

RAFINESQUE'S TYPES OF UNIO.

BY E. G. VANATTA.

Mr. C. A. Poulson, in *A Monograph of the Fluviatile Bivalves of the Ohio River, Translated from the French of Prof. C. S. Rafinesque, Philadelphia (1832)*, p. v, states that he has "most of the shells described" by Prof. Rafinesque in the *Monographie des Coquilles Bivalves Fluviatiles de la Riviere Ohio*.¹ These shells are now in the collection of The Academy of Natural Sciences of Philadelphia, with Rafinesque's original labels and ink numbers on the specimens. These numbers are the same as those in Prof. Rafinesque's Monograph of 1820.

The fractions given by Rafinesque after each species indicate at what point upon the shell a given dimension is found. The figured species agree well with the types or specimens in hand.

As some of Rafinesque's names are now in use, I believe it will be of interest to determine by what names these shells are known at the present time and the effect on nomenclature if they were recognized and the names dated from 1820.

Many of Rafinesque's species have been credited to Conrad by Mr. C. T. Simpson.²

Dr. H. A. Pilsbry, to whom this paper has been submitted, suggests that it should be explicitly stated that the use of a Rafinesquian name depends upon whether it could be identified by descriptions published prior to any other recognizable name for the same species. That it can be recognized from the types or other specimens from Rafinesque does not entitle his names to acceptance unless the published descriptions are adequate. This question of the adequacy of published diagnoses must be considered for each species separately. It is not taken up in this paper, which deals merely with the question of the identity of the Rafinesque-Poulson specimens.

¹ *Annales Generales des Sciences Physiques*, Tome 5, Bruxelles (1820), p. 287.

² *Proceedings of the United States National Museum*, Vol. 22, No. 1205, p. 501, Washington (1900); *Synopsis of the Naiades or Pearly Freshwater Mussels*, by Charles Torrey Simpson; and in *A Descriptive Catalogue of the Naiades*, by C. T. Simpson, Detroit (1914).

Truncilla triquetra Raf.

Truncilla triquetra (*Unio triquetra*) Raf. Monogr. (1820), p. 300, No. 18, Pl. 81, figs. 1, 2, 3, 4.

The type is A. N. S. P. Coll. No. 20,231.

Length 55, height 37, diam. 32.5 mm.

This is *Truncilla triquetra* Raf. of Simps. Synopsis, p. 517, and A Descriptive Catalogue of the Naiades by C. T. Simpson, Detroit (1914), p. 5.

Truncilla brevidens Lea.

Obliquaria interrupta (*U. do.*) Raf. Monogr. (1820), p. 302, No. 21.

The type is A. N. S. P. Coll. No. 20,257, from the Ohio River.

Length 55.5, height 43, diam. 26.5 mm.

This is *Truncilla brevidens* Lea (1834) of Simps. Synopsis, p. 517, and Descr. Catal., p. 7. It is preoccupied by *Unio solenoides interrupta* Raf. (1820), p. 298, No. 13, var. 1.

Truncilla obliqua Raf.

Obliquaria obliquata (*U. obliquata*) Raf. Monogr. (1820), p. 309, No. 40.

The type is A. N. S. P. Coll. No. 20,226, from the Kentucky River.

Length 59, height 43, diam. 32.5 mm.

This is *Truncilla sulcata* Lea (1830) of Simps. Synops., p. 520, Descr. Catal., p. 14. It is the first name for the species. *Unio sulcatus* Lea (1830) is preoccupied by *Unio cuneata var. sulcata* Raf. Monogr. (1820), p. 313, No. 52, var. 2.

Truncilla torulosa Raf.

Amblema torulosa (*Unio torulosa*) Raf. Monogr. (1820), p. 314, Pl. 82, figs. 11, 12.

The types are A. N. S. P. Coll. No. 20,218. This is the figured specimen.

Length 65, height 48, diam. 33.5 mm.

Tray No. 20,216 is another specimen from the Kentucky River.

Length 66, height 58, diam. 36.5 mm.

Amblema gibbosa (*Unio gibbosa*) Raf. Monogr. (1820), p. 315, No. 56 (not Barnes, 1823).

The type is A. N. S. P. Coll. No. 20,232, from the Ohio River.

Length 40, height 33, diam. 25 mm.

These shells are *Truncilla perplexa* Lea (1831) of Simps. Synops., p. 522, Descr. Catal., p. 24.

Truncilla flexuosa Raf.

Obliquaria flexuosa (*Unio flexuosa*) Raf. Monogr. (1820), p. 306, No. 33.

The type is A. N. S. P. Coll. No. 20,249, from the Kentucky River.

Length 57, height 47, diam. 33 mm.

This is *Truncilla foliata* Hild. (1828) of Simps. Synops., p. 521, Deser. Catal., p. 18.

Lampsilis cardium Raf.

Lampsilis cardium (Unio cardium) Raf. Monogr. (1820), p. 298, No. 14, Pl. 80, figs. 16, 17, 18, 19.

The type is A. N. S. P. Coll. No. 20,210.

Length 106, height 77, diam. 48 mm.

This is *Lampsilis ventricosus* Bar. (1823) of Simps. Synops., p. 526, Deser. Catal., p. 38.

Lampsilis luteolus Lam.

Lampsilis fasciola (Unio fasciola) Raf. Monogr. (1820), p. 299, No. 16.

The type is A. N. S. P. Coll. No. 20,203, one valve only.

Length 66, height 39, diam. 10 mm.

This is *Lampsilis luteolus* Lam. (1819) of Simps. Synops., p. 534, Deser. Catal., p. 60.

Lampsilis ligamentinus Lam.

Unio crassa (Elliptio crassa) (Say) Raf. Monogr. (1820), p. 293, No. 2.

This shell is A. N. S. P. Coll. No. 20,234, from the Ohio River.

Length 113.5, height 76, diam. 46 mm.

The name is preoccupied by *Unio crassa* Retz (1778).

Unio fasciata (Elliptio fasciata) Raf. Monogr. (1820), p. 294, No. 4.

The type is A. N. S. P. Coll. No. 20,222, from the Kentucky River.

Length, 72, height 48, diam. 25.5 mm.

Unio pallens (Obliq. ditto, 1821) Raf. Continuation of a Monogr. of Bivalve shells of the Ohio, etc., by Prof. C. S. Rafinesque, Philadelphia, October (1831), p. 3, No. 94.

The type is A. N. S. P. Coll. No. 20,240. Gift of S. S. Haldeman.

Length 59, height 38, diam. 27.5 mm.

These three species are *Lampsilis ligamentinus* Lam. (1819) of Simps. Synops., p. 539, Deser. Catal., p. 79.

Lampsilis reotus Lam.

Unio latissima (Elliptio latissima) Raf. Monogr. (1820), p. 297, No. 12, Pl. 80, figs. 14, 15.

The type is A. N. S. P. Coll. No. 20,212, from the Ohio River.

Length 112, height 44, diam. 31 mm.

This is *Lampsilis reotus* Lam. (1819) of Simps. Synops., p. 544, Deser. Catal., p. 95.

Lampsilis leptodon Raf.

Unio leptodon (Elliptio leptodon) Raf. Monogr. (1820), p. 295, Pl. 80, figs. 5, 6, 7.

This shell is A. N. S. P. Coll. No. 20,214, from the Kentucky River.

Length 50, height 25, diam. 12.5 mm.

This is *Lampsilis leptodon* Raf. of Simps. Synops., p. 575, Descr. Catal., p. 188.

Lampsilis fragilis Raf.

Unio fragilis (*Elliptio fragilis*) Raf. Monogr. (1820), p. 295, No. 16.

The type is A. N. S. P. Coll. No. 20,209, from creeks in Kentucky.
Length 97, height 64, diam. 32 mm.

This is *Lampsilis gracilis* Bar. (1823) of Simps. Synops., p. 573, Descr. Catal., p. 182.

Lampsilis alatus Say.

Metaptera megaptera (*Unio megaptera*) Raf. Monogr. (1820), p. 300, No. 17, Pl. 80, figs. 20, 21, 22.

The type is A. N. S. P. Coll. No. 20,211, from the Ohio River.
Length 141, height 100, diam. 50 mm.

This is *Lampsilis alatus* Say (1816) of Simps. Synopsis, p. 567, Descr. Catal., p. 162.

Obovaria retusa Lam.

Obovaria torsa (*Unio torsa*) Raf. Monogr. (1820), p. 311, No. 46, Pl. 82, figs. 1, 2, 3.

The type is A. N. S. P. Coll. No. 20,256, from the Kentucky River.
Length 56, height 57, diam. 36 mm.

This is *Obovaria retusa* Lam. (1819) of Simps. Synops., p. 599, Descr. Catal., p. 290.

Obovaria subrotunda Raf.

Obliquaria subrotunda (*U. subrotunda*) Raf. Monogr. (1820), p. 308, No. 38, Pl. 81, figs. 21, 22, 23.

This shell is A. N. S. P. Coll. No. 20,254, from the Kentucky River.
Length 26.5, height 25.5, diam. 19 mm.
This is not *Unio subrotunda* Lea (1831).

Obovaria striata (*Unio striata*) Raf. Monogr. (1820), p. 311, No. 47.

The type is A. N. S. P. Coll. No. 20,205, from the Ohio River.
Length 44, height 41.5, diam. 27.5 mm.

This is not *Unio striata* Lea (1840).

These two shells are *Obovaria circulus* Lea (1829) of Simps. Synops., p. 600, Descr. Catal., p. 291.

Obovaria levigata Raf.

Unio levigata (*Elliptio levigata*) Raf. Monogr. (1820), p. 296, No. 9, Pl. 80, figs. 11, 12, 13.

The types are A. N. S. P. Coll. No. 20,255, from the Kentucky River.

Length 27, height 22, diam. 14 mm.

Length 25, height 21, diam. 13 mm.

1915.]

This is *Obovaria lens* Lea (1831) of Simps. Synops., p. 600, Descr. Catal., p. 293.

Obovaria olivaria Raf.

Amblema olivaria (*U. olivaria*) Raf. Monogr. (1820), p. 314, No. 53.

The types are A. N. S. P. Coll. No. 20,251, from the Kentucky River.

Length 58, height 46, diam. 32 mm.

Length 53, height 40, diam. 29 mm.

This is *Obovaria ellipsis* Lea (1828) of Simps. Synops., p. 602, Descr. Catal., p. 299.

Plagiola lineolata Raf.

Obliquaria depressa (*U. depressa*) Raf. Monogr. (1820), p. 303, No. 22, Pl. 81, figs. 5, 6, 7.

The type is A. N. S. P. Coll. No. 20,207, from the Ohio River.

Length 50, height 37, diam. 16 mm.

This is not *Unio depressa* Lam. (1819).

Obliquaria lineolata (*U. lineolata*) Raf. Monogr. (1820), p. 303, No. 23.

The type is A. N. S. P. Coll. No. 20,242, from the Ohio River.

Length 71, height 61, diam. 33 mm.

Obliquaria ellipsaria (*U. ellipsaria*) Raf. Monogr. (1820), p. 303, No. 24.

This shell is A. N. S. P. Coll. No. 20,233, from the Ohio River.

Length 58.5, height 48, diam. 39.5 mm.

These three shells are *Plagiola securis* Lea (1829) of Simps. Synops., p. 603, Descr. Catal., p. 304.

Plagiola elegans Lea.

Truncilla truncata (*Unio truncata*) Raf. Monogr. (1820), p. 301, No. 19.

The type is A. N. S. P. Coll. No. 20,217, from the Falls of the Ohio River.

Length 42, height 36, diam. 22.5 mm.

This is not *Unio truncata* Spengl. (1793).

Unio metaplata (*Tr. do. 1822*) Raf. Continuation of Monogr. (1831), p. 4, No. 101.

The type is A. N. S. P. Coll. No. 20,258, from the Cumberland River, gift of S. S. Haldeman.

Length 47, height 39, diam. 27 mm.

These two shells are *Plagiola elegans* Lea (1831) of Simps. Synops., p. 604, Descr. Catal., p. 307.

Tritogonia verrucosa Raf.

Obliquaria verrucosa (*U. verrucosa*) Raf. Monogr. (1820), p. 304, No. 26, Pl. 81, figs. 10, 11, 12.

The types are A. N. S. P. Coll. No. 20,235, from the Ohio River.

Length 100, height 56, diam. 32 mm.

Length 93, height 53, diam. 28 mm.

This is *Tritogonia tuberculata* Bar. (1823) of Simps. Synops., p. 608, Descr. Catal., p. 318. *Unio tuberculata* Bar. (1823) is preoccupied by *Unio tuberculata* Raf. Monogr. (1820), pp. 308, 311, 312.

Cyprogenia stegaria Raf.

Obovaria stegaria (*Unio stegaria*) Raf. Monogr. (1820), p. 312, No. 49, Pl. 82, figs. 4, 5, var. 1, *tuberculata* Raf.

The type is A. N. S. P. Coll. No. 20,241, from the Ohio River.

Length 47, height 49, diam. 32 mm.

This is *Cyprogenia irrorata* Lea (1830) of Simps. Synops., p. 610, Descr. Catal., p. 326. The name *tuberculata* is preoccupied by Raf. Monogr. (1820), p. 308, No. 37.

Obliquaria reflexa Raf.

Obliquaria reflexa (*U. reflexa*) Raf. Monogr. (1820), p. 306, No. 31.

The types are A. N. S. P. Coll. No. 20,206, from Letart Falls.

Length 54, height 49, diam. 34 mm.

Length 50.5, height 46.5, diam. 35 mm.

This is *Obliquaria reflexa* Raf. of Simps. Synops., p. 611, Descr. Catal., p. 330.

Ptychobranchus fasciolaris Raf.

Obliquaria fasciolaris (*U. fasciolaris*) Raf. Monogr. (1820), p. 303, No. 25.

The type is A. N. S. P. Coll. No. 20,253, from the Kentucky River.

Length 81, height 49, diam. 28 mm.

This is *Ptychobranchus phaseolus* Hild. (1828) of Simps. Synops., p. 612, Descr. Catal., p. 333.

Lastena lata Raf.

Anodonta lata (*Lastena lata*) Raf. Monogr. (1820), p. 317, No. 59, Pl. 82, figs. 17, 18.

The type is A. N. S. P. Coll. No. 20,227, from the Kentucky River.

Length 61.5, height 25, diam. 13 mm.

This is *Lastena lata* Raf. of Simps. Synops., p. 654, Descr. Catal., p. 453.

Symphynota viridis Raf.

Unio viridis (*Elliptio viridis*) Raf. Monogr. (1820), p. 293, No. 3, var. 2, *fuscata* Raf. l.c., p. 294.

The type is A. N. S. P. Coll. No. 20,219, from the Kentucky River, only one valve.

Length 46.5, height 28, diam. 8 mm.

This is *Symphynota viridis* Conr. (1836) of Simps. Synops., p. 663, Descr. Catal., p. 484.

Unio dilatata Raf.

Unio dilatata (*Elliptio dilatata*) Raf. Monogr. (1820), p. 297, No. 11.

The types are A. N. S. P. Coll. No. 20,248, from the Kentucky River.

Length 76.5, height 42, diam. 24 mm.

Another specimen, No. 20,236.

Length 102, height 49, diam. 30 mm.

Obliquaria sinuata (*Unio sinuata*) Raf. Monogr. (1820), p. 321, No. 67.

The type is A. N. S. P. Coll. No. 20,252, from the Kentucky River.

Length 110, height 61, diam. 37 mm.

These shells are *Unio gibbosus* Bar. (1823) of Simps. Synopsis, p. 703, Descr. Catal., p. 597. This is not *Unio gibbosus* Raf. Monogr. (1820), p. 315, No. 56.

Unio crassidens Lam.

Unio nigra (*Elliptio nigra*) Raf. Monogr. (1820), p. 291, No. 1, Pl. 80, figs. 1, 2, 3, 4.

The type is A. N. S. P. Coll. No. 20,243, from the Ohio River.

Length 73, height 47, diam. 30.5 mm.

This is *Unio crassidens* Lam. (1819) of Simps. Synops., p. 706, Descr. Catal., p. 606.

Unio buxeus Lea.

Unio pusilla Raf. (1820), p. 308, No. 39, is earlier than *Unio pusillus* Lea (1840), but *Unio buxeus* Lea (1852) can be used for the species, Simps. Synops., p. 708, Descr. Catal., p. 611.

Pleurobema clava Lam.

Unio elliptica (*Elliptio elliptica*) Raf. Monogr. (1820), p. 296, No. 8.

The type is A. N. S. P. Coll. No. 20,213.

Length 34, height 29, diam. 29.5 mm.

Obliquaria scalenia (*U. scalenia*) Raf. Monogr. (1820), p. 309, No. 42, Pl. 81, figs. 24, 25.

The type is A. N. S. P. Coll. No. 20,229, from Ohio.

Length 54, height 35, diam. 26 mm.

Pleurobema cuneata (*Unio cuneata*) Raf. Monogr. (1820), p. 313, No. 52.

The type is A. N. S. P. Coll. No. 20,228, from the Ohio River.

Length 65, height 45, diam. 31 mm.

These shells are all *Pleurobema clava* Lam. (1819) of Simps. Synops., p. 745, Descr. Catal., p. 735.

I believe *Pleurobema mytiloides* (*U. mytiloides*) Raf. Monogr. (1820) p. 313, No. 51, Pl. 82, figs. 8, 9, 10, is also *P. clava* Lam., but unfortunately the type is not in the collection here.

Pleurobema cyphia Raf.

Obliquaria cyphia (*U. cyphia*) Raf. Monogr. (1820), p. 305, No. 29.

The type is A. N. S. P. Coll. No. 20,239, from the Ohio River.

Length 83, height 58, diam. 36 mm.

This is *Pleurobema aesopus* Green (1827) of Simps. Synops., p. 764, Deser. Catal., p. 806.

Quadrula costata Raf.

Amblema costata (*Unio costata*) Raf. Monogr. (1820), p. 315, No. 57, Pl. 82, figs. 13, 14.

The type is A. N. S. P. Coll. No. 20,246, from small creeks in Kentucky.

Length 66, height 53, diam. 24 mm.

This is *Quadrula undulata* Bar. (1823) of Simps. Synops., p. 569, Deser. Catal., p. 819.

Quadrula cylindricus Say.

Unio solenoides (*Elliptio solenoides*) Raf. Monogr. (1820), p. 298, No. 13.

The type is A. N. S. P. Coll. No. 20,204, from the Ohio River.

Length 73, height 32.5, diam. 27 mm.

This is *Quadrula cylindricus* Say (1816) of Simps. Synops., p. 773, Deser. Catal., p. 832.

Quadrula metanevra Raf.

Obliquaria metanevra (*Unio metanevra*) Raf. Monogr. (1820), p. 305, No. 30, Pl. 81, figs. 15, 16.

The types are A. N. S. P. Coll. No. 20,238, from the Ohio River.

Length 87, height 68, diam. 51 mm.

Length 31, height 27, diam. 12 mm.

This is *Quadrula metanevra* Raf. of Simps. Synops., p. 774, Deser. Catal., p. 834.

Quadrula quadrula Raf.

Obliquaria quadrula (*Unio quadrula*) Raf. Monogr. (1820), p. 307, No. 35.

This shell is A. N. S. P. Coll. No. 20,224, from the Salt River.

Length 60, height 49, diam. 31 mm.

This is *Quadrula lachrymosa* Lea (1828) var. *asperrima* Lea (1831) of Simps. Synops., p. 776, Deser. Catal., p. 842.

Quadrula pustulosa Lea.

Obliquaria retusa (*Unio retusa*) Raf. Monogr. (1820), p. 306, No. 32, Pl. 81, figs. 19, 20.

The type is A. N. S. P. Coll. No. 20,220, from the Green River, one valve.

Length 31, height 26, diam. 7 mm.

This is probably *Quadrula pustulosa* Lea (1831) of Simps. Synops., p. 780, Deser. Catal., p. 848.

This is not *Unio retusa* Lam. (1819).

Quadrula pustulosa pernodosa Lea.

Obliquaria bullata (*U. bullata*) Raf. Monogr. (1820), p. 307, No. 36.

The type is A. N. S. P. Coll. No. 20,250, from the Kentucky River

Length 51, height 52, diam. 28.5 mm.

This is *Quadrula pustulosa pernodosa* Lea (1845) of Simps. Synops., p. 780, Deser. Catal., p. 851. This name *U. bullata* Raf. is pre-occupied by *Unio flexuosa var. bullata* Raf. Monogr. (1820), p. 307, No. 33, var. 1.

Quadrula nodulata Raf.

Obliquaria nodulata (*Unio nodulata*) Raf. Monogr. (1820), p. 307, No. 34, Pl. 81, figs. 17, 18.

The types are A. N. S. P. Coll. No. 20,225, from the Kentucky River.

Length 51, height 43.5, diam. 31 mm.

Length 29.5, height 21.5, diam. 8 mm. (one valve).

This is *Quadrula pustulata* Lea (1834) of Simps. Synops., p. 781, Deser. Catal., p. 856.

Quadrula flava Raf.

Obliquaria flava (*U. flava*) Raf. Monogr. (1820), p. 305, No. 28, Pl. 81, figs. 13, 14.

The type is A. N. S. P. Coll. No. 20,230, from small creeks in Kentucky.

Length 46, height 36, diam. 18 mm.

This is *Quadrula rubiginosa* Lea (1829) of Simps. Synops., p. 786, Deser. Catal., p. 872.

Quadrula obliqua Lam.

Obliquaria lateralis (*U. lateralis*) Raf. Monogr. (1820), p. 310, No. 43.

The types are two valves, A. N. S. P. Coll. No. 20,247, from the Kentucky River.

Length 75, height 67, diam. 20 mm.

Length 71, height 62, diam. 20 mm.

This is *Quadrula obliqua* Lam. (1819) of Simps. Synops., p. 788, Deser. Catal., p. 881.

Quadrula rubra Raf.

Obliquaria rubra (*U. rubra*) Raf. Monogr. (1820), p. 214, No. 54.

The type is A. N. S. P. Coll. No. 20,237.

Length 87, height 66, diam. 40 mm.

This is *Quadrula pyramidata* Lea (1834) of Simps. Synops., p. 790, Descr. Catal., p. 888.

Quadrula cordata Raf.

Obovaria cordata (Unio cordata) Raf. Monogr. (1820), p. 312, No. 50, Pl. 82, figs. 6, 7.

The type is A. N. S. P. Coll. No. 20,221, one valve, from the Ohio River.

Length 61, height 63, diam. 19 mm.

This is *Quadrula plena* Lea (1840) of Simps. Synops., p. 790, Descr. Catal., p. 886.

Quadrula sintoxia Raf.

Obliquaria sintoxia (Unio sintoxia) Raf. Monogr. (1820), p. 310, No. 44.

The type is A. N. S. P. Coll. No. 20,208, from the Ohio River.

Length 97, height 71, diam. 41.5 mm.

This is *Quadrula subrotunda* Lea (1831) of Simps. Synops., p. 791, Descr. Catal., p. 892. *Unio subrotunda* Lea (1831) is preoccupied by *Unio subrotunda* Raf. Monogr. (1820), p. 308, No. 38:

Quadrula obovalis Raf.

Obovaria obovalis (Unio obovalis) Raf. Monogr. (1820), p. 311, No. 45.

The type is A. N. S. P. Coll. No. 20,224, from the Ohio River.

Length 41, height 46.5, diam. 29 mm.

This is *Quadrula ebenus* Lea (1831) of Simps. Synops., p. 793, Descr. Catal., p. 897.

Quadrula tuberculata Raf.

Obliquaria tuberculata (U. tuberculata) Raf. Monogr. (1820), p. 308, No. 37.

The type is A. N. S. P. Coll. No. 20,215, from the Ohio River.

Length 59, height 54, diam. 29 mm.

This is *Quadrula tuberculata* Raf. of Simps. Synops., p. 795, Descr. Catal., p. 903.

The following names are proposed by Prof. Rafinesque in Monogr. (1820) which are not mentioned in Simpson's Synopsis: *Unio alternata* p. 294, *angulata* p. 315, *aurata* p. 295, *decorticata* p. 302, *difformis* p. 315, *fasciolata* p. 312, *fusca* p. 293, *fuscata* p. 294, *lineata* p. 314 (not Gmel. 1792), *longa* p. 304, *maculata* p. 293, *marginata* p. 311, *nigrescens* p. 309, *nigrofasciata* p. 294, *obliterata* p. 304, *olivaceu* p. 295, *pallida* p. 314, *radiata* p. 294, *rosea* p. 311, *semiradiata* p. 295, *teres* p. 312, *vermiculata* p. 301, *zonalis* p. 297, *Lampsilis pallida* p. 299, *rosea* p. 299; *Anodonta atra* p. 316, *cuneata* p. 316, *mutabilis* p. 317, *nigrescens* p. 317, *radiata* p. 317 (not Müll. 1774), *violacina* p. 317.

Unio rafinesquei n. n.

I propose the name *Unio rafinesquei* for *Unio fuscatus* Lea, Obs. iv, p. 35, Pl. 40, fig. 4 (not *U. fuscata* Raf. 1820); Simps. Synopsis, p. 717; Deser. Catal., p. 643.

Pleurobema simpsoni n. n.

I propose the name *Pleurobema simpsoni* for *Unio striatus* Lea, Obs. iii, p. 41, Pl. 12, fig. 16 (not *U. striata* Raf. 1820); Simps. Synopsis, p. 762; Deser. Catal., p. 795.

Pleurobema conradi n. n.

I propose the name *Pleurobema conradi* for *Unio maculatus* Conr. New. F. W. Shells (1834), p. 30, Pl. 4, fig. 4 (not *U. maculata* Raf. 1820); Simps. Synops., p. 746; Deser. Catal., p. 737.