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PROCEEDINGS
OF THE
BOSTON SOCIETY OF NATURAL HISTORY.
TAKEN FROM THE SOCIETY'S RECORDS.

January 1, 1845.

The President, A. BINNEY, Esq. in the Chair.

The President communicated the following paper from
Professor C. B. Adams, of Middlebury College, Vermont: —

SPECIERUM NOVARUM CONCHYLIIORUM, IN JAMAICA REPER-
TORUM, SYNOPSIS, à C. B. ADAMS, Chim. et Hist. Nat. Prof. &c.*

PARS I.

SPECIES MARINÆ.

MARGINELLA RUBELLA. M. t. tenui, elongatâ, fasciis tribus
rubellis ornatâ ; anf. 4 ; spirâ vitreâ ; labro albo, maculis tribus
rubellis ornato, aperturam suprâ angustante ; columellâ 4-plicatâ.
Diverg. 100° ; spiræ long. .025 poll. ; long. tot. .35 poll. ; lat.
.17 poll.

ERATO (?) CYPREOIDES. M. t. solidâ, albâ ; anf. infra suturam
fusco-canaliculatis ; spirâ planâ, parvâ ; aperturâ lineari, pro-

* The following species were collected by the writer in Jamaica, principally in
February and March of the present year, (1844.) His limited opportunities for
consulting valuable books render it probable that he has brought forward some
species which have been described elsewhere, and that he has used names
already preoccupied. As he contemplates the publication of a more extended
article on the subject, any information from those into whose hands this paper
may come, will be thankfully received. He cannot omit to acknowledge his
indebtedness to Dr. Binney, especially, for the frequent use of his very rich and
extensive library.

fundè emarginatâ; labro extrâ crasso, intùs exilè crenulato; labio per totum transversim exilè plicato. Long. .325 poll.; lat. .2 poll.

MITRA ALBO-CINCTA. M. t. minimâ, fusiformi; anf. 6, fasciâ superiore fuscâ, inferiore albâ majori ornatis, striis decurrentibus et costis latis spiraliū anfractuum latitudine brevioribus—instructis; canali brevi. Div. 40°; spiræ long. .11 poll.; long. tot. .2 poll.; lat. .1 poll. *M. savignyi* affinis.

MITRA EXIGUA. M. t. minimâ, ovali-elongatâ, albidâ; anf. 6, suprâ costellis plurimis et infrâ costis latis—instructis, suprâ atropurpureis, infrâ fusco-maculatis; ultimo infrâ sicut suprâ insculpto; canali brevi. Spiræ long. .075 poll.; long. tot. .13 poll.; lat. .06 poll.

COLUMBELLA PURPURASCENS. C. t. parvâ, pallidè purpureâ, striis decurrentibus supra labrum in fauces productis ornatâ; anf. 5½; aperturâ elongatâ; columellâ suprâ excavatâ. Div. 50°; spiræ long. .09 poll.; long. tot. .27 poll.; lat. .13 poll.

COLUMBELLA SUBCOSTULATA. C. t. *C. pygmææ* Sowb. affini, exiliore, costis minùs elevatis, aperturâ latiore; fusco irregulariter maculatâ et reticulatâ. Div. ib.; spiræ long. .165 poll.; long. tot. .285 poll.; lat. .125 poll.

BUCCINUM CANDIDISSIMUM. B. t. parvulâ, albâ, solidâ; anf. 6½, suprâ striis decurrentibus, costis (anf. cujusque 7 vel 8) ad suturam suprâ haud productis, latis, lævibus—ornatis; labro crassissimo; labio calloso. Div. 50°; spiræ long. .275 poll.; long. tot. .45 poll.; lat. .23 poll.

BUCCINUM CONCINNUM. B. t. parvâ, nitidâ, flavo-fuscâ, fusco-maculatâ, maculis plerumque seriatis; anf. 7, costis parvis, et striis decurrentibus; labro solido et albo-varicato, intùs 6-denticulato; aperturâ lacunatâ. Div. 40°; spiræ long. .12 poll.; long. tot. .225 poll.; lat. .11 poll.

BUCCINUM OBESUM. B. t. parvâ, latâ, fusiformi, suprâ et infrâ acuminatâ, atrâ, albo-fasciatâ; anf. 5, costis parvis prominulis, et striis decurrentibus haud costas superantibus—instructis; labro incrassato sed acuto, intùs 6-denticulato, suprâ sinuato; labio subcalloso. Div. 45°; spiræ long. .11 poll.; long. tot. .21 poll.; lat. .11 poll.

PURPURA NODULOSA. P. t. solidâ, parvâ, rhombicâ; anf. 5, nodulis seriatis, et striis subimbricatis decurrentibus, aerrimis, maculis albidis inter secundæ et quartæ serierum nodulos—

ornatis; labro incrassato, intùs 4-denticulato. Div. 45°; spiræ long. .32 poll.; long. tot. .62 poll.; lat. .32 poll.

FUSUS MURICOIDES. F. t. parvâ; anf. 6, singulatim costis 9 vel 10 propinquis, et striis decurrentibus inequalibus partim granosis—instructis; aperturâ violacescente, angustâ; labro crasso, intùs albo-denticulato; labio subrugoso; canali brevi. Div. 40°; spiræ long. .32 poll.; long. tot. .6 poll.; lat. .25 poll.

PLEUROTOMA ALBO-MACULATA. P. t. parvâ, rubro-fuscâ; anf. 7, infrâ longitudinaliter tuberculatis, suprâ tuberculis minoribus transversis et striis pluribus granosis decurrentibus—instructis; tuberculis et granulis albis; sinûs ostio contracto; canali brevissimo. Div. 35°; spiræ long. .25 poll.; long. tot. .48 poll.; lat. .06 poll.

PLEUROTOMA ALBO-CINCTA. P. t. parvâ, rubro-fuscâ, anf. 6, suprâ carinâ albo-tuberculatâ, infrâ carinâ enodi—instructis, mediis striatis, striis creberrimis subtilissimis decurrentibus; anf. ultimo alteris carinis tuberculosis, et fasciâ albâ ornato; anf. etiam longitudinaliter costulatis, intersectionibus noduliferis; canali brevi. Div. 45°; spiræ long. .16 poll.; long. tot. .28 poll.; lat. .13 poll.

PLEUROTOMA NIGRESCENS. P. t. parvâ, atro-violacescente; anf. 8, sulco sinum sequente, exilissimè decussato—instructis, ceterùm granulosis, decussatis; labro crassissimo; sinu haud multùm profundo; canali brevissimo. Div. 30°; spiræ long. .2 poll.; long. tot. .3 poll.; lat. .11 poll.

PLEUROTOMA TRILINEATA. P. t. minimâ, albâ, lineis tribus pallidè fuscis fasciatâ; anf. 6½, subangulatis, lineis pluribus elevatis decurrentibus, et costulis longitudinalibus—instructis; labro crasso; sinu profundo; canali brevissimo. Div. 25°; spiræ long. .1 poll.; long. .185 poll.; lat. .075 poll.

PLEUROTOMA ALBIDA. P. t. parvâ, albidâ, lineâ flavo-fuscâ decurrente costulis interruptâ; anf. 6, perconvexis, subangulatis, costulis crassis, et striis profundis decurrentibus minùs sæpè costulas superantibus—instructis; sinu haud profundo; canali subbrevis. Div. 30°; spiræ long. .15 poll.; long. tot. .26 poll.; lat. .11 poll.

PLEUROTOMA MULTILINEATA. P. t. minimâ, flavido-fuscâ, albo-multilineatâ; anf. 6, singulatim costis 8 ad 10 latis, ad basim expansis, et striis creberrimis decurrentibus inequalibus—instructis; suturâ profundâ; sinu magno; canali brevissimo.

Div. 35° ad 25°; spiræ long. .11 poll.; long. tot. .18 poll.; lat. .08 poll.

PLEUROTOMA ALBO-VITTATA. P. t. parvâ, flavido-fuscâ, fasciâ albâ latissimâ—cinctâ; suturâ parùm impressâ; anf. 6, haud multùm convexis, singulatim costis 8 vel 9 latis, et striis creberrimis decurrentibus inequalibus—ornatis; suturâ haud multùm impressâ; sinu magno; canali brevissimo. Div. 33° ad 23°; spiræ long. .15 poll.; long. tot. .25 poll.; lat. .1 poll.

PLEUROTOMA CANDIDISSIMA. P. t. parvâ, candidissimâ; suturâ profundâ; anf. 5, suprâ subangulatis, singulatim costis 8 vel 9 robustis subcompressis, et striis decurrentibus haud crebris parallelis—instructis; canali brevissimo. Div. 35°; spiræ long. .1 poll.; long. .19 poll.; lat. .085 poll.

PLEUROTOMA FUSCA. P. t. parvâ, fuscâ; suturâ profundâ; anf. 5, singulatim costis 8 vel 9, et multis striis decurrentibus inequidistantibus—instructis; labro expanso; sinu parvo; canali brevissimo. Div. 35° ad 25°; spiræ long. .12 poll.; long. tot. .22 poll.; lat. .1 poll.

PLEUROTOMA DUBIA, à *P. multilineatâ* haud multùm differt; costæ angustiores sunt, et ad basim compressæ. Forsan var.

PLEUROTOMA MINOR. P. t. minimâ, solidâ, flavido-fuscâ, fasciis albis duabus aliquantò interruptis, (alterâ ad spiram pertinente, alterâ anf. ultimum infrâ cingente,)—cinctâ; anf. 6, subnodulosi, singulatim costis 9 robustis convexis, striis latis decurrentibus—instructis. Div. 25°; spiræ long. .11 poll.; long. tot. .16 poll.; lat. .07 poll.

PLEUROTOMA FUSCO-LINEATA. P. t. parvâ, albidâ, lineis pluribus fuscis irregulariter interruptis cinctâ; anf. 7, singulatim costis 10 ad 12 et striis profundis decurrentibus haud costas superantibus—instructis; sinu minimè profundo; canali brevissimo. Div. 25°; spiræ long. .13 poll.; long. tot. .2 poll.; lat. .08 poll.

PLEUROTOMA ELATIOR. P. t. minimâ, subconicâ, albidâ, fuscescente, lineis flavido-fuscis decurrentibus inequalibus à costis interruptis—ornatâ; spirâ elongatâ; anf. 6, haud multùm convexis, singulatim costis 12 haud robustis, et striis decurrentibus subprofundis, unâ profundiore—instructis; sinu minimè profundo; canali brevissimo. Div. 22°; spiræ long. .125 poll.; long. tot. .19 poll.; lat. .075 poll.

CERITHIUM AMBIGUUM. *C. lafondii*, Kr., affine; t. costis plu-

ribus, 20 ad 25, minoribus—instructâ, præcipuè elatiore minùsque robustâ.

	Div.	spiræ long.	long. tot.	lat.
<i>C. lafondii</i> :	23° ;	.57 poll ;	.8 poll ;	.8 poll.
“ <i>ambiguum</i> :	17° ;	.65 “	.8 “	.2 “

CERITHIUM GIBBERULUM. C. t. minimâ, tenui, nigrescente ; anf. 9. singulatim plicis 18, et striis decurrentibus latis 5 vel 6, intersectionibus nodiferis—instructis ; anf. ultimo varice dorsali, plicis obsoletis et striis minoribus—instructo ; aperturâ emarginatâ. Div. 30° ad 25° ; spiræ long. .17 poll. ; long. tot. .24 poll. ; lat. .085 poll.

CERITHIUM IOTA. C. t. minimâ, atro-rubrà ; suturâ profundâ ; anf. 10, plicis decurrentibus tribus, (anf. ultimi 4,) et plicis longitudinalibus minoribus, intersectionibus nodiferis—instructis ; canali brevissimo. Div. suprâ 25°, infrâ nihil ; spiræ long. .095 poll. ; long. tot. .12 poll. ; lat. .03 poll.

CERITHIUM VARIABILE. C. t. parvâ, solidâ, nigrâ, irregulariter albo-maculatâ ; suturâ profundâ ; anf. 9, convexis, striatis, striis creberrimis decurrentibus ; spiræ anf. plicis 4 angustis decurrentibus, et plicis longitudinalibus, intersectionibus nodiferis—instructis ; labro intùs incrassato et crenato ; labio suprâ uniplicato ; canali brevi. Div. 30° ; spiræ long. .34 poll. ; long. tot. .51 poll. ; lat. .2 poll.

CERITHIUM MUTABILE. C. t. parvâ, subtenui, nigrâ, rubescente, irregulariter albo-maculatâ ; suturâ profundâ ; anf. 9, haud multùm convexis, plicis decurrentibus pluribus, 3 majoribus, et plicis longitudinalibus inequalibus, intersectionibus nodiferis—instructis ; canali brevissimo. Div. 33° ; spiræ long. .22 poll. ; long. tot. .22 poll. ; lat. .15 poll.

CERITHIUM ALGICOLA. C. t. irregulariter albo et fusco-maculatâ, cærulescente ; varicibus albis vel fuscis, penultimo ab ultimo semi-fractum distante, alteris $\frac{2}{3}$ anf. distantibus ; anf. 10, subangulatis, striis decurrentibus, pluribus exilioribus 5 majoribus granulosis, et plicis longitudinalibus—instructis ; labio suprâ uniplicato ; canali brevi. Div. 35° ad 25° ; spiræ long. .52 poll. ; long. tot. .73 poll. ; lat. .33 poll.

CERITHIUM BICOLOR. C. t. parvâ, solidiusculâ, albidâ, fasciâ rubro-fuscâ—cinctâ ; anf. 15 (?), planulatis, lineis 5 elevatis decurrentibus, suprâ (2 exceptis) obsoletis, et lineis elevatis longitudinalibus pluribus, intersectionibus nodiferis—instructis ; anf.

ultimo plicâ fuscâ cincto; columellâ uniplicatâ, plicâ decurrente; canali brevi. Div. 15°; aperturæ long. .08 poll.; long. tot. .08 poll. ?; lat. .13 poll.

RISSOA ALBIDA. R. t. magnâ, diaphanâ, albidâ; apice acutissimo; anf. 10, a costulis pluribus exilissimis, ad cujusque inferam partem obsoletis, et striis exilissimis decurrentibus, eleganter decussatis; striis juxta suturam profundioribus, anf. angustantibus; labio á labro suprâ sinu disjuncto. Div. 28°; spiræ long. .2 poll.; long. tot. .31 poll.; lat. .11 poll.

RISSOA AFFINIS. Præcedenti affinis; spirâ graciliore; striis juxta suturam nullis; costulis ad suturam infrâ productis. Forsan var.

RISSOA SCALARELLA. R. t. parvâ, solidâ, albâ; anf. 8, singulatum costis 14 robustis ad extremitatem infrâ productis—instructis; aperturâ infrâ latè haud profundè sinuatâ; labro valdè incrassato. Div. 22°; spiræ long. .1 poll.; long. tot. .15 poll.; lat. .06 poll.

RISSOA TERVARICOSA. R. t. tenui, diaphanâ, albidâ, interdum pallidè fusco exilissimè tessellatâ; suturâ profundâ; anf. 9, convexis, singulatim ter-varicosis, varicibus candidissimis, in seriebus tribus continuis, et striis exilissimis distantibus decurrentibus—ornatis. Div. 23°; spiræ long. .17 poll.; long. tot. .225 poll.; lat. .08 poll.

RISSOA CRASSICOSTA. R. t. magnâ, crassâ, lacteâ; anf. 7, costulis 11 vel 12, latis, obliquis, supra suturam profundam trajectis et striis pluribus exilissimis decurrentibus costulas superantibus—instructis; labro perincrassato, infrâ haud sinuato. Div. 35°; spiræ long. .21 poll.; long. tot. .3 poll.; lat. .11 poll.

EULIMA JAMAICENSIS. E. t. gracili, lacteâ, diaphanâ, fasciâ albâ opacâ suturali—cinctâ; suturâ lineari, subprofundâ; anf. 13, planis, lævibus; aperturâ minimâ; labro expanso. Div. 20°; spiræ long. .23 poll.; long. tot. .325 poll.; lat. .1 poll.

CHEMNITZIA BABYLONIA. C. t. parvâ, lacteâ; anf. (apice deflecto excepto) 4, carinis duabus perelevatis decurrentibus, intervallis concavis—ornatâ; anf. ultimo quadricarinato; labro à carinis pectinato. Div. 20°; spiræ long. .05 poll.; long. tot. .08 poll.; lat. .03 poll.

MONODONTA MACULO-STRIATA. M. t. parvâ, crassâ, intùs virescente, olivaceâ, extrâ maculis subradiantibus elongatis paucis irregulariter ornatâ; anf. 6½, striis et lineis elevatis planulatis albo et nigro alternatim maculatis decurrentibus—instructis

labro intùs subcrenulato, infrà bi- vel tri-dentato; umbilico profundo. Operculo flavo; anf. 15. Div. 100° ad 80°; spiræ long. .3 poll.; long. tot. .48 poll.; lat. .5 poll.; umbilici diam. .1 poll.

MONODONTA ANGULATA. M. t. parvâ, crassâ, olivaceâ, rubescente, maculis parvis quadratis albidis ornatâ; spirâ conicâ; suturâ minimè impressâ; anf. 7, concavis, singulatim plicis 6 decurrentibus—instructis; anf. ultimo acutè carinato, infrà plicis 8 cincto; aperturâ subquadratâ; umbilico angusto, subprofundo. Div. 75°; spiræ long. .16 poll.; long. tot. .325 poll.; lat. .32 poll. *M. modulo* affinis.

MONODONTA LIVIDO-MACULATA. M. t. albidâ, maculis pluribus lividis fuscescentibus, magnis, ornatâ; suturâ profundâ; anf. 6, subangulatis, striatis, striis latis inequalibus decurrentibus; aperturâ transversâ, ovatâ; labro infrà bi- vel ter-emarginato; umbilico profundo, bi- vel tri-carinato. Div. 90°; spiræ long. .45 poll.; long. tot. .65 poll.; lat. .75 poll.; umbilici diam. .14 poll.

TURBO (?) PULCHELLUS. T. t. minimâ, albidâ, maculis rubris quadratis inequalibus, majoribus nigrescentibus, serie decurrente dispositis, ornatâ; suturâ profundâ; anf. 5, mediis carinatis, lineis elevatis pluribus decurrentibus—instructis; labro tenui; umbilico nullo. Div. 45°; spiræ long. .09 poll.; long. tot. .165 poll.; lat. .1 poll.

SCALARIA MODESTA. S. t. subcrassâ, albidâ, haud nitente; suturâ profundâ; anf. 9, costulis 11 robustis acutis retrò subreclinibus, et striis decurrentibus exilissimis haud crebris—instructis; ultimo anfractu haud carinato. Div. 35°; spiræ long. .275 poll.; long. tot. .4 poll.; lat. .175 poll.

NERITA PRÆCOGNITA. N. t. crassâ, olivaceâ, albo-marmoratâ; anf. 3, superioribus convexiusculis; ultimo costulis rotundatis crebris, striatis, numerum (à 20 ad 25) et latitudinem in diversis exemplis disparibus—ornato; labro acuto, à costulis eleganter pectinato, intùs juxta marginem polito, interiùs crasso et crenulato, et suprâ infrâque bituberculato; labio medio excavato et bidentato, alibi plicato vel noduloso. Operculo pallidè murino, creberrimè papilloso. Long. 1.05 poll.; lat. 1.3 poll.

NERITINA PYGMÆA. N. t. minimâ, tenui, fuscâ, læviusculâ; spirâ vix elevatâ, apice prominulo; anf. 2½; aperturâ expansâ;

labro tenui; labio candido, lævi; operculo flavido. Long. .1 poll.; lat. .13 poll.

FISSURELLA ELONGATA. F. t. elongatâ, tenui, diaphanâ, fuscâ, albido-maculatâ, costulis 20 radiantibus, totidem brevioribus alternatim dispositis, et 40 brevissimis marginalibus ornatâ; incrementi striis maximis; anteriùs concavâ; posteriùs convexâ; intùs cœrulescente; fissurâ atro-marginatâ, mediâ utrùmque sinuatâ. Lon. .375 poll.; lat. .2 poll.; alt. .11 poll. Dec. ant.: Dec. post. :: 1 : 2.

PATELLA TENERA. P. t. tenui, fragili, diaphanâ, albidâ, fusco-radiatâ, (radiis plerùmque 8) maculatâ, vel reticulatâ, exilè decussata, anteriùs et posteriùs convexâ; margine acuto, exilè pectinato. Long. .72 poll.; lat. .53 poll.; alt. .15 poll.; alt. exemp. long. .74 poll.; lat. .55 poll.; alt. 21 poll.; dec. ant: dec. post. :: 5 : 8.

PATELLA ALBICOSTA. P. t. crassâ, atro-fuscâ, costulis 12 elevatis, totidem brevioribus, omnibus albis—instructâ; margine pectinato, juniorum fusco—et albo-maculato, seniorum albo. Long. .84 poll.; lat. .7 poll.; alt. 41 poll.; dec. ant. : dec. post. :: 4 : 5.

CHITON SQUALIDUS. C. t. albidâ, atro-maculatâ, maculis maximis, rugosâ; areis a costâ robustâ discretis; valvis extremis costis 8 ad 10 instructis; margine membranaceo, setosâ. Long. 1.15 poll.; lat. .7 poll.

CHITON COSTATUS. C. t. albido atroque maculatâ; areis lateralibus elevatis, costulis 3 vel 4 papillosis instructis, posteriùs sub-spinosis; areis dorsi mediis lævibus, transversim striatis; inter areas declivitas est, profundè striata; margine squamoso, alternatim flavido-albo atroque. Long. 1.35 poll.; lat. .75 poll.

CHITON SQUAMULOSUS. C. t. olivecêâ, lineâ pallidè virente dorsali—ornatâ; areis lateralibus squamosis inequalibus prostratis—obtectis; areis dorsi mediis sublævibus, puncto-striatis; margine exilè squamuloso, alternatim cinereo-virescente viridique. Long. .7 poll.; lat. .4 poll.

CHITON MULTICOSTATUS. C. t. prælongâ, intùs rubellâ, extus pallidè virente, punctis albis et atro-virentibus, lineâque dorsali pallidâ ornatâ; areis lateralibus perelevatis, costatis, costis 6 ad 8 nodosis; areis dorsi costulis 20 gracilibus, compressis,—instructis; margine squamoso, alternatim virente alboque. Long. .9 poll.; lat. 42 poll.

CHITON PURPURASCENS. C. t. prælongâ, purpureo-rubente concentricè striatâ; margine lato, exilissimè squamuloso, cærulescente, alternatim pallidiore. Long. 1.1 poll.; lat. 5 poll.

CHITON PAPILLOSUS. C. t. minimâ, latâ, virente, albido atroque crebrè maculatâ, papillosâ; areis a costulâ gracili discretis; margine exilissimè squamuloso, alternatim virente albidoque. Long. .21 poll.; lat. .13 poll.

CHITON ERYTHRONOTUS. C. t. parvâ, subelongatâ, flavido-albâ, irregulariter rubro-maculatâ; areis lateralibus costatis, costis nodulosis, areis dorsi striatis; margine squamuloso. Long. .55 poll.; lat. .3 poll.

PERNA BICOLOR. P. t. convexâ, intùs argenteâ, extra pallii impressionem aterrimâ, splendente; impressione musculari bilobatâ, parte alterâ majori suborbiculari, alterâ cuspidatâ; ligamentis 7, robustis. Long. 7 poll.; alt. 1 poll.; lat. .33 poll.

ARCA TENERA. A. t. albidâ, subtenui, ellipticâ, decussatâ, mediâ compressâ, umbonibus planulatis, approximatis; costulis radiantibus crenulatis; striis concentricis pilearibus; dentibus paucis; hiatu minimo. Long. .8 poll.; alt. .5 poll.; lat. .4 poll.

CARDITA OVATA. C. t. ovatâ, lamellis decumbentibus inequalibus et striis radiantibus profundis lamellas persectantibus—ornatâ; lamellis posterioribus haud insectis, striatis; margine vix crenulato.

GENUS THETIS.

G. t. *Astarte* affini, sed dente laterali remotâ anteriore in utrâque valvâ—instructâ; pallii impressione vix vel haud sinuatâ.

THETIS CERINA. T. t. parvâ, lineis elevatis concentricis distantibus et striis radiantibus ornatâ, cerinâ; lunulâ vulvâque transversim rubro lineatis; umbonibus minimis, acutis, pallide virentibus; margine suprâ angulato, alibi rotundato; pallii impressione subsinuatâ. Long. .42 poll.; alt. .39 poll.; lat. .21 poll.

THETIS PARVA. T. t. minimâ albidâ, lamellis elevatis robustis concentricis ornatâ; umbonibus parvis, acutis; margine suprâ angulato, alibi rotundato; pallii impressione simplici. Long. .16 poll.; alt. .14 poll.; lat. .09 poll.

LUCINA GRANULOSA. L. t. parvâ, globulosâ, albâ, nodulis subquincuncialibus plerùmque ornatâ; dentibus lateralibus obso-

letis, cardinalibus robustis. Long. .34 poll.; alt. .31 poll.; lat. .35 poll.

LUCINA IMBRICATULA. *L. pectini* affinis, sed t. brevior, crassiore, orbiculari, subequalaterali, costulis valdè imbricatis ornatâ. Long. .9 poll.; alt. .85 poll.; lat. .5 poll.

LUCINA PULCHELLA. *L. t.* parvâ, subcordatâ, rubellâ, albomarginatâ, striis obliquis parallelis, posterioribus undatis, anterioribus divaricatis—ornatâ; dentibus lateralibus robustis. Long. .28 poll.; alt. .28 poll.; lat. .18 poll.

AMPHIDESMA JAYANUM. *A. t.* orbiculari, flexuosâ, haud hiante, lamellis concentricis crebris, interdum obsoletis, striisque radiantibus exilissimis ornatâ; (juniorum intus rubro-maculatâ, seniorum albidis vel flavis;) interdum rubro-radiatâ; dentibus 2, magnis, divaricatis, subremotis. Long. 1.41 poll.; alt. 1.36 poll.; lat. .7 poll.

TELLINA DECUSSATULA. *T. t.* rosaceâ, suprâ albidâ, iridescente, exilissimè decussatâ; dente sinistrâ posteriore obsoletâ. Long. 1 poll.; alt. .65 poll.; lat. .29 poll.

TELLINA NITENS. *T. t.* nitidâ, rosaceâ, zonis pallidis ornatâ; parte posteriore elevatâ, infrâ angulatâ; dentibus lateralibus anterioribus obsoletis. Long. .75 poll.; alt. .4 poll.; lat. .17 poll.

PSAMMOBIA PURPUREO-MACULATA. *P. t.* brevi, posteriùs truncatâ, albidâ, maculis paucis purpureis cœrulescentibus, interdum obsoletis, ornatâ; ligamento brevi, crasso.

PSAMMOBIA AFFINIS. Præcedenti affinis, sed t. fuscâ, atropurpureo biradiatâ, exilissimè decussatâ. Long. .66 poll.; alt. .51 poll.; lat. .25 poll.

PSAMMOBIA BIRADIATA. Præcedenti affinis, sed t. anteriùs longiore, candidissimâ, radiis 2 sanguineis latis, brevibus, ornatâ. Long. .49 poll.; alt. .38 poll.; lat. .18 poll.

PSAMMOBIA CERINA. *P. t.* parvâ, cerinâ, tenui, anteriùs procerâ et circulari, posteriùs angulatâ (angulo haud multùm truncato,) concentricè exilissimè striatâ; dentibus parvis, prominentibus. Long. .39 poll.; alt. .31 poll.; lat. .17 poll.

PARS II.

SPECIES TERRESTRES.

CYCLOSTOMA DUFFIANUM. C. t. magnâ, discordeâ, rubellâ albâque; anf. $4\frac{1}{2}$, cylindraceis; umbilico lato, profundo; margine simplici. Div. 150° ; lat. max. 1.9 poll.; lat. min. 1.45 poll.; alt. .87 poll. Gulielmo Duff, armig., conchyliorum Jamaicensium doctissimo, hæc species dedicatur.

CYCLOSTOMA HILLIANUM. C. t. sub-depressâ, candidâ, fasciis angustis fuscis interruptis ornatâ, decollatâ, anf. reliquis 5, vix-connexis, aculeis elongatis decussatim seriatis—elegantissimè insculptis; aperturâ ab anf. penultimo remotâ; labro latissimè planulato, plicato; umbilico lato, profundo; operculo albo, lamellâ spirali procerâ ornato. Div. 110° ; alt. .32 poll.; lat. max. .47 poll.; lat. min. .37 poll.; Ricardo Hill, armig., rerum naturalium Jamaicensium doctissimo, hæc species dedicatur.

CYCLOSTOMA LIMA. C. *lincinæ* affine, t. perexiliùs decussatâ, aculeis brevioribus, subtus costulis revolventibus majoribus instructâ; labro nunquam crenulato. Div. 56° ; alt. .9 poll.; lat. max. .7 poll.; lat. min. .45 poll.

CYCLOSTOMA BRONNII. C. t. fuscâ, interdum subalbidâ, decollatâ; anf. $2\frac{1}{2}$ perditis; anf. reliquis 4, suprâ exilè crenulatis, striis longitudinalibus exilissimis parallelis creberrimis—elegantè insculptis; labro crassiusculo, suprâ in triangulum parvum concavum producto; operculo albo, sub-duplici. Div. 58° ; alt. .67 poll.; lat. max. .5 poll.; lat. min. .35 poll.

CYCLOSTOMA FUSCO-LINEATUM. C. t. præcedenti affine, fasciis angustis fuscis interruptis ornatâ, sutura haud multum crenulatâ, labro minore. Forsan var? alt. .55 poll.; lat. max. .4 poll.; lat. min. .3 poll.

CYCLOSTOMA PULCHRIUS. C. t. fasciâ latâ, rubro-fuscâ, ornatâ, decollatâ; anf. $2\frac{1}{2}$ perditis; anf. reliquis 4, exilissimè regulariter et elegantissimè decussatis; labro crasso, rotundato, albo; umbilico perangusto, profundo; operculo tenui. Div. 48° ; alt. .56 poll.; lat. max. .38 poll.; lat. min. .3 poll.

HELICINA LEANA. H. t. perdepressâ, pallidè rufâ, vel albidâ; epidermide exilissimè hirsutâ; anf. $4\frac{1}{2}$, haud multum convexis, striis decurrentibus exilissimis—ornatis; anf. ultimo haud angulato; aperturâ a labri dentibus duobus obtusis suprâ et infrâ

contractâ ; operculo tenui. Div. 135° ; alt. .13 poll. ; lat. max. .27 poll. ; lat. min. .22 poll.

HELICINA LINEATA. H. t. depressâ ; anf. 4½, lineis elevatis parallelis distantibus decurrentibus—ornatis ; anf. ultimo a lineâ majori subangulato ; aperturâ *H. leanæ* simili. Div. 112° ; alt. .09 poll. ; lat. max. .15 poll. ; lat. min. .13 poll.

HELICINA SOLITARIA. H. t. depressâ, rubrâ, fuscescente ; anf. 4½, lævibus ; ultimo nunquam angulato ; aperturâ semicirculari ; labio infrâ emarginato ; columellâ acutâ ; labro subtenui, extrâ flavo ; operculo tenui. Div. 115° ; alt. .22 poll. ; lat. max. .35 poll. ; lat. min. .31 poll.

TRUNCATELLA SUCCINEA. T. t. magnâ, succineâ-rubente, decollatâ ; anf. 5 vel 5½ perditis ; anf. reliquis 3½ vel 4, costis crebris (ultimi obsoletis)—ornatis ; aperturâ albidâ ; operculo convexo, calcareo, corneo-marginato. Div. 22° ; spiræ long. post decoll. .2 poll. ; long. tot. .31 poll. ; lat. .13 poll.

TRUNCATELLA CUMINGII. T. t. parvâ, succineâ, rubente, scalariformi, decollatâ ; anf. 4 perditis ; anf. reliquis 4, singulatim costis 9 robustis acutis—ornatis ; operculo subcorneo. Div. 22° ad 18° ; spiræ long. post decoll. .12 poll., antêa .18 poll. ; long. tot. .17 poll. ; lat. .08 poll.

TRUNCATELLA SCALARIFORMIS. T. t. solidâ, elongatâ, decollatâ ; anf. 4 vel 5 reliquis, singulatim costis 10 robustis et striis decurrentibus exilissimis—ornatis. Div. 20° ; long. post decoll. .16 poll. ; lat. .08 poll.

PEDIPES GLOBULOSUS. *P. quadridens?* *Pfr.* P. t. globulosâ, crassâ, castaneâ ; lineis elevatis, inequalibus, inequidistantibus, decurrentibus, ornatâ ; labro acuto, intûs incrassato, suprâ unidentato ; labio suprâ dente maximâ, lamelliformi, transversâ, ornato ; columellâ bidentatâ ; dentibus et columellâ albis. Div. 90° ; spiræ long. .08 poll. ; long. tbt. .19 poll. ; lat. .14 poll.

SUCCINEA CONTORTA. S. t. corneâ ; spirâ minimâ ; anf. 2½, perconvexis, perobliquis ; aperturâ maximâ, obliquâ, ellipticâ. Div. 80° ; spiræ long. .08 poll. ; long. tot. .23 poll. ; lat. max. .21 poll. ; lat. min. .1 poll.

BULIMUS OCTONOIDES. B. t. parvâ, albidâ, elongatâ ; anf. 7, perconvexis ; labro tenui ; columellâ rectâ ; *B. octono* simili, speciei quam *Gen. Achatina* habeat. Div. 22° ; spiræ long. .22 poll. ; long. tot. .31 poll. ; lat. .1 poll.

BULIMUS PALLIDUS. B. t. parvâ, tenui, diaphanâ, corneâ, elon-

gatâ ; anf. 5, convexis ; labro tenui ; columellâ rectâ. Div. 35° ; spiræ long. .16 poll. ; long. tot. .27 poll. ; lat. .13 poll.

BULIMUS PROCERUS. B. t. parvâ, nitidâ, tenui, diaphanâ, flavido-fuscâ, perelongatâ ; anf. 8 ad 10, haud multùm convexis ; labro tenui ; columellâ tortâ. Div. 18° ad 14° ; spiræ long. .5 poll. ; long. tot. .63 poll. ; lat. .14 poll.

BULIMUS LÆVIUSCULUS. B. t. minimâ, tenui, nitidâ, diaphanâ, ovatâ, elongatâ ; anf. 6, haud multùm convexis ; striis paucis, distantibus, exilissimis, longitudinalibus—ornatis ; aperturâ elongatâ, suprâ angustâ, acutâque ; labro tenui, infrâ retracto ; columellâ tortâ. Div. 18° ; spiræ long. .16 poll. ; long. tot. .25 poll. ; lat. .075 poll.

BULIMUS STRIATELLA. B. t. parvâ, tenui, nitidâ, diaphanâ, elongatâ ; anf. 7, convexis, striis robustis, parallelis—ornatis ; aperturâ latâ ; labro tenui ; columellâ haud multùm tortâ. Div. 30° ; spiræ long. .15 poll. ; long. tot. .2 poll. ; lat. .07 poll.

ACHATINA IOTA. A. t. minimâ, gracili, corneâ ; anf. 4, latis-simis, lævibus ; aperturâ elongatâ, suprâ acutissimâ ; columellâ arcuatâ. Div. 12° ; spiræ long. 08 poll. ; long. tot. .135 poll. ; lat. .045 poll.

ACHATINA PELLUCENS. A. t. parvâ, nitidâ, gracili, corneâ, striis exilissimis longitudinalibus, suprâ crebris, infrâ distantibus—ornatâ ; anf. 7 ; labro tenui, infrâ retracto ; columellâ arcuatâ. Div. 14° ; spiræ long. .19 poll. ; long. tot. .27 poll. ; lat. .07 poll.

ACHATINA COSTULATA. A. t. parvâ, conicâ, tenui, diaphanâ, fuscescente, atro-fusco bifasciatâ ; suturâ profundâ ; anf. 8, suprâ subangulatis, costulis gracillimis crebris—instructis ; labro tenui, infrâ retracto ; columella haud multùm arcuatâ. Div. 20° ; spiræ long. .23 poll. ; long. tot. .335 poll. ; lat. .1 poll.

ACHATINA PHILLIPSII. A. t. tenui, diaphanâ, elongatâ, subfusi-formi, pallidè fuscescente, lineis atro-fuscis paucis distantibus longitudinalibus—ornatâ ; anf. 7, suprâ a lineâ infra-suturali impressis, striatis, striis distantibus ; labro tenui, infrâ retracto ; columellâ haud multùm arcuatâ. Div. 20° ; spiræ long. .5 poll. ; long. tot. .73 poll. ; lat. .13 poll.

ACHATINA PROPINQUA. Præcedenti affinis, forsan var ; sed t. lineis longitudinalibus crebris instructâ, sine lineâ infra-suturali ; anf. 6 ; columellâ rectâ. Div. 18° ; spiræ long. .32 poll. ; long. tot. .48 poll. ; lat. .13 poll.

ACHATINA VICINA. Forsan *A. Phillipsii* var.; sed t. striis longitudinalibus crebris—instructâ, nunquam fusco-fasciatâ; lineâ infra-suturali a suturâ plus remotâ, spirâ brevior. Div. 22°; spiræ long. .3 poll.; long. tot. .54 poll.; lat. .175 poll.

ACHATINA GRIFFITHSII. A. t. tenui, diaphanâ, pallidè fuscescente, lineis atro-fuscis longitudinalibus paucis distantibus—ornatâ; anf. 7½ a lineâ infra-suturali impressis, costulatis, costulis creberrimis haud multùm elevatis et rotundatis; aperturâ elongatâ, suprâ acutâ, infrâ subcanaliculatâ; labro tenui, medio angulato, infrâ valdè retracto; columellâ valdè contortâ. Div. 28°; spiræ long. .46 poll.; long. tot. .81 poll.; lat. .275 poll.

CYLINDRELLA (?) PYGMÆA. C. t. minimâ, conicâ, gracillimâ, regulariter striatâ, striis latis; anf. 7, convexis; aperturâ obliquâ; labro haud latè reflexo. Div. 10°; spiræ long. .195 poll.; long. tot. .35 poll.; lat. .04 poll.

CYLINDRELLA CUMINGII. C. t. magnâ, candidâ, subfusiformi, longissimâ, heterostrophâ, costulis minimis obliquis regularibus rotundatis creberrimis—ornatâ, latè decollatâ; anf. 10 vel 11 perditis, superis perconvexis; anf. reliquis 8 vel 9; aperturâ ellipticâ, in faucibus valdè contractâ, in labrum latissimum acutum expansâ; anf. ultimocarinâ semi-revolvete aperturam subeffusam faciente—instructo. Div. suprâ 10°; long. tot. 1.4 poll.; post decoll. long. 1.15 poll.; lat. .19 poll.

CYLINDRELLA CYLINDRUS. C. t. rubrâ, cylindraceâ, præcedenti similiter sed exilitis insculptâ, latè decollatâ; anf. reliquis 12, haud multùm convexis; aperturâ subovatâ, in labrum subtenue expansâ; anf. ultimo acutè carinato. Long. post decoll. .82 poll.; lat. .15 poll.

CYLINDRELLA SEMINUDA. C. t. parvâ, albidâ, subfusiformi, latè decollatâ; anf. 10 vel 11 perditis; anf. reliquis 9 suprâ subangulatis, mediis planulatis, costatis, costis pluribus prominentibus; anf. superis mediis obsolete costatis; anf. ultimo bicarinato; aperturâ ab anf. penultimo latè disjunctâ; labro expanso, tenui. Long. post decoll. .33 poll.; lat. .09 poll.

PUPA FUSIFORMIS. P. t. fusiformi, nitidâ, exilissimè striatâ, opacâ, cinereâ, decollatâ; anf. 5 vel 6 perditis, planulatis; anf. 8 reliquis, haud multùm convexis, albo-fasciatis, fasciâ infra-suturali; labro, solido, albo, rotundato, sinuoso, suprâ haud continuo; umbilico angusto. Long. post decoll. .8 poll.; lat. .27 poll.

PUPA NOBILIOR. P. t. magnâ, crassâ, opacâ, stramineâ, striis obliquis creberrimis parallelis eleganter insculptâ, infrâ cylindraceâ, suprâ tereti; spirâ longissimâ, decollatâ; anf. perditis 15! anf. reliquis 10; labro lato, crasso, continuo, albo, anf. penultimo appresso. Long. partis amissæ .6 poll.; long. post decoll. 1.18 poll.; tot. 1.78 poll.; lat. .37 poll. Species nobilis, notabilis!

PUPA OBESA. P. t. tenui, diaphanâ, pallidè fusciscente, subfusiformi, striis obliquis costiformibus ornatâ, suprâ concavè et breviter tereti, decollatâ; anf. 6 vel 7 perditis; anf. 7 vel 8 reliquis; labro tenui, albo, reflexo, continuo, ab anf. penultimo disjuncto. Long. partis amissæ .13 poll.; long. post decoll. .57 poll.; lat. .235 poll.—Var. **DENSESTRIATA**, t. majore, striis exilissimis creberrimis ornatâ.

PUPA RUBELLA. P. *cylindro*, Desh. affinis; sed t. minore, ardentè rubrà; spirâ suprâ graciliore; anf. 14 perditis, 8 reliquis; labro tenui, ab anf. penultimo disjuncto. Long. partis amissæ .43 poll.; long. post decoll. .7 poll.; lat. .3 poll.

PUPA TENEIDENS. P. *ovata*, Say, affinis, et magnitudinis ejusdem; aperturâ suprâ dente magnâ lamelliformi intùs productâ, infrâ alterâ simili, minore, oppositâ; duobus alteris, unâ utrinque oppositis.

HELIX PERACUTISSIMA. H. t. magnâ, imperforatâ, lenticulari subtenui, fuscâ, exilè sagrinatâ; anf. 5; inferis suprâ concavis; ultimo medio in angulum acutissimum lamelliformem expanso, subtùs convexo; aperturâ perdepressâ, infrâ *H. sinuata*, Müll. similiter 4-dentatâ; labro medio acutè angulato. Div. 140°; alt. .6 poll.; lat. max. 1.6 poll.; lat. min. 1.43 poll.

HELIX NEMORALOIDES. H. *nemorali* affinis; sed t. subtùs valdè planulatâ; apice plus elevatâ; anf. 5; anf. ultimo fasciis tribus fuscis semper ornato; superis bifasciatis. Magnit. sicut in *H. nemorali*.

HELIX SUBCONICA. H. t. tenui, latè subconicâ, imperforatâ, flavido-fuscâ, atro-fusco variè lineatâ; anf. 5, haud multùm convexis, exilè striatis; anf. ultimo subangulato, subtùs convexo; aperturâ subrectangulari, curviter depressâ; labro tenuissimo; columellâ rectâ acutâ. Div. 100°; alt. .43 poll.; lat. max. .67 poll.; lat. min. .57 poll.

HELIX SUBPYRAMIDALIS. H. t. tenui, latè subconicâ, diaphanâ, pallidè corneâ; apice subacutâ; suturâ profundâ; anf. 6, planulatis, superis infrâ obtusè angulatis, ultimo medio angulato, subtùs

convexo; labro tenuissimo; umbilico angusto, profundo. Div. 90°; alt. .2 poll.; lat. max. .27 poll.; lat. min. .24 poll.

HELIX DEPRESSA. Præcedenti affinis; sed t. perdepressâ; apice obtusâ; umbilico latiore. Div. 155°; alt. .1 poll.; lat. max. .25 poll.; lat. min. .22 poll.

HELIX SINCERA. H. t. parvâ, depressâ, diaphanâ, pallidè corneâ, costulis crebris ornatâ; anf. 4½, perconvexis; anf. ultimo rotundato; aperturâ sub-orbiculari, ab anf. penultimo valdè invasâ; labro tenui; umbilico lato. Div. 160°; alt. .075 poll.; lat. max. .15 poll.; lat. min. .13 poll.

HELIX OPALINA. H. t. parvâ, perdepressâ, suprâ convexâ, diaphanâ, nitidâ, pallidè corneâ, exilissimè striatâ, infrâ indentatâ, haud umbilicatâ; anf. 5, suprâ a lineâ subsuturali impressis; aperturâ infrâ carinâ candidâ intùs decurrente calloque umbilicari candidâ—instructâ; labro tenui. Div. 145°; alt. .135 poll.; lat. max. .3 poll.; lat. min. .26 poll.

HELIX PELLUCIDA. H. t. parvâ, pallidè corneâ, diaphanâ, exilissimè et creberrimè striatâ; spirâ latè conicâ; anf. 6, perconvexis; ultimo magno, rotundato; aperturâ suborbiculari, ab anf. penultimo valdè invasâ; labro tenuissimo; umbilico parvo. Div. 110°; alt. .2 poll.; lat. max. .28 poll.; lat. min. .25 poll.

HELIX PERAFFINIS. Præcedentis var.? sed t. spirâ depressâ, convexâ; umbilico multo latiore. Div. 140°; alt. .17 poll.; lat. max. .3 poll.; lat. min. .25 poll.

HELIX ARBOREOIDES. H. t. discoideâ, tenui, nitidâ, diaphanâ, pallidè corneâ, exilissimè striatâ; anf. 7, angustis, a lineâ subsuturali impressis; ultimo rotundato, subtùs latè et profundè indentato; aperturâ sub-ovatâ, ab anf. penultimo valdè invasâ; labro tenuissimo. Div. 140°; alt. .3 poll.; lat. max. .59 poll.; lat. min. .51 poll.

HELIX TENERRIMA. H. t. tenuissimâ, subglobosâ, diaphanâ, fuscâ, pallidè virente, imperforatâ; anf. 5, convexis; ultimo maximo, inflato, subtùs convexo; aperturâ magnâ, suborbiculari; labro tenuissimo; columellâ infrâ expansâ. Div. 115°; alt. .5 poll.; lat. max. .72 poll.; lat. min. .56 poll.

HELIX DIOSCORICOLA. H. t. minimâ, tenui, subglobosâ, imperforatâ, anf. 3, perconvexis; ultimo rotundato, subtùs angustè indentato; labro tenui. Div. 70°; alt. .05 poll.; lat. max. .06 poll.; lat. min. .05 poll.

HELIX JAYANA. *H. epistylum*, Müll., affinis ;

H. jayana ;

H. epistylum ;

dente unâ lamelliformi longisimâ ; dentibus tribus, obliquis, tortis, brevibus ;

t. latiore, subtùs latissimè et t. angustiore, subtùs perconvexâ, angustè indentatâ ;
anf. 9½. anf. 9.

Alt. .9 poll. ; lat. max. 1.18 poll. ; lat. min. 1.1 poll. Alt. .1 poll. ; lat. max. .1 poll. ; lat. min. .9 poll.

PARS III.

SPECIES FLUVIATILES.

PALUDINA RIVULARIS. *P. t. minimâ*, lævi, corneâ, elongatâ ; spirâ conicâ, acutâ ; anf. 6 ; aperturâ ovatâ. Div. 30° ; spiræ long. .07 poll. ; long. tot. .11 poll. ; lat. .05 poll.

MELANIA SPINIFERA. *M. t. minimâ*, corneâ ; anf. 6, angulatis, angulo spinifero ; ultimo subtùs striis exilissimis revolventibus insculpto ; aperturâ suprâ et infrâ angulatâ. Div. 45° ; spiræ long. .09 poll. ; long. tot. .17 poll. ; lat. .1 poll.

PLANORBIS DENTIFERUS. *P. dentato*, Gould, affinis ; t. anf. 4, ultimo quam penultimo, haud multò latiore ; sed *P. dentatus* ultimum maximum habet, (v. fig. Gouldianam) ; dentium labialium dextrâ bifidâ, magnâ ; dentibus sicut in specie Gouldianâ dispositis.

Mr. Phineas W. Blunt was elected a member of the Society.

DONATIONS TO THE CABINET.

Phials containing specimens of sugar, and molasses or syrup made from the cornstalk, from Dr. C. T. Jackson, received by him from Mr. Ellsworth, Commissioner of Patents, Washington.

A collection of marine and terrestrial shells, from Jamaica. From Prof. C. B. Adams.

A large slab, containing beautiful specimens of Fucoides. From Prof. Henry D. Rogers.

ADDITIONS TO THE LIBRARY.

A Report on American Coals, and their comparative power and efficiency in generating Steam, and for other purposes. By Prof. Walter R. Johnson. 8vo. Washington. From Hon. R. C. Winthrop.

A Final Report on the Geology of New Hampshire. By Dr. C. T. Jackson. 4to. 1844. From the Author.

A Public Discourse, in Commemoration of Peter S. Du Ponceau, LL. D., late President of the American Philosophical Society, &c., &c. By Robley Dunglison, M. D. Philadelphia, 1844. From the Society.

Memoirs of William Maclure. By Samuel G. Morton, M. D., &c. Philadelphia, 1844. From the Author.

List of Specimens of Myriapoda in the British Museum. 18mo. London, 1844. From the British Museum.

List of Specimens of Birds in the same. Part I. 18mo. London, 1844. From the same.

Catalogue of Tortoises, Crocodiles, and Amphisbæneans in same. 18mo. London, 1844. From the same.

January 15, 1845.

The President in the Chair.

The President communicated a paper from Dr. J. W. Mighels, of Portland, Maine, a Corresponding Member, entitled "Descriptions of Shells from the Sandwich Islands, and other localities." In this paper the author characterizes the following species, which he supposes to be hitherto undescribed.

HELIX. INTERCARINATA. Shell depressed, subdiscoid, brown, mottled with a darker color; umbilicus deep; whorls five, convex, with fine, raised incremental striæ; aperture semilunate, with two thin, elevated, keel-like laminæ, placed longitudinally

upon the intruded body whorl, and extending into the depth of the shell,—and five equidistant teeth within the external lip, which is simple and thin. Diameter, $\frac{2}{15}$ inch. *Hab.* Oahu.

HELIX SUBRUTILA. Shell orbicular, depressed, pellucid, smooth, shining, yellowish, imperforate, subcarinate; whorls five, slightly convex; aperture semilunate, slightly gibbous, lip simple, thin. Diameter, $\frac{3}{10}$ to $\frac{4}{10}$ inch. *Hab.* Oahu.

HELIX TIARA. Shell low turbinata, yellowish, with dark brown zig-zag lines crossing the whorls, when young and fresh; umbilicus wide and deep; incremental striæ rather coarse; whorls five to six, convex; aperture circular, modified by the last whorl; lip simple, acute. Diameter, about $\frac{1}{2}$ inch. *Hab.* Kauai.

HELIX JUGOSA. Shell depressed, subdiscoidal, reddish brown; umbilicus broad and deep; whorls five, convex, with numerous, raised, incremental lines; aperture circular, modified by the last whorl, with a thin, elevated lamina, extending into the depth of the shell; lip simple, thin. Diameter, $\frac{9}{10}$ inch. *Hab.* Waioli.

HELICINA LACINIOSA. Shell orbicular, convex, reddish brown; interspersed with irregular light spots; whorls five, more or less flattened, with two or three raised lines, revolving over the middle of the outer whorl; aperture semilunar; lip simple, acute. Diameter, $\frac{3}{5}$ inch. *Hab.* Oahu.

HELICINA ROTELLOIDEA. Shell orbicular, low, conical, convex at the base, sometimes reddish brown, sometimes greenish, with obscure light spots, surface smooth; whorls about $3\frac{1}{2}$, convex; aperture semilunate; lip simple, acute. Diameter, from $\frac{1}{10}$ to $\frac{3}{5}$ inch. *Hab.* Oahu.

PUPA ADMODESTA. Shell minute, ovate, greenish brown; whorls $3\frac{1}{2}$, convex; incremental striæ very fine; aperture circular, unarmed; lip simple, thin, slightly inflected; umbilicus small. Length, $\frac{1}{20}$ inch, diameter, $\frac{1}{40}$ inch. *Hab.* Oahu.

BULIMUS ARMATUS. Shell sinistral, rarely dextral, conical, brown, or yellowish, sometimes with a light, revolving band below the suture, perforate; whorls five, convex; aperture oblong-ovate, with a thin, flexuous, lamellated tooth on the transverse lip, and a small tooth or fold on the columellar lip; outer lip thin, slightly reflected. Length, $\frac{1}{3}$ inch, diameter, $\frac{1}{5}$ inch. *Hab.* Hawaii.

BULIMUS PUMICATUS. Shell dextral, conical, polished, glossy, light horn color, imperforate; whorls seven, slightly convex;

aperture oval, small, with a delicate fold on the left side; lip simple, acute. Length, $\frac{1}{2}$ inch, diameter, $\frac{3}{8}$ inch. *Hab.* Oahu.

BULIMUS SCUTILUS. Shell dextral, cylindrical, turreted, white, polished, imperforate; whorls six, convex; aperture elongate-oval; lip simple, acute. Length, $\frac{7}{10}$ inch, diameter, $\frac{3}{5}$ inch. *Hab.* Oahu.

BULIMUS CLAUSINUS. Shell dextral, ovate-conic, thick and solid, white, smooth, glossy, sometimes with an obscure, narrow, yellowish band, revolving with the suture and passing over the middle of the body whorl; whorls five, convex; aperture subovate; lip yellowish, thickened, coalescing with the body whorl and forming an enamel on the left side of the aperture. Length, about $\frac{7}{10}$ inch, diameter, $\frac{2}{5}$ inch. *Hab.* Hawaii.

PARTULA VIRGULATA. Shell ovate-conic, light fawn color, beautifully adorned with dark brown bands, more or less numerous, imperforate; whorls five, convex; incremental striæ delicate; aperture oblong; lip reflected, slightly inflected. Length, 1 inch, diameter, $\frac{3}{4}$ inch. *Hab.* Waianai.

ACHATINA ACCINETA. Shell dextral, conical, horn color, smooth, polished, imperforate; whorls six, convex, with an impressed revolving line just below the suture; aperture semi-ovate; lip simple, acute. Length, $\frac{4}{5}$ inch, diameter, $\frac{2}{5}$ inch. *Hab.* Oahu.

ACHATINA TURBICULA. Shell cylindrical, turreted, sometimes dark, sometimes light brown, imperforate; whorls ten, convex, more or less distinctly striate transversly; incremental striæ coarse; aperture oblong; lip simple, acute. Length, $2\frac{3}{4}$ inches, diameter, $\frac{4}{5}$ inch. *Hab.* Oahu.

ACHATINELLA NUBILOSA. Shell dextral, ovate, conic, thin, variously mottled with dark brown on a light ground, imperforate; whorls six, convex; aperture semicircular; lip simple, acute. Length, $\frac{7}{10}$ inch, diameter, $\frac{2}{5}$ inch. *Hab.* Oahu.

ACHATINELLA VESTITA. Shell sinistral, acuminate-conical, light brown, or white, with beautiful narrow dark brown bands, more or less numerous, imperforate; whorls six, convex; aperture semilunate; lip reflected. Average length, 1 inch, diameter, $\frac{1}{2}$ inch. *Hab.* Waianai and Hawaii.

ACHATINELLA VIRIDANS. Shell dextral, elongate-conic, green, with light streaks intermixed, imperforate; whorls five, convex, with a revolving, slightly impressed line below the suture; aper-

ture subovate, stained with a pink color just within the margin; lip slightly thickened. Length, $\frac{3}{4}$ inch, diameter, $\frac{7}{15}$ inch. *Hab.* Oahu.

ACHATINELLA MUSTELINA. Shell dextral, conical, dark brown, with a light revolving band at the suture, perforate; whorls seven, convex; aperture oblong; lip simple, acute. Length, 1 inch, diameter, $\frac{2}{5}$ inch. *Hab.* Waiwai.

ACHATINELLA CINGULA. Shell dextral, ovate-conic, horn color, smooth and polished, with a narrow brown band accompanying the suture, imperforate; whorls seven, convex; aperture small, subovate; lip simple. Length, $\frac{1}{2}$ inch, diameter, $\frac{1}{4}$ inch. *Hab.* Oahu.

ACHATINELLA VENUSTA. Shell sinistral, conical, body whorl large and tumid, reddish yellow, beautifully ornamented with black zigzag lines, more or less numerous and regular, perforate; whorls six, convex; aperture subovate; lip simple, acute. Length, $\frac{2}{3}$ inch, diameter, $\frac{1}{5}$ inch. *Hab.* Oahu.

ACHATINELLA PICTA. Shell sinistral, short, thick, conical, light yellow, with black, zigzag lines, more or less numerous, perforate; whorls six, convex; aperture campanulate; lip simple, acute. Length, $\frac{7}{10}$ inch, average diameter, $\frac{2}{5}$ inch. *Hab.* Oahu.

ACHATINELLA INORNATA. Shell dextral, elevated, turreted, sometimes straw-colored, sometimes dark brown, unadorned, perforate; whorls seven, convex; aperture subovate; lip simple, acute. Length, $\frac{2}{3}$ inch, diameter, $\frac{3}{10}$ inch. *Hab.* Oahu.

SUCCINEA PATULA. Shell ovate, pellucid, fragile, yellowish; last whorl very large, composing almost the whole shell, there being only about half a volution above it, forming a minute knob; aperture oval, very large and open; lip very thin. Length, $\frac{1}{2}$ inch, breadth, $\frac{2}{5}$ inch. *Hab.* Oahu.

SUCCINEA CADUCA. Shell subovate, very thin and fragile, horn color; whorls about two and a half, the last very large; spire rather prominent; aperture elongated-oval; lip thin. Length, $\frac{7}{10}$ inch, breadth, $\frac{1}{4}$ inch. *Hab.* Oahu.

PHYSA UMBILICATA. Shell subovate, gibbous, reddish brown; whorls about three and a half; aperture campanulate, oblique; columella fold prominent; outer lip rather thick; umbilicated. Length, $\frac{7}{10}$ inch, breadth, $\frac{1}{10}$ inch. *Hab.* Oahu.

PHYSA PRODUCTA. Shell elongate-oval, thin, fragile, pellucid, horn color, imperforate; whorls four; suture well impressed;

aperture pyriform, half the length of the shell; columella fold conspicuous; lip thin. Length, $\frac{2}{25}$ inch, breadth, $\frac{1}{2}$ inch. *Hab.* Oahu.

PALUDINA PORRECTA. Shell elongated, turreted, thin, smooth, greenish, imperforate; whorls six, very convex; suture deep; aperture ovate; lip continuous. Length, $\frac{3}{40}$ inch, diameter less than $\frac{1}{10}$ inch. *Hab.* Oahu.

PALUDINA ANTHRACINA. Shell elongate-conic, thin, smooth, brown, covered with a black pigment, imperforate; whorls five, convex; aperture subovate; lip continuous, acute. Length, $\frac{4}{25}$ inch, diameter, $\frac{1}{15}$ inch. *Hab.* Tortola.

SIGARETUS FILICATUS. Shell orbicular-ovate, rather thick, white, umbilicated; whorls about two, the last two of which composes nearly all the shell; external surface beautifully sculptured, being covered with triangular ribs placed longitudinally, and numerous transverse striæ; aperture rounded oval. Length, $\frac{2}{3}$ inch, breadth nearly equal to the length. *Hab.* Zanzibar, eastern Africa.

SOLARIUM IMPLEXUM. Shell depressed, subdiscoid, grayish white, with a few brown spots; whorls three, flattened, with five rounded, revolving ridges on each, intersected by numerous, impressed, transverse striæ; aperture circular; umbilicus large and deep. Diameter, $\frac{4}{15}$ inch. *Hab.* Oahu.

SOLARIUM CYCLOSTOMUM. Shell orbicular, convex, ash colored or greenish; whorls four to five, convex, with five, revolving ridges, intersected by impressed transverse striæ; suture, deep; aperture circular; umbilicus deep; operculum horny, spiral. Diameter, $\frac{3}{10}$ inch. *Hab.* Oahu.

TURBO RUBRICINCTUS. Shell minute, orbicular-conical, white, with numerous, impressed, revolving bands of a superb vermilion color, imperforate; whorls four, convex; aperture circular. Diameter, $\frac{2}{10}$ inch. *Hab.* Oahu.

CERITHIUM GRACILENTUM. Shell turreted, fusiform, brown and white, spotted or banded, whorls ten to twelve, flattened, with four unequal, acute, elevated revolving ridges on each; aperture sinistral, subovate; canal tubular, deflected, twisted. Length of the largest, $\frac{7}{10}$ inch, diameter, $\frac{1}{2}$ inch. *Hab.* Oahu.

CERITHIUM MACULOSUM. Shell conical, white, with zigzag lines and spots, polished; whorls six, angular, tuberculated, transversely striated; aperture ovate, ending in a notch. Length, about $\frac{1}{2}$ inch, diameter, $\frac{1}{2}$ inch. *Hab.* Oahu.

CERITHIUM LACINIOSUM. Shell conical, rather thick, yellowish white, with a few, irregular, brown spots; whorls six, flattened, depressed in the middle, longitudinally plicate, transversely striate; aperture ovate; canal short, slightly deflected. Length, $\frac{1}{2}$ inch, diameter, $\frac{1}{3}$ inch. *Hab.* Oahu.

PLEUROTOMA CRASSILABRUM. Shell short, thick, solid, white, covered with coarse, tortuous ribs, and fine, crowded, transverse, striæ; whorls eight, angular, tuberculated in the middle; spire tapers rapidly above the penultimate whorl, and ends in a sharp tip; aperture narrow, half the length of the shell, striated internally; lip thick; fissure distinct; canal short. Length, $\frac{7}{15}$ inch, diameter, $\frac{1}{3}$ inch. *Hab.* Oahu.

PLEUROTOMA RUGOSA. Shell thick, solid, covered with coarse ribs, and rather coarse transverse striæ; whorls seven, convex; suture accompanied with a purple line on a straw-colored ground; aperture narrow, striated internally; lip thick; fissure well marked; canal very short. Length, $\frac{4}{15}$ inch, diameter, $\frac{2}{15}$ inch. *Hab.* Oahu.

PLEUROTOMA ACUMINATA. Shell small, wax-colored, with tortuous ribs; whorls seven, slightly convex; spire rapidly tapering, ending in a sharp point; aperture one third the length of the shell, smooth internally; lip thin; fissure deep; canal very short. Length, $\frac{3}{10}$ inch, diameter, $\frac{1}{15}$ inch. *Hab.* Oahu.

PLEUROTOMA CORONATA. Shell thick, solid, white, shining, with strong ribs, ending at the suture in projecting points, transverse striæ microscopic; whorls four, flattened, angular; aperture half the length of the shell, unarmed; lip thickened; fissure well marked; canal short. Length, $\frac{2}{5}$ inch, diameter, $\frac{3}{10}$ inch. *Hab.* Oahu.

PLEUROTOMA MICANS. Shell small, white, pellucid, smooth and glistening, with obscure brown spots; whorls six, convex; aperture half the length of the shell; lip acute; fissure superficial; canal short. Length, $\frac{1}{5}$ inch, diameter, $\frac{1}{10}$ inch. *Hab.* Oahu.

PLEUROTOMA PUMILA. Shell small, purple, surface granulated; whorls four, convex; aperture narrow, one third the length of the shell; right lip thickened, with four or five small teeth projecting inwardly; fissure well marked; canal very short. Length, $\frac{7}{10}$ inch, diameter, $\frac{3}{10}$ inch. *Hab.* Oahu.

PLEUROTOMA SINUOSA. Shell short, thick, tumid, yellowish,

surface granulated; whorls six, rather angular; suture deep; aperture striated internally; lip thickened; fissure well marked; canal somewhat elongated, slightly tortuous, giving the shell a slight gibbous appearance. Length, $\frac{1}{2}$ inch, diameter, $\frac{1}{15}$ inch. *Hab.* Oahu.

PLEUROTOMA TODILLA. Shell small, surface granulated, dull white, with microscopic, brown spots; whorls six, convex; apex obtuse; aperture narrow, less than half the length of the shell, striated internally; lip thickened; fissure superficial; canal short. Length, $\frac{4}{15}$ inch, diameter, $\frac{1}{2}$ inch. *Hab.* Oahu.

PLEUROTOMA CIRCUMSECTA. Shell small, reddish brown, adorned with rounded, slightly tortuous, longitudinal ribs; whorls five, tumid in the middle; suture well impressed, with a contiguous impressed line; aperture rather wide, unarmed, one third the length of the shell; lip sharp; fissure well marked. Length, $\frac{7}{10}$ inch, diameter, $\frac{3}{5}$ inch. *Hab.* Oahu.

PLEUROTOMA OBNUBILA. Shell small, whitish, with elongated brown spots, surface smooth, with a few transverse striæ on the extremity of the last whorl; whorls six, flattened; aperture one third the length of the shell; lip slightly thickened; fissure superficial; canal short. Length, $\frac{9}{20}$ inch, diameter, $\frac{3}{8}$ inch. *Hab.* Oahu.

TRITON LACUNATUM. Shell small, short, thick, yellowish ash color, with coarse longitudinal and transverse raised lines, and varices extending on both sides from the apex to the base; whorls seven, convex; suture impressed; aperture oval, stained with purple, with purple lines extending into the depth of the shell, and armed with a series of teeth just within the margin of the right lip; canal short, narrow, deflected. Length, $\frac{2}{3}$ inch, longest diameter, $\frac{3}{10}$ inch. *Hab.* Oahu.

CYPRÆA SEMIPLOTA. Shell ovate, ventricose, short, thick, smooth, light brown, with numerous obscure white spots; base tumid, white; aperture yellowish, narrow. Length, $\frac{2}{3}$ inch, breadth, $\frac{3}{10}$ inch. *Hab.* Oahu.

CYPRÆA INSECTA. Shell elongate-oval, subrostrate, white, striated transversely, striæ extending into the aperture, with a longitudinal, dorsal impression; aperture white, narrow. Length, $\frac{7}{10}$ inch, breadth, $\frac{2}{5}$ inch. *Hab.* Oahu.

CYPRÆA SPHÆRULA. Shell very small, globular, white, with an impressed dorsal line, and numerous transverse, impressed lines

extending into the aperture ; base very convex ; aperture white. Length, $\frac{1}{10}$ inch, breadth, equal to the length. *Hab.* Oahu.

CYP. UNIFASCIATA. Shell oblong-ovate, subrostrate, smooth, glossy, light slate color, with a broad, interrupted band of a dark brown color passing over the middle of the shell ; aperture rather narrow, white, with a fine purple stain at the extremities. Length, nearly $\frac{1}{2}$ inch, breadth, $\frac{1}{4}$ inch. *Hab.* Oahu.

CYPRÆA SPADIX. Shell elongate-ovate, rostrate, smooth, polished, brown or bay color ; base convex, white ; aperture narrow, yellowish, especially at the extremities. Length, $\frac{2}{3}$ inch, breadth, $\frac{1}{3}$ inch. *Hab.* Oahu.

Mr. Binney stated that Dr. Gould, a few other gentlemen, and himself, had engaged Mr. John Bartlett, a person well qualified for the task, to make a zoological exploration of the extreme southern part of the peninsula of Florida, with a view of ascertaining its productions in reference to the geographical distribution of both terrestrial and marine species. Mr. Bartlett's first remittances had arrived. Mr. Binney had examined the land shells ; they are such as to confirm fully the supposition formerly advanced by him that, in respect of the terrestrial mollusks, the southern district of Florida is distinguished from the other districts of the United States, and approximates in zoological character to the Antilles, which it approaches so nearly, geographically. Of seven genera, two, *Cyclostoma* and *Siphonostoma*, are common to it and the Antilles, and the species of these genera are probably the same that have been already noticed in Cuba. There are several forms of *Bulimus* and *Pupa* peculiar to this district, the Antilles, and the more southern coasts of the Gulf of Mexico, and one form of *Helix* common to it and the island of St. Croix. Of twenty-four species, at least one half are common also to the island of Cuba. Mr. Binney proposed to give a more particular account of these mollusks hereafter.

Dr. C. T. Jackson made some remarks upon Prof. W. R. Johnson's Report on American coals. He explained the processes employed by Prof. Johnson in his various experi-

ments, all of which he considered ingenious and well adapted to the purpose. The Report was pronounced to be the result of an elaborate and thorough examination of the subject, and to present facts of great importance, in determining the economical value of American Coals.

Mr. Blake presented for the cabinet some curious globular masses of Quartz, concerning which he made the following remarks :—

On a plain situated in the valley of *Quilca*, in South Peru, near the city of *Arequipa*, and about thirty-four miles from the coast, are to be found, scattered over the surface and imbedded in the loose soil, a vast number of quartz balls like the one exhibited, varying in size from one inch to four inches in diameter. The exterior is dark reddish brown, and presents a rough surface showing no marks of abrasion. When broken they are found to be pure white quartz. The structure is crystalline in all of them, while in some the crystals are well defined with slight interstices between them, and a few have been found hollow, the central cavities being lined with crystals.

So remarkably similar, and so nearly globular are these balls that many of the inhabitants of the country believe them to be the work of art, and ascribe their origin to the ancient Peruvians, a supposition the absurdity of which is evident on the slightest inspection. The plain over which they lie scattered is made up of the debris of the neighboring mountains ;— the lofty porphyritic peaks of the Andes flanked by sand-stone and gypsum.

Dr. Gould read a paper, containing descriptions of species of land shells, from the Sandwich Islands, supposed to be hitherto undescribed.

ACHATINA ADUSTA. Testâ turritâ, apice pyramidatâ, imperforatâ, solidâ, fusco-nigricante, sursum pallescente ; anfr. 7 convexis, leviter striatis, ultimo subcarinato ; aperturâ ovali, intus opalinâ, labro simplici, acuto, nigro ; columellâ eburneâ, anticè in dentem productâ. Long. $1\frac{1}{2}$, lat. $\frac{3}{4}$ poll.

A singular shell, partaking of the characters of both *Achatina* and *Achatinella*. Occasionally, instead of being totally black, there are bands of yellow.

STOMATELLA CONCINNA. Testâ parvulâ, auriformi, tenui, striis

regularibus, rosaceo catenatim pictis, cinctâ ; labio posticè disjuncto, revoluto ; columellâ obsolete perforatâ ; intus rosaceâ, nitidâ ; anfr. tres. Long. $\frac{1}{2}$, lat. $\frac{3}{10}$ poll.

A minute and very beautiful species, which cannot be confounded with any other.

TROCHUS VERRUCA. Testâ parvâ, solidâ, globoso-conicâ, nitidâ plus minusve rosaceâ : anfr. 6 rotundatis, ultimo costulis volveventibus 12 subequalibus, maculis saturatoribus catenatim signatis cincto ; aperturâ circulari ; columellâ planulatâ, anticè subproductâ : umbilico parvo. Long. $\frac{1}{2}$, lat. $\frac{1}{2}$ poll.

Its specific name suggests its general appearance.

TROCHUS (MONODONTA) GEMMATUS. Testâ parvâ, conico-globosâ, rubellâ vel cinerascete : anfr. 4 rotundatis, ultimo costulis ad 10, a granulis nitidis interdum radiatim saturatoribus compositis, cincto : suturâ canaliculatâ : umbilico expanso, canali et carinâ circumdato ; aperturâ rotundatâ, basi plicatâ, ringente, labro costulis crenulato, intus sulcato. Long. $\frac{1}{4}$, lat. $\frac{1}{2}$ poll.

COLUMBELLA PALUMBINA. Testâ ovato-turbinatâ, nitidâ, albidâ, ferrugineo marmoratâ, et transversè lineatâ ; aperturâ ringente ; labro inflexo, denticulato ; columellâ biplicatâ, granulosa, interdum rosaceo tinctâ. Long. $\frac{2}{3}$, lat. $\frac{3}{10}$ poll.

Like *turturina*, but much smaller, and having, instead of revolving striæ, regular revolving lines, always developed near the lip, and passing more or less backward.

CYPRÆA GEMMULA. Testâ parvâ, ovato-globosâ, nitidâ, costulis numerosis interdum divaricantibus, undique elegantissimè rugosâ : dorso minimè sulcato : colore rubidâ, dorso utrinque maculis duabus rosaceis ferè confluentibus, lateribus rosaceo asperso : subtus albâ, apicibus rosaceo tinctis. Long. $\frac{1}{2}$, lat. $\frac{3}{10}$ poll.

Allied to *C. tremeza*, *Duclos*.

ACHATINELLA RADIATA. Testâ solidâ, ovato-conicâ, lineolis castaneis, flavidis et albidis longitudinaliter pictâ, interdum fasciâ mediani vel basali albâ ; anfr. 6 convexis ; suturâ marginatâ albidâ ; aperturâ ovatâ, peristomate reflexo, flavido ; plicâ latâ ; umbilicatâ. Long. $\frac{3}{4}$, lat. $\frac{3}{10}$ poll.

In size and marking somewhat resembles *Bulimus radiatus*, but the lines are finer and more numerous.

ACHATINELLA RUBENS. Testâ elongato-ovatâ, crassâ, stra-

mineâ, apice castaneâ, anticè erubescente; anfr. 6 convexis, suturâ impressâ, epidermide fusco hic et illic obtectis; aperturâ ovatâ, labro simplici intus incrassato, rosaceo, fauce albâ, plicâ tenui; imperforatâ. Long. $\frac{3}{4}$, lat. $\frac{2}{5}$ poll.

A plain species, but well marked by its colors, especially by that of the aperture.

ACHATINELLA NUCLEOLA. Testâ solidâ, imperforatâ, ovato-globosâ, livido-castaneâ, apice pallidâ ad suturam et anticè albidâ: anfr. 6, posticè subtabulatis: aperturâ rotundatâ, labro simplici; columellâ excavatâ, callo obtecto; plicâ parvâ. Long. $\frac{9}{20}$, lat. $\frac{1}{4}$ poll.

A small, solid species, of a livid hue, whitish at tip and the neighborhood of the suture, and milk white just before the termination of the whorl at the aperture.

ACHATINELLA MICROSTOMA. Testâ ovatâ imperforatâ, solidâ, epidermide fusco-virescente; anfr. 6, ultimo ventricosos; aperturâ parvâ, ovato-rotundatâ, fauce lividâ; labro simplici, intus incrassato; columellâ profundè sinuosâ, callo crasso obtectâ; plicâ validâ. Long. $\frac{3}{4}$, lat. $\frac{7}{10}$ poll.

Distinguished by its ovate form, dusky green exterior, and small, strongly fortified aperture.

ACHATINELLA FULIGINOSA. Testâ imperforatâ, ventricosos-ovatâ, apice acutâ, tenui, pallidè virescente, epidermide nigricante indutâ; anfr. 6, supra sub-tabulatis, striis incrementi, et striis volventibus inequalibus decussatis; aperturâ parvâ, semilunari; labro simplici, intus incrassato, fauce cærulescente; plicâ acutâ. Long. $\frac{7}{10}$, lat. $\frac{2}{5}$ poll.

Its ventricose form, coarse revolving striæ, and blackish epidermis, distinguish it.

ACHATINELLA STRIATULA. Testâ parvâ, ovato-elongatâ, nitidâ, viridi, longitudinaliter concinnè et creberrimè striato-costatâ; anfr. 7 convexis, ultimo partem dimidiam spiræ æquante; aperturâ angustâ, semilunari; labro albido, incrassato. Long. $\frac{7}{10}$, lat. $\frac{3}{10}$ poll.

Not unlike *Bulimus obscurus* in general appearance. Distinguished from several similar species, by its more slender form and by its beautifully barred surface.

February 5, 1845.

Dr. A. A. Gould in the Chair.

Dr. Gould read extracts from a letter from Mr. James Hall, Geologist of New York, making corrections in the report of his remarks at the meeting of the Society on the 21st February last, published in the Proceedings, page 173. The knob of Serpentine in the neighborhood of Syracuse, N. Y., was stated to have been first noticed by Professor Vanuxem, and not as there reported, by Mr. Hall himself.

A letter was read, addressed to the President of the Society, by John J. Dixwell, Esq. executor, giving notice that by the last will and testament of the late John Parker, Esq. a bequest of two thousand dollars had been made to the Society, which sum the executors were ready to pay to such person as the Society might authorize to receive it in its behalf. The following votes were then passed :

Voted, That the Society will accept the legacy of two thousand dollars bequeathed to it by the late John Parker, Esq.

Voted, That the President be authorized to receive from the executors the amount of the legacy bequeathed to this Society by said will, and to execute to said executors, in the name and behalf of this society, a receipt or other instrument in full discharge and satisfaction of the same.

Voted, That the Secretary be requested to communicate to the representatives of Mr. Parker the high sense which this Society entertains of the honorable motives which dictated the bequest, and their grateful acknowledgment of the liberal aid thus rendered to the Society, and to the cause of science.

Voted, That the President be directed to pay over the amount of said legacy to John J. Dixwell, Esq. Treasurer of this Society, to be by him permanently invested in such securities as he may think proper, with the concurrence of

the Financial Committee, in the name of "The Boston Society of Natural History."

The Chairman announced the donation of about fifty volumes of books, mostly relating to Natural History, which had been received since the last meeting, from Dr. Francis Boott, of London. It was then

Voted, That the Recording Secretary be requested to express to Dr. Boott the thanks of the Society for this valuable addition to its library; and also that the fact of the donation be announced in the public papers.

The Treasurer called the attention of the Society to the state of its finances. It appeared that for several years past, the annual contributions from members, on which the Society relies for the means of paying its current expenses, had fallen off by the secession of many who had formerly been members. It was proposed that an earnest effort should be made to add one hundred new members to the Society; and it was voted to refer the subject to the President, and Messrs. Bulfinch and Bouvé.

ADDITIONS TO THE LIBRARY.

Professor Emmons's Report on the Taconic System of New York. From the *Author*.

Quarterly Journal of Agriculture, conducted by Prof. Emmons and A. Prince. From the *Editors*.

DR. FRANCIS BOOTT'S DONATION.

Lamarck. Histoire Naturelle des Animaux sans vertèbres. 5 vols. 8vo. Paris, 1815.

Linnæi Fauna Suecica. 8vo. Ludg. Bat. 1746.

Latreille. Genera Crustaceorum et Insectorum. 4 vols. in 2. 8vo. Paris, 1607.

Smith, J. E. Introduction to Botany, with Notes, by Dr. J. Bigelow. 8vo. Boston, 1814.

Samouelle, G. Entomologist's Companion. 8vo. London, 1819.

Berkenhout, J. Synopsis of the Natural History of Great Britain and Ireland. 2 vols. 12mo. London, 1795.

Buchoz, I. P. Histoire des Insectes. 2 vols. 12mo. Paris, 1809.

Linnæi, C. Hortus Upsalensis. 8vo. Vol. 1. Stockholmæ, 1748.

Cleveland, P. Elementary Treatise on Mineralogy and Geology. 8vo. Boston, 1816.

Kirby, W. and Spence, W. Introduction to Entomology. 2 vols. 8vo. London, 1816.

Swartz, Olof. Methodus Muscorum Illust. 4to pamph. Upsaliæ, 1781.

Clarke, E. D. Gas Blow Pipe. 8vo. London, 1819.

Rennie, R. Essay on the Natural History and Origin of Peat. 8vo. pamph.

L'Abbè Dubois, &c. Rapport fait sur les divers Concours pour la culture des Pommes de Terre, &c. 8vo. pamph. Paris, 1818.

Richard, L. C. Analyse des Fruits. 12mo. pamph, Paris, 1808.

Catalogue of Plants in the Botanic Garden at Liverpool. 8vo. Liverpool, 1808.

Launy, L. de. Minéralogie des Anciens. 2 vols. 8vo. Bruxelles, 1803.

Bartram, W. Travels in North America. 2d ed. 8vo. London, 1794.

Henderson, E. Iceland; or Journal of a residence in that Island. 2 vols. 8vo. Edinburgh, 1818.

Hooker, W. J. and Taylor, T. Muscologia Britannica. 8vo. London, 1818.

Barrow, J. Voyages into the Arctic Regions. 8vo. London, 1818.

Reaumur. Memoires pour servir à l'Histoire des Insectes. 6 vols. 4to. Paris, 1734.

Levaillant, F. Voyage en Afrique. 3 vols. 4to. Paris, 1783-1785.

Sparrman, A. Voyage to the Cape of Good Hope. 2 vols. 4to. London, 1781.

Bauhini, C. Pinax Theatri Botanici. 4to. Basileæ, 1671.

Evelyn, J. Sylva, or a Discourse on Forest Trees, &c. Long 4to. London, 1689.

Whitehurst, J. Original state and formation of the Earth. 4to. London, 1792.

Petro Pena et M. de Lobel, Medicis. Accessio ad priscorum præsertim Dioscoridis, et recentiorum Materiam Medicam. Long 4to. Antverpiæ, 1576.

M. de Lobel. Insulani Plantarum seu Stirpium Historia. Long 4to. Antverp. 1576.

Malpighi, M. Opera Omnia. Folio. Londini, 1687.

Dillenius, J. J. Historia Muscorum. 4to. Oxonii, 1741. Iterum Edinburgi, 1811.

Barrelienus, A. P. J. Plantæ per Galliam, &c. observatæ. Fol. Parisiis, 1714.

February 19, 1845.

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

Dr. Binney presented a paper from Dr. James Deane, of Greenfield, Mass., entitled "Illustrations of Fossil Footmarks." It was accompanied by a reduced fac simile drawing of a slab about six feet in diameter, containing upwards of one hundred perfect tracks, being completely intersected by rows of the tracks of four or five varieties of gregarious birds, said to be by far the most interesting specimen, both in point of the number and perfection of the impressions, yet discovered. The paper was referred to the Committee of Publication.

Dr. Binney also announced the reception of a cast of a very perfect *Ornithichinites giganteus*, from Mr. Marsh, of Greenfield.

Mr. Bouvé exhibited a collection of Fossils from the Tertiary of Claiborne, Alabama, and a few from Prairie Bluff, presented by Mr. C. S. Hale, of Mobile. The collection is a very

valuable one, both in regard to the number and perfection of the specimens.

The thanks of the Society were voted to Messrs. Marsh and Hale. Dr. Bacon reported on a mass of copper ore from Lake Superior. It was chrysocolla, and contained about 30 per cent. of metallic copper.

Dr. C. T. Jackson reported upon "Forbes's Travels in the Alps." He gave a sketch of his theory of the movement of glaciers, as deduced from his observations and measurements. Mr. Whitney offered some objections to the theory, and the work was recommitted to him, with a request that he would communicate to the Society his own observations, made during the last year.

Dr. Gould read a communication from Professor J. W. Bailey, of West Point, entitled "Notes on the Infusoria of the Mississippi river."

"A bottle full of water was recently placed in my hands, which had been collected about a month before, from the Mississippi river, at St. Louis, by Lieut. L. H. Allen, of the United States army, who brought it away as a specimen of the water ordinarily used at that city, for drinking. Having long supposed that the waters of the Missouri must at times be loaded with great quantities of the minute fossil Polythalamia, which are so abundant in the cretaceous marls of a portion of the river which it traverses, I was led to seek for them in the sediment from the water from St. Louis, as at this place the turbid waters of the Missouri still impress their own character upon the Mississippi.

It is still my belief, that during the season of floods, these fossils may be detected in the sediment of the Missouri, although on this occasion I failed to find any trace of these animalcules of former days. The amount, however, of microscopic beings of the present epoch which I found in this water was truly surprising; and as the bottle had been carefully corked when the waters were collected, and had not been opened until its arrival at West Point, whatever organisms it contained undoubtedly belonged to species inhabiting the Mississippi. The number of individuals had doubtless increased by reproduction; but no spe-

cies could have been introduced from the time it was first collected up to the time of its examination by me. This is confirmed by the fact, that several of the species are entirely different from any occurring in the eastern portions of the United States.

Having thus unexpectedly an opportunity to study the recent animalcules of so interesting a locality, I examined them carefully; and I now offer the following results of my observations as a slight contribution to the knowledge of the geographical distribution of Infusoria:

1st. The water of the Mississippi, at St. Louis, abounds in soft, as well as siliceous-shelled Infusoria.

2d. The species observed by me, as far as I could identify them with species described by Ehrenberg, were the following, namely:

Arthrodesmus acutus,	Micrasterias boryana,
" quadricaudatus,	" elliptica,
Chætonotus larus,	" tricycla,
Coleps hirtus,	Navicula amphirhyncus,
Euglena triquetra?	" sigma.
Eunotia westermanni,	Oxytricha ———?
Fragillaria constricta,	Rotifera vulgaris,
" rhabdosoma,	Stylonichia ———?
Furcularia gibba,	Surirella campylodiscus,
Gallionella distans,	Synedra ulna.

3d. All these were observed by me in a living state, and most of them were in great abundance, and from their activity as well as other characters they appeared to have suffered no injury from transportation.

4th. The remarkable *Surirella campylodiscus* which abounds in the water from St. Louis, has not before been found in the United States, but is mentioned by Ehrenberg (*Verbreitung, &c.*, p. 100,) as a Mexican species.

5th. No traces of any *Phytolitharia* were seen; neither was the cosmopolite species *Pinnularia viridis* detected.

6th. The inhabitants of St. Louis consider the water which they drink as remarkably wholesome, and are surprised that strangers wish to have it filtered for their use. Whatever its effect on health may be, it is certain that it contains a sufficient amount of animal matter to be somewhat nutritious.

7th. These observations prove that the waters of the Mississippi, like those of the Nile, are crowded with organic life, and to this, as Ehrenberg has proved, with regard to the Nile, is probably due, in no small degree, the fertilizing power of its sediment.

8th. The minute indestructible shells of the fluviatile siliceous infusoria, must be borne to immense distances by the powerful current of the Mississippi, and it is even probable that they may be carried into the Gulf of Mexico, to be there deposited, in company with recent marine species.

DONATIONS TO THE CABINET.

A bottle containiug fishes and reptiles. From *G. W. Collamore*.

ADDITIONS TO THE LIBRARY.

Proceedings of the Zoological Society of London. 8vo. pamph. Nos. 120 to 134. For 1843 and 1844. From the *Zoological Society*.

Reports of the Council and Auditors of the Zoological Society of London. 8vo. pamph. 1844. From the *same*.

Proceedings of the Academy of Natural Sciences of Philadelphia. Vol. ii. No. 6, for Nov. and Dec. 1844. From the *Academy*.

March 5, 1845.

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

Mr. Bouvé read a notice of the Final Report upon the Geological Survey of the State of New Hampshire by Charles T. Jackson, M. D.

Dr. Cabot placed upon the table mounted specimens of birds from Dr. Cragin's collection, among them *Cacicus hæmorrhous* and *Cacicus icteronotus*.

Mr. Richards mentioned certain experiments made by him on heated tar. He had plunged his hand into tar at the temperature of 194° Fahrenheit, and had held it in that situation, for several seconds, without a painful sensation of heat. He stated, on the authority of others, that the same result had followed when the tar was heated to 212°. He asked an explanation of the fact. Dr. C. T. Jackson suggested that the low conducting power of the tar might be the cause, and proposed that a series of observations should be made to ascertain the relative power of tar, as compared with water, for conducting caloric.

John B. Walker, M. D., Mr. William A. Parker, and Mr. Franklin Darracott, were elected members.

DONATIONS TO THE CABINET.

Muscicapa coronata, from Yucatan, male and female. By Dr. Cabot.

Skeleton of a box tortoise.

Palate and pharyngeal bones of a parrot-fish.

A bird called by the natives Devil-Bird, from its note which is thought by them to be of ill omen. All from the Cape de Verd Islands. By Dr. C. J. Bates.

ADDITIONS TO THE LIBRARY.

Conrad, T. A. Fossils of the Miocene Formation of the United States. 8vo. pamph. From the *Author*.

Gray, G. R., Genera of Birds, No. 10. 4to. London, 1845. *Audubon Fund*.

Gould, John. Monograph of the Odontophorinæ, or Partridges of the United States, No. 1. Folio. London, 1845. *Audubon Fund*.

March 19, 1845.

Charles T. Jackson, Vice President, in the Chair.

Dr. A. A. Gould read descriptions of shells collected by Dr. Charles J. Bates, Assistant Surgeon U. S. Navy, on the coast of Liberia.

PHOLAS BRANCHIATA. Testa oviformi, clausâ, posticè acuminatâ, areolis tribus triangularibus partitâ : areolâ anticâ plicis numerosis concentricis serratis : mediali transversè subtiliter striatâ : posticâ lamellis corneis flexilibus imbricatis instructâ : dorso scutis tribus oblecto, unico magno imbonali, orbiculari ; duobus marginalibus lanceolatis, duobus quoque ventralibus ; apophysi exili, flexuoso-falciformi. Long. $1\frac{1}{5}$; lat. $\frac{1}{2}\frac{2}{8}$; poll.

PSAMMOBIA FIGLINA. T. crassâ, sub-ovali, sub-equilaterali, rufo-cinereâ ; anticè rotundatâ ; posticè hiantè, sub-rostratâ, valdè flexuosâ, apice emarginatâ ; valvis concentricè laminoso-striatis, radiatim lineolatis ; natibus elevatis, attigentibus ; dentibus cardinalibus divaricatis ; intus albâ, punctis numerosis indentatâ. Long. $3\frac{1}{5}$; alt. $2\frac{1}{4}$; lat. $1\frac{3}{8}$ poll.

TELLINA RUBICUNDA. T. tenui, transversâ, inequivalvi, natibus postmedianis, anticè semi-ellipticâ, posticè triangulari, flexuosâ, apice truncatâ, concentricè et radiatim minutissimè striatâ ; valvâ dextrâ planulatâ, posticè areolam triangularem lamellosam habente ; valvâ sinistrâ convexâ ; colore dilutè rosaceâ, albo radiatâ. Long. 1 ; alt. $\frac{3}{8}$; lat. $\frac{1}{4}$ poll.

Resembles *T. donacina* in shape and coloring, but is larger, and is also distinguished by the triangular area of coarser sculpture on the right valve.

NUCULA BICUSPIDATA. T. albâ, transversè elongato-ovatâ, sub-cylindricâ, anticè rotundatâ et triplicatâ, posticè productâ, tricarinatâ, bicuspidatâ ; valvis obliquè concinnè striatis, præter spatio excavato inter carinas serratas ; cardine dentibus anticis ad 12, posticis ad 26. Long. $\frac{3}{8}$; alt. $\frac{1}{4}$ poll.

NASSA TURBINEA. Testâ solidâ, ovatâ, apice productâ, albidâ ; anfr. 9 sub-tabulatis, plicis numerosis acutis et striis volventibus profundis ad 13 decussatis ; basi spiraliter striata ; aperturâ parvâ, strictâ, angulato-ovali ; labio acuto, crenulato, intus sulcato ; callo columellari erecto, granulato. Long. $1\frac{2}{10}$; lat. $\frac{1}{4}$ poll.

NASSA ELATA. T. elongato-conicâ, cinereo-albidâ ; anfr. 8 tabulatis, marginatis, posterioribus plicatis, penultimo glabro, ultimo anticè striato ; aperturâ angustâ, ovali, albâ ; labro acuto, anticè crenulato, intus striato. Long. $\frac{1}{2}$; lat. $\frac{3}{8}$ poll.

HELIX HEPATIZON. Testâ depresso-conicâ, crassâ, rubro-castaneâ, canescente, sub-perforatâ ; anfr. $5\frac{1}{2}$ convexis, striis incrementalibus et striis volventibus argutè reticulatis ; suturâ impressâ ; aperturâ semicirculari, contractâ, peristomate incrasatâ, intus cerasinâ. Lat, $1\frac{3}{8}$; alt. $\frac{4}{5}$ poll.

Found near the mouth of the Gaboon river.

James Deane, M. D., of Greenfield, Mass. ; C. B. Adams, M. D., of Middlebury, Vt., were elected corresponding members.

DONATIONS TO THE CABINET.

Mounted specimens of *Hirundo serripennis* and *fulva*, *Troglodytes bewickii*, *Trichas philadelphia*, *Fringilla lincolni*. By exchange.

A specimen of petrified wood. From Dr. S. P. Kirtland, of Ohio.

ADDITIONS TO THE LIBRARY.

Audubon and Bachman. Quadrupeds of America. Plates 46 to 50. Folio. *Subscribers.*

Gray, G. R. Genera of Birds, No. 11. 4to. London, 1845. *Audubon Fund.*

April 3, 1845.

Mr. Binney, President, in the Chair.

Dr. Wyman exhibited the shell of *Kinixis homeana*, Bell, from Cape de Verd Islands, presented by Dr. Bates. Dr. W. remarked that Mr. Bell described this species as a native of West Africa, while Dumeril and Bibron, probably incorrectly, speak of it as belonging to South Am

Dr. Storer exhibited numerous drawings of f

by Dr. C. J. Bates, U. S. N., and presented by him to the Society. They were drawn chiefly from specimens observed by him on the west coast of Africa. Dr. Storer remarked that the drawings and accompanying descriptions, though not the results of the labor of a professed naturalist, were quite sufficient to give a clear idea of the objects described. They showed, too, that any careful and intelligent person may, by close attention and perseverance, render essential services to Natural History, especially when possessing a facility for drawing. From cursory examination, it appeared probable that there were among them several new and interesting forms.

Letters from Dr. G. A. Perkins, of Liberia, corresponding member ; George Brown, U. S. Commissioner at the Sandwich Islands ; and Mr. George Ditson, of Cuba ; respectively, announcing donations, were read.

Dr. Bacon remarked upon a specimen of petrified wood, recently presented by Dr. Kirtland, that, its character having been doubted, he had examined longitudinal and horizontal sections with a microscope, and had ascertained conclusively that it is a portion of a true fossil tree belonging to the natural family of palms.

D. S. Smalley, of Jamaica Plain ; Waldo Higginson, of Boston ; Asa B. Snow, M. D. ; Dr. Daniel D. Slade, Cambridge, were elected members.

Walter Channing, M. D., Samuel Wigglesworth, M. D., former members, were, at their request, restored.

DONATIONS TO THE CABINET.

A box of shells. From *Dr. G. A. Perkins*, of the Liberia mission.
 A box of shells, and another of minerals. From *George Brown*, U. S. Commissioner, Sandwich Islands.
 Specimens of minerals. From *George Ditson*, Cuba.

ADDITIONS TO THE LIBRARY.

Delessert Benj. *Musée Botanique*. 8vo. Paris, 1845. From the *Author*.

Navigantium et Itinerantium Bibliotheca. Folio. From George Brown, Esq.

Proceedings of the American Philosophical Society. No. 21 and 24. 1842. From the *Society*.

April 16, 1845.

D. H. Storer, Vice President, in the Chair.

Dr. Wyman placed upon the table a specimen of the mole-cricket, *Gryllotalpa vulgaris*, taken by him in Virginia. This species takes its name from its habit of burrowing in the earth, for which purpose its first pair of legs is modified in form, presenting a striking analogy to those of the mole. He exhibited this structure in detail. Dr. Wyman also exhibited specimens of the blue-bottle fly, in the different stages of development.

A letter from Dr. Kirtland was read.

Caleb Reed, and F. S. Ainsworth, were elected members.

ADDITIONS TO THE LIBRARY.

American Journal of Science. Vol. xlviii. No. 2. From the *Editors*.

Gray, G. R. Genera of Birds. 4to. No. 12. *Audubon Fund*.

May 7, 1845.

ANNUAL MEETING.

Amos Binney, the President, in the Chair.

The Secretary read the record of the last annual meeting.

The President, then, addressed the Society, reviewing its progress for the past year, and giving a statement of its con-

dition and prospects. He enforced the necessity of more ample accommodations for the museum, and recommended that an appeal should be made to the liberality of the public, with a view to raise the sum of \$ 30,000. In aid of such an appeal, he gave a short history of the Society, showing how much it had accomplished, how great its influence had been on the cultivation of the Natural Sciences in New England, the extent of its necessities, and the nature of its claims on the friends of learning in the city and State. This address, having been printed in a separate form, is omitted here.

Professor Charles Brooks, then read a discourse on the History of Philosophical Zoology, from the earliest times to the present day.

The Reports of the Curators and Librarian were then read, showing a respectable increase in every department of the museum and in the library.

The Report of the Treasurer exhibited the financial condition of the Society as follows :

Amount of investment for permanent fund,	\$ 12,000
Cash on hand,	428 88
	<hr/>
Total,	\$ 12,428 88
The amount of admission fees and annual assessments, received during the year, is,	
	456
The amount of ordinary expenses is,	598 88
Deficiency supplied from income of permanent fund,	<hr/> 142 88
Add deficiency of former years,	327 22
	<hr/>
Total amount diverted, from income appropriated to the library and museum,	\$ 470 10

A letter from John J. Dixwell, Treasurer, was read, declining a reelection, and concluding in the following words :

“ I cannot retire from the office which I have held during the past six years, without expressing my warmest thanks for the

indulgence with which my efforts have been received by the Society, and the urbanity which has been extended to me by all its members, nor without offering an earnest prayer that the beautiful science of Nature, exhibiting as it does the Divine love and wisdom of the Creator, may continue to be illustrated by your Society, with renewed zeal and untiring diligence."

On motion of Dr. Charles T. Jackson, it was then

Voted, That we sincerely regret the retirement of Mr. Dixwell from the office which he has so long and so acceptably filled ; and that the thanks of the Society be presented to him for the faithful and satisfactory manner in which he has performed the duties of its Treasurer for six years past.

The Society then proceeded to ballot for the choice of officers for the year ensuing, and the following gentlemen were unanimously chosen :

President,
Amos Binney.

Vice Presidents,
Charles T. Jackson, D. Humphreys Storex.

Corresponding Secretary,
Augustus A. Gould.

Recording Secretary,
Thomas Bulfinch.

Treasurer,
Patrick T. Jackson, Jr.

Curators,
J. E. Teschemacher, *Botany,*
T. William Harris, *Entomology,*
Jeffries Wyman, *Ichthyology & Herpetology,*
Martin Gay, *Mineralogy,*
N. B. Shurtleff, *Comparative Anatomy,*
Thomas T. Bouvé, *Geology,*
Samuel Cabot, Jr., *Ornithology,*
Edward Tuckerman, *Conchology.*

Librarian,

Charles K. Dillaway.

Cabinet Keeper.

Henry J. Bigelow.

On motion of Dr. J. V. C. Smith, it was unanimously Voted, That the thanks of the Society be tendered to Rev. Prof. Brooks, for the learned and interesting address which he has delivered on this occasion.

On motion of Dr. Storer, it was

Voted, That the President be requested to publish, for the use of members and others, and in aid of the effort to raise funds, the address which he has made this day.

Voted, That, in the opinion of the Society, the time has now arrived when a strenuous effort should be made to raise sufficient funds to ensure the prosperity and permanence of the institution.

Voted, That a committee be appointed, to act personally, or through others to be selected by them, to solicit contributions for the purpose of erecting a building for the use of this Society.

The following gentlemen were elected to compose this Committee :

Amos Binney,
Charles T. Jackson,
D. H. Storer,
A. A. Gould,
Charles Brooks,
Benjamin A. Gould.

The Report of the Treasurer, and his accounts to this time, were referred to B. A. Gould and T. J. Whittemore, who, having examined them, reported the accounts to be correctly kept, the expenditure properly vouched, and the balance of cash to correspond with that stated by the Treasurer and held temporarily by the President, viz., \$ 428 88.

The President read a letter from the Secretary of the Association of American Geologists and Naturalists, communicating a Report of a Committee of that body, laid before it at its late session at New Haven, on the subject of the nomenclature of Zoölogy, which Report was ordered by a vote of the Association to be submitted to this Society for consideration. It was voted to refer the papers to a committee composed of the following persons: A. A. Gould, Jeffries Wyman, and S. L. Abbott,

June 4, 1845.

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

Mr. Teschemacher remarked that he had just received, from St. Diego, California, a living specimen of *Melocactus viridescens*, of Nuttall's MSS., communicated to Messrs. Torrey and Gray, and published by them, in their invaluable work on the plants of North America, as an *Echinocactus*. The difference of opinion, between these authors and Mr. Nuttall, as to the generic character of this plant, arose, probably, from the assertion of the latter that the flowers proceeded from the upper clusters of spines; whereas the flowers of *Melocactus* proceed from the woolly head, characteristic of this genus, in which they are usually imbedded. But Nuttall also states that the fruit is smooth. This is a character of *Melocactus*, the fruit of *Echinocactus* being generally more or less scaly from the remains of the sepals. Pfeiffer says, "rarissime lævis."

The specimen was stated to be about 5 inches high, and 9 inches in diameter; the spines radiating, very crowded, and transversely striate, four of them (Nuttall says three) in each fascicle larger than the rest, but the upper and lower spines the largest. The spines somewhat poisonous, and

wounds inflicted by them almost certain to fester. In other respects agreeing with Nuttall's description, but having a woolly head, distinct, though small, and depressed in the centre of the plant.

There were no flowers upon the specimen, but the scars left by them existed. On the scars several seeds remained exactly as may be seen in other *Melocacti*, the fruit of which has dried off. The scars were behind the fascicles of spines, near the axis, and not in the centre of the fascicle as in *Echinocactus*, and from their close proximity to the woolly head, were probably immersed in the edge of it. Nuttall had stated that they are seldom laterally clustered; there were, however, two young plants laterally attached to the specimen.

From these facts Mr. Tesclemacher was of opinion that the plant should be restored to the genus *Melocactus* in which Nuttall originally placed it. The native name of the plant is Choyas.

Mr. Tesclemacher also exhibited and remarked upon a large collection of ferns and club-mosses, sent to the Society from the Sandwich Islands by George Brown, U. S. Commissioner.

Dr. Gould, in behalf of the Committee to whom was referred the Communication from the Association of American Naturalists and Geologists concerning nomenclature, reported its approval of the code of rules recommended by that body, with some suggestions of amendment. The Committee was directed to communicate their report, with the suggestions, to the Association.

Dr. C. T. Jackson reported upon the copper ores of Cuba presented by Mr. George Ditson.

A letter was read from Prof. Agassiz, of Neufchatel, announcing his intention of visiting this country, and of bringing with him a large collection of fossils, and other specimens of foreign natural history, to exchange for North American productions.

Letters from Ezra Weston and George Ditson, accompanying donations, were also read.

The following gentlemen were elected members : Lemuel Stanwood ; Franklin H. Story, Jun. ; Henry G. Andrews ; George B. Blake ; Thomas C. Amory, Jun. ; Waldo Flint ; George H. Kuhn ; and Joseph Hobbins, M. D.

DONATIONS TO THE CABINET.

Large specimen of *Mytilus* from Monterey, California. By J. E. Teschemacher.

Numerous bottles of reptiles and other animals, from Surinam. By Dr. F. W. Cragin, of Surinam.

An engraved portrait, in a frame, of Sacaze-Gaston, a self-taught botanist, of the department of Basses-Pyrénées, France. By Ezra Weston.

June 18, 1845.

The President in the Chair.

Dr. Samuel Cabot, Jun., remarked that among the birds of Surinam lately received from Dr. Cragin, he had noticed,

Himantopus nigrocollis, The black-backed stilt,

Anhinga Carolinensis, The black-bellied darter,

which are also natives of the United States.

He had also recently procured in the market *Scolopax noveboracensis*, the read-breasted snipe, in its winter plumage, in which it very rarely occurs in this region.

Dr. Jeffries Wyman mentioned that among the specimens presented by Dr. Cragin, there were two of monstrosities. He proposed that these should be deposited with the Society for Medical Improvement, whose collection of monstrosities,

exhibited anatomically, he described as surpassing, in extent and value, any of a similar kind in this country, or even in Europe, with the exception of that at Berlin. It was then

Voted, That the specimens be deposited with the Society of Medical Improvement, in the name and as the donation of Dr. Cragin, and that Dr. Cragin be informed of the disposition thus made of them.

Dr. Wyman made some observations upon a specimen of *Simia pithecia* received from Dr. Cragin.

Edward Winslow, Jacob Sleeper, Joseph M. Wightman, Paschal P. Pope, and Samuel Austin, Jun., were elected members of the Society.

ADDITIONS TO THE LIBRARY.

Gray, G. R. Genera of Birds. 4to. Part. xiv. *Audubon Fund.*

Hooker, W. I. Genera Filicum. Parts x, xi, xii. *Courtis Fund.*

Annals and Magazine of Natural History. No. 100. June, 1845. *The same.*

Report of Commissioner of Patents for 1844. 8vo. Washington, 1845. From *Charles Stodder.*

July 2, 1845.

The President in the Chair.

Dr. D. H. Storer read a description of a hitherto undescribed species of fish, received from Mr. S. C. Clark, of Chicago, with drawings taken from the living fish.

ETHEOSTOMA CÆRULEA. Body oblong. Head slightly gibbous anterior to the eyes, which are prominent. When alive, reddish

above, orange-colored upon the lower portions of the sides, with nine or ten transverse blue bands, which are not perceptible through the red upon the back. Anterior dorsal yellow, margined with blue; posterior dorsal with a longitudinal blue band at its base and margin; ventral, anal and caudal fins, bluish; pectorals light yellow. A blue blotch upon the cheeks.

Rays. D. 10, 13; P. 13; V. 1, 5; A. 9; C. 16.

Length, $2\frac{1}{2}$ inches. Fox River, Illinois.

Dr. Storer, also read descriptions of the following species of fishes, received, together with drawings, from Mr. Charles A. Hentz, of Florence, Alabama.

LEUCISCUS CROCEUS. Body oblong, convex in front of the dorsal fin. Lateral line straight. Head large. All upper part of body greenish; throat flesh-colored. An indistinct brown band runs through the centre of the sides from the operculum to the base of the tail; at its termination is a small black blotch. Surface covered with a slimy secretion. Fins orange.

Rays. D. 8; P. 14; V. 8; A. 7; C. 19.

Length, $3\frac{1}{2}$ inches. Alabama.

L. PROLIXUS. Body much elongated. Head flattened above. Lateral line descends obliquely to a point above posterior extremity of the pectorals, thence pursues a straight course to the tail. Top of head brown, with numerous minute tubercles; back greenish. Upper part of sides blue with lilac tints, lower part white. Dorsal fin brown, the others yellowish.

D. 9; P. 14; V. 8; A. 9; C. 16.

Length, 4 inches. Alabama.

L. OBESUS. Body short. Head large. Abdomen convex. Dorsal ridge green; sides yellow, with deep lilac intermixed, so as to appear like a longitudinal band of the latter color; lower part of sides bluish; top of head fuliginous. Pupils black, irides golden. Lateral line assumes the curve of the body.

Length $3\frac{1}{2}$ inches. Florence, Alabama.

L. GIBBOSUS. Body convex above. All upper parts of body green; lower part of sides light lilac. Fins greenish-yellow. Opercles light with lilac tints.

Length, 4 inches. Tuscaloosa, Alabama.

ETHEOSTOMA TESSELLATA. Body oblong. Head gibbous, less

than one fourth the length of the body. Lateral line straight. Top of the head and upper portion of the sides, of a greenish-brown color; eight or ten transverse bluish bands upon the sides. The intervals between these bands are yellowish, and in their centres is a bluish rhomb. A black blotch at the base of the tail. The lips, opercles and rays of the first dorsal, gamboge yellow. Caught in running water.

D. 12, 13; P. 13; V. 6; A. 12; C. 17.

Length, 3 inches. Florence, Alabama.

ETHEOSTOMA CINEREA. Body, oblong, compressed. Head gibbous directly over the eyes. The upper portion of the sides of a light yellow color, crossed longitudinally by three or four cinereous interrupted narrow bands, one or two of which commence at the snout, the others arise back of the head, and are lost anterior to the tail. Beneath these bands, is a series of longitudinally arranged oval blotches, of a similar color, and from these blotches descend, obliquely, backwards and downwards to the abdomen, narrow, cinereous lines. Lower portion of sides yellowish white. First dorsal margined with red; second dorsal and anal variegated with red. Caught in deep, still water.

D. 11, 13; P. 15; V. 6; A. 10; C. 17.

Length, 3 to 4 inches. Florence, Alabama.

A paper, by Dr. J. P. Kirtland, supplementary to his former papers, was read, containing descriptions of the fishes of Ohio, in which the following new species occurred.

EXOGLOSSUM DUBIUM. Head somewhat elongated; eyes small, prominent; upper-jaw projects two lines beyond the lower, which is small, semicircular, and mostly concealed by the projection of the upper when the mouth is closed; lips circular, the lower reflected after the manner of the *Catostomi*, only smaller and less fleshy. Body gibbous on the back, before the dorsal fin cylindrical, slightly compressed on the sides. Abdomen full. Scales small oval. Dorsal and anal fins, trapezoidal; caudal fin bilobed, the upper lobe acuminate, the lower obtuse. Pectoral fin falcate, subovate.

Color. Irides golden yellow, head and back olive, operculum iridescent, sides dusky, abdomen white, fins fulvous.

Length, from 4 to 6 inches. *Hab.* Yellow-Creek, Poland, Trumbull Co., Ohio.

D. 8 ; C. 20 ; A. 7 ; V. 8 ; P. 14.

Mr. James D. Dana, of New Haven, corresponding member, made some interesting remarks concerning the growth of corals, madrepores, sponges, &c., derived from his own observations during the late exploring expedition. At his request, the Society voted to allow him the use of any specimens in their collection, to aid him in illustrating and perfecting his forthcoming work on the corals and other allied families, with the privilege of removing them to his own residence.

Dr. Storer made some remarks on a specimen of the ray family, *Myliobatis guttata*, a beautifully preserved specimen of which was presented by John Tyler, Jun.

George Heaton, M. D. ; George Hayward, Jun., M. D. ; Edward Hall, M. D. ; Abiel Chandler ; S. N. Dickinson, were elected members.

Rev. William Dean, Missionary to China ; M. W. Dickerson, M. D., Natchez, Mississippi ; B. C. L. Wailes, Washington, Mississippi ; Joseph Leidy, M. D., Philadelphia, were elected corresponding members of the Society.

ADDITIONS TO THE LIBRARY.

Audubon and Bachman. Quadrupeds of N. America. Folio. Plates 56 to 60. *Subscribers.*

Von Martius. Systema Materiæ Medicæ Vegetabilis Brasiliensis. 8vo pamph. Lipsiæ, 1843. From *Asa Gray.*

Brisseau de Mirbel. Anatomische und Physiologische Untersuchungen über den Stamm der Dattelpalme. 4to pamph. 1843. From the *same.*

Von Martius, C. F. P. Bericht über das Guano. 8vo pamph. From the *same.*

July 16, 1845.

Mr. Binney, President, in the Chair.

Dr. D. H. Storer read a description of a fish from Alabama river, forwarded, with a drawing, by Charles A. Hentz, Florence, Alabama.

PÆCILIA OLIVACEA. Body oblong, head flattened above. All upper portion of the body olive-colored, sprinkled with minute black dots; a light spot on the top of the head; a broad black band, commencing at the angle of the jaws, is continued the whole length of the body to the caudal rays; throat and abdomen white. Fins yellowish green. Caudal rounded, spotted like the upper portion of the body. Caught at all seasons, swimming on the top of the water, catching at floating objects. Commonly called *Top minnow*.

D. 9; P. 13; V. 6; A. 12; C. 19.

Length $2\frac{1}{2}$ inches. Florence, Alabama.

Dr. Storer mentioned that he had recently obtained a specimen of *Prionotus tribulus*, *Mitch.*, from the waters of Massachusetts Bay. He had never before been able to obtain authentic evidence of the existence of this fish in Massachusetts. The specimen was presented to the Society by the Hon. Daniel Webster, who procured it in an early morning visit to the Boston market, where his accurate knowledge of our fishes enabled him at once to distinguish it as a species he had never before seen. It was taken north of Cape Cod.

Dr. J. B. S. Jackson exhibited a collection of marine objects and fossils, collected by him during a recent visit to Nantucket and Martha's Vineyard.

Dr. Jeffries Wyman stated that, while examining microscopically the structure of *Actinia*, he had noticed, in the extremities of the tentacles, the existence of minute spiculæ, having an elongated form slightly curved, with the extremities rounded. He had found similar spiculæ existing in

nearly all the tissues of the body, especially in the integuments, and in the coats of the stomach. They were diffused through the tissues in the same manner as the spiculæ in sponges and other allied substances.

A paper, by Joseph Leidy, M. D., of Philadelphia, corresponding member, on the Anatomy of *Littorina angulifera*, was read. It was accompanied by drawings, and was referred to the Committee of Publication.

Dr. J. B. S. Jackson stated that, when recently at Nantucket, he had examined, as well as he could, on the spot, the anatomy of several specimens of swell-fish, *Tetraodon turgidus*, and he had reason to suppose, contrary to the opinion of others, that the part of the animal which is inflated, is truly the stomach. The observations, however, were made under unfavorable circumstances, and the result being unexpected, he desired not to commit himself as to this opinion, until he could have an opportunity of a more careful investigation.

August 6, 1845.

Dr. A. A. Gould in the Chair.

Dr. D. H. Storer mentioned that he had received a letter from Prof. J. P. Kirtland, of Cleveland, Ohio, dated July 17, 1845, mentioning some facts which might be interesting to ornithologists. At the date of the letter, flocks of the pine-finch, *Fringilla pinea*, were flying about his garden, and also the Bohemian wax-wing, *Bombycilla garrula*, thirty or forty specimens of which had been taken.

Dr. Storer read a letter from Dr. Richard Parnell, author of a prize essay on the fishes of the Frith of Forth, announcing that he was giving his attention to the fishes of the West Indies.

DONATIONS TO THE MUSEUM.

- Fossils from Trenton Falls, New York. By *Dr. S. L. Abbott*.
 A Pelican from Bombay. By *William Ballard, Esq.*
 Specimen of Menobranchus. By *D. C. Clark*, Chicago.
 A large number of nests with eggs. By *Mr. Ogden*.
 Skins of *Tyrannula flavi-ventris, minima, fusca, acadica, virens*
 and *traillii*. From *Prof. S. F. Baird*, Carlisle, Penn.
 Skin of *Picus varius*. By *Moses Kimball*.
 Skin of *Arctomys monax*. By *Mr. Ogden*.

August 20, 1845.

D. H. Storer, Vice President, in the Chair.

Dr. A. A. Gould read descriptions of recent shells collected by Mr. John Bartlett in the everglades of Florida.

UNIO PALUDICOLUS. Testâ transversâ, ovato-rhomboidêâ inequilaterali, anticè rotundatâ ; margine ligamentali arcuatâ ; natibus prominulis, erosis ; epidermide rufo-castaneâ ; dentibus cardinalibus obliquis, pyramidatis ; lateralibus lentè arcuatis ; margarita cupreo-coruscante. Long. $1\frac{3}{4}$; alt. $\frac{3}{8}$ poll.

In shape and size closely resembles *U. heterodon*.

UNIO POPYRACEUS Testâ fragili, valdè inequilaterali, transversè ovato-oblongatâ, sub-cylindraceâ ; posticè subrostratâ, supra angulatâ ; natibus parvis, eleganter undulatis ; epidermide levigatâ, luteo-castaneâ, radiatim lineolatâ ; cardine invalido ; dente cardinali longitudinali, compressâ ; laterali tenui, rectâ ; margaritâ argenteâ. Long. $1\frac{1}{4}$; lat. $\frac{7}{16}$; alt. 1 poll.

In shape, delicacy, and even its color, it is not unlike *Anod. couperiana*, Lea.

Dr. J. B. S. Jackson made some remarks upon the skeleton of a whale recently exhibited in this city, and compared it with the *Rorqual du Cap* of Cuvier. The individual was taken off the coast of Maine, last July, and the skeleton was prepared and set up with much labor and expense, though by persons totally unacquainted with anatomy.

The whole length of the skeleton was said to be 40 feet, and the number of vertebræ was 51, the terminal one having perhaps been lost. The cervical vertebræ were all separate, and so they are in the *Rorqual du Cap*, excepting a fusion of the upper part of the wings of the second and third. This fusion may have originally existed, and the evidence been apparent in the present specimen; but Dr. Jackson not being aware of the observation, at the time, in respect of the rorqual, had not given his attention to this point in the skeleton. The number of ribs, on the right side, was thirteen, and on the left side fourteen; in the rorqual, fourteen on each side. Only one of the baleen plates was exhibited; this measured only thirty inches in length, although it was said to be one of the longest. The skeleton wanted the bones of the pelvis, and belonged to a female nearly adult.

Rev. E. E. Hale gave a relation of an ascent recently made by him to the top of Mount Katahdin, in Maine.

Mr. Hale found on the summit but eight phanerogamous plants which are not found below that elevation. All of these prove to be common to Katahdin and Mount Washington. Katahdin is nearly one hundred miles farther north than Mount Washington, and the climate of the summits is probably about the same.

The plants referred to are :

<i>Arenaria greenlandica,</i>	<i>Empetrum nigrum,</i>
<i>Solidago virgaurea [alpina,]</i>	<i>Juncus trifidus,</i>
<i>Vaccinium uliginosum,</i>	<i>Carex washingtoniana,</i>
<i>Diapensia lapponica,</i>	<i>Prenanthes thesoidea.</i>

Mr. Hale also observed the *Lycopodium anotinum*.

Dr. J. Wyman announced some observations recently made by him, on the perforation of shells by the animal of *Natica heros*.

ADDITIONS TO THE LIBRARY.

Catalogue of Plants in the Cabinet of the Providence Franklin Society. From *S. T. Olney*.

Annals and Magazine of Natural History. Nos. 101, 102 and 103. *Courtis Fund.*

Gray, G. R. Genera of Birds. 4to. No. 16. *Audubon Fund.*

Sept. 3, 1845.

The President in the Chair.

Dr. S. Cabot, Jr., communicated a list of birds observed by him, during a late visit to the Magalloway River, one of the sources of the Androscroggin, including only such as he had ascertained to have their breeding places in that vicinity. These were :

<i>Mergus serrator,</i>	<i>Anas sponsa,</i>
“ <i>cucullatus,</i>	<i>Fuligula clangula.</i>
<i>Anas obscura,</i>	

He also exhibited a specimen of *Orismia canivetii*, Lesson, concerning which he had lately noticed a remark in M. Lesson's work, to the effect that the species is very rare, and that the author had never seen a perfect specimen. Dr. Cabot procured his in Yucatan.

Prof. Asa Gray read a paper prepared by himself and Dr. George Engelmann, entitled, “*Plantæ Lindheimerianæ : an Enumeration of the Plants collected in Texas, and distributed to Subscribers, by F. Lindheimer ; with Remarks, and Descriptions of New Species.*” It was referred to the Publishing Committee. In it the following new genera and species were characterized :

New Genera Proposed.

THYSANELLA. Flores dioico-polygami. Perigonium pentaphyllum petaloideum ; phyllis omnibus erectis margine scariosis et eroso-fimbriatis, duobus exterioribus cordato-sagittatis post anthesin auctis, interioribus minoribus ovato-lanceolatis, pectinato-fimbriatis. Stamina 8 : filamenta filiformia perigonium adæquantia. Ovarium (infertile) trigonum : styli 3 filiformes ; stigmatibus simplicibus. — Herba ramosa, glabra (bipedalis) in

arenosis Georgiæ vigens, caulibus virgatis strictis ; foliis angustilinearibus elongatis acutatis striatulis sessilibus ; ochreis truncatis setis capillaribus longissime barbatis ; floribus (incarnatis) racemoso-spicatis ; spicis solitariis vel geminis, paniculatis, dense imbricatim ochreato-brachteatis ; ochreis oblique truncatis in acumen aristiforme productis ; pedicellis in medio articulatis.

BRAZORIA. Calyx late campanulatus, bilabiatus (labio superiore breviter 3-lobo, inferiore 2-lobo,) per anthesin inflatus, post anthesin e surrectione labii inferioris clausus, indistincte nervosus, reticulato-venosus. Corolla tubo longe exsuto, fauce inflata ; limbi bilabiati labio superiore erecto subgaleato breviter bilobo vel integro, inferiore profunde trifido, lobis rotundatis patentibus seu recurvis. Stamina 4, sub labio superiore adscendentia : filamentum supra medium corollæ adnata, ubi pilosa, inferioribus eminentibus : antheræ approximatae ; oculis distinctis divaricantibus ad rimam pl. m. ciliatis. Stylus glaber, apicè æqualiter bifido, lobis subulatis. Achenia sicca. — Herbæ annuæ, Texanæ, facie foliis et inflorescentia Physostegia. Corolla incarnata, fauce luteola.

Species Described.

Ranunculus texensis,	Echinocactus setispinus,
“ trachyspermus,	“ lindheimeri,
Hypericum gymnanthum,	Cereus cæspitosus,
Sida lindheimeri,	Asclepias lindheimeri.
Gaura lindheimeri,	Gonolobus cynanchoides,
Helianthus præcox,	Lithospermum breviflorum,
Cuscuta cuspidata,	Eutoca strictiflora,
Solanum texense,	“ patuliflora,
Scutellaria cardiophylla,	Brazoria scutellarioides,
Monarda lindheimeri,	Dipteracanthus micranthus,
Pilinophytum lindheimeri,	“ drummondii,
Sagittaria stolonifera,	“ linearis,
Spiranthes vernalis,	“ nudiflorus,
Scilla angusta,	Polygonum cristatum,
Spartina junciformis,	Aristolochia longiflora,
Scirpus olneyi,	Euphorbia arkansana,
Vesicaria auriculata,	“ bicolor,
Mammillaria similis,	Aphora humilis,
“ sulcata,	Tragia brevispica,
	Sisirincum minus.

Prof. Gray exhibited specimens of a new manner of engraving on stone, well adapted for botanical and other natural history illustrations. The cost was stated to be very low compared with copper-plate engravings.

A paper containing an elaborate description and drawings of the anatomy of the animal of *Helix albolabris*, Say, by Joseph Leidy, M. D., of Philadelphia, Corresponding Member, was read, and referred to the Publishing Committee.

A letter from Dr. C. T. Jackson, dated at Copper Harbor, Lake Superior, Aug. 12, 1845, was read. Dr. J. described a large block of native copper discovered by Major Campbell on the lake shore, about 40 miles west of Keweenaw Point. It measured 3 feet 4 inches in length, by 2 feet 5 inches in width, and 7 to 10 inches in thickness, and weighed about 2000 lbs. Its surface is deeply cut by grooves of abrasion, and is covered with fine drift scratches. It was found among loose blocks of sienite on the beach, nearly covered by gravel. Dr. J. considered it to be a valuable geological specimen illustrative of drift phenomena.

Dr. J. also related some particulars concerning the vein of black oxide of copper near Fort Wilkins. The ore occurs in bunches 5 or 6 feet long, and generally 8 inches thick in the middle. The bunches run out into dead vein-stone of calcareous spar. The principal ore in the mine was stated to be the black siliceous oxide, mixed with or covered by chrysocolla or green hydrous silicate of the oxide of copper. Laumonite and analcime abound also in the vein. Dr. Jackson supposed the chemical action producing the various minerals to be as follows. They resulted from the action of lime on gelatinous silicate of alumina. The oxide of copper was precipitated from the gelatinous silicate by the action of lime, and black silicate resulted from the influence of heated water, while green silicate formed when the water was cold: when lime predominated, the black oxide was precipitated pure; but when there was a deficiency of it, the silicic acid combined with the oxide of copper. Laumonite

was formed by the combination of silica, alumina and lime in water. The laws governing this action, he considered to be perfectly obvious to the chemist.

A letter from M. Liénard, dated Port Louis, Mauritius, June 25, 1844, recently received by the hands of Mr. Samuel, was read. It announced that M. Liénard had sent by Mr. S. specimens of *Pedum*, and a head of the *Histriophorus indicus*, for the Society. These specimens, however, were not forthcoming. M. L. intimated his intention of sending a box of shells, and several of his own publications concerning the meteorology of Mauritius.

A letter from Mr. Tuomey, containing a list of fossil shells sent by him to the Society, was read.

The following gentlemen were elected corresponding members: S. C. Clark, Chicago, Illinois; A. Clapp, New Albany, Indiana.

DONATIONS TO THE CABINET.

Fossils from Gay Head. From *J. B. S. Jackson*.

A box of fossil shells, from the tertiary strata near Petersburg, Virginia. From *M. Tuomey*.

ADDITIONS TO THE LIBRARY.

Audubon and Bachman. Quadrupeds of N. America. Plates 50 to 55. *Subscribers*.

Ruschenberger's First Books of Natural History. From the *Author*.

Sept. 17, 1845.

The President in the Chair.

A letter from Rev. Francis Mason, missionary in Tavoy, Burmah, was read. It contained notices of the Zoölogy of

that region, and particularly of the habits, localities, &c., of the animals of the land shells formerly sent by him, of which he gave also the native names. He announced that he had collected a number of species not previously seen by him.

A letter from A. G. Salisbury, dated Syracuse, N. Y., Sept. 4, 1845, accompanying specimens of sulphate of lime, was read. The specimens were described to be artificial crystallizations of the salt of lime obtained from the cisterns of salt-works, in which the brine, before being drawn off for evaporation, is settled by the aid of steam. They adhere to the sides of the cistern. The specimens themselves had not arrived.

Dr. J. Wyman read descriptions and presented drawings of two species of *Linguatula*, which were referred to the Publishing Committee. The two species described are :

LINGUATULA ARMILLATA. Body cylindrical, slightly flattened on its anterior face, and surrounded by about 20 distinct rings, separated from each other by a wide interval.

From the intestines of *Python bivittata*.

L. CLAVATA. Cylindrical, largest in its anterior fourth, diminishing towards the tail which is slightly dilated. Tegument with indistinct annuli, not imbricated, and deficient at both extremities. Anus terminal. From the lungs of a South American *Boa*. It may prove to be *Linguatula subcylindrica* of Diesing.

A paper, by Dr. Joseph Leidy, of Philadelphia, Corresponding Member, was read *On the Existence of the Sack of the Dart and of the Dart in several Species of North American pneumobranchiate Mollusks*. It was referred to the Publishing Committee.

Dr. Leidy stated that he had recently dissected two specimens of *Tebennophorus caroliniensis*, in which he had the good fortune to discover the *sack of the dart*, with the contained *dart*. The sack was found situated at the junction of the neck of the oviduct with the spermatheca, was about 3 lines long and 2 in thickness, muscular in structure, and lined internally with mucous

membrane. The sack is the *cæcum* marked *g* in Dr. Wyman's plate of a dissection of the same animal published in the Society's Journal. On the bottom of the sack, in both individuals, there was a papillary eminence, to the summit of which, in one individual, was attached the dart. It was about 2 lines in length, shaped like a cock's spur, the point being bent upwards towards the cavity of the neck of the oviduct. It is hollow, and composed of carbonate of lime, effervescing and soluble in weak chlorohydric acid.

Dr. Leidy also stated that he had repeatedly seen the dart in *Planorbis parvus*, but had sought for it in vain in other species.

DONATIONS TO THE CABINET.

Collection of fossils from the limestone strata near Louisville, Ky. From *Jedediah Cobb, M. D.*, Louisville.

Fossils from the upper Missouri. From *T. Sprague*, Hingham.

Two shrew moles, *Scalops aquaticus* ; one in white pelage. From *Joseph Barratt, M. D.*, Middletown, Conn.

October 1, 1845.

Dr. Samuel Cabot, Jun., in the Chair.

Dr. J. B. S. Jackson read a paper on the fossil bones of *Mastodon giganteus*, disinterred from a marl pit on Schooley's Mountain, New Jersey, and now exhibiting in this city.

Dr. Jackson remarked, that the locality where the bones were procured, is fully described in the Proceedings of the American Philosophical Society, D c., 1844. The chief point of interest is the mounted skeleton, this being far more perfect than any that has yet been seen, though less so, it is said, and altogether less interesting, than the one now exhibited in New York ; the feet, the sternum and a few of the caudal vertebræ only

wanting. Several skeletons were found in the same bog, and, according to the owners who dug them out, and who are evidently trustworthy men, they were all found lying in a confused state, except the one in question, which was found at some distance from the others, upon its side, the bones being in a natural and undisturbed position. Supposing, then, that all the bones belonged to the same individual, and, also, from the soundness of their structure, that none of the larger vertebræ are wanting, this specimen shows what seems never before to have been observed, the true number of the dorsal vertebræ in *Mastodon giganteus*. Cuvier remarked (*Ossemens Fossiles*) that there were 19, but perhaps, said he, one may be wanting, and then the number would be the same as in the elephant; now in the present case there are just 20. The skeleton of the so called *Missourium* has been reconstructed under the direction of Prof. Owen, and put up in the British Museum as that of a *Mastodon*, and, from the full-length drawing which Mr. Lyell had made of it, and which he has recently brought out with him to use in his lectures before the Lowell Institute, it appears that on the left side, this being the front view, there are but 18 ribs, these last, in a perfect skeleton, of course, determining the number of the dorsal vertebræ. Of the cervical vertebræ of the skeleton now here, there are 7, of the lumbar 3, of the sacral 3, and of the caudal 23, besides those that are wanting, the tail probably descending to the knee-joint or below it, and being considerably longer than it is represented in the drawing above referred to. The length from the intermaxillaries to the pelvis, inclusive, is 14 feet, and the greatest height 10 feet 8 inches; but much allowance must be made for these measurements. The skeleton is that of a young adult, and, from the small size of the proper tusks, and the absence of any in the lower jaw, the individual was probably a female, the length of the tusks beyond the intermaxillaries being 25 inches, and the greatest circumference 11 inches. A curious fact is mentioned by the owners, that, about in the situation of the stomach, a bushel or more of small twigs, about an inch in length, were found, most of which fell into a powder on exposure to the air, though a small specimen was preserved, and may be seen in the collection; the same has been observed in some other cases.

There are also in the collection two other crania which are immature, but perfect, except the tusks, and of these Dr. J. gave

the measurements and the internal capacity, this last being 282 cubic inches in one, and 287 in the other; the cranium of an African elephant, in the Society's Cabinet, measured 338 inches. The next specimen noticed was the lower jaw of a young individual, showing the alveoli for the inferior tusks, 20 lines in depth, and about $\frac{3}{4}$ of an inch in diameter at the outlet.

Prof. Owen states that in the *M. giganteus* the first and second molars have two ridges, the third and fourth have three, and the last has four or five, (*Annals of Nat. Hist.* vol. xi.); and it may be inferred that he regards five as the whole number of teeth. Now, the present collection demonstrates that, in the lower jaw at least, the true number is six, the two first having two perfect ridges, the three next having three, and the last four, with a marked talon, or single point at the posterior extremity. The lower jaw of the calf, with the three others belonging to the crania above mentioned and to the skeleton, form a series in which the corresponding teeth are satisfactorily made out, and, as the calf had never shed one, and the skeleton had evidently got its last, we may be sure that we have the whole number. In the calf there are three teeth, and one in the socket, the first measuring $1\frac{1}{4}$ inches in length and $\frac{3}{4}$ of an inch transversely; with regard to the second tooth, it should be stated that, besides the two proper ridges, there is a third which should perhaps be included, though imperfectly developed, and having no corresponding fang. The youngest cranium has two teeth with three ridges, and one in the sockets, the oldest three, with three ridges on the right side, and one in the socket, the left anterior having fallen out; and the skeleton one with three ridges, and one with four and a talon, this last tooth being $6\frac{1}{4}$ inches in length. The upper molars correspond with those in the lower jaw, so far as observed, but as the cranium of the calf was not procured, the existence of the two first teeth can only be inferred. Amongst the loose bones which make up the remainder of this collection, is a three-ridged tooth, evidently from the socket, as it is not at all worn, showing the formation of the crown before the fangs have begun to develop. Two styloid bones are also seen, about 8 inches in length, and these have never before been observed, so far as Dr. J. is aware.

A very large tooth of a *Mastodon*, brought from Burmah, now in the Society's Collection, has seven distinct ridges and a talon.

A letter from James Brown, Esq., accompanying a box of British moths presented by Mrs. B. F. Foster, was read.

DONATIONS TO THE CABINET.

A box of British moths. Collected and presented by *Mrs. B. F. Foster*, of Chelsea, England, through James Brown, Esq.

ADDITIONS TO THE LIBRARY.

Hooker, W. J. *Species Filicum*. Parts i. ii. iii. 8vo. London. *Courts Fund*.

Lyell, Ch. *Travels in North America*. 2 vols. 12mo. From the *same*.

Transactions of the Entomological Society of London. 2 parts. From the *Entomol. Society*.

Catalogue of the Shells of the United States, in the Cabinet of C. M. Wheatley. 12mo pamphlet. From the *Author*.

October 15, 1845.

D. H. Storer, M. D., Vice President, in the Chair.

Dr. S. Cabot, Jun., stated that a specimen of *Silvia agilis*, Wilson, a bird not known to have been met with before in this State, had been shot at Brookline.

The second part of the fifth volume of the Society's Journal was announced to have been published, and copies were placed on the table.

A list of the species of the short-tailed crabs, DECAPODA BRACHYURA, in the collection made by Mr. Bartlett on the Southern shores of the peninsula of Florida, between Cape Florida and Charlotte Harbor, and the adjacent keys, as prepared by Dr.

Lewis R. Gibbes, of Charleston, S. C., was transmitted by Dr. Binney. The list is made in aid of our knowledge of the geographical distribution of the Crustaceans.

Mithrax hispidus, Herbst,	Pericera cornuta, Herbst,
“ sculptus, Lam.,	“ bicornuta, Lat.,
Zantho mercenaria, Say,	Sesarma cinerea, Bosc,
Lupea Sebæ, M. Edwards,	“ Pisonii, M. Edwards,
“ dicantha, Leach,	Calappa marmorata, Fab.,
Dromia lator, Parra,	Ocypoda arenaria, Lat.,
Albunea symnista, Fab.,	Panopeus Herbstii, M. Edwards,
Grapsus lividus, M. Edwards,	Hepatus fasciatus, Say,
“ cruentatus, Lat.,	Libinia dubia, M. Edwards,
Ranilia muricata, M. Edwards,	Gelasimus vocans, Say,
Eriphia gonagra, Fab.,	Cardisoma guanhumi, Marg.,
Chorinus heros, Herbst,	

together with several other undetermined species.

Drs. Gould and Cabot were appointed a Committee to consider the expediency of memorializing the Navy Department on the subject of employing a naturalist on board the vessel commissioned for the survey of the coast of Oregon and Columbia River.

Joseph Barratt, M. D., of Middletown, Conn., was elected a corresponding member.

ADDITIONS TO THE LIBRARY.

Cuvier, G. *Léçons d'Anatomie Comparée*. 2d edit. Paris. tome 8. *Courtis Fund*.

Virlet D'Aoust. *Mémoire sur les filons en général*. Pamph. 8vo. Paris, 1841. From the *Author*.

Virlet d'Aoust. *Notes sur quelques Phenomènes de Deplacemens dans les Rochers, etc., etc.* Pamph. 8vo. Paris, 1841. From the *same*.

Jacquemont, Victor. *Voyage dans l'Inde pendant les années 1828 à 1841*. 6 tomes. 4to. Paris, 1841. *Audubon Fund*.

November 5, 1845.

The President in the Chair.

A communication from Prof. Jeffries Wyman, on the subject of the fossil skeleton recently exhibited in New York as that of a sea-serpent under the name of *Hydrarchos Sillimani*, was read.

Prof. Wyman stated that, during a recent visit to New York, he had an opportunity of examining the fossil remains exhibited in Broadway under the name of *Hydrarchos Sillimani*, and purporting to be those of an extinct marine serpent. These remains consist of a head and vertebral column, measuring in all 114 feet, of a few ribs attached to the thoracic portion of the latter, and of parts of supposed paddles.

I. *The head.* This is five feet seven inches long, or one twentieth of the entire length of the whole animal. That part purporting to be the cranium proper, and which serves more especially to protect the brain, consists apparently of a single bone, and is destitute of any visible sutures, is a little more than one foot long, about five inches wide, and has, attached laterally by cement, two bones forming incomplete zygomatic arches. Inferiorly it is so much covered with cement that little or nothing can be seen of its surface. Posteriorly there are no condyles, nor any foramen for the passage of the spinal marrow; in fact, no foramina are anywhere visible. This absence of sutures and foramina naturally leads to the supposition that it is not the true cranium, but may be some bone or fragment not in its natural position. The size of the supposed cranium is obviously too small for lodging the brain of an animal 114 feet long, inasmuch as its cavity, if it had one, could exceed but little that of the spinal canal which is visible in some of the vertebræ. The upper jaw is narrow and elongated, so that the whole head, with its broad zygomatic arches, has something of the general outline of that of an *Ichthyosaurus*. The jaw has been crushed by violence, as is obvious from the broken edges of the pieces; and, in one instance at least, a fragment, containing a tooth, is in an inverted position.

These are all held together by the natural matrix in which the whole was originally imbedded. Near the union of the upper jaw with the cranium, are some sutures, but not sufficiently exposed to enable one to identify them. At the tip of the jaw, there is a fragment of bone without teeth or alveoli, and differing in the appearance of its texture from the bones adjoining; this is, probably, a fragment which has found its way to its present locality by accident, and is retained there by the matrix. The lower jaw corresponds with the upper in its elongated form, but the condyles and processes are wanting.

The teeth, organs of great importance in determining the natural affinities of any animal, are many of them in a complete state of preservation, and some so completely exposed as to be studied with great ease. Through Dr. Koch's kindness, Prof. W. was enabled to give them a satisfactory examination. The crowns are laterally compressed, of a somewhat triangular form, but deeply indented on the edges, and all which were sufficiently exposed for examination, were implanted into the *double alveoli of the jaw by means of double roots*. Here is the most positive evidence that the individual to which they belonged was no reptile, but a warm-blooded, mammiferous animal; for, according to the odontological rule, no animal not mammiferous ever possesses a tooth with double roots, implanted into double alveoli or sockets. The teeth of sharks are no exception, for, although there exists in them an approximation to a double root, they are attached to the jaw by ligament only.

II. *Vertebral column*. This consists of a series of bones which could never have belonged to the same individual, as is obvious from the fact that they manifest different degrees of ossification, and must, therefore, have belonged to individuals of different ages. The plates attached to the extremities of the bodies of the vertebræ are, in some instances, perfectly coössified, in others not, or, in some cases, detached, leaving the imperfectly ossified surface exposed. In some of the vertebral bones the spinal canal is represented by a cast of its cavity, which, as already stated, would nearly equal the diameter of that of the supposed cranium, which it could never do in a warm-blooded animal, especially a cetacean, where the brain acquires a high degree of development. The bodies of the vertebræ and the articulating processes, do not

present any of the characters of an ophidian reptile, the ball and socket joint of the bodies and the double articulating processes being in all cases wanting. The processes of the vertebræ, however, are in general so imperfect, that this last assertion must be taken with some limitation. It is also worthy of notice that some of the vertebræ have the appearance of having been imbedded in a matrix, while others are so clean and comparatively recent in their appearance, that it seems impossible that they should have been thus imbedded.

III. *Ribs*. These are few in number, and are not supposed to be anything more than an incomplete set. Some of the more perfect ones present two articulating surfaces, one at the head and the other at the tubercle, like those of most animals, but entirely unlike those of the serpents. They are remarkable for their flattened, club-shaped extremities, to which there is, however, something analogous in the herbivorous cetaceans.

IV. *Paddles*. These are composed of two kinds of pieces; one of which possibly consists of the long bones, naturally forming a part of an anterior extremity; but which he could not identify on a cursory examination. The other pieces consist not of bones, but of *casts of the cavities of a camerated shell, a species of Nautilus*, of which specimens, brought from the State of Alabama, and now in the Cabinet of the Academy of Natural Sciences, were shown to Prof. W. by Dr. Morton, of Philadelphia. These could not fail to strike the eye at a glance, when examined by any one acquainted with the forms of fossil nautiloid shells.

From the facts above stated, Prof. Wyman considered it to be evident to those who have any acquaintance with fossil osteology, 1st, that these remains have never belonged to one and the same individual; 2d, that the anatomical characters of the teeth indicate that they are not those of a reptile, but of a warm-blooded mammal.

As to the precise species to which they belonged, it is not so easy to decide. The late Dr. Harlan, of Philadelphia, to whom the fossil osteologist is so much indebted, several years since, described some bones and a portion of a jaw, brought from Alabama, which he considered as those of a reptile, and to which he gave the name of *Basilosaurus*, believing that they belonged to a gigantic Saurian. The subsequent examinations of Prof. Owen,

however, demonstrated that they were not saurian but cetacean bones, and he gave to them the name of *Zeuglodon ceti*, the generic name being derived from the peculiar form of the teeth, which consist of two roots yoked together by the crown. The crowns of the teeth which fell under the observation of Prof. Owen, were imperfect, and it is therefore impossible to say how far they are identical with those of the animal of which we have been speaking. The latter do, however, present a complete resemblance to the teeth described and figured by Prof. Gibbes, of Columbia, S. C., in the Proceedings of the Academy of Natural Sciences, for June, 1845, under the name of *Dorudon serratus*. These last have been compared by Prof. G. with those of a *Zeuglodon* at Albany, in the State Cabinet, and in speaking of them, he says, "I was much struck with the similarity in their general characters with those of *Dorudon*." "The teeth of the *Zeuglodon* are solid, of a dense structure and very strong, and resembling those of the cetacea; while the *hollowness* of those of the *Dorudon* approximate it to the saurians." Other differences of less importance are referred to by Prof. G. The *Hydrarchos* and *Dorudon* are unquestionably members of the same genus; and if the bones at Albany are those of the *Zeuglodon*, it is highly probable that it is to this genus that the preceding must be referred. The character of "hollowness" does not appear to be sufficient to establish generic distinctions, unless it can be shown that it is not the result of imperfect development, or that it is not the consequence of the ossification of the teeth being incomplete. We have not, as yet, a perfect series of the teeth of the *Zeuglodon*, and are therefore ignorant what are the varieties of form which such a series would present in different parts of the same jaw. The figures and descriptions of Prof. Gibbes are of great value, being the only perfect representations of individual teeth which have as yet appeared, and it is to be hoped that his future researches may enable him to complete the osteological description of these interesting remains.

A communication was received from Lewis R. Gibbes, M. D., of Charleston, S. C., enclosing a Catalogue of the species of Crustaceans contained in the Cabinet of this Society, as recently examined and determined by him. Viz.

CATALOGUE

Of the Collection of Crustaceans in the Cabinet of the Boston
Society of Natural History. Sept. 1, 1845.

PODOPHTHALMIA. DECAPODA.

BRACHYURA.

OXYRHINCA.

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| <p>I. <i>Stenorhynchus</i>, Lam.
1. <i>phalangium</i>, Penn.</p> <p>II. <i>Inachus</i>, Leach.
2. <i>scorpio</i>, Fab.
3. <i>thoracicus</i>, Roux, male.</p> <p>III. <i>Libinia</i>, Leach.
4. <i>canaliculata</i>, Say, male and fem.
5. <i>dubia</i>, M. Edw.</p> <p>IV. <i>Pisa</i>, Leach.
6. <i>tetraodon</i>, Penn., 4 males, 1 fem.</p> <p>V. <i>Pericera</i>, Lat.
7. <i>cornuta</i>, Parra?
8. <i>bicornuta</i>, Lat.</p> <p>VI. <i>Lissa</i>, Leach.
9. <i>fissirostra</i>, Say, male.</p> | <p>VII. <i>Maia</i>, Lam.
10. <i>verrucosa</i>, M. Edw., female.</p> <p>VIII. <i>Mithrax</i>, Leach.
11. <i>hispidus</i>, Herbst.</p> <p>IX. <i>Chorinus</i>, Leach.
12. <i>heros</i>, Herbst.</p> <p>X. <i>Acanthonyx</i>, Lat.
13. <i>lunulatus</i>, Lat., male.</p> <p>XI. <i>Lambrus</i>, Leach.
14. <i>mediterraneus</i>, Roux, male.
15. <i>longimanus</i>, L., male.</p> <p>XII. <i>Cryptopodia</i>, M. Edw.
16. <i>fornicata</i>, Fab., male.</p> |
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CYCLOMETOPA.

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| <p>XIII. <i>Carpilius</i>, Leach.
17. <i>corallinus</i>, Fabr., male and f.</p> <p>XIV. <i>Xantho</i>, Leach.
18. <i>mercenaria</i>, Say.</p> <p>XV. <i>Pseudocarcinus</i>, M. Edw.
19. <i>Rumphii</i>, Fabr.</p> <p>XVI. <i>Platycarcinus</i>, Lat.
20. <i>irroratus</i>, Say, male and fem.</p> <p>XVII. <i>Eriphia</i>, Latr.
21. <i>spinifrons</i>, Herbst, m. and fem.
22. <i>gonagra</i>, Fabr., male and fem.</p> <p>XVIII. <i>Panopeus</i>, M. Edw.
23. <i>Herbstii</i>, M. Edw.</p> | <p>XIX. <i>Carcinus</i>, Leach.
24. <i>maenas</i>, Baster, male and fem.</p> <p>XX. <i>Platyonichus</i>, Lat.
25. <i>ocellatus</i>, Herbst, male.</p> <p>XXI. <i>Portunus</i>, Fab.
26. <i>Rondeletii</i>, Risso, male.
27. <i>corrugatus</i>, Penn., m. and fem.
28. <i>plicatus</i>, Risso, male and fem.</p> <p>XXII. <i>Lupea</i>, Leach.
29. <i>tranquebarica</i>, Fab. male.
30. <i>Sebae</i>, M. Edw.
31. <i>dicantha</i>, Lat.</p> |
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CATOMETOPA.

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| <p>XXIII. <i>Thelphusa</i>, Lat.
32. <i>indica</i>, Lat., male and female.</p> <p>XXIV. <i>Cardisoma</i>, Lat.
33. <i>guanhumii</i>, Lat., male.</p> <p>XXV. <i>Boscia</i>, M. Edw.
34. <i>dentata</i>, Lat., female.</p> <p>XXVI. <i>Grapsus</i>, Lam.
35. <i>pictus</i>, Lat., male and female.
36. <i>varius</i>, Lat., female.
37. <i>cruentatus</i>, Lat.
38. <i>lividus</i>, M. Edw.</p> | <p>XXVII. <i>Gecarcinus</i>, Lat.
39. <i>uricola</i>, L., male.
40. <i>lateralis</i>, Frem., female.</p> <p>XXVIII. <i>Gelasimus</i>, Lat.
41. <i>vocans</i>, Lat., male and female.</p> <p>XXIX. <i>Ocypoda</i>, Fab.
42. <i>arenaria</i>, Latr., male and fem.
43. <i>rhombica</i>, Fab., female.</p> <p>XXX. <i>Gonoplax</i>, Leach.
44. <i>rhomboides</i>, Fab., male.</p> |
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| <p>XXXI. <i>Sesarma</i>, Say.
 45. <i>Pisonii</i>, M. Edw., female.
 46. <i>africana</i>?, M. Edw., m. and f.
 47. <i>cinerea</i>, Bosc.</p> | <p>XXXII. <i>Plagusia</i>, Lat.
 48. <i>squamosa</i>, Herbst, male.
 XXXIII. <i>Nautilograpsus</i>, M. Edw.
 49. <i>minutus</i>, Fab., male and fem.</p> |
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OXYSTOMA.

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| <p>XXXIV. <i>Calappa</i>, Fab.
 50. <i>granulata</i>, L., male and fem.
 51. <i>marmorata</i>, Fab.
 XXXV. <i>Dorippe</i>, Fab.
 52. <i>lanata</i>, Bosc, male.
 XXXVI. <i>Platymera</i>, M. Edw.
 53. <i>Gaudichaudii</i>, M. Edw., f. y'ng.</p> | <p>XXXVII. <i>Leucosia</i>, Fab.
 54. <i>craniolaris</i>, L., female.
 XXXVIII. <i>Cymopolia</i>, Roux.
 55. <i>Caronii</i>, Roux, male and fem.
 XXXIX. <i>Hepatus</i>, Lat.
 56. <i>fasciatus</i>, Lat., male.
 XL. <i>Ilia</i>, Leach.
 57. <i>nucleus</i>, Herbst, male and fem.</p> |
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ANOMOURA.

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| <p>XLI. <i>Dromia</i>, Fab.
 58. <i>vulgaris</i>, M. Edw., m. and f.
 59. <i>lator</i>, Parra.
 XLII. <i>Lithodes</i>.
 60. <i>arctica</i>, Lam.
 XLIII. <i>Remipes</i>, Lat.
 61. <i>testudinarius</i>.
 XLIV. <i>Ranilia</i>, M. Edw.
 62. <i>muricata</i>, M. Edw.
 XLV. <i>Albunea</i>, Fab.
 63. <i>symnista</i>, Fab.</p> | <p>XLVI. <i>Hippa</i>, Fab.
 64. <i>emerila</i>, L.
 XLVII. <i>Pagurus</i>, Fab.
 65. <i>Bernhardus</i>, L.
 66. <i>granulatus</i>, Olivier.
 67. <i>longicarpus</i>, Say.
 68. <i>pollicaris</i>, Say.
 XLVIII. <i>Cenobita</i>, Lat.
 69. <i>Diogenes</i>, Lat.</p> |
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MACROURA.

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| <p>XLIX. <i>Scyllarus</i>, Fab.
 70. <i>sculptus</i>, Lam.
 L. <i>Theus</i>, Leach.
 71. <i>orientalis</i>, Fab.
 LI. <i>Palinurus</i>, Fab.
 72. <i>vulgaris</i>, Lat.
 73. <i>argus</i>, Lat.
 LII. <i>Astacus</i>, Fab.
 74. <i>Bartonii</i>, Fab.
 75. <i>affinis</i>, Say.
 LIII. <i>Crangon</i>, Fab.
 76. <i>septemspinus</i>, Say.
 77. <i>cataphractus</i>, Oliv.</p> | <p>LIV. <i>Sicyonia</i>, M. Edw.
 78. <i>sculpta</i>, M. Edw.
 LV. <i>Galathea</i>, Fab.
 79. <i>squamifera</i>, Leach.
 LVI. <i>Palemon</i>, Fab.
 80. <i>carcinus</i>, Fab.
 81. <i>jamaicensis</i>, Herbst.
 82. <i>serratus</i>, Penn.
 83. <i>squilla</i>, L.
 84. <i>locusta</i>, Fab.
 LVII. <i>Peneus</i>, Lat.
 85. <i>caramote</i>, Risso.
 86. <i>setiferus</i>, L.</p> |
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PODOPHTHALMIA. STOMAPODA.

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| <p>LVIII. <i>Squilla</i>, Fab.
 87. <i>scabricauda</i>, Lat.
 88. <i>mantis</i>.
 89. <i>dubia</i>, M. Edw.
 90. <i>Desmarestii</i>, Risso.</p> | <p>LIX. <i>Gonodactylus</i>, Lat.
 91. <i>scyllarus</i>, Fab.
 92. <i>chiragra</i>, Fab.</p> |
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The specimens labelled as *Remipes testudinarius*, *Albunea symnista*, and *Gonodactylus scyllarus*, agree in general with the descriptions given by M. Edwards under those names, but differ in several particulars.

There are also in the Cabinet several undetermined, and probably undescribed, forms.

Dr. D. H. Storer made some remarks on a living specimen of *Torpedo occidentalis*, the *cramp-fish* or *torpedo*.

Dr. Storer stated that, since the last meeting of the Society, a living specimen of the cramp-fish or torpedo, *Torpedo occidentalis*, had been exhibited here, and that he, with Dr. J. B. S. Jackson, had had an opportunity of testing its electrical properties. He visited it while it was still in the well of the vessel in which it had been brought here, and it gave, when lifted upon the wet deck, a very distinct shock. This shock was scarcely perceived if the fish was quiet ; it was most marked when the portion directly over the electrical organs was excited. The most powerful effect was produced by seizing the tail with one hand, and grasping that portion of the pectoral fins which was supplied with nerves from the fifth pair ; here, quite a shock was perceived in the arms as high as the elbows. If such effects are produced when the fish is removed from its native element, Dr. S. did not doubt that, when struck by a harpoon while in the water, it might have the power to benumb perfectly, but temporarily, the arms of the fisherman employed in its capture. This fish was seen near the shore at Provincetown, the latter part of October, apparently benumbed ; and a rope being attached to its tail, it was readily dragged on shore. Although this is undoubtedly a southern fish, Dr. S. had never known it to be taken on the eastern coast of Cape Cod, or, in other words, out of Cape Cod Bay. It appears to have been seen, as yet, only on the eastern shore of Cape Cod Bay, between Provincetown Harbor and Orleans, an extent of about thirty miles : and is found in greater numbers upon the eastern shore of *Long-point*, a small neck of land, west of the town of Provincetown, than at any other place. Capt. Atwood informed Dr. S. that at least a dozen specimens have been taken there this season, from the early part of September to this date, Nov. 1st. At Wellfleet they are found, but not in such numbers ; and Dr. S. had heard of a specimen having been taken at Orleans. Capt. Atwood has known only two specimens to have been taken with the hook, while fishing for other species. They are almost always met with just at the margin of the shore, and are taken mostly for the sake of the oil in their livers.

Dr. Storer also observed that he had received, through

the politeness of Dr. Wheatland, of Salem, the specimen of *Balistes*, belonging to the Salem Natural History Society, which was taken there in August, of the present year. It proves to be the *Balistes aurantiacus*, Mitchill. Dr. S. had never known a specimen to be taken before in the waters of Massachusetts. He exhibited a drawing of a specimen taken by Dr. Bates in Portland harbor, Me., and, of course, knew that it must have passed through our waters, it being a southern species. He also exhibited a drawing of this specimen (taken at Salem).

J. C. Fremont, Esq., U. S. Army, was elected a corresponding member.

DONATIONS TO THE CABINET.

Marl fossils, viz., *Planorbis parvus*, *campanulatus*, and *bicarinatus*, *Physa ancillaria*, *Limnea galbana*, *Paludina decisa*, and *limosa*, all of Say; and *Valvata bicarinata*, Lea, with a *Cyclas*, from White Pond, Warren Co., N. J. From J. Leidy, M. D.

Numenius hudsonicus. From Dr. Cabot.

Corvus picus, L., from N. W. of Michigan, and *Bombycivora garrulus*, from Cleveland. From W. Case, Esq. of Cleveland, Ohio.

Lymnea emarginata, Say, and *L. jugularis*, Say, *Paludina ponderosa*, Say, *Unio levissima*, *triangularis*, and *formosa*, *Alasmidonta corrugata*. From Lake Superior. From the same.

ADDITIONS TO THE LIBRARY.

Adams, C. B. First Annual Report on the Geology of the State of Vermont. Svo, pp. 90. Burlington, 1845. From the Author.

Phillips, John. A Treatise on Geology. 12mo. Edinburg, 1837. *Courtis Fund.*

De La Bêche, H. T. A Geological Manual. Svo. Philadelphia, 1832. *Courtis Fund.*

Gray, G. R. Genera of Birds. No. 18. Folio. *Courtis Fund.*
Annals and Magazine of Natural History. No. 105, Oct., 1845. *Same.*

The Literary Record and Journal of the Linnean Association of Pennsylvania College. No. 12. 8vo pamph. Oct., 1845. From Prof. S. F. Baird.

November 19, 1845.

A. A. Gould, M. D., in the Chair.

Dr. D. H. Storer read a description of a new species of *Syngnathus*, brought from the western coast of California by Capt. Phelps.

SYNGNATHUS CALIFORNIENSIS. Reddish brown, lighter beneath: the lower portion of the sides irregularly dashed with white; 19 transverse plates anterior to the vent, and 47 plates posterior to it. From the tip of the tubular mouth to the posterior edge of the operculum, the length is rather more than one seventh the length of the fish. The greatest depth of the jaws is rather less than one half the depth of the head. The dorsal fin commences on the anterior third of the body, and the height of its rays is less than one third the depth of the body.

D. 42; P. 13; A. 3; C. 10.

Mr. J. E. Teschemacher made some remarks on a collection of Russian minerals lately presented to the Society by Charles Cramer, Esq., of St. Petersburg. He pronounced the specimens to be interesting and to constitute a valuable addition to the Society's collection.

Dr. Samuel Cabot, Jun., exhibited a specimen of *Pica melanoleuca*, magpie, from the North-West part of Michigan, presented to the Society at the last meeting.

Having been struck with some apparent differences in the measurements of this specimen and European specimens of the same bird, Dr. Cabot had instituted a careful comparison between

them, using for the purpose three foreign specimens from his own cabinet, and the one under consideration. He found the measurements to be as follows :

Measurements.	N. American specimen.	European specimen.
	inches.	inches.
Length of bill along the gape,	1.75	1.56
Diameter of bill from above downwards directly in front of nasal depression,	.55	.56
From middle of nostril to end of bill,	1.12	1.06
Horizontal diameter of bill at nostrils,45	.50
From bifurcation of rami to tip of lower mandible,85	.75
Wing, from flexure to tip,	8.25	7.62
Length of tarsus,	1.85	1.85
Length of tail,	10.75	10.00
Average length, according to Aud. & Temm.	18.50	18.00

The 5th primary is longest in the American, the 4th and 5th in the European. The white markings on the inside of the primaries are much less distinct in the American than in the European specimens, and the green color on the wings is more prevalent. Although he would not assert that he considered these differences sufficient to constitute the American bird a distinct species, Dr. Cabot believed there was better cause for so doing than in the case of *Corvus corone* of the United States, which Mr. Audubon had described as distinct from *Corvus corone* of Europe, under the name of *Corvus americanus*.

Dr. Cabot also exhibited, and read a description of, a new species of Humming-bird.

He stated that he had examined all the books to which he could get access, without finding any description of this bird ; but thought it probable that it might be among the many species lately described in periodical publications which he had not seen.

TROCHILUS YUCATANENSIS. Length 4 inches. Bill $\frac{2}{3}$ of an inch. First primary longest ; primaries curved, broadest at their tips. Tail, somewhat forked, rather more than $1\frac{1}{2}$ inch long, consists of 10 feathers. Bill light yellowish at base and along centre of man-

dibles, dark horn-color at tip and half way along sides. Male brilliant shining emerald on chin, throat and upper part of breast. Head, upper part of neck and back dull golden green with some metallic reflections. Lower part of breast, belly, under tail coverts, central and upper part of tail feathers light bay. Tips and both sides of central tail feathers and outer side of lateral tail feathers dark golden green with metallic reflections. Vent white. Female nearly the same as male, but rufous instead of bright emerald on chin, neck, &c., and less white about vent. This is the most common humming-bird found in Yucatan. It was seen in numbers about the acacias which grew upon the tops of the ruined buildings, where the specimens, from which the above description was taken, were procured.

ADDITIONS TO THE LIBRARY.

Teschemacher, J. E. Essay on Guano. Pamph. 8vo, pp. 51. Boston, 1845. From the *Author*.

Chapman, A. W., M. D. List of Plants growing spontaneously in the vicinity of Quincy, Florida. Pamph. 8vo. 1845. From the *Author*.

Menke, C. T. Molluscorum Novæ Hollandiæ Specimen. 4to. Hanoveriæ, 1843. From *Dr. J. Torrey*.

Gibbes, Robert W., M. D. Descriptions of the Teeth of a New Fossil Animal from the green sand of South Carolina. Pamph. 8vo. Philadelphia, 1845. From the *Author*.

Von Osersky, A. Geognostische Umriss des Nord-Westlichen Ehtslands. Pamph. 8vo, pp. 65. St. Petersburg, 1844. From the *Author*.

Von Osersky, A. Mineralogisch-Chemische Abhandlungen. Pamph. 8vo, pp. 42. St. Petersburg, 1844. From the *same*.

Saunders, W. W. Addresses before the Entomological Society of London. 1842 and 1843. pamph. 8vo. From the *Entomolog. Society*.

Newport, George. Addresses before the Entomological Society of London. 1844 and 1845. Pamph. 8vo. From the *same*.

Journal of Proceedings of the Entomological Society of London. For 1841. From the *same*.

British Coleoptera delineated, &c. Svo. London, 1840. From
E. S. Dixwell.

Essai d'une Carte Géologique du Globe terrestre. From the
Geological Society of France.

December 13, 1845.

The President in the Chair.

Dr. D. H. Storer read a description of a new species of *Leptocephalus*, drawn up from a specimen belonging to the Essex Natural History Society, and lent to him for that purpose by Dr. Wheatland, of Salem. He also exhibited the specimen, which was taken at Cherryfield, Maine.

Dr. S. remarked that, up to this time, only one species of this genus had been known, *Leptocephalus Morrisii*, Pennant, which is found off the coast of England and in the Mediterranean Sea. The *genus* is, therefore, new to this continent. The description is as follows :

LEPTOCEPHALUS GRACILIS. In spirits, of a rusty brown color, translucent; the vertebral column and ribs perceptible throughout its whole length. Head small, snout pointed. Eyes circular, pupils black, irides silvery. Length of the fish four and a half inches; of head one quarter of an inch; the greatest depth of the body slightly exceeds the length of the head. Jaws equal.

Pectorals wanting. The dorsal and anal fins, which require the microscope to be distinguished, are continued to the pointed tail, which is formed by their junction. Small black points are noticed upon the margin of the dorsal and anal fins, and also along the lateral line, by means of the glass.

It will be perceived by the above description, which is necessarily very imperfect, the specimen having been preserved in spirit, that this species resembles somewhat the *L. Morrisii*, of Pennant, but the relative proportions of the parts in each, point

them out as distinct species. In Yarrell's figure of the *L. Morrisi*, the length of the fish is $3\frac{1}{2}$ inches, while the head is $\frac{1}{4}$ of an inch long, or $\frac{1}{13}$ the whole length, and the greatest depth of the body is nearly $\frac{1}{3}$ of an inch, or $\frac{1}{10}$ its length. In our species, the entire length of the head is $\frac{1}{7}$ its whole length, and the depth of the body is also about $\frac{1}{7}$ of its whole length.

Dr. Storer stated that of the American genus *Prionotus*, Cuvier and Valenciennes had described four species, of which three had been already noticed in the waters of Massachusetts. He had not expected to be able to include the fourth, *P. punctatus*, among our fishes, as it was supposed to be exclusively a southern species. He had, however, recently obtained it, and could now assert that all the known species are found in the waters of our State. He had also recently obtained an undescribed species, of which he gave the following description :

PRIONOTUS PILEATUS. Color, above reddish brown, beneath yellowish white. The first dorsal fin is crossed by two oblique white lines, with a black blotch upon the connecting membrane, between the fourth and fifth rays, above the upper oblique line. The entire head is roughened by raised striæ. The lateral projections of the snout are prominent, and margined with very strong crenulations. Two distinct spines at the anterior superior angle of the eye. Opercular spine of moderate size, not elevated at its base above the opercular plate. Preopercular spine large, naked at its posterior extremity, raised and crenulated along its whole outer edge. Length of the head equal to $\frac{1}{4}$ of the length of the body. Length of the pectoral fins equal to nearly $\frac{1}{3}$ the length of the head. The caudal fin is quite deeply emarginated, the outer rays projecting.

D. 10, 13 ; P. 13 ; V. 6 ; A. 12 ; C. $12\frac{1}{2}$. Length $12\frac{1}{2}$ inches. Massachusetts Bay.

This species differs from the other species of this genus, in the following particulars, viz. :

From the *P. lineatus*, in the greater prominence of the sides of the snout, and in the larger size of their crenulations ; in the striations of the head being more delicate ; in having two well

marked spines at the anterior superior angle of the eye ; in the preopercular spine being larger ; and in the absence of the second lateral line.

From the *P. Carolinus*, in having the striæ about the head more rough, and in not having the extremities of the free rays of the pectoral fins palmated.

From the *P. punctatus*, in the absence of the smoothness of the striæ over the head generally, and of the two small spines on the side of the mouth, the one back of the lateral lobes of the snout, and the other just above the angle of the jaws ; and of the denticulations at the sides of the spines situated at the anterior superior angle of the eyes ; by the less length of the pectorals and by the emargination of the caudal fin.

From the *P. tribulus*, in the absence of the spine upon the sub-orbital bones ; in having the spines generally upon the head less prominent and sharper, and in having the pectorals shorter in proportion to the length of the body.

A description of a new species of *Argyreiosus*, by Mr. J. M. Batchelder, of Saco, Maine, communicated through Dr. Storer, was read.

ARGYREIOSUS UNIMACULATUS. Body nearly circular, much compressed. Breadth $1\frac{1}{10}$ inches. Profile nearly vertical. Lower jaw the longer and hooked. Eyes $\frac{1}{10}$ of an inch in diameter. A filament, $\frac{1}{2}$ of an inch in length, arises on the back in a vertical plane with the origin of the pectoral fin : $\frac{3}{10}$ of an inch back of this, are three very minute spines. Several finlets upon the back and abdomen. Pectoral fins $\frac{3}{10}$ of an inch long. Caudal fin deeply forked.

Color, in parts above the lateral line, dark ; below it, silvery : upon the lateral line, which passes in nearly a right line from the superior angle of the gill covers to the base of the caudal rays, is a nearly circular black spot, the anterior edge of which is just touched by the pectoral fin when depressed.

D. ? P. ? V. ? A. ? C. 14 rays. Length $1\frac{3}{10}$ inches to the base of the caudal fin.

The specimen above described, was taken, with six others, in shallow water, on the beach at Saco, Maine. After having been

preserved a year in spirits, it was sent to Mr. Batchelder, who prepared from it the above description.

Prof. H. D. Rogers submitted to the Society some verbal remarks upon the bones of the *Zeuglodon*, recently exhibited in Boston, under the name of *Hydrarchos*, by their proprietor, Dr. Koch.

Prof. R. mentioned, that, among the loose bones not arranged with the skeleton, he discovered two specimens of the Cochlea of the ear, and he described them as approximating very closely, in form and structure, to the similar bone in the organ of hearing of the whales. They are about the size of a small lemon, and display that variety of the whorled or convoluted form of the cochlea peculiar to the cetacea. This analogy, and their wide deviation from the type of the organ as found in reptiles, he regarded as an interesting confirmation of the decision of Prof. Owen, of London, that this animal, the *Basilosaurus* of Harlan, is no *saurian*, but a true *cetacean*. It was furthermore stated that the two cochleæ were of different dimensions, and therefore, since no animal has ears of unequal dimensions, this fact is an evidence of their having belonged to two distinct individuals.

A paper from Professors Henry D. and William B. Rogers, on two remarkable Boulder Trains, in Berkshire Co., Mass., was then read by the first named gentleman.

After referring to the importance of the phenomena in connection with the interesting question of the origin of the drift, and mentioning the descriptions already given by Dr. Reid and Dr. Hitchcock, the authors proceed to detail their observations made in August last, and to present their own explanation.

These Boulder Trains they describe as starting from the summit of a high ridge in Canaan, New York, each from a particular depression; ranging in a direction about S. 35° E., across other even higher ridges and their intervening valleys; the longer train a distance of twenty miles, and the shorter ten miles, about half a mile asunder, and neither of them more than 300 or 400 feet in breadth. The blocks are of great size, from 5 to 20 feet in diameter, are angular and free from diluvial scratches, and, unlike the rounded boulders, are confined to the surface. They all con-

sist of a single kind of rock, identical with that in the crest of the ridge whence they originate.

After exhibiting the inadequacy of either the iceberg or glacier hypothesis to account for their production, the authors proceed to show how all the phenomena may be explained by the theory they have elsewhere advocated, of a sudden discharge of a portion of the Arctic Ocean southward across the land. They discuss the important functions of the wave of translation, show its surpassing velocity and great propulsive power, and trace the influence of vehement earthquakes near the Pole, in dislodging the northern waters and ice, and maintaining in the rushing flood, these vast and potent waves. They then suggest that, at a certain stage of the inundation, the ice, previously floating free, would impinge with irresistible violence against the tops of the submerged hills, and that the Canaan mountain stood precisely in the position to take the brunt of a part of the ice-driving flood, as it swept down the long high slope of the distant Adirondack, and across the low, broad valley of the Hudson.

They next proceed to show that, at the instant when some enormous ice-island struck the crest of the mountain, and scooped the trench which we there behold, a great vortex was produced by the obstruction, thus suddenly thrown in the path of the current, which, endowed with an excessive gyratory or spiral velocity, was capable of sustaining and carrying forward the greater part of the fragments. As in the instance of the waterspout and whirlwind, the functions of whose motion they discuss, the whirlpool would gather into the rotating column the projected blocks, and strew them in a narrow path, in the line along which its pendant apex would drag the ground.

The paper terminated with an application of this idea in detail, to the explanation of each important feature of these Trains: to their deflections from a straight line, the intermission in the boulders at certain places in the Train, and to the fact that some of the blocks have been violently broken at the moment previous to their final rest.

The paper was referred to the Publishing Committee.

Mr. Bouvé exhibited, and remarked upon, a beautiful collection of tertiary fossils, recently presented by M. Tuomey,

Esq., of Petersburg, Va. The following is a list of the species :

CRETACEOUS.

Anomia argentarica, Morton.
Exogyra costata, Say.

Belemnites americanus.

Eocene.

Cardita planicosta, Lam.
Turritella Mortoni, Conrad.
Ostrea compressirostra, Say.
" *selleformis*, Conrad.

Cucullæa gigantea.
Scutella Lyelli, Conrad.
" *macrophora*, Ravenel.

MIOCENE.

Anomia ephippium, Lin.
" *Ruffini*, Conrad.
Astarte concentrica, Conrad.
" *undulata*, Say.
Cardita granulata, Say.
" *tridentata*, Say.
Cardium sublineatum, Conrad.
Carditamera arata, Conrad.
Chama corticosa, Conrad.
" *congregata*, Conrad.
" *arcinella*, Lam.
Crepidula fornicata, Say.
" *costata*, Morton.
" *spinosa*, Conrad.
Crassatella undulata, Say.
Cytherea reposta, Conrad.
" *Sayana*, Conrad.
Fissurella redimicula, Say.
Cyrena densata, Conrad.
Dispotæa ramosa, Conrad.
Artemis acetabulum, Conrad.
Arca lienosa, Say.
" *limula*, Conrad.
" *incilis*, Say.
Pectunculus subovatus, Lam.
" *lentiformis*, Conrad.
" *aratus*, Conrad.
" *tricenarius*, Conrad.
" *parilis*, Conrad.
" *tumulus*, Conrad.
Venus tridacnoides, Lam.
" *Mortoni*, Conrad.
" *Rileyi*, Conrad.

Venus capax, Conrad.
" *mercenaria*, Conrad.
" *cribraria*, Conrad.
" *alveata*, Conrad.
Fulgur contrarius.
Natica heros, Say.
" *duplicata*, Say.
Oliva litterata, Lam.
" *canaliculata*, Lea.
Dentalium dentale, Lin.
Solarium.
Mactra congesta, Conrad.
" *lateralis*, Say.
Ostrea disparilis, Conrad.
" *sculpturata*, Conrad.
" *subfalcata*, Conrad.
Ostrea ———.
Panopea reflexa, Say.
Perna maxillata, Lam.
Plicatula marginata, Say.
Pecten Mortoni, Rav.
" *eboreus*, Conrad.
" *Jeffersonius*, Say.
Teredo fistula, H. C. Lea.
Petalocochus sculpturata, Lea.
Conus adversarius, Conrad.
" *diluvianus*.
Cypræa caroliniana, Conrad.
Fasciolaria mutabilis, Conrad.
" *rhomboidea*, Rogers.
Fusus quadricostatus, Say.
Buccinum Tuomeyi, Lea.
Turritella alticostata.

Dr. Gould stated that he had received, for the Society, from Thomas A. Green, Esq., of New Bedford, three living specimens of *Pholas costata*, and three of *Pholas truncata*, Say.

They were taken by the mud machine, at the end of the Long Wharf, in New Bedford. Mr. G. thinks they were at a depth of perhaps two feet in the mud, and, from the number obtained in half an hour's search, he believes them to be abundant.

Dr. Gould regarded this as a very interesting discovery. He was not aware that *P. costata* had been heretofore found alive this side of the Gulf of Mexico, though a bed of dead shells was discovered by Prof. C. B. Adams in the vicinity of New Bedford six or eight years ago, which at the time excited surprise, these vestiges of an animal, supposed to belong to a warm climate, not then known to live within more than a thousand miles, showing that the animal must have flourished there at no very distant period.

The animal is of a caucasian hue, and its siphonal tubes, which are united, are capable of great extension, certainly to four times the length of the shell, maintaining its full size, and of being moulded to every possible shape. In one animal the siphon was beautifully stippled near its tip with mahogany brown. The foot is about an inch long, its adhering surface not unlike the sole of a sharp-pointed shoe in shape. The accessory portions of the hinge are not calcareous, but pergamineous, consisting of two triangular pieces united base to base, one nearly an inch long, spear-pointed, filling the anterior fissure, and another small, nearly equilateral, shutting down posteriorly.

P. truncata is described by Say as $1\frac{3}{4}$ inches in length; whereas the New Bedford specimens are $2\frac{1}{2}$ inches in length, and of proportional width. He gives South Carolina as its habitat, and Dr. G. was not aware that it had been before found to the northward of that locality.

The animal is of a dark, smoky, almost inky color. The *siphon* less extensive than that of *P. costata*, and whether more or less extended, always maintains a tapering form, and is everywhere circularly and coarsely corrugated. The respiratory orifice is seen to be striped alternately black and white, the latter stripes marking the presence of fourteen tentacular organs. The *foot* is oval, one third longer than broad. The *supplementary valve* is single, calcareous, halberd-shaped, pointed anteriorly, rounded posteriorly and contracted at the sides; marked with lines of growth, parallel to its margin, and channelled on the median line.

John Curtis, M. D. of Lowell, was elected a member.

John L. Le Conte, of New York, was elected a corresponding member.

DONATIONS TO THE MUSEUM.

Specimens of *Pholas costata* and *Pholas truncata*. From New Bedford harbor. By T. A. Greene, Esq.

ADDITIONS TO THE LIBRARY.

American Journal of Agriculture and Science. Conducted by E. Emmons, M. D. and A. J. Prince, M. D. Vol. ii. No. 2. For Oct., Nov., and Dec., 1845. 8vo. Albany. From the *Editors*.

Annals and Magazine of Natural History. For Nov. 1845. 8vo. London. *Curtis Fund*.

Audubon, J. J., and Bachman, J. North American Quadrupeds. Plates 65 to 69. folio. From *Subscribers*.

Brown, B. B. Meteorological Observations for the years 1841 to 1844, inclusive. 8vo. pamph. St. Louis, 1845. From the *Author*.

Gray, G. R. Genera of Birds. Part 19. November. Folio. London, 1845. *Audubon Fund*.

Magallotti. Lettere Scientifiche ed Erudite del Conte Lorenzo Magallotti, Gentiluomo Trattenuto. 4to. Venezia, 1740. From *A. Binney*.

Versoris, Johannes. Physica, sive circa Libros Aristotelis Philosoph. Questiones, &c. Black-letter 4to. 1489. From the *same*.

December 17, 1845.

The President in the Chair.

Dr. A. A. Gould made some verbal remarks on certain characters in the shell distinctive of *Lottia* and *Patella*.

In the genus *Lottia* of Gray, (*Patelloidea*, Quoy,) we have a remarkable instance, where animals, differing widely in the arrangement of their respiratory organs, have, so far as hitherto observed, an entire similarity of shells. So much so, that M. Quoy, who described the animal, says that it is absolutely impossible to distinguish the shell from that of *Patella*; and also, that here is a marked exception to the general rule, that an animal having the respiratory apparatus non-symmetrical will have a non-symmetrical shell.

By a careful examination of several well established species, and numerous individuals, of this genus, Dr. G. thinks he has detected a character which will nullify both the above remarks, and enable us, by the shell alone, to distinguish the two genera in the majority of cases.

If we examine the anterior portion of the shell, corresponding to the left side of the animal, we shall find a faint groove or undulation passing, in direct continuation of the lateral margin of the cervical portion of the muscular impression, to the margin of the shell, thus taking nearly the diagonal line of the shell from its apex. This is quite decided in *L. gigantea*, Gray, *L. testudinaria*, L., and in our own *L. testudinialis*, Mull. But in other species it is detected with difficulty, sometimes merely by the play of light as the shell is turned horizontally around. Nothing of the kind, whether distinct or faint, will ever be found corresponding to it on the opposite side; nor is it found in any species of true *Patella* that Dr. G. has yet examined. In some specimens, and probably in some species, this groove may not be visible; but wherever it is discovered, the shell may safely be referred to the genus *Lottia*.

To constitute this a perfectly satisfactory diagnostic mark, we ought to be able to refer to some organ of the body as its cause, as we can for the groove in *Siphonaria*. But the branchial plume is here on the opposite side; and there is no organ, so far as Dr. G. has learnt, which corresponds to this mark; and while we cannot yet account for it on anatomical grounds, yet its presence is too constant to be regarded as merely accidental.

Mr. J. E. Teschemacher exhibited three specimens of ferns, from the Sandwich Islands, of the genus *Depairia* of Hooker, and made the following observations.

This very curious and elegant genus of ferns, bearing its delicate pateriform sori on the margin of the leaf, was first separated as a genus by Hooker, in Hooker & Greville, Icon. Filicum, where in tab. 154, *D. Macrei* is beautifully figured. Kaulfuss, in his Enum. Filicum, p. 225, had previously arranged a proliferous *Depairia* with *Dicksonia*, as *Dicksonia prolifera*, but the fructification differs too essentially from *Dicksonia* to permit this arrangement. From *Cibotium* also, with which Presl has joined it, the habit and fructification differ. *Depairia* of Hooker will therefore probably remain a good genus. In the Species Filicum of Hooker now in course of publication, he transfers the specific name *prolifera* to his *D. Macrei*, which he calls a synonym, and states that "Kaulfuss, who first described this handsome plant, observes that its rachis 'is proliferous, which is not apparent in my specimens.'" He also describes a new species, *D. Mathewsii*.

It is evident, however, from the specimens now exhibited, that *D. Macrei* and *D. prolifera* are by no means synonyms. This genus would then consist of 1, *D. Macrei*, as described by Hooker; 2, *D. prolifera* [*Dicksonia prolifera* of Kaulfuss] which may be described, Frond bi?-pinnate, rachis proliferous, not glabrous, pinnae opposite, elongate, acuminate, deeply pinnatifid, quite approximate, segments lanceolate acuminate, veins both simple and forked, those at the base of the frond nearly all forked, sori at the termination of the forked veins, usually on the uppermost, but rarely on both veins. The whole outline and appearance quite distinct from either of the other species. It seems probable that a microscopic examination of living specimens would exhibit other striking distinctions between these three species, the evidence of which, in dried specimens, is not sufficiently marked to direct a mature judgment. Thus the sori appear more sessile in *D. prolifera* than in *D. Macrei*. The rachis also of *D. prolifera* is now partially covered with sporules, so as to give it a rufous appearance; they could not, however, attach themselves thus, if the rachis was like that of *D. Macrei*, glabrous.

3. *D. Mathewsii* as described by Hooker. Mr. T.'s specimen of this species is from the mountain Punkohala Waioli.

Dr. Cabot, in behalf of Dr. Storer, exhibited a drawing of *Trichiurus lepturus*, taken from a specimen 40 inches

in length ; the only perfect specimen which Dr. S. has seen from the waters of Massachusetts Bay.

ADDITIONS TO THE LIBRARY.

Frémont, J. C. Capt. U. S. Army. Report of the Exploring Expedition to the Rocky Mountains in the year 1842 ; and to Oregon and North California in 1843 and 1844. 8vo. Washington, 1845. From the Hon. R. C. Winthrop.

Johnson, Walter R. Report on the Coals of the United States. Duplicate. 8vo. Washington, 1845. From Hon. R. Choate.

Valenciennes, M. A. Observation d'une espèce de ver de la cavité abdominale d'un lézard vert-piqueté, le *Dithyridium la-certa*. Comptes Rendus. Sept. 1844. Pamphlet, 8vo. From J. E. De Kay, M. D., of New York.

Valenciennes, M. A. Nouvelles Observations sur l'organe électrique du *Silure électrique*, (*Malopterus electricus*, Lacepède.) Comptes Rendus, Août, 1844. From same.

Valenciennes, M. A. Description de quelques dents fossiles de Poissons. 4to. pamph. 1844. From same.

Valenciennes, M. A. Nouvelles Recherches anatomiques sur *Le Nautilé* (*Nautilus pompilius*) Comptes Rendus. Jan. 1841. 4to. pamph. From same.

Valenciennes, M. A. Recherches sur la Structure et la Nature du Tissu Élémentaire des Cartilages. 4to pamph. Nov. 1844. From same.

Valenciennes, M. A. Observations sur les machoires Fossiles des Couches oolithiques de Stonesfield, nommées *Didelphis Prevostii* et *Didelphis Bucklandi*. Pamph. 4to. Comptes Rendus. Sept. 1838. From same.

Valenciennes, M. A. Memoire sur le genre "*Ictides*," etc. etc. An. des. Sc. Nat. 1825. 8vo. pamph. From same.

Microscopical Journal and Structural Record, for 1841 and 1842. Edited by Daniel Cooper, M. D., &c. 2 vols. 8vo. London. *Courtis Fund*.

Proceedings of the Academy of Natural Sciences of Philadelphia, from May to October, 1845. 8vo.

Proceedings of the American Philosophical Society, from May to August, 1845. 8vo.

DONATIONS TO THE CABINET.

Ammonite from the lias of England, fine specimen. From *Nathaniel Brewer, Esq.*

January 7, 1846.

Dr. A. A. Gould in the Chair.

Mr. Francis Alger exhibited certain minerals, and read a paper concerning them, which was referred to the Publishing Committee. The following is an abstract of it.

Mr. Alger announced that he had discovered *Phacolite* among specimens of minerals from New York Island. The crystals are beautifully perfect, double six-sided pyramids, implanted on carbonate of lime. They are of a wax-yellow color, have also a waxy lustre, and are translucent. This mineral, he observed, had been regarded by some as a species distinct from Chabasite, but it is now, principally on the authority of Tamnau, of Berlin, admitted to be only a variety of that mineral, derived from the same primary rhombohedron. Mr. A. remarked that the New York crystals were very interesting, from the fact that they showed the incipient modifications by which the ultimate double six-sided pyramids were produced from the rhombohedron, thereby clearly proving the Phacolite to be a secondary to the primary form of Chabasite. This he had not observed in any of the specimens from Bohemia or Ireland. It should nevertheless be remembered that the analyses of Phacolite, by Anderson and Rammelsberg, make it differ somewhat from common Chabasite, one being a bisilicate of alumina, + bisilicate of lime, potash and soda, + six atoms water; the other, a tersilicate of the first term, and a simple silicate of the second, along with three atoms water.

Ytiro-cerite. Mr. A. had found this very rare mineral in the limestone from Orange county, New York. It presents all the characters of the mineral from Finbo, in Sweden, and cannot be