

April 7th.

ISAAC LEA, LL.D., in the Chair.

Presented for publication: "Description of a new species of the United States." By Isaac Lea.

April 14th.

ISAAC LEA, LL.D., in the Chair.

Present.

April 21st.

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able specimen of the best kind that they contained only six pounds

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MINERAL in CRYOLITE.

THEO. D. RAND.

The name Ivigite, from its locality, was recently has been obtained in sufficient quan-

ty to be separated into seams through massive cryolite—some crystals of carbonate of iron and the cryolite is reddish. Color pale yellowish-green, somewhat.

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times yellow. Structure fine granular, approaching micaceous. Hardness 2-2.5 S. G. 2.05. B. B. alone blackens slightly and fuses rather easily to a white slag. With carb. soda fuses readily and with effervescence to a greenish bead. In borax dissolves readily iron reaction. In microcosmic salt dissolves readily, except silica skeleton, bead yellow while hot, bluish opalescent when cold. In closed tube yields acid water.

With considerable difficulty 0.679 gm. of the mineral, free from admixture, was obtained and submitted to analysis with the following percentage result:

Water.....	3.42
Fluorine.....	7.5
Silica.....	36.49
Sesquioxide of iron.....	7.54
Alumina.....	24.69
Soda.....	16.03
Loss.....	11.68

100.00

The very small quantity of the mineral which could be procured prevented a more satisfactory result, but from the foregoing characteristics I feel justified in pronouncing it a new species, and hope that a larger quantity may be procured and a correct analysis made.

Pachnolite, besides its usual occurrence in honey-combed cryolite, nearly or always in juxtaposition with the so-called Hagemannite, has been observed in crystals implanted on massive cryolite, and also coating crystals of the latter, mixed with microscopic crystals of cryolite. The crystals of pachnolite are always small, rarely exceeding the fiftieth of an inch in diameter, but those of cryolite have been found measuring over 3-10ths of an inch cube. The crystals of carbonate of iron, found in the cryolite, have probably never been exceeded for size and beauty. They are usually simple rhombohedrons, often of fine polish and measuring from half an inch to four inches across. A black blende, containing much iron, has been found in the massive cryolite, crystallized in perfect octahedra.

Philadelphia, March 23, 1868.

Description of Sixteen New Species of the Genus *UNIO* of the United States.

BY ISAAC LEA.

UNIO MURRAYENSIS.—Testa lævi, obliqua, tumida, solida, valde inæquilaterali, postice rotundata, antice truncata; valvulis crassis, antice crassioribus; natibus valde elevatis, tumidis; epidermide luteo-fuscata, concentricotubata, eradiata; dentibus cardinalibus crassis, subelevatis; lateralibus crassis, obliquis rectisque; margarita argentea et iridescente.

Hab.—Murray County, Georgia, Maj. T. C. Downie; Etowah River, Georgia, Bishop Elliott.

UNIO FASSINANS.—Testa lævi, elliptica, subcompressa, inæquilaterali, postice obtuse angulata, antice rotundata; valvulis crassiusculis, antice crassioribus; natibus subprominentibus; epidermide tenebroso-rufo-fusca, eradiata; dentibus cardinalibus crassiusculis, compressis, obliquis; lateralibus sublongis, crassis, obliquis corrugatisque; margarita salmonis colore tincta, splendida et iridescente.

Hab.—Headwaters of Holston River, Washington Co., Va., Prof. E. D. Cope.

UNIO SPARUS.—Testa lævi, lato-elliptica, subinflata, valde inæquilaterali, postice obtuse angulata, antice rotundata; valvulis subtenuibus, antice crassioribus; natibus prominulis, ad apices minute undulatis; epidermide subrocea, valde radiata; dentibus cardinalibus parvis, erectis, conicis; laterali-

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bus longis subcurvisque; margarita salmonis colore tincta et valde iridescente.

Hab.—Swamp Creek, North Georgia, Maj. T. C. Downie.

UNIO COPEI.—Testa lævi, elliptica, subcompressa, inaequilaterali, antice et postice rotundata; valvulis subcrassis antice crassioribus; natibus prominulis, ad apices undulatis; epidermide tenebroso-fuscata, ad marginem squamosa, eradiata; dentibus cardinalibus subcrassis, elevatis, compressis, corrugatis, in utroque valvulo dupplicibus; lateralibus longis, lamellatis, subcurvisque; margarita purpurea et valde iridescente.

Hab.—Headwaters of Holston River, Smith Co., Va., Prof. E. D. Cope.

UNIO CYLINDRILLUS.—Testa lævi, late elliptica, cylindræca, valde inaequilaterali, antice et postice rotundata; valvulis subcrassis, antice crassioribus; natibus prominulis; epidermide luteola, eradiata; dentibus cardinalibus parvis, subconicis corrugatisque; lateralibus longis subrectisque; margarita intus purpurea et valde iridescente.

Hab.—Duck Creek, Tenn.: Swamp Creek, Murray Co., Ga., Major Downie and North Alabama, Prof Tuomey.

UNIO BIFFICHLIS.—Testa lævi, elliptica, inflata, valde inaequilaterali, postice obtuse angulata, antice rotundata; valvulis tenuibus, antice crassioribus; natibus prominulis; epidermide luteola, valde radiata; dentibus cardinalibus parvisculis, conicis creculatisque; lateralibus sublongis rectisque; margarita alba et valde iridescente.

Hab.—Swamp Creek, Ga., Major Downie; Holston River, Washington Co., Prof. Cope.

UNIO TOPEKANENSIS.—Testa lævi, lata, subcompressa, valde inaequilaterali, postice obtuse angulata, antice rotundata; valvulis crassiusculis, antice crassioribus; natibus prominulis, ad apices undulatis; epidermide tenebroso-fusca, radiata; dentibus cardinalibus erectis, compressis creculatisque; lateralibus longis rectisque; margarita ceruleo-alba et valde iridescente.

Hab.—Topeka, Kansas, Prof. Daniels; Little Arkansas, Dr. Le Conte.

UNIO BRAZOSSENSIS.—Testa plicata, subrotunda, ventricosa, valde inaequilaterali, antice et postice rotundata; valvulis percrassis, antice crassioribus; natibus prominentibus, tumidis, incurvis, ad apices minute undulatis; epidermide tenebroso-rufa-fusca, eradiata; dentibus cardinalibus percrassis solidis, erectis corrugatisque; lateralibus longis, subcrassis et obliquis; margarita argentea et valde iridescente.

Hab.—Dallas Co., Texas, Prof. Forshey; Brazos River, Dr. Lincecum.

UNIO LINCECUMI.—Testa plicata, rotundata, subglobosa, valde inaequilaterali; valvulis percrassis, antice crassioribus; natibus prominentibus, tumidis, incurvis, ad apices minute undulatis; epidermide tenebroso-fusca, nigricante, eradiata; dentibus cardinalibus percrassis, solidis, erectis corrugatisque; lateralibus longis, subcrassis et obliquis; margarita argentea et valde iridescente.

Hab.—Dallas County, Texas, Prof. Forshey; Brazos River, Texas, Dr. G. Lincecum.

UNIO CORVICUS.—Testa lævi, elliptica, inflata, valde inaequilaterali; antice et postice rotundata; valvulis subcrassis, antice crassioribus; natibus rix prominentibus, epidermide nigra, subsquamea, eradiata; dentibus cardinalibus parvissimis decussatisque; lateralibus longis subrectisque; margarita alba et valde iridescente.

Hab.—Flint River, Geo., J. C. Plant and Dr. Neister; Neuse River, N. C. Prof. Emmons.

UNIO CORVINCULUS.—Testa lævi, elliptica, subinflata, valde inaequilaterali; antice et postice rotundata; valvulis crassiusculis, antice crassioribus; natibus

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bus prominulis, ad apices subconcentrico-undulatis; epidermide tenebroso-fusca, eradiata; dentibus cardinalibus parvis, erectis, subconcentrico-undulatis; margarita purpurea et iridescente.

Hab.—Flint River, Ga., J. C. Plant and Dr. Neister. I

UNIO PLASIOR.—Testa subsulcata, subtriangulari, ad hunc lateralem; valvulis crassiusculis, antice crassioribus; natibus: epidermide vel lutea vel ochracea, radiata; dentibus parvis, compressis striatisque; lateralibus longis, crassis, corrugatisque; margarita alba et iridescente.

Hab.—Tennessee, Mr. H. Moore; Headwaters Holston Co., Virginia, Prof. Cope.

UNIO VALLATUS.—Testa nodulosa, rotundata, lenticulari laterali; valvulis, crassis, antice crassioribus; natibus epidermide luteo-fusca, eradiata; dentibus cardinalibus granularis; lateralibus crassis, cartis obliqua et iridescente.

Hab.—Alabama River, Dr. Showalter.

UNIO REUGENSIS.—Testa nodulosa, rotundata, lenticulari laterali; valvulis, crassis, antice crassioribus; natibus rufa-castanea, aliquanto polita; dentibus cardinalibus genter corrugatis creculatisque; lateralibus longiusculis, corrugatis; margarita albida, ad marginem purpureo iridescente.

Hab.—Oktibbeha River, Landerdale Co., Miss., W. Sp

UNIO HARENSIS.—Testa lævi, oblonga, ad latere plani postice triangulata, antice rotundata; valvulis crassiusculis; natibus prominulis; epidermide rufa-fusca, subconcentrico-undulatis; dentibus cardinalibus parvis, ad apices, in utroque valvulo longis, lamellatis subcurvisque; margarita alba et tincta.

Hab.—Charee River, Montgomery Co., N. C., P. A. G.

UNIO SENRIENSIS.—Testa nodulosa, valde inflata, subtriangulari; valvulis crassis, antice crassioribus; natibus rufa-castanea, eradiata; dentibus cardinalibus percreculatisque; lateralibus cartis, crassis, corrugatis, margarita argentea et valde iridescente.

Hab.—Pearl River, at Jackson, Miss., C. M. Wheatley

Notes on some singular forms of Chinese shells

BY ISAAC LEA.

In a paper on "Chinese Shells," by Dr. Baird and Mr. Mearns in the Proceedings of the Zoological Society of London, are some remarks and claims which call upon me for a notice of "Unio Douglasii." It is stated that "in 1833 was described and accurately figured in the 12th volume of *Cuvier's Species of Unio* which he called *U. Douglasii*," & a few years afterwards, from not knowing the shell described and figured a species from China, which he called *U. Douglasii*, but which there is no doubt is the same as *U. Douglasii* of the above statements, there are several to which I beg suggested by these gentlemen that "perhaps from *U. Douglasii* as figured in Griffith," I had "described a species, which there is no doubt is the *Douglasii* of Gray." [April, 1868.]

; margarita salmonis colore tincta et valde irides-

North Georgia, Maj. T. C. Downie.

vi, elliptica, subcompressa, inaequilaterali, antice et
 subcrassis antice crassioribus; natibus prominu-
 liseride tenebroso-fusca, ad marginem squamo-
 sissimis subcrassis, elevatis, compressis, corrugatis,
 ibus; lateralibus longis, lamellatis, subcurvatisque;
 lde iridescente.

Holston River, Smith Co., Va., Prof. E. D. Cope.

esta levi, late elliptica, cylindracea, valde inaequi-
 rotundata; valvulis subcrassis, antice crassioribus;
 ermide luteola, eradiata; dentibus cardinalibus
 stisque; lateralibus longis subrectisque; margarita
 idescente.

n.: Swamp Creek, Murray Co., Ga., Major Downie;
 Tuomey.

levi, elliptica, inflata, valde inaequilaterali, postice
 rotundata; valvulis tenuibus, antice crassioribus;
 ermide luteola, valde radiata; dentibus cardinali-
 bus; crenulatisque; lateralibus sublongis rectisque;
 idescente.

a., Major Downie; Holston River, Washington Co.

ta levi, lata, subcompressa, valde inaequilaterali,
 antice rotundata; valvulis crassiusculis, antice cras-
 sulis, ad apices undulatis; epidermide tenebroso-
 cardinalibus erectis, compressis crenulatisque;
 e; margarita caeruleo-alba et valde iridescente.

Prof. Daniels; Little Arkansas, Dr. Le Conte, &c.

ta plicata, subrotunda, ventricosa, valde inaequila-
 rotundata; valvulis percrassis, antice crassioribus;
 midis, incurvis, ad apices minute undulatis; epi-
 sca, eradiata; dentibus cardinalibus percrassis,
 re; lateralibus longis, subcrassis et obliquis; mar-
 descente.

Prof. Forshey; Brazos River, Dr. Lincecum.

plicata, rotundata, subglobosa, valde inaequilater-
 antice crassioribus; natibus prominentibus, tumidis,
 undulatis; epidermide tenebroso-fusca, nigricante.
 alibus percrassis, solidis, erectis corrugatisque;
 is et obliquis; margarita argentea et valde irides-

exas. Prof. Forshey; Brazos River, Texas, Dr. G.

vi, elliptica, inflata, valde inaequilaterali; antice et
 subcrassis, antice crassioribus; natibus vix pro-
 ra, subsquamea, eradiata; dentibus cardinalibus
 lateralibus longis subrectisque; margarita alba

J. C. Plant and Dr. Neisler; Neuse River, N. C.

a levi, elliptica, subinflata, valde inaequilaterali;
 valvulis crassiusculis, antice crassioribus; nati-

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bus prominulis, ad apices subconcentrico-undulatis; epidermide nigricante,
 eradiata; dentibus cardinalibus parvis, erectis, subcompressis crenulatisque;
 margarita purpurea et iridescente.

Hab.—Flint River, Ga., J. C. Plant and Dr. Neisler; Darien, J. H. Couper.

UNIO PLANIOR.—Testa subsulcata, subtriangulari, ad latere planulata, inaequi-
 laterali; valvulis crassiusculis, antice crassioribus; natibus subpromi-
 nentibus; epidermide vel lutea vel ochracea, radiata; dentibus cardinalibus
 parvis, compressis striatisque; lateralibus longis, crassiusculis et obliquis;
 margarita alba et iridescente.

Hab.—Tennessee, Mr. H. Moores; Headwaters Holston River, Washington
 Co., Virginia, Prof. Cope.

UNIO VALLATUS.—Testa nodulosa, rotundata, lenticulari, subinflata, inaequi-
 laterali; valvulis, crassis, antice crassioribus; natibus subprominentibus;
 epidermide luteo-fusca, eradiata; dentibus cardinalibus pergrandibus, ele-
 vatis granulatisque; lateralibus crassis, curtis obliquisque; margarita ar-
 gentea et iridescente.

Hab.—Alabama River, Dr. Showalter.

UNIO REFULGENS.—Testa nodulosa, rotundata, lenticulari, inaequilaterali;
 valvulis subcrassis, antice crassioribus; natibus prominulis; epidermide
 rufo-castanea, aliquanto polita; dentibus cardinalibus subgrandibus, ele-
 ganter corrugatis crenulatisque; lateralibus longiusculis, obliquis, minute
 corrugatis; margarita albida, ad marginem purpurecente et elegantissime
 iridescente.

Hab.—Oktibbeha River, Lauderdale Co., Miss., W. Spillman, M. D.

UNIO UHARENSIS.—Testa levi, oblonga, ad latere planulata, inaequilaterali,
 postice biangulata, antice rotundata; valvulis crassiusculis, antice crassiori-
 bus; natibus prominulis; epidermide rufo-fusca, subsquamea, eradiata;
 dentibus cardinalibus parvis, striatis, in utroque valvulo duplicibus; laterali-
 bus longis, lamellatis subcurvisque; margarita vel alba vel salmonis colore
 tincta.

Hab.—Uharee River, Montgomery Co., N. C., F. A. Genth, M. D.

UNIO SPHERICUS.—Testa nodulosa, valde inflata, subglobosa, fere equila-
 laterali; valvulis crassis, antice crassioribus; natibus elevatis; epidermide
 rufo-castanea, eradiata; dentibus cardinalibus pergrandibus, corrugatis
 crenulatisque; lateralibus curtis, crassis, corrugatis, obliquis subcurvisque;
 margarita argentea et valde iridescente.

Hab.—Pearl River, at Jackson, Miss., C. M. Wheatley.

Notes on some singular forms of Chinese species of UNIO.

BY ISAAC LEA.

In a paper on "Chinese Shells," by Dr. Baird and Mr. H. Adams, published
 in the Proceedings of the Zoological Society of London, May 9, 1867, there
 are some remarks and claims which call upon me for correction.

1st, "*Unio Douglasæ*." It is stated that "in 1833 Dr. Gray shortly de-
 scribed and accurately figured in the 12th volume of Griffith's edition of Cu-
 vier a species of *Unio*, which he called *U. Douglasæ*," &c. Further, that "Mr.
 Lea, some years afterwards, from not knowing the shell as figured in Griffith,
 described and figured a species from China, which he named *U. Murchisonia-
 nus*, but which there is no doubt is the same as *U. Douglasæ* of Gray." In
 the above statements there are several to which I beg leave to demur. It is
 suggested by these gentlemen that "perhaps from not knowing the shell
 (*Douglasæ*) as figured in Griffith," I had "described and figured *Murchisonia-
 nus*, which there is no doubt is the *Douglasæ* of Gray." In answer to this I
 1868.]