A Synopsis of the Family of Naiades of North America, with Notes, and a Table of some of the genera and sub-genera of the Family, according to their geographical distribution, and descriptions of genera and sub-genera.

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The present attempt to give a synonymy of the North American Naiades, has originated from the absence of dates and references in Mr. Lea's memoirs. To render strict justice to every authoraccording to date of publication, is not only the duty of the naturalist, but a necessity of science. The difficulty in the attempt is to ascertain with precision the date of publication of each species, and when this cannot otherwise be obtained, perhaps it would be right to refer to the date on the title-page of the volume wherein the species may be described. Mr. Lea never refers to the date of publication, but says, "my memoir bears date," &c., which means, the day it was read before a meeting of a Society, though not published in some instances until two years afterwards. In adopting the names given by Rafinesque, the rule will be observed to quote no species without a mark of doubt, which is not clearly borne out by the description, assisted by reference to Rafinesque's shells marked by his own hand, and now placed in the noble collection of Charles A. Poulson, Esq.

It is true Rafinesque's descriptions are brief and many of them obscure, and his figures rude. Others again are better characterized than some of Lamarck's. Mr. Lea complains that Say has not left him one species in his very short and incomplete "Synonymy of Western Unios;" but on the other hand, Mr. Lea credits Rafinesque with only two species of the sixty or seventy he has named and described.

Every man must work according to his means and his abilities. Rafinesque, in his day, was destitute of the advantages many naturalists now enjoy, and could not publish expensive plates; and, unfortunately, he had the examples of Linné and Lamarck for short and indefinite descriptions. If Rafinesque's names should be rejected, there seems no reason why Lamarck's should not share the same fate.

Of late years, Comparative Anatomy has shown that genera can readily be founded on differences in organisation of the animal inhabitants of shells varying little in external character, whilst among the Naiades there are divisions so well marked by the external character as well as the hinge, that generic differences can be safely predicted to exist among the animals which inhabit them. These various genera are moreover not indiscriminately placed in every quarter of the globe, but some are peculiar to one country and some to another, as Paxyodon and Prisodon to tropical South America; Pleiodon to tropical Africa, &c., and yet an author, even in the present day, is content to arrange the Naiades in a singularly artificial system, embracing one genus and seven subgenera. Mr. Gray's arrangement is far more natural and useful, but he does not subdivide to the extent that Mr. Swainson did, who was the first to give a philosophical view of the subject, and to have an idea of geographical distribution of genera. Mr. Swainson, speaking of the tuberculated Unios of North America, observes, "Where we find a character, however trivial it may appear, pervading a whole group, we may be perfectly assured that it is a natural character, although it may not be the only one." And if this is true of the exterior, a similar uniformity of character in the hinge is still more important; and how strongly marked it is in Paxyodon, Pleiodon and others!

It is supposed that this family existed at as early a period as the Carboniferous, but it is doubtful if the shells usually referred to Unio were members of this group. Certainly none of the existing genera are represented in the bivalves of that era, nor is there any even in the Lower Tertiary; but in the Crag or Middle Tertiary, the two genera, Unio and Anodonta make their first appearance.

It is worthy of remark that a genus so nearly related to Unio as Trigonia, abounded in numerous species in the Oolitic and Cretaceous eras, and then ceasing to exist during the long Tertiary periods, reappeared in a solitary species of the present day. Is not this long interval between the fossil and recent

species, presumptive evidence that the animal of the living shell is generically different from that of the extinct species? The hinge of a bivalve shell will not always serve to determine a genus, else PLATYODON, would be a MYA, and MYCETOPUS an ANODONTA; but when a material difference exists in the hinge, some important variation may be expected to exist in the animal organization. By means of Comparative Anatomy, Agassiz has discovered differences in the animals of the North American UNIOS, which he considers sufficient to warrant the construction of several genera, and when these are fully determined and compared with those of Asia, Africa, &c., it will very likely be found that the various genera are restricted to narrower geographical limits than the mere external characters of the shells would lead us to suppose.

I have at present not ventured to do more than indicate *subgenera*, except among a few distinct groups. In COMPLANARIA, *Swains.*, the hinge is so peculiar and different from the other genera, that it is fully as well entitled to a generic distinction as ALASMODONTA or BARBALA. There is another small group which is somewhat isolated, the plicated shells, having bold and distinctive characters. This has been separated from UNIO under the name of PLECTOMERUS. The only aberrant form in the genus is *U. crassidens*, Lam., which, however, has no affinity with any other group. *U. infucatus*, though somewhat plicated, has a very different character, and belongs to a distinct group. The *U. rotundatus*, Lam., is an isolated shell, with the cardinal teeth more like those of NAIA, *Swainson*, an Asian subgenus, than the other North American UNIOS.

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CON.—Monography of the Family Unionidæ.
Proceedings and Journal of the Academy of Natural Sciences, Second Series.
New Fresh Water Shells, May, 1834.
CHENU.—Illustrations Conchologiques, &c.
CHEMN.—Chemnitz (Martini) Neues Syst. Conchyl.
BARNES.—American Journal of Sciences and Arts, vol. vi. 18.
HILDRETH.—Ib. ib. ib. xiv. 18.
DESH.—Deshayes, New Ed. of Lamarck's Anim. sans Vertebres.
FERUSSAC, in Guerin's Mag. de Zoologie, 1835.
LAM.—Lamarck, Hist. Nat. des Animaux sans Vertebres.
RAF.—Rafinesque, Les Annales general des Sciences Physiques, 1820.
SAY.—Nicholson's Encyclopedia, American edition, article Conchology, vol. 4, 1819.
American Conchology, with a Synonymy of Western Unios.
Transylvania Journal of Medicine.
New Harmony Disseminator.
SWAINS.—Swainson, Exotic Conchology; Zoological Illustrations; Malacology.

NOTE. The Roman numerals refer to the volume, and the figures following indicate the page, plate and figure. An asterisk (*) indicates the doubtful species.

UNIO.

Unio abacus, *Hald.*, Journ. A. N. S. viii. 202.
Lea, Synopsis, 24.

Aberti, *Con.*, Proceed. A. N. S., March, 1850, v. 10.
U. Lamarckianus, *Lea*, 1852, x. 22, 17, 20.

acutissimus, *Lea*, Aug. 1834, iv. 89, 10, 18.
Con. Monog. 86, 47, 2.
Chenu, Conchyl. Unio, pl. 8, fig. 3.

affinis, *Lea*, 1852, x. 271, 19, 26, Synopsis 27.

amœnus, *Lea*, 1841, viii. 200, 10, 12, Synopsis 29.
Chenu, Conchyl. Unio, pl. 33, fig. 5.

amygdalum, *Lea*, 1846, ix. 275, 39, 1. Synopsis 39,

altilis, *Con.*, New F. W. Shells, 43, 2, 1.
Lea, Synopsis, 27.

Unio angustatus, *Lea*, 1832, v. 114, 17 , 43. Synopsis 23.
Con. Monog. 98, 54, 2.
Chenu, pl. 14, fig. 1.

apiculatus, *Say*, New Harm. Dissem., 1829, Amer. Conch. pl. 22.
Con. Monog. 78, 44, 1.
Lea, Synopsis, 22.
U. asper, *Jay*, not *Lea*, Jay's Catalogue, 55.

approximus, *Lea*, 1845, x. 74, 5, 13. Synopsis 28.

*arctior, *Lea*, 1838, vi. 10, 4, 10, Synopsis, 38.
Chenu, Conchyl. Unio, 21, 2.

arctatus, *Con.*, Sill. Jour., xxv. 340, 1, 9; New F. W. Shells, 36, 5, 4.
Lea, Synopsis, 38.

arcus, *Con.*, Sillim. Jour. 1834, xxv. 340 1, 8.
Lea, Synopsis, 38.

argenteus, *Lea*, 1841, viii. 242, 25, 57, Synopsis, 26.
Chenu, Conchyl. Unio, pl. 33, fig. 2.

asper, *Lea*, (*a*) 1832, iv. 85, 9, 15, Synopsis, 22.
Chenu, Conchyl. Unio, pl. 15, fig. 4.
U. apiculatus, var. *Jay*, Catalogue, No. 1496, 55.

Barrattii, *Lea*, 1852, x. 256, 13, Synopsis, 37.

Barnesianus, *Lea*, 1838, vi. 31, 10, 26, Synopsis, 24.
Chenu, Conchyl. Unio, pl. 19, fig. 2.

*biangulatus, *Lea*, 1841, viii. 197, 9, 8, Synopsis 38.
Chenu, Conchyl. Unio, pl. 30, fig. 7.

Bigbyensis, *Lea*, 1841, viii. 237, 22, 51, Synopsis 24.
Chenu, Conchyl. Unio, pl. 26, fig. 5.

Binneyi, *Lea*, 1845, x. 77, 6, 18, Synopsis 29.

Blandingianus, *Lea*, Aug. 1834, v. 101, 15, 44, Synopsis 33.
Con. Monog. 46, 23, 3.
Kust., Chemn. Unio, 36, 6, 2.

Bournianus, *Lea*, 1841, Synopsis 25, viii. 213, 15, 28.
Chenu, Conchyl. Unio, pl. 28, fig. 2.

Brumbyanus, *Lea*, 1841, viii. 245, 26, 62, Synopsis 31.

Boydianus, *Lea*, 1841, viii. 216, 16, 32, Synopsis 38.
Chenu, Conchyl. Unio, pl. 32, fig. 2.

Buckleyi, *Lea*, 1846, ix. 276, 39, 2, Synopsis 30.

Buddianus, *Lea*, 1846, ix. 277, 40, 4, Synopsis 32.

buxeus, *Lea*, 1852, x. 261, 15, 13, Synopsis 29.

bullatus,* *Raf.* Ann., Sept. 1820, v. 41. Poulson's Trans., 23.
Con., Monog. 82, 45, 2.
Ferussac, Guerin's Mag. 28.
U. verrucosus albus, Hildreth, Sillim. Journ. xiv. 289.
U. pustulosus, *Lea*, 1832, iv. 76, 7, 7. Synopsis, 22.
Chenu, Conchyl. Unio, pl. 18, fig. 2.

capax, *Green*, Cab. of Nat. Hist. 1832, ii. 290.
Con., Monog. 75, 42.
Ferussac, Guerin's Mag. 1835, 26.
Symphynota globosa, *Lea*, 1834, iv. 153, 4, 12.
U. capax, *Kust.* Chemn. Unio, 21, 15, 3.
Lea, Synopsis, 27.

cælatus, *Con.*, Sillim. Journ. 1834, xxv. 338, 1, 2.
Lea, Synopsis, 20.

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* Say makes this species the same as *Mya modulosa*, Wood, which is very different, and evidently not an American species.

Unio caliginosus, *Lea*, 1845, x. 79, 7, 21, Synopsis 29.
callosus, *Lea*, 1841, viii. 239, 23, 54, Synopsis 33.
camptodon, *Say*, Amer. Conch. pl. 42.
Ferussac, Guerin's Mag. 26.
U. Sayi, *Lea*, (not Tappan), Synopsis, 32.
capsæformis, *Lea*, 1834, iv. 143, 2, 4, Synopsis 33.
Con. Monog. 72, 40, 2, 3.
cardium, *Raf.* Ann. 1820, 32, Poulson's Trans. 27.
Say, Amer. Conch. 32, Synonym. of Unio, No. 11.
U. ventricosus, *Barnes*, Sillim. Journ. vi. 267, 13, 14.
U. occidens, *Lea*, 1832 (?) iii. 435, 10, 16.
Synopsis, 26.
Chenu, Conchyl. Unio, pl. 13, fig. 5.
U. subovatus, *Lea*, 1832, iv. 118, 18, 46.
Chenu, Conchyl. Unio, pl. 12, fig. 6.
U. ovata, var. *b*. ? Lam. An. vi. 75.
cariosus, *Say*, (*b*) Nicholson's Ency., article Conch., pl. 3, fig. 2.
Lam. Desh. An. sans Vert. vi. 545.
U. ovata, *Valen.*
U. cariosus, *Kust.*, Chem. Unio, 24, 1, 2, 3.
Barnes, Sillim. Journ. vi. 271.
Con., Monog., 40, 19.
Gould, Invertebrata of Mass., 107.
Dekay, Zool. of New York, 193.
Lea, Synopsis, 27.
Lampsilis cariosa, Agas. MSS. Stimpson's Shells of New Eng. 14.
Carolinanus, *Bosc. Fer.* Guerin's Mag. 26.
U. obesus, *Lea*, 1832, iv. 96, 13, 26, Synopsis, 32.
Chenu, Conchyl. Unio, pl. 18, fig. 4.
castaneus, *Lea*, 1832, iv. 91, 11, 21, Synopsis 26.
Ferussac, Guerin's Mag. 28.
Chenu, Conchyl. Unio, pl. 11, fig. 5.
catillus, *Con.*, Monog. 1836, 30, 13, 2.
Kust., Chemn. Unio, pl. 10, fig. 2.
cerinus, *Con.*, (*c*) Monog. 1838, 95, 52.
U. flavus, *Lea*, (not Raf.) Synopsis, 24.
cicatricosus, *Say*, Disseminator, 1829.
Con., Monog., 115, 64.
Ferr., Guerin's Mag., 28.
U. varicosus, *Lea*, 1832, iv. 100, 11, 20, Synopsis, 23.
Chenu, Conchyl. Unio, pl. 2, fig. 6.
Cincinnatiensis, *Lea*, 1841, viii. 194, 8, 4, Synopsis, 22.
Chenu, Conchyl. Unio, pl. 30, fig. 3.
Claibornensis, *Lea*, 1838, (young shell,) vi. 105, 24, 115, Synopsis, 28.
Chenu, Conchyl. Unio, pl. 23, fig. 3.
U. obtusus (?) *Lea*, viii. 201, 11, 13.
Clarkianus, *Lea*, 1852, x. 273, 21, 30, Synopsis, 28.
clava, *Lam.* An. sans Vert. vi.74. *Desh.* ed. of Lam. vi. 537.
Ferussac, Guerin's Mag. 28.
Con., Monog. 5, 3.
U. mytiloides, *Raf.* v. 47, Poulson's Trans., 47.
U. scalenia, *Raf.* Ann. v. 43, Poulson's Trans. 47.
U. cuneatus, *Raf.* Ann. v. 47, Poulson's Trans. 53.
Say, Amer. Conch. Syn. No. 35.
U. modioliformis, *Say*, (not Lea.)
U. clavus, *Lea*, Synopsis, 26.
Kust. Chemn. Unio, 39, 7, 2.

Unio coccineus, *Hildreth*, MSS.
Con., Monog., 1836, 29, 13, 1.
Lea, 1838, Synopsis, 35, vi. 12, 5, 12.

collinus, *Con.*, Monog., 65, 36, 2, and 159, 60, 3.
Lea, Synopsis, 23.

complanatus, *Soland. Lea*, (*e*)
Mya complanata, Soland. Portland Catalogue, 100.
Dillwyn, Catalogue, i. 51.
U. complanatus, *Lea*, Synopsis, 32.
violaceus, *Speng.*, Ferrus, Guerin's Mag. 26.
coarctata, *Lam.*, Anim. vi. 75.
Desh. ed. of Lam. vi. 535.
Enc. Method, ii. 581.
purpurascens, *Lam.*, Desh. ed. vi. 536.
rhombula, " var. b. " " "
carinifera, " " " "
Georgina, " " " "
sulcidens, " " " 540.
glabrata, " " " 537.
rarisulcata ? " " " 534.
aurata, *Raf.*, Ann. Poulson's trans. 27.
jejunus ? *Lea*, vi. 9, 4, 9.
Chenu, pl. 20, fig. 1.
Roanokensis ? *Lea*, vi. 27, 8, 21, Synopsis, 32.
Delassert, Recueil. de Conchyl. pl. 12, fig. 3.
Chenu, pl. 12, fig. 5.
complanatus, *Gould*, Invert. of Mass. 107, 68, 69, 70.
Dekay, Zool. of New York, 188, 22, 246.
Agas., Stimpson's Shells of N. Eng. 13.
purpureus, *Say*, Nicholson's Enc. fig. 3.
Barnes, Sillim. Journ. vi. 264.

concavus, *Lea*, 1852, x. 260, 15, 1,1, Synopsis 29.

Congaræus, *Lea*, 1832, iv. 62, 6, 4, Synopsis, 27.
Con., Monog., pl. 12, fig. 1.
Chenu, Conchyl. Unio, pl. 8, fig. 5.

compressissimus, *Lea*, 1845, x. 81, 8, 23. Synopsis, 24.

Conradicus, *Lea*, 1834, Synopsis, 21, v. 63, 9, 2.
Chenu, Conchyl. Unio, 87, 47, 3.

contrarius, *Con.*, Journ. Acad. Nat. Sc., i. 276, 37, 7.

constrictus, *Con.*, Monog., pl. 49, fig. 4.
Lea, Synopsis, 29.

Cooperianus, *Lea*, 1834, v. 61, 8, 21, Synopsis 22.

cor, *Con.*, New F. W. Shells, 28, 3, 3.
Lea, Synopsis, 26.

cordatus, *Raf.* (Obovaria,) Ann., v. 46, Poulson's trans. 52.
Con., Monog., 48, 25.
Kust., Chemn. Unio, pl. 13, fig. 1.

creperus, *Lea*, vi. 33, 10, 28, Synopsis, 31.
Chenu, Conchyl. Unio, pl. 23, fig. 5.

crocatus, *Lea*, 1841, Synopsis 27, viii. 238, 22, 52.
Chenu, Conchyl. Unio, pl. 33, fig. 1.

Cumberlandianus, *Lea*, 1838, vi. 25, 7, 19, Synopsis 30.
U. Cumberlandicus, Chenu, pl. 24, fig. 1.
U. glaber ? *Lea*.

cuneolus, *Lea*, 1842, viii. 193, 7, 3, Synopsis 24.
Chenu. Conchyl. Unio, pl. 30, fig. 2.

Unio Cuvierianus, *Lea*, 1852, x. 263, 16, 16, Synopsis 32.

cyphius, *Raf.*, Poulson's Trans. 39, v. 59.
Con. Monog. 113, 63.
U. Æsopus, *Green*, Contributions to Maclurian Lyceum, i. 46, 3.
Lea, Synopsis, 23.

Cylindricus, *Say*, Nicholson's Enc. pl. 4, fig. 3.
U. naviformis, *Lam.*, An. vi. 75, *Desh.* ed. 537.
Elliptio solenoides, *Raf.*, Ann. v. 32, Poulson's trans. 26.
Theliderma cylindrica, *Swains.*, Malac. pl. 271, fig. 54.
U. cylindricus, *Hildreth*, Silliman's Journ. xiv. 283, fig. 13.
Lea, Synopsis, 23.

Cyrenoides, *Phillipi*, Conchyl. 1848, 11, 5, 1.
Lea, Synopsis, 25.

dactylus, *Lea*, 1841, viii. 196, 7, 7, Synopsis 36.
Chenu, Conchyl. Unio, pl. 30, fig. 5.

Dariensis, *Lea*, 1841, viii. 246, 26, 61, Synopsis 33.
Chenu, Conchyl. Unio, pl. 33, fig. 6.

decisus, *Lea*, 1832, iv. 92, 12, 23, Synopsis 26.
Con. Monog. 3, 2, 6.
Kust. Chem. Unio pl. 7, fig. 3.
Chenu. Conch. Unio pl. 18, fig. 3.
Fer. Guerin's Mag. 28.

declivis, *Say.*, Transylvania Journ., Dec. 1831, iv. 527.
American Conch. pl. 35.
U. geometricus, *Lea*, 1834, v. 38, 4, 10, Synopsis 33.
Desh. Lam. An. sans Vert. vi. 556.

delumbis, *Con.*, New Fresh Water Shells, May, 1834, 35, 5, 3.
U. modioliformis, *Lea*, Aug. 1834, v. 97, 13, 40.

decoratus, *Lea*, 1852, x. 257, 13, 6, Synopsis 19.

dilatatus, *Raf.*, (Elliptio) Ann., v. 31, Poulson's Trans. 25.
Con. Monog. 42, 21.
U. cuprea, *Raf.*, (young) Ann. 38, 81, 8, 9.
U. atroviolacea, *Raf.*, (obliquaria) Ann. v. 55. Poulson's trans. 69.
U. nasutus, *Lam.* not *Say*, An. sans Vert. vi. 538.
Illustrated ed. Cuvier's Regne Animal. Moll. 92, 2.
U. gibbosus, *Barnes*, Sillim. Journ. 1823, vi. 262.
U. arctior ? *Lea*, (young) Synopsis, 38, vi. 10, 4, 10.
Chenu, Conchyl. Unio, 33, 2.

discus, *Lea*, 1838, vi. 74, 18, 57. Synopsis 31,
Chenu, Conchyl. Unio, pl. 19, fig. 6.

dolabræformis, *Lea*, 1838, vi. 103, 24, 113, Synopsis 27.
Chenu, Conchyl. Unio, pl. 23, fig. 6.

*dolabelloides, *Lea*, 1842, viii. 215, 15, 31, Synopsis 35.
Chenu, Conchyl. Unio, pl. 29, fig. 4.

Dorfeuillianus, *Lea*, 1838, vi. 73, 17, 54, Synopsis 22.
Chenu, Conchyl. Unio, pl. 25, fig. 5.

dromas, *Lea*, 1834, v. 70, 10, 29, Synopsis 23.
Con. Monog. 84, 46, 2.
U. caperatus, *Lea*, 1845, x. 75, 5, 14.

Duttonianus, *Lea*, 1841, viii. 236, 22, 50, Synopsis 35.
Chenu. Conchyl. Unio, pl. 32, fig. 4.

Edgarianus, *Lea*, 1841, viii. 214, 15, 30, Synopsis 25.
Chenu. Conchyl. Unio, pl. 29, fig. 5.

Eastbrookianus, *Lea*, 1845, x. 77, 6, 17. Synopsis 40.

exiguus, *Lea*, 1842, viii. 191, 7, 1, Synopsis 27.
Chenu. Conchyl. Unio, pl. 30, fig. 1.

Unio excultus, *Con.*, Monog. 99, 55, 1.
U. declivis, *Lea*, (not *Say*,) Synopsis 33.
famelicus, *Gould.*, Lea, Synopsis 31.
fasciolaris, *Raf.*, Ann. v. 37, Poulson's Trans. 36.
Fer. Guerin's Mag. 1835, 27.
Say. Amer. Conch. Syn. No. 20.
U. phaseolus, *Hildreth*, Sillim. Journ. xiv. 283.
Lea. Synopsis, 38.
U. sinuatus, *Raf.*, (very old) Ann. v. 55.
U. mucronatus, *Barnes*, Sillim. Journ. vi. 266, 13, 13.
U. planulatus, *Lea.* iii. 431, 9, 13.
Chenu. Conchyl. Unio, pl. 13, fig. 1.
U. cuneatus, *Barnes*, (white var.) Fresh Water Shells, Sillim. Journ. note to Hildreth, xiv. 283.
U. phaseolus, *Say.*, Amer. Conch. pl. 22.
U. planulata, *Desh.*, Lam. vi. 549.
U. camelus, *Lea*, (old) 1834, v. 102, 15, 45.
fasciatus, *Ann.*, Poulson's Trans 28.
Say. Amer. Conch. Syn. of Unio, No. 6.
Fer. Guerin's Mag. 1835, 27.
Con. Monog. 3, 1.
U. Crassus? *Say*, Nicholson's Encyc. pl. 1, fig. 3.
U. carinatus, *Barnes*, Silliman's Journ. vi. 126.
U. ellipticus, " " 259, 13, 19.
Hildreth, " xiv. 278.
fasciolus, *Raf.*, Ann. v. 33, Poulson's Trans. 28.
U. subangulatus, *Lea*, x. 209, 13, 23.
fatuus, *Lea*, viii. 201, 11, 14, Synopsis, 38.
Chenu. Conchyl. Unio, pl. 31, fig. 4.
Fisherianus, *Lea*, 1838, vi. 8, 4, 8, Synopsis 37.
Chenu. Conchyl. Unio, pl. 20, fig. 4.
U. nasutus, var. *Con.*, not *Say*, Monog. 38, 18, 1.
flavescens, *Lea*, 1845, x. 72, 3, 9, Synopsis 27.
flavus, *Raf.*, Ann. v. 39, Poulson's Trans. 38.
Con. Monog. 74, 41, 2.
Fer. Guerin's Mag. 1835, 27.
Say. Amer. Conch. Syn., No. 22.
U. rubiginosus, *Lea*, 1832, iii. 427, 8, 10, Synopsis 24.
Chenu, Conchyl. Unio, pl. 13, fig. 4.
flexuosus, *Raf.* Ann. v. 40, Poulson's Trans. 41.
Con. Monog. 8, 4, 2.
Say. Amer. Conch. Syn., No. 27.
U. foliatus, *Hildreth*, Sillim. Journ. xiv. 284, 16.
Lea. Synopsis, 20.
Floridensis, *Lea*, 1852, x. 274, 21, 31, Synopsis 39.
folliculatus, *Lea*, 1838, vi. 38, 11, 33, Synopsis 35.
Chenu, Conchyl. Unio, pl. 23, fig. 4.
Forbesianus, *Lea*, 1852, x. 264, 16, 17, Synopsis 24.
U. congaræus? *Lea.*
Foremanianus, *Lea*, 1841, viii. 247, 27, 64, Synopsis, 23.
Chenu, Conchyl. Unio, pl. 26, fig. 1.
fragosus, *Con.*, Monog. 12, 6, 2.
Lea, Synopsis, 22.
fraternus, *Lea*, 1852, x. 263, 16, 15, Synopsis, 32.
fulgidus, *Lea*, 1845, x. 73, 4, 10, Synopsis, 25.

Unio furvus, *Con.*, New F. W. Shells, 39, 6, 3.
Lea, Synopsis, 40.
U. Hanleyanus ? x. 279, 23, 37.
U. Troschelianus ? x. 286, 23, 39.

fuliginosus, *Lea*, 1845, x. 280, 23, 37, Synopsis, 33.

fuscatus, *Lea*, 1846, ix. 277, 40, 4, Synopsis, 30.

Geddingsianus, *Lea*, 1841, viii. 202, 11, 15, Synopsis 33.
Chenu. Conchyl. Unio, pl. 31, fig. 3.

Georgianus, *Lea*, 1841, viii. 235, 21, 49. Synopsis 27.
Chenu. Conchyl. Unio, pl. 32, fig. 3.

*gibber, *Lea*, vi. 35, 10, 30. Synopsis, 24.
Chenu. Conchyl. Unio, pl. 23, fig. 2.

Gibbesianus, *Lea*, 1852, x. 254, 12, 2, Synopsis 33.

*glaber, *Lea*, 1838, vi. 34, 10, 29, Synopsis 31.
Chenu. Conchyl. Unio, pl. 24, fig. 3.

glans, *Lea*, 1832, iv. 82, 8, 12, Synopsis 31.
Chenu. Conchyl. Unio, pl. 8, fig. 9.
U. Brumbyanus, *Lea*, 1841, viii. 245, 26, 62.

Gouldii, *Lea*, 1845, x. 76, 6, 16, Synopsis 29.

*graniferus, *Lea*, vi. 69, 19, 60, Synopsis 22.
Chenu. Conchyl. Unio, pl. 25, fig. 3.

Greenii, *Con.*, New Fresh Water Shells, 1834. 32, 4, 1.
Monog. 69, 38, 2.
Lea, Synopsis, 27.
U. simplex, *Lea*, 1845, x. 76, 5, 15, Synopsis 27.

Griffithianus, *Lea*, 1834, v. 103, 15, 46, Synopsis 33.

Haleianus, *Lea*, 1842, viii. 247, 27, 63, Synopsis 31.
Chenu. Conchyl. Unio, pl. 26, fig. 6.

Hayesianus, *Lea*, 1834, v. 35, 3, 7, Synopsis 26.

hebes, *Lea*, 1852, x. 267, 18, 21, Synopsis 26.

heterodon, *Lea*, 1833, iii. 428, 8, 11, Synopsis 24 .
Con. Monog. 90, 49, 3.
Fer. Guerin's Mag., 1835, 26.
Chenu. Conchyl. Unio, pl. 16, fig. 2.

Holstonensis, *Lea*, 1841, viii. 212, 15, 27, Synopsis 25.
Chenu. Conchyl. Unio, pl. 32, fig. 1.

hyalinus, *Lea*, 1845, x. 69, 2, 4, Synopsis 39.

Hydianus, *Lea*, 1838, vi. 14, 6, 14, Synopsis, 28.
Chenu, Conchyl. Unio, pl. 17, fig. 3.
U. Claibornensis ? *Lea*.

icterinus, *Con*. New Fresh Water Shells, May 1834, 41, 6, 5.
Monog. 39, 18, 2.
U. fulvus, *Lea*, Aug. 1834, v. 96, 13, 39.

ineptus, *Lea*, 1852, x. 261, 15, 12, Synopsis, 31.

*infucatus, *Con*. New Fresh Water Shells, 45, 3, 2.
Lea, Synopsis, 20.
U. securiformis ? *Con*.

intermedius, *Con*. Monog. 63, 35, 1.
Lea, Synopsis, 22.

interruptus, *Raf*. Ann. v. 36, Poulson's trans. 33.
Con. Monog. 88, 48.
Fer. Guerin, Mag. 28.
Say, Amer. Conch. syn. No. 26.
U. brevidens, *Lea*, vi. 15, 6, 15, Synopsis, 32.
Chenu, Conchyl. Unio, pl. 8, fig. 6.

Unio Jayensis, *Lea*, 1838, vi. 28, 9, 23, Synopsis, 37.
Chenu, Conchyl. Unio, pl. 22, 4.

*jejunus, *Lea*, 1838, vi. 9, 4, 9, Synopsis, 32.

Keinerianus, *Lea*, (Kienerianus?) 1852, x. 281, 23, 40, Synopsis, 22.

Kirtlandianus, *Lea*, 1834, v. 98, 14, 41, Synopsis, 35.

Kleinianus, *Lea*, 1852, x. 265, 17, 18, Synopsis, 20.

lanceolatus, *Lea*, 1832, iii. 266, 3, 2. Synopsis, 36.
Con. Monog. 32, 14, 2.
Chenu, Conchyl. Unio, pl. 8, fig. 1.

lapillus, *Say*, Trans. Journ. 1831, iv. 528, Amer. Conch. 41.
Con. Monog. 54, 29, 2.
U. fabalis, *Lea*, 1832, iv. 96, 10, 16, Synopsis, 31.
Chenu, Conchyl. Unio, pl. 8, fig. 4.

lævigatus, *Raf.* Ann. (Elliptio) v. 50, 80, 11, 12, 13, Poulson's trans. 24.
U. lens, *Lea*, 1832, iv. 80, 8, 10. Synopsis, 34.
Chenu, Conchyl. Unio, pl. 30, fig. 4.

latiradiatus, *Con.*, Monog. 96, 53.
U. interruptus, *Lea*, 1838. vi. 15. 6, 15. Synopsis, 27.
Chenu, Conchyl. Unio, pl. 17, fig. 4.

lazarus, *Lea*, 1852, x. 259, 14, 9, Synopsis, 39.

Lecontianus, *Lea*, 1838, vi. 40, 12, 35. Synopsis, 26.
Chenu, Conchyl. Unio, pl. 24, fig. 6.

lenior, *Lea*, 1841, viii. 204, 12, 18. Synopsis, 38.
Chenu, Conchyl. Unio, pl. 27, fig. 4.

Leseurianus, *Lea*, 1842, viii. 195, 8, 6. Synopsis, 35.
Chenu, Conchyl. Unio, pl. 30, fig. 4.

lineatus, *Lea*, 1841, viii. 206, 12, 20, Synopsis, 27.
Chenu, Conchyl. Unio, pl. 28, fig. 1.

lienosus, *Con.*, Sillim. Journ. xxv. 339, 1, 4; Monog. 91, 49, 4.
Lea, Synopsis, 29.
U. obscurus, *Lea*, vi. 7, 3, 7.
Chenu, Conchyl. Unio, pl. 17, fig. 1.

ligamentinus, *Lam.* Ann. sans Vert Desh. ed. vi. 533.
U. fasciolus, *Con.* (not *Raf.*) Monog. 26, 11, 2.
U. multiradiatus, *Lea*, 1832, iii. 48, 9, 15, Synopsis, 27.
Chenu, Conchyl. Unio, pl. 13, fig. 2.

limatulus, *Con.* Journ. Acad. Nat. Sc. 2d ser. 1849, i. 276, 37, 9.
Lea, Synopsis, 32.
U. Tuomeyi, *Lea*, 1852, x. 256, 13, 4. Synopsis, 33.

lineolatus, *Raf.* (obliquaria) Ann. 37, Poulson's trans. 35.
Say, American Conch. pl. 68.
Synonym. of Unio, No. 18.
Fer. Guerin's Mag. 1835, 28.
U. depressa, *Raf.* (not *Lam.*) Ann. v.
U. securis, *Lea*, 1832, iii. 437, 11, 17. Synopsis, 24.
Chenu, Conchyl. Unio, pl. 16, fig. 4.

luridus, *Lea*, x. 273, 20, 29. Synopsis, 30.

luteolus, *Lam. Desh.* An. sans Vert. vi. 544.
Dekay, Zool. of New York, 190, 20, 241.
Lea, Synopsis, 28.
U. siliquoideus, *Con.* Monog. 22, 10, 1.
Fer. Guerin's Mag. 1835, 27.
U. siliquoideus, *Barnes*, Sillim. Journ. vi. 267.
U. inflatus, ib. ib. 267.
Lampsilis siliquoideus, *Stimpson*, Shells of New England, 14.

Unio lugubris, *Lea*, vi. 30, 9, 25, Synopsis, 38.
Chenu, Conchyl. Unio, pl. 20, fig. 3.

maculatus, *Con.* New Fresh Water Shells, May, 1834, 30, 4, 4.
Lea, Synopsis, 24.
U. Ravenelianus, *Lea*, Aug. 1834, v. 32, 3, 5.

Masoni, *Con.* Monog. 28, 12, 2.
Lea, Synopsis, 34.
Kust. Chem. Unio, pl. 5, fig. 6.

mœstus, *Lea*, 1841, viii. 244, 26, 60. Synopsis, 31.
Chenu, Conchyl. Unio, pl. 28, fig. 3.

merus, *Lea*, 1852, x. 260, 15, 10. Synopsis, 33.

Menkianus, *Lea*, 1838, vi. 76, 19, 59, Synopsis, 27.
Chenu, Conchyl. Unio, pl. 19, fig. 4.

Metallicus, *Say*, Dissem. 1830.
Amer. Conch. Synonym. of Unio, No. 51.
U. cuprinus, *Lea*, 1834, iv. 94, 12, 24. Synopsis, 38.
Chenu, Conchyl. Unio, pl. 11, fig. 3.

metanever, *Raf.* Ann. v. 39. Poulson's Trans. 39.
Fer., Guerin's Mag. 1835, 27.
U. metanevrus, *Say*, Amer. Conch. Synonym. of Unio, 24.
Con., Monog. 10, 5, 2.
Kust. Chemn. Unio, pl. 10, fig. 4.
U. nodosus, *Barnes*, Sillim. Journ. vi. 124, 6, 7.
U. rugosus, (?) ib. ib. vi. 126, 8, 9.
U. metanever, *Lea*, Synopsis, 22.

minor, *Lea*, 1846, ix. 276, 39, 2. Synopsis, 31.

Mississipiensis, *Con.*, Journ. Acad. Nat. Sc. ii. 277, 38, 11.
Lea, Synopsis, 29.

Mortoni, *Con.*, Monog. Dec. 1835, 11, 6, 1.
Kust. Chemn. Conchyl. Unio, pl. 11. fig. 1.
U. turgidus, *Lea*, 1837, vi. 11, 5, 11.
Chenu, Conchyl. Unio, pl. 25, fig. 1.

Mühlfeldianus, *Lea*, 1838, vi. 41, 12, 36. Synopsis, 30.
Chenu, Conchyl. Unio, pl. 17, fig. 5.

Monroensis, *Lea*, 1841, ix. 279, 41, 8. Synopsis, 29.

Moussianus, *Lea*, 1852, x. 268, 18, 22. Synopsis, 29.

Nashvillianus, *Lea*, 1834, v. 100, 14, 43. Synopsis, 29.

nasutus, *Say*, Nicholson's Ency. article Conch. pl. 4, fig. 1.
Lister's Conch., t. 151, fig. 6.
Con. Monog. 38, 18, 1.
Gould, Invert. of Mass. 109.
Dekay, Zool. of New York, 191, 20, 239.
Lea, Synopsis, 37.
Mya nasuta, *Wood.*, Index Test. Sup. pl. 1, fig. 4.
U. rostratus, *Valenc.* Humb. and Bonpl., ii. 223, 53, 3.
Eurinea nasuta, *Agas. Stimpson's* Shells of New England, 13.

*nebulosus, *Con.* New Fresh Water Shells, 28, 3, 7.

neglectus, *Lea*, 1846, ix. 280, 42, 10. Synopsis, 33.

nexus, *Say*, Transyl. Journ. 1831, fv. 527.
Amer. Conch. pl. 51.
Con. Monog. 68, 38, 1.
Fer. Guerin's Mag. 1835, 28.
U. arcæformis, *Lea*, 1832, iv. 116, 17, 44. Synopsis, 13.
Chenu, Conchyl. Unio, pl. 12, fig. 3.

Unio nervosus, *Raf.* Ann. v. 30. Poulson's Trans. 22.
Say, Amer. Conch. Synonym. of Unio, No. 6.
U. zigzag, *Lea*, iii. 440, 12, 19. Synopsis, 24.
U. Donaciformis, iii. 267, 4, 3. Synopsis, 24.

nigellus, *Lea*, x. 283, 24, 42. Synopsis, 30.

niger, *Raf.* Ann. v. 25. (Elliptio,) Poulson's Trans. 15.
Con. Monog. 49, 26.
Fer. Guerin's Mag. 1835, 27.
Lister's Conch. pl. 150, fig. 5.
U. incrassatus, *Lea*, 1842, viii. 217, 16, 34. Synopsis, 24.
Chenu, Conchyl. Unio, pl. 31, fig. 5.
U. gibber, (?) *Lea*.

nigerrimus, *Lea*, 1852, x. 268, 18, 23. Synopsis, 31.

nigrinus, *Lea*, x. 284, 24, 44, Synopsis, 39.

nitens, *Lea*, viii. 205, 12, 19. Synopsis, 29.
Chenu, Conchyl. Unio, pl. 28, fig. 5.

nodiferus, *Con.*, (*g*) Journ. Acad. Nat. Sc. second ser. i. 277, 38, 4, 8.
U. prasinus, *Lea*, (not *Con.*) Synopsis, 22.

nodulatus, *Raf.* Ann. v. 41, 81, 17, 18. Poulson's Trans. 42.
Say, Amer. Conch. Synonym. of Unio, No. 6.
Fer., Guerin's Mag. 1835, 28.
U. pustulatus, *Lea*, 1832, iv. 79, 7, 9. Synopsis, 22.
Chenu, Conchyl. Unio, pl. 15, fig. 8.

notatus, *Lea*, 1838, vi. 28, 8, 22, Synopsis, 29.

Novi-Eboraci, *Lea*, 1838, vi. 104, 24, 114, Synopsis, 27.
Dekay, Zool. of New York, 194, 20, 240.
Chenu, Conchyl. Unio, pl. 19, fig. 5.

nucleopsis, *Con.*, Journ. Acad. Nat. Sc. 2d ser. i. 276, 37, 8.
Lea, Synopsis, 35.

nexus, *Say*, Transylvania Journ. 1831, iv. 527. Amer. Conch. 51.
Con. Monog. 68, 38, 1.
Ferussac, Guerin's p. Mag. 28.
U. arcæformis, *Lea*, 1832, iv. 116, 17, 44, Synopsis, 23.

notatus, *Lea*, 1838, vi. 28, 8, 22, Synopsis, 29.
Chenu, Conchyl. Unio, pl. 21, fig. 3.
U. simus, Lea, vi. 26, 8, 20.
Chenu, Conchyl. Unio, pl. 21, fig. 4.

obliquus, *Lam.* An. sans Vert. vi. 72.
Con. Monog. 77, 43, 2.
U. obliquus, *Fer.* Guerin's Mag. 1835.
U. ebenus, *Lea*, 1832, iv. 84, 9, 14. Synopsis, 35
Chenu, Conchyl. Unio, pl. 15, fig. 7.
U. undatus, *Desh.* (not *Barnes*) Desh. ed. of Lam. vi. 534.
U. mytiloides, (?) *Swain.* (not *Raf.*) 43, Malac. 270, fig. 53.

obliquatus, *Raf.* (obliquaria) Ann. v. Poulson's Trans. 46.
Say, Amer. Conch. Synonym of Unio, No. 33.
U. ridibundus, *Say*, Disseminator.
U. sulcatus, *Lea*, iii. 430, 8, 12, Synopsis, 26.
Chenu, Conchyl. Unio, pl. 13, fig. 3.

obovalis, *Raf.* v. 45, Poulson's Trans. 49.
U. solidus, *Lea*, vi. 13, 5, 13, Synopsis, 25.
Chenu, Conchyl. Unio, pl. 25, fig. 2.

*obtusus, *Lea*, viii. 201, 11, 13, Synopsis, 39.
Chenu, Conchyl. Unio, pl. 31, fig. 2.

occidentalis, *Con.* Monog. 64, 36, 1.
Lea, Synopsis, 33.

Unio ochraceus, *Say*, (*h*) Nicholson's Encyclopedia, iv. 4, 2, 8.
Pectunculus fluviatilus, *List*. Conch. pl. 157, fig. 12.
Mytilus fluviatilus, *Gmel*. Dillwyn Cat. 316.
Symphynota ochracea, *Lea*, iii. 69.
U. ochraceus, *Con*. Monog. 37, 17, 2.
Gould, Invert. of Mass. 112, 74.
Dekay, Zool. of New York, 193, 19, 137, 138.
U. rosaceus, (?) *Con*. (not *Dekay*) Jour. Ac. Nat. Sc. 2d ser. 275, 37, 5.

Olivarius, *Raf*. Ann. v. Poulson's Trans. 28.
Fer. Guerin's Mag. 1835, 28.
U. elllpsis, *Lea*, iii. 268, 4, 4. Synopsis, 26.
Chenu, Conchyl. Unio, pl. 18, fig. 1.

Ogeecheensis, *Con*. Journ. Acad. Nat. Sc. 2d ser. i. 275, 37, 3.

oratus, *Con*. Jour. Acad. Nat. Sc. 2d ser. 276, 37, 6.

orbiculatus, *Hild*. 1828, Sillim. Journ. xiv. 284, fig. 15.
Lea, Synopsis, 28.
U. abruptus, *Say*, Amer. Conch. pl. 17.
U. crassus, *Con*. Monog. 34, 16.

ovatus, *Say*, Nicholson's Encyclopedia, iv. 7, 2.
Lam. Anim. sans Vert. vi. 75.
Con. Monog. 4, 2.
Fer. Guerin's Mag. 1835, 26.
Kust. Chemn. Unio, 22, 3, 2.
Lea, Synopsis, 24.
U. ventricosus, *Desh*. (not *Barnes*), Desh. ed. of Lam. vi. 538.
U. subovatus, ib. (not *Lea*.)
U. occidens, (?) ib. ib. 528.

oviformis, *Con*., New Fresh Water Shells, 46, 3, 6.
Lea, Synopsis, 26.

pallescens, *Lea*, 1845, x. 79, 7, 20, Synopsis, 27.

paliatus, *Lea*, 1845, x. 79, 7, 20, Synopsis, 33.

paludicolor, *Gould*, Proceed. Bost. S. N. H. ii. 63.
Lea, Synopsis, 33.

papyraceus, *Gould*, Proceed. Bost. S. N. H. ii. 53.
Lea, Syuopsis, 38.

parvus, *Barnes*, Sillim. Journ. vi. 174.
Con. Monog. 20, 9, 1.
Philippi, Conchyl. 19, 1, 2.
Lea, Synopsis, 31.

paulus, *Lea*, viii. 213, 15, 29, Synopsis, 31.
Chenu, Conchyl. Unio, pl. 27, fig. 5.

pectorosus, *Con*. New Fresh Water Shells, May, 1834, 37, 6, 1.
Monog. 25, 11, 1.
Kust. Chemn. Unio, pl. 4, fig. 2.
U. perdix, *Lea*, Aug. 1834, v. 72, 11, 31, Synopsis, 26.
U. biangulatus, *Lea*, viii. 197, 9, 8.

pellucidus, *Lea*, 1845, x. 70, 2, 6, Synopsis, 39.

penitus, *Con*. New Fresh Water Shells, 33, 5, 1.
Lea, Synopsis, 24.

perovatus, Sillim. Journ. xxv. 338, 1, 3.
Con. New Fresh Water Shells, 47, 2, 3.
Lea, Synopsis, 27.
U. nux, *Lea*, x. 283, 24, 43.

perovalis, *Con*. New Fresh Water Shells, 43, 2, 2.
Lea, Synopsis, 27.

pernodosus, *Lea*, 1845, x. 71, 3, 8, Synopsis,

Unio pectitus, *Con.*, Journ. Acad. Nat. Sc. iii. 2d series.

personatus, *Say*, (female) Disseminator, 1829, 309.
Con. Monog. 47, 24.
Kust. Chemn. Unio, pl. 10, fig. 1.
U. capillaris, *Lea*, 1834, v. 29, 2, 2, Synopsis, 35.
U. pileus, *Lea*, (male) 1832, iv. 119, 18, 47, Synopsis, 24.
Chenu, Conchyl. Unio, pl. 15, fig. 2.

perstriatus, *Lea*, 1852, x. 255, 12, 3, Synopsis, 36.

Phillipsii, *Con.* Monog. 9, 5, 1.
Lea, Synopsis, 22.
Kust. Chemn. Unio, pl. 10, fig. 3.

pictus, *Lea*, 1834, v. 73, 11, 32, Synopsis, 27.

pilaris, *Lea*, viii. 209, 14, 24, Synopsis, 35.
Chenu, Conchyl. Unio, pl. 29, fig. 3.

placitus, *Lea*, 1852, x. 279, 23, 38, Synopsis, 29.

planilateris, *Con.* Monog. 103, 57, 1.

plenus, *Lea*, 1842, viii. 211, 14, 26, Synopsis, 25.

plexus, *Con.* (*j*) Monog. 1836, 89, 49, 1.
U. pliciferus, *Lea*, 1838, vi. 61, 17, 53, Synopsis, 20.
Chenu, Conchyl. Unio, pl. 22, fig. 5.
U. subtrapezius, *Philippi*, Conchyl. 1847, 12, 5, 2.
U. carbonarius, *Lea*, (old shell) vi. 37, 11, 32, Synopsis, 20.
Chenu, Conchyl. Unio, pl. 23, fig. 1.

Powellii, *Lea*, 1852, x. 270, 19, 25, Synopsis, 28.

politus, *Say*, Amer. Conch. Synonym. of Unio, No. 6.
U. brevialis, ? *Lam.* An. sans Vert. 1819, vi. 73.
U. olivarius, var. 2, *Raf.*
U. brevialis, *Crouch*, Illustrated Lamarck, 1827, 16, 9, 3.
U. subrotundus, *Lea*, (not *Raf.*) 1832, iv. 117, 18, 45, Synopsis, 26.
Chenu, Conchyl. Unio, pl. 15, fig. 1.
U. politus, *Con.* Monog. 67, 37, 2.

Prevostianus, *Lea*, 1852, x. 269, 19, 24, Synopsis, 29.

prasinus, *Con.* (*k*) New Fresh Water Shells, May, 1834, 44.
Monog. 79, 44, 2.
U. Schoolcraftensis, *Lea*, Aug. 1834, v. 37, 3, 9.
U. nodiferus, *Lea*, (not *Con.*) Synopsis, 22.

productus, *Con.*, Monog. 44.
Kust. Chemn. Unio, pl. 16, fig. 2.
Lea, Synopsis, 37.

proximus, *Lea*, 1852, x. 271, 20, 27, Synopsis, 29.

pullus, *Con.* Monog. 100, 55, 2.
Lea, Synopsis, 31.

*pulvinulus, *Lea*, 1845, x. 81, 8, 24, Synopsis, 26.

pumilis, *Lea*, 1838, vi. 23, 7, 17, Synopsis, 24.
Chenu, Conchyl. Unio, pl. 19, fig. 1.

puniceus, *Haldeman*, Journ. Acad. Nat. Sc. viii. 201.

purpuratus, *Lam.* (*l*) *Desh.* An. sans Vert. vi. 533.
Fer. Guerin's Mag. 1835, 26.
U. ater, *Lea*, iii. 426, 7, 9.
U. lugubris, *Say*, Amer. Conch. pl. 43.
U. atra, *Desh.* Enc. Method. Vers. ii. 528.
U. purpuratus, *Lea*, Synopsis, 38.
Mya ventricosa, *Soland. Humph.* Catalogue, No. 1084, 59.
Chenu, Conchyl. Unio, pl. 10, fig. 1.

Unio purpuriatus, *Say*, Disseminator, 1829.
U. Medellinus, *Lea*, 1838, vi. 39, 12, 34, Synopsis, 29.
Chenu, Conchyl. Unio, pl. 17, fig. 6.

pusillus, *Lea*, viii. 220, 18, 36, Synopsis, 31.
Chenu, Conchyl. Unio, pl. 32, fig. 5.

pygmœus, *Lea*, x. 262, 15, 14, Synopsis, 31.

quadrulus, (*m*) *Raf.* Ann. v. 41, Poulson's Translation, 42.
Say, Amer. Conch. pl. 53.
Con. Monog. 112, 62.
U. asperrimus, *Lea*, iv. 71, 5, 3, Synopsis, 21.
Chenu, Conchyl. Unio, pl. 9, fig. 2.
U. lachrymosus, *Lea*, iii. 272, 6, 8, (young) pl. 15, fig. 6, Synop. 21.
Chenu, Conchyl. Unio, pl. 15, fig. 6.

radiatus, *Lam. Desh.* An. sans Vert. vi. 535.
Mya radiata, *Gmel.* vide Lam.
Mya, *Schrot.* Eil. 614.
Mya radiata, *Dillwyn*, Cat. i. 51.
Mya pictorum tenuis, *Chemn.* vi. 23, 2, 7.
U. Virginiana, *Lam. Desh.* An. sans Vert. vi. 544.
Delassert, Recueil de Coquilles, pl. 13, fig. 4.
Mya oblongata, *Wood.* Supplement to Index Test. pl. 5, fig. 2.
Conchyl. pl. 12, fig. 4.
U. ochraceus, *Desh.* (not *Say*,) ed. Lam. vi. 536.
U. radiatus, *Con.* Monog. 24, 10, 2.
Lea, Synopsis, 29.
Dekay, Zool. of New York, 189, 18, 236.
Gould, Invert. of Mass. 110.
Lampsilis radiata, *Agas.* MSS. *Stimpson's* Shells of New Eng. 13.

*Rangianus, *Lea*, 1838, vi. 85, 18, 56, Synopsis, 25.
Chenu, Conchyl. Unio, pl. 24, fig. 5.

Raveneli, *Con.* New Fresh Water Shells, May, 1834, 39, 6, 4.
U. confertus, *Lea*, Aug. 1834, v. 103, 16, 47, Synopsis, 30.
U. Watereensis, *Lea*, Aug. 1838, v. i. 130, note, Synopsis, 33.

rectus, *Lam.* An. sans Vert. vi. 74, Desh. ed. 537.
Con. Monog. 33, 15.
U. latissima, (Elliptio,) *Raf.* Ann. v. 31, Poulson's Trans. 25.
U. prælongus, *Barnes*, Sillim. Journ. vi. 261.
U. rectus, *Kust.* Chemn. Conchyl. 35, 6, 1.
Lea, Synopsis, 35.
Eurinea prælonga, *Agas.* MSS. *Stimpson's* Shells of New Eng. 13.

Reevianus, *Lea*, 1852, x. 272, 20, 28, Synopsis, 28.

reflexus, *Raf.* Ann. v. 40, Poulson's Trans. 40.
Con. Monog. 7, 4, 1.
Fer. Guerin's Mag. 1835, 28.
Say, Synonym. of Unio, No. 25.
Kust. Chemn. Unio, pl. 11, fig. 2.
U. cornutus, *Barnes*, Sillim. Journ. vi. 122.
Lea, Synopsis, 22.

regularis, *Lea*, 1841, viii. 243, 25, 59, Synopsis, 29.
Chenu, Conchyl. Unio, pl. 33, fig. 3.

retusus, *Lam. Desh.* An. sans Vert. vi. 534.
Fer. Guerin's Mag. 1835, 28.
Say, Amer. Conch. Synonym. of Unio, No. 26.
Con. Monog. 1, 19, 8.
Lea, Synopsis, 35.
U. torsa, *Raf.* Ann. v. 45, 82, 1, 2, 3, Poulson's Trans. 40.
Kust. Chemn. Conchyl. Unio, pl. 13, fig. 2.
U. obtusa, *Cuv.* Regne Animal, illust. edit. pl. 92, fig. 1.

Unio rivularis, *Con.* Journ. Acad. Nat. Sc. 1853, iii. 2d series.
U. declivis, *Con.* (not *Say*) Monog. 45, 23, 1.
Kust. Chemn. Unio, pl. 14, fig. 1.
Lea, Synopsis, 33.

*Roanokensis, *Lea*, 1838, vi. 27, 8, 21, Synopsis, 32.

rosaceus, *Dekay*, Zool. of New York, 192, 39, 355, 356, and pl.40, fig.357.

rotundatus, *Lam.* An. sans Vert. Desh. ed. vi. 538.
U. suborbiculata, *Lam. Desh.* ib. 546.
decorticata, *Raf.* Ann. v. 36, Poulson's Trans. 33.
glebulus, *Say*, Amer. Conch. pl. 34.
subglobosus, *Lea*, v. 30, 2, 3.
rotundatus, *Lea*, Synopsis, 34.

rubellus, *Con.* New Fresh Water Shells, 38, 6, 2.
Lea, Synopsis, 34.

Ruber, *Raf.* v. 48, Poulson's Trans. 55.
U. pyramidatus, *Lea*, iv. 109, 16, 39, Synopsis, 25.
Chenu, Conchyl. Unio, pl. 16, fig. 5.
U. coccineus, *Jay*, (not *Hildreth*,) Catalogue, 66.

rudis, *Con.* Monog. 76, 43, 1.
U. Ravenelianus, *Lea*, v. 32, 3, 5, Synopsis, 26.

rufusculus, *Lea*, 1852, x. 258, 14, 7, Synopsis, 33.

Rumphianus, *Lea*, 1852, x. 276, 22, 34.

sagittiformis, *Lea*, 1852, x. 277, 22, 35, Synopsis, 37.

Sapotalensis, *Lea*, viii. 233, 21, 47, Synopsis, 29.
Chenu, Conchyl. Unio, pl. 33, fig. 4.

saxeus, *Con.* Monography of North American Unionidæ, 109, 60, 1.

satur, *Lea*, 1852, x. 265, 17, 19, Synopsis, 24.
Lea, Synopsis, 27.

*securiformis, *Con.* Journ. A. N. S. i. 275, 37, 1.

semigranosus, *V. d. Busch.*
Phillippi, Conchyl. Unio, 1, 1, 1, 2, 3.
Lea, Synopsis, 20.

Shepardianus, *Lea*, 1834, v. 95, 13, 38, Synopsis, 35.
Con. Monog. 70, 39.

simus, *Lea*, 1838, vi. 26, 8, 20, Synopsis, 31.

sintoxia,* *Raf.* v. 44, Poulson's Trans. v. 48.

sordidus, *Lea*, 1852, x. 254, 12, 1. Synopsis, 33.

Sowerbianus, *Lea*, 1834, v. 68, 10, 28, Synopsis, 25.
Con. Monog. 66, 37, 1.

sparsus, *Lea*, 1841, viii. 242, 25, 58, Synopsis, 22.
Chenu, Conchyl. Unio, pl. 26, fig. 2.

spatulatus, *Lea*, 1845, x. 80, 8, 22.

spinosus, *Lea*, vi. 57, 16, 50, Synopsis, 23.
Chenu, Conchyl. Unio, pl. 22, fig. 6.

splendidus, *Lea*, vi. 70, 19, 61, Synopsis, 27.
Chenu, Conchyl. Unio, pl. 17, fig. 7.

stagnalis, *Con.* Journ. Acad. Nat. Sc. 2d ser. i. 275, 37, 2.
Lea, Synopsis, 27.

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* The specimen in Mr. Poulson's cabinet labelled *sintoxia* by Rafinesque is a large compressed shell, similar in outline to *U. coccineus*. Length 3⅞ inches; height 3 inches.

Unio stapes, *Lea*, 1832, iv. 77, 7, 8, Synopsis, 22.
Con. Monog. 83, 46, 1.
Fer. Guerin's Mag. 1835, 28.
Chenu, Conchyl. Unio, pl. 15, fig. 5.

stegarius, *Raf.* Ann. v. 46, Poulson's Trans. 51.
Con. Monog. 83, 46, 1.
Fer. Guerin's Mag. 1835, 28.
U. irroratus, *Lea*, 1852, iii. 269, 5, 5, Synopsis, 22.
Chenu, Conchyl. Unio, pl. 10, fig. 3.

Stewardsonii, *Lea*, 1852, x. 278, 23, 36, Synopsis, 20.

Stonensis, *Lea*, viii. 195, 8, 5, Synopsis, 27.

stramineus, *Con.* Sillim. Journ. xxv. 339, 1, 6.
Monog. 91, 50, 1.
Lea, Synopsis, 28.

striatus, *Lea*, 1841, viii. 203, 12, 16, Synopsis, 26.

strigosus, *Lea*, 1841, viii. 198, 9, 9, Synopsis, 36.
Chenu, Conchyl. Unio, pl. 30, fig. 6.

subinflatus, *Con.* New Fresh Water Shells, Appendix, 1835, 5.
Monog. 97, 54, 1.
U. Hopetonensis ? *Lea*, 1838, vi. 29, 9, 24, Synopsis, 32.
Chenu, Conchyl. Unio, pl. 20, 5.

subplanus, *Con.* Monog. 73, 41, 1.
Lea, Synopsis, 33.

subrotundus, *Raf.* (young) Ann. 42, Poulson's Trans. 44.
Say, Amer. Conch. Synonym. of Unio, No. 32.
Fer. Guerin's Mag. p. 28.
U. striatus, *Raf.* (old) Ann. v. 45, Poulson's Trans. 50.
circulus, *Lea*, iii. 433, 9, 14, Synopsis, 34.
Chenu. Conchyl. Unio, pl. 16, fig. 1.

subtentus, *Say*, Journ. Acad. Nat. Sc. v. 130, Amer. Conch. pl. 15.
Con. Sillim. Jour. xxv. 339, 1, 4, Monog. 85, 47, 1.
Fer. Guerin's Mag. 1835.
Lea, Synopsis, 21.

subrostratus, *Say*, Disseminator, 1830.
U. iris, *Lea*, iii. 439, 11, 18, Synopsis, 38.
Chenu, Conchyl. Unio, pl. 8, fig. 7.

symmetricus, *Lea*, 1845, x. 73, 4, 11, Synopsis, 32.

Tampicoensis, *Lea*, vi. 24, 7, 18, Synopsis, 26.
Chenu, Conchyl. Unio, pl. 21, fig. 5.

tæniatus, *Con.* New Fresh Water Shells, 26, 4, 2.
U. pulcher, *Lea*, vi. 6, 3, 6, Synopsis, 28.
Chenu, Conchyl. Unio, pl. 17, fig. 2.

Taitianus, *Lea*, 39, 4, 11, Synopsis, 25.

Tecomatensis, *Lea*, 1841, viii. 234, 21, 48, Synopsis, 27.
Chenu, Conchyl. Unio, pl. 31, fig. 6.

Tennesseensis, *Lea*, 1842, viii. 199, 10, 11, Synopsis, 27.
Chenu, Conchyl. Unio, pl. 27, fig. 1.

tener, *Lea*, 1842, viii. 198, 10, 10. Synopsis, 28.
Chenu, Conchyl. Unio, pl. 31, fig. 1.

tenerus, *Ravenel*, *Lea*, 1834, v. 63, 9, 2. Synopsis, 39.
U. tenebrosus, *Con.* New Fresh Water Shells, 42, 7, 1.

tetralasmus, *Say*, Amer. Conch. pl. 23.
Lea, Synopsis, 32.

Unio teres, *Raf.* Ann., v. 55, Poulson's trans. 68.
Con. Monog. 52, 28.
Fer. Guerin's Mag. 1835, 27.
Say, Synonym. of Unio, No. 42.
U. Anodontoides, *Lea*, iv. 86, 8, 11, Synopsis, 36.
Chenu, Conchyl. Unio, pl. 14, 3.

trabalis, *Con.* New Fresh Water Shells, Mav, 1834, 27, 3, 5.
Monog., 110, 60, 2.
U. Troostensis, *Lea*, Aug. 1834, v. 71, 10, 30, Synopsis, 25.

trigonus, *Lea*, 1832, iv. 110, 16, 40, Synopsis 25.

tortivus, *Lea*, 1842, viii. 204, 12, 17, Synopsis 24.
Chenu, Conchyl. Unio, pl. 29, fig. 6.

torulosus, *Raf.* (obliquaria) Ann. v. 48, Poulson's Trans. 56.
Fer., Guerin's Mag. 1835, p. 28.
Kust., Chemn. Unio, 28, 4, 3, 4.
Say, Amer. Conch. Synonym. of Unio, No. 40.
U. gibbosus, *Raf.*, *Con.* Monog. 50, 27.
Kust. Chemn. Unio, 28, 4, 3, 4.
U. perplexus, *Lea*, iv. 122, 17, 42, Synopsis, 23.
Chenu, pl. 18, fig. 5.

triqueter, *Raf.* Ann. v. 34, Poulson's Trans. 31.
U. triangularis, *Barnes*, vi. 272, fig. 17.
U. formosus, *Lea*, iv. 111, 16, 41.
Chenu, Conchyl. Unio, pl. 8, fig. 12.
U. triangularis, *Lea*, Synopsis, 22.

truncatus, *Raf.* Ann. v. 35. Poulson's Trans. 31.
Fer. Guerin's Mag. 1835,
Say, Amer. Conch. Synonym. of Unio, No.
U. elegans, *Lea*, iv. 83, 9, 13, Synopsis, 23.
Chenu, Conchyl. Unio, pl. 15, fig. 3.

trossulus, *Lea*, ix. 278, 40, 6, Synopsis, 25.

tuberosus, *Lea*, 1842, viii. 210, 14, 25, Synopsis, 22.
Chenu, pl. 28, fig. 7.

tumescens, *Lea*, 1845, x. 71, 3, 7. Synopsis, 25.

undatus, (*n*) *Barnes*, Sillim. Journ. vi. 121, 4, 4.

unicolor, *Lea*, 1845, x. 74, 4, 12, Synopsis, 34.

utriculus, *Lea*, 1845, x. 69, 1, 3, Synopsis,

Vanuxemiensis, *Lea*, 1838, vi. 36, 11, 31, Synopsis, 29.
Chenu, Conchyl. Unio, pl. 19, fig. 3.

Vaughnianus, *Lea*, vi. 5, 3, 5, Synopsis, 38.
Chenu, Conchyl. Unio, pl. 21, fig. 1.

velatus, *Con.*, 1853, Journ. Acad. Nat. Sc. iii. 2d series.

venustus, *Lea*, 1838, vi. 4, 2, 4, Synopsis, 27.
Chenu. Conchyl. Unio, pl. 22, fig. 1.

verrucosus, *Raf.* Ann. v. 42, Poulson's Trans. 44.
U. tuberculatus, *Barnes*, Sillim. Journ. vi.
Hildreth, Sillim. Jour. xiv. 281, fig. 8. *Lea*, Synopsis, 23.

viridis, (*o*) *Raf.* Ann. v. 27, Poulson's Trans. 19.
Con., Monog., 36, 17, 1.
U. Tappanianus, *Lea*, vi. 62, 17, 55, Synopsis, 39.
Dekay, Zool. of New York, part i. 194, 20, 242.
Chenu, Conchyl. Unio, pl. 20, fig. 2.

Unio vibex, *Con.* New Fresh Water Shells, 31, 4, 3.
Lea, Synopsis, 30.
Whiteanus, *Lea*, 1852, x. 258, 14, 8, Synopsis 33.
Zeiglerianus, *Lea*, 1838 (Zieglerianus?) vi. 32, 10, 27. Synopsis, 29.
Chenu, Conchyl. Unio, pl. 24, fig. 2.

METAPTERA, *Raf.*, *Agas.*

Metap. alata.
U. alata, *Say*, Nicholson's Encyclopedia, iv. pl. 4, fig. 2.
Lam. Anim. sans Vert. 1819, vi. 76. *Desh.* ed. of Lam. vi. 539.
Symphynota alata, *Lea*, iii. 448. U. alatus, Synopsis, 19.
Barnes, Sillim. Journ. vi. 260.
Con., Monog., 56, 31.
Metaptera megaptera, *Raf.*, Ann. v. 34, 80, 20, Poulson's Trans. 29.
Symphynota alata, *Lea*, iii. 448. U. alatus, Synopsis, 19.
Lymnadia alata, *Swains.* Malac. 265, 48.
U. alatus, *Kust.* Chemn. Unio. 15, 1, 1.

fragilis.*
Elliptio fragilis, *Raf.* Ann. v. 29. Poulson's Trans. 22.
U. fragilis, *Swains.*, Zool. Illust. 1st ser. pl. 171.
U. fragilis, *Say*, Amer. Conch. Syn. No. 6.
Kust. Chemn. Unio, 19, 3, 1.
U. gracilis, *Barnes*, Sillim. Journ. vi. 174.
Symphynota gracilis, *Lea*, iii. 452. U. gracilis, Synopsis, 19.

inflata.
Symphynota inflata, *Lea*, iv. 99, 14, 28.
U. inflatus, *Con.* Monog. 57, 32.
Lea, Synopsis, 19.
Kust. Chem. Unio, 17, 2, 1.
U. Alabamensis, *Con.*, New Fresh Water Shells, p. 67.

Ohiensis.
Lastena Ohiensis, *Raf.* Ann. v. 50, Poulson's Trans. 60.
U. lævissimus, *Lea*, iii. 444, 13, 23, Synopsis, 19.

PLECTOMERUS, *Con.*

Shell subalated, obliquely plicated; cardinal teeth very thick, sulcated, the posterior lobe directed towards the posterior extremity of the shell; posterior muscular impressions scarcely impressed, confluent.

Plect. atromarginatus.
U. atromarginatus, *Lea*, viii. 207, 13, 21, Synopsis, 19.
Chenu, Conchyl. Unio, pl. 28, fig. 6.

Boykianus.
U. Boykianus, *Lea*, viii. 208, 13, 22, Synopsis, 19.
Chenu, Conchyl. Unio, pl. 27, fig. 2.

costatus.
U. costatus, *Raf.* Ann. v. 49, Poulson's Trans. 57.
Con. Monog. 17, 7.
U. undulatus, *Barnes*, Sillim. Journ. vi. 120, pl. 2.
Lea, Synopsis, 20.
U. latecostatus, *Lea*, 1845, x. 68, 1, 2.

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* I have not quoted Stimpson for this species, because he says that the Ohio species is different from the shell usually regarded as the same, which inhabits Lake Champlain, and he refers only to the latter. Rafinesque described the Western shell. As Say's *U. alatus* was found in Lake Erie, I do not know whether Agassiz considers it the same as the Ohio river species, or as that of Lake Champlain.

Plect. crassidens.
U. crassidens,* (*a*) *Lam.*, An. sans Vert. vi. 71.
interruptus, *Say.*, Transylvania Journ., 1831, iv. 525.
Amer. Conch. pl. 33.
trapezoides, *Lea*, 1838, vi. 69, 3, 1, Synopsis, 21.
Chenu, Conchyl. Unio, pl. 28, fig. 6.

Nicklinianus.
U. Nicklinianus, *Lea*, v. 28, 1, 1, Synopsis, 19.

perplicatus, *Con.* Proc. Acad. Nat. Sc. 2d ser. i. 19.
Journ. Acad. Nat. Sc. ii. 276, 38, 2.
U. atrocostatus, *Lea*, Aug. 1845, x. 70, 2, 15, Synopsis, 20.

*plectophorus, *Con.* Journ. Acad. Nat. Sc. i. 2d ser. 277, 38, 7.

plicatus.
U. plicatus, *Say*, Nicholson's Enc., article Conch. iv.
Barnes, Sillim. Journ. vi. 120, 3, 3.
Lea, Synopsis, 20.
U. Peruviana, *Lam.*, An. sans Vert. vi. 71.
Enc. Method. pl. 248, fig. 7.
U. rariplicata, *Lam.*, vi. 71. *Desh.* ed. of Lam. v. 533.
Dombeyanus, *Valenc.*
undulatus, *Desh.* (not *Barnes*) ed. of Lam. vi. 533.
multiplicatus, *Desh.* (not *Lea*) ib. vi. 533.
crassus, *Barnes*, Sillim. Journ. vi. 118, 1, 1.
plicata, *Swains.*, Malac. 271, 54, *e*.
Hippopæus, *Lea*, 1845, x. 68, 1, 1.

Sloatianus.
U. Sloatianus, *Lea*, viii. 217, 16, 33, Synopsis, 21.
Chenu, Conchyl. Unio, pl. 32, fig. 7.
U. plectophorus ? *Con.*

Complanaria, *Swains.*, *Agas.*

Comp. complanata.
Alas. complanata, *Barnes*, Sillim. Journ. vi. 278, 13, 22.
Hild. ibid. xiv. 289.
Symphynota complanata, *Lea*, iii. 448.
U. complanata, *Desh.* ed. of Lam. vi. 559.
Katherina, *Lea*, Synopsis, 42.

costata.
Alasmidonta costata, *Raf.*, Ann. v. 52, 82, 15, Poulson's Trans. 63.
Alasmodonta rugosa, *Barnes*, Sillim. Journ. vi. 278, 13, 21.
Complanaria rugosa, *Agas.* Stimpson's Shells of New Eng. 14.

compressa.
Symphynota compressa, *Lea*, 1832, iii. 450, 12, 22.
U. compressus, *Con.* Monog. 71, 40, 1.
Dekay, Zool. of New York, 191, 21, 245.
Lea, Synopsis, 19.
Complanaria alasmodontina, *Stimpson*, Shells of New Eng. 14.

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* This species is identical with the *interruptus* of Say and *trapezoides* of Lea. The description "antice binis ternisve subsinuosâ," can apply to no other species which could be compared with Say's *interruptus*. This description applies to (*a*) of Lam., which Mr. Lea acknowledges to be his *trapezoides*, and is the type of *crassidens*. How, then, can he set it aside, and take up *b* as the type of that species, especially as it does not agree with the description?

MARGARITANA, *Schumacker*.

Marg. arcuata.
Alasmodonta arcuata, *Barnes*, Sillim. Journ. vi. 277, 12, 20.
Gould, Invert. of Mass. 114, fig. 75.
Dekay, Zool. of New York, 197, 14, 224.
Margaritana margaritifera, *Lea*, (not *Lin.*) Synopsis, 43.
M. arcuata, *Stimpson*, Shells of New England, 15.

falcata, *Gould*.

monodonta.
Unio monodontus, *Say*, Amer. Conch. pl. 6.
Desh. ed. of Lam. An. sans Vert. vi. 553.
Alas. monodonta, *Fer.* Guerin's Mag. 1835, note 8, 31.
U. Soleniformis, *Lea*, iv. 86, 10, 16, Synopsis, 39.
Chenu, Conchyl. Unio, pl. 14, fig. 4.

ALASMODONTA, *Say*.

arcula, *Lea*, 1838, vi. 71, 22, 69, Synopsis, 42.

confragosa, *Say*. Amer. Conch. pl. 21.
U. confragosa, *Desh.* ed. of Lam. vi. 553.
Marg. confragosa, *Lea*, Synopsis, 42.

marginata, *Say*, Journ. Acad. Nat. Sc. i. 459.
Barnes, Sillim. Journ. vi. 279.
U. varicosa, *Lam.* An. sans. Vert. vi. 78, Desh. ed. 543.
Mya rugulosa, *Wood*. Index, Sup. pl. 1, fig. 7.
Margaritana marginata, *Lea*, Synopsis, 42.
Alas. marginata, *Dekay*, Zool. of New York, 196, 14, 226.

truncata, *Say*, MSS. *Gould*, Invert. 117.
Alas. marginata, *Auc.* (Western var.)

LEPTODEA, *Raf.*.

Lept. lata, *Raf.*, Ann. v. 51, 82, 17, Poulson's Trans. 61.
U. dehiscens, *Say*, Disseminator, ii. 308.
Amer. Conch. pl. 24.
Desh. ed. of Lam. 554.
U. oriens, *Lea*, v. 4, 6, 5, Synopsis, 43.
U. dehiscens, *Lea*, Synopsis, 43.
Chenu. Conchyl. Unio, pl. 14, fig. 2.
Anodonta lata, *Fer.* Guerin's Mag. 1835, 25.
U. latus, *Say*, Amer. Conch. Syn. of Unio, No. 44.

leptodon, *Raf.*, Ann. v. Poulson's Trans. 21.
U. leptodon, *Say*. Amer. Conch. Syn. of Unio, No. 6.
Fer. Guerin's Mag. 25.
Con., Monog. 59, 33.
U. planus, *Barnes*, Sillim. Journ. vi. 272.
Anodonta purpurascens, *Swain.*, Zool. Illust. 1st ser. iii. pl. 160.
Symphynota tenuissima, *Lea*, iii. 453, 11, 21.
Unio tenuissima, *Lea*, Synopsis, 38.

STROPHITUS, *Raf.* HEMIODON, *Swains*.

argenteus.
Anod. argentea, *Lea*, 223, 19, 41.

Arkansensis.
Anod. Arkansensis, *Lea*, x. 293, 29, 56.

calceolus.
U. calceola, *Lea*, iii. 265, 3, 1.
Desh. ed. of Lam. An. sans Vert. 546.
Margaritana calceola, *Lea*, Synopsis, 43.

Stroph. Curreyanus.
Margaritana Curreyana, *Lea*, viii. 223, 18, 40, Synopsis, 42.
deltoideus.
Marg. deltoidea, *Lea*, vi. 43, 13, 38, Synopsis, 42.
edentulus.
Alas. edentula, *Say*, Disseminator.
Anodonta edentula, *Dekay*, Zool. of New York, 201, 15, 231.
A. edentula, *Lea*, Synopsis, 49.
A. areolata, *Swains.*, Zool. Illust. 2d ser. i. pl. 1.
Etowaosis, *Con.* Proceed. Acad. Nat. Sc. 1849, iv. 154.
fabula.
Marg. fabula, *Lea*, vi. 44, 13, 39, Synopsis, 44.
Hildrethianus.
Marg. Hildrethiana, *Lea*, v. 36, 3, 8. Synopsis, 43.
Holstonia?
Marg. Holstonia, *Lea*, vi. 42, 13, 37, Synopsis, 44.
minor.
Marg. minor, *Lea*, x. 82, 8, 26, Synopsis, 42.
radiatus, *Con.*
Alas. radiata, Sillim. Journ. xxv. 34, 1, 10.
Marg. radiata, *Lea*, Synopsis, 43.
Ravenelianus.
Marg. Ravenelianus, *Lea*, v. 106, 17, 50, Synopsis, 42.
Shæfferiana.
Anod. Shæfferiana, *Lea*, x. pl. 26, fig. 50.
tetragona.
Anod. tetragona, *Lea*, 1846, x. 82, 8, 25.
*unadilla, *Dekay*, Zool. of New York, part i. 199, 15, 228.
undulatus.
Anod. undulata, *Say*, Nicholson's Ency. iv. pl. 3, fig. 6.
Gould, Invert. of Mass. 120.
Anod. rugosa, *Swains.*, Zool. Illust. 1st series, ii. 96.
A. Pennsylvanica, *Lam.* An. sans Vert. vi. 86.
Strophitus undulatus, *Stimp.* Shells of New England, 15.
virgatus, *Con.* Monog. cover of No. 6, June, 1836.
Anod. Wardiana, *Lea*, 1838, vi. 46, 14, 42.

ANODONTA, *Cuvier, Lam.*

Anod. angulata, *Lea*, vi. 97, 16, 52.
Benedictensis, *Lea*, vi. 104, 16, 48.
Buchanensis, *Lea*, vi. 47, 16, 43.
Californiensis, *Lea*, x. 286, 25, 47.
cataracta, (*a*) *Say*, Nicholson's Encyc. iv. pl. 3, fig. 4.
Lam. An. sans Vert. vi. 85.
A. fluviatilis, *Lea*, vi. 138, Synopsis,
Gould, Invert. of Mass. 117.
Dekay, Zool. of New York, 203, 18, 234.
Kust. Chemn. Unio, 33, 7, 2.
cognata, *Gould.*
Couperiana, *Lea*, viii. 227, 20, 46.
cylindracea, *Lea*, vi. 45, 13, 40.
decora, *Lea*, vi. 64, 20, 63.
declivis, *Con.* Sillim. Journ., July, 1834, xxv. 341, 1, 11.
A. plana, *Lea*, Aug. 1834, v. 48, 7, 18.

Anod. denigrata, *Lea*, 1852, x. 285, 25, 45.
excurvata, *Dekay*, Zool. of New York, 202, 17, 233.
fragilis, *Lam.* An. sans Vert. vi. 85.
ferruginea, *Lea*, viii. 225, 19, 43.
Ferussaciana, v. 45, 6, 15.
Footiana, *Lea*, viii. 226, 20, 44.
gibbosa, *Say*, Long's Ex. to St. Peter's, 1824, ii. 265. *Lea*, Synopsis, 50.
gigantea, *Lea*. vi. 1, 1, 1.
glauca, *Valen*. *Lea*, Synopsis, 50.
Delassert, Recueil de Coquilles, pl. 13, fig. 3.
grandis, *Say*, Dissem. 1829, 341.
Lea, Synopsis, 51.
corpulenta, *Cooper*, MSS.
Harpenthis, *Lea*, viii. 224, 19, 42.
imbecilis, *Say*, Dissem. 1829.
incerta, *Lea*, 1834, v. 46, 6, 16.
implicata, *Say*, Dissem. 350.
Gould, Invert. of Mass. 118, 78.
A. Newtonensis, *Lea*, vi. 79. 21, 66.
impura, *Say*, Dissem. 1829. *Lea*, Synopsis, 53.
Linneana, *Lea*, x. 289, 27, 51.
lugubris, *Say*, Disseminator, 1829, 340.
Marryattana, *Lea*, viii. 226, 20, 45.
marginata, (*b*) *Say*, Nicholson's Encyclop. iv. pl. 3. fig. 1.
Nuttalliana, *Lea*, vi. 77, 20, 62.
oblita, *Lea*, 1852, x. 290, 28, 52.
opaca, *Lea*, 1852, x. 285, 25, 46.
Oregonensis, *Lea*, vi. 80, 21, 67.
ovata, *Lea*, vi. 2, 2, 2.
pavonia, *Lea*, vi. 78, 21, 45.
Pepiniana, *Lea*, vi. 96, 16, 51.
plicata, *Hald*. Journ. Acad. Nat. Sc. viii. 202.
salmonia, *Lea*, vi. 45, 14, 41.
Stewartiana, *Lea*, v. 47, 6, 17.
suborbiculata, *Say*, Amer. Conch. pl. 11.
subcylindracea, *Lea*, vi. 106, 24, 117.
subvexa, *Con.*, Sillim. Journ. xxv. 341, 1, 12.
teres, *Con.* New Fresh Water Shells, 47, 7, 2.
virens, *Lea*, x. pl. 28. fig. 53.
Wahlamatensis, *Lea*, vi. 68, 20, 64.

NOTES.

(*a*.) *Unio asper*. Ferussac considered this species and Say's apiculatus the same; but there is a strongly marked difference in the arrangement of the tubercles and in the form of the shells posteriorly. (Guerin's Mag. 1835.)

(*b*.) *U. cariosus*. In my Monograph I followed Ferussac in referring *U. luteola*, Lam., to this species, but his description does not apply. It very well describes *U. siliquoideus*, Barnes, in an early stage of growth.

(*c.*) *U. cerinus.* This species cannot be confounded with *flavus;* it has much less prominent beaks, more compressed disks, is proportionally longer, with the hinge and basal margins more nearly parallel, while the color of the epidermis and of nacre are very different. Mr. Lea seems to have hastily made them one species, probably without having time or inclination to compare them.

(*e.*) *U. complanatus*, Soland. There has been some controversy respecting the original name of this species, but it seems clear that Solander had Say's *purpureus* in view when he described his species. He not only remarks that it inhabits rivers in Maryland and New Jersey, but his description, "ovate, compressed, with the front (posterior) margin straight, obliquely truncated towards the cardinal slope, hinge with the primary teeth three-sided and striated," applies very well to a common variety of Say's *purpureus*. If Solander's name had been founded alone on the figure in Lister, t. 150, fig. 5, it could not be retained, because the species intended to be represented by that figure will probably ever be disputed; and it represents *U. niger*, Raf., much better than the shell in question. Lamarck even quotes it for *crassidens*, (Lea's *trapezoides*,) which it certainly does not resemble. The words "admodum crassus," engraved on Lister's plate, prove that it was an exceedingly thick shell, and a Western species.

(*f.*) *U. clava.* Kuster has quoted Rafinesque's figures 23 and 24 for his *gibbosa*, which is a nodulosus species not figured on any of his plates. Those figures represent *U. scalenia.*

(*g.*) *U. nodiferus*, Con. Mr. Lea considers this identical with *prasinus.* Since I have compared several specimens with a fine series of the latter species, I see little resemblance between them. The *nodiferus* is a smaller, more ventricose and inequilateral shell, and the large tubercles grouped together about the middle of the disc, are never seen in *prasinus.* The latter has the slightly prominent tear-shaped tubercles like the young *quadrulus*, very dissimilar in number, shape and prominence to those of the *nodiferus.* Three specimens of the latter, from Alabama, are in the collection of the Academy.

(*h.*) *U. ochraceus*, Say. T. 157, fig. 12, in Lister's Conch., is usually referred to *Anodonta cataracta* of Say, but it much better agrees with the Southern variety of *U. ochraceus.* The color, "subruber," does not agree with any of our *Anodontas*, and, moreover, Lister names it PECTUNCULUS, under which general term he includes *Galathea*, *Paxyodon* and *Cyclas*, which is sufficient evidence that his *Pectunculus fluviatilis* had well defined teeth. The cardinal teeth of the Southern *ochraceus* being distinctly striated, would account for the name of *Pectunculus* being applied to it. Besides, it will be observed that Lister commences the *Anodontas* with the heading of "Section 2d, De musculis cardine lævi," which includes three species. His Section 3d then commences under the heading of "Pectunculus." This is proof positive that his t. 157, fig. 12, is not an Anodonta.

(*i.*) *U. obliquus*, Lam. Mr. Lea has referred Barnes' *undatus* to this species, but Lamarck's description is wholly inapplicable to *undatus*, which is not oblique, and certainly not "ovate-rotundate." The error probably originated in Barnes' citation of Lamarck's species with a mark of doubt, as synonymous with *undatus.*

(*j.*) *U. plexus*, Con. There is a variety of this species, more elliptical, and with the umbo and upper part of the disc covered with closely-arranged granulations. It is possible that this may prove to be a distinct species. *U. semigranosus*, some conchologists think the same species with *U. plexus*, but it certainly cannot be, if von dem Busch's species is represented in Phillippi's Conchyl. pl. 1, fig. 1. That is a far larger shell, and of a totally different character.

(*k.*) *U. prasinus*, Con. Mr. Lea observes that Prof. Kirtland thinks this may prove to be a variety of *pustulosus*, (*bullatus*, Raf.) They are, however,

very distinct species, the *prasinus* being much longer comparatively, with fewer and less-prominent tubercles, and arranged in a very different manner. The cardinal plate under the beaks is not dilated; in the *nodulatus*, it is profoundly dilated, a very important difference, which it is strange should have been overlooked. Young shells of *prasinus* and *bullatus*, when compared, are strikingly dissimilar.

(*l.*) *U. purpuratus*, Lam. There is no doubt that Solander named this species *ventricosa*, as Humphreys terms it "La Ventrue rouge," and gives the habitat of "Mississippi river," where it abounds, and where no other species has been found which agrees with the description.

(*m.*) *U. quadrulus* is not *U. rugosus*, Barnes. Mr. Lea remarks that some of our best Western conchologists think *U. rugosus* identical with *U. fragosus*. Barnes' figure certainly has little resemblance to the latter, and the "*broad* nodulous, somewhat *double* ridge," wholly inapplicable to *quadrulus*. Mr. Lea says, "two specimens referred to by Mr. B. as *rugosus*, were under my inspection, and proved to be, the one a flat *metanever*, and the other a *plicatus*." Now the *rugosus* may be the *metaneurus*, Raf., but Barnes' figure was never intended for any variety of the *U. plicatus*.

Mr. Say has unfortunately copied Barnes' description of *U. rugosus*, and applied it to *U. quadrulus*, Raf.

(*n.*) *U. undatus*. It has been supposed that this was the shell described by Mr. Lea as *trigonus*, but it is distinct. There is a fine specimen of *undatus* in the collection of the Academy, which agrees perfectly with Barnes' figure, and is much more ventricose anteriorly and over the umbo, than *trigonus*; has more elevated beaks, and is very inequilateral, whilst the latter is nearly equilateral. The *undatus* is equally distinct from *cordatus*, Raf., which is comparatively compressed.

Compare Barnes' description, "subtriangular, very tumid, waved," with Lamarck's description of *U. obliqua*, "ovato-rotundate, oblique," and the discrepancy must strike every one; yet both Lea and Deshayes make them one species.

U. undulatus, Barnes. The old specimens of this species have so much resemblance to Say's heros, as even to have deceived Say himself, who abandoned his species, and referred it to Barnes's *undulatus*; but it is a very distinct species, the young shell having little resemblance to that of the latter. There can be no doubt that Barnes figured the species now known as the *costatus* of Raf.

(*o.*) *U. viridis*, Raf. Mr. Lea gives another name to this shell, because he says it is not Rafinesque's species, which it certainly is; yet he does not acknowledge Rafinesque as authority, for he applies his specific names, as in the case of *U. interruptus*, to a species of his own; consequently the shell in question should have been quoted by him as *U. viridis*, Con., unless he has one rule applicable to himself and another referable to other authors. The shell labelled *viridis* by Rafinesque himself in Mr. Poulson's cabinet, is the same as Lea's *Tappianus*.

ANODONTA.

(*a.*) *A. cataracta*, Say. The *Mytilus fluviatilis* of Gmel. and Dillwyn, and the *M. illitus* of Solander, appear to be merely names given to the *Unio ochraceus* in Lister's work, t. 157, fig. 12. The two *Anodontas* figured by Lister, t. 154, 155, and having *Virg.* inscribed upon the plates, I cannot refer to any of our species.

(*b.*) *A. marginata*, Say. Dekay regarded this shell as the young of *implicata*, and it is not unlikely his opinion was correct. It certainly is not Say's *cataracta*.

Supplementary Notes.

U. cuneatus, Raf. Having examined several specimens of this shell, it is found to be a form between *U. patulus* and *U. clavus*, and may be a distinct species.

U. fasciolus, Raf. Mr. Poulson's specimen labelled by Rafinesque, is not *U. multiradiatus*, but certainly *U. subangulatus*, Lea.

U. simplex, Lea. It is strange that Mr. Lea should compare this shell with *U. Hydianus*, to which it bears no resemblance, and at the same time overlook *U. Greenii*, Con. His figure might almost answer for a copy of mine.

U. triangularis, Raf. Mr. Poulson's cabinet contains no authentic specimen of this species, which is one I have never identified. *Pachostea*, *Cliffordiana* and *lateralis* are also uncertain species. *Lampsilis rosea* and *pallida* are probably varieties of *U. ochraceus*.

Table showing the geographical range of the Families Unionidæ, Muteladæ *and* Mycetopodidæ, *and some of the genera and sub-genera.*

Asia.

Family Unionidæ.

Sub-genera.

Naia, *Swains.*
Lanceolaria,* *Con.*
Monodontina, *Con.*

Genera.

Barbala, *Humph.*
Hyriopsis,† *Con.*
Nodularia,‡ *Con.*

Europe.

Sub-genera.

Mysca, *Turton.*
Potamida, *Swains.*

Africa.

Family Muteladæ.

Mutela, *Scopoli.*
Iridella, *Con.*
Pleiodon, *Con.*, *Gray.*
Calliscapha, *Swains.*
Spatha, Lea.

Family Unionidæ.

Sub-genus.

Cælatura,§ *Con.*

Australia.

Family Unionidæ.

Hyridella, *Swains.*
Parreysia, *Con.*
U. multidentatus, Parreyss.
Cucumaria,‖ *Con.*

North America.

Family Unionidæ.

Sub-genera.

Eurinea, *Raf.*, *Agas.*
Lampsilis, *Raf.* *Agas.*
Canthyria, *Swains.*
Theliderma, *Swains.*
Cunicula, *Swains.*

Genera.

Metaptera, *Raf.*, *Agas.*
Strophitus, *Raf.*
Lastena, *Raf.*
Complanaria, *Swains.*, *Agas.*
Alasmodonta, *Say*, *Agas.*

South America.

Family Muteladæ.

Genera.

Leila, *Gray.*
Paxyodon, *Schum.*
Prisodon, *ib.*

Sub-genus.

Iridea, *Swains.*

Family Mycetopodidæ.

Mycetopus, *D'Orb.*

Family Unionidæ.

Genera.

Lamproscapha, *Swains.*
Monocondylæa, *D'Orb.*
Byssodonta, *ib.*

Sub-genus.

Corrugaria, *Con.*

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* U. Grayanus, *Lea.* † U Delphinus, *Gruner.* ‡ U. Douglasiæ, *Gray.*
§ U. Egyptiacus. ‖ U. cucumoides, *Lea.*

Sub-genera of Unio.

NODULARIA, *Con.*

Shell nodose; cardinal teeth robust, single in the right valve; in each valve the principal cardinal tooth is parallel with the lateral teeth, or directed towards the posterior extremity of the shell.

Unio Douglasiæ, Gray.

IRIDEA, *Swains.* South America.

Shell with corrugated radiating folds on the beak or umbo; cardinal teeth granulated, generally curved, elongated. Third muscular impression distinct, not confluent, situated under the anterior portion of the cardinal tooth.

Unio granosus, Lam. To this subgenus I would refer *U. solisiana*, D'Orb., *U. Paranensis*, Lea, *U. rhuacoica*, D'Orb., *U. Fontainiana*, D'Orb., *U. hylœa*, D'Orb., *U. Guaraniana*, D'Orb., *U. Matoniana*, D'Orb., *U. Psammoica*, D'Orb., *U. charruana*, D'Orb.

This sub-genus is very distinct from any of those existing in North America, nor, indeed, does there appear to be any sub-genus in South America identical with a Northern group.

MYSCA, *Turton.* Europe.

The type of this sub-genus, *U. pictorum*, has the third anterior muscular impression deep, and more distinct from the large one, than occurs in any American species of Unio.

LANCEOLARIA, *Con.* China.

Shell elongated; cardinal teeth widely bifid; third muscular impression situated at the base of the anterior lobe of the cardinal tooth, not confluent, and very profoundly impressed; accessory impression small and confluent with the superior margin of the large impression; pallial impression slightly deflected anteriorly.

U. Grayanus, Lea.

CŒLATURA, *Con.* Africa.

Shell thin, not elongated; beaks corrugated or subnodular; cardinal teeth laminar, greatly elongated, parallel with the anterior hinge margin; anterior accessory muscular impressions confluent with the lower part of the larger one; pallial impression slightly deflected.

U. Ægyptiacus, Caill.

CUNICULA, *Swains.* North America.

Shell compressed, thick, lateral teeth robust and receding from the dorsal margin, posterior accessory muscular impression not confluent, and placed at the extremity of the lateral teeth.

U. fasciolaris, lineolatus, Eastbrookianus, subtentus, cælatus, arcus, &c.

I have founded this subgenus on other characters than those given by Swainson.

GLEBULA, *Con.* Lousiana.

Shell with the cardinal teeth granulated and profoundly sulcated or divided into 4 or 5 lobes, irregular, diverging, somewhat resembling those of *Paxyodon;* posterior muscular impression very large and confluent with the accessory, which is obsolete.

U. rotundatus, Lam.

UNIOMERUS, *Con.*

Shell elongated, not thick, with parallel dorsal and basal margins; beaks with obliquely concentric plicæ.

U. declivis, camptodon, subcroceus, Sayii, rivularis, perrectus, symmetricus, and excultus.

The members of this group inhabit almost exclusively the small streams and ponds in the Southern States.

THELIDERMA, *Swains.*

This embraces all the tuberculated species, as U. Phillipsea, fragosus, nobilis, quadrulus, apiculatus, &c. The animal appears to agree with that of the mytiloid species, as U. ruber, coccineus, obliquus, cordatus, &c.

LAMPSILIS, *Raf.*

This includes U. ochraceus, ovatus, cardium, capax, dolabræformis, &c.

EURINEA, *Raf.*

This includes U. nasutus, rectus, productus, Jayensis, lanceolatus, &c.

Proposed New Genera.

CUCUMARIA, *Con.* Australia.

Shell elongated, plicate; cardinal teeth robust, little prominent, obtuse, slightly lobed, transversely sulcated; lateral teeth compressed, not prominent; third anterior muscular impression profound, not confluent, situated immediately under, and near the extremity of the cardinal teeth.

U. cucumoides, Lea.

HYRIOPSIS, *Con.* Asia.

Shell elongated, posteriorly winged; cardinal teeth elongated, very oblique, not prominent, and marked with transverse granulated lines; lateral teeth granulated on the margins; third anterior muscular impression large, not confluent, situated remote from the extremity of the cardinal teeth; anterior accessory muscular impression rather small and more distant from the large impression than in any other sub-genus.

We know only one species, *U. delphinus*, Gruner.

MONODONTINA, *Con.*

Hinge with an obtuse rounded tooth immediately under the beak.

Margaritana Vondenbuschiana, Lea. (*M. Buschiana*, Con.)

CORRIGENDA.

U. angustatus, *Lea*, 1832, vi. &c.

U. capax, *Green*, (Symphynota globosa,) *Lea*, 1834, v. 41, &c.

U. capsæformis, *Lea*, 1834, v. 31, &c.

U. metanever, *read* U. metaneurus.

The Committee on Major Le Conte's paper on the Vines of North America, reported in favor of publication in the Proceedings.

An enumeration of the Vines of North America.

By JOHN LE CONTE, F. L. S.

In attempting to give some account of the vines of our country, a very considerable difficulty arises, even at the outset, from the great similarity of the different species. A family resemblance almost amounting to identity runs through the whole of them. Hence, characters which are taken as distinctive, may appear too slight to warrant us in separating as distinct species what at first sight might appear to be mere varieties. But setting aside the shape and appearance of the leaves, the nature of the fruit and the method of its growth, in most cases, furnish a good criterion for distinguishing closely allied species from each other, which might in vain be sought for elsewhere.

Some years ago, when there existed a *mania* for the cultivation of the vine,