil remains for publication in the Journal.

A living specimen of the horned frog from Galveston, Texas, presented by J. Elliot Lillie.

Glow Worm, from Illinois, presented by Mr. Tilson.

FOR THE LIBRARY.

“Rapport sur les Travaux de M. Espy relatifs aux Tornados;” Commissaires MM. Arago, Pouillet. Babinet rapporteur 4to. 1841. Paris.

“Rapport de M. Warden sur un ouvrage relatif à la Florida Occidentale” 12mo.

“Analyse d’un memoire sur les bois d’Amerique par M. Bull,” présenté par M. Warden, 12mo. pam. Presented by D. B. Warden, Esq.

“Osservazioni sulle Larve, Ninfe et Abitudini della *Scolia fla-*

vifrons, lotte in Pisa, alla sezione di Zoologia della prima riunione degli Scienziati Italiani, di Carlo Passerini." 4to. Pisa. 1840.

From the author.

A Letter was received from M. Auguste St. Hilaire, acknowledging his election as an honorary member of the Society, and requesting their acceptance of two volumes of his miscellaneous works.

John A. Bolles, Esq. was elected an immediate member of the Society.

Messrs. C. H. Olmsted of E. Hartford, Ct.,

Isaac Sprague of Hingham, Ms.,

Increase S. Smith, do.

were elected corresponding members of the Society.

Adjourned,

F. A. EDDY, *Rec. Sec.*

September 1, 1841.

Mr. Dillaway in the Chair.

Dr. Storer presented from Dr. Wood of Portland a very beautiful collection of fishes, prepared by him during a residence in Santa Cruz, comprising, among others, the following genera :

Serranus, Mullus, Scorpcena, Eques, Chætodon, Heniochus, Holacanthus, Vomer, Acanthurus, Scarus. Fistularia, Scomberesox, Diodon, Balistes, Ostracion.

On motion of Dr. Storer, the thanks of the Society were voted to Dr. Wood for his donation, the richest collection of fishes ever presented to the Cabinet.

Mr. Whittemore presented specimens of *Purpura tuberculata*, *P. anaxares*, and *P. musiva*, from the Pacific; also the Eggs of the Black Snake, from Fresh Pond.

George W. Pratt, Esq. presented to the Society in behalf of his brother, W. Pratt, Jr., Esq., casts of the head and foot of the Dodo from the Ashmolean Museum, and some fine geodes of Quartz from Clifton, Eng.

Mr. Edward Codman was elected a member of the Society.

Adjourned,

F. A. EDDY, *Rec. Sec.*

September 15, 1841.

The President in the Chair.

Mr. Whittemore, to whom was referred a specimen of the genus *Spondylus*, presented at a previous meeting, reported that this very rare and curious species has been hitherto undescribed.

No mention of it is made in any conchological work. The shell was referred to the Committee on Conchology with instructions to prepare a description of the species for publication in the Journal.

Rev. Dr. Greenwood gave a description of a swordfish of remarkable size taken during his visit at Hingham, with an interesting account of their habits and the manner of taking them.

The President, Messrs. Gould and Dillaway, were appointed a committee to make arrangements for a permanent place for the Library.

Mr. Couthouy was added to the Committee on Conchology, and Dr. Eddy to the Committee on Zoology.

Mr. Bulfinch gave notice of the receipt of three boxes of minerals, specimens of the rocks of Maine, sent in by Dr. Charles T. Jackson, having been collected in his late survey of the lands in that State belonging to Massachusetts.

The specimens were mostly labelled, some of which are as follows: From Moosehead lake the specimens are primary rocks; from Aroostook river, Black Limestone, Greenstone Trap, Bog Iron Ore, Hematitic Iron Ore, and Sulphuret of Iron; from Penobscot river, Granite and Trap rocks; from Tobique river, Contorted Slate, New Red Sandstone; from St. John's river, Fossiliferous

Limestone. The fossils are Favosite, Madreporite, Encrinite, and Terebratulite.

Mr. Whittemore presented some specimens of a singular clay formation.

Mr. Couthouy presented two Jars, containing several serpents and other smaller reptiles, preserved in alcohol; also, a collection of fossils from the vicinity of Trenton Falls, consisting of Favosites, Terebratulæ, Producti, Corallines and Trilobites.

B. R. Curtis, Esq., was elected an immediate member of the Society.

Adjourned,

F. A. EDDY, *Rec. Sec.*

October 6, 1841.

The President in the Chair.

Dr. Storer read a report on the *Cybiium maculatum*, a fish recently taken at Lynn, and not before found in our waters.

Dr. Gould reported on a collection of star-fishes from Portland, among which were *Solaster endeca*, *Solaster papposa*, *Asterias aurantiaca*, *Echinarachnius placenta*, *E. parma*, *Cribella oculata*, *Ophiura aculeata* and *O. bellis*.

Dr. G. thought that all the English Radiata would be found in our waters.

Dr. Abbot read a report on the genera Cuculus, Coracius and Corvus, and exhibited specimens of each from the Society's collection.

Dr. Storer read a paper entitled "Observations on the genus Scalops, with descriptions of the species found in North America" by Mr. Bachman. After some general remarks on the genus, he enumerates and describes the following species :

S. aquaticus, Lin. In restoring to this species the name given by its first describer, I have adhered to a rule which it is necessary

to adopt in order to prevent the repetition of synonyms. The name "*aquaticus*" certainly does not apply to the habits of the animal; but that of "*Canadensis*" is equally unfortunate, as it is more common in the Southern States than in Canada.

S. Townsendi, Bach. Dental formula incisors $\frac{2}{4}$; false molars $\frac{12}{12}$; true molars $\frac{2}{2}$ = 44. Length of the head and body 7 inches 6 lines; of the tail one inch 6 lines; breadth of the palm 6 lines. Body thick and cylindrical, shaped like *S. aquaticus*, but larger. The whole upper and under surface is of a dark color, in most lights appearing black; the hair, when blown aside, exhibits a greyish black color, from the roots to near the tips. The tail is slightly clothed with short, strong bristles. Brought from the banks of Columbia river.

S. Breweri, Bach. Glossy, cinereous black above, brownish beneath. Palms narrow. Tail flat, broad and hairy. Dental formula—incisors $\frac{2}{4}$; false molars $\frac{12}{12}$; true molars $\frac{2}{2}$ = 44. Length of the head and body 5 inches 11 lines; of the tail 1 inch 5 lines; breadth of the tail 4 lines; of the palm 4 lines; length of the palm to the end of the middle claw 7 lines. Its most striking peculiarity is its tail, which, instead of being round and nearly naked, as in *S. aquaticus*, is flat and broad, resembling, in some respects, that of the Beaver, and is very thickly clothed, above and beneath, with long stiff hairs, which extend 5 lines beyond the vertebræ. Found at Martha's Vineyard.

S. latimanus, Bach. Broad-palmed shrew-mole, larger than the common shrew-mole, intermediate in size between *S. Townsendi* and *S. Breweri*. Hair longer and thinner than in either of the other species, and slightly curled. Palms larger than in any of the known species. Color nearly black. Tail naked. Length to the root of the tail 7 inches 7 lines; of the tail 10 lines; breadth of the palm 10 lines; of the tarsus 7 lines. Mexico and Texas.

Dr. Storer also read part of a "Monograph on the Araneides of the United States," accompanied with Plates by Prof. N. M. Hentz, of Florence, Al. The following species of the genus MYGALE, are described:

M. truncata. Piceous; cephalothorax with a curved impression behind the middle, cheliceres terminated by several points above the fang, hairy; abdomen cylindrical, suddenly truncated at the end, and callous at that place, with concentric grooves and 6 cir-

cular impressions; thighs more or less rufous at base; a white membrane between the joints. Feet, 4. 1. 3 = 2. Alabama.

M. solstitialis. Deep black; cephalothorax with two indentations, cheliceres moderately large; abdomen with several impressions above, and 4 yellow spots underneath; membrane between the joints white; third pair of legs with the third joint short and crooked; feet hairy, 4. 1. 2. 4. Alabama.

M. Carolinensis. Brownish, very glossy; cephalothorax with two slight impressions near the base; abdomen blackish, not glossy; third joint of the third pair of legs very short and crooked; feet 4. 1 = 3 = 2. N. Carolina.

M. gracilis. Rufous; cephalothorax somewhat six sided, long and narrow; abdomen plumbeous, two nipples very long; feet long, hairy, penultimate joint of the anterior pair with a notch; feet 4. 1. 2. 3. Alabama.

M. unicolor. Deep rufous; cephalothorax deepened in the middle, with two impressions, cheliceres very large; abdomen smooth; third pair of legs with short, very thick joints; feet 4. 1. 2. 3. Alabama.

Professor W. R. Johnson presented to the Society a number of minerals and fossils from the coal regions of Pennsylvania, as *Juglandites*, *Stigmaria ficoides*, *Philolithus imbricatus*, *Calamites cannæformis*, *Lepidodendron obovatum*.

A species of *Agama* from Texas, not before in our collection, was presented by Mr. Thomas A. Holt through Dr. C. T. Jackson.

DONATIONS TO THE LIBRARY.

A Selection of the Birds of Brazil and Mexico, the Drawings by Wm. Swainson. 8vo. Lond. 1841.

History of British Starfishes, by Edward Forbes. 8vo. Lond. 1841.

British Oölogy, by Wm. C. Hewitson. 8vo. Newcastle on Tyne. *Audubon Fund*.

Proceedings of the Philadelphia Academy of Natural Sciences, No. 5. *From the Academy*.

Report on the Fauna of Ireland, div. Vertebrata. By Wm. Thompson. 8vo. Lond. 1841. *The Author*.

A letter was received from the Treasurer of the "Institut Historique" of Paris, acknowledging the receipt of the Society's Journal. Accompanying the letter was the complete collection of the Journal of that Institute for eight years. Monsieur Renzi, in behalf of the Institute, requests in future an exchange of publications.

A letter was received from the Secretary of the Zoological Society of London, returning the thanks of that Society for the third volume of our Journal, and enclosing their last Annual Report.

Adjourned,
F. A. EDDY, *Rec. Sec.*

October 25, 1841.

Vice President, Dr. C. T. Jackson, in the Chair.

VERBAL COMMUNICATION.

Professor Johnson of Philadelphia, by request, made some statements respecting the fossils presented by him at the last meeting of the Society.

The sample of foliated or micaceous Galena then presented, from a locality 2 1-2 miles below Sunbury in Pennsylvania, on the left bank of the Susquehanna, was stated to occur in an upward curvature of the limestone bed in which it is found, which, like other strata of the formation in that part of Pennsylvania, has been cut through by the Susquehanna, in excavating its channel. The lead ore occurs in fissures from one to two hundred feet above the bed of the stream, and at a part where the bank is almost perpendicular. These fissures doubtless descend below the bed of the river, but the height at which they are worked is that just indicated. Through these fissures, which are four or five in number within the distance of as many hundred yards, the sulphuret appears to have been sublimed from below, and to have lodged in the cavities of the limestone, mixing with the loose fragments of the latter, and forming very irregular masses. Some carbonate of lead also occurs with the galena. That the lead ore has been sublimed into

its present position seems probable from its position, from the absence of marks of fusion, from the appearance of the limestone near the tops of the fissures where a sort of Cadmeia exists and coats every projecting fragment of the rock, from similar indications in other lead regions where large caves are found in the limestone, wholly incrusting with the crystallized galena, over which, as it adheres to the rock, the percolation of water has caused a coating of stalactite to be formed partially veiling the faces of the crystals. That the sulphuret of lead may be sublimed, in the manner just suggested, is proved by an experiment made a few years since in Philadelphia, in which a mixture of lead and sulphur, in chemical proportion to form galena, were placed in a well closed strong iron tube, and heated for some time to a bright red heat, the upper part of the tube being kept at a considerably lower temperature than that in which the mixture was placed. On cooling the tube, and cutting off the upper part, the whole material was found sublimed at that part. The fossils, consisting of orthoceratites, encrinites, producti and juglandites, occur in beds overlying the limestone in which the lead is found. These beds are various alternations of limestone and clay slate, forming a series many hundred feet thick. The juglandites occur in a bed of one or two feet thick, the general appearance of which is marked by ferruginous matter in considerable quantities. In or near the same localities occur nodules of radiated pyrites. The shells of the juglandites are sometimes easily separable from the nucleus; sometimes they are wholly decayed, and only the more solid nucleus remains.

One or two of these singular fossils were found of the size of a large lemon, and very strongly resembling that fruit in its exterior figure. Marly beds of considerable thickness occur in some portions of this formation, the more solid parts of which are perceived to be composed wholly of fossils. The lead locality is 12 miles west of the Shamokin coal basin, at its westerly prolongation.

The fossil vegetables from the coal measures of Pennsylvania were from Bear Gap, 16 miles east of the Susquehanna river. They consist of the usual plants accompanying both anthracite and bituminous coal, and seem conclusively to prove, so far as fossils may be regarded as the indices of geology, the contemporaneousness of the anthracite and bituminous coal deposits.

A specimen of coal exhibiting pure anthracite, mineralized charcoal and a material strongly resembling coke in exterior characters, was also among the objects commented on. The tendency of the anthracite portion to a crystalloid arrangement was also remarked.

Mr. Bulfinch read a report on the casts of fossil footsteps from Cheshire, England, lately presented to the Society by Mr. Archer of Liverpool.

He gave an account of the researches of Professor Owen as detailed in a communication to the Geological Society of London in the present year, by which the Professor has been led to the conclusion that the footmarks of the Keuper sandstone of Germany, the Cheirotherian impressions of Hessberg, those of the Warwick sandstone, and those of Cheshire, of which we have the casts, are those of an animal of one and the same genus, and of the Batrachian family. This result was obtained from an examination and comparison of teeth, found in the German sandstone, with others found in England, and particularly from sections of the teeth viewed microscopically, disclosing a structure entirely unknown heretofore, in which the enamel of the outer portion of the tooth is diffused through the interior substance in folds, exhibiting a labyrinthine appearance, upon a cross section. From this structure, the Professor has formed the name of "Labyrinthodon," to designate the animals of the fossil footsteps heretofore designated by the various names of Cheirotherium, Salamandroides, Mastodonsaurus, &c.

Dr. Storer, through Dr. Abbot, presented a rare variety *Phrynosoma cornuta* from Texas, together with a specimen of *Trionix ferox*, from the Hudson river sent to him by Dr. Wright.

It was first described in 1771, in the Philosophical Transactions, and afterward described and figured by Lacepede. The present specimen is young, as the old ones are covered with tubercles. It has no undershell.

Dr. C. T. Jackson exhibited specimens of the compact tin ore from New Hampshire, and one of Chlorophillite, a new mineral, discovered in the town of Unity, N. H., which

has been stated, in defiance of the careful analysis of J. D. Whitney, to be Iolite.

He hoped that Mr. Whitney would soon make another analysis, to put the question at rest. Dr. J. likewise exhibited a rare mineral, the Titanite of Zirconia, from Merrimack.

From Dr. Stearns of Groton a black squirrel.

Dr. H. I. Bowditch presented two specimens of fossiliferous limestone from Virginia.

Capt. Sturgis presented a Conglomerate Boulder which was washed on Cape Cod during the late storm.

Adjourned,

M. B. WILLIAMS, *Sec. pro tem.*

November 3, 1841.

Vice President, Dr. Binney, in the Chair.

Thirteen members present.

A report from the Committee to whom was referred a communication inviting the coöperation of the Society in M. Vattemare's plan was read, received, and ordered to be placed upon the records.

E. S. Dixwell, Esq., from the Committee appointed to procure a Common Seal for the Society, presented a model which was adopted.

Dr. Abbot exhibited eight new birds, which had been procured and mounted for the Society, viz.

Anser bernicla ; Anas Americana, female ; Mergus cucullatus, female ; Anas acuta, female ; Anas fusca ; Podiceps Carolinensis, young ; Fuligula Americana, male adult.

Dr. A. also reported upon Hewitson's Oölogy, committed to him at the last meeting.

Letters were received from Francis Archer, Esq., of Liverpool, acknowledging his election as a corresponding member, and from Auguste St. Hilaire, acknowledging his election as honorary member.

Letters were received from the Historical Institute, and from the Geological Society of France, accompanied by the Journals of those Societies, in exchange for ours.

A beautiful series of Unios and fresh water shells was presented by S. S. Haldeman, Esq., of Pennsylvania.

From E. S. Perkins, Esq. two African hangingbirds' nests.

DONATIONS TO THE LIBRARY.

John Pickering, Esq., presented Vandelle's *Viridarium Lusitanicum*; a revision and new arrangement of a very old Flora of Grisley, which was first published in 1661, and at the time of its publication in 1789 was the only Flora of Portugal.

History of British Starfishes. By Edward Forbes. 8vo. Lond. 1841. *From Edward Doubleday, Esq.*

Manual of British Algae, by Hon. Wm. Henry Harvey. 8vo. Lond. 1841. *From the Author.*

Nos. 1 to 4 of the *Phytologist*.

Edward Newman, Esq., presented, through the same, Newman's *Familiar Introduction to the History of Insects*, and Nos. 4 to 7 of Newman's "*Entomologist*."

The following gentlemen, nominated by the Council, were elected honorary members of the Society.

Edward Spach, Aide Naturaliste au Museum d'Histoire Naturelle.

Prof. D. F. L. von Schlechtendal, P. D., Halle.

Prof. Aug. Pyr. De Candolle. Geneva.

Asa Gray, M. D. of New York.

Professor John Torrey of New York.

Roderick Impey Murchison, Esq., London.

J. O. Westwood, F. L. S. London.

Heinrich Friedrich Link, Director of the Royal Gardens, Berlin.

Wm. Sharp McLeay, Esq., F. L. S. London.

John George Children, F. R. S. London.

Edmund Griffith, Esq. F. R. S. London.

John James Audubon. New York.

F. A. EDDY, *Rec. Sec.*

November 17, 1841.

The President in the Chair.

On motion of Dr. Gould it was voted that the Report of the Committee on M. Vattermare's plan be transmitted to Dr. Walter Channing by the Corresponding Secretary.

Mr. Couthouy presented to the Society a very large specimen of *Maetra gigantea*, and stated that he has received from Chelsea three living specimens of *Mya truncatu*, the first ever obtained directly on our coast. They differ somewhat from those found on George's Bank.

Mr. Couthouy also made some remarks on certain errors, into which he believed Professor Lyell had fallen in regard to the formation of the Coral Islands in the Pacific, and announced his intention of preparing a paper on that subject for the Journal.

Dr. Gould read a paper entitled "Descriptions of twenty-five new species of New England Shells," by J. W. Mighels, M. D., and Prof. C. B. Adams, of which the following are regarded as new.

Thracia truncata, Migh. T. testâ parvâ, solidâ, per-inequilaterali, posticè truncatâ, et striatâ: callo nymphali producto, haud cochleariformi. Length, .75 inch; height, .5 inch. *Habitat*, Casco Bay, Me.

Cyclas minor, Adams. C. testâ minimâ, ovatâ, inequilaterali; natibus tumidis, approximatis; marginibus rotundatis; dentibus omnibus fortibus. Length, .18 inch; height, .15 inch; width, .11 inch. *Habitat*, Weybridge, Vt.

Cyclas nitida, Migh. C. testâ sub-ovatâ, inequilaterali; natibus parvis, haud approximatis; dentibus lateralibus fortibus, cardinalibus obsolete. Length, .3 inch.; height, .24 inch; width, .2 inch. *Habitat*, Norway, Oxford Co., Me.

Nucula delphinodonta, Migh. N. testâ parvâ, solidâ, trigonâ, transversè sub-sulcatâ; angulis umbonalibus duobus; natibus prominentibus, sub-terminalibus; dentibus anticis tribus, posticis septem, elevatis, conicis, acutis. Length, .13 inch; height, .11 inch; width, .09 inch. *Habitat*, Casco Bay.

Nucula Cascöensis, Migh. N. testâ ovato-lanceolatâ, sub-inequi-

lateralis, compressâ ; posticè attenuatâ ; areolâ valdè compressâ ; natibus parvis ; dentibus anticis decem, posticis duodecim, parvis. Length, .6 inch ; height, .35 inch ; width, .09 inch. *Habitat*, Casco Bay.

Pecten tenuicostatus, Migh. P. testâ parvâ, tenui, sub-inequivalvi ; valvâ superiore plerumque rubro-fuscâ, tenuicostatâ, costis majoribus 25 usque ad 30, totidem minoribus ; auribus costulatis ; valvâ inferiore pallidè rubro-fuscâ ; extus et intus lævi. Length, .5 inch ; height, .56 inch ; width, .14 inch. *Habitat*, Casco Bay.

Chiton mendicarius, Migh. C. testâ elongatâ, in medio longitudinaliter ad latus irregulariter granulatâ, cinereâ, nubeculatâ ; areis parum conspicuis ; margine coriaceo, rubro. Length, 1 inch ; breadth, .4 inch ; width of margin, .06 inch. *Habitat*, Casco Bay.

Cemoria princeps, Migh. C. testâ albâ, procerâ, costulatâ, punctulatâ ; rimâ intus in canalem productâ, fornice obtectâ ; fornice lateraliter testæ alis adjuncto ; aperturâ ovatâ, crenulatâ. Length, .46 inch ; width, .33 inch ; height, .35 inch. *Habitat*, Coast of Maine.

Bulla puncto-striata, Migh. B. testâ albâ, solidâ, eleganter striatâ ; striis crebris, inequidistantibus, punctatis ; spirâ occultâ ; aperturâ magnâ. Length, .38 inch ; breadth, .24 inch. *Habitat*, Casco Bay.

Physa fragilis, Migh. P. testâ tenuissima, obliquè ovatâ ; spirâ brevi ; anfractibus quatuor ; aperturâ subovatâ, repandâ ; labio tumido, laminâ oblecto. Length, .55 inch ; greatest breadth, .4 inch. *Habitat*, Monmouth, Me.

Limnæa decollata. L. testâ ventricosâ ; anfractibus duobus vel tribus, ultimo magno ; spirâ breviusculâ, plerumque decollatâ ; suturâ impressâ ; aperturâ maximâ, sub-campanulatâ ; labro porrecto ; columellâ valdè plicatâ. Length, .6 inch ; breadth, .5 inch ; height, .4 inch. *Habitat*, Unity, Me.

Margarita varicosa, Migh. M. testâ parvâ, tenui, conicâ ; anfractibus quatuor, convexis ; longitudinaliter costulatis, transversè striatis ; suturâ sub-canaliculatâ ; umbilico magno, profundo. Height, .25 inch ; diameter of base equal to the height. *Habitat*, Bay Chaleur.

Trochus occidentalis, Migh. T. testâ pallidâ, imperforata ; anfractibus septem, convexis ; carinis pallidè fuscis ; infrâ lævi ;

suturâ impressâ ; columellâ callosâ. Height, .5 inch ; greatest basal diameter, .43 inch. *Habitat*, Casco Bay.

Cingula latior, Migh. C. testâ minimâ, ovato-conicâ, lævi, pallidâ ; anfractibus quatuor, convexis ; suturâ impressâ ; spirâ quàm apertura longiore ; anfractu postremo magno ; aperturâ sub-ovatâ ; operculo corneo. Length, .08 inch ; breadth, .05 inch. *Habitat*, Casco Bay.

Turritella costulata, Migh. T. testâ albidâ, transversè subtilissimè striatâ ; anfractibus decem, superioribus sub-plicatis, duobus ultimis sub-lævibus, ultimo sub-carinato ; aperturâ subovatâ, antèrius productâ. Length, .7 inch ; breadth, .23 inch. *Habitat*, Casco Bay.

Turritella reticulata, Migh. T. testâ turrito-subulatâ ; anfractibus duodecim, convexis, longitudinaliter plicatis, transversim striatis ; suturâ valdè impressâ ; aperturâ sub-orbiculari. Length, .7 inch ; breadth, .2 inch. *Habitat*, Bay Chaleur.

Pleurotoma violacea, Migh. & Adams. P. testâ atro-purpureâ, longitudinaliter sub-plicatâ, transversè striatâ ; anfractibus sex, ultimo suprâ carinato, plicis in medio evanescentibus, alteris medio carinatis ; spirâ acutâ ; aperturâ angustatâ ; caudâ brevi. Length, .3 inch ; breadth, .15 inch. *Habitat*, Casco Bay.

Fasciolaria ligata, Migh. F. testâ elongatâ, fusiformi, crassâ, rubro-fuscâ, transversim costulatâ ; anfractibus sex, convexis : spirâ acuminatâ ; suturâ valdè impressâ ; aperturâ ovato-elongatâ ; labro crenato ; columellâ biplicatâ. Length, .7 inch ; breadth, .3 inch. *Habitat*, Mingan, in the Gulf of St. Lawrence.

Fusus cancellatus, Migh. F. testâ subulatâ, longitudinaliter plicatâ, transversè striatâ : anfractibus septem, convexis : suturâ valdè impressâ ; spirâ acuminatâ ; apice acutâ ; aperturâ sub-ovatâ ; labro crenato. Length, .65 inch ; breadth, .25 inch. *Habitat*, Casco Bay.

Nucula antiqua, Migh. N. testâ parvâ, sub-trapeziformi, per-obliquâ, transversè sulcatâ : dentibus posticis sexdecim, anticis sex ; margine simplici. Length, .7 inch ; height, .27 inch ; breadth, .2 inch. *Habitat*, Westbrook, Me. (fossil.)

Bulla occulta, Migh. B. testâ parvâ, ovato-cylindraceâ : spirâ occultâ : labro suprâ elevato, medio recto ; aperturâ sub-angustâ, infrâ latâ, rotundatâ. Length, .2 inch ; breadth, .15 inch. *Habitat*, Westbrook, Me. (fossil.)

The President read a letter from Mr. Edward Tuckerman now in Europe, giving a very interesting account of his reception by botanists abroad, both in England and on the Continent.

The President announced to the Society the death of Professor A. P. Decandolle of Geneva, who was elected an honorary member, at the last meeting of the Society.

He read a memoir of his life and services to the cause of science. On motion of Rev. Dr. Greenwood, it was voted, That the President be requested to communicate with the son of Prof. De Candolle, and to express the sympathy which this Society feels in the loss to the scientific world of his distinguished parent, and that the President be further requested to prepare a memoir for publication in the Journal.*

Adjourned,
F. A. EDDY, *Rec. Sec.*

December 1, 1841.

The President in the Chair.

Dr. Binney exhibited four species of N. American Helices, which he supposed to be new, and requested that they might be submitted to a Committee for examination as to this fact.

Voted, That they be submitted to the Chairman of the Committee on Conchology.

Dr. Binney also read a paper, "on some of the species of naked Pneumonobranchous Mollusca of the United States," containing a new genus and two new species, and four species previously known, viz. *Limax agrestis*, Lin. ; *L. hortensis*, Fer. ; *L. flavus*, Lin. ; *Tebennophorus Carolinensis*, Bosc.

Genus Tebennophorus, Binney. Mantle covering the whole superior surface of the body ; pulmonary cavity anterior, orifice on the right side toward the head ; orifice of the rectum contiguous to, and a little above and in advance of the pulmonary orifice ; organs of generation united, orifice behind and below the superior tenta-

* Published in Silliman's Journal, Vol. XLII. p. 217.

cle of the right side : without testaceous rudiment, terminal mucus pore, or locomotive band of the foot.

Limax campestris, Binney. L. corpore succineo colore, cylindraceo, glandulis elevatis, elongatis subrugoso ; clypeo sub-antico, ovali-oblongo, lineis et sulcis concentricis striato ; caudâ subcarinata ; aperturâ laterali posticâ. Length, one inch. Inhabits the New England States, New York, Ohio, Missouri.

Philomycus dorsalis, Binney. P. corpore cylindraceo, posticè attenuato ; dorso lineâ longitudinali nigrescente interruptâ et glandulis minutis longulis instructo ; clypeo nullo ; aperturâ laterali parvâ, anticâ. Length, .75 inch. Inhabits Massachusetts and Vermont.

Professor Hall made some verbal statements with regard to the Geology of the region of Niagara Falls.

He alluded more particularly to the retrocession of the Falls ; the supposed *fault* of Professor Daubeny at Lewiston ; the formation for a space of 16 miles between Erie and Ontario, until recently undetermined,—and the discovery of a fresh water formation along the banks of the River, and on Goat Island. He announced that it was his intention to write a detailed paper on these subjects, and offer it for publication in the Journal.

Professor Hall also exhibited well authenticated specimens of Old Red Sandstone of England and those of Pennsylvania and New York, and showed their identity by the contained fossils. He proposed to prepare a paper on the results of a comparison of these rocks and fossils for publication in the Journal.

Mr. J. P. Couthouy continued his remarks upon the Lagoon Islands of the Pacific, which are to be embodied in a paper for publication in the Journal.

He also presented for the Cabinet several species of shells, viz.—

Helix lirata, Couth. ms. ; and *H. rupium*, Couth. ms. ; *Chiton viridulus*, Couth. ms. ; *Terebratula*— ; *Littorina erosa*, Couth. ms. ; all from Terra del Fuego ; *Helicina solidula*, Swains. from Chain Islands ; *Bulimus*, from Pachecamac, Callao Bay ; *Bulimus* from Ascension ; *Littorina* from Feejee Islands ; *Nerita picea*, Reclus ; *Littorina* and *Pecten*, all from Kauai, Sandwich Is. ; *Buccinum* and *Ovula*, from Newcastle, New South Wales ; *Vitrina* from Argyle, New

South Wales; *Voluta multicosata*, Brod. from New Zealand; two species of *Hyalæa* from Newcastle, New South Wales.

Mr. Whittemore communicated a portion of a letter from Mr. J. G. Anthony, of Cincinnati, in which he speaks of having received Fishes and Crustacea from a dark cavern in Kentucky, without any perceptible organ of vision.

The President laid upon the table Part 1 of Vol I. of the Proceedings of the Botanical Society of London, from the Society.

Dr. Gould presented specimens of *Nidularia crucibulum* in behalf of John A. Bolles, Esq.

A. A. GOULD, *Sec. pro tem.*

December 15, 1841.

The Society met at the President's house.—The President in the Chair.

Mr. J. P. Couthouy continued his remarks upon the Lagoon Islands of the Pacific.

A written report was sent by Dr. Storer, entitled "Additional Descriptions of, and Observations on, the Fishes of Massachusetts."

The following species he supposes to be new, viz.

Myliobatis bispinosus, Storer. Jaws furnished with rows of smooth, flat, elongated plates, with rhomboidal plates exterior to these. Tail 30 inches long from the anus, dirty brown and perfectly smooth, and tapering to a point. Dorsal fin two inches back of the anus, one inch in length, subtriangular; at its posterior extremity is a strong, naked spine, 3 inches long, closely serrated upon its sides, and beneath this is a similar spine 4 inches long. The tail and part of the jaw were the only portions examined, and were furnished by Dr. L. M. Yale, of Holmes Hole.

The following species have been added to the Catalogue :

Perca flavescens, Mitchill, from Concord River.
Cybiium maculatum, Cuv. " Mass. Bay.
Leuciscus cornutus, Mitch. " Berkshire Co.
Tetraodon mathematicus, Mitch. from Nantucket.
Zygæna malleus, Valenc. from Holmes Hole.
Raia centroura, Mitch. " Holmes Hole.
Squalus macrodon, Mitch. " Lynn.

Dr. Storer has also become satisfied that the fish previously regarded by him as *Perca flavescens*, is *P. granulata*, Cuv. *Trachinotus argenteus*, Cuv. is *Coryphæna perciformis*, Mitch. It is not a *Coryphæna*, however, and has been placed by De Kay in a new genus which he calls *Palinurus*.

The paper contained many other interesting particulars with regard to the characters and habits of various fishes.

The President announced the following donations :

Four Nos. of the Journal of the Calcutta Society of Natural History, from *J. P. McClelland*.

The 53d and 54th Annual Reports of the Regents of the University of New York.

The 3d, 4th, and 5th parts of the 2d Vol. of the Transactions of the Albany Institute, from the *Albany Institute*.

Several Reports on the Geological Survey of New York, from *Professor James Hall*.

A Report of the Superintendent and Inspector of Salt for the State of New York, from *Professor Hall*.

Adjourned,

F. A. EDDY, *Rec. Sec.*

January 5, 1842.

The President in the Chair.

Mr. Couthouy continued the reading of his paper on the formation of the Lagoon Islands in the Pacific.

A letter was received from Dr. T. S. Savage of Cape