

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	" Vark.
" 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.

Mycetopus siliquosa, *Unio obtusus*, *Bulimus auris-muris*, B. Capueira, B. Bahiensis, *Cyclostoma Blanchetianum*, *Helicina variabilis*, *Anodonta anserina*, all from Brazil. *From Dr. A. A. Gould.*

January 4, 1843.

Dr. Gould was appointed Chairman.

Mr. E. S. Dixwell exhibited some specimens of lias limestone from Meadville, Pa., in which were imbedded some conical masses of about an inch in height, and somewhat less at base.

He desired an opinion whether they were organic structures or otherwise. They were committed to Mr. Bouvé.

Dr. Abbot made a report upon some of the birds' skins recently received from Dr. Cragin of Surinam. There were five species, all new to our cabinet, viz.

Rhamphastos Tucanus, Lin.	Rhamphastos erythrorynchus, L.
Rhamphastos viridis, Lin.	Rhamphastos aricari, Lin.
Rhamphastos piperivorus, Lin.	

Dr. A. also exhibited some skins of native birds recently added to the Cabinet, viz.

Tringa alpina—Oxbird, (winter plumage.)
Sylvia icterocephalus—Chesnut-sided warbler, (male.)
Sylvia Americana—Parti-colored warbler, (male.)
Sylvia Canadensis—Black-throated blue warbler, (male.)
Sylvia trichas, Maryland yellow-throat, (male and female.)
Sylvia rubri-capilla—Nashville warbler.

Professor Gray exhibited a specimen of *Carex Fraseriana*, an American plant, which had been so long unnoticed as to have been regarded as lost. It was rediscovered by a party of which Prof. G. was one, on Grandfather Mountain, North Carolina.

Dr. Wyman exhibited specimens of *Echinorhynchus nodosus*, Rudolphi, a parasite infesting the intestines of the striped bass, (*Labrax lineatus*.)

To a space three inches in length and one in width were attached twenty or more of different sizes. In some instances the head of the animal protruded, having pierced the intestine, while the body remained within.

Baron Benjamin Delessert, of Paris, was elected an honorary member.

ADDITIONS TO THE CABINET.

A Box of Crustacea from Terra del Fuego. *From Joseph P. Couthouy.*

Specimens of the imbricated bony plates found beneath the skin, on the humeral region of the Horse Mackerel, (*Thynnus vulgaris*). *From Dr. Toomey of Chelsea.*

January 18, 1843.

Mr. Bouvé was appointed Chairman.

Mr. Teschemacher reported on some slabs of slate with dendritic markings, recently quarried in Newton.

The stone is a quartzose argillaceous slate, of a light gray color, contrasting beautifully with the dendritic markings. These markings suggest the idea that they are the remains of Algæ. Mr. T. found no trace of organic matter in their composition; on the other hand, their metallic nature was established by obtaining a globule of Manganese. He supposes the particles of Manganese to have subsided, in the solution in which they were contained, and to have assumed a dendritic form by pressure between the layers. He in fact exhibited the same appearance, which he had obtained by pressing manganese between two plates of glass. Similar markings, though less noticeable, are found in the Roxbury pudding-stone, and in a similar German sandstone.

Dr. Wyman read a Report on the Chimpanzee presented by Dr. Savage. He compared the skeleton and all the viscera, in detail, with those of man, and the ourang outang.

He also exhibited, in behalf of Dr. Storer, the ovary of a striped bass. From some unknown cause, the annual product of eggs

appeared not to have been excluded for six successive years ; and the mass exhibited, on a cross section, as many layers, distinctly marked at the line of junction.

Mr. Perkins exhibited splendid specimens of the Goliath Beetle, (*Goliathus Drurii*,) male and female. The female is supposed to be the first which has ever been brought across the Atlantic. On motion, it was voted, that a description, with figures, of these insects be prepared for our Journal.

Mr. Bouvé made a report upon the specimens (Conolites) from Meadville, Pa. exhibited at the last meeting.

He had not been able to ascertain their nature, or to decide whether the bodies were concretionary, crystalline, or organic. He was of the opinion, that they were not organic. Nothing of the kind is described in any work to which he had access. The great want of books in our library on this branch of Geology was greatly to be lamented.

He also gave some account of the Sulphurs and other minerals of Vesuvius, recently presented by Dr. Randall.

Dr. Abbot continued his account of the birds' skins from Surinam, and exhibited the following:

Psittacus menstruus, L.	Psittacus Guianensis, L.
Psittacus purpureus, L.	Psittacus purpuratus, L.
Psittacus passerinus, L.	Crimson & blue collared Parrot.

Seeds of the *Aleurites grandiflora*, from the Sandwich Islands were presented by James J. Jarves.

ADDITIONS TO THE LIBRARY.

Annals and Magazine of Natural History, Dec. 1842. 8vo. Lond. *Courtis Fund.*

American Bacillaria, by J. W. Bailey, 8vo. pam. 1842. *Author.*

Transactions of the American Philosophical Society of Philadelphia, Vol. VIII. Part. II. New Series. 4to. Philad. 1842. *From the Society.*

American Journal of Science and Arts, Vol. XLIV. No. 1.
From Messrs. Silliman.

Brevi Cenni sulla Condizione attuale della Sardegna, autore G. Michelotti. 8vo. pam. Torino. 1842.

Saggio Orittografico sulla Classe dei Gasteropodi Fossili dei Terreni Terziani del Piemonte. S. Bellardi e G. Michelotti. *From Signore Michelotti.*

Treatise on some of the Insects of New England which are injurious to Vegetation. By T. Wm. Harris. *From the Author.*

Selections from the Scientific Correspondence of Cadwallader Colden. 8vo. pam. 1843. *From the Editor, Professor Asa Gray.*

Annals and Magazine of Nat. History, Nos. 66, 67. 8vo. Lond. *Courtis Fund.*

Reply to Dr. Hare's Objections relating to Whirlwind Storms, by W. C. Redfield. 8vo. pam. 1842. *From the Author.*

New Genessee Farmer, Vol. III. No. 12. 8vo. *From H. Colman.*

Fifty-fifth Annual Report of the Regents of the University of N. York. 8vo. pam. Albany. 1842. *From G. B. Emerson.*

De Solariis in Supracretaceis Italiæ Stratis repertis. auct. J. Michelotti. 4to. pam. 1841. *From the Author.*

February 1, 1843.

Regular meeting—the President in the Chair.

Mr. Bouvé reported on a specimen of lead ore from the Southampton lead mines which he had found to be carbonate of lead.

Dr. Gould exhibited a portfolio of British Zoöphytes elegantly preserved, which he had lately received from Dr. Johnston of Berwick-upon-Tweed, accompanied with an interesting letter.

Among other facts, Dr. Johnston states that he has kept various species of Mollusca alive for ten months, in a jar of sea water stopped with a cork, *without changing the water.* He ascribes the prolonged purity of the water to the presence of a tuft of *Coralina officinalis.* A growth of *Conferva* had sprung up in the mean

time. Dr. Gould stated that his own observations would give confirmation to this conjecture. Sea water would remain pure for any length of time, if some marine vegetable were placed in it; otherwise it became putrid, and required to be changed every twenty-four hours. It struck him, that the experiment of Dr. J. settled the disputed question as to the vegetable or animal nature of the Corallina. It must be a vegetable.

Dr. Wyman mentioned an experiment by Dumas, in which a fish was kept alive in a closely stopped jar of water containing Con-ferva. While the light acted upon the vegetable matter, a sufficient quantity of oxygen was disengaged for the respiration of the fish, the fish giving out enough carbonic acid for the nourishment of the plant. When the light was excluded, the fish died.

Dr. Wyman made some remarks on some late experiments of Doyère of Paris, made with a view to test the fact first recorded by Leuenhoeck and Spallanzani, of the revivification of animalcules after complete desiccation.

He has shown Spallanzani's experiments to be correct; and has succeeded in reducing to dryness rotifers and tardigrades by the complete evaporation of the drop of water in which they were contained; and, after exposing them to a heat equal to that of boiling water, they were easily reënimated by being moistened with distilled water. Dr. Wyman also stated that an experiment of his own showed them to be equally capable of bearing extreme cold. The water containing some, having been frozen for many days, the animalcules were found alive and active in the water when thawed.

Dr. Abbot stated that, to his knowledge, seven specimens of the Great Cinereous Owl, (*Strix cinerea*,) had been taken in Massachusetts within the past year; a bird hitherto considered by ornithologists as very rare in our State.

ADDITIONS TO THE CABINET.

Dr J. B. S. Jackson presented the teeth of *Delphinus globiceps* fixed on a black tablet in their order, showing, in the upper jaw, nine on each side, and, in the lower jaw, eight on one side and ten on the other. He remarked that the jaw exhibited no trace of the existence of the deficient teeth. Dr. J. also presented a very

beautiful figure of the animal drawn by Dr. W. T. Parker of South Boston.

ADDITIONS TO THE LIBRARY.

Proceedings of the Acad. of Nat. Sciences, Philad. Nov. & Dec. 1842. 8vo. pam. *From the Academy.*

Twenty-second Annual Report of the Mercantile Library Association, New York. 8vo. pam. 1843. *From the Association.*

Instructions for collecting and preserving various subjects of Natural History, with a Treatise on Insects, by J. T. Donovan. 8vo. 10. Lond. 1794--1801. *Courtis Fund.*

February 15, 1843.

Regular meeting—Mr. Bouvé in the Chair.

Dr. Wyman remarked upon some articles in the numbers of the Annals and Magazine of Natural History committed to him, particularly a paper on the growth of Fungi in Fruits.

Fungi attack both vegetable and animal structures, and late experiments have shown that healthy fruits may be infected with them by inoculation. Another paper in the same number, in a notice of Agassiz' work on Freshwater Fishes, states, that fungi also infest the ova of that class of animals. They are also found in the cavities caused by certain diseases of the lungs. To an inquiry from Dr. Wyman whether he had made any observations of their attacks on fruits, Mr. Tescemacher replied that he had, some time since, traced the discoloration of the cuticle of the St. Michaels pear to this source; also, the mould that infests the Gooseberry. All dark spots and scabs on fruits are probably of the same origin. They destroy the cuticle, and prevent growth. The Spores, diffused through the air, lodge wherever they find a spot favorable to their development.

A perfect specimen of the flower of the *Cheirostemon*, the Arbol de Manitos of Mexico, preserved in alcohol, was presented by Mr. Lawrence.

Mr. Teschemacher stated that it belongs to the family Sterculiaceæ, tribe Bombaciæ, and is the only known species of the genus *Cheirostemon*, a name derived from its five stamens being arranged in a palmate manner. He also exhibited its interesting structure, and made some remarks on the mode of growth, &c.

Mr. Teschemacher presented specimens of Guano just received from the coast of Peru, containing feathers, with the request that they might be referred to the ornithological section of the Society to ascertain, if possible, their nature.

With reference to the opinion, entertained by some, that the Guano had been accumulating from a period perhaps prior to the origin of the human race, Mr. T. translated the following passage from the "Memoriales Reales" of "Garcilasso de la Vega." Lisbon, 1609, p. 102. "On the seacoast, from below Arequipa as far as Tarapaca, which is more than two hundred leagues of coast, they use no other manure than that of marine birds, which exist on all the coast of Peru, both great and small, and go in flocks perfectly incredible, if not seen. They are reared on some uninhabited islands which exist on that coast, and the manure that they leave is of inconceivable amount. At a distance, the hills of it resemble the mounds on some snow̄ plain. In the time of the Incas there was so much vigilance in guarding these birds that, during the rearing season, no person was allowed to visit the islands under pain of death, in order that they might not be frightened and driven from their nests. Neither was it allowed to kill them at any time, either on or off of the islands, under the same penalty." Each district or territory also had a portion of these islands allotted to it, the penalties for infringement of which were very severe. From this extraordinary case it is probable that the Incas did not permit any remarkable consumption of this valuable manure beyond the annual additions; and the consumption during the depopulation of South America by the Spaniards could, by no means, have equalled those annual deposits. Even the greatest thickness of seven to eight hundred feet might, without extravagant calculation, be deposited in about three thousand years at the rate of two or three inches a year. The feathers do not appear

different from those of birds of the present day. Mr. Blake, a member of our Society, who has visited these deposits, has a shell found in the Guano, very much resembling the *Crepidula fornicata* of this coast, but not in any way fossilized. On this coast it never rains, so that the deposits of manure are not, like those on other coasts, annually washed away.

Mr. Teschemacher next exhibited dendritic appearances, artificially produced, resembling, in their forms, those of the Dendritic Manganese from Newton, Mass.

They were formed by laying finely pulverized earth on a slip of glass, moistening it with a few drops of water, and then covering it with a thin plate of mica without further pressure. On the gradual evaporation of the water, the particles of earth, under the slight pressure of the mica, aggregated themselves into these dendritic forms.

Mr. Stoddard read a paper entitled "An Hypothesis to explain the Changes of the Surface of the Earth," which, on motion of Dr. Gould, was committed to a select Committee for examination and report. Dr. C. T. Jackson, Dr. Binney and Mr. Emerson were chosen the Committee.

Dr. Binney said he had lately visited Washington, and stated that an unfavorable impression which he had received of the value of the collections of specimens in Natural History made by the late Exploring Expedition, and the care bestowed on their preservation, had been entirely removed.

Rev. Francis Mason, missionary in Burmah, was elected a corresponding member.

ADDITIONS TO THE LIBRARY.

Annals and Magazine of Natural History, for February, 1843. *Courtis Fund.*

Description des Cancellaires Fossiles des Terrains Tertiaires du Piedmont, per L. Bellardi. 4to. pam. Turin. 1841. *Dr. C. T. Jackson.*

Histoire Naturelle des Rainettes, des Grénouilles et des Cra-pauds, par Daudin. *From S. S. Haldeman.*

Illustrations of British Ornithology. By P. J. Selby. 8vo. 2. Edin. *Exchange.*

March 1, 1843.

Regular meeting—Dr. Binney, Vice President, in the Chair.

Dr. Wyman exhibited some specimens of *Linguatula*, parasites from the inner surface of the lung of a Boa, which he had lately dissected.

One was about three inches long, others from an inch to an inch and a half. They were alive when taken from the lung. Dr. W. had nowhere met with a description of this species.

Dr. W. also exhibited some specimens of *Ascarides* from the *Cyclopterus lumpus*, Lump fish. They were alive when taken, although the fish had been completely frozen for two days

Dr. Wyman remarked upon a work on Frogs by Daudin presented to the Society by Mr. Haldeman.

It is an old work, and some of the statements respecting American species were gathered from rumor. The author says the Bull-frog is common in the southern States, but rare in the north; that the inhabitants protect them, thinking they keep the waters pure; that one pair only inhabit a pond; that they have holes in the bank in which they live, only taking to the water when alarmed, &c. Dr. W. had himself observed them in variable numbers in the ponds at Mount Auburn, and other places.

The Librarian announced that he had received a subscription paper, of which the following is a copy:

“Understanding that Audubon’s work on the Quadrupeds of America is to come out in numbers, and to be completed in five years, at the expense of three hundred dollars, and thinking that a copy should be in the Library of the Boston Society of Natural History, the subscribers agree to pay each one tenth part of the expense of a copy of that work for said Library.

G. B. Emerson,
N. I. Bowditch,
Amos A. Lawrence,
Amos Binney,
Geo. C. Shattuck, Jr.

J. A. Lowell,
Geo. Parkman,
Wm. Sturgis,
F. C. Gray,
J. J. Dixwell.

It was thereupon voted, "That the thanks of the Society be rendered to the gentlemen who have so liberally contributed to bestow upon it this valuable donation, and that the Secretary be instructed to notify each of the gentlemen of this vote."

ADDITIONS TO THE LIBRARY.

Report on the Geology of Connecticut. By J. G. Percival. 8vo. New Haven. 1842. *From the Author.*

Agricultural Address. By Henry Colman. 8vo. pam. Rochester. 1842. *The Author.*

Annals and Magazine of Nat. History, for March, 1843. *Cour-tis Fund.*

March 15, 1843.

Regular meeting—the President in the Chair.

Dr. Wyman was chosen Secretary, *pro tem.*

Dr. Gould read a paper on Zoölogical Nomenclature, founded on the proposition recently made by the British Association for a reformation in Zoölogical Nomenclature, and upon Agassiz's "Nomenclator Zoölogicus." (See Siliman's Journal. Vol. XLV. p. 1).

Dr. Abbot exhibited the following specimens recently added to the Society's collection of mounted birds, viz :

Strix asio, male,	Muscicapa ruticilla, female,
Tringa pectoralis,	Caprimulgus vociferus,
Cervus cristatus, male,	Caprimulgus Virginianus,
Vireo olivaceus,	Pyrrhula frontalis,
Vireo flavifrons,	Fringilla purpurea, male,
Muscicapa Cooperi,	F. graminea.

Dr. Binney read a critical notice of the species found in the United States, which, at present, are described as constituting the genus PUPA.

Having examined, with the aid of a microscope, well authenticated specimens from most of the public and private collections in

the country, he had arrived at the conclusion that identical species have, in many instances, been described under different names, and that a very considerable deduction ought to be made from the number of species now recorded. The number of species described by American authors he found to be 18. On these species, he submitted the following statement :

The original specimens of *Cyclostoma marginata* and *Pupa fallax*, Say, are identical.

The original specimen of Mr. Say's *P. placida*, in the Collection of the Academy at Philadelphia, is *Bulimus hordeaceus*, of Europe.

P. ovata and *P. modesta*, Say, are identical, the latter being an immature stage. In this opinion Dr. Gould coincides.

P. procera, Gould, is identical with *P. rupicola*, Say.

P. curvidens, Gould; *P. Tappaniana*, Adams; and *P. pentodon*, Say, are identical. Thus six of the eighteen species are struck out. Of the twelve remaining species, Dr. B. considered two uncertain, viz: *P. simplex*, and *P. carinata*, Gould.

Dr. Binney further observed that there was another well characterized species of *Pupa* which he had possessed for several years, and which seemed to be very common in the North-Eastern and Middle States, which had not yet been described. It was intermediate between *P. ovata*, Say, and *P. milium*, Gould, having, like them, a heart-shaped or double-curved aperture, the animal also, like theirs, having only two tentacles, and belonging evidently to the genus *Vertigo* of Muller. He proposes for it a specific name, and describes it as follows :

P. GOULDII. Testâ minutâ ovato-cylindricâ, sub-castaneâ; anfractibus pluribus quàm quatuor, apice obtuso; aperturâ sub-caudatâ, bilobatâ; dentibus quinque armatâ, labro subreflexo.

Animal, with two tentacles only. Black above. Foot grey, short posteriorly. Shell light chestnut, cylindrical ovate, whorls between four and five, rather ventricose; the last occupying nearly half the length of the axis; apex obtuse; aperture lateral, composed of two unequal curves, meeting in the centre of the outer lip, with five prominent white teeth, viz: one upon the transverse margin, two upon the umbilical margin, and two upon the labial margin; lip thickened, not reflected; umbilicus a little open.

If this species should be received, and the views of Dr. Binney

should be acquiesced in as regards the other species, there would remain eleven certain species, viz :

- P. fallax*, Say. Synon. *P. marginata*, Say ; *P. albilabris*, Adams.
- P. armifera*, Say.
- P. contracta*, Say.
- P. rupicola*, Say. Synonym, *P. procera*, Gould.
- P. pentodon*, Say. Synonyms, *P. curvidens*, Gould ; *P. Tappaniana*, Adams.
- P. exigua*, Say.
- P. ovata*, Say. Synonym, *P. modesta*, Say.
- P. badia*, Adams.
- P. milium*, Gould.
- P. Gouldii*, Binney.

Dr. Gould made some verbal remarks on Dr. Binney's paper.

He concurred in most of Dr. B.'s conclusions. He allowed that no one would be justified in making a species of such imperfect specimens as Dr. B. had seen of *P. simplex*. Very few had as yet been found ; but the characters of the entire specimens were so distinct, that he felt confident it would prove a good species. *P. carinata*, to be sure, was founded upon a single specimen, now lost. But he did not think that a shell so peculiar in so many respects could belong to any known species ; nor was he satisfied that *P. rupicola* and *P. procera* were synonymous. The name *P. pentodon* might well give place to one of the other names, inasmuch as it is a *misnomer*, the name having been given to the immature shell, before the aperture was complete, and when only five teeth were to be found ; or, it might be applied to the new species described by Dr. B. The characters of the aperture agree generally with *P. curvidens* ; but, if they are the same, there is an extraordinary difference on account of locality ; the western specimens, (*P. pentodon*,) being of a translucent spermaceti color, while the eastern variety, (*P. curvidens*,) is a third smaller, opaque, and covered with a thick, green epidermis.

Dr. Storer read a critical notice of De Kay's Report on the Reptiles of New York, in which he made several corrections of errors occurring in that report.

He observed that Dr. De Kay seems to have forgotten that my Report was upon the Reptiles of Massachusetts. In my description of the "*Cistuda Blandingii*," I observed "it has been detected as far north as Haverhill;" to which De Kay adds, "New Hampshire, in 44° north latitude."

Again,—under the head of *Kinosternon Pennsylvanicum*, Mud Tortoise, Dr. De Kay says, "I find no mention of it in Storer's Report on the Reptiles of Massachusetts, although it is cited in Hitchcock's Catalogue." If he had referred to the preface to that Report, he would have found why it *was not* mentioned. In that preface, I use these words: "The *Testudo Pennsylvanica* is plainly confounded with the *Sternothærus odoratus*, a widely distributed species."

Our author has fallen into another singular and altogether inexcusable error respecting the *Triton millepunctatus*. While engaged in preparing my Report, I met with a beautiful little Salamander, which I described to this Society as having all the upper parts of the body, together with the feet, to the extremities of the toes and tail, sprinkled with innumerable black points;" and hence I called it "*Salamandra millepunctata*." I had an accurate figure drawn, and thought I had found a new species, for the simple reason that I could meet with no description to correspond with my specimens. Dr. Holbrook, however, who visited this city while I was laboring upon my Report, thought it had been described by Dr. Harlan under the name of "*dorsalis*," from, as he describes it, "a white dorsal line extending from the occiput over the tail," which Dr. Holbrook could *not* point out to me, and which none of my specimens exhibited. Very reluctantly I published it in my Report, under the name of "*dorsalis*," reserving to myself, however, the liberty of throwing out a few suggestions upon this subject.

Dr. De Kay, although Dr. Holbrook calls it "*dorsalis*," is unwilling to call it by this name; but introduces it as the "*millepunctatus*" with the following remarks: "This species had originally the misfortune to be so badly named, and the description, which was taken from a changed cabinet specimen, gave such an imperfect and false idea of the animal, that we have adopted the name originally applied by Dr. Storer, both as more descriptive in itself, and as being the first true description of the species." I am much

obliged to Dr. De Kay for his course in this matter, and only wish I could stop here. But I am compelled to go on. In his description *he* also speaks of the belly being "punctured with black," and again, "the punctures extend over the belly, inside of the legs, and upper parts of the body and tail," and still, with these innumerable little punctures before him, he gives his *characteristics* of the species as follows: "Olive, with crimson spots; the two colors above and beneath distinctly separated;" or, in other words, while his description agrees with mine, he loses sight of the true specific characters, and supposes the word "*millepunctatus*" to apply to a few crimson spots upon the flanks, which, in *his words*, "vary from one to ten in number."

The Legislature of Massachusetts, having recently placed at the disposal of the Society, fifty copies of each of the Zoological and Botanical Reports of the State, Messrs. Binney, Gould and Emerson were chosen a Committee to take into consideration the best mode for their distribution.

On motion of the President, it was unanimously voted, that a copy of the Society's Journal, and copies of the State Reports be sent to Prof. Agassiz of Neufchatel.

DONATIONS TO THE CABINET.

A specimen of *Emys biguttata* from Dr. Newcomb of Troy, N. Y.

ADDITIONS TO THE LIBRARY.

Proceedings of the Acad. of Nat. Sciences, Philad. for Jan. and Feb. 8vo. pam. *From the Academy.*

Récherches d'Anatomie Comparée sur le Chimpanzé, par W. Vrolick. fol. Amsterdam. 1841. *Courtis Fund.*

North American Review, for April, 1843. 8vo. Bost. *Exch.*

April 5, 1843.

Regular meeting—Dr. C. T. Jackson, Vice President, in the Chair.

Mr. Teschemacher reported on the Transactions of the Imperial Mineralogical Society of St. Petersburg, 2 vols.

presented by Charles Cramer, Esq., committed to him at the last meeting.

He noticed the octahedrons of Rutile ; the account of the large, well known slab of Labradorite in the possession of the Duke of Devonshire ; mentioned the history of the Sancy diamond ; and explained the magnificent colored plates contained in this work, of the Siberian Emeralds in the Cabinet of the Emperor of Russia, and of the Siberian Chrysoberyl or Alexandrite.

He made observations on the new minerals therein described, viz. Cuboite, Perowskite, Volborthite, (a Vanadate of Copper!) Kammererite, Worthite, and Xenolite. Of this last he exhibited a specimen from Mr. Alger's Cabinet, which he believed to agree, both in external physical characters, and in chemical composition, with Buchholzite, of which he also showed a small specimen, but especially with the Buchholzite of Chester, Penn., the constituents of which, according to Thompson's analysis, are : Alum : 52. 92 ; silica, 46. 40, with a trace of iron. He also pointed out the new localities mentioned in the works of Uwarowite, Malachite and Pyrophyllite. This last mineral he believed to be identical with the Vermiculite from Millbury, of which he produced a specimen, and exhibited its remarkable, and hitherto uninvestigated character of sudden and enormous increase of bulk under the influence of heat. Hermann's account of Pyrophyllite from its original locality states the color to be a greenish hue. In the new locality mentioned in these Transactions, it is stated to be of a Tombac brown ; consisting of shining, micaceous-like scales ; in which characters, as well as in those before the blowpipe, it also completely coincides with Vermiculite, which has not yet been analyzed. The Pyrophyllite, being found in the Emerald district of the Ural mountains, Mr. T. suggested the plausibility of this precious stone being found in the Vermiculite locality of Millbury.

He mentioned the account of the quantity of gold and platina collected in Russia during sixteen years ; noticed the very interesting paper on the gold and platina washings of the Ural chain, as well as that of the mineralogical tour in this district ; the paper on the various Manganesian Minerals, and on the Crustacean and other Fossils found in the neighborhood of St. Petersburg ; and finally characterized these Transactions as being of exceeding interest

and value to Mineralogists and Geologists, particularly in this country.

Dr. Gould remarked briefly on a late publication, by Professor Gray, of the Scientific Correspondence of Cadwallader Colden, with Gronovius, Collinson, Linnæus and others.

Dr. Wyman exhibited the anal pouches of the skunk, (*Mephitis Americana*), in which is secreted the offensive fluid which the animal ejects as a means of defence.

They consist of two glandular sacs of an oval shape, about three quarters of an inch in diameter, covered with a muscular envelope, and opening into the rectum, quite near to the anus, by two papillæ. These last, when not protruded, are surrounded by a fold of mucous membrane, and very nearly concealed by it. The fluid is ejected by the contractions of the muscular covering. A small band passes from each sac to the ischium, which rotates these bodies on themselves, and serves to bring their orifices to the anus. The fluid is a peculiar secretion like that of the Civet, and not the urine, as is commonly thought. The common opinion, that the animal scatters it with its tail is erroneous. The fluid is limited in quantity; and, having been discharged, the animal is harmless until the sacs are again filled by gradual secretion.

Dr. C. T. Jackson read a detailed notice of pamphlets sent to the Society by M. Elie de Beaumont, containing his instructions to the Geologists of the French Voyage of Discovery in the North of Europe, and an Abstract of the Results of the Expedition. He also remarked upon a pamphlet entitled, "Remarks on the Anthracites of the Alps by Alphonse Favre, Jan. 21, 1841."

ADDITIONS TO THE CABINET.

A letter was read from Dr. F. W. Cragin, dated Paramaribo, February 3, 1843, announcing his having sent to the Society 12 jars of reptiles and other specimens.

On motion of Dr. Binney, the thanks of the Society were voted to Dr. Cragin for this renewed instance of his friendliness and liberality. The articles sent were committed to Drs. J. Wyman,

J. B. S. Jackson and Abbot, to each such as fall within their respective departments.

ADDITIONS TO THE LIBRARY.

Voyages en Scandinavie, &c. Observations sur le Phénomène Diluvien dans le Nord de l'Europe, par MM. A. Brongniart et Elie de Beaumont. 8vo. pam. Paris, 1840. *From the Authors.*

Annual Report of the Superintendent of Salt Springs in Onondaga Co. New York. 8vo. pam. 1843. *From Rev. J. P. B. Storer.*

Schriften der Russischen Kaiserl. Mineralog. Gesellschaft. 8vo. 2. St. Petersburg, 1842. *From the Imperial Mineralogical Soc'y.*

Transactions of the Literary and Historical Society of Quebec, Vol. IV. Part I. 8vo. 1843.

Report of the Council of the Lit. and Hist. Society of Quebec, for the year ending January, 1843. 8vo. pam. *From the Society.*

Silliman's American Journal of Science, Vol. XLIV. No. 2. *From the Editors.*

April 19, 1843.

Regular meeting—the President in the Chair.

A letter from Rev. Rufus Anderson, Secretary of the American Board of Commissioners for Foreign Missions, addressed to Dr. Gould, was read, enclosing a copy of a letter from Rev. Dwight Baldwin, M. D. dated Lahaina, Maui, one of the Sandwich islands.

Accompanying Dr. B.'s letter were four roots of the Taro, one bunch of Bananas, two ripe Breadfruits, and a considerable number of the nuts of the Candle Tree; also, some leaves and flowers of the latter, and leaves of the Taro and Breadfruit. Dr. Anderson presents to the Society the above-named specimens, reserving a specimen of each for the museum of the A. B. C. F. M.

On motion of Dr. Gould, the thanks of the Society were voted to the A. B. C. F. M. for this valuable donation. The specimens were committed to Mr. Teschemacher.

Mr. Bouvé communicated a letter from Rev. Gordon Winslow, dated Annapolis, Md. March 27th, accompanying a box of Minerals and Shells, recent and fossil, from that locality, and promising future contributions. Thanks were voted to Mr. W. for these specimens.

Dr. S. L. Abbot communicated a note from Dr. Cotting, accompanying a donation of a suite of Fossil Shells, illustrative of the supercretaceous strata of Europe, arranged, ticketed and catalogued by Dr. C. according to specimens in the cabinet of the Lowell Institute, labelled by Mr. Lyell. The thanks of the Society were voted to the donor.

The President laid on the table a Lycopodiaceous plant, from Mexico, presented by J. J. Dixwell, Esq.

Dr. Gould presented a number of Fossil Shells from the vicinity of Darien, Georgia, sent to him by Mr. Couper of that place.

ADDITIONS TO THE LIBRARY.

Annals and Magazine of Zoology and Botany for April, 1843.
Courtis Fund.

Proceedings of the American Philosophical Society, Vol. II. No. 25. Philadelphia. 1843.

Transactions of the American Philosophical Society, Vol. VIII. Part 3. 4to. 1843. *From the Society.*

Entomologists' Useful Compendium. By Geo. Samouelle. 12mo. Lond. 1819. *Exchange.*

May 4, 1843.

In consequence of the absence of many of the officers and active members to attend the meeting of the Association of American Geologists and Naturalists, at Albany, it was Voted, to postpone the business of the annual meeting until the next regular meeting.

Annual Meeting, May 17, 1843.

The President in the Chair.

The President read a paper, embodying the Reports of the Curators, the Librarian and the Treasurer, for the past year.

The Curator of Comparative Anatomy reports, that the general condition of the specimens in his department is good.

Valuable donations have been received from Drs. Savage, W. Lewis, Jr., D. H. Storer, F. W. Cragin, J. B. S. Jackson, N. B. Shurtleff, and Capt. Cook, of Provincetown.

The Curator of Herpetology reports the favorable state and regular increase of his department, and mentions in a recent donation from Dr. F. W. Cragin, of Surinam, the tadpole of the *Rana paradoxa* or *Jakia*, the largest tadpole known; which in this state is much larger than when adult.

The Curator of Ichthyology reports, that he has been able to obtain, since the last annual meeting, specimens of *Argyrosus*, of a *Mustelus*, of an *Esox*, and of a *Monocanthus* new to our Fauna, and a species of *Torpedo* which is new to science. "This last discovery," he says, "is exceedingly gratifying to me. It is the only specimen which has fallen into the hands of a naturalist. I have called it *Torpedo occidentalis*."

Donations have been made to this department during the past year by Dr. F. W. Cragin, of Surinam, Mr. J. G. Anthony, of Cincinnati, Mr. Olmsted, of E. Hartford, Conn., Mr. Horatio Leonard, of New Bedford, Dr. Leland, Dr. Toomey, of Chelsea, and Mr. W. T. Reynolds.

The Curator of Ornithology reports:

"During the past year, the additions to the collection of birds has been as follows, viz.: To the number of mounted birds of Massachusetts 66 specimens, comprising 56 species, the duplicates

being different in sex from the others—making the whole number of mounted birds of our State, in our possession, 172, including 131 species. We have had donations of foreign bird-skins, unmounted, to the number of 147—making the whole increase, in this department, during the past year, 213. Our whole collection consists of 753 specimens. The most important donations, since the last annual meeting, have been from Dr. F. W. Cragin, of Surinam, and Mr. W. T. Reynolds, of this city.”

Valuable donations in the department of Entomology have been made by Dr. Savage, of Cape Palmas, and Dr. Yale, of Martha's Vineyard.

The Curator of Conchology reports the addition, during the past year, to the catalogue, of 84 species :

Nine species from Brazil, presented by the Curator ; 7 from Greece, by Rev. Dr. Robertson ; 8 from the Sandwich Islands, by Mr. J. J. Jarves ; 17 from Santa Cruz, by R. E. Griffiths, Esq., of Maryland ; 24 from the Feejee Islands, by T. J. Whittemore, Esq. ; 5 from the Philippine Islands, by Dr. J. C. Jay, of New York. The remainder were contributed by Messrs. E. R. Mayo, J. P. Couthouy, A. Binney, D. H. Storer, Dr. Cabot, and the American Board of Commissioners for Foreign Missions.

The names of about 120 species have been ascertained and labels attached.

The Curator of Botany reports few additions in his department during the year past. The most valuable were presented by the American Board of Commissioners for Foreign Missions.

The Curator of Geology reports :

That at the commencement of the year, the collection under his charge consisted of not far from 600 specimens. Donations have been received from Prof. Locke, of Cincinnati, Dr. Cotting, Dr. Gould, Prof. Emmons and Rev. G. Winslow. A few valuable specimens have been purchased. The Geological Cabinet now consists of about 1000 specimens, of which about 200 are Silurian, 50 Carboniferous, 25 new red sandstone, 50 Cretaceous, nearly 500 Tertiary, 50 of unstratified rocks, lavas, &c., and the remain-

der yet undetermined. A few days prior to our last annual meeting, the State collection, deposited in the hall of the Society and under the charge of the Geological Curator, was increased by the reception of about 1100 new specimens, collected by Prof. Hitchcock in his re-survey of the State. These have been added to the rest of the collection, in the order corresponding to the full catalogue annexed to the Professor's final report.

In addition to the donations abovementioned, Fossils have been received from Signor Michelotti; specimens of slate, with dendritic markings, from the late William Pratt, Jr. Esq.; and other specimens, from Mr. A. Ward, Mr. Couper, of Darien, Ga., and Dr. John Randall, of this city.

No report from the Curator of Mineralogy, who is absent in Europe, was prepared.

The Librarian reports the addition, by donations and exchange, during the past year, of 105 vols. and 55 pamphlets, making the library to consist in all of 1071 vols. and 250 pamphlets. He has also 50 copies of each of the Legislative Reports of Messrs. Storer, Dewey, Harris and Gould, on the Natural History of Massachusetts, presented by a resolve of the Legislature.

The donors to the Library, during the past year, have been Messrs. S. G. Morton, J. J. Audubon, John Bachman, Henry Colman, J. P. Couthouy, R. I. Murchison, Benjamin Silliman, J. G. Palfrey, B. D. Greene, S. S. Haldeman, G. Michelotti, Asa Gray, Charles Cramer, J. E. Teschemacher, J. W. Bailey, T. W. Harris, W. C. Redfield, G. B. Emerson, C. T. Jackson, J. G. Percival, Thomas Lee and Edward Doubleday.

The Treasurer reports the

Current expenses of the Society for the past year,	-	\$656	38
Excess of expenditure over income last year,	-	75	07
			<hr/>
		731	45
To meet which there has been no other source of income			
than that arising from fees of members,	-	473	00
			<hr/>
Leaving deficit on this account of	-	\$258	45

Balance of the Curtis fund and income this year, -	816 00
Expenditures charged to this account, - - -	512 47
	<hr/>
Balance in favor of the Society on this account, -	<u>\$303 53</u>

The meetings of the Society, though less numerous than usual, being only 22, have not often been wanting in interest. Many valuable communications have been received and read. Some of these have already appeared, and others may be expected in the Society's Journal. More than sixty reports of greater or less length, and all interesting, have been made by the active members of the Society.

Of these, 18 have been upon subjects of Comparative Anatomy, 6 upon Ichthyology, 12 upon Ornithology, besides notices of prepared specimens, 13 upon Conchology, 5 upon Botany, 6 upon Geology and Mineralogy, and several upon Books.

Then followed the Annual Address, from Dr. J. Wyman, a learned and interesting discourse on the progress of Science in the various branches of Natural History during the past year.

At the close of the Address, it was *Voted*, "That the thanks of the Society be presented to Dr. Jeffries Wyman, for his interesting and instructive Address, and that a copy be requested for publication."

The Committee for the nomination of Officers, for the ensuing year, announced that G. B. Emerson, Esq., who has filled the office of President, and E. S. Dixwell, Esq., who has been Corresponding Secretary, each for the term of six years, have severally declined a reëlection to those offices.

The Society then proceeded to the election of Officers, for the ensuing year, and the following gentlemen were unanimously chosen :

President.

Amos Binney, Esq.

Vice Presidents.

Charles T. Jackson, M. D.

D. Humphreys Storer, M. D.

*Secretaries.*Augustus A. Gould, *Corresponding Sec.*Thomas Bulfinch, *Recording Sec.**Treasurer.*

John James Dixwell.

*Curators.*J. E. Teschemacher, *Botany.*T. William Harris, M. D., *Entomology.*Jeffries Wyman, M. D., *Ichthyol. and Herpetol.*Andrew E. Belknap, Esq., *Conchology.*Martin Gay, M. D., *Mineralogy.*Thomas T. Bouvé, *Geology.*Samuel L. Abbot, M. D., *Ornithology.*Nathaniel B. Shurtleff, M. D., *Compar. Anat.**Librarian.*

Charles K. Dillaway.

Cabinet Keeper.

Henry Bryant.

 June 7, 1843.

Regular meeting—Vice President, D. H. Storer, in the Chair.

Dr. Gould presented a paper entitled "A Catalogue of the Marine, Fluvial, and Terrestrial Shells of the State of Maine and adjacent Ocean," by J. W. Mighels, M. D., Portland, March, 1843.

The paper contains many valuable remarks on the habits and distribution of species. The whole number of species enumerated is 228, belonging to 81 genera—besides 3 fossil species, *Nucula Portlandica*, *N. antiqua* and *Bulla occulta*, he gives 37 species not yet found in Massachusetts or its waters, most of which had been recently discovered and described by himself. Among them he enumerates *Solen Caribæus*, *Terebra dislocata* and *Arca*—species of a much more southern habitat. Dr. M. thinks their presence on the coast of Maine is accounted for by the fact that a southerly current sets upon it during a part of the year. Dr. M. considers the shell formerly described by him as *Pecten tenuistriatus*, the young of *P. Magellanicus*, and *Chiton fulminatus* Couth. as identical with *C. lavigatus* Fleming.

Dr. Gould also read extracts from a paper lately received by him from Rev. Francis Mason, Missionary in British Burmah and a Corresponding Member of the Society.

It gave an account of the geographical, botanical and geological features of Tavoy and Mergui, accompanied by a map, and specimens of the rocks; the principal of which are Granite, Sandstone, Clay Porphyry, Clay Slate, Chlorite Slate, Mica Slate, Limestone with veins of Trap, and Lignite. He mentions isolated masses of mural, mountain limestone, in one instance several hundred feet high, abounding with cylindrical pits a few feet in diameter, of unknown depth; which Mr. M. thinks may resemble the wells described by Mr. Murchison in the limestone of Wales. A series of Hot Springs runs parallel with the slate strata, and they are always found near the junction of the slate with the granite, or in the granite itself. The hottest of the springs mentioned by Mr. M. is at Pai, among granite rocks, through which water bubbles up, at a temperature of 198° Fahr. The water of all of them is free from sulphurous smell, and no mineral has yet been detected in solution. One, however, at the junction of slate with a trap dyke, is strongly impregnated with sulphuretted Hydrogen.

Sometimes the sides of the hills and the ravines between them are covered with diluvial and alluvial pebbles, among which Tin is found, but never at a greater depth than 8 or 10 feet below the surface. The principal deposit of Tin is evidently in the rocks of the neighboring mountains.

The notes upon botanical subjects are full and interesting. Among other observations, Mr. M. thinks he has discovered the tree which furnishes the Siam Gamboge, a point hitherto undetermined. He has no doubt that it is the *Garcinia pictoria* of Roxburgh. He mentions several other trees which afford a yellow resin of inferior quality, more or less resembling Gamboge, and also several trees which afford Kino, or a gum resembling it. The paper was referred to the Publishing Committee.

Dr. Wyman exhibited the prepared sternum of a male Trumpeter Swan, (*Cygnus buccinator*.)

The keel of this bone contains a remarkable cavity, extending its whole length, designed to receive the trachea, which traverses it from top to bottom, and then is folded upon itself, and returns by the opening at the top into the chest. It only exists in the male.

Dr. Abbot exhibited the nest and eggs of the Northern Humming-Bird, (*Trochilus colubris*.)

Mr. Snelling laid on the table a Catalogue of Seeds brought home by the Exploring Expedition, furnished him by Capt. Wilkes. He offered selections from them to gentlemen desirous of attempting their cultivation.

ADDITIONS TO THE CABINET.

Four jars of Fishes and Reptiles from Calcutta, from *J. L. Dimmock, Esq.*

Two jars of Reptiles and Fishes, from California, from *Dr. N. B. Shurtleff*.

A Ray, (*Raia ocellata*) from *Rev. Mr. Linsley, of Stratford, Conn.*

A seed vessel, from *R. B. Lincoln, Esq.*

ADDITIONS TO THE LIBRARY.

Entomologist, Nos. 12—26. Conducted by *Ed. Newman*. 8vo. London. 1841-2. *Editor*.

Proceedings of Academy of Nat. Sciences at Philadelphia. 8vo. Vol. I., Nos. 24, 25, for March and April, 1843. *Academy of Nat. Sciences*.

Annals and Magazine of Nat. History. Vol. XI., No. 71, for May, 1843. Svo. London. *Courtis Fund.*

Engraved Heads of Joh. Casp. Bauhinus, Casparus Bauhinus, Joan. Bauhinus and Hieron. Bauhinus. *Prof. Asa Gray.*

Fourth Report on the Agriculture of Massachusetts. By Henry Colman. Svo. Boston, 1841. *John A. Bolles.*

Army and Navy Chronicle. Vol. I., No. 20. 1 sheet. Svo. 1843. *National Institute.*

June 21, 1843.

Regular meeting—The President in the Chair.

Dr. Binney, on taking the Chair, returned thanks to the Society for the honor conferred upon him in electing him President.

Dr. D. H. Storer read a paper upon such parts of Dr. De Kay's Report on the Fishes of New York as related to Fishes found in Massachusetts.

Dr. S., after speaking of the great amount of information contained in the work, proceeded to mention some of the defects and errors which he had noticed, confining his remarks to such species as are found also in Massachusetts, and promising promptly to retract any thing which should be shown to be unjust.

Page 16. *Pileoma semifasciatum*. Both the description and figure of this fish place it in the genus *Etheostoma* of Rafinesque.

Page 20. *Boleosoma tessellatum*. Dr. S. read a description of this fish before this Society, in April, 1841, which was published, with a figure, in the Society's Journal, January, 1842, under the name of *Etheostoma Olmstedii*, from its discoverer, Mr. C. H. Olmsted. Personal friendship, as well as the common rules of scientific etiquette, forbid that the scientific name should be thus unceremoniously changed.

Page 32. *Pomotis appendix*. The specific name being derived from a generic character, "opercle with an elongated membrane at its angle," will doubtless be hereafter changed.

Page 61. *Uranidea quiescens*. This is the *Cottus viscosus* of Haldeman.

Page 153. *Gunnellus mucronatus*. Mr. Yarrell, with the American fish before him, pronounces it to "be in every respect so similar to the British Gunnel, (*Muraenoides guttata*) that there is little doubt it is the same species."

Page 162. *Lophius Americanus*. Until some one has, on comparison, pointed out some differences between our fish and the *L. piscatorius* of Linneus, Pennant and others, we must continue to regard them as identical.

Page 168. *Batrachus tau*. This species cannot be identified with the description while living, because the two lines which form the T only appear in the dried specimen.

Page 174. *Ctenolabrus uni-notatus* is merely a variety of the common Burgall, as may be readily seen in the fish-market.

Page 194. *Labeo gibbosus*, and page 199, *Catostomus tuberculatus*. So far from having claim to be arranged under different genera, Mr. W. O. Ayres, of East Hartford, Conn., has determined that they are not even distinct species.

Page 204. *Stilbe chrysoleucas*. Dr. De Kay has separated this fish from *Leuciscus* and formed a new genus, because he says there is "a short spine before the dorsal fin, which is short. Anal fin long." Klein characterizes the anal fin of *Leuciscus* as "short." Nor has Dr. S. been able to find the vestige of a spine in eleven specimens which he has recently examined. In all other respects it is clearly a *Leuciscus*, and the *L. chrysoleucas*.

Page 216. *Fundulus fasciatus*. This is an *Hydrargira* of Le Sueur. Dr. S. dissents from Dr. De Kay as to the imperfect elaboration of this genus.

Page 233. *Fistularia tabacaria*. The two specimens alluded to as having been obtained by Dr. Smith from Martha's Vineyard, have long been in the possession of the Society. One of these Dr. S. described in his report as the *F. serrata*. The identical specimen was sent to Dr. De Kay, who also described and figured it (p. 232,) as *F. serrata*.

Page 243. *Osmerus viridescens*. In his catalogue, Dr. S. gave this as the *O. eperlanus* of Artedi, on the authority of Cuvier; and he has yet to learn that it is distinct from the European smelt.

Page 244. *Baione fontinalis*. This new genus has been formed upon what was unquestionably a young brook trout. (*Salmo fontinalis*.)

Page 250. *Clupea elongata*. In the description of the herring which has been copied from Dr. Storer's Report, without credit, an error has been unfortunately transferred. Instead of the eyes being "two diameters apart," it should be, "distance between the eyes less than the diameter of the eye."

Page 258. *Alosa tyrannus*. While it is not easy to see why Peck's prior name "*serrata*" is more "absurd and unmeaning" than "*tyrannus*," it is not a little surprising that the very acceptable and appropriate one of Dr. Mitchell, "*vernalis*," was not retained.

Page 269. *Amia occidentalis*. This must be the *Amia calva* of Kirtland, published Nov. 1840, in the Boston Journal of Natural History.

Page 283. *Lota inornata*. Dr. S. read a description of this fish April, 1841, under the name of *Lota brosmiana*, which was published, with a figure, in the Society's Journal, Jan. 1842.

Page 289. *Brosnius vulgaris*. Dr. De Kay is right in regarding this as distinct from the European fish. But when he says that "the Cusk of Storer is uniform dark slate," he overlooks the description of an adult fish on the following page, which reads "the color is brown upon the back, with yellowish sides and white abdomen."

Page 305. *Lumpus Anglorum*. Dr. De Kay says, "the dorsal lump without any vestige of rays; at least I find none in two which I examined," though Dr. S., in the Report which must have been before him, states that the "ridge is formed of distinct rays." A dried specimen was exhibited, in which eight rays were perfectly visible, and could not have escaped a slight dissection.

Page 310. *Anguilla tenuirostris*. The description of this species is admirable; but it is the *Muræna Bostoniensis* of Le Sueur. No other species is ever seen in Boston market, where Le Sueur found his specimen, and named it accordingly.

Page 319. *Syngnathus fasciatus*. This species was described and figured by Dr. S. several years ago, under the name of *S. Peckianus*. A careful comparison of the terms of description will exhibit no differences except as to the length of the head. Dr. S. exhibited several specimens to show the great differences in the proportionate dimensions of the head, rostrum and body.

Page 321. *Syngnathus viridescens*. Already described by

Dr. S. as *S. fuscus*. A mere difference in a shade of color, such as is here noticed, is of no importance as a specific character.

Page 341. *Lactophrys camelinus*. This genus appears to be altogether unnecessary.

Dr. C. T. Jackson reported on a paper committed to him and others for examination, entitled "an Hypothesis to explain, &c. the changes of the surface of the earth." By Charles Stoddard.

Dr. J. considers the theory of paroxysmal elevations of the earth's crust as satisfactorily proved, in opposition to the theory of gradual change proposed by Mr. Lyell, and that it only remains to examine into the *causes* of the paroxysms. Here we have three sets of causes to examine: 1st. the expansion of the internal matter of the globe; 2d. its secular refrigeration; 3d. a change of inclination of the earth's axis. The last is the power appealed to by the author of the paper before us. This hypothesis is eminently popular, for it seems to be illustrated by what we know of the forces acting on a revolving sphere composed of soft and yielding materials. Dr. J. remarks, "he does not know where it originated, but finds it is a common opinion among the people of New Hampshire and Maine, insomuch that he has often heard it advanced as a new theory by many different men."

Viewing the earth as a globe of molten matter, having a comparatively thin crust of solid materials, it is easy to conceive that with each change of axis of the revolving globe the surface would be elevated or depressed, and a force exerted adequate to the rupture of the earth's crust, and sufficient for the elevation of chains of mountains and whole continents at a single operation. The hypothesis, therefore, suggests an adequate cause of the phenomena to be explained.

The thesis under examination, Dr. J. remarks, is an ingenious and well written exposé of this hypothesis. The principal objection to it is, that the author has not shown any cause adequate to produce a change of axis of rotation of the earth. Dr. J. concluded by expressing his wish that the author would continue his researches upon the subject, and by recommending that an abstract of the paper be inserted in the Proceedings of the Society.

Dr. C. T. Jackson made a verbal communication on researches made by himself and Mr. A. A. Hayes, of Rox-

bury, respecting the saline and other ingredients of *Zea mays*, and other grains, exhibiting specimens of seeds to which Mr. Hayes' test of sulphate of copper, for the detection of the limits of the phosphates, had been applied. He also exhibited specimens to which tincture of iodine had been applied, which indicated the extent of the starch in each kind of grain and in several other plants. Mr. Hayes' discovery of the limits of a salt of the peroxide of iron was demonstrated by soaking Indian corn in sulphhydrate of ammonia.

The relative proportions of oil in the different varieties of corn was shewn by sections of the kernel, also the relative proportions of the zeine of Gorham or the gluten of corn. The causes of the peculiar explosion and evolution of the starch and gluten of corn in parching, was explained by the decomposition of the oil in the cells of the transparent portions of the grain.

Dr. Jackson had observed, in April, 1840, while analyzing the ashes of Indian corn, that after combustion of the corn in a platina capsule, at a high temperature, the platina was rendered brittle, and was in part converted into a phosphuret of that metal. On examining into the cause of this, he discovered phosphoric acid united to some volatile or destructible base, mixed with the phosphates of lime and of magnesia.

His subsequent researches satisfied him that the volatile base in question was ammonia, which he separated by the action of potash and lime, at a temperature below that required for charring the grain.

By the action of nitric acid, he burnt out the carbonaceous matter from the ashes of corn, and procured a considerable quantity of glacial phosphoric acid. In all these experiments, thus far, the *whole* grain was employed.

In May, 1842, Mr. A. A. Hayes, of Roxbury, exhibited to the chemical association some specimens of southern corn, which had been cut in two and soaked in a solution of sulphate of copper; and this test most beautifully marked out the limits of the phosphates in that grain. Profiting by this interesting experiment, and observing that the phosphates were indicated only in the *cotyledon* of corn, Dr. Jackson dissected out the cotyledons, analyzed them

separately, and glacial phosphoric acid, phosphate of lime, phosphate of magnesia and ammonia were obtained. The proportions in the ashes of the whole corn was but 1 per ct. of phosphates of lime, magnesia and free phosphoric acid, and a little silica.

The cotyledons taken separately gave 6.4 per ct. of fusible matter, which ran freely when melted. It consisted of

Phos. lime,	-	-	-	2.4
Phos. acid,	-	-	-	3.2
Phos. magnesia,	-	-	-	0.8

He also made an extensive series of researches on other seeds, both of the Monocotyledonous and Dicotyledonous plants, which determined the existence of the phosphates exclusively in their cotyledons. The specimens to which Mr. Hayes' test had been applied, and which were exhibited to the Society, were peas and beans of various kinds, squash and pumpkin seeds, horse chesnuts, the common chesnut, pea-nut, barley, oats, wheat, rye, buckwheat and cocoa-nut; also potatoe tubers and turnip bulbs. In all these the existence of phosphates was demonstrated.

In almonds, walnuts, butternuts, and most oily seeds, the sulphate of copper fails to demonstrate the presence of phosphates.

The application of tincture of iodine proved the presence and limits of starch in the turnip, and in several other plants which were exhibited.

A sample of the hard and transparent portion of Indian corn, from which the oil and zeine had been removed by alcohol and ether, was proved by the iodine test to be starch. It was observed that weak tincture of iodine does not color this portion of the corn until the oil is removed. If strong tincture of iodine is employed, the alcohol removing the oil causes the freed starch to take the blue color.

Beans and peas, consisting mostly of legumine, discovered by Braconnot, do not take a blue color like the starch containing grains, but become dark brown.

Specimens of various germinated and growing plants were also tested before the Society. In the potatoe sprout the starch was traced up into the plumule about half an inch, where it disappeared, and dextrine was present, the starch having undergone a metamorphosis into that substance. Similar experiments were tried on In-

dian corn, which had been grown about two inches high, in pure powdered quartz. The changes which the seed had undergone were quite interesting, and it was seen, by the iodine test, that the starch of the albumen had been absorbed, and was changed in the plumule into dextrine and sugar. The portion of the corn, where the oil exists with starch and gluten, had begun to change, and iodine instantly forms a blue compound with the starch. On applying the sulphate of copper, the presence of phosphoric acid in the radicle and plumule, and a little around it, was readily proved.

On testing germinated English beans, the presence of phosphates was demonstrated in the cotyledons, but iodine did not prove the formation of starch from the legumin. The same experiment was performed with the common bean, with the same results. It will be interesting to study the changes which legumin, (a substance now supposed to be identical with caseine,) undergoes in the process of germination. As yet, we know of no chemical researches on its transformations in the living plant.

Dr. J. had observed that cucurbitaceous plants contained nitrate of potash, and had consequently directed its application around the roots of such vines. Observations on such plants grown on nitrous ground, where old barns had been removed, proved the value of that salt as a manure for squashes, pumpkins and melons.

Many important and interesting agricultural principles are to be discovered by investigations similar to these above noticed, but it may not be appropriate to lay any other facts before this Society than such as appertain to Natural History. It is evident that Organography and Physiology may derive much aid from the application of chemical tests to plants and their fruits. The subject is yet in its infancy, and we have much to expect when it shall become more mature.

Dr. Jackson exhibited to the Society a buff-coloured salt of lead, obtained by him, in 1841, from the maple sugar of commerce, by adding to its solution sub-acetate of lead.

This salt is humate of lead, and demonstrates the existence of humic acid in maple sugar, in which it was combined with ammonia and lime. March 18th, 1842.—Having procured some maple sugar made with care at Northampton, he repeated his researches, and discovered in it humic acid, apocrenic acid and crenic acid. These acids were proved to be combined, in part, with ammonia,

which was separated by the action of hydrates of potash and of lime abundantly. Lime was also discovered in combination with crenic acid.

The same researches were made on brown, beet and cane sugars, and the same acids and ammonia were discovered, but in less quantity.

Mr. R. Soule, Jr., while a pupil in Dr. Jackson's Laboratory, made an examination of exhausted bone-black, to ascertain what coloring matters are retained by it. The substances detected confirm the researches of Dr. J. respecting the coloring matters of brown sugar. They were lime, apocrenic acid, crenic acid, humic acid, extract of humus and humin.

These facts were mentioned in his public lectures at the time, and they have been alluded to in the North American Review, in a notice of Prof. Hitchcock's Survey of Massachusetts.

We would call attention to this, because the same discovery has very recently been announced by Herman, of Moscow, and has been noticed in the New England Farmer as a discovery of much interest. The discovery is properly American, and Mr. Herman's researches have, independently, reached the same result, which must be regarded as confirmatory of Dr. J.'s.

He would remark, however, that he has, during the two past seasons, demonstrated, by the analysis of maple sap, that the organic acid which it contains is the *glucic acid*, which is in combination with lime as a biglucate. This is readily converted into crenic, apocrenic and humic acids by heat. Hence its origin in sugar. Specimens of all the substances mentioned in this communication were laid upon the table.

Dr. Jackson remarked, that he had satisfactorily proved, that the gluten of Indian corn, or the zeine of Gorham, contained 5 per ct. of nitrogen, which was naturally overlooked at a time when the means for exactly separating that element were unknown. Corn also contains 6 per ct. of oil.

The following reflections naturally suggest themselves, on considering the ingredients of Indian corn :

1st. The phosphates of lime and of magnesia are essential ingredients of animal bones and of several different fibrous organs.

2d. Phosphate of ammonia exists in the albuminous and fibrous cerebral and nervous matters of animals.

3d. Nitrogen, so essential to animals, which is not absorbed in any other way than by the food received through the digestive organs, exists in the glutinous part of this grain.

4th. Starch, the matter which so readily undergoes transformations into other carbonaceous ingredients, exists in the corn, and is one of the most nutritive ingredients, capable of being converted into fat, or into any other matter having carbon, hydrogen and oxygen for their elements.

5th. The oil of corn is ready formed fat, requiring but little change in the animal economy.

7th. The peroxide of iron of corn, furnishes the red globules of the blood with that important ingredient, the transporter of oxygen, which gives the blood its renovating properties.

These ingredients, common also to other cereal grains, explain to us why they have been justly called the "staff of life."

Analysis of the Raspberry Bush :

Having noticed that the raspberry bush sprung up wherever fields had been burnt over, and also by the side of decomposing stone walls, Dr. J. was led to analyze it, with the expectation of finding an unusual amount of potash.

The following are the results of the analysis of the *Rubus strigosus* : 1000 grains of the dry raspberry bushes were burnt in a platina dish, in a muffle, and the ashes collected in this manner were found to be burnt perfectly free from carbon. The amount of ashes from 1000 grains of the bushes was 16.2 grains, or 1.62 per ct. It was easily melted, and flowed in the capsule. The fused ashes, analyzed in the usual manner, yielded

Silicic acid, - - -	0.25	or per ct.	0.025
Phosphate of Lime,	3.65	"	0.365
Carbonate of Lime,	3.40	"	0.340
Potash, - - - -	5.24	"	0.524
Soda, - - - -	0.50	"	0.050
Ox. Manganese, -	1.00	"	0.100
	<hr/>		<hr/>
	14.04		1.401
Carbonic acid, - -	2.16		
	<hr/>		
	16.20		

Dr. Gould presented, on behalf of Dr. Mighels, a paper, entitled "Descriptions of seven species of shells regarded as new," by J. W. Mighels, M. D., Portland, Me.

ASTARTE PORTLANDICA. A. testâ parvâ, solidâ, per-inequilaterali; umbonibus elevatis, approximatis, recurvis; lunulâ angustatâ; intus lividâ; marginibus simplicibus. Long. 2-5; alt. 9-20; lat. 1-5 poll. Casco Bay.

BULLA PERTENUIS. B. testâ minutâ, cylindraceâ, albidâ, hyalinâ; anfractibus quatuor; spirâ elevatâ; labro supernè recto, infra rotundato; aperturâ supernè angustatâ, infra latâ. Long. 8-100; lat. 4-100 poll. Casco Bay.

LIMNEA AMPLA. L. testâ amplâ, subovatâ; anfractibus quinque, convexis, supernè geniculatis; suturâ valdè impressâ; spirâ brevi; aperturâ latâ; umbilico profundo; columellâ valdè plicatâ. Long. 1.3; alt. 8; lat. 1 poll. *Habitat*, Second Eagle Lake, Maine. N. lat. 47°.

PHASIANELLA SULCOSA. P. testâ minutâ, ovato-conicâ, lævi; anfractibus quatuor subconvexis, transversim sulcatis; suturâ impressâ; aperturâ ovato-oblongâ, intus transversim fasciatâ. Long. 1-10; lat. 1-20 poll. Casco Bay.

MARGARITA MINUTISSIMA. M. testâ minutissimâ, globoso-subovatâ; anfractibus tribus, convexis, longitudinaliter sulcatis; spirâ brevi, obtusâ; suturâ valdè impressâ; aperturâ orbiculari: umbilico magno, profundo. Long. 1-50; lat. circa 1-50 poll. Casco Bay.

DELPHINULA ? COARCTATA. D. testâ parvâ, subdiscoideâ, imperforatâ; anfractibus tribus, convexis, longitudinaliter minutissimè striatis; ultimo anfractu maximo; suturâ canaliculatâ; aperturâ integerrimâ, circulari, intus flavidulâ. Long 1-5; lat. 1-5 poll. Casco Bay.

ADDITIONS TO THE CABINET.

Dr. Gould presented a section of the trunk of a Californian tree, and a gigantic *Aculeus* of some tree from Cuba, committed to Prof. Gray.

Dr. Binney, on behalf of Mr. Anthony, of Cincinnati, presented specimens of *Melania varicosa*.

B. N. Cumings, Esq., presented some specimens of coal plants.

ADDITIONS TO THE LIBRARY.

Haldeman, S. S. Monograph of the Fresh Water Univalve Mollusca. No. 6. 8vo. Pam. Philadelphia. 1843. *Author.*

N. American Review for July. 1843. 8vo. Boston. *By Exchange.*

July 5, 1843.

Regular meeting—Dr. C. T. Jackson, Vice President, in the Chair.

Mr. W. O. Ayres, of E. Hartford, Conn., presented, through Dr. Storer, the following general description of a new species of *Leuciscus*; observing that he should, at some future time, furnish the Society with a detailed account, together with a figure of the species, for publication in the Journal of the Society.

Leuciscus nasutus.—Body elongated, rounded anteriorly, compressed towards the tail. Head destitute of scales, pointed. Mouth small, semicircular, situated beneath the projecting snout. Color above and on the sides, very dark brown; beneath light, almost white. Nostrils anterior to the upper portion of the eye. Lateral line nearly straight. Dorsal and anal fins trapezoidal; dorsal situated posterior to the ventrals. Pectorals and ventrals rounded. Caudal lunate. Length of the largest specimen hitherto obtained, five and a quarter inches. Inhabits rapid streams. Connecticut and Massachusetts.

Dr. Storer remarked that he had lately obtained a flat-fish, which was very rarely taken in our waters, and had not as yet been described. Its specific characters are as follows:

Platessa glabra.—Body perfectly smooth. Color above greyish, mottled with dark brown. Dorsal, anal and caudal fins, reddish yellow, with well-marked, nearly black spots, more or less oval,

differing in their size. The eyes are less prominent than those of the *P. plana*. Between the eyes is a smooth ridge, covered by the common cuticle of the head as far back as the posterior angle of the orbit of the upper eye. From this point it becomes naked and rough, and is continued back to the superior angle of the operculum, where it is much larger than at any other point, and terminates in an obtuse point. The posterior extremities of the ventrals do not reach the anal fin. The teeth are cylindrical, slightly conical at their points. The hyoid bone has numerous blunted teeth. The fin rays are D. 54, P. 9, V. 6, A. 39, C. 16. Inhabits Boston harbor in company with *P. plana*.

Mr. Charles H. Olmsted, of E. Hartford, Conn., presented to the Cabinet, through Dr. Storer, specimens of the *Leuciscus nasutus* and *L. cornutus*, taken by him at Blandford, Hampden Co., Mass.

Dr. Wyman exhibited some microscopic sections of the teeth of the Duck-bill Gar, (*Lepidosteus platyrhinus*,) and of *L. oxyurus*. He pointed out the analogies which exist between the structure of the teeth of the Lepidostei and those of the Labyrinthodonts, described by Prof. Owen, in his Odontography. x

Like those of the Labyrinthodonts they are characterized by processes of the pulp-cavity radiating towards the circumference, and by prolongations of the cementum towards the centre of the tooth, enclosing between them the "dentine." In the Labyrinthodonts the prolongations of cementum are more or less undulating, except in the *L. leptognathus*, where they present almost precisely the conformation met with in the *Lepidosteus oxyurus*. Of the existence of such a structure in fishes, Prof. Owen does not appear to have been aware, since he says, "such a disposition of the external substance may be traced at the base of the teeth of a few fishes, but is more conspicuous in the fang of the Ichthyosaurus." If the sections of the teeth of the Gars be compared with that of the tooth of the Ichthyosaurus, given by Prof. Owen, it will be at once seen, that the former present the same plan, but far more extensively carried out. Other analogies with the Labyrinthodonts

were found in the osteology of the Gars, but of these he proposes to speak in a future communication.

Dr. Abbot laid on the table a mounted specimen of *Numenius Hudsonicus*, Hudsonian Curlew, shot in Chelsea, Mass., in the month of May. This breeds so far north that its nest and eggs are unknown. It is not uncommon here in its northern and southern migrations, flying in small flocks.

Mr. Bouvé presented a specimen of Chalcedony, found by him at Nahant.

This mineral has not been found heretofore in the trap-rocks of this vicinity. Prof. Hitchcock, in his Survey of the Geology of Massachusetts, notes this fact as singular, since Chalcedony is of frequent occurrence in similar rocks, in the western part of the State.

ADDITIONS TO THE LIBRARY.

Wallich, N. *Plantæ Asiaticæ Rariores*. 3 vols. Folio. London. 1830. *J. P. Cushing, Esq.*

Silliman's *Amer. Journal of Science and Arts*. No. 1. Vol. XLV. 8vo. New Haven. 1843. *Editors.*

July 19th, 1843.

Regular meeting—the President in the Chair.

Dr. Gould read a notice of "Monograph of the Fresh-water Univalve Mollusca of the U. S., by S. S. Haldeman. No. 6. Genus *Physa*."

"This number, in its mechanical execution, fully sustains the reputation of the preceding numbers of this beautiful work. The author has seen fit to change the title of the work, for reasons, which would seem insufficient, on account of the perplexity in reference which will ensue. It is very doubtful whether he has succeeded in defining the limits of the very variable species of this genus. In illustration of this, there needs only to be mentioned

the fact, that the animal he has given, is, in truth, the animal of *P. ancillaria*, and not that of *P. heterostropha*, as he states ; at least, of all the specimens of this omnipresent species, which I have observed, I have never seen an animal like that of the figure ; whereas it *is* like the few specimens of *P. ancillaria*, which I have met with, and which is described in the 'Report on the Invertebrata of Mass.,' to be lemon yellow."

At the request of Dr. Gould, Mr. Thomas McCulloch, Jr., of Halifax, Nova Scotia, read a paper "On the importance of Habit, as a guide to accuracy in systematical arrangement ; illustrated in the instance of the *Sylvia petechia* of Wilson and all subsequent writers."

The *S. petechia* differs little in external development from the true *Sylvicolæ*, but, as shown by the evidence of habit, belongs to the small genus *Seiurus* of Swainson. The characteristics of this genus are chiefly indicated by habit ; and these, by the bird above-mentioned, are exhibited quite as forcibly as by either of its congeners. Mr. McCulloch gave in support of his opinion, a minute and interesting detail of the habits of the bird, as observed by himself at various seasons, particularly at the pairing season. He concluded by expressing his regret at the necessity of disturbing, in any case, scientific arrangements which have long been acquiesced in, but, at the same time, his conviction that accuracy, in this instance, requires the change.

On motion of Dr. C. T. Jackson, the thanks of the Society were presented to Mr. McCulloch, for his communication, and a copy was requested for publication in the Journal of the Society.

The President, to whom had been committed a paper entitled "Descriptions of seven species of shells, regarded as new by Dr. J. W. Mighels, of Portland," reported thereon, expressing a doubt whether all the species described by Dr. Mighels, would prove to be new, but recommending the publication of the paper in the Journal.

ADDITIONS TO THE CABINET.

A note was read from Dr. Bass, Librarian of the Boston Athenæum, accompanying a deposite, on behalf of that institution, of the Cranium of an African Elephant, the under jaw of the Hippopotamus, and the horns of a Sicilian ox.

Dr. Gould, on behalf of J. M. Batchelder, of Saco, Me., presented a vertebra and bone of the forearm of a whale, lately found in the Saco river. They were probably recent.

Dr. Gould laid on the table specimens of *Helix*, (*Streptaxis*) *Blandingii* of Lea, and *Nucula recurva*, Conrad, from Africa, presented by Mr. George Perkins.

ADDITIONS TO THE LIBRARY.

D. H. Storer. Description of a New Species of Torpedo. 8vo. Pam. New Haven. 1843. *Author*.

Annals and Magazine of Natural History. Nos. 73, 74, for July. 8vo. Pam. London. 1843. *Courtis Fund*.

Chambaud et Bory de St. Vincent. Nouvelle Flore du Péloponnèse et des Cyclades. Folio. Paris. 1838. *Audubon Fund*.

Reliquiæ Baldwinianæ: Selections from the Correspondence of the late Wm. Baldwin. Compiled by Wm. Darlington. 12mo. Philadelphia. 1843. *Compiler*.

Notices of some works recently published on the Nomenclature of Zoology. By A. A. Gould, M. D. 8vo. Pam. New Haven. 1843. *Author*.

August 2nd, 1843.

Regular meeting—the President in the Chair.

The President announced to the Society the decease of their associate and former Vice-President, the Rev. F. W. P. Greenwood, as follows:—

GENTLEMEN,—It is my painful duty to announce to the Society, the decease of the Reverend Dr. Greenwood, one of its foundation

members, and for several years one of its vice-presidents, which event occurred at an early hour this morning.

Our distinguished associate and friend has been taken from us after a long illness, which has for several years indicated the near approaching termination of his life, and has lately incapacitated him for any active participation in our labors. There are some of us, however, who remember him as he appeared in this place, and who will not soon forget the lively interest which he manifested in our progress, the evident pleasure with which he was wont to listen to the communications which are accustomed to be made here, and the deep love of nature which was impressed upon his natural character, and strengthened by study and reflection. Long may we cherish these recollections, for in him we beheld the pure-minded Christian naturalist; one who, looking beyond the mere utilities, and even the intellectual gratifications of science, saw in the works of nature new reasons for adoring the Author of nature; and whose every advancement in the path of Natural History, increased his devotion and reverence for the Deity.

It is not however my intention to pronounce his eulogy; others will do it in more appropriate terms than I could; but in speaking of his connection with this institution, I may be permitted to say, that no one possessed a taste for the study of natural objects, more refined and cultivated than his; no one could appreciate more correctly the importance of the new views of life and organization constantly opening to us; and no one made a better application of the lessons of piety and humility drawn from them, to his own life and character, than he.

I cannot better close these few remarks, than in wishing that in these respects, each and all of us may keep in view his example.

Dr. Storer proposed the following resolutions, which were unanimously adopted.

“That this Society have learned, with deep regret, the decease of their late distinguished associate, Rev. F. W. P. Greenwood; who had endeared himself to us all by the unblemished purity of his character, no less than by the congeniality of his tastes.”

“That our deep sympathy is extended to the widow and family of our deceased friend, and that, if grateful to their feelings, we will, as a Society, follow his remains to the grave.”

Dr. Storer read a letter from Dr. Andrew Nichols, of Danvers, Mass., accompanying a specimen, which Dr. S. pronounced to be the *Bufo lentiginosus* of Shaw.

Dr. N. has known them more than forty years, by their amative croak, which he describes as "a shrill monotone, continued a second or more, thrice as long and more trilling, in about the same high, falsetto voice, as the *Hylodes Pickeringii*:" and adds, "there is no sound in bog, pond, fen, forest or air, at all like it." Many years ago he happened to see one in the act of uttering the well-known sound. From that time to the present, though he has every season heard them, he has never seen another singing. S. P. Fowler, Esq., of Danvers, captured the specimen now sent, immediately after seeing it sing.

Mr. James Elliot Cabot was unanimously elected a member of the Society.

ADDITIONS TO THE CABINET.

From Rev. J. H. Linsley, of Stratford, Conn., through Dr. Storer,—

<i>Emys terrapin,</i>	<i>Leuciscus atromaculatus.</i>
<i>Hydrargyra ornata,</i>	" <i>pulchellus.</i>
<i>Leuciscus chrysoleucas.</i>	" <i>atronasus.</i>
" <i>cornutus.</i>	Larvæ of <i>Lepidoptera.</i>

ADDITIONS TO THE LIBRARY.

Figures of Molluscous Animals. By Mrs. E. Gray. 8vo. London. Vol. I. *Mrs. Gray.*

List of the Specimens of Mammalia in the Collection of the British Museum. 12mo. London. 1843. *British Museum.*

Gualteri Charletoni Exercitationes de Differentiis et Nominibus Animalium. Fol. 2d ed. Oxoniæ. 1677. *John E. Gray, Esq.*

Prodromus Systematis Naturalis Regni Vegetabilis. Auctore A. P. De Candolle. Part VII. 8vo. 1838. Paris. *Dr. B. D. Greene.*

On motion of Dr. Gould, thanks were voted to Mr. and Mrs. Gray for the above donations.

August 16th, 1843.

Regular meeting—the President in the Chair.

Dr. Binney presented, on behalf of Mr. J. G. Anthony, of Cincinnati, Ohio, two specimens of *Unio*, viz.: *U. Sayi*, and *U. siliquoides*: also, on behalf of Mr. S. S. Halde-
man, “*Indice d’ Ittiologia Siciliana.*”

Dr. Gould announced the arrival of Dr. F. W. Cragin from Surinam, with numerous contributions to the Cabinet, procured at the expense of much labor and money, and proposed that suitable acknowledgments be made for the same.

Dr. Storer enforced the suggestion: and it was voted, that the thanks of the Society be rendered to Dr. Cragin for this and former instances of his liberality and coöperation, and that the Corresponding Secretary communicate fully to him our sense of obligation.

ADDITIONS TO THE LIBRARY.

Geological History of Manhattan, or New York Island. By Issachar Cozzens, Jr. 8vo. N. Y. 1843. *Author.*

Annals and Magazine of Nat. History. No. 75, for Aug. 1843. 8vo. London. *Courtis Fund.*

Audubon’s Quadrapeds of America. Nos. 1 to 15. Folio. 1843. *Subscribers*:—N. I. Bowditch, Geo. B. Emerson, Amos A. Lawrence, Amos Binney, G. C. Shattuck, Jr., John A. Lowell, George Parkman, Wm. Sturgis, F. C. Gray, J. J. Dixwell.

September 6th, 1843.

Regular meeting—Dr. C. T. Jackson, Vice-President, in the Chair.

Dr. Gould stated, that since the publication on the cover of the Journal, Vol. IV., No. 1, of the specific characters of

some shells supposed to be new, he had ascertained that the following had been previously described, viz. :

Helix penicillata is said to be the young *H. gilvus*, Fer.

Helicina glabra is *H. nitida*, Pfeiffer.

Pupa carinata is the young of *P. procera*, Gould.

Siphonostoma lituus, is *Cylindrella elegans*, Pfeif.

Cyclostoma clathratum is *C. rugulosum*, Pfeif.

Cyclostoma Mahogani is *C. Sagra*, D'Orbigny, and *C. pictum*, Pfeif.

Cyclostoma bicolor is *C. auriculatum*, D'Orb.

The following do not appear to have been elsewhere described, viz. :

SIPHONOSTOMA PORRECTUM. Testâ gracillimâ, fusiformi, glabrâ, pellucidâ, maculis lacteis subquadratis obscure tessellatâ; anfractibus ad 24, ultimo disjuncto et valdè porrecto; aperturâ campanulatâ, subquadratâ, peristomate albo, reflexo. Long. 3-5; lat. 7-100 poll. Habitat, Cuba.

CYCLOSTOMA CATENATUM. Testâ conico-turritâ, fulvo-viridescente; anfractibus quinque convexis, striis elevatis volventibus, fusco articulatis; aperturâ sub-orbiculari, anfractu penultimo disjuncto; peristomate reflexo, posticè dentato; operculo albo, calcareo. Long. 1-2; lat. 2-5 poll. Habitat, Cuba.

CONUS CASTRENSIS. C. testâ lævi, conicâ, anticè admodum constrictâ; spirâ planulatâ, apice mamillatâ, flammulis radiantibus castaneis notatâ; anfractibus 10, supra concavis, ultimo colore albo, lineis et maculis angulatis castaneis reticulatâ; basi castaneâ. Long. 3: lat. 1 1-2 poll. Habitat, (—— ?)

Dr. Gould also presented the conclusion of his "Monograph of the Pupadæ of the United States," which treated of the following species, viz. : *P. ovata*, *modesta*, *Gouldii*, *pentodon*, *Tappaniana*, *rupicola* and *fallax*; to which he added descriptions of two foreign species, viz. :

PUPA SERVILIS. Testâ parvâ, ovato-oblongatâ, glabrâ, rufescente, umbilicatâ; anfractibus quinque convexis; aperturâ semi-ellipticâ, dentibus quinque armatâ, quorum unus contortus posticè affixus, unus ad basin, duo ad labium; labro reflexo. Long. 1-10; lat.

1-20 poll. Inhabits Cuba and Santa Cruz, and is closely allied to *P. rupicola*, Say.

PUPA LYRATA. Testâ parvâ, plerumque sinistrorsâ, castaneâ, latè umbilicatâ ; anfr. 5 convexis, costulis flexuosis ad 20 concinnè clathratis ; aperturâ sub-orbiculari, campanulatâ ; posticè dentibus duobus lamellosis, in faucibus duobus aliis armatâ. Long. 22-200 ; lat. 13-200 poll. Inhabits one of the Sandwich Islands.

Dr. Gould had examined the shells not long since announced as having been received from the Rev. Francis Mason, missionary at Tavoy, in British Burmah. The collection proves to be highly interesting ; a large proportion of the shells appearing to be hitherto undescribed, some of which he proceeded to characterize, viz.

HELIX PROCUMBENS. Testâ discoideâ, supra planulatâ, subtus convexâ, epidermide pallidè corneâ, latè umbilicatâ ; anfr. quatuor, ultimo deflecto ; aperturâ rotundatâ, labro reflexo, albo. Diam. 3-4 ; alt. 1-4 poll.

Belongs to the group of which *H. planulata* is the type.

HELIX INFRENDENS. T. orbiculatâ, depresso-conoideâ, corneo-virescente, subcarinatâ, supra rugosè striatâ, infra glabrâ, nitidâ, regione umbilicali indentatâ ; anfr. 7 convexis, suturâ impressâ ; aperturâ coarctatâ, labro vix reflexo, dentibus tribus pliciformibus instructâ. Diam. 2-5 ; alt. 1-5 poll.

Very closely allied to *H. Rangiana*, Fer.

HELIX (Caracolla) GABATA. Testâ albido-corneâ, supra planulata, infra valdè convexâ, latâ et profundè umbilicatâ ; anfr. 4 1-2, leviter striatis, ultimo carinâ castaneâ circumdato ; aperturâ subquadratâ, labro albo, reflexo. Diam. 4-5 ; alt. 7-20 poll.

Much like *H. scabriuscula* in form and aperture, but quite different as to surface, color, and umbilicus.

HELIX (Caracolla) RETRORSA. Testâ orbiculatâ, sinistrorsâ, utrinque convexâ, pallidè castaneâ, arcetè umbilicatâ ; anfr. 5, lineis longitudinalibus et volventibus minutè rugosis, ultimo carinato ; aperturâ rotundatâ, labro acuto. Lat. 1 3-4 ; alt. 1 poll.

Young specimens might be confounded with *H. Himalana*, Lea, which is much more rounded, the surface smoother, the carina quite indistinct, and the umbilicus smaller.

HELIX (Caracolla) ANCEPS. Testâ lenticulari, pallidè corneâ

acutè carinatâ, supra striatâ, subtus nitidâ, vix perforatâ ; anfr. 6, suprâ planulatis, suturâ submarginatâ ; aperturâ lunulari, labro simplici, angulatâ. Diam. 7-10 ; alt. 7-20 poll.

In general form, color and sculpture it resembles *H. acies*, Fer., but is much smaller and not umbilicated.

VITRINA PRÆSTANS. Testâ depressâ, fragili, nitidâ, stramineâ ; anfr. tribus, striis incrementi et striis volventibus reticulatis ; aperturâ sub-coarctatâ. Lat. 4-5 ; alt. 2-5 poll.

The largest species yet described.

BULIMUS ATRICALLOSUS. Testâ solidâ, imperforatâ, oblongo-ovatâ, vix striatâ, sulphureâ ; anfr. 7 convexiusculis, ad suturam constrictis ; aperturâ lunato-ovali, basi sub-effusâ, labro albo, reflexo, marginibus callo atro junctis. Long. 2 1-3 ; lat. 1 poll.

Allied to *B. vittatus*, *Dryas*, &c., from Philippine Is. The colors of the aperture are distributed as in *B. iostoma*.

CLAUSILIA INSIGNIS. Testâ fusiformi, sinistrorsâ, solidâ, castaneâ ; anfr. 9 convexis, leviter striatis ; aperturâ purpureâ, rotundatâ, lamellis duabus fortibus posticè, quinque tenuibus, per testam apparentibus, intus instructâ ; labro valde reflexo. Long. 1 ; lat. 1-5 poll.

Allied to *C. Macarana*, and is the largest and most ponderous species known.

CYCLOSTOMA FERNOBILIS. Testâ depresso-conicâ, apice acutâ, latè umbilicatâ ; anfr. 6 subdepressis, striis incrementi conspicuis et striis volventibus rugulosis, ultimo carinâ costali albidâ cincto ; aperturâ magnâ, intus cærulescente, labro crasso, expanso, vividè sanguineo : coloribus piceis et lutescentibus supernè variè nubeculatâ ; infra albidâ, lineis piceis volventibus interruptâ. Alt. 1 ; lat. 2 poll.

This superb species closely resembles *C. involvulus*, Sowb.

CYCLOSTOMA SECTILABRUM. Testâ turritâ, spirâ acuminatâ, arcuè umbilicatâ, brunneâ ; anfract. 8 sub-ventricosus, vix striatis, penultimo sub-gibbo ; aperturâ sub-orbiculari, intus rubescente, peritremate duplici, incrassato, albo, propè angulum posticum canali parvo interruptâ. Alt. 1 ; lat. 2-5 poll.

Resembles *C. altum*, Sowb., but has the fissure of the peritreme on the opposite side. *C. croceum*, Sowb., may be a faded specimen of this shell.

UNIO TAVOYENSIS. Testâ rotundatâ, solidâ, sub-equilaterali,

fuscâ, posticè dilatâtâ, sub-angulatâ ; umbonibus elevatis, unâ cum latere postico corrugatis ; dentibus cardinalibus pyramidatis, lateralibus flexuosis : impressionibus musculorum profundis ; margaritâ albido-incarnatâ. Long. 2 ; alt. 1 1-2 ; lat. 4-5 poll.

Closely allied to *U. corrugata*, Lam., which is less rounded and less corrugated.

UNIO CRISPATA. Testâ ovali-elongatâ, inequilaterali, anticè rotundatâ, posticè subrostratâ, costâque umbonali ; umbonibus parvis ; colore virescente, fusco variegatâ ; rugis angulatis radiantibus undique crispatâ : intus lividâ ; dentibus parvis obtusis. Long. 1 7-10 ; alt. 9-10 ; lat. 1-2 poll.

UNIO FOLIACEA. Testâ parvâ, compressâ, fragili, fusco-virescente, inequilaterali, transversè oblongo-ovatâ, posticè sub-angulatâ ; umbonibus parvis, subtilissimè corrugatis ; dentibus exilibus, rectis, ad marginem parallelis ; margaritâ lividâ, iridescente. Long. 1 3-5 ; lat. 1-2 ; alt. 9-10 poll.

Closely allied to *U. Bengalensis* and *Corrianus* Lea.

UNIO EXOLESCENS. Testâ transverso-oblongatâ, inequilaterali, sub-compressâ, fusco-virescente ; posticè dilatâtâ, sub-biangulatâ ; umbonibus sub-elevatis ; dentibus cardinalibus parvis, obliquis, interdum exoletis ; lateralibus remotis, rectis ; margaritâ lividâ vel ferrugineâ. Long. 2 3-4 ; alt. 1 1-4 ; lat. 3-5 poll.

In form and color resembles some stunted varieties of *U. complanatus*.

Dr. J. B. S. Jackson stated that the female Chimpanzee, which had lately been exhibited at the Boston Museum, having died, the internal organs had been obtained for the Society.

ADDITIONS TO THE LIBRARY.

Linsley, J. H. Catalogue of the Birds of Connecticut. Pam. 8vo. *Author*.

Proceedings of the Academy of Nat. Sciences, at Philadelphia. Nos. 26—29. 8vo. Pam. *Academy of Natural Sciences*.

September 20th, 1843.

Regular meeting—the President in the Chair.

Dr. Binney read a paper “On the influence of physical causes on the geographical distribution of the genera and species of terrestrial mollusks of the United States.”

In this paper the author first gave a concise description of the great geographical divisions of the territory of the United States, which he divided into the three distinct regions, viz.

1. The Pacific Region,—that lying between the Pacific Ocean and the Rocky Mountains.
2. The Central Region,—that between the Rocky Mountains and the Alleghany Mountains, including the whole country watered by the Mississippi River and its tributaries.
3. The Atlantic Region,—lying between the Alleghany Mountains and the Atlantic Ocean.

He then discussed the question, whether *merely geographical* features exercised any influence on the distribution of the terrestrial mollusks, and arrived at the conclusion, that unless combined with climatal causes, they offered scarcely any obstacle to their extension. The Rocky Mountains, rising above the limits of perpetual frost and snow, were considered to form an impenetrable barrier; while the Alleghany Mountains, of moderate elevation, and covered to their summits with forests, were traversed in every direction by these animals, so that the same species are for the most part found on both sides of them. Hence he inferred that the country west of the Rocky Mountains, constitutes a distinct zoological region, and the country between these mountains and the Atlantic Ocean another.

The other causes considered were the following:—Climate, Elevation, Geological Structure, Vegetation, Humidity and Dryness, which were classed as primary and constant causes; and Inundations, Fires, Agriculture, Increase of Domestic Animals, Proximity of the Sea, Commercial intercourse with Europe, Excessive Heat or Cold of particular seasons, and Oceanic currents, which were set down as accidental or secondary causes. After

stating the effects of these, the author proceeded to suggest, as the result of his observation, that the facts known in relation to the subject, would authorize the belief that the country is divided (so far as concerns these animals,) into several distinct zoological sections, each more or less perfectly defined, and each inhabited by certain species peculiar to itself. These he indicated as follows:—

Sect. 1.—The peninsula of Florida.

Sect. 2.—The Alluvial Region of the southern Atlantic coast and of the Gulf of Mexico.

Sect. 3.—The Southern Inland Section, comprising the territory between the preceding and the river Ohio, and the State of Virginia.

Sect. 4.—The Southern Inland Section, lying between the Ohio River and the great Lakes, and embracing the middle Atlantic States and a part of New England.

Sect. 5.—The Northwestern Section, west and northwest of the great Lakes.

Sect. 6.—The Northeastern Section, between the river St. Lawrence and the Atlantic Ocean.

The physical features of each of these sections, were described, and catalogues of the species inhabiting each were given,—and the author concluded with some general remarks concerning the introduction of foreign species.

ADDITIONS TO THE CABINET.

Dr. Gould presented, on behalf of Dr. Wright, of the U. S. Navy, a skull of *Diomedea exulans*, Wandering Albatross, from Van Dieman's Land; also a skin of a *Galeopithecus*, from Manilla?

From Mr. Brazer, Fossils from Alabama, consisting of Shark's teeth, and a fragment of the Jaw-bone of a reptile, with teeth, from the marl of Alabama river. Three consecutive vertebræ of a Saurian, from Lowndes Co., Ala.; Encrinites from Prairie Bluff, on Alabama river, and a Coprolite. Also valves of Unio.

ADDITIONS TO THE LIBRARY.

Annals and Magazine of Nat. History. No. 76, for Sept. Svo. Pam. London. 1843. *Curtis Fund.*

Proceedings of the Zoological Society of London. Part X. Svo. 1842. *Zoolog. Soc.*

Reports of the Council and Auditors of the same. Svo. Pam. 1843.

N. A. Review for Oct. 1843. Svo. Boston. *Exchange.*

October 4th, 1843.

Regular meeting—Dr. C. T. Jackson, Vice President, in the Chair.

Dr. Gould continued his account of the Shells from Burmah, received from the Rev. Mr. Mason.

PALUDINA DOLIARIS. Testâ tenui, conico-globosâ, luteo-viridescente, arctissimè umbilicatâ ; anfract. 5 ventricosi, striis minutissimis reticulatis, costulis numerosis inequalibus, purpureis, cinctis ; aperturâ sub-circulari ; columellâ reflexâ, non appressâ, albâ ; labiis posticè disjunctis. Long. 11-10 ; lat. 9-10 poll.

Differs from *P. Burroughiana* and *elongata* in form and aperture ; but is nearly allied to *P. subcostata*, Griffith's Cuvier.

PALUDINA PETROSA. Testâ solidâ, imperforatâ, subglobosâ, apice erosâ, saturatè viridi, rufo fasciatâ ; anfract. 3, ultimo amplo, suturâ præcipuè marginatâ ; aperturâ semi-circulari, columellâ latè planulatâ, rufescente ; intus nigrescente vel holosericâ ; operculo apice subcentrali, elementis concentricis.

Resembles *Anculotus* or *Littorina*, but its place is determined by the operculum.

MELANIA BATANA. Testâ turrîtâ, solida, fusco-virescente, apice erosâ, anfract. 6—7, planulatis, posticè sub-coronatis, costulis longitudinalibus et volventibus gemmularum series tres efformantibus ; aperturâ angusto-ovatâ, posticè coronatâ, intus cærulescente, columellâ albâ. Long. 1 ; lat. 2-5 poll.

Very closely resembles *M. Hydeii*, Conrad.

MODIOLA VARICOSA. Testâ fragili, lucidâ, inequilaterali, transversè ovato-oblongatâ, sub-falcatâ ; colore luteo-viridescente, supra costâ umbonali maculis venosis obliquis notatâ ; margaritâ argenteâ, ad umbones purpurea. Long. 1-2 ; lat. 7-20 ; alt. .5.

A beautiful and delicate shell, which I suspect to be an inhabitant of brackish, or even fresh water.

Dr. Storer reported on the Papers of the Rev. R. T. Lowe, recently presented to the Society by the Author. He complimented them highly for their scientific accuracy, and the exquisite beauty of the figures.

Dr. Abbot reported upon some of the birds from Surinam, presented by Dr. F. W. Cragin. He remarked upon their structure and habits, and exhibited the following species, which were in excellent condition.

Galbula albirostris,	White-billed Jacamar.
“ paradisica,	Paradise “
“ grandis,	Great “
Alcedo bicolor,	Rufous and Green Kingfisher.
Trogon Curucui,	Red-bellied Curucui.
“ viridis,	Yellow-bellied “
Cuculus tranquillus,	Wax-billed Barbacou.
Bucco Tamatia,	Spotted-bellied Tamatia.
Momotus Braziliensis,	Brazilian Motmot, 2 specimens.
Columba speciosa,	Scallop-necked Pigeon, 2 specimens.
“ Martinica,	Copper-colored Ground Dove.
“ ruffina,	Russet “ “ Male.
“ passerina,	Ground Turtle. Male.
“ frontalis,	Grey-fronted Pigeon, 2 specimens.
Tinamus variegatus,	Variegated Tinamou, 2 specimens.
Perdix Guianensis,	Guiana Partridge, 2 specimens.

Mr. F. Alger, member of the Society, read an interesting paper on the identity of the Beaumontite of M. Levy, and the Lincolnite of Prof. Hitchcock, with Heulandite, and illustrated his remarks by differently modified crystals of these substances, specimens of which he laid before the members.*

The derivation of the secondary forms of the Beaumontite, from the primary right oblique-angled prism of Heulandite, was very clearly proved, and the source of fallacy pointed out, by which Mr.

* Mr. Levy read his paper before the Academy of Sciences, Paris, and an abstract of it may be seen in the Lond. and Edinb. Mag. for February, 1840. Prof. Hitchcock's account may be found in his Final Report on the Geological Survey of Massachusetts.

Levy had been led to describe the mineral as new. It was shown to agree in all its chemical, external, and crystallographical characters, with Heulandite, as found in Nova Scotia, where it offers a peculiarity in its crystalline form, not before observed, excepting in the Beaumontite. This peculiarity is in the near approximation of the crystals to a right square prism, (supposed by Mr. Levy to be the primary form,) by the undue extension of the replacements on the acute lateral edges of the common crystals of Heulandite. The *gradual* changes by which the ultimate figure is produced, was beautifully exemplified in the crystals from Nova Scotia, while they are not seen in the Beaumontite. The supposed Beaumontite occurs with Haydenite, near Baltimore, and it has hitherto been highly esteemed among mineralogists. The Lincolnite, named by Prof. Hitchcock, in honor of the late Governor of Massachusetts, occurs in the trap-rock of Deerfield, Mass., and in the gneiss at Bellows Falls. It was shown to differ from the ordinary crystals of Heulandite, only by the absence of the replacements upon the obtuse solid angles of the right oblique angled prism; a peculiarity which, Mr. Alger remarked, was not confined to those crystals, as others similar to them had lately been found on New York Island, and at Suckasunny, New Jersey. From measurement with the common goniometer, Prof. Hitchcock had found a difference of 10° in the incidence of planes M on T, which led him to figure and describe it as a new species. But Mr. Teschemacher, whose accuracy in the use of the reflecting goniometer is well known, has measured the same crystals, at Mr. Alger's request, and found them to agree precisely with the recorded angles of Heulandite.

A copy of Mr. Alger's paper was requested for the Journal of the Society.

Professor Charles Brooks was unanimously elected a member of the Society.

ADDITIONS TO THE CABINET.

Dr. Wyman, on behalf of Mr. Brazer, presented the cranium of a *Lepidosteus* and of a Beaver, (*Castor fiber*.)

Dr. Gould, on behalf of Dr. Dodd, U. S. Navy, presented two bottles containing fishes from the Grand Banks; and in behalf of

Mr. E. R. Mayo, a *Cyclostoma*, from Madagascar; also from an unknown donor, a piece of petrified wood, from Shreveport, La.

Dr. Storer presented, on behalf of Mr. H. W. Abbot, a beautiful specimen of *Trichiurus lepturus*, Silvery Hair-tail, from Mobile Bay. Also from Rev. Zadock Thompson, a bottle of Fishes.

Thanks were voted to Messrs. Brazer, Abbot, Thompson, and Dr. Dodd, for their donations.

ADDITIONS TO THE LIBRARY.

History of Vermont. By Zadock Thompson. 8vo. Burlington. 1842. *Author*.

Mollusca. Fresh Water and Land Shells of Vermont. By C. B. Adams. 8vo. Pam. 1843. *Z. Thompson*.

Catalogue of Vermont Plants. By Wm. Oakes. 8vo. Pam. 1843. *Z. Thompson*.

Proceedings of the Amer. Philosophical Soc. Vol. II. No. 27. May, 1843. 8vo. Pam. Philadelphia. *A. P. Society*.

Erichson, G. F. Genera et Species Staphylinorum Insectorum Coleopterorum Familiæ. Pars I. 8vo. Berolini. 1839.

Spinola, M. Insectorum Liguriæ Species.

Bristol Institution. Proceedings of 13th Annual Meeting. 8vo. Pam. 1836.

On certain Crystalline Forms of Sulphate of Strontian, found at Pyle Hill, near Bristol. 8vo. Pam. 1840.

Abstract of a Memoir on Physical Geology. By W. Hopkins. 8vo. Pam. Cambridge (Eng.) 1826.

Catalogue of Hemiptera, in the collection of Rev. F. W. Hope. 8vo. Pam. London. 1837. Nos. 1 and 2. With Latin Descriptions by J. O. Westwood. All from *Rev. T. S. Savage*.

Silliman's Amer. Journal of Science. No. 2. Vol. XLV., for July, Aug. and Sept. 1843. 8vo. N. Haven. *Editors*.

Lieut. Fremont's Report of his Exploring Expedition to the Rocky Mountains. 8vo. Pam. Washington. 1843. *Hon. R. C. Winthrop*.

Proceedings of Amer. Philosophical Soc. No. 26. Vol. II. 8vo. Pam. Philadelphia. 1843. *A. P. Society*.

October 18th, 1843.

Regular meeting—Dr. C. T. Jackson, Vice-President, in the Chair.

Mr. G. B. Emerson made some remarks upon the Report of the Regents of the University of New York, committed to him at a former meeting. He spoke chiefly of the want of attention to the subject of Natural History in the New York system of education.

Mr. E. was sorry to see that the subject was much neglected. He attributed this, in part, to the want of suitable books; none having appeared since the work of Smellie, so suitable for the purpose, as the American edition of this work, edited by Dr. Ware, greatly enriched by the valuable notes of the editor. At present, this is the best text-book we have. But this is entirely inadequate to supply the want at present felt. Children in New England want a book of instruction in Natural History which draws its illustrations from objects seen every day about us, and familiar to all, and not from foreign examples, whose very names are entirely new. Mr. E. expressed a hope that before long such a work would be prepared by some one of this Society, and anticipated that it would be far more valuable for New England schools than any now existing.

Dr. Storer exhibited beautiful drawings of *Sphyræna borealis* and *Caranx chrysos*, from specimens which he had lately received.

He was not aware that either of these existed in our waters at the time his Report on the Fishes of Massachusetts was made. The former of these species was sent to him by Dr. Yale, from Holmes's Hole; the latter was taken in Boston, from one of the bridges leading to Charlestown. Both are described by Dr. De Kay as New York fishes.

Dr. Gould reported on papers of the Rev. R. T. Lowe relating to the plants and land shells of Madeira.

He dwelt upon some detailed experiments made by the author,

with a view to ascertain the nature of the respiratory system of the animals of *Melampus* and *Pedipes*. These experiments were numerous and conducted with great care, yet they led the author to a result which subsequent observation has shown to be false, in consequence of not reversing his experiments. Finding that the animal could sustain life for a week or more when confined in a bag under water, so as to prevent all access to the surface, he inferred that it was a water-breathing animal; but it is also a fact, that some animals known to be air-breathing, can endure a like or longer confinement under water, sustained by supplies of air, which they inspire and retain, till a renewed opportunity of rising to the surface is afforded.

Several matters of business were disposed of.

ADDITIONS TO THE CABINET.

Specimens from the Infusorial Strata of Richmond, Va.

Specimen of *Posidonia Keuperi*, from Prof. *W. B. Rogers*.

Cranium of an African Leopard from Dr. *T. S. Savage*.

Beautiful specimens of Fluor Spar, covered with crystals of Quartz; specimens of Galena and other minerals, from Mr. *Nathan Metcalf, Jr.*

A Crustacean, from Dr. *James Jackson*.

Specimens of about fifty species of wood, from Surinam, with the native names annexed, from Dr. *F. W. Cragin*.

The thanks of the Society were voted to Messrs. Rogers and Metcalf for their donations.

ADDITIONS TO THE LIBRARY.

Fifty-sixth Report of the Regents of the University of New York State. 8vo. Albany. 1843.

R. T. Lowe's Description of a new Genus of Acanthopterygian Fishes. 4to. Pam. Cambridge (Eng.) 1838.

Fishes of Madeira. 4to. Pam. Cambridge (Eng.) 1836.

Synopsis of the same. 4to. Pam. Cambridge (Eng.) 1837.

Supplement to Synopsis. 4to. Pam. Cambridge (Eng.) 1839.

Additional Observations on *Alepisaurus*. 4to. Pam. 1835.

Novitiæ Floræ Maderensis. 4to. Pam. 1838.

Primitiæ Faunæ et Floræ Maderæ et Portus Sancti. 4to. Pam. 1831.

Description of the Animal to which belongs the shell *Helicolumax Lamarckii*. By R. T. Lowe. 8vo. London.

Remarks on the Nature of the Respiratory Organs in certain Littoral Mollusca of Madeira. By Rev. R. T. Lowe. 8vo. Pam. London.

On the Genera *Melampus*, *Pedipes* and *Truncatella*. By Rev. R. T. Lowe. 8vo. Pam. London.

Notes on the Morbid Appearance in the Dissection of the Chimpanzee. 8vo. (2 leaves and 2 plates.) 1836. London.

Description of two species of Araneidæ. 8vo. Pam. London. By Rev. R. T. Lowe. All from *Rev. R. T. Lowe*.

Description of 12 new species of Unioncs. By Isaac Lea. 8vo. (1 leaf.) 1843. Philadelphia. *Author*.

Annals and Magazine of Nat. History. No. 77, for Oct., 1843. 8vo. London. *Courtis Fund*.

Reply to the Accusations of J. D. Dana. By Joseph P. Couthouy. 8vo. Pam. New Haven. 1843. *Author*.

November 1st, 1843.

Regular meeting—the President in the Chair.

Dr. Abbot continued his report upon the South American birds, of Dr. Cragin's donation, and exhibited the following species, viz :

Lanius Cayanus, Cayenne Shrike, two specimens, adult and young. *L. rubiginosus*, Rusty Shrike. *Tanagra Cayana*, Rufous-headed Tanager, male. *T. punctata*, Spotted Green Tanager. *T. atro-coccinea*, Marone Tanager. *Muscicapa* (———), Orange-crowned Fly-catcher, Lath., two specimens. *Ampelis pompadora*, Pompadour Chatterer. *Pipra albifrons*, White-faced Manikin. *P. pareola*, Blue-backed Manikin, young male. *P. pectoralis*, Gold-breasted Manikin.

Dr. Samuel Cabot, Jr., read a paper on a species of *Ortyx* discovered by him in Yucatan, the male of which had been recently described by Mr. Gould, of London, under the name of *O. nigrogularis*, but previously characterized by himself in Stephens' Incidents of Travel, &c., Vol. I., Appendix, p. 474.

He gave a full account of its habits, note, &c., and stated that Mr. Gould's measure of the bird (8 inches,) was too short, being probably taken from a dried skin. The shortest he measured was $8\frac{1}{2}$ inches, and some were as much as $8\frac{3}{4}$ inches. The color of the eye is hazel.

The *Female* is 8 to $8\frac{1}{2}$ inches long. Tarsus $1\frac{1}{2}$ inch. Middle toe, $1\frac{1}{4}$ inch. Tail, $2\frac{1}{8}$ to $2\frac{3}{8}$ inches long, and consists of twelve feathers, rounded. Bill 9-16 inch, nearly black. Top of head, back of neck, back, rump, upper tail coverts, dark brown with buff, reddish brown, and black, intermixed; edges of wing coverts, very light buff, almost white. Throat, chin, line across the forehead and between bill and eyes to cheek, line over eyes and along superciliary ridge to nape, deep buff or yellowish brown. Feathers of breast, flanks and belly not fringed with black, as in the male, but having a light reddish color at the part nearest the quill, then a mark like the crown of a bicuspid tooth, of very dark brown, on some feathers almost black; then a large spot of very light buff, on some feathers, white; and then a slight tip of dark brown, on the margin. The light spots on the breast are much smaller than those on the abdomen. Large spots of reddish and dark brown on the flank feathers. Under the tail-coverts, nearly white, with a lanceolate spot of dark brown or black along the middle of each. Legs light flesh-colored. Primaries, ash brown, fourth and fifth longest.

A paper from Dr. T. W. Harris was read, entitled "Description of an African Beetle, allied to *Scarabæus Polyphemus*, with remarks upon some other insects of the same group."

Dr. H. had enjoyed the rare opportunity of seeing all the Goliath beetles brought from western Africa by Dr. Thos. S. Savage and Mr. Geo. Perkins. Among them were several males and a female

of this rare and noble species, the latter of which was before unknown, together with both sexes of another scarcely inferior to it in size and beauty; and at the request of Dr. S., he had prepared descriptions of them. They both belong to the sub-genus *Mecynorhina* of Hope.

M. POLYPHEMUS. Opaque, velvet green, above; top of the head, five longitudinal stripes on the thorax, three rows of rounded spots on each elytron, a spot on the scutel, two large square spots on the podex, and the sides of the breast, pale buff-colored; margin of the clypeus, horn, antennæ, and tarsi, black.

Male.—Head, three-horned; the anterior horn curved upwards, forked, and denticulated at the end; the lateral horns elevated perpendicularly, compressed and denticulated. Intermediate stripe on the thorax abbreviated behind, anterior femora six-toothed internally, and notched at the base. Body beneath, except the sternum and abdomen, covered with a yellowish, velvet-like pile. Length, exclusive of the horns, $2\frac{1}{4}$ inches; central horn, $\frac{3}{4}$ of an inch, or more.

Female.—Clypeus narrowed before, and widely emarginated on the anterior edge. Thorax grossly punctured; the intermediate vitta obsolete. Body beneath entirely green, polished, grossly punctured, and scarcely clothed with tawny hairs. Length, $2\frac{1}{2}$ inches.

M. SAVAGII. Thorax opaque velvet-green above, with five broad yellowish stripes; scutel green, with a broad yellowish stripe in the middle; elytra velvet-black, with three rows of tawny spots on each elytron, and an indented stripe of the same color on the suture, the marginal and subsutural spots confluent from the base to the middle; head of the male and central horn above, two spots on the vertex of the female, two square spots on the podex, and sides of the breast, yellowish gray; sternum, abdomen, and legs, dark green, and polished; horns and margin of the clypeus, anterior and intermediate tarsi, black; posterior tarsi pale rufous, with the articulations and claws black.

Male.—Head three horned; the anterior horn horizontally extended, and forked at the end; lateral horns smooth and tapering, extended forwards and outwards; anterior femora with three unequal robust teeth on each side, those on the outer edge abruptly bent downwards. Length nearly 2 inches; horn more than half an inch.

Female.—Clypeus quadrate, truncated before; sides of the breast covered with a yellowish gray substance, intermixed with coarse hairs. Length, $1\frac{3}{4}$ inches.

Dr. H. accompanied these descriptions with an account of the characters of the sub-genera, into which the Goliath beetles had been distributed, and subjoined the notes of Dr. Savage relative to their habits, food, and habitat. Dr. S. says that he "has seen Professor Klug's *G. regius*, which is no more nor less than the female of *Drurii*; of this I am as certain as that the *princeps* of Hope is the female of *Cacicus*."

Dr. Gould exhibited about 50 species of Shells, received from Dr. Savage, from Cape Palmas.

There were among them several new species, which he should hereafter describe. A valve of *Unio ochraceus* was among them. He had once before received a valve of *U. complanatus* from the same region, which was supposed by the person who brought it to have been indigenous there. These instances show with how much caution the alleged localities of shells should be regarded.

Dr. Henry J. Bigelow was elected Cabinet keeper in the place of Dr. Henry Bryant, resigned. Several matters of business were disposed of.

ADDITIONS TO THE CABINET.

Dr. J. B. S. Jackson presented a mass of Egg cases of *Buccinum*, fished up at Marblehead, Mass.

ADDITIONS TO THE LIBRARY.

Constitution and By-Laws of the Northern Academy of Arts and Sciences. Pam. 1843. From the *Academy*.

Meteorological Register for 1822—25, by Joseph Lovell; also from 1826—30, by Tho. Lawson. 8vo. Philad. 1840. From Hon. R. C. Winthrop.

Monograph of the species of the genus *Pupa*, found in the U. S. By A. A. Gould. 8vo. Pam. From the *Author*.

November 15th, 1843.

Regular meeting—the President in the Chair.

Dr. Wyman, communicated through the President, a paper on the anatomical structure of the genera *TEBENNOPHORUS*, Binney, and *GLANDINA*, Say.

The paper gives all the details of a minute dissection of every organ, but the following are the main anatomical features by which the genera are characterized. The species examined were *Tebennophorus Carolinensis*, Bosc, and *Glandina glans*, Say.

TEBENNOPHORUS. On making a longitudinal section through the shield, along the back, there is found between the shield and the viscera, a large cavity occupying the whole extent of the dorsal and lateral region. It has no communication with the respiratory sac, nor does it communicate externally with the air. Its internal surface is lined by a thin, smooth, delicate membrane, enveloping the viscera, so as to unite them into a single mass, and from them it is reflected upon the tegumentary parietes, like the peritoneum of the higher animals. In the *Limaces*, the membrane by which the viscera are invested, is attached by a loose cellular tissue to the parietes, so that no similar cavity can be said to exist. In *Tebennophorus*, there is no cavity in the cuirass for a calcareous body, as in *Limax*.

The respiratory cavity presents a very remarkable variation from that of the *Limaces*, in being attached to the viscera, and in having no connection whatever with the shield. In the *Limaces* the shield contains two cavities, one of which secretes and contains the calcareous body or rudimentary shell, and the other the organ of respiration, the heart and kidneys.

GLANDINA. In the general characters of its organization, it resembles that of the genera *Limax* and *Helix*, but differs from them in the existence of an additional pair of tentacles and a corresponding modification of the nerves distributed to them;—in the arrangement of the teeth upon the tongue;—in the complicated form of the stomach, and in some other characters of less importance. With

the genera *Achatina* and *Bulimus*, it is more intimately allied and has been confounded with them. The buccal pouch is many times longer than its breadth, while in all the above genera it is ovoidal. There is no horny beak at the entrance of the mouth. The teeth are arranged *en chevron* instead of transversely, and there is no teeth on the median line. It has the anterior portion of the membranous part of the stomach terminating in a cul de sac. The salivary glands form a distinct collar around the œsophagus, and are not separate as in the other genera. In *Bulimus* and *Achatina* the anterior lobe of the liver is largest; in *Glandina* it is smallest. There appears to be but one bile duct in the latter, while there exist two large ones in the smaller. The third pair of tentacles, so prominent in *Glandina*, are very slightly developed in *Bulimus* and do not exist in *Achatina*. In the two former, they are provided with a special nerve. In *Achatina*, the male organ is enveloped in a large and muscular sheath, which does not exist in any of the other genera.

Dr. Cabot exhibited three birds from Yucatan, which he regarded as new, and of which he read descriptions.

CORVUS VOCIFERUS. Male, about 16 inches long. Tail, $1\frac{1}{2}$ inches. Bill, $1\frac{1}{2}$ inches along ridge, and $1\frac{3}{4}$ along gape; $\frac{1}{2}$ inch diameter at base. Nostrils rounded, partially covered with bristly hairs. Tarsus, $1\frac{3}{4}$ inches. Middle toe, $1\frac{1}{2}$ inches long. First primary shortest; 5th, longest. Dark brown on head, chin, neck, back and upper part of tail. A steel grey spot on cheeks. Tail consists of 12 feathers, all tipped for about one-third their length, with white, except the middle ones, which have merely a white mark on each side the shaft, near the tip. Under parts and flanks are white. Bill, black. Iris, brown.

Female, $15\frac{1}{4}$ inches in length; brown, lighter than the male. Bill, yellow.

ORIOIUS MUSICUS. Male, $9\frac{1}{2}$ inches long. Tarsus, 1 1-16 inches long. Bill, $\frac{3}{4}$ of an inch along gape; $\frac{7}{8}$ along ridge. Tail, $4\frac{1}{8}$ inches long. Head, neck, cheeks, breast, belly, rump, tertiaries, and nearly the whole length of the two outer tail feathers, and the lower part of the third, and sometimes a stripe on the fourth, bright chrome yellow. Face, throat, primaries, secondaries, back, and four, sometimes six tail feathers, black. Legs,

bluish. Bill, black, except base of lower mandible, which is bluish.

Female, $8\frac{7}{8}$ inches long, marked like the male, but not so brilliant. Irides, hazel. Tail consists of 12 feathers.

MOMOTUS YUCATACENSIS. Black-throated Motmot. 15 to $15\frac{3}{4}$ inches long. Bill, $2\frac{1}{8}$ inches long; gape, $1\frac{5}{8}$ inch along ridge, $\frac{1}{2}$ inch broad, 7-16 of an inch through at base from above downwards. About 50 serrations can be counted on each edge of upper mandible, and 32 on each edge of lower. A strongly marked ridge runs along roof of mouth to within $\frac{3}{8}$ inches of point of bill. Tarsus, $\frac{7}{8}$ of an inch long. Tail, $8\frac{1}{4}$ inches long, bare part of two central tail feathers, about $2\frac{1}{2}$ inches. Along top of head, upper part of back, rump, cheeks, breast and sides of neck, reddish green or olive. In middle of back is a spot of bay. A stripe of very light blue, like some of the salts of copper, passes from base of bill almost to nape, along each side of head. A black stripe extends under each eye to neck. Another black stripe passes down middle of chin to upper part of breast, growing broader as it descends, and mixed with light blue on chin, and bordered on each side with the same color. Abdomen, under tail coverts and flanks, bright rufous. Primaries and tail light green, changing to blue in some lights, tipped, and more or less bordered with black. 1st primary, longest; 4th, shortest. Ten tail feathers. The expansion at end of two middle tail feathers, about half bright pale green varying to blue, and the other half black. Eyes, hazel. Legs and bill nearly black.

Mr. Bouvé reported upon some fossil shells from the Tertiary of Europe, which had been committed to him, and made some remarks upon the prevalence of the different strata of this class in Great Britain, as also of their paleontological contents.

In relation to what has been published upon the subject, he took the opportunity of calling the attention of any present, who might not be aware of the fact, to the discrepancy in the different accounts of the English Tertiary, found in the most popular works. For instance. In Mantell's Wonders of Geology, the author, remarking upon the Miocene (Tertiary) deposits, states that there are *no* good

types of this group in Great Britain ; and in the Elements of Geology, by Mr. Lyell, it is also said that in England the Miocene strata are wanting, the Tertiary being limited to the Eocene and the Pliocene. In the Principles of Geology, edition of 1842, the Coralline Crag of Suffolk, and the Red Crag, succeeding, two extensive deposits, are both ranked as belonging to the strata, said in the other cases to be wanting—the Miocene. Now there is nothing to show in this last published edition why the author makes a statement so different from that in his Elements and in other works. The reader of these only, is therefore left in doubt as to the correctness of either. A satisfactory explanation is, however, contained in an address delivered by Prof. Buckland before the Geological Society of London, in 1840. An account being there given of a visit made by Mr. Lyell to Norfolk and Suffolk, for the purpose of determining, with the assistance of others who accompanied him, the age of the deposits there, by a comparison of their fossil shells with the recent. It was found that the number of extinct species, in both the Coralline and Red Crag, brought them both within the limits of the Miocene, and that the views before held by geologists had been erroneous.

Dr. Storer read extracts from a letter of Mr. S. S. Halde-
man, as follows:—“I have a third undescribed species of
Percina, from the Susquehannah, which may be charac-
terized as follows.”

“P. BIMACULATA. Light yellow, sides transversely and irregularly
branded with black, and dorsal fins clouded with brown, a distinct
black spot at the extremity of the lateral line. Slender, lateral
line sub-rectilinear, above the middle ; ten or twelve irregular trans-
verse bands upon the back and side ; rays of the second dorsal and
caudal fins crossed by bands of dark brown.

D. 15 — 15 : P. 13 : V. 6 : A 11 : C 17.

The length of the pectoral fins deserves mention as a generic character.”

Dr. Gould read descriptions of shells received from Drs.
Savage and Perkins, from Africa. They are as follows:—

HELIX (CARACOLLA) PELLUCIDA. Testâ fragili, pellucidâ, pallidè

corneâ, orbiculari, carinatâ, vix perforatâ : spirâ depressâ, sub lente striis subtilissimis decussatâ ; infra convexâ, nitidâ : anfractibus 6 subconvexis, externis propè suturam excavatis : aperturâ lunatâ, labro angulato. Lat. 17-20 ; alt. $\frac{1}{2}$ poll.

BULIMUS RUBICUNDULUS. Testâ oblongo-conicâ, tenui, rosaceo-erubescente ; anfractibus 7 convexiusculis, ultimo obsolete carinato. suturâ marginatâ, albidâ, eleganter crenulatâ ; aperturâ ovatâ, columellâ tenui, labro subreflexo, intus sub-incrassato. Long. $1\frac{1}{2}$; lat. 7-10 poll.

Allied to *B. Boholenis* Brod., and is colored like some varieties of *B. concinnus*, Brod.

BULIMUS INTERSTINCTUS. Testâ ovatâ, apice mamillatâ, imperforatâ, pallidè incarnatâ, striis liturisque purpureis et pallidis hic et illic variegatâ ; anfractibus 7 ventricosis, ultimo magno, partem dimidiam spiræ æquante ; suturâ marginatâ, albidâ, notissimè crenulatâ : aperturâ parvâ, sub-quadratâ ; columellâ rosaceâ, evolvente, posticè sinuatâ ; labro acuto, intus callo rosaceo incrassato. Long. $1\frac{3}{4}$; lat. 9-10.

ACHATINA TORRIDA. Testâ ovoideâ, apice mamillatâ, rufo-castaneâ : anfractibus 7 ventricosis, striatis, ultimo magno, basi deorsum contractâ ; suturâ marginatâ, perspicuè crenulatâ ; aperturâ parvâ, ovatâ ; columellâ albâ, fusco-marginatâ, basi leviter truncatâ ; labro simplici, fuscescente, intus albo, incrassato. Long. $3\frac{1}{4}$; lat. $1\frac{1}{2}$ poll.

Allied to *A. Saulcydi*, Guerin, a reversed species.

ACHATINA INVOLUTA. Testâ turratâ, elongatâ, apice mamillatâ, imperforatâ, fuscescente ; anfractibus 12 leviter striatis, quatuor superioribus sub-equalibus, ultimo carinato ; suturâ impressâ, minutissimè crenulatâ ; aperturâ ovatâ, spiræ partem sextam æquante, columellâ arcuatâ, involutâ, tubulum efformante. Long. 11-10 ; lat. $\frac{1}{4}$ poll.

Allied to *A. octona*, *decollata*, &c.

PUPA PUMILIO. Testâ obovatâ, ventricosâ, sursum auctâ, apice rotundatâ, imperforatâ, albida, nitidâ : anfractibus 7 planulatis, leviter striatis, ultimo deorsum attenuatâ ; suturâ lineari ; aperturâ parvâ, semi-ellipticâ, lamellâ unicâ posticâ, cum labro continuâ, et plicâ umbilicali angulatâ impeditâ ; peritremate albo, undulato, leviter et inequaliter reflexo. Long. 13-20 ; lat. 7-10 poll.

PUPA CAPITATA. Testâ cylindraceâ, apice rotundatâ, albidâ, imperforatâ ; anfractibus planulatis, concinnè obliquè striatis, ultimo

deorsum attenuatâ, basi carinatâ, externè et sub suturâ umbilicali indentatâ ; suturâ conspicuâ ; aperturâ angustâ, protensâ, subovali, basi sub-angulatâ, lamellâ posticâ, alterâ columellari, dentibus quatuor inequalibus, plicaque umbilicali dentiferâ ringente ; peritremate candidâ, reflexâ. Long. 11-20 ; lat. $\frac{1}{4}$ poll.

MELANIA MUTANS. Testâ turritâ, spirâ elongatâ, saturatè fuscâ, decollatâ ; anfractibus superstitibus 8 planulatis, plicis longitudinalibus ad 16 et lineis volventibus decussantibus compresso-granulatis, vel eorum vice, carinis compressis, acutis, flavescens, plus minusve eminentibus cinctis ; ultimo basi striis ad 12 deorsum diminuendis spiraliter exarato ; aperturâ angustâ, ellipticâ, basi mediocriter effusâ, intus cœrulescente, fusco variegatâ ; columellâ lutescente ; labro acuto. Long. $1\frac{1}{2}$; lat. 9-20 poll.

Possibly the same as *M. quadriseriata*, Griffith's Cuv.

December 6th, 1843.

The President in the Chair.

Dr. Storer read a letter from Maj. Le Conte, tendering for publication in the Journal a Monograph of the Histeridæ, which that gentleman has in preparation. The offer was thankfully accepted.

Dr. S. alluded to some errors which had occurred in his paper in the number of the Journal recently published.

"An error occurs on page 80, Vol. IV., No. 3, which should be corrected, —because it might be inferred from the text, as it now stands, that a mistake, which Mr. Ayres has pointed out, did not exist. The asterisk, instead of being placed where it is, should occur in the first line of the page, after the period. And 'Mr. Ayres' should be substituted for 'De Kay,' in the note."

Dr. S. also remarked, that the species of flat fish, known in our market as the "turbot," and which had been supposed to be the *Pleuronectes aquosus*, Mitchill,—but which Mr. Ayres, in his late communication, in an article upon the "Fishes of Brookhaven, L. I., considered a new species, he had been enabled, by Dr. De Kay's

Report, satisfactorily to determine to be the *Pleuronectes oblongus*, Mitchill,—of which the *Platessa ocellaris*, DeKay, is a synonym.

Dr. Cabot exhibited the male and female Thibetian Polyplectron (*P. Tibetanus*.)

The male differs from the description in the Naturalist's Library, in having a crest, and in being marked with spots of black, instead of undulated bands.

Temminck's description of the female is obviously wrong, that is to say, if we suppose the present specimen to be an adult. We find on the wings and wing coverts, lanceolate, black spots, with some bright reflections, instead of round, brilliant spots, as in the male. Spots near tip of tail only on the outer side of shaft, instead of on both sides, and surrounded with black only, without the yellowish white. Length between 17 and 18 inches. This bird was bought in Canton, by Mr. R. B. Forbes, and presented by him to me.

Dr. Gould read descriptions of two species of Anodon, from the river Salwen, in British Burmah, sent him by Rev. F. Mason.

A. SALWENIANA. T. trapezoideâ, compressâ, subtenui, retrò dilatâtâ, posticè truncatâ, colore piceâ; supra costam umbonalem radiatim plicatâ: umbonibus parum elevatis; margine superiori rectâ, compressâ, ligamentum occultante, ante umbonibus excavatâ; utraque valvâ processu dentiformi cardinali, uno ante altero aptante, instructâ; cavitate minimè profundâ; impressionibus muscularibus minimè impressis; margaritâ sub-lividâ. Long. $5\frac{1}{2}$; lat. $1\frac{1}{4}$; alt. $2\frac{3}{4}$ poll.

Resembles small specimens of *Alas. complanata*, but is much less ponderous.

A. INOSCLARIS. T. transversè oblongâ, sub-ovata, solidâ, subventricosâ, piceâ: umbonibus parum elevatis; margine supra brevi, recto, ad angulum posticum rotundato, posticè subtruncato; infra arcuatâ; utraque valvâ processu cardinali crassa, dentiformi, instructâ, uno ante altero aptante; margaritâ albidâ; impressione musculari antico profundo. Long. 3; lat. $1\frac{3}{4}$; alt. $1\frac{1}{8}$ poll.

Very closely allied to *A. edentula*, Say, but is a more solid shell, and the cardinal apophyses are more elevated and stronger.

The prominent toothlike apophyses of these shells, render their position among the genera of Naiades, as now received, somewhat equivocal; uniting, as they do, *Alasmodon* and *Anodon*; and they strengthen the idea entertained by many, that the modifications in the number, position, or absence of teeth, according to which the genera are now founded, are so gradual as to authorize us to regard them as merely sub-genera of one grand genus. Should this view be adopted, and to it Dr. G. is much inclined, he believes that another subgeneric group might be instituted, equally as characteristic as any now received; and proposes as follows:

Subgenus *PSEUDODON*. Hinge margin with a tooth-like apophysis on each valve, the surface of which is not fractured, but smoothly covered with enamel, fitting into corresponding undulations in the opposite valve, that on the right valve closing in front of that on the left.

Anod. inoscularis would be the type of this group, and to it would belong *A. Salweeniana*, *edentula*, *Stewartii* and perhaps some others.

Dr. Gould read a letter lately received from Mr. McClelland, of Calcutta, acknowledging the notice of his election to Corresponding membership.

Mr. Emerson read portions of a letter from Hon. H. Barnard, of Nantucket, accompanying specimens of the nut of *Laodoicea Seychellarum*, and also a mass of Resin which "exudes from a tree very similar to our white pine. It came from the west coast of Central America, and is used for such purposes as we use our pitch pine."

Dr. C. T. Jackson gave an abstract of Lieut. Fremont's Report of his Exploring Expedition to the Rocky Mountains.

The narrative abounds in incident, and the facts collected are very interesting. The river Platte was traced to its sources in the Rocky Mountains, the highest peak of which was ascertained to be 13,570 ft. above the sea. The rock formations are limestone and sandstone to 109° west longitude, where they rest immediately upon the granite. About 350 species of plants were collected.

Dr. C. T. Jackson announced that he had recently made a chemical analysis of the Pink Scapolite, of Bolton, in which he had discovered oxide of Cerium,—to which the mineral apparently owes its beautiful color.

He stated also that he had analyzed a mineral, which Prof. Hitchcock had found among some minerals which he collected in Worcester county, though he did not know in what town it occurred.

Prof. H. supposed it to be Yttrocerite, from its resemblance to specimens received from Mr. Tamnau, of Berlin, and from some tests he had applied. This mineral does not agree exactly with the description of the foreign Yttrocerite, although it contains the Fluorides of Ytria and Cerium. Dr. J. thinks it may have been obtained in Bolton or Boxborough. Analyses of these minerals will be communicated to the Society at a future meeting.

Dr. J. also remarked that he had been engaged in the examination of the composition of Red Cedar (*Juniperus Virginiana*), with a view to ascertain the nature of its antiseptic properties.

He had discovered in it a peculiar red coloring matter of a resinous nature, combined with a peculiar oil and tannin. This peculiar matter can be extracted by means of boiling alcohol, and may then be infused into other kinds of wood, to which it would probably communicate its antiseptic properties, and would render cabinets and boxes thus imbued with it, free from the attacks of moths and other insects. He proposes also to examine the antiseptic principle in the Locust and other trees. It is remarkable that no researches have hitherto been made in this important subject, which can only be properly investigated by chemists.

Dr. Shurtleff, in behalf of the committee for procuring a suitable apparatus for destroying, by means of heat, insects pernicious to the collections, reported that they had procured an apparatus, which, on trial, was found to answer the purpose perfectly.

The thanks of the Society were voted to Dr. Shurtleff, to whose invention and supervision the Society feels much indebted.

ADDITIONS TO THE CABINET.

A box of valuable Brazilian Insects, from *Dr. R. J. Dodd, U. S. N.*
Specimens of various species of wood, with leaves, fruit, &c., about 60 species, from the Sandwich Islands, from *Jos. P. Couthouy.*

December 20, 1843.

Regular Meeting—Dr. Gould in the Chair.

Prof. H. D. Rogers, of Philadelphia, gave an interesting account of the Mammoth Cave, in Kentucky.

He mentioned particularly the incrustations of Sulphate of Lime, which assumes the form of fibrous, columnar crystals, projecting from the walls and ceiling. At first in clusters, and resembling in shape rosettes, they afterwards become longer and curved. Prof. Rogers explained the probable manner of their formation, which he considered analogous to that of the fibrous columns of ice common in clay banks.

Dr. H. J. Bigelow mentioned similar smaller formations, which he had seen in one of the great pyramids, on the walls of a chamber lately opened, specimens of which he had procured on the spot. They exhibit the same fibrous and columnar structure as those of the Kentucky Cave, and probably owe it to the same cause. They are crystals of common salt.

Dr. Cabot mentioned the occurrence in Yucatan of cavities in the earth called Senotes, resembling closely in their structure the hollow spires or pinnacles in the Mammoth Cave, described by Prof. Rogers. These spires are supposed to be produced by dropping water wearing away the floor on which it fell, and carving niches and buttresses on the walls. In the Senotes the water is apparently at the same level in all; from which circumstance, together with the fact that those immediately on the sea coast are brackish, Dr. Cabot was led to suspect an underground communication, by infiltration, with the ocean.

ADDITIONS TO THE CABINET.

Specimens of Lichens and Mosses, collected by Dr. Porter, of Plainfield, Conn., and presented by him. The thanks of the Society were voted to him for the donation.

ADDITIONS TO THE LIBRARY.

Collections of the American Statistical Association, Vol. I., Part I. 8vo. pamph. 1843. *From the Association.*

Zuccarini, Dr. J. G.—*Monographie der Americanischen Oxalis Arten.* 4to pamph. *From Prof. Gray.*

Annals and Mag. of Nat. History. Nos. 79 and 80.

System of Nature, by Edward Newman. 8vo. London, 1843
From the Author.

North American Review, for January, 1844. *Exchange.*