

BULLETIN
OF THE
ILLINOIS STATE LABORATORY
OF
NATURAL HISTORY

URBANA, ILLINOIS, U. S. A.

VOL. VII.

SEPTEMBER, 1906

ARTICLE VI.

A CATALOGUE OF THE MOLLUSCA OF ILLINOIS.

BY

FRANK COLLINS BAKER

Curator of the Chicago Academy of Sciences.

ERRATA AND ADDENDA.

- Page 55, line 15, for 1854 read 1855.
Page 55, line 16, for *Horticultural* read *State Agricultural*.
Page 60, in second table, Illinois, for 240 read 241.
Page 65, first line above foot-note, for *ventricosa* read *ligamentina*.
Page 72, line 9, for *imbecilis* read *imbecillis*.
Page 79, line 19, for *asperimus* read *asperrimus*.
Page 80, above *Quadrula rubiginosa* insert Section *Fusconaia* Simpson.
Page 76. The record of Calkins for *Margaritana margaritifera* is without doubt erroneous and should be eliminated. This species is not found in Illinois.
Page 95. *Pomatiopsis sheldonii* Pilsbry should read *Ammicola sheldonii* and should be transferred to the genus *Ammicola* on page 93.
Page 100. *Physa gyrina oleacea* Tryon is the immature stage of *Physa gyrina*.
Page 103. *Lymnæa tazewelliana* is a synonym of *Lymnæa parva*.
Page 105. *Lymnæa palustris michiganensis* is the immature form of *Lymnæa reflexa*.
Page 106. *Lymnæa reflexa iowensis* and *Lymnæa reflexa crystalensis* are synonyms of *Lymnæa reflexa*.
Page 112, line 6 from bottom, for *gouldi* read *gouldii*.
Page 114, line 5 from bottom, for *juxtigens* read *juxticens*.
Page 115, line 21, for *Witter* read *Walker*; line 23, *Polygyra sayii* Binney should be changed to *Polygyra sayana* Pilsbry.
Page 116, line 1. *Polygyra exoleta* Binney (1885) should be changed to *Polygyra zaleta* Binney (1837).
Page 117, line 11 from bottom, for *leai* read *leaii*; line 3 from bottom, *Polygyra monodon fraterna* is a good species and should read *Polygyra fraterna*.
Page 119, foot-note. A specimen of *alliaris* in the collection of Mr. Aldrich, received from Calkins, proves to be *draparnaldi*.
Page 121, line 3 from bottom, for *Champaign* read *Piatt*.
Page 122, line 12 from bottom, for *Pyramidula striatella* Anthony read *Pyramidula cronkkiti anthonyi* Pilsbry; line 4, for *Held* read *Hald*.
Page 123, for *Helicodiscus lineatus* Say read *Helicodiscus parallelus* Say.
Page 162, line 7, for *glandulosa* read *linearis*.
Page 171, line 17, for *riparia* read *vulpina*.
Page 176, line 8 from bottom, for *canadense* read *majus*.
Page 180, line 9, for *virginica* read *virginiana*.
Page 221, line 6 from bottom, for *rectangulus* read *rectangularis*.
Page 226, line 3, for *fasciatus* read *fasciata*.
Page 239, line 11, strike out Lake Co. entry.
Page 246, lines 6 and 7, and page 248, lines 1, 14, 20, and 23, for *Ænothera* read *Onagra*.
Page 248, line 4, for *candida* Horn substitute n. sp.

Page 249, line 8 from bottom, for *Olethreutes dimidiana* Sodoff? read *Olethreutes separatana* Kearfott, and strike out parenthetical matter.

Page 251, line 7, for *grossa* read *thoracica*; line 21, for words preceding H. 6, read *Asilus rufipennis* Hine; line 18 from bottom, for words preceding H. 2, substitute *Asilus cacopilogus* Hine.

Page 253, line 8, for *Linn.* read *Emory*.

Page 257, line 15, for *pennsylvanicus* DeG. read *auricomus* Rob.

Page 261, Note 6. *Melanoplus macneilli* is very probably *M. fluviatilis* Brun.

Page 262, Note 9. Dr. Bergroth writes that *Nabis elongatus* is preoccupied. The original is *elogantus* in the check list. Comparison with long-winged *vicarius* is desirable before re-naming it.

Page 309, in table, for 59 read 57, and for 743 read 741.

Page 310, in table, for 59 read 57.

Page 314, line 5, for 1587 read 481; line 16, after *stubble* insert *meadows*; line 17, after *pastures* strike out *and meadows*, and after 1500 strike out *each*.

Page 315, last line, for 553 read 481.

Page 362, line 7 from bottom, for *longa* read *parvilamellata*.

Page 373. As a second entry in synonymy insert as follows:

1854. *Nothrus bistriatus*, Nicolet, *Acariens des Environs de Paris*, p. 397, Pl. VII., Fig. 7.

Page 376, line 13 from bottom, for *Oribata* read *Oribates*.

Page 378, line 1, for XXV. read XXXV.

Page 384, after line 5 insert as follows:

N. bipilis Hermann. *Mem. Apt.*, p. 95.

In moss, Arcola and Parker, Ill.

Page 384, line 5 from bottom, for *pyrostigma* read *pyrostigmata*.

Page 386, after line 11 from bottom insert as follows:

H. bistrinata Nicolet. *Acariens des Environs de Paris*, p. 397, Pl. VII., Fig. 7.

Under logs and in moss, Urbana and Arcola, Ill.

Page 388, line 12, for *sphærum* read *sphærule*.

Map of Illinois, showing the number of species of mollusks which have been recorded from each county. The higher figures indicate in which counties systematic work has been done.



JO DAVIENESS 2 STEPHENSON 1 WINNEBAGO 75 McHENRY 80 LAKE 58
 CARROLL 40 OGLE 32 KANE 58 COOK 141
 WHITESIDE 1 DEKALB 2 DU PAGE 10
 RICHARDSON 17 LYNN R. LEE 2 KENDALL 120 WILL 110
 HENRY 1 LA SALLE 2
 MERCER 113 PUTNAM 3 GRUNDY 2
 WARREN 2 STARK 6 MARSHALL 3 KANKAKEE 2
 KNOX 2 PEORIA 36 WOODFORD 25 LIVINGSTON 12 IROQUOIS 4
 HANCOCK 8 MCDONOUGH 15 TAZEWELL 12 FORD 4
 ADAMS 56 SCHUYLER 1 MASON 98 LOGAN 2 DEWITT 23 CHAMPAIGN 4
 BROWN 1 CASS 2 MENARD 3 MACON 2 PIATT 3
 PIKE 1 MORGAN 6 SANGAMON 1 MOULTRIE 1 DOUGLAS 3 EDGAR 3
 SCOTT 1 CHRISTIAN 1 SHELBY 1
 GREENE 1 MONTGOMERY 1 CUMBERLAND 1 CLARK 1
 JERSEY 1 MACOUPIN 1 FAYETTE 1 EFFINGHAM 1 JASPER 1
 MADISON 2 BOND 1 CLAY 1 RICHLAND 1 LAWRENCE 1
 ST CLAIR 4 MARION 1 WAYNE 1
 MONROE 1 WASHINGTON 37 JEFFERSON 1
 RANDOLPH 1 PERRY 5 FRANKLIN 1
 JACKSON 20 SWILAMSON 5 WASHINGTON 10
 UNION 14 JOHNSON 8 SALINE 5 GALLATIN 12
 ALEXANDER 1 HUNTER 17 HARDSYDE 17
 PULASKI 1 HANNAH 1
 OHIO 1

ARTICLE VI.—*A Catalogue of the Mollusca of Illinois.* BY
FRANK COLLINS BAKER.

INTRODUCTORY.

The following catalogue of Illinois mollusks is intended to record every reference to the Mollusca occurring in the state which may be found in the few published lists, and also all scattered references to the same, wherever published. The bibliography is believed to contain a majority of the publications referring to the Mollusca of the state, but it can scarcely be complete, since references probably exist which are unknown to the author.

The classification is that of Dall, Pilsbry, and Simpson. The valid species (so considered at the present time) overhang at the margin, while those specific names which have been used in Illinois references and which are now considered synonyms follow in parenthesis. In indicating the geographical distribution the author has deemed it best simply to quote every locality from which specimens have been recorded, adding after each locality, in parenthesis, the name of the collector or author who is authority for the same. By this means an exact census of our molluscan fauna will be secured, based on actual collections. There have been several references to species which are evidently founded on misidentifications. These are indicated in foot-notes under their respective genera. Several species are listed on the authority of correspondents, and the identifications have not been verified.

Acknowledgments are due to the following Illinois conchologists, who kindly furnished more or less exhaustive lists: Mr. A. A. Hinkley, DuBois; Mr. J. H. Ferriss and Mr. J. H. Handwerk, of Joliet; Mr. W. A. Marsh, Aledo; Dr. W. A. Nason, Algonquin; Dr. W. S. Strode, Lewiston; and Mr. Charles A. Hart, of Urbana. The following persons have also aided in the work, either by presenting collections to the Chicago Academy

of Sciences or by loaning material for study: Professor W. K. Higley, T. Jensen, John Henry, A. W. Conner, J. D. Hood, Thomas Swick, Carl Dilg, W. W. Calkins, W. W. Cooper, F. M. Woodruff, H. B. Derr, Dr. H. N. Lyon, H. Fischer, E. W. Engleholm, R. L. Rea, and James Zetek, of Chicago; J. H. Ferriss, J. H. Handwerk, and Mr. Oakes, of Joliet; E. Chamberlain and V. H. Chase, Wady Petra; Benjamin T. Gault, Glen Ellyn; L. E. Daniels, La Porte, Indiana; and Mrs. E. C. Wiswall, Kenosha, Wisconsin. Collections made by Robert Kennicott, E. W. Nelson, and J. W. Velie are in the collection of the Chicago Academy of Sciences, and have been used in preparing this catalogue.

The following gentlemen have kindly identified the groups indicated, and my thanks are due to them: Dr. H. A. Pilsbry, Academy of Natural Sciences, Philadelphia, Penn., various land and fresh-water shells; Mr. Bryant Walker, Detroit, Mich., *Ancylis* and other fresh-water shells; and Dr. V. Sterki, New Philadelphia, Ohio, *Corneocyclas* and *Pupidae*. These gentlemen have also identified considerable material in the State Laboratory collection.

My thanks are especially due to Prof. S. A. Forbes, Director of the State Laboratory of Natural History, Urbana, for the privilege of studying and listing the very large collection of Illinois mollusks under his charge.

This catalogue is but a tentative list, and additions and corrections are earnestly solicited from all interested persons.

In the following pages the writer has aimed to present a condensed survey of our knowledge concerning the molluscan fauna of the state of Illinois. The position of the state, lying, as it does, with the Mississippi River on the west, the Wabash River on the east, the Ohio River on the south, and Lake Michigan on the north, not to speak of the Illinois, Kaskaskia, Rock, and other rivers intersecting the state, is particularly favorable to the presence of a varied and abundant molluscan fauna. The rich woodlands bordering or near the watercourses also afford favorite retreats for the terrestrial species, about one sixth of the surface being forest-covered.

There are two main drainage areas, one, very small, in the northern part of the state, draining into Lake Michigan, and the other, including the larger part of the state, draining into the Mississippi River by way of the Illinois, Rock, Fox, Desplaines, Kankakee, Wabash, and Ohio, and other rivers and streams. When the state is more thoroughly explored conchologically it will probably be found that its mollusks will show peculiar geographical variations due to its extent through five and a half degrees of latitude (from 37° to $42\frac{1}{2}^{\circ}$).

While the literature relating to the Mollusca of Illinois is rather extensive, it is a singular fact that not one catalogue has been published which gives a list of all of the species of the state. Some of the more extensive catalogues which have been published are mentioned below.

In 1854 Mr. H. A. Uffers published a list of the Mollusca of Southern Illinois in the Transactions of the Illinois Horticultural Society (Vol. I., p. 610). This included 87 species. Of these, 14 are now considered synonyms.

In 1871 Mr. John Wolf published his "Catalogue of the Shell-bearing Mollusca of Fulton County, Illinois," in the American Journal of Conchology (Vol. VI., p. 27), listing 138 species, of which 8 are now considered synonyms.

In 1874 Mr. W. W. Calkins listed the Mollusca of Northern Illinois in the Cincinnati Quarterly Journal of Science (Vol. I., p. 321). This list included 129 species, of which but 6 are now considered synonyms. The same author, in the Proceedings of the Ottawa Academy of Sciences for 1874, enumerates 105 species as occurring in La Salle County.

In 1887-89 Mr. William A. Marsh enumerated 110 species of land and fresh-water shells as found in Mercer county, his lists being published in the Conchologist's Exchange (Vol. I. and II.) and in the Nautilus (Vol. III.). Several of the species listed are now considered synonyms.

Dr. W. S. Strode (Nautilus, Vol. V., p. 61, American Naturalist, Vol. XXVI., p. 495) enumerates 35 species, mostly Unios, from Spoon River, near Bernadotte.

In 1898 Mr. John W. Huett published a volume on "The Natural History of La Salle County, Illinois," in which (Part II., p. 96) 92 species of land and fresh-water shells are listed.

In 1898-1902 Mr. Frank C. Baker published a report on "The Mollusca of the Chicago Area", in which 164 species are recorded for Cook, Du Page, and Will counties.

In addition to these more or less extensive lists, numerous papers have been published in which Illinois shells are mentioned, and also quite a number which are devoted to critical remarks or notes on the geographic distribution or economic value of Illinois mollusks. The works of Binney, Bland, Conrad, Haldeman, Küster, Lea, Pilsbry, Prime, Say, Simpson, Sterki, Tryon, and Walker contain many references to Illinois species, as well as descriptions of some species new to science.

There have been twenty-eight species and varieties new to science described from Illinois specimens. These are as follows:

- Unio upsoni* Marsh. Mercer County.
Sphaerium lilycashense Baker. Lilycash Creek.
 " *stamineum forbesi* Baker. Matanzas Lake.
Musculium hodgsoni Sterki. Albion.
Corneocyclus handwerki Sterki. Lilycash Creek.
 " *roperi* Sterki. Higginbotham's Spring, Joliet.
Campeloma subsolidum Anthony. Illinois.
Annicola pilsbryi Walker. Rockford.
Pyrgulopsis mississippiensis Pilsbry. Mississippi River, near Rock River.
 " *scalariformis* Wolf. Tazewell Co. shore, Illinois River.
Pleurocera lewisii Lea. Peoria.
 " *moniliferum* Lea. Ohio River, near its mouth, in Illinois.
Goniobasis grosvenorii Lea. Fox River.
Physa hildrethiana Lea. A lake in Illinois.
 " *elongata* Say. Shores of Illinois.
Lymnaea tazewelliana Wolf. Tazewell Co. shore, Illinois River.
 " *woodruffi* Baker. Lake Michigan.
 " *ferrissii* Baker. Joliet.
 " *sufflatus* Calkins. Calumet River, Chicago.
 " *reflexa jolietensis* Baker. Joliet.
 " *reflexa crystallensis* Baker. Crystal Lake.
Vallonia parvula Sterki. Joliet.
Zonites upsoni Calkins. Rockford.
Vertigo tridentata Wolf. Canton.

- Succinea calumetensis* Calkins. Calumet Marshes, Chicago.
 “ *peoriensis* Wolf. Peoria.
 “ *illinoisensis* Wolf. Canton.
Polygyra multilineata algonquinensis Nason. Algonquin.

Of the above list the following are now considered synonyms of other species:

- Unio upsoni* = *Lampsilis ligamentina* Lamarck.
Goniobasis grosvenorii = *Goniobasis semicarinata* Say.
Physa elongata = *Aplexa hypnorum* Linné.
Lymnaea ferrissii = *Lymnaea caperata* Say.
 “ *sufflatus* = *Lymnaea palustris* Müller.
Zonites upsoni = *Vertigo orata* Say.
Succinea calumetensis = *Succinea retusa* Lea.

Illinois lies wholly within Binney's Interior Region of the Eastern Province. Of the 69 species mentioned by Binney as inhabiting this region, all but 8 have been found in Illinois. It will thus be seen that the Illinois molluscan fauna is typical of the interior region. Among the land shells the families *Zonitidae* and *Helicidae* are represented by the largest number of species; among the genera, *Polygyra* is the most noteworthy.

The Mississippi Valley is the metropolis of the pearly freshwater mussels (*Unionidae*), and the position of the state, bordered on the west by the Mississippi River and on the south and east by the Ohio and Wabash rivers, has produced a large and varied *Unio* fauna, no less than 98 species and varieties being found in the various rivers and lakes. The *Sphaeriidae*, *Viviparidae*, *Amnicolidae*, and *Lymnaeidae* are also notably developed.

The fluviatile species are distributed among 9 families and 47 genera. Of these, 2 families and 25 genera are bivalves, 3 families and 7 genera are pulmoniferous, and 4 families and 15 genera are branchiferous and operculate, as is evident from the following list.

FLUVIATILE MOLLUSKS.

Family.	Genus.	No. of Species.	No. of Varieties.
<i>Unionidae</i>	<i>Truncilla</i>	6	1
	<i>Lampsilis</i>	24	
	<i>Micromya</i>	1	
	<i>Obovaria</i>	4	

Family.	Genus.	No. of Species.	No. of Varieties.
<i>Unionidæ</i> [Cont.]	<i>Plagiola</i>	3	
	<i>Tritogonia</i>	1	
	<i>Cyprogenia</i>	1	
	<i>Obliquaria</i>	1	
	<i>Ptychobranchius</i>	1	
	<i>Dromus</i>	1	
	<i>Strophitus</i>	1	1
	<i>Anodonta</i>	6	2
	<i>Lastena</i>	1	
	<i>Anodontoides</i>	1	1
	<i>Arcidens</i>	1	
	<i>Symphynota</i>	3	
	<i>Alasmidonta</i>	2	
	<i>Hemilastena</i>	1	
	<i>Margaritana</i>	2	
	<i>Unio</i>	3	2
	<i>Pleurobema</i>	3	
	<i>Quadrula</i>	22	2
	<i>Sphæriidæ</i>	<i>Sphærium</i>	9
<i>Musculium</i>		9	
<i>Corneocyclas</i>		24	5
<i>Viriparidæ</i>	<i>Viripara</i>	3	1
	<i>Campeloma</i>	6	2
	<i>Lioplax</i>	1	
<i>Valvatidæ</i>	<i>Valvata</i>	4	3
<i>Annicolidæ</i>	<i>Bythinia</i>	1	
	<i>Annicola</i>	7	3
	<i>Paludestrina</i>	1	
	<i>Somatogyrus</i>	4	1
	<i>Pomatiopsis</i>	3	
	<i>Pyrgulopsis</i>	2	
	<i>Angitrema</i>	2	
<i>Pleuroceridæ</i>	<i>Lithasia</i>	2	
	<i>Pleurocera</i>	12	2
	<i>Goniobasis</i>	9	
	<i>Anculosa</i>	3	
	<i>Physa</i>	9	2
<i>Physidæ</i>	<i>Aplexa</i>	1	
	<i>Ancylus</i>	10	1
<i>Ancylidæ</i>	<i>Gundlachia</i>	2	
	<i>Lymnæa</i>	15	13
<i>Lymnæidæ</i>	<i>Planorbis</i>	12	1
	<i>Segmentina</i>	1	
	Total.....	241	44

The terrestrial forms are distributed among 14 families and 27 genera.

TERRESTRIAL MOLLUSKS.

Family.	Genus.	No. of Species.	No. of Varieties.
<i>Helicinidae</i>	<i>Helicina</i>	1	
<i>Auriculidae</i>	<i>Carychium</i>	2	
<i>Valloniidae</i>	<i>Vallonia</i>	3	
<i>Pupidae</i>	<i>Strobilops</i>	3	
	<i>Pupoides</i>	1	
	<i>Bifidaria</i>	7	1
	<i>Vertigo</i>	5	1
	<i>Pupilla</i>	1	
<i>Cochlicopidae</i>	<i>Cochlicopa</i>	1	
<i>Succineidae</i>	<i>Succinea</i>	9	3
<i>Helicidae</i>	<i>Polygyra</i>	21	6
<i>Achatinidae</i>	<i>Opeas</i>	1	
<i>Testacellidae</i>	<i>Testacella</i>	1	
<i>Circinariidae</i>	<i>Circinaria</i>	1	
<i>Zonitidae</i>	<i>Omphalina</i>	4	
	<i>Vitrea</i>	5	
	<i>Vitrina</i>	1	
	<i>Euconulus</i>	2	1
	<i>Zonitoides</i>	5	
	<i>Gastrodonta</i>	5	
	<i>Limacidae</i>	<i>Limax</i>	2
	<i>Agriolimax</i>	2	
<i>Philomycidae</i>	<i>Philomycus</i>	1	
<i>Endodontidae</i>	<i>Pyramidula</i>	4	
	<i>Helicodiscus</i>	1	
	<i>Punctum</i>	1	
	<i>Sphyradium</i>	1	
	Total	91	12

A comparison of our fauna with that of other states is interesting, although the comparison is scarcely accurate in one or two cases on account of the age of the records (Maine, 1864; Alabama, 1876)*.

*The figures of the following table are mostly from Mr. Bryant Walker's paper, "Revision of our Present Knowledge of the Molluscan Fauna of Michigan", 1894.

State	Catalogue	Land species	Hygrophila	Annicolidae	Valvatidae	Viviparidae	Pleuroceridae	Sphaeriidae	Unionidae	Total
Maine.....	Morse, 1864	50	26	4	2	1	0	12*	10	105
New York	Letson, 1905	82	36	14	2	4	9	34	59	240
Michigan.....	Walker, 1906	78	50	14	4	6	10	60	52	274
Indiana.....	Daniels, 1904	78	33	10	3	10	24	35	83	276
Illinois.....	Baker, 1906	91	50	18	4	10	28	42	89	332†
Alabama.....	Lewis, 1876	78	20	24‡	1§	17	302	7*	256	705

A comparison of the figures in the table will show (1) that the number of species increases toward the south and west; (2) that this increase is confined mainly to the aquatic forms; and (3) that the increase in certain families is very great. The increase in aquatic forms is shown in the following comparisons.

State.	Land Species.	Aquatic Species.
Maine.....	50	55
New York.....	82	158
Michigan.....	78	194
Indiana.....	78	198
Illinois.....	91	240
Alabama.....	78	627

The ratios of land to aquatic forms increase more rapidly to the south than to the west, being in New York 1 to 2, in Illinois 1 to 2½, and in Alabama 1 to 8. In Maine the ratios are nearly equal.

As to the great increase in certain families toward the south and west, Alabama has 25 times as many species of *Unionida* as Maine, 3 times as many as Illinois, and nearly 4½ times as

* This does not include the recently described *Corneocyclus*, which would materially increase the number of species recorded in the older lists.

† This does not include the 56 varieties enumerated in the present list.

‡ The recently described *Annicola* and *Somatogyrus* are here included.

§ *Vide* Hinkley.

many as New York; while in the *Pleurocerida* this comparison is even more marked, the corresponding record being 34 times as many for New York, 30 times as many for Michigan, and about 11 times as many for Illinois. In other families the ratios are more nearly equal. In the *Hygrophila* the greatest increase is toward the west, Michigan and Illinois having the greatest number of species. In a general way we may say that the *Unionida*, *Pleurocerida*, and *Viriparida* are characteristic of the southern region, while the *Hygrophila*, *Valvatida*, and *Sphæriida* are characteristic of the northern region. The number of species of *Sphæriida* found in this state (42) is noteworthy.

A study of the published and manuscript lists of the state shows that little is known concerning the geographical distribution of our Mollusca. For only ten counties has a careful list been made. The writer has obtained records from 69 counties, the number of species ranging from 1 to 145. The following list shows the number of species known to inhabit 10 counties and 8 rivers.

<i>Counties.</i>		<i>Rivers.</i>	
Cook.....	141	Illinois.....	110
Fulton.....	145	Wabash.....	43
La Salle.....	120	Ohio.....	43
Will.....	110	Kaskaskia.....	19
Mercer.....	113	Kankakee.....	67
Winnebago.....	75	Rock.....	14
Mason.....	98	Kishwaukee.....	10
McHenry.....	89	Mississippi.....	56
Menard.....	62		
Adams.....	56		

The Cook county list includes 8 species which have been introduced from Europe and are now thriving in the green-houses of Chicago.

Too little is as yet known concerning the distribution of Illinois Mollusca to permit any satisfactory generalizations. One of the reasons which prompted the preparation of the present catalogue was the hope that its publication might stimulate a desire among conchologists to prepare careful, up-to-date lists

of as many counties as possible. Much good work has been done in Indiana by Call, Daniels, and Blatchley, and the work of the Michigan conchologists under the leadership of Mr. Bryant Walker is to be highly commended. It is to be hoped that Illinois will not fall behind in this good work.

SYSTEMATIC CATALOGUE OF SPECIES.

CLASS PELECYPODA.

ORDER PRIONODESMACEA.

Superfamily NAIADACEA.

Family UNIONIDÆ.

HETEROGENÆ.

Genus TRUNCILLA Rafinesque.

Subgenus *Truncilla* Rafinesque.

Truncilla triquetra Rafinesque (= *triangularis* Lea).

Northern Illinois (Calkins); Will Co. (Ferriss); Kankakee River; Illinois River (Handwerk); La Salle Co. (Huett); Wabash River (Marsh); Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf).

Subgenus *Scalenaria* (Rafinesque) Agassiz.

Truncilla sulcata Lea.

Ohio River (Marsh).

Subgenus *Dysnomia* Agassiz.

Truncilla foliata Hildreth.

Ohio River (Marsh); Southern Illinois (Ulffers).

Subgenus *Pilea* Simpson.

Truncilla perplexa Lea.

Wabash River (Hinkley); Ohio River (Marsh); Southern Illinois (Ulffers).

Truncilla perplexa rangiana Lea.

Illinois (Call); Wabash River (Marsh); Southern Illinois (Ulffers).

Truncilla propinqua Lea.

Ohio River (Marsh).

Truncilla personata Say (= *pileus* Lea).

Southern Illinois (Ulffers).

Genus MICROMYA (Agassiz) Simpson.

Micromya fabalis Lea.

Wabash River (Marsh).

Genus LAMPSILIS Rafinesque.

Subgenus *Lampsilis* Rafinesque.Section *Lampsilis* Rafinesque.*Lampsilis ventricosa* Barnes (= *occidens* Lea, *subovata* Lea).*

Oregon, Ogle Co.; Starved Rock, La Salle Co.; Savanna, Carroll Co. (Baker); Cook Co. (Baker, Calkins); Northern Illinois; Fox River (Calkins); Dundee, Kane Co. (Engleholm, Nason); Hickory Creek; Kaskaskia River (Ferriss, Handwerk); Du Page River; Illinois River (Handwerk); Mississippi River, Quincy, Adams Co.; Mackinaw River, Kappa, Woodford Co. (Hart); Winnebago Co.; Ohio River; Kaskaskia River (Hinkley); La Salle Co. (Huett); Fulton Co. (Kelly, Wolf); Mercer Co.; Ohio River; Mississippi River (Marsh); Athens, Menard Co. (Nason); Mt. Carmel, Wabash Co. (Nelson); Spoon River (Strode); Southern Illinois (Ulffers); Embarras River, Oakland, Coles Co.; Quiver Creek, Havana, Mason Co. (State Laboratory).

Lampsilis capax Green.

Northern Illinois; Mt. Carmel, Wabash Co. (Calkins); Mercer Co. (Ferriss, Marsh); Shawneetown, Gallatin Co. (Fischer); Quincy, Adams Co. (Hart); La Salle Co. (Huett); Mississippi River (Marsh); Spoon River, Fulton Co. (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf).

Lampsilis ovata Say.

Ohio River (Marsh).

Lampsilis multiradiata Lea.

Cook Co. (Baker); Illinois (Call); Dundee, Kane Co. (Engleholm); Big Vermilion River (Marsh); Southern Illinois (Ulffers).

**Lampsilis cariosa* Say is reported by Huett from La Salle county. The reference was undoubtedly founded on specimens of *ventricosa*, as *cariosa* is a species of the Atlantic and St. Lawrence drainage.

Section *Eurymia* Rafinesque.*

Lampsilis luteola Lamarck (= *siliquoides* Barnes, *distans* Anthony).

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Calkins, Higley, Jensen, Lyon, Nason); Mt. Carmel, Wabash Co. (Calkins); Northern Illinois (Calkins, Nason); Dundee, Kane Co. (Engleholm, Nason); Hickory Creek, Will Co. (Ferriss); Du Page River (Gault); Kankakee and Du Page rivers (Handwerk); Illinois River (Handwerk, Kelly); Mackinaw River, Kappa, Woodford Co. (Hart); Rock, Pecatonica, and Kishwaukee rivers, and Kent's Creek (Hinkley); Little Wabash and Big Muddy rivers (Hinkley, for *siliquoides*); La Salle Co. (Huett); Quiver Creek, Mason Co. (Kelly); Crystal Lake (Lyon); Cedar Lake, Lake Co. (Marcy); Washington Co.; Mississippi River, Mercer Co. (Marsh); Calumet River; Algonquin and Silver Lake, McHenry Co.; Athens, Menard Co. (Nason); Illinois River; Spoon River (Strode); Southern Illinois (Ulffers, for *siliquoides*); Fulton Co. (Wolf); Lake Michigan, Chicago, Cook Co.; Havana, Mason Co. (State Laboratory).

Lampsilis ligamentina Lamarck (= *crassa* Say).

Oregon, Ogle Co.; Savanna, Carroll Co.; Cook Co. (Baker); Northern Illinois; Mt. Carmel, Wabash Co. (Calkins); Dundee, Kane Co. (Engleholm, Nason); Kankakee River (Ferriss); Kankakee, Illinois, and Du Page rivers (Handwerk); Mississippi River, Quincy, Adams Co. (Hart); Rock, Pecatonica, Kaskaskia, Wabash, and Little Wabash rivers (Hinkley); La Salle Co. (Huett); Spoon and Illinois rivers (Kelly, Strode); Mercer Co., Mississippi River (Marsh); Athens, Menard Co.; Algonquin, McHenry Co. (Nason); Southern Illinois (Ulffers); Havana, Mason Co. (State Laboratory).

Lampsilis upsoni Marsh (= *ligamentina*) is reported from Mercer Co. (Marsh) and from the Kishwaukee River (Hinkley and Marsh). Simpson (Synopsis, p. 539) makes this a synonym of *ventricosa*.

**Lampsilis propria* Lea. A specimen of this species, identified by Mr. C. T. Simpson, is in the collection of the Chicago Academy of Sciences and was received from Mr. W. W. Calkins as from the Illinois River. As this species has been found only in Virginia and Georgia the Illinois record must be considered very doubtful. The probability is that the specimen became mixed with Illinois shells.

Lampsilis orbiculata Hildreth.*

Northern Illinois (Calkins); Mississippi River, Quincy, Adams Co. (Hart, Nason); La Salle Co. (Huett); Wabash River (Marsh); Illinois River (Strode); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Lampsilis higginsii Lea.

Illinois River (Ferriss, Handwerk, Kelly); Kankakee River (Handwerk); Mississippi River (Marsh).

Lampsilis anodontooides Lea (= *teres* Say).

Savanna, Carroll Co.; Cook Co. (Baker); Mt. Carmel, Wabash Co.; Northern Illinois (Calkins); Illinois River (Ferriss, Handwerk, Strode); Shawneetown, Gallatin Co. (Fischer); Du Page Co. (Gault); all rivers visited (Hinkley); La Salle Co. (Huett); Illinois River (Kelly); Cache Creek, Pulaski Co. (Lyon); Mercer Co., Mississippi River (Marsh); Mississippi River, Quincy, Adams Co.; Athens, Menard Co. (Nason); Thompson's Lake (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co.; Fulton Co. (State Laboratory).

Lampsilis fallaciosa (Smith) Simpson.

Savanna, Carroll Co.; Cook Co. (Baker); Meredosia, Morgan Co. (Gault); Hickory Creek, Will Co. (Handwerk); Quincy, Adams Co. (Hart); Cache Creek, Pulaski Co.; Crooked and Clear creeks, Union Co. (Lyon); Mississippi River (Marsh); Havana, Mason Co.; Meredosia, Morgan Co.; Peoria, Peoria Co. (State Laboratory).

Lampsilis recta Lamarek.

Fox River (Atwater); Savanna, Carroll Co.; Cook Co.; Oregon, Ogle Co. (Baker); Northern Illinois (Calkins); Fox River, Dundee, Kane Co. (Engleholm, Nason); Kankakee River (Ferriss); Illinois, Kankakee, and Du Page rivers (Handwerk); Mississippi River, Quincy, Adams Co. (Hart); Winnebago Co.; Kaskaskia River (Hinkley); La Salle Co. (Huett); Alton, Madison Co. (Kennicott); Mississippi River, Mercer Co. (Marsh); Fox River, Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Illinois and Spoon rivers and Quiver Creek, Mason Co. (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

**Lampsilis pinguis* Lea is listed by Marsh from the Illinois River. According to Simpson this species is doubtfully distinct from *orbiculata*, the type being diseased. It is recorded only from St. Peter's River, Minnesota. (Simpson's Synopsis, p. 540.)

Lampsilis subrostrata Say (= *mississippiensis* Conrad).

Peru, La Salle Co. (Derr); Lily Lake, Quincy, Adams Co. (Hart); Big and Little Muddy rivers (Hinkley); Mt. Carmel, Wabash Co.; Aledo, Mercer Co. (Lewis); Mercer Co., Mississippi River; Wabash River (Marsh).

Lampsilis nigerrima Lea.

Wabash River (Marsh). This species is recorded by Simpson from "Alexandria, Louisiana, to Eastern Texas; Indiana?"

Lampsilis lienosa Conrad (= *caliginosa* Lea).

Saline River; pond in Perry Co. (Hinkley); Little Vermilion River (Marsh); Southern Illinois (Ulffers).

Lampsilis iris Lea (= *novi-eboraci* Lea).

Cook Co. (Baker, Jensen); Northern Illinois (Calkins); Fox River, Dundee, Kane Co. (Engleholm); Du Page River (Ferriss, Gault, Handwerk); Hickory Creek, Will Co. (Handwerk); La Salle Co. (Huett); Kankakee River; Edwards Creek (Marsh); Fox River, Elgin, Kane Co.; Algonquin, McHenry Co. (Nason); Spoon River (Strode); Fulton Co. (Wolf).

Lampsilis ellipsiformis Conrad (= *spatulata* Lea).

Cook Co. (Baker, Jensen); Northern Illinois; Vermilion River (Calkins); Fox River, Dundee, Kane Co. (Engleholm, Nason); Hickory Creek, Will Co. (Ferriss, Handwerk); Du Page River (Gault); Mackinaw River, Kappa, Woodford Co. (Hart); Kishwaukee River (Hinkley); La Salle Co. (Huett); Mercer Co., Edwards Creek (Marsh); Fox River, Algonquin, McHenry Co. (Nason); Fulton Co. (Wolf); Fox River (New York State Cabinet).

Subgenus *Carunculina* Simpson.

Lampsilis texasensis Lea.

Southern Illinois (Simpson).

Lampsilis parva Barnes.

Oregon, Ogle Co.; Savanna, Carroll Co.; Cook Co. (Baker); La Salle Co.; Northern Illinois (Calkins); Kankakee River (Ferriss); Quincy, Adams Co. (Garman); Du Page River (Gault); Hickory Creek, Will Co. (Handwerk); Quincy, Adams Co.; Kappa, Woodford Co. (Hart); nearly all streams visited (Hinkley); Illinois River (Kelly); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Spoon River, Thompson's Lake,

Fulton Co. (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co; Herod, Pope Co. (State Laboratory).

Lampsilis glans Lea.

Little Wabash River (Hinkley); Big Vermilion River (Marsh); Southern Illinois (Ulffers).

Subgenus *Proptera* Rafinesque.

Lampsilis alata Say.

Savanna, Carroll Co.; Cook Co. (Baker); Northern Illinois; Fox River (Calkins); Fox River, Dundee, Kane Co. (Engleholm); Kankakee River (Ferriss, Handwerk); Shawneetown, Gallatin Co. (Fischer); Quincy, Adams Co. (Garman, Hart, Nason); Du Page River; Illinois River (Handwerk); Rock, Kishwaukee, Kaskaskia, Ohio, and Big Muddy rivers (Hinkley); La Salle Co. (Huett); Cook Co. (Jensen); Spoon River; Illinois River (Kelly, Strode); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Illinois River and Quiver Creek, Havana, Mason Co. (State Laboratory).

Lampsilis purpurata Lamarck.

Spring Creek (Handwerk).

Lampsilis gracilis Barnes.

Savanna, Carroll Co.; Cook Co. (Baker, Jensen); Northern Illinois (Calkins); Fox River, Dundee, Kane Co. (Engleholm); Kankakee River (Ferriss); Shawneetown, Gallatin Co. (Fischer); Mississippi River, Quincy, Adams Co. (Garman, Hart, Nason); Desplaines, Illinois, and Kankakee rivers (Handwerk); all rivers visited (Hinkley); La Salle Co. (Huett); Illinois River; Spoon River (Kelly, Strode); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co.; Cedar Lake, Lake Co.; Peoria, Peoria Co.; Dallas Slough, Dallas City, Hancock Co. (State Laboratory).

Lampsilis levissima Lea (= *ohioensis* Say).

Northern Illinois (Calkins); Illinois River, Utica, La Salle Co. (Ferriss); Quincy, Adams Co. (Garman, Hart); Kaskaskia Ohio, and Wabash rivers (Hinkley); Spoon and Illinois rivers (Kelly, Strode); Mercer Co., Mississippi River (Marsh); South-

ern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Lampsilis leptodon Rafinesque (= *tenuissima* Lea).

Savanna, Carroll Co. (Baker); Illinois River (Ferriss); Kaskaskia River (Hinkley); Mississippi River, Mercer Co. (Marsh); Southern Illinois (Ulffers); Fulton Co. (Wolf).

Genus *OBOVARIA* Rafinesque.

Subgenus *Obovaria* Rafinesque.

Obovaria retusa Lamarek.

Northern Illinois (Calkins); Wabash River (Hinkley); La Salle Co. (Huett); Ohio River (Marsh); Spoon and Illinois rivers (Strode).

Obovaria circulus Lea.

Wabash River (Hinkley, Marsh); Southern Illinois (Ulffers).

Obovaria lens Lea.

Ohio River (Hinkley, Marsh).

Subgenus *Pseudoon* Simpson.

Obovaria ellipsis Lea.

Northern Illinois: Illinois River (Calkins); Kankakee River (Ferriss); Illinois River (Handwerk); Quincy, Adams Co. (Hart); Wabash and Ohio rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Illinois and Spoon rivers (Strode); Fulton Co. (Wolf); Illinois River, Havana, Mason Co. (State Laboratory).*

Genus *PLAGIOLA* (Rafinesque) Agassiz.

Subgenus *Plagiola* (Rafinesque) Agassiz.

Plagiola securis Lea.

Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Kankakee River (Ferriss, Handwerk); Shawneetown, Gallatin Co. (Fischer); Illinois River (Handwerk, Kelley, Nason, and Strode); Mississippi River, Quincy, Adams Co. (Hart); Kaskaskia, Wabash, and Ohio rivers (Hinkley); Mercer Co., Mississippi River (Marsh); Southern Illinois (Ulffers); Fulton Co. (Wolf); Illinois River, Havana, Mason Co. (State Laboratory).

*Calkins (Cin. Quart. Journ. Sci., I., p. 244) lists *ellipsis* as occurring near Chicago, but no authentic specimens have been seen, and occurrence of this species in the Chicago region is very doubtful.

Plagiola elegans Lea.

Savanna, Carroll Co. (Baker); Cook Co. (Baker, Calkins, Jensen); Chicago; Northern Illinois (Calkins); Kankakee River (Ferriss); Meredosia, Morgan Co. (Gault); Illinois River (Handwerk, Kelly, Strode); Mississippi River, Quincy, Adams Co. (Hart); Kaskaskia, Wabash, Little Wabash, Big Muddy, and Ohio rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Athens, Menard Co.; Quincy, Adams Co. (Nason); Spoon River (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co.; Saline Co. (State Laboratory).

Plagiola donaciformis Lea (=zigzag Lea).

Cook Co. (Baker, Calkins); Northern Illinois (Calkins); Illinois River (Calkins, Handwerk, Kelly, Strode); Kankakee River; Spring Creek (Ferriss, Handwerk); Quincy, Adams Co. (Hart); Little Wabash, Kaskaskia, and Wabash rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Spoon River (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

DIGENÆ.

Genus TRITOGONIA Agassiz.

Tritogonia tuberculata Barnes.

Oregon, Ogle Co. (Baker); Northern Illinois (Calkins); Illinois River (Calkins, Handwerk); Fox River, Dundee, Kane Co. (Engleholm); Kankakee River (Ferriss); Shawneetown, Gallatin Co. (Fischer); Meredosia, Morgan Co. (Gault); Illinois River (Handwerk); Mississippi River, Quincy, Adams Co. (Hart); all rivers visited (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Athens, Menard Co.; Quincy, Adams Co. (Nason); Spoon River (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co.; Saline Co. (State Laboratory).*

*Calkins (Cin. Quart. Jour. Sci., I., p. 244) cites this species from Chicago, but no specimens have been seen. It is therefore a very doubtful inhabitant of the Chicago Area.

MESOGENÆ.

Genus CYPROGENIA Agassiz.

Cyprogenia irrorata Lea (= *stegaria* Say).

Mt. Carmel, Wabash Co. (Calkins); Wabash River (Hinkley, Marsh); Southern Illinois (Ulffers).

Genus OBLIQUARIA (Rafinesque) Simpson.

Obliquaria reflexa Rafinesque (= *cornuta* Barnes).

Savanna, Carroll Co. (Baker); Cook Co. (Baker, Calkins); Northern Illinois; Mt. Carmel, Wabash Co. (Calkins); Kankakee River (Ferriss, Handwerk); Shawneetown, Gallatin Co. (Fischer); Meredosia, Morgan Co. (Gault); Illinois River (Handwerk, Kelly, Ferriss, Strode); Mississippi River, Quincy, Adams Co. (Hart); Little Wabash, Big Muddy, and Ohio rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Athens, Menard Co; Mississippi River, Quincy, Adams Co. (Nason); Spoon River (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

PTYCHOGENÆ.

Genus PTYCHOBANCHUS Simpson.

Ptychobanchus phaseolus Hildreth.

Wabash River (Hinkley, Marsh); Southern Illinois (Ulffers).

ESCHATIGENÆ.

Genus DROMUS Simpson.

Dromus dromus Lea.

Ohio River (Marsh).

DIAGENÆ.

Genus STROPHITUS Rafinesque.

Strophitus edentulus Say (= *shaffneriana* Lea, *wardiana* Lea).

Oregon, Ogle Co.; Savanna, Carroll Co. (Baker); Cook Co. (Baker, Higley, Jensen, Lyon); Northern Illinois (Calkins); Peoria, Peoria Co. (Chamberlain); Hickory Creek, Will Co. (Ferriss, Handwerk); Du Page River (Gault); Desplaines River (Handwerk); Rockford, Winnebago Co.; Kaskaskia and Wabash rivers (Hinkley); La Salle Co. (Huett); Illinois River (Kelly, Nason); Mercer Co.; Mississippi and Wabash rivers (Marsh); Fox River, Dundee, Kane Co., and Algonquin,

McHenry Co; Athens, Menard Co. (Nason); Spoon River (Strode); Fulton Co. (Wolf); Havana, Mason Co.; Peoria, Peoria Co. (State Laboratory).

Strophitus edentulus pavonius Lea.

Cook Co. (Baker); Hickory Creek, Will Co. (Ferriss); Joliet, Will Co. (Handwerk); Wabash River (Marsh).

HOMOGENÆ.

Genus ANODONTA (Bruguïère) Lamarck.

Anodonta imbecilis Say.

Cook Co. (Baker, Calkins, Jensen); Northern Illinois (Calkins); Illinois River (Calkins, Kelly, Strode); Kankakee River (Ferriss); Quincy, Adams Co. (Garman, Hart); Desplaines River (Handwerk); Kishwaukee and Big and Little Muddy rivers (Hinkley); La Salle Co. (Huett); Pulaski Co. (Lyon); Mercer Co., Mississippi River (Marsh); Spoon River (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Quiver Lake and Havana, Mason Co.; Peoria, Peoria Co.; Hamilton Co.; Pekin Lake, Tazewell Co. (State Laboratory).

Anodonta suborbiculata Say.

Northern Illinois (Calkins); Springfield, Sangamon Co. (Call); Putnam Co. (Ferriss); Thompson's Lake, Fulton Co. (Kelly, Strode); Fulton Co. (Lyon, Wolf); Mercer Co., Mississippi River (Marsh); Spoon and Illinois rivers (Strode); Southern Illinois (Ulffers); Thompson's Lake, Fulton Co.; Clear and Quiver lakes, Mason Co. (State Laboratory).

Anodonta grandis Say (= *salmonia* Lea, *ovata* Lea).

Cook Co. (Baker, Nason); Northern Illinois (Calkins); Fox River, Dundee, Kane Co. (Engleholm); Illinois River (Ferriss, Strode); Quincy, Adams Co. (Garman, Hart, Nason); Du Page River (Gault); Desplaines River (Handwerk); Mackinaw River, Kappa, Woodford Co. (Hart); Winnebago Co.; Little Wabash, Kaskaskia, Big Muddy, and Little Muddy rivers (Hinkley); La Salle Co. (Huett); Thompson's Lake and Spoon River, Fulton Co. (Kelly, Strode); Union Co. (Lyon); Lake Co. (Marcy); Rock River, Mercer Co.; Washington Co.; Winnebago Co. (Marsh); Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Grass Lake, Lake Co. (Woodruff); Havana, Mason Co.; Crystal

Lake, Urbana, Champaign Co.; Fox Lake, Lake Co.; Thompson's Lake, Fulton Co.; Hamilton Co. (State Laboratory).

Anodonta grandis footiana Lea (= *marryattana* Lea).

Cook Co. (Baker, Calkins, Marsh); Dundee, Kane Co. (Engleholm); Du Page River (Handwerk); Silver and Crystal lakes and Algonquin, McHenry Co. (Lyon, Nason); Lake Co. (Marcy, Marsh); Northern Illinois (Nason); Grass Lake, Lake Co. (Woodruff); Cedar Lake, Lake Co. (State Laboratory).

Anodonta grandis gigantea Lea (= *decora* Lea, *plana* Lea).

Cook Co. (Calkins); Mercer Co., Edwards Creek; Big Vermilion River (Marsh); Spoon River (Strode); Southern Illinois (Ulffers).

Anodonta corpulenta Cooper.

Savanna, Carroll Co. (Baker); Northern Illinois; Peoria Lake, Peoria Co.; La Salle Co. (Calkins); Aledo, Mercer Co. (Call); Illinois River (Cooper, Ferriss, Handwerk, Kelly); Quincy, Adams Co. (Hart, Nason); La Salle Co. (Huett); Cook Co. (Jensen); Thompson's Lake, Fulton Co. (Kelly, Strode); Mercer Co., Mississippi River (Marsh); Fulton Co. (Wolf); Havana, Mason Co.; Pekin Lake, Tazewell Co. (State Laboratory).

Anodonta marginata Say (= *fragilis* Lamarck, *subcarinata* Currier, *lacustris* Lea).

Hickory Creek, Will Co.; Desplaines River (Handwerk); Lake Co. (Marsh); Spoon River (Strode); Fulton Co. (Wolf).

Simpson gives this as found in the St. Lawrence River drainage, but the records above seem to be authentic.

Anodonta implicata Say.

Lake Co. (Marsh).

Genus LASTENA Rafinesque.

Lastena lata Rafinesque (= *dehiscens* Say).

Illinois (Call); Illinois River (Marsh); Southern Illinois (Ulffers).

Genus ANODONTOIDES Simpson.

Anodontoides ferussacianus Lea.

Cook Co. (Baker); Hickory Creek, Will Co. (Ferriss, Handwerk); Du Page River (Gault); Kishwaukee River and Kent's Creek (Hinkley); Mercer Co., Edwards Creek (Marsh); Fox

River, Dundee, Kane Co. (Nason); Spoon River (Strode); Cedar Lake, Lake Co. (State Laboratory).

Anodontoides ferussacianus subcylindraceus Lea.

Cook Co. (Baker, Jensen); Northern Illinois (Calkins); Hickory Creek, Will Co. (Ferriss, Handwerk); Du Page Co. (Lyon); Lake Co. (Marcy); Peoria, Peoria Co. (State Laboratory).

Genus *ARCIDENS* Simpson.

Arcidens confragosus Say.

Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Springfield, Sangamon Co., and Fox River (Call); Illinois River, Utica, La Salle Co. (Ferriss, Handwerk); Mississippi River, Quincy, Adams Co. (Hart, Nason); Kaskaskia, Big Muddy, and Little Wabash rivers (Hinkley); La Salle Co. (Huett); Spoon and Illinois rivers (Kelly, Strode); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Lake Michigan, Chicago, Cook Co.; Havana, Mason Co. (State Laboratory).

Genus *SYMPHYNOTA* Lea.

Subgenus *Symphynota* Lea.*

Symphynota compressa Lea (= *pressa* Lea).

Cook Co. (Baker); Hickory Creek, Will Co. (Ferriss); Du Page River (Gault); Illinois River (Handwerk); Kent's Creek, Rockford, Winnebago Co. (Hinkley); Mercer Co. (Marsh); Mill Race, Algonquin, McHenry Co. (Nason).

Subgenus *Lasmigona* Rafinesque.

Symphynota costata Rafinesque (= *rugosa* Barnes).

Savanna, Carroll Co. (Baker); Cook Co. (Baker, Jensen); Northern Illinois; Fox River (Calkins); Fox River, Dundee, Kane Co. (Engleholm, Nason); Hickory Creek, Will Co. (Ferriss); Du Page and Kankakee rivers (Handwerk); Illinois River (Handwerk, Strode); Mackinaw River, Kappa, Woodford Co. (Hart); Winnebago Co. (Hinkley); La Salle Co. (Huett); Spoon River (Kelly, Strode); Mercer Co., Mississippi River

**Symphynota neglecta* Lea is reported from Fulton Co. by Wolf (Am. Journ. Conch., VI., p. 29), but the record must rest upon a misidentification, as this species is confined to northern Alabama. (Vide Simpson, Synopsis, p. 664.)

(Marsh); Fox River, Algonquin, McHenry Co; Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Subgenus *Pterosygna* Rafinesque.

Symphynota complanata Barnes.

Savanna, Carroll Co. (Baker); Cook Co. (Baker, Calkins, Jensen); Northern Illinois (Calkins); Peoria, Peoria Co. (Chamberlain); Mazon Creek, Grundy Co. (Dilg); Hickory Creek, Will Co. (Ferriss, Handwerk); Starved Rock, La Salle Co. Illinois River (Handwerk); Kappa, Woodford Co. (Hart); Mississippi River, Quincy, Adams Co. (Hart, Nason); Winnebago Co.; Kaskaskia, Big Muddy, and Little Wabash rivers (Hinkley); Spoon River; Illinois River (Kelly, Strode); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Genus *ALASMIDONTA* Say.

Subgenus *Pressodonta* Simpson.*

Alasmidonta calceola Lea (= *deltoidea* Lea).

Cook Co. (Baker, Jensen, Lyon); Northern Illinois (Calkins); Hickory Creek, Joliet, Will Co. (Ferriss, Handwerk); Mackinaw River, Kappa, Woodford Co. (Hart); Kishwaukee River and Kent's Creek (Hinkley); La Salle Co. (Huett); Mercer Co., Edwards Creek, Wabash River (Marsh); Algonquin, McHenry Co; Athens, Menard Co. (Nason); Spoon River (Strode); Fulton Co. (Wolf).

Subgenus *Rugifera* Simpson.

Alasmidonta marginata Say.

Cook Co. (Baker, Higley); Northern Illinois; Fox River (Calkins); Hickory Creek, Will Co. (Ferriss, Handwerk); Illinois River (Handwerk); Mackinaw River, Kappa, Woodford Co. (Hart); Winnebago Co. (Hinkley); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Fox River, Dundee, Kane Co. (Nason, Swick); Spoon River (Strode); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

**Alasmidonta heterodon* Lea is reported from Southern Illinois by Ulffers. As this species is confined to the Atlantic states from Maine to Virginia, this reference must rest upon a misidentification.

Genus HEMILASTENA (Agassiz) Simpson.

Hemilastena ambigua Say (= *hildrethiana* Lea).

Cook Co. (Baker); Kankakee River, Wilmington, Will Co. (Ferriss, Handwerk); Hickory Creek, Will Co. (Handwerk); Wabash River; Mercer Co. (Marsh); Spoon River (Strode).

Genus MARGARITANA Schumacher.

Margaritana margaritifera Linné.

Illinois River (Calkins).

Margaritana monodonta Say (= *soleniformis* Lea).

Northern Illinois (Calkins); Mercer Co. (Call, Marsh); Kankakee River (Ferriss, Handwerk); Mississippi River, Quincy, Adams Co. (Hart); Mississippi River (Marsh); Southern Illinois (Ulfers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Genus UNIO Retzius.*

Section *Elliptio* Rafinesque.*Unio gibbosus* Barnes (= *arctior* Lea).

Oregon, Ogle Co.; Savanna, Carroll Co. (Baker); Cook Co. (Baker, Calkins, Higley, Nason); Northern Illinois (Calkins); Kankakee River (Ferriss, Handwerk); Illinois and Du Page rivers (Handwerk); Mississippi River, Quincy, Adams Co. (Hart); Winnebago Co.; Wabash and Ohio rivers (Hinkley); La Salle Co. (Huett); Mercer Co.; Mississippi and Wabash rivers (Marsh); Fox River, Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fox River, Dundee, Kane

**Unio inflatus* Lea (= *Lampsilis alabamensis* Conrad) is reported by Wolf from Fulton Co. (Am. Journ. Conch., VI., p. 29). This record is erroneous, as the species is confined to the Alabama and Tombigbee rivers.

Unio bullatus Rafinesque is reported by Ulfers from Southern Illinois. I do not know what species this is intended for. Rafinesque described an *Obliquaria bullata*, but it is absolutely indeterminate.

Unio torsus Rafinesque reported by Ulfers from Southern Illinois, is indeterminate.

Unio niger Conrad is reported from Southern Illinois by Ulfers. I know of no species of that name. *Unio mytiloides* Rafinesque is also an indeterminate species. (Ulfers, p. 610.)

Unio scaleni Rafinesque is reported from Southern Illinois by Ulfers. There is no *scalenius* of Rafinesque, and *scalenius* Say = *Pleurobema decisa* Lea, which is confined to the Alabama and Tombigbee river systems.

Unio rubidundus Say is reported by Ulfers from Southern Illinois. There is no *rubidundus* or *rubicundus* described by Say.

Co. (Nason, Swick); Spoon and Illinois rivers (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Unio gibbosus delicatus Simpson.

Cook Co. (Baker); Kent's Creek (Hinkley); Dundee, Kane Co. (Swick).

Unio crassidens Lea.

Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Illinois River, Utica, La Salle Co. (Ferriss); Kaskaskia and Wabash rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Mt Carmel, Wabash Co. (Nelson); Spoon River (Strode); Fulton Co. (Wolf).

Section *Uniomerus* Conrad.

Unio tetralasmus Say (= *jamesianus* Lea).

Washington and Perry counties, in creeks and ponds (Hinkley); Big Muddy River (Marsh); Phelps Lake, Fulton Co.; Sidney and Urbana, Champaign Co. (State Laboratory).

Unio tetralasmus camptodon Say.

Du Bois, Washington Co., in pond (Hinkley); Albion, Edwards Co. (Jensen).

Genus *PLEUROBEMA* (Rafinesque) Agassiz.*

Pleurobema clava Lamarck.

Wabash River (Hinkley, Marsh).

Section *Plethobasus* Simpson.

Pleurobema wsopus Green.

Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Fox River, Dundee, Kane Co. (Connor); Kankakee River (Ferriss, Handwerk); Mississippi River, Quincy, Adams Co. (Hart); Green, Kaskaskia, Wabash, and Rock rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Mt. Carmel, Wabash Co. (Nelson); Spoon River (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Illinois River, Havana, Mason Co. (State Laboratory).

* *Pleurobema cor* Conrad is reported from Southern Illinois by Ulffers,—a misidentification, as the species is confined to the Alabama River system of Alabama and the Flint River of Georgia.

Pleurobema cicatricosa Say (= *varicosa* Say).

Ohio River (Marsh); Southern Illinois (Ulffers).

TETRAGENEÆ.

Genus QUADRULA (Rafinesque) Agassiz.

Section *Crenodonta* Schlüter.

Quadrula plicata Say.

Cook Co.; Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Kankakee River (Ferriss, Handwerk); Desplaines River (Handwerk); Illinois River (Handwerk, Kelly, Strode); Quincy, Adams Co. (Hart); all rivers visited (Hinkley); La Salle Co. (Huett); Spoon River (Kelly, Strode); Mississippi River, Mercer Co. (Marsh); Quincy, Adams Co.; Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Quadrula undulata Barnes.

Oregon, Ogle Co.; Cook Co. (Baker); Savanna, Carroll Co. (Baker, Jensen); Northern Illinois; Vermilion and Illinois rivers (Calkins, Handwerk); Peoria, Peoria Co. (Chamberlain); Kankakee River (Ferriss, Handwerk); Starved Rock, La Salle Co. (Handwerk); Mackinaw River, Kappa, Woodford Co. (Hart); Winnebago Co.; Big Muddy, Little Muddy, and Saline rivers (Hinkley); La Salle Co. (Huett); Desplaines River (Lyon); Mercer Co., Edwards Creek (Marsh); Fox River, Algonquin, McHenry Co. (Nason); Fox River, Dundee, Kane Co. (Nason, Swick); Spoon River (Strode); Fulton Co. (Wolf).

Quadrula heros Say (= *multiplicata* Lea).

Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Illinois River (Calkins, Handwerk, Kelly, Strode); Utica, La Salle Co., in canal (Ferriss); Ottawa, La Salle Co. (Handwerk); Mississippi River, Quincy, Adams Co. (Hart, Nason); Kaskaskia, Wabash, Little Wabash, and Big Muddy rivers (Hinkley); La Salle Co. (Huett); Spoon River (Kelly, Strode); Drury Creek (Lyon); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Quadrula trapezoides Lea (= *interruptus* Say).

Southern Illinois (Ulffers). This is a doubtful record and should be substantiated.

Section *Quadrula* (Rafinesque) Agassiz.*Quadrula cylindrica* Say.

Shawneetown, Gallatin Co. (Fischer); Ohio River, Golconda, Pope Co. (Hart); Wabash River (Hinkley); Little Vermilion River (Marsh); Mt. Carmel, Wabash Co. (Nelson); Southern Illinois (Ulffers).

Quadrula metanevra Rafinesque.

Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Illinois River (Calkins, Handwerk, Kelly); Kankakee River (Ferriss, Handwerk); Quincy, Adams Co. (Hart, Nason); Kaskaskia, Wabash, and Ohio rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Spoon River (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Quadrula metanevra wardii Lea.

Illinois River (Handwerk, Marsh).

Section *Theliderma* (Swainson) Simpson.*Quadrula lachrymosa* Lea (= *quadrula* Say, *asperimus* Lea).

Savanna, Carroll Co. (Baker); Cook Co. (Baker, Jensen); Kankakee River (Ferriss, Handwerk); Shawneetown, Gallatin Co. (Fischer); Illinois River (Handwerk, Strode); Quincy, Adams Co. (Hart, Nason); Kaskaskia, Big Muddy, Little Wabash, Ohio, and Peconica rivers (Hinkley); Spoon River (Kelly, Strode); Mississippi River, Mercer Co. (Marsh); Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co.; Peoria, Peoria Co. (State Laboratory).

Quadrula lachrymosa lunulata Pratt.

Mississippi River (Marsh).

Quadrula fragosa Conrad.

Illinois River (Ferriss, Marsh); Kaskaskia River (Hinkley); Athens, Menard Co. (Nason); Spoon River (Strode); Fulton Co. (Wolf).

Quadrula pustulosa Lea (= *dorfeuilliana* Lea, *schoolcraftensis* Lea).

Oregon, Ogle Co.; Savanna, Carroll Co. (Baker); Cook Co. (Baker, Calkins, Jensen); Northern Illinois; Rock River (Calkins); Kane Co. (Connor); La Salle Co. (Derr, Huett); Kankakee River (Ferriss, Handwerk); Illinois River (Handwerk);

Mississippi River, Quincy, Adams Co. (Hart); all rivers visited (Hinkley); Spoon River; Illinois River (Kelly, Strode); Mercer Co., Edwards Creek; Mississippi and Illinois rivers (Marsh); Fox River, Algonquin, McHenry Co.; Quincy, Adams Co.; Athens, Menard Co. (Nason); Mt. Carmel, Wabash Co. (Nelson); Fulton Co. (Wolf); Meredosia, Morgan Co. (Woodruff); Havana, Mason Co. (State Laboratory).

Quadrula pustulata Lea.

Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Utica, La Salle Co. (Ferriss); Shawneetown, Gallatin Co. (Fischer); Kaskaskia, Wabash, and Ohio rivers (Hinkley); Mississippi River, Quincy, Adams Co. (Hart); La Salle Co. (Huett); Illinois and Spoon rivers (Kelly, Strode); Mississippi River, Mercer Co. (Marsh); Athens, Menard Co. (Nason); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Reported from Chicago by Calkins, but no specimens have been seen from this area.

Quadrula cooperiana Lea.

Wabash River (Hinkley); Ohio River (Marsh); Fulton Co. (Wolf).

Quadrula rubiginosa Lea (= *hava* Conrad).

Cook Co. (Baker, Calkins, Jensen, Lyon); Northern Illinois; Illinois River (Calkins); Kankakee River (Ferriss, Handwerk); Mackinaw River, Kappa, Woodford Co. (Hart); Kishwaukee, Rock, and Pecatonica rivers (Hinkley); La Salle Co. (Huett); Spoon River (Kelly, Strode); Mercer Co., Edwards Creek; Kankakee River (Marsh); Algonquin, McHenry Co. (Nason); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Quadrula trigona Lea.

Oregon, Ogle Co; Savanna, Carroll Co. (Baker); Cook Co. (Baker, Derr, Jensen); Northern Illinois (Calkins); Kane Co. (Engleholm); Kankakee River (Ferriss, Handwerk); Quincy, Adams Co. (Hart, Nason); all rivers visited (Hinkley); La Salle Co. (Huett); Illinois and Spoon rivers (Kelly, Strode); Mercer Co., Mississippi River (Marsh); Athens, Menard Co. (Nason); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Quadrula obliqua Lamarck.

Savanna, Carroll Co. (Baker); Northern Illinois and Missis-

issippi River (Calkins); Wabash and Ohio rivers (Hinkley); La Salle Co. (Huett); Ohio River (Marsh); Spoon and Illinois rivers (Strode).

Quadrula coccinea Conrad (= *catillus* Conrad).

Cook Co. (Baker, Jensen); Northern Illinois (Calkins); Fox and Du Page rivers (Ferriss); Illinois, Du Page, and Kankakee rivers and Lilycash Creek, Will Co. (Handwerk); Kishwaukee, Rock, and Pecatonica rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Illinois River (Marsh); Fox River, Dundee, Kane Co.; Algonquin, McHenry Co. (Nason); Mt. Carmel, Wabash Co. (Nelson); Spoon River (Strode); Fulton Co. (Wolf).

Quadrula solida Lea (= *fulgidus* Lea).

Northern Illinois (Calkins); Illinois River (Calkins, Handwerk, Strode); Kankakee River (Ferriss, Handwerk, Marsh); Kishwaukee and Pecatonica rivers (Hinkley); La Salle Co. (Huett); Mercer Co., Mississippi River (Marsh); Quincy, Adams Co. (Nason); Spoon River (Strode); Fulton Co. (Wolf); Milan, Rock Island Co. (State Laboratory).

Quadrula plena Lea.

Wabash River (Hinkley, Marsh).

Quadrula pyramidata Lea.

Little Wabash River (Hinkley); Ohio River (Marsh); Athens, Menard Co. (Nason); Spoon and Illinois rivers (Strode); Southern Illinois (Ulffers).

Quadrula subrotunda Lea.

Illinois River (Call); Ohio River (Marsh).

Quadrula ebena Lea.

Oregon, Ogle Co; Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Moline, Rock Island Co. (Call); Illinois River, Utica, La Salle Co. (Ferriss, Handwerk); Shawneetown, Gallatin Co. (Fischer); Quincy, Adams Co. (Hart, Nason); Ohio, Wabash, and Little Wabash rivers (Hinkley); La Salle Co. (Huett); Illinois and Spoon rivers (Kelly, Strode); Mercer Co., Mississippi River (Marsh); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Subgenus *Rotundaria* (Rafinesque) Simpson.

Quadrula tuberculata Rafinesque (= *verrucosa* Barnes).

Savanna, Carroll Co. (Baker); Cook Co. (Baker, Calkins,

Higley); Northern Illinois (Calkins); Illinois River (Calkins, Handwerk, Marsh, Strode); Kane Co. (Engleholm); Kankakee River (Ferriss, Handwerk); Mississippi River, Quincy, Adams Co. (Hart); La Salle Co. (Huett); Spoon River (Kelly, Strode); Rock River (Kelly, Wiswall); Athens, Menard Co. (Nason); Southern Illinois (Ulffers).

Quadrula granifera Lea.

Oregon, Ogle Co. (Baker); Mercer Co. (Ferriss, Marsh); Wabash and Little Wabash rivers (Hinkley); Rock River (Hinkley, Wiswall); Illinois River (Kelly); Mississippi River (Marsh); Spoon River (Strode); Desplaines River, Cook Co. (Zetek); Havana, Mason Co. (State Laboratory).

ORDER TELEODESMACEA.

Superfamily CYRENACEA.

Family SPHÆRIIDÆ.

Genus SPHÆRIUM Scopoli.*

Sphærium vermontanum Prime.

Cook Co. (Baker, Lyon); Hickory Creek, Will Co. (Ferriss); Canton, Fulton Co. (Nason); Lake Michigan, Chicago, Cook Co. (State Laboratory).

Sphærium solidulum Prime.

Quincy, Adams Co. (Garman); Hardin Co. (Hinkley); Mercer Co.; White Co. (Marsh); Fulton Co. (Wolf); Lake Michigan, Chicago, Cook Co. (State Laboratory).

Sphærium stamineum Conrad.

Cook Co. (Baker, Calkins, Jensen); Hickory Creek, Will Co.; Kankakee Feeder (Ferriss); Du Page Co. (Gault); Lilycash Creek, Will Co. (Handwerk); Quincy, Adams Co.; Kappa, Woodford Co. (Hart); Winnebago Co.; Big Muddy, Little Wabash, Ohio, and Saline rivers (Hinkley); McLean Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Canton, Fulton Co. (Nason); Matanzas and Quiver lakes, Havana, Mason Co.; Quincy, Adams Co.; Clay Co.; Homer and Urbana, Champaign Co.; Thompson's Lake, Fulton Co.; Peoria, Peoria Co.; Cedar, Fox,

**Sphærium triangulare* Say is reported from Fulton Co. by Wolf, but this is an error of identification, as *triangulare* is a Mexican species.

and Pistakee lakes, Lake Co.; Lake Michigan, Chicago, Cook Co.; Milan, Rock Island Co. (State Laboratory).

Sphaerium stamineum forbesi Baker.

Thompson's Lake, Fulton Co.; Matanzas Lake, Havana, Mason Co.; Little Fox River, White Co. (State Laboratory).

Sphaerium striatinum Lamarck.

Cook Co. (Baker, Calkins, Higley, Nason); Joliet, Will Co. (Baker, Ferriss, Handwerk); Northern Illinois (Calkins); Stark Co. (Chase); Hickory Creek, Will Co. (Ferriss); Lilycash Creek, Will Co. (Handwerk); Quincy, Adams Co.; Kappa, Woodford Co. (Hart); Winnebago Co.; Big Muddy, Little Muddy, Wabash, and Ohio rivers, (Hinkley); La Salle Co. (Huett); Union Co. (Lyon); Mercer Co.; McLean Co. (Marsh); Illinois River and Quiver Lake, Havana, Mason Co.; Milan, Rock Island Co.; Urbana, Champaign Co.; Panola, Woodford Co.; Fulton Co.; Grand Pierre Creek, Herod, Pope Co.; Peoria, Peoria Co.; Long and Cedar lakes, Lake Co.; Chicago, Lake Michigan, Cook Co.; Kickapoo Creek, Coles Co.; Swanwick Creek, Perry Co.; Henderson Creek, Biggsville, Henderson Co. (State Laboratory).

Sphaerium simile Say (= *sulcatum* Lamarck).

Cook Co. (Baker, Calkins); Northern Illinois (Calkins); Kankakee River (Ferriss); Lilycash Creek, Will Co. (Handwerk); Winnebago Co. (Hinkley); La Salle Co. (Huett); Mercer, McLean, and Edgar counties (Marsh); Elmhurst, Du Page Co.; Elgin, Kane Co.; Algonquin, McHenry Co.; Rock River (Nason); Southern Illinois (Ulffers); Sand, Clear, Fox, Pistakee, and Cedar lakes, Lake Co.; Lake Michigan, Chicago, Lake Co.; Warsaw, Hancock Co. (State Laboratory).

Sphaerium lilycashense Baker.

Lilycash Creek, Joliet, Will Co. (Baker, Ferriss, Handwerk).

Sphaerium fabale Prime.

Cook Co. (Baker, State Laboratory); Kankakee Feeder (Ferriss); Illinois (Prime).

Sphaerium occidentale Prime.

Cook Co. (Baker, Higley, Jensen); Northern Illinois (Calkins); Joliet, Will Co. (Ferriss, Handwerk); Winnebago Co. and Little Muddy Creek (Hinkley); La Salle Co. (Huett); Bush Park, Mercer Co. (Marsh); Fulton Co. (Wolf); Pistakee Lake, Lake Co. (State Laboratory).

Sphaerium rhomboideum Prime.

Winnebago Co. (Hinkley, Marsh); Athens, Menard Co. (Nason); Sand and Fourth lakes, Lake Co. (State Laboratory).

Genus MUSCULIUM Link, 1807.

(= *Calyculina* Clessin, 1872.)

Musculium transversum Say.

Cook Co. (Baker, Calkins); Northern Illinois (Calkins); Hickory Creek, Will Co. (Ferriss); Joliet, Will Co. (Ferriss, Handwerk); Quincy, Adams Co. (Garman, Hart); Desplaines River (Handwerk); Winnebago Co.; Big and Little Muddy, Wabash, Ohio, and Saline rivers (Hinkley); Mercer Co. (Marsh); Athens, Menard Co. (Nason); Fulton Co. (Wolf); Spring Bay, Peoria, Peoria Co.; Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co.; Thompson's Lake, Fulton Co.; Sidney and Urbana, Champaign Co.; Bernadotte, Spoon River, Fulton Co.; Pekin Lake, Tazewell Co.; Quincy, Adams Co. (State Laboratory).

Musculium truncatum Linsley.

Cook Co. (Baker, Jensen); Joliet, Desplaines River, Will Co. (Ferriss, Handwerk); Kappa, Woodford Co. (Hart); Mercer Co. (Marsh); Athens, Menard Co.; Canton, Fulton Co. (Nason); Quincy, Adams Co. (Oakes); Urbana, Champaign Co.; Fox, Cedar, and Clear lakes, Lake Co.; Phelps Lake, Fulton Co.; Havana and Quiver Lake, Mason Co. (State Laboratory).

Musculium partumeivum Say.

Cook Co. (Baker, Calkins); Northern Illinois (Calkins); Rock Run, Joliet, Will Co. (Ferriss); La Salle Co. (Huett); Crystal Lake, McHenry Co. (Lyon); Eastern Illinois (Marsh); Athens, Menard Co. (Nason); Du Page Co. (Woodruff); Illinois River, Havana, Mason Co.; Cedar Lake, Lake Co.; ditch, Urbana, Champaign Co. (State Laboratory).

Musculium hodgsoni Sterki.

Albion, Edwards Co. (Sterki).

Musculium elevatum Haldeman.

Big Muddy River (Hinkley). This species is typically of southern distribution (Florida and Alabama), and the present record extends its range considerably to the north.

Musculium sphericum Anthony.

Mississippi River (Marsh); Canton, Fulton Co. (Nason); Fulton Co. (Wolf).

Musculium secure Prime.

Rock Run, Joliet, Will Co. (Ferriss); Cook Co. (Jensen); Sand and Cedar lakes, Lake Co. (State Laboratory).

Musculium rosaceum Prime.

Fulton Co. (Wolf). A somewhat doubtful record, as this species is an eastern one.

Musculium jayanum Prime (= *jayensis* Prime).

Winnebago Co. (Hinkley); Mercer Co. (Marsh); Havana, Mason Co. (State Laboratory).

Genus CORNEOCYCLAS Ferussac, 1818.

(= *Pisidium* Pfeiffer, 1824.)

Corneocyclas abdita Haldeman.

Cook Co. (Baker, Calkins, Higley, Nason); Northern Illinois (Calkins); Kankakee River (Ferriss); Joliet, Will Co. (Ferriss, Handwerk); Lilycash Creek, Will Co. (Handwerk); Winnebago Co. (Hinkley, Marsh); La Salle Co. (Huett); Canton, Fulton Co. (Nason); Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co.; Pistakee, Sand, and Cedar lakes, Lake Co.; Thompson's Lake, Fulton Co.; Grand Pierre Creek, Herod, Pope Co.; Lake Michigan, Cook Co. (State Laboratory).

Corneocyclas abyssorum (Stimpson) Sterki.

Off Racine, Wisconsin, in deep water, dredged by George L. Marston (Hoy, Sterki).

As this species probably inhabits that part of Lake Michigan bordering on Illinois, it is included in this list.

Corneocyclas aquilateralis Prime.

Mercer Co. (Marsh); Havana, Mason Co.; Thompson's Lake, Fulton Co. (State Laboratory).

Corneocyclas affinis Sterki.

Winnebago Co. (Hinkley); Illinois (Sterki).

Corneocyclas compressa Prime.

Cook Co. (Baker, Calkins, Higley, Jensen); Northern Illinois (Calkins); Joliet, Will Co. (Ferriss, Handwerk); Lilycash Creek, Will Co. (Handwerk); Winnebago Co. and Big Muddy River, (Hinkley); La Salle Co. (Huett); Mercer Co. (Marsh); Canton,

Fulton Co. (Nason); Matanzas and Quiver lakes, and Illinois River, Havana, Mason Co.; Pistakee, Cedar, Fourth, Loon, Fox, and Sand lakes, Lake Co.; Lake Michigan, Cook Co.; Thompson's Lake, Fulton Co.; Quincy, Adams Co.; Grand Pierre Creek, Herod, Pope Co.; Towanda, McLean Co (State Laboratory).

Corneocyclas compressa levigata Sterki.

Cedar and Fox lakes and between Loon and Cedar lakes, Lake Co. (State Laboratory).

Corneocyclas compressa rostrata Sterki.

Lake Michigan, Cook Co. (State Laboratory).

Several specimens are provisionally referred to this variety by Dr. Sterki.

Corneocyclas cruciata Sterki.

Lilycash Creek, Will Co. (Handwerk); Joliet, Will Co. (Handwerk, Sterki).

Corneocyclas fallax Sterki.

Lilycash Creek, Joliet, Will Co. (Ferriss, Handwerk).

Corneocyclas handwerki Sterki.

Lilycash Creek, Will Co. (Handwerk).

Corneocyclas idahoensis Roper.

Lake Michigan, Cook Co. (Daniels).

Corneocyclas pauperkulata crystalensis Sterki.

Sand Lake, Lake Co. (State Laboratory).

Corneocyclas mediana Sterki.

Pistakee Lake, Lake Co. (State Laboratory).

Corneocyclas tenuissima Sterki.

Long Lake, Lake Co. (State Laboratory).

Corneocyclas kirklandi Sterki.

Cook Co. (Baker).

Corneocyclas noveboracensis Prime.

Northern Illinois (Marsh); Cedar and Pistakee lakes, Lake Co. (State Laboratory).

Corneocyclas noveboracensis elevata Sterki.

Joliet, Will Co. (Ferriss, Handwerk).

Corneocyclas peralata Sterki.

Elizabethtown, Hardin Co. (Hinkley); Havana, Mason Co. (Sterki); Fox Lake, Lake Co.; Lake Michigan, Cook Co. (State Laboratory).

Corneocyclas polita Sterki.

Joliet, Will Co. (Handwerk); Illinois River, Havana, Mason Co. (State Laboratory).

Corneocyclas punctata Sterki.

Lilycash Creek, Will Co. (Handwerk).

Corneocyclas punctata simplex Sterki.

Joliet, Will Co. (Ferriss, Handwerk).

Corneocyclas roperi Sterki.

Joliet, Will Co. (Handwerk, Sterki).

Corneocyclas rotundata Prime.

Northern Illinois (Marsh).

Corneocyclas sargenti Sterki.

Illinois (Sterki); Cedar Lake, Lake Co. (State Laboratory).

Corneocyclas scutellata Sterki.

Lake Michigan, near Chicago, Cook Co. (Baker); Huntley, McHenry Co. (Ferriss); Joliet, Will Co. (Handwerk); Fox and Pistakee lakes, Lake Co.; Lake Michigan, Cook Co. (State Laboratory).

Corneocyclas splendidula Sterki.

Lilycash Creek, Will Co. (Handwerk); Sand and Cedar lakes, Lake Co. (State Laboratory).

Corneocyclas variabilis Prime.

Lake Michigan, Cook Co. (Baker); Cook Co. (Baker, Jensen); Kankakee River (Ferriss); Du Page River (Gault); Lilycash Creek, Joliet, Will Co. (Handwerk); Winnebago Co. (Hinkley); Mercer Co. (Marsh); Canton, Fulton Co. (Nason); Fulton Co. (Wolf); Pistakee, Sand, Cedar, and Fox lakes, Lake Co.; Quiver Lake, and Illinois River, Havana, Mason Co.; Thompson's Lake, Fulton Co. (State Laboratory).

Corneocyclas virginica Gmelin.

Cook Co. (Baker); Kankakee River (Ferriss); Joliet, Will Co. (Ferriss, Handwerk); Lilycash Creek, Will Co. (Handwerk); Little Wabash River (Hinkley); Winnebago Co. (Marsh).

Corneocyclas walkeri Sterki.

Joliet, Will Co.; Du Page River (Ferriss); Lilycash Creek, Will Co. (Handwerk).

CLASS GASTROPODA.

SUBCLASS ANISOPLEURA.

ORDER PROSOBRANCHIATA.

Superfamily RHIPIDOGLOSSA.

Family HELICINIDÆ.

Genus HELICINA Lamarck.

Helicina occulta Lamarck.

Athens, Menard Co. (Pilsbry); Moline, Rock Island Co. (Shimek).

Superfamily TÆNIOGLOSSA.

Family VIVIPARIDÆ.

Genus VIVIPARA Lamarck.

Vivipara contectoides W. G. Binney.

Cook Co. (Baker, Calkins, Jensen, Nason, Woodruff); Northern Illinois (Calkins); Desplaines River (Ferriss); Romeo, Will Co.; Kankakee and Illinois rivers (Handwerk); Quincy, Adams Co. (Hart); White Co. (Hinkley); La Salle Co. (Huett); Mercer Co.; Henderson Co. (Marsh); Mississippi River, Quincy, Adams Co.; Illinois River (Nason); Thompson's Lake, Fulton Co. (Strode); Fulton Co. (Wolf); Quiver Lake, and Illinois River, Havana, Mason Co.; Peoria, Peoria Co.; Warsaw, Hancock Co.; Pekin Lake, Tazewell Co.; Fulton Co. (State Laboratory).

Vivipara subpurpurea Say.

Northern Illinois (Calkins); Rock Island (Call); Mt. Carmel, Wabash Co. (Daniels); Utica, in canal, La Salle Co. (Ferriss); Quincy, Adams Co. (Garman, Hart); Little Wabash, Saline, and Big Muddy rivers (Hinkley); La Salle Co. (Huett); Pulaski Co. (Lyon); Mercer Co. (Marsh); Mississippi River, Quincy, Adams Co. (Nason); Southern Illinois (Ulffers, as *vivipara*); Fulton Co. (Wolf); Matanzas Lake and Illinois River, Havana, Mason Co.; Peoria, Peoria Co.; Pekin Lake, Tazewell Co.; Thompson's Lake, Fulton Co. (State Laboratory).

Vivipara subpurpurea texana Tryon.

A specimen of this variety is in the collection of the Chicago Academy of Sciences labeled "Illinois" and presented by Mr. W. W. Calkins. The reference seems doubtful.

Vivipara intertexta Say.

Savanna, Carroll Co. (Baker); Northern and Southern Illinois (Calkins); Mt. Carmel, Wabash Co. (Call, Daniels); Putnam Co. (Ferriss); Quincy, Adams Co. (Garman, Hart); Winnebago Co. (Hinkley); Mercer Co. (Marsh); Canton, Fulton Co. (Nason, Wolf); Thompson's Lake, Fulton Co. (Strode); Cypress Swamp, Johnson Co.; Havana, Mason Co.; Flag Lake, Fulton Co. (State Laboratory).

Genus LIOPLAX Troschel.

Lioplax subcarinata Say.

Northern Illinois; Illinois River (Calkins, Nason); Kankakee River (Ferriss); Mississippi River, Quincy, Adams Co. (Garman, Hart, Nason); all rivers visited (Hinkley); La Salle Co. (Hnett); Pulaski Co. (Lyon); Mercer Co. (Marsh); Canton, Fulton Co. (Nason); Quincy, Adams Co.; Pekin Lake, Tazewell Co.; Peoria, Peoria Co.; Matanzas Lake and Illinois River, Mason Co.; Little Fox River, Phillipstown, White Co.; Fulton Co.; Franklin Co. (State Laboratory).

Genus CAMPELOMA Rafinesque.

Campeloma ponderosum Say.

Illinois River (Calkins, Rea); Wabash and Ohio rivers (Hinkley); Ohio River (Marsh); Southern Illinois (Ulfers); Chicago, Cook Co. (Velie).

Conrad says of this shell (New Fresh-water Shells, p. 12): "A common inhabitant of all the rivers of the west, from the northern districts of Illinois and Indiana to the waters of the Tennessee Valley." The Chicago record rests upon a number of specimens said to have been collected in Calumet River by Dr. J. W. Velie. The specimens are true *ponderosum* and are in the collection of the Chicago Academy of Sciences.

Campeloma coarctatum? Lea.

Cache Creek, Pulaski Co. (Lyon). Specimens of a species of *Campeloma* submitted to Mr. Bryant Walker, were thought by him to be doubtfully this species.

Campeloma decisum Say.

Chicago, Cook Co. (Baker, Higley, Jensen, Woodruff); Northern Illinois (Binney, Calkins); Jerseyville, Jersey Co.; Batavia, Kane Co. (Binney); Du Page River, (Ferriss); Quincy, Adams Co. (Garman); Joliet, Will Co. (Handwerk); all rivers visited (Hinkley); La Salle Co. (Huett); Sangamon Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co. (Nason); Quiver Lake, Havana, Mason Co.; Sand Lake, Lake Co. (State Laboratory).

Campeloma integrum De Kay.

Savanna, Carroll Co.; Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley, Jensen, Lyon); Kane Co., Fox and Illinois rivers (Calkins); Du Page River (Ferriss); Joliet, Will Co. (Handwerk); Kappa, Woodford Co. (Hart); Hamilton Co. (Lyon); Elgin, Kane Co.; Algonquin, McHenry Co. (Nason); Quincy, Adams Co.; Peoria, Peoria Co.; Fox and Sand lakes, Lake Co.; Havana, Mason Co.; Milan, Rock Island Co.; Fulton Co. (State Laboratory).

Campeloma integrum obesum Lewis.

Fox and Illinois rivers (Calkins); Mercer Co. (John Henry); Cook and Pulaski counties (Lyon); Winnebago Co. (Marsh); Peoria, Peoria Co.; Crooked Creek, Clinton Co.; Quincy, Adams Co. (State Laboratory).

Campeloma rufum Haldeman.

Cook Co. (Baker, Jensen, Lyon, Woodruff); Northern Illinois (Calkins); Du Page River (Ferriss); Joliet, Will Co. (Handwerk); Kappa, Woodford Co. (Hart); Rockford, Winnebago Co. (Hinkley); Mercer and Vermilion counties (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co. (Nason); Fulton Co. (Wolf); Cedar Lake, Lake Co.; Peoria, Peoria Co.; Pekin Lake, Tazewell Co.; Ohio River and Cache Creek, Pulaski Co.; Clear Lake, Cairo, Alexander Co. (State Laboratory).

Campeloma subsidum Anthony.

Savanna, Carroll Co. (Baker); Cook Co. (Baker, Calkins, Jensen, Lyon); Northern Illinois; Illinois and Fox rivers (Calkins); Grundy Co. (Daniels); Joliet, Will Co. (Handwerk); Quincy, Adams Co. (Hart); La Salle Co. (Huett); Union and Pulaski counties (Lyon); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co.; Quincy, Adams

Co. (Nason); Fulton Co. (Wolf); Quincy, Adams Co.; Swanwick Creek, Perry Co.; Fox, Clear, Sand, and Pistakee lakes, Lake Co.; Fulton Co.; Meredosia, Morgan Co.; Crab Orchard Creek, Williamson Co.; Peoria, Peoria Co.; Havana, Mason Co. (State Laboratory).

Campeloma subsolidum exilis Anthony.

Chicago, Cook Co. (Calkins, Higley); Northern Illinois (Calkins); Mercer Co. (Marsh); Quincy, Adams Co. (Nason); Illinois River (Walker); Fulton Co. (Wolf).

Call has recorded *Campeloma milesii* Lea from Mercer Co., but as no authentic *milesii* have as yet been found outside of the state of Michigan this citation must be understood to mean variety *exilis*.

FAMILY VALVATIDÆ.

Genus VALVATA Müller.

Valvata sincera Say.

Although no authentic Illinois records of this species have been seen, it is deemed best to include it in this list as it undoubtedly inhabits Northern Illinois.

Valvata lewisii Currier (= *sincera* of authors, not of Say).

Cook Co. (Baker, Calkins, Jensen, Lyon, Nason); Northern Illinois (Calkins); La Salle Co. (Huett); Jo Daviess Co. (Marsh); Lake Michigan, Chicago, Cook Co.; Long Lake, Lake Co. (State Laboratory).

Valvata tricarinata Say.

Cook Co. (Baker, Calkins, Nason); Northern Illinois (Calkins); Desplaines River, Joliet, Will Co. (Ferriss); Quincy, Adams Co. (Garman); Rockford, Winnebago Co. (Hinkley); La Salle Co. (Huett); Lake Co. (Jensen); Crystal Lake, McHenry Co. (Lyon); Mercer Co. (Marsh); Algonquin and Silver Lake, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf); Quiver Lake and Quiver Creek, Havana, Mason Co.; Cedar, Fourth, Sand, Fox, Long, and Pistakee lakes, Lake Co.; Thompson's Lake, Fulton Co.; Lake Michigan, Chicago, Cook Co. (State Laboratory).

Valvata tricarinata confusa Walker.

Joliet, Will Co. (Ferriss); Lake Co. (Jensen); Long Lake, Lake Co.; Havana, Mason Co. (State Laboratory).

Valvata bicarinata Lea.

Desplaines River; Lake Michigan, Cook Co. (Baker); Rock River (Ferriss); Joliet, Will Co. (Ferriss, Handwerk); Saline River; Elizabethtown, Hardin Co. (Hinkley); Lake Co. (Jensen); Mercer Co. (Marsh); Long, Sand, and Pistakee lakes, Lake Co.; Slough, Havana, Mason Co. (State Laboratory).

Valvata bicarinata perdepressa Walker.

Lake Michigan, Chicago, Cook Co. (Baker, Jensen, Lyon).

Valvata bicarinata normalis Walker.

Joliet, Will Co. (Ferriss); Willow Springs, Cook Co. (Handwerk); Quincy, Adams Co. (Hart); Lake Co. (Jensen); Crystal Lake, McHenry Co. (Lyon); Cedar, Fox, Long, and Pistakee lakes, Lake Co.; Quiver and Matanzas lakes and Havana, Mason Co.; McHenry Co.; Fulton Co. (State Laboratory).

FAMILY AMNICOLIDÆ.

Subfamily BYTHINIINÆ.

Genus BYTHINIA Gray.

Bythinia tentaculata Linné.

Cook Co. (Baker, Jensen, Lyon).

Subfamily HYDROBIINÆ.

Genus AMNICOLA Gould and Haldeman.

Amnicola limosa Say.

Savanna, Carroll Co. (Baker, Nason); Cook Co. (Baker, Calkins, Jensen, Lyon); Du Page River (Ferriss); Quincy, Adams Co. (Garman); Northern Illinois; Mercer Co. (Marsh); Algonquin, McHenry Co.; Elgin, Kane Co. (Nason); Fulton Co. (Wolf); Cedar, Pistakee, Fox, Long, and Sand lakes, Lake Co.; Lake Michigan, Chicago, Cook Co.; Clear and Quiver lakes, and Illinois River, Mason Co.; Flag and Thompson's lakes, and Spoon River, Fulton Co. (State Laboratory).

Amnicola limosa porata Say (= *orbiculata* Lea).

Cook Co. (Baker, Lyon, Nason); Northern Illinois (Calkins); Kankakee and Du Page rivers (Ferriss); La Salle Co. (Huett); Macoupin and Mercer counties (Marsh); Canton, Fulton Co.; Rock Island, Rock Island Co. (Nason); Fulton Co. (Wolf); Lake Michigan, Chicago, Cook Co.; Fox Lake, Lake Co.; Quiver Lake, Havana, Mason Co. (State Laboratory).

Amnicola limosa parva Lea.

Joliet, Will Co. (Ferriss, Handwerk); Cook Co. (Higley, Jensen); Seifert, Perry Co. (Hinkley); Salt Creek, Cook Co. (Jensen); Northern Illinois; Mercer Co. (Marsh); Fox River, Algonquin, McHenry Co. (Nason); Pistakee, Cedar, Long, and Fox lakes, Lake Co.; Quiver Lake, and Illinois River, Havana, Mason Co.; Thompson's and Flag lakes, Fulton Co.; Drew Pond, two miles from Wabash River, White Co.; Lake Michigan, Chicago, Cook Co.; Urbana, Champaign Co. (State Laboratory).

Amnicola limosa pallida Haldeman.

Kankakee River (Ferriss); Silver Lake, McHenry Co. (Nason); Fox Lake, Lake Co. (State Laboratory).

Amnicola lustrica Pilsbry.

Cook Co. (Baker, Higley); Fox River (Calkins); Joliet, Will Co. (Ferriss); Mason Co. (Hinkley); Crystal Lake, McHenry Co. (Lyon); Silver Lake, Fox River, McHenry Co. (Nason); Fox, Pistakee, Sand, Long, Cedar, and Slough lakes, Lake Co.; Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co.; Lake Michigan, Chicago, Cook Co. (State Laboratory).

Amnicola pilsbryi Walker.

Rockford, Winnebago Co. (Hinkley); Winnebago Co. (Marsh); Sand and Fox lakes, Lake Co. (State Laboratory).

Amnicola walkeri Pilsbry.

Joliet, Will Co. (Ferriss); Fox River, Algonquin, McHenry Co. (Nason); Long Lake, Lake Co. (State Laboratory).

Amnicola decisa Haldeman.

Fulton Co. (Wolf).

Subgenus *Cincinnatia* Pilsbry.*Amnicola cincinnatiensis* Lea (= *sayana* Anthony).

Cook Co. (Baker, Calkins, Jensen); Northern Illinois (Calkins); Joliet, Will Co.; Du Page River (Ferriss); Pecatonica River, Winnebago Co.; Little Wabash River; Big and Little Muddy rivers; Ohio River; Du Bois, Washington Co.; Elizabethtown, Hardin Co.; Mason Co. (Hinkley); Peoria Co. (Marsh); Algonquin, McHenry Co. (Nason); Fulton Co. (Wolf); Cedar, Pistakee, and Fourth lakes, Lake Co.; Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co.; Lake Michigan, Chicago, Cook Co.; McHenry Co.; Crystal Lake, Urbana, Cham-

paign Co.; Spoon River and Thompson's Lake, Fulton Co. (State Laboratory).

Amnicola emarginata Küster (= *obtusa* Lea).

Cook Co. (Baker, Calkins, Jensen); Ottawa, La Salle Co.; Northern Illinois; Kankakee River (Calkins); Kankakee River, Utica, La Salle Co. (Ferriss); Mercer Co. (Marsh); Fulton Co. (Wolf); Lake Michigan, Chicago, Cook Co.; Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co. (State Laboratory).

Genus PALUDESTRINA Orbigny.

Paludestrina nickliniana Lea.

Cook Co. (Baker, Higley); Fox River (Calkins); Evanston, Cook Co. (Lyon).

Genus SOMATOGYRUS Gill.

Somatogyrus isogonus Say.

Big Muddy River, Blairsville, Williamson Co. (Hinkley); Quincy, Adams Co. (State Laboratory).

Somatogyrus subglobosus Say.

Cook Co. (Baker, Calkins, Jensen, Lyon, Nason); Northern Illinois (Calkins); Kankakee River; Joliet, Will Co. (Ferriss); Quincy, Adams Co. (Garman); Wabash, Little Wabash, and Ohio rivers; Rockford, Winnebago Co. (Hinkley); Hamilton Co. (Lyon); Mississippi River (Marsh); Canton, Fulton Co.; Athens, Menard Co. (Nason); Spoon River (Strode); Fulton Co. (Wolf); Quincy, Adams Co.; Pekin, Tazewell Co.; Havana, Mason Co.; Peoria, Peoria Co.; Lake Michigan, Chicago, Cook Co. (State Laboratory).

Somatogyrus integer Say.

Rock River (Calkins); Joliet, Will Co. (Ferriss); Wabash River, White Co.; Ohio River, Golconda, Pope Co.; Little Muddy Creek, Rockford, Winnebago Co.; Du Bois, Washington Co.; Elizabethtown, Hardin Co. (Hinkley); Mississippi and Wabash rivers (Marsh).

Somatogyrus integer depressus Tryon.

Du Bois, Washington Co.; Rockford, Winnebago Co.; Peoria, Peoria Co. (Hinkley); Rock Island Co. (Nason).

Somatogyrus currierianus Lea.

Elizabethtown, Hardin Co. (Hinkley).

Subfamily POMATIOPSINÆ.

Genus POMATIOPSIS Tryon.

Pomatiopsis cincinnatiensis Anthony.

Northern Illinois (Calkins); Joliet, Will Co.; Kankakee River (Ferriss); Peoria Co. (Marsh); Fulton Co. (Wolf).

Pomatiopsis lapidaria Say (= *lustrica* Say).

Cook Co. (Baker, Higley); Northern Illinois; Ottawa, La Salle Co. (Calkins); Kankakee River; Joliet, Will Co. (Ferriss); Quincy, Adams Co. (Hart); Winnebago Co.; Du Bois, Washington Co. (Hinkley); La Salle Co. (Huett); Winnebago and Mercer counties (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf); Quiver Lake, Havana, Mason Co.; Bartelso, Clinton Co. (State Laboratory).

Pomatiopsis sheldoni Pilsbry.

Illinois River (Marsh).

Genus PYRGULOPSIS Call and Pilsbry.

Pyrgulopsis mississippiensis Pilsbry.

Mississippi River, near mouth of Rock River (Call, Marsh, Pilsbry).

Pyrgulopsis scalariformis Wolf.

Tazewell Co. shore of Illinois River (Wolf).

Family PLEURO CERIDÆ.

Genus ANGITREMA Haldeman.

Angitrema armigera Say.

Wabash and Ohio rivers (Hinkley); Ohio River (Marsh); Southern Illinois (Ulffers); Ohio River, Golconda, Pope Co. (State Laboratory).

Angitrema verrucosa Rafinesque.

Wabash and Ohio rivers (Hinkley); Ohio River (Marsh); Mt. Carmel, Wabash Co. (Nelson); Ohio River, Golconda, Pope Co. (State Laboratory).

Genus LITHASIA Haldeman.

Lithasia undosa Anthony.

Little Wabash and Saline rivers (Hinkley); Ohio River (Marsh).

Lithasia obovata Say.

Ohio River (Marsh).

Genus PLEUROCERA Rafinesque.

Pleurocera alveare Conrad (= *nupera* Say).

Little Wabash and Saline rivers (Hinkley); Ohio River (Marsh); Southern Illinois (Ulffers).

Pleurocera canaliculatum Say.

Wabash and Ohio rivers (Hinkley); Wabash River (Marsh); Mt. Carmel, Wabash Co. (Nelson); Southern Illinois (Ulffers); Golconda, Pope Co.; Saline River, Saline Co. (State Laboratory).

Pleurocera elevatum Say.

Cook Co. (Baker, Jensen); Joliet, Will Co.; Kankakee River (Ferriss, Handwerk); Kishwaukee and Kaskaskia rivers (Hinkley); Illinois River (Marsh); Spoon River (Strode); Peoria, Peoria Co.; Pekin Lake, Tazewell Co.; Golconda, Pope Co.; Saline River, Saline Co.; Kaskaskia River, Bartelso, Clinton Co.; Pistakee Lake, Lake Co.; Skillet Fork, Wayne Co.; Duncan's Mills and Bernadotte, Fulton Co.; Little Muddy River, Franklin Co.; Havana, Mason Co.; Kishwaukee River, Winnebago Co.; Carlyle, Clinton Co.; Lake Michigan, Chicago, Cook Co. (State Laboratory).

Pleurocera elevatum lewisii Lea.

Northern Illinois; Fox River (Calkins); Utica, La Salle Co.; Joliet, Will Co.; Kankakee River (Ferriss); Quincy, Adams Co. (Hart); La Salle Co. (Huett); Peoria Co. (Lea, Lewis, Marsh, Tryon); Illinois River; Canton, Fulton Co. (Nason); Spoon River (Strode); Fulton Co. (Wolf); Peoria, Peoria Co.; Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co.; Pekin Lake, Tazewell Co.; Thompson's Lake, Fulton Co.; Milan, Rock Island Co. (State Laboratory).

Pleurocera florencense Lea.

Wabash River (Marsh).

Pleurocera lesleyi Lea.

Ohio River (Marsh).

Pleurocera moniliferum Lea.

Wabash, Little Wabash, Saline, and Ohio rivers (Hinkley, Marsh); Ohio River (Lea).

Pleurocera neglectum Anthony.

Big and Little Muddy rivers (Hinkley); Washington Co. (Marsh).

Pleurocera pallidum Lea.

Fox River (Calkins); Kappa, Woodford Co. (Hinkley, collected by C. A. Hart).

Pleurocera ponderosum Anthony.

Illinois River (Ferriss, Marsh); Fox River (Tryon).

Pleurocera subulare Lea.

Cook Co. (Baker, Calkins, Jensen, Lyon); Northern Illinois; Fox River (Calkins); Kankakee River (Ferriss); Rock River and Kent's Creek (Hinkley); La Salle Co. (Huett); Union Co. (Lyon); Mississippi River (Marsh); Fulton Co. (Wolf); Lake Michigan, Chicago, Cook Co.; Havana, Mason Co. (State Laboratory).

Pleurocera subulare intensum Anthony.

Desplaines River (Baker); Cook Co. (Jensen, Velie); Meredosia, Morgan Co. (Woodruff); Quincy, Adams Co. (State Laboratory).

Pleurocera troostii Lea.

Wabash River (Marsh).

Pleurocera undulatum Say.

Wabash and Ohio rivers (Hinkley); Wabash River (Marsh).

GENUS GONIOBASIS Lea.

Goniobasis costifera Haldeman.

Creeks of Hardin Co. (Hinkley); Hennepin, Putnam Co. (Haldeman, Tyron); Saline River (Marsh).

Goniobasis plebeius Anthony (= *cubicoides* Anthony).

Kankakee River (Ferriss, Marsh).

Goniobasis depygis Say.

Northern Illinois (Calkins); Kankakee River (Ferriss); Joliet, Will Co. (Ferriss, Handwerk); Hickory Creek, Will Co. (Handwerk); La Salle Co. (Huett); Peoria Co. (Marsh).

Goniobasis gracilior Anthony.

Fulton Co. (Wolf); Peoria, Peoria Co. (State Laboratory).

Goniobasis infantula Lea.

Ohio River (Marsh).

Goniobasis semicarinata Say (= *grosvenorii* Lea).

Hickory Creek, Will Co. (Ferriss); Fox River (Lea); Big Vermilion River (Marsh); Grand Pierre Creek, Herod, Pope Co.; Elizabethtown, Hardin Co.; Bartelso, Clinton Co. (State Laboratory).

Goniobasis livescens Menke.

Cook Co. (Baker, Calkins, Jensen, Lyon); Northern Illinois; Fox River (Calkins); Utica, La Salle Co.; Kankakee River (Ferriss); Kappa, Woodford Co. (Hart); La Salle Co. (Huett); Illinois River (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Illinois River (Nason); Fulton Co. (Wolf); Havana, Mason Co.; Peoria, Peoria Co.; Lake Michigan, Chicago, Cook Co. (State Laboratory).

Goniobasis pulchella Anthony.

Big Vermilion River (Calkins); Desplaines River (Ferriss); Illinois River (Lewis, Marsh).

Goniobasis spartenburgensis Lea.

Mt. Carmel, Wabash Co. (Hinkley, collected by Mr. Charles A. Hodgson).

GENUS ANCULOSA Say.

Anculosa subglobosa Say.

Ohio River (Marsh).

Anculosa prerosa Say.

Wabash and Ohio rivers (Hinkley); Ohio River (Marsh); Southern Illinois (Ulffers); Golconda, Pope Co. (State Laboratory).

Anculosa costata Anthony.

Wabash River (Marsh).

SUBCLASS EUTHYNEURA.

ORDER PULMONATA.

SUBORDER BASOMMATOPHORA.

Superfamily HYGROPHILA.

Family PHYSIDÆ.

Genus PHYSA Draparnaud.

Physa ancillaria Say (= *vinosa* of authors, not of Gould).

Quincy, Adams Co. (Garman); tank pond, Du Bois, Washington Co.; Winnebago Co. (Hinkley); Winnebago Co. (Marsh); Lake Michigan, Cook Co. (Nason).

Physa sayii Tappan.

Cook and Will counties; Northern Illinois (Baker); Fox River; Algonquin, McHenry Co. (Nason); Clear, Sand, and Cedar lakes, Lake Co.; Peoria, Peoria Co.; Urbana, Champaign Co.; Milan, Rock Island Co.; Havana, Mason Co.; Northern Illinois (State Laboratory).

Physa heterostropha Say.

Cook Co. (Baker, Calkins); Southern Illinois (Binney, Ulfers); Quincy, Adams Co. (Garman); Joliet, Will Co.; Kankakee River (Handwerk); Saline River; Winnebago, Washington, and Hardin counties (Hinkley); Mercer Co. (Marsh); Silver and Crystal lakes and Algonquin, McHenry Co. (Nason); Thompson's Lake, Fulton Co. (Strode); Cedar, Pistakee, and Clear lakes, Lake Co.; Quiver Lake, Havana, Mason Co.; Normal, McLean Co.; McHenry Co. (State Laboratory).

Physa anatina Lea.

Elizabethtown, Hardin Co. (Hinkley); Algonquin, McHenry Co. (Nason); Quincy, Adams Co. (State Laboratory).

Physa gyrina Say.

Northern Illinois (Baker, Calkins); Cook Co. (Baker, Calkins, Lyon, Woodruff); Oregon, Ogle Co.; Savanna, Carroll Co. (Baker, Nason); Du Page River (Ferriss); Kankakee River (Handwerk); Winnebago, Jefferson, Hardin, and Washington counties; Saline River (Hinkley); Fulton Co. (Hinkley, Wolf);

La Salle Co. (Huett); Mercer Co. (Marsh); Fox River; Algonquin, Flint Creek and Crystal and Silver lakes, McHenry Co. (Nason); Quincy, Adams Co.; Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co.; Grand Pierre Creek, Herod, Pope Co.; Normal, McLean Co.; Peoria, Peoria Co.; Polecat Creek, Ashmore, Coles Co.; Cypress Creek, Grantsburg, Johnson Co.; Urbana, Champaign Co.; Union Co.; Lake Michigan, Chicago, Cook Co. (State Laboratory).

Physa gyrina oleacea Tryon (= *elliptica* of authors, not of Lea).

Cook Co.; Northern Illinois (Baker, Nason); Quincy, Adams Co. (Hart); Little Muddy River (Hinkley); Algonquin, McHenry Co.; Quincy, Adams Co.; Athens, Menard Co. (Nason); Miller's Pond, Union Co.; Saline Co.; Peoria, Peoria Co.; Pekin, Tazewell Co.; Pistakee and Fourth lakes, Lake Co.; Dixon, Lee Co.; Havana, Mason Co. (State Laboratory).

Physa gyrina hildrethiana Lea.

Cook Co. (Baker, Nason); Northern Illinois (Calkins); La Salle Co. (Huett); a lake in Illinois (Lea); Canton, Fulton Co. (Lewis); Fulton Co. (Marsh, Wolf); Elgin, Kane Co.; Crystal Lake, McHenry Co.; Athens, Menard Co. (Nason).

Physa integra Haldeman (= *niagarensis* Lea).

Savanna, Carroll Co. (Baker); Oregon, Ogle Co.; Cook Co. (Baker, Nason); De Soto, Jackson Co.; Du Bois, Washington Co.; Rockford, Winnebago Co.; Big Muddy River (Hinkley); Elgin, Kane Co.; Crystal and Silver lakes and Algonquin, McHenry Co. (Nason); Blue Mound, Macon Co.; Peoria, Peoria Co.; Pistakee, Fox, Cedar, Sand, and Fourth lakes, Lake Co.; Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co.; Lake Michigan, Chicago, Cook Co.; Bluff Lake, Anna, Union Co.; Pekin Lake, Tazewell Co.; Flag Lake, Fulton Co.; Cedar Creek, Quincy, Adams Co. (State Laboratory).

Physa walkeri Crandall.

Rockford, Winnebago Co. (Hinkley); Elgin, Kane Co. (Nason).

Physa crandalli Baker (= *rhomboidea* Crandall, 1901, not Meek and Hayden, 1856).

Big Muddy and Saline rivers; Jefferson Co. (Hinkley); Athens, Menard Co. (Nason).

Physa sp.

Greenhouse, Douglass Park, Chicago, Cook Co. (Hood, Zetek).

Genus APLEXA Fleming.

Aplexa hypnorum Linné (= *Physa elongata* Say).

Cook Co. (Baker, Higley, Nason); Northern Illinois (Calkins); Desplaines River (Ferriss); Rockford, Winnebago Co. (Hinkley); La Salle Co. (Huett); Canton, Fulton Co. (Lewis); Eastern Illinois (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Canton, Fulton Co. (Nason); shores of Illinois (Say); Southern Illinois (Uliffers); Fulton Co. (Wolf).

Family ANCYLIDÆ.

Genus ANCYLUS Geoffroy.

Section *Lavapex* Walker.*Ancylus diaphanus* Haldeman.

Illinois River (Ferriss, Walker).

Ancylus fuscus Adams.

Algonquin and Fox Lake, McHenry Co. (Nason).

Ancylus fuscus euglyptus Pilsbry.

Havana, Mason Co.; Illinois River (Pilsbry).

Ancylus kirklandi Walker.

Havana, Mason Co.; Crystal Lake, Urbana, Champaign Co. (State Laboratory).

Section *Ferrissia* Walker.*Ancylus rivularis* Say.

Du Page River (Ferriss); Winnebago and Washington counties (Hinkley); Cook Co. (Jensen); Mercer Co. (Marsh); creek, Algonquin, McHenry Co.; Fox River, Elgin, Kane Co. (Nason); Salt Fork, Urbana, Champaign Co. (State Laboratory).

Ancylus parallelus Haldeman*

Algonquin, McHenry Co. (Nason); Pistakee and Cedar lakes, Lake Co. (State Laboratory).

Ancylus tardus Say.

Northern Illinois; La Salle Co. (Calkins, Huett); Du Page River (Ferriss); Winnebago Co. (Hinkley); Mercer Co. (Marsh); creek, Algonquin, McHenry Co. (Nason); Rockford, Winnebago

**Ancylus parallelus* Haldeman as quoted by Marsh from Mercer Co., is said by Walker to be *A. tardus*. (Nautilus XVIII, p. 76.)

Co. (Walker); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Ancylus haldemani Bourguignat.

Quiver Lake and Illinois River, Havana, Mason Co. (State Laboratory).

Ancylus pumilus Sterki.

Rockford, Winnebago Co.; Kankakee River (Walker).

Ancylus shimckii Pilsbry.

Salt Fork, Urbana, Champaign Co. (State Laboratory).

Ancylus sp.*

Genus GUNDLACHIA Pfeiffer.

Gundlachia meekiana Stimpson.

Rock Island Co. (Marsh, Pilsbry).

Gundlachia sp.

Quiver Lake, Havana, Mason Co. (State Laboratory).

Family LYMNÆIDÆ.

Subfamily LYMNÆINÆ.

Genus LYMNÆA Lamarck.

Subgenus *Lymnæa* Lamarck.†

Section *Lymnæa* s.s.

Lymnæa stagnalis appressa Say (= *jugularis* Say).

Cook Co. (Baker, Calkins, Jensen, Nason); Northern Illinois (Calkins); Desplaines River (Ferriss, Handwerk); Romeo, Will Co. (Handwerk); La Salle Co. (Huett, for *stagnalis*); Lake Co. (Marsh); Silver Lake and Algonquin, McHenry Co. (Nason); Cedar and Fourth lakes, Lake Co.; Chicago, Cook Co. (State Laboratory).

Section *Radix* Montfort.

Lymnæa auricularia Linné.

Greenhouse, Lincoln Park, Chicago, introduced (Baker, Nason).

**Ancylus shimckii* Pilsbry as quoted by Baker from Joliet and by Pilsbry from Rock Island, is said by Mr. Bryant Walker to be an undescribed species.

†*Lymnæa emarginata* Say is reported from Southern Illinois by Ulfers, but this would seem to be an error, as no authentic specimens of this species from Illinois have been seen by the writer.

Lymnaea columella Say.

Cook Co. (Baker); Little Muddy River, Du Bois, Washington Co.; De Soto, Jackson Co. (Hinkley); McHenry Co. (Marsh).

Lymnaea columella chalybea Gould (= *casta* Lea).

Mercer Co. (Marsh).

Section *Acella* Haldeman.*Lymnaea haldemani* Deshayes (= *gracilis* Jay).

Cedar Lake, Lake Co. (State Laboratory).

Subgenus *Galba* Schrank.*Lymnaea obrussa* Say (= *desidiosa* of authors, not of Say).

Cook Co. (Baker, Higley); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk); Desplaines River (Ferriss); Mackinaw River, Kappa, Woodford Co. (Hart); Winnebago and Hardin counties (Hinkley); Mercer and Will counties (Marsh); Elgin, Kane Co.; Fox River, Algonquin and Silver Lake, McHenry Co. (Nason); Fulton Co. (Wolf); Dixon, Lee Co.; Panola, Woodford Co.; Galena, Jo Daviess Co.; Cedar, Fox, and Fourth lakes, Lake Co.; Quiver and Matanzas lakes, and Illinois River, Havana, Mason Co.; Urbana and Champaign, Champaign Co.; Thompson's Lake, Fulton Co. (State Laboratory).

Lymnaea obrussa plica Lea (= *exigua* Lea).

Chicago, Cook Co. (Baker, Jensen); Rockford, Winnebago Co. (Hinkley).

Lymnaea obrussa decampi Streng.

Silver Lake and Algonquin, McHenry Co. (Nason); Cedar and Long lakes, Lake Co. (State Laboratory).

Lymnaea obrussa modicella Say.

Cook Co. (Baker, Higley); Elgin, Kane Co.; Fox River, Algonquin and Crystal Lake, McHenry Co.; Athens, Menard Co. (Nason); Wabash Co. (Marsh); Urbana, Champaign Co.; Illinois River, Havana, Mason Co.; Thompson's Lake, Fulton Co. (State Laboratory).

Lymnaea tazewelliana Wolf.

Tazewell Co. shore of Illinois River, (Wolf). Pleistocene fossil.

Lymnaea sterkii Baker.

Canton, Fulton Co. (Nason).

Lymnaea humilis Say.

Cook Co. (Baker); Desplaines River (Ferriss); Joliet, Will Co. (Ferriss, Handwerk); La Salle Co. (Huett); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Canton, Fulton Co. (Nason); Jackson Co. (Walker); Fulton Co. (Wolf); Grand Tower, Jackson Co. (Woodruff); Quiver and Matanzas lakes, Havana, Mason Co. (State Laboratory).

Lymnaea parva Lea (= *curta* Lea).

Joliet, Will Co. (Ferriss, Handwerk); Mercer Co. (Marsh); Athens, Menard Co.; Cook Co.; Algonquin and Crystal Lake, McHenry Co.; Elgin, Kane Co. (Nason); Canton, Fulton Co. (Nason, Walker); Fulton Co. (Wolf); Copperas Creek (Phil. Acad. Sciences); Illinois River, Havana, Mason Co.; Clifton, Iroquois Co. (State Laboratory).

Lymnaea dalli Baker

Rockford, Winnebago Co. (Hinkley); Northern Illinois, in drift (Sterki).

Subgenus *Stagnicola* Leach.Section *Stagnicola s.s.**Lymnaea catascopium* Say (= *fusiformis* Lea).

Cook Co. (Baker, Jensen, Nason); Northern Illinois (Calkins); Will Co. (Marsh); Lake Michigan, Chicago, Cook Co. (State Laboratory).

Lymnaea catascopium pinguis Say.

Cook Co. (Baker, Calkins).

Lymnaea woodruffi Baker.

Lake Michigan, Cook Co. (Baker, Lyon, Nason, Woodruff, State Laboratory).

Lymnaea caperata Say (= *ferrissi* Baker).

Cook Co. (Baker, Calkins, Jensen, Nason); Northern Illinois (Calkins); Joliet, Will Co. (Ferriss); Winnebago Co. (Hinkley); Lake Co. (Huett); Mercer and Whiteside counties (Marsh); Elgin, Kane Co.; Algonquin and Crystal Lake, McHenry Co. (Nason); Fulton Co. (Wolf); Urbana, Champaign Co.; Cedar Lake, Lake Co.; Clifton, Iroquois Co.; Quincy, Adams Co.; Freeport, Stephenson Co. (State Laboratory).

Lymnaea caperata umbilicata Adams.

Cook Co. (Baker, Jensen, Nason); Joliet, Will Co.; Desplaines River (Ferriss); Kankakee Co. (Marsh).

Lymnaea pallida Adams.

Northern Illinois (Calkins); La Salle Co. (Huett); Winnebago Co. (Marsh).

Lymnaea palustris Müller (= *clodes* Say, *umbrosa* Say, *suttlatus* Calkins).*

Cook Co. (Baker, Calkins, Nason); Northern Illinois (Calkins); Desplaines River (Ferriss); Winnebago Co.; Canton, Fulton Co. (Hinkley, Marsh); Mercer and Lake counties (Marsh); Silver Lake, McHenry Co. (Nason); Southern Illinois (Ulffers, as *fragilis*); Havana, Mason Co. (Walker); Fulton Co. (Wolf); Urbana, Champaign Co.; Flag Lake, Fulton Co.; Quiver Lake, Havana, Mason Co.; Peoria, Peoria Co.; Cedar, Fourth, and Pistakee lakes, Lake Co. (State Laboratory).

Lymnaea palustris michiganensis Walker.

Cook Co. (Baker); Joliet, Will Co. (Ferriss, Handwerk); Winnebago Co. (Hinkley); Havana, Mason Co. (State Laboratory).

Lymnaea reflexa Say (= *zebra* Tryon).

Cook Co. (Baker, Calkins, Lyon, Nason); Northern Illinois (Calkins); Joliet, Will Co.; Desplaines River (Ferriss, Handwerk); Pecatonica, Winnebago Co. (Hinkley); Kappa, Woodford Co. (Hart); La Salle Co. (Huett); Mercer Co. (Marsh); Silver and Crystal lakes and Algonquin, McHenry Co.; Mason Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Quiver Lake, Havana, Mason Co.; Clear and Cedar lakes, Lake Co.; Thompson's Lake, Fulton Co.; Normal, McLean Co.; Running Lake, Union Co.; McHenry Co. (State Laboratory).

Lymnaea reflexa erilis Lea (= *kirtlandiana* Lea, *lanceata* Gould).

Cook Co. (Calkins); Mercer Co.; Desplaines River (Ferriss); Winnebago Co. (Hinkley); Will Co. (Marsh); Algonquin and Silver Lake, McHenry Co. (Nason); Aledo, Mercer Co. (Walker); Cedar Lake, Lake Co.; Northern Illinois (State Laboratory).

**Lymnaea palustris nuttalliana* and *Lymnaea palustris expansa*, recorded in The Mollusca of the Chicago Area, Part II., pp. 276, 277, prove to be forms of *palustris*.

Lymnaea reflexa jolietensis Baker.

Rock Run, Joliet, Will Co. (Ferriss); Elgin, Kane Co.; Crystal Lake, McHenry Co. (Nason).

Lymnaea reflexa walkeri Baker (= *scalaris* Walker, 1892, not Van den Broeck, 1870).

Cook Co. (Baker, Nason); Joliet, Will Co. (Ferriss); Algonquin, McHenry Co. (Nason).

Lymnaea reflexa iowensis Baker.

Joliet, Will Co. (Ferriss).

Lymnaea reflexa crystalensis Baker.

Crystal Lake, McHenry Co. (Lyon); Flint Creek, McHenry Co.; Mason Co. (Nason).

Subfamily PLANORBINÆ.

Genus PLANORBIS Müller.

Subgenus *Planorbis* s.s.

Section *Planorbina* Haldeman.

Planorbis glabratus Say.

Northern Illinois (Calkins); Winnebago Co.; Mercer Co.; Pecatonica River (Hinkley); La Salle Co. (Huett); Cypress Creek, Johnson Co.; McHenry Co.; Hamilton Co.; Hawthorne, White Co. (State Laboratory).

Subgenus *Helisoma* Swainson.

Section *Helisoma* Swainson.

Planorbis bicarinatus Say.

Cook Co. (Baker, Calkins, Higley, Jensen, Nason); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Desplaines River (Ferriss); Kappa, Woodford Co. (Hart); common throughout the state (Hinkley); Crystal Lake, McHenry Co. (Lyon); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Mason Co. (Nason); McHenry Co. (Stearns); Fulton Co. (Wolf); Illinois River and Dogfish, Quiver, and Matanzas lakes and Slough, Havana, Mason Co.; Fourth, Sand, Cedar, Fox, Pistakee, Clear, Long, and Slough lakes, Lake Co.; Pope Co.; Johnson Co.; Thompson's Lake, Fulton Co.; Milan, Rock Island Co.; Panola, Woodford Co.; Pekin, Tazewell Co. (State Laboratory). A white variety from Crystal and Silver lakes, McHenry Co. (Nason).

Section *Picrosoma* Dall.

Planorbis trivolvis Say (= *fallax* Hald., *megastoma* De Kay, *lentus* of authors, not of Say).*

Cook Co. (Baker, Calkins, Lyon, Nason); Southern Illinois (Binney, Ulfers); Northern Illinois (Calkins); Joliet, Will Co.; Desplaines River (Ferriss); Quincy, Adams Co. (Garman); East Branch Du Page River (Gault); Romeo and Joliet, Will Co. (Handwerk); Kappa, Woodford Co.; Quincy, Adams Co. (Hart); Kishwaukee and Little Wabash rivers; Winnebago, Washington, and Hardin counties; Seifert, Perry Co. (Hinkley); La Salle Co. (Huett); Crystal Lake, McHenry Co. (Lyon); Eastern Illinois; Mercer Co. (Marsh); Athens, Menard Co.; Fox River, Algonquin and Silver Lake, McHenry Co.; Elgin, Kane Co. (Nason); Fulton Co. (Wolf); Saline Co.; Champaign Co.; Peoria, Peoria Co.; Quiver Lake, Havana, Mason Co.; Cypress Creek, Johnson Co.; Cedar Lake, Lake Co.; Dug Hill and Miller's Pond, Union Co.; Washington Co.; Thompson's Lake, Fulton Co.; Pekin, Tazewell Co.; Taylorville, Christian Co.; Northern Illinois; Warsaw, Hancock Co. (State Laboratory).

Planorbis trivolvis macrostoma Whiteaves.

Desplaines River, Will Co. (Ferriss); Northern Illinois (Marsh); Fox River and Algonquin, McHenry Co. (Nason).

Planorbis truncatus Miles.

Cook Co. (Baker, Higley, Jensen).

Planorbis sampsoni Ancey.

Athens, Menard Co., collected by E. Hall (*Nautilus*, IX., p. 36, 1895).

Section *Planorbella* Haldeman.

Planorbis campanulatus Say.

Cook Co. (Baker, Calkins, Higley); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Desplaines River (Ferriss); Romeo and Joliet, Will Co. (Handwerk); Quincy, Adams Co. (Hart); Winnebago Co. (Hinkley, Marsh); Crystal Lake, McHenry Co. (Lyon); Silver and Crystal lakes and Algonquin, McHenry Co. (Nason); McHenry Co. (Stearns); Southern Illinois (Ulfers); Milan, Rock Island Co.; Clear, Cedar, Sand, Fox,

*The references to *Planorbis lentus* Say from Illinois are extremely doubtful, as it is essentially a southern species. It is reported from the following localities: Winnebago Co. (Hinkley); Mercer Co. (Marsh). (See *Nautilus*, III., p. 23.)

and Fourth lakes, Lake Co.; Pekin Lake, Tazewell Co.; Havana, Mason Co.; Fulton Co.; McHenry Co.; Lake Michigan, Cook Co.; Northern Illinois; Camp Point, Adams Co. (State Laboratory).

Subgenus *Hippeutis* Agassiz.

Section *Menetus* H. & A. Adams.

Planorbis excavous Say (= *excavatus* of authors).

Joliet, Will Co., Desplaines River (Ferriss); Winnebago Co. (Hinkley); Mercer Co. (Marsh); Chicago, Cook Co.; Algonquin, McHenry Co.; Illinois River (Nason); Fulton Co. (Wolf); Quiver Lake and Havana, Mason Co.; Pistakee, Fourth, Fox, Sand, Long, Cedar, and Slough lakes, and between Cedar and Loon lakes, Lake Co.; Urbana, Champaign Co.; Flag Lake, Fulton Co. (State Laboratory).

Subgenus *Gyraulus* Agassiz.

Planorbis albus Müller (= *hirsutus* Gould).

Rockford, Winnebago Co.; Du Bois, Washington Co. (Hinkley); Algonquin, McHenry Co. (Nason); Pistakee and Cedar lakes, Lake Co.; Northern Illinois (State Laboratory).

Planorbis deflectus Say.

Cook Co. (Baker, Nason); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Desplaines River (Ferriss); Winnebago Co. (Hinkley); Will Co. (Marsh); Silver Lake and Algonquin, McHenry Co. (Nason); Fulton Co. (Wolf); Cedar, Fox, and Pistakee lakes, Lake Co.; Quiver Creek and Quiver and Dogfish lakes, Mason Co.; McHenry Co. (State Laboratory).

Section *Torquis* Dall.

Planorbis parvus Say.

Cook Co. (Baker, Calkins, Lyon, Nason); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Desplaines River (Ferriss); Joliet, Will Co. (Ferriss, Handwerk); Romeo, Will Co. (Handwerk); Rockford, Winnebago Co. (Hinkley); Mercer Co. (Marsh); Algonquin, McHenry Co.; Quincy, Adams Co.; Athens, Menard Co.; Elgin, Kane Co. (Nason); Fulton Co. (Wolf); Thompson's Lake, Fulton Co.; Quiver, Dogfish, and Matanzas lakes and Slough, Havana, Mason Co.; Cedar, Pistakee, Sand, Fox, Fourth, and Slough lakes, Lake Co.; Urbana, Champaign Co. (State Laboratory).

Planorbis dilatatus Gould.

Carbondale, Jackson Co. (Hinkley).

Section *Armiger* Hartmann.

Planorbis crista Linné, 1758 (= *nautilus* Linné, 1767).

Algonquin, McHenry Co. (Nason).

Genus SEGMENTINA Fleming.

Subgenus *Planorbula* Haldeman.

Segmentina armigera Say.

Cook Co. (Baker, Calkins, Nason); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Desplaines River, Joliet, Will Co. (Ferriss); Rockford, Winnebago Co. (Hinkley); Mercer Co. (Marsh); Elgin, Kane Co.; Silver and Crystal lakes and Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf); Glen Ellyn, Du Page Co. (Woodruff); Quiver Lake, Havana, Mason Co.; Urbana, Champaign Co.; Fourth Lake, Lake Co.; McHenry Co. (State Laboratory).

Superfamily AKTEOPHILA.

Family AURICULIDÆ.

Genus CARYCHIUM Müller.

Carychium exiguum Say.

Cook Co. (Baker, Jensen); Northern Illinois; Fox River (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss); Lilycash Creek, Will Co. (Handwerk); Rockford, Winnebago Co.; Du Bois, Washington Co. (Hinkley); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf).

Carychium exile H. C. Lea.

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley, Jensen); Joliet, Will Co. (Ferriss); Algonquin, McHenry Co. (Nason).

SUBORDER STYLOMMATOPHORA.

MONOTREMATA.

Vasopulmonata.

ORTHURETHRA.

Family VALLONIIDÆ.

Genus VALLONIA Risso.

Vallonia pulchella Müller (= *Helix minuta* Say).

Cook Co. (Baker, Higley, Jensen); Joliet, Will Co. (Ferriss, Handwerk); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co. (Nason); Fulton Co. (Wolf).

Vallonia costata Müller.

La Salle Co. (Calkins); Rock Island Co. (Marsh); Algonquin, McHenry Co. (Nason).

Vallonia parvula Sterki.

Joliet, Will Co. (Ferriss, Handwerk); Algonquin, McHenry Co. (Nason); Will Co. (Sterki).

Family PUPIDÆ.

Genus STROBILOPS Pilsbry.

Strobilops labyrinthica Say.

Cook Co. (Baker, Jensen); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Utica and Sheridan. La Salle Co. (Ferriss); Winnebago and Washington counties (Hinkley); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf).

Strobilops affinis Pilsbry.

Oregon, Ogle Co.; Evanston, Cook Co. (Baker); Algonquin, McHenry Co. (Nason).

Strobilops virgo Pilsbry.

Elgin, Kane Co.; Algonquin, McHenry Co. (Nason).

Genus PUPOIDES Pfeiffer.

Pupoides marginata Say (= *fallax* Say of American authors, not of Say).

Oregon, Ogle Co. (Baker); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Hand-

werk); Lilycash Creek, Will Co. (Handwerk); Cook Co. (Higley, Nason); Winnebago Co. (Hinkley); Mercer Co. (Marsh); Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Aurora, Kane Co. (Oakes); Fulton Co. (Wolf).

Genus BIFIDARIA Sterki.

Section *Bifidaria s.s.*

Bifidaria corticaria Say.

Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Sheridan, La Salle Co. (Ferriss); Mt. Carmel, Wabash Co. (Gratacap); Washington Co. (Hinkley); Will Co. (Marsh); Fulton Co. (Wolf).

Bifidaria procera Gould (= *rupicola* of authors not of Say).

Joliet, Will Co.; Du Page Co. (Ferriss); Will Co. (Marsh); Fulton Co. (Wolf).

Section *Albinula* Sterki.

Bifidaria armifera Say.

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley, Jensen); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Peoria Co. (Chamberlain); Stark Co. (Chase); Joliet, Will Co.; Utica, La Salle Co. (Ferriss, Handwerk); Winnebago and Washington counties (Hinkley); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf); Illinois River, Havana, Mason Co. (State Laboratory).

Bifidaria contracta Say.

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Jensen); La Salle Co. (Calkins); Stark Co. (Chase); Joliet, Will Co. (Ferriss, Handwerk); Mt. Carmel, Wabash Co. (Gratacap); Washington Co. (Hinkley); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Bifidaria holzingeri Sterki.

Joliet, Will Co. (Ferriss, Handwerk); Northern Illinois; Will and La Salle counties (Ferriss, Sterki); Will Co. (Marsh).

Section *Vertigopsis* (Cockerell) Sterki.

Bitidaria tapaniana C. B. Adams (= *pentodon* of authors, not of Say).

Cook Co. (Baker, Jensen); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Stark Co. (Chase); Joliet, Will Co. (Ferriss); Washington and Winnebago counties (Hinkley); Will and Fulton counties (Marsh); Canton, Fulton Co. (Nason).

Bitidaria pentodon Say (= *curvidens* Gould).

Cook Co. (Baker, Jensen); Ottawa, La Salle Co. (Calkins); Joliet, Will Co. (Ferriss, Handwerk); Eastern Illinois (Marsh).

Bitidaria pentodon floridana Dall.

Huntley, McHenry Co. (Ferriss).

Genus PUPILLA Leach.

Pupilla muscorum Linné.

Mercer Co. (Marsh).

Genus VERTIGO Draparnaud.

Subgenus *Angustula* Sterki.

Vertigo milium Gould.

Washington and Winnebago counties (Hinkley, Marsh); Elgin, Kane Co.; Algonquin, McHenry Co. (Nason); Canton, Fulton Co. (Nason, Wolf).

Subgenus *Vertigo* Draparnaud.Section *Vertigo s.s.*

Vertigo ovata Say (= *Zonites upsoni* Calkins).

Rockford, Winnebago Co. (Calkins, Hinkley); Joliet, Will Co. (Ferriss, Handwerk); Winnebago Co. (Marsh); Algonquin, McHenry Co.; Canton, Fulton Co. (Nason); Fulton Co. (Wolf).

Vertigo ventricosa Morse.

Illinois (Pilsbry).

Vertigo ventricosa approximata Sterki.

Winnebago Co. (Marsh).

Vertigo gouldi Binney.

Rockford, Winnebago Co. (Hinkley); Will Co. (Marsh).

Vertigo tridentata Wolf.

Joliet, Will Co.; Utica, La Salle Co. (Ferriss, Handwerk); Canton, Fulton Co. (Gratacap, Hinkley, Marsh, Nason, Wolf); Fulton Co. (Marsh).

Family COCHLICOPIDÆ.

Genus COCHLICOPA (Ferussac) Risso.

Cochlicopa lubrica Müller.Cook Co. (Baker, Higley); Wilmington, Will Co. (Ferriss);
McHenry Co. (Marsh); Algonquin, McHenry Co. (Nason).

HETERURETHRA.

Superfamily ELASMOGNATHA.

Family SUCCINEIDÆ.

Genus SUCCINEA Draparnaud.

Succinea ovalis Say (= *obliqua* Say).Oregon, Ogle Co.; Cook Co.; Savanna, Carroll Co. (Baker);
Northern Illinois (Calkins); Fox River (Calkins, Ferriss); La
Salle Co. (Calkins, Huett); Joliet, Will Co.; Bristol, Kendall Co.
(Ferriss, Handwerk); Quincy, Adams Co. (Hart); Will Co.
(Marsh); Carpentersville, Kane Co.; Algonquin, McHenry Co.
(Nason); Fulton Co. (Wolf); Matanzas Lake, Havana, Mason
Co. (State Laboratory).*Succinea ovalis totteniana* Lea.Cook Co. (Baker, Jensen, Nason); Joliet, Will Co. (Ferriss);
Algonquin, McHenry Co. (Nason).*Succinea retusa* Lea (= *ovalis* Gould, *calumetensis* Calkins).Cook Co. (Baker, Calkins, Jensen, Lyon); Northern Illinois
(Calkins); La Salle Co. (Calkins, Huett); Kankakee River
(Ferriss); Joliet, Will Co. (Ferriss, Handwerk); Washington
and Winnebago counties (Hinkley); Crystal Lake, McHenry
Co. (Lyon); Mercer Co. (Marsh); Algonquin, McHenry Co.
(Nason); Glen Ellyn, Du Page Co. (Woodruff); Quiver and
Matanzas lakes, and Illinois River, Havana, Mason Co.; Cedar
Lake, Lake Co.; Flag and Thompson's lakes, Fulton Co.;
Peoria, Peoria Co.; Normal, McLean Co. (State Laboratory).*Succinea retusa magister* Pilsbry.

Cook Co. (Baker); Rock Island (Pilsbry).

Succinea retusa peoriensis Wolf.

Kankakee River (Ferriss); Peoria Co. (Wolf).

Succinea avara Say (= *vermeta* Say, *wardiana* Lea).

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley); North-

ern Illinois, Illinois River (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk); Washington and Hardin counties (Hinkley); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co. (Nason); Starved Rock, La Salle Co. (Oakes); Fulton Co. (Wolf); Herod, Pope Co. (State Laboratory).

Succinea nuttalliana Lea.

Rockford, Winnebago Co. (Hinkley); Fulton Co. (Wolf).

Succinea higginsii Bland.

Rock Island Co. (Marsh).

Succinea concordialis Gould.

Du Bois, Washington Co. (Hinkley).

Succinea grosvenorii Lea (= *mooresiana* Lea).

Canton, Fulton Co. (Nason, Wolf).

Succinea aurea Lea.

Effingham Co. (Marsh).

Succinea illinoisensis Wolf.

Canton, Fulton Co. (Handwerk); Fulton Co. (Marsh).

SIGMURETHRA.

Superfamily HOLOPODA.

Family HELICIDÆ.

Subfamily POLYGYRINÆ.

Genus POLYGYRA (Say) Pilsbry.

Section *Polygyra s.s.*

Polygyra leporina Gould.

Jackson and Hardin counties (Hinkley); Jackson Co. (Marsh).

Section *Triodopsis* Rafinesque.

Polygyra tridentata Say.

Near Berry Lake, Chicago, Cook Co. (Higley); Hancock Co. (Marsh); Southern Illinois (Uffers); Golconda, Pope Co. (State Laboratory).

Polygyra tridentata juxtigens Pilsbry.

La Salle Co. (Calkins); Cook Co. (Higley).

Polygyra fraudulenta Pilsbry (= *fallax* of authors, not of Say).

La Salle Co. (Calkins); Lemont, Cook Co. (Higley); Pope and Hardin counties (Hinkley); Union Co. (Lyon); Grand

Tower, Jackson Co. (Woodruff); Cypress Swamp, Johnson Co. (State Laboratory).

Polygyra fallax Say (= *introferens* Binney).

La Salle Co. (Calkins); Knox Co. (Lyon).

Two undoubted specimens of this species are in the collection of the Chicago Academy of Sciences, received from Mr. W. W. Calkins. As the locality is somewhat north of its known range the record from La Salle Co. must be looked upon with suspicion until verified.

Polygyra intlecta Say.

Northern Illinois (Calkins); Cook Co. (Higley); Jackson Co. (Hinkley, Woodruff); Wabash Co. (Marsh); Cypress Swamp, Johnson Co.; Grand Tower, Jackson Co. (State Laboratory).

Polygyra profunda Say.

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley, Jensen); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk, Nason); Winnebago Co. (Hinkley); Mercer Co. (Marsh); Rock Island (Nason); Spoon River, Fulton Co. (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf).

Polygyra profunda alba Witter.

Cook Co. (Baker); Joliet, Will Co. (Ferriss).

Polygyra sayii Binney (= *diodonta* Say).

Northern Illinois (Calkins); Edgar Co. (Marsh).

Polygyra albolabris Say.

Cook Co. (Baker, Higley, Jensen); Fox River; Northern Illinois (Calkins); La Salle Co. (Calkins, Ferriss, Huett); Joliet, Will Co. (Ferriss, Handwerk); Marion Co. (Hinkley); Mercer Co. (Marsh); Algonquin, McHenry Co.; Elgin, Kane Co.; Athens, Menard Co. (Nason); Spoon River, Fulton Co. (Strode); Southern Illinois (Ulffers); Grand Tower, Jackson Co. (Woodruff); Normal, McLean Co.; Cairo, Alexander Co. (State Laboratory).

Polygyra albolabris traversensis Leach.

Summit, Cook Co. (Zetek).

Polygyra albolabris dentata Tryon.

Cook Co. (Baker).

Polygyra exoleta Binney.

Northern Illinois (Calkins); La Salle Co. (Calkins, Huett, Marsh); Cook Co. (Higley); Grand Tower, Jackson Co. (Woodruff).

Polygyra multilineata Say (= vars. *alba* and *rubra* Witter).

Oregon, Ogle Co.; Savanna, Carroll Co. (Baker); Northern Illinois (Calkins); Cook Co. (Calkins, Higley, Jensen); La Salle Co. (Calkins, Huett); Peoria Co. (Chase); Kendall Co. (Ferriss); Joliet, Will Co.; Utica, La Salle Co. (Ferriss, Handwerk); Winnebago Co. (Hinkley); Elgin, Kane Co. (Jensen, Nason); Knox Co. (Lyon); Mercer Co. (Marsh); Fulton Co. (Wolf); Havana, Mason Co.; Bernadotte, Fulton Co. (State Laboratory).

Polygyra multilineata algonquinensis (Nason).

Algonquin, McHenry Co. (Nason).

Polygyra palliata Say.

Wabash Co. (Hinkley); Hamilton, Hancock Co.; Union Co. (Lyon); White Co. (Marsh); Southern Illinois (Ulffers); Normal, McLean Co.; Cypress Swamp, Johnson Co.; Dug Hill, Union Co.; Golconda, Pope Co. (State Laboratory).

Polygyra appressa Say.

Alton, Madison Co. (Ferriss); Washington and Jackson counties (Hinkley); Albion, Edwards Co. (Hodgson); Henderson Co. (Marsh); Bernadotte, Fulton Co. (State Laboratory).

Polygyra obstricta Say.

White Co. (Marsh).

Polygyra elevata Say.

Vermilion Co. (Marsh); Spoon River, Fulton Co. (Strode); Southern Illinois (Ulffers).

Polygyra pennsylvanica Green.

Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk); La Salle Co. (Ferriss, Marsh); Washington and Jackson counties (Hinkley); Hamilton, Hancock Co. (Lyon); Fulton Co. (Wolf).

Polygyra thyroides Say.

Cook Co. (Baker, Higley, Jensen); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk); Washington, White, and Hardin counties (Hink-

ley); Union Co.; Hamilton, Hancock Co. (Lyon); Mercer Co. (Marsh); Athens, Menard Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Grand Tower, Jackson Co. (Woodruff); Havana, Mason Co.; Urbana, Champaign Co.; Peoria, Peoria Co. (State Laboratory).

Polygyra clausa Say.

Oregon, Ogle Co. (Baker); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk); Kappa, Woodford Co. (Hart); Winnebago and Washington counties (Hinkley); Cook Co.; Willow Springs, Cook Co. (Jensen); Mercer Co. (Marsh); Chicago, Cook Co.; Canton, Fulton Co. (Nason) Fulton Co. (Wolf); Cairo, Alexander Co. (State Laboratory).

Polygyra mitchelliana Lea.

Starved Rock, La Salle Co. (Baker); La Salle Co. (Calkins); Mercer Co. (Marsh); Spoon River, Fulton Co. (Strode).

Section *Stenotrema* Rafinesque.

Polygyra stenotrema Ferussac.

McHenry Co. (Pilsbry).

Polygyra hirsuta Say.

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk); Kappa, Woodford Co. (Hart); Winnebago, Jackson, and Washington counties (Hinkley); Henderson Co. (Marsh); Canton, Fulton Co. (Nason); Southern Illinois (Ulffers); Grand Tower, Jackson Co. (Woodruff); Urbana, Champaign Co. (State Laboratory).

Polygyra monodon Rackett (= *leai* Ward).

Cook Co. (Baker, Higley); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett, Marsh); Stark Co. (Chase); Joliet, Will Co., Utica, La Salle Co. (Ferriss, Handwerk); Cass Co. (Gratacap); Willow Springs, Cook Co. (Jensen); Mercer Co. (Marsh); Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf); Havana, Mason Co.; Normal, McLean Co. (State Laboratory).

Polygyra monodon fraterna Say.

La Salle Co. (Calkins); Joliet, Will Co. (Ferriss); Evanston, Cook Co. (Higginson); Vermilion Co. (Marsh); Algonquin,

McHenry Co.; Chicago, Cook Co.; Canton, Fulton Co. (Nason); Southern Illinois (Ulffers); Fulton Co. (Wolf); Grand Tower, Jackson Co. (Woodruff); Makanda, Jackson Co. (State Laboratory).

Family ACHATINIDÆ.

Genus OPEAS Albers.

Opeas mauritianum Pfeiffer.

Garfield Park greenhouse, Chicago, Cook Co. (Hood, Zetek).

Superfamily AGNATHA.

Family TESTACELLIDÆ.

Genus TESTACELLA Cuvier.

Testacella haliotidea Ferussac.

Chicago, in greenhouses, Lincoln Park (Baker).

Superfamily AGNATHOMORPHA.

Family CIRCINARIIDÆ.

Genus CIRCINARIA (Beck) Pilsbry.

Circinaria concava Say.

Oregon, Ogle Co.; Evanston, Cook Co. (Baker); Cook Co. (Baker, Jensen, Nason); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Kankakee River, Joliet, Will Co.; Utica, La Salle Co. (Ferriss); Kappa, Woodford Co. (Hart); Winnebago, White, and Jackson counties (Hinkley); Hamilton Co. (Lyon); Mercer Co. (Marsh); Athens, Menard Co.; Canton, Fulton Co. (Nason); Fulton Co. (Wolf); Grand Tower, Jackson Co. (Woodruff); Urbana, Champaign Co. (State Laboratory).

Superfamily AULACOPODA.

Family ZONITIDÆ.

Subfamily ZONITINÆ.

Genus OMPHALINA Rafinesque.

Omphalina fuliginosa Griffith.

Maywood, Cook Co. (Higley); Williamson Co. (Hinkley); Cobden, Union Co. (Lyon); Gallatin Co. (Marsh); Grand Tower, Jackson Co. (Woodruff).

Omphalina inornata Say.

La Salle Co. (Calkins).

Omphalina lewigata Pfeiffer.

Illinois (Binney, Bland); Edgar Co. (Marsh).

Omphalina friabilis W. G. Binney.

Southern Illinois (Binney, Pilsbry); Shelby Co. (Marsh).

GENUS VITRINA Draparnaud.

Vitrina limpida Gould.

La Salle Co. (Marsh).

GENUS VITREA Fitzinger.

Vitrea draparnaldi Beck.*

Chicago, greenhouses in Lincoln Park (Baker).

Vitrea hammonis Ström (= *radiatula* Alder, *electrina* Gould, *viridula* Menke).

Cook Co. (Baker, Nason); Joliet, Will Co. (Ferriss); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Vitrea wheatleyi Bland.

Washington Co. (Hinkley); Fulton Co. (Marsh).

Vitrea cellaria Müller.

Chicago, Cook Co., in greenhouses, Lincoln Park (Baker, Calkins); Rockford, Winnebago Co., in greenhouses (Hinkley); La Salle Co. (Marsh).

Section *Glyphyalina* Martens.

Vitrea indentata Say.

Cook Co. (Baker, Jensen, Nason); Joliet, Will Co. (Ferriss); Southern Illinois (Hinkley); Henderson Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf).

GENUS EUCONULUS Reinhardt.

Euconulus fulvus Draparnaud.

Cook Co. (Baker, Jensen, Nason); Northern Illinois (Calk-

* *Vitrea alliarius* Müller has been reported from the greenhouses of Chicago by Calkins and Gratacap, but the record has not been substantiated by later collectors. The specimens so identified might have been either *cellaria* or *draparnaldi*, which are common in the greenhouses of Chicago.

ins); Joliet, Will Co.; Utica, La Salle Co. (Ferriss); Winnebago and Washington counties (Hinkley); Mercer Co. (Marsh); Algonquin, McHenry Co.; Athens, Menard Co. (Nason).

Euconulus fulvus mortoni Jeffries.

Huntley, McHenry Co. (Ferriss).

Euconulus chersinus Say.

Cook Co. (Baker); Algonquin, McHenry Co. (Nason); Fulton Co. (Wolf).

Subfamily ARIOPHANTINÆ.

Genus ZONITOIDES Lehmann.

Zonitoides nitidus Müller.

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley, Jensen); Northern Illinois (Calkins); Joliet, Will Co. (Ferriss); Union Co. (Lyon); Will Co. (Marsh); Algonquin, McHenry Co. (Nason); Grand Tower, Jackson Co. (Woodruff); McHenry Co. (State Laboratory).

Zonitoides arboreus Say.

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley, Jensen, Lyon); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Peoria Co. (Chamberlain); Joliet, Will Co. (Ferriss); Lemont, Cook Co. (Higley); common throughout the state (Hinkley); Union Co. (Lyon); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf); Havana, Mason Co. (State Laboratory).

Section *Pseudohyalina* Morse.

Zonitoides limatulus Ward.

Washington Co. (Hinkley); Hamilton Co. (Marsh).

Zonitoides minusculus Binney.

Cook Co. (Baker, Jensen, Nason); Northern Illinois (Calkins); Joliet, Will Co.; Utica, La Salle Co. (Ferriss); Du Bois, Washington Co. (Hinkley); Mercer Co. (Marsh); Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Canton, Fulton Co. (Nason, Wolf); Havana, Mason Co. (State Laboratory).

Zonitoides milium Morse.

McHenry Co. (Marsh).

Genus GASTRODONTA Albers.

Gastrodonta ligera Say.

Joliet, Will Co.; Utica, La Salle Co. (Ferriss); Cook Co. (Higley); Williamson Co. (Hinkley); Vermilion Co. (Marsh).

Gastrodonta intertexta Binney.

White Co. (Hinkley); Vermilion Co. (Marsh).

Gastrodonta demissa Binney.

Northern Illinois (Calkins); Cook Co. (Higley); Du Bois, Washington Co. (Hinkley).

Gastrodonta gularis Say.

Northern Illinois (Calkins).

Gastrodonta interna Say.

Macoupin Co. (Marsh).

Family LIMACIDÆ.

Genus LIMAX Linné.

Limax maximus Linné.

Chicago, greenhouses in Lincoln Park (Baker).

Limax flavus Linné.

Chicago, greenhouses in Lincoln Park (Baker).

Genus AGRIOLIMAX Mörch.

Agriolimax campestris Binney.

Cook Co. (Baker, Lyon); Mercer Co. (Marsh); Urbana, Champaign Co.; Normal, McLean Co.; Havana, Mason Co. (State Laboratory).

Agriolimax agrestis Linné.

Mercer Co. (Marsh).

Family PHILOMYCIDÆ.

Genus PHILOMYCUS (Rafinesque) Ferussac.

Philomycus carolinensis Bosc.

Cook Co. (Baker); Union Co. (Lyon); Mercer Co. (Marsh); Bernadotte, Spoon River, Fulton Co.; White Heath, Champaign Co.; Golconda, Pope Co.; Anna, Union Co.; Savanna, Carroll Co. (State Laboratory).

Family ENDODONTIDÆ.

Subfamily ENDODONTINÆ.

Genus PYRAMIDULA Fitzinger.

Subgenus *Patula* Held.

Pyramidula alternata Say (= var. *mordax* of authors, not of Shuttleworth).

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley, Lyon); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk); Winnebago and Williamson counties (Hinkley); Albion, Edwards Co. (Hodgson); Union Co. (Lyon); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Spoon River, Fulton Co. (Strode); Southern Illinois (Ulffers); Fulton Co. (Wolf); Du Page Co.; Grand Tower, Jackson Co. (Woodruff); Normal, McLean Co.; Peoria, Peoria Co.; Bernadotte, Fulton Co.; Bloomington, McLean Co.; Panola, Woodford Co.; Towanda, McLean Co. (State Laboratory).

Pyramidula solitaria Say.

Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Joliet, Will Co. (Ferriss, Handwerk); Cook Co. (Higley); Du Bois, Washington Co. (Hinkley); Will Co. (Marsh); Macon Co. (Nason); Fulton Co. (Wolf).

Subgenus *Gonyodiscus* Fitzinger.

Pyramidula striatella Anthony.

Cook Co. (Baker, Higley, Jensen); Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); Peoria Co. (Chamberlain); Stark Co. (Chase); Joliet, Will Co. (Ferriss, Handwerk); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co. (Nason); Fulton Co. (Wolf).

Pyramidula perspectiva Say.

Northern Illinois; La Salle Co. (Calkins); Southern Illinois (Hinkley); Union Co. (Lyon); Mercer Co. (Marsh); Brown Co. (Nason); Canton, Fulton Co. (Nason, Wolf); Southern Illinois (Ulffers); Grand Tower, Jackson Co. (Woodruff); Cairo, Alexander Co. (State Laboratory).

Genus *HELICODISCUS* Morse.*Helicodiscus lineatus* Say.

Oregon, Ogle Co. (Baker); Cook Co. (Baker, Higley, Jensen, Lyon, Nason, Woodruff); Cook Co.; Northern Illinois (Calkins); La Salle Co. (Calkins, Huett); La Salle Co.; Joliet, Will Co. (Ferriss); Winnebago and Washington counties (Hinkley); Mercer Co. (Marsh); Elgin, Kane Co.; Algonquin, McHenry Co.; Athens, Menard Co. (Nason); Fulton Co. (Wolf)*; Havana, Mason Co. (State Laboratory).

Subfamily PUNCTINÆ.

Genus PUNCTUM Morse.

Punctum pygmaeum Draparnaud.

Joliet, Will Co.; Huntley, McHenry Co. (Ferriss); Joliet, Will Co. (Handwerk); Du Bois, Washington Co. (Hinkley); Cook Co. (Jensen); Will Co. (Marsh).

Genus SPHYRADIUM Charpentier.

Sphyradium edentulum Draparnaud (= *Vertigo simplex* Gould).

Eastern Illinois (Marsh); Canton, Fulton Co. (Nason, Wolf).

**Stenotrema lineata* Say is recorded by Wolf from Fulton County. *Helicodiscus lineatus* is probably what was meant. (See Am. Journ. Conch., VI., p. 27.)

BIBLIOGRAPHY.*

Adams, C. C.

- '92. Mollusks as Catfish Food. *Nautilus*, Vol. V., p. 127.

Anonymus.

- '84. List of the Unionidæ of the Gould Collection. Thirty-fifth Ann. Rep. N. Y. State Mus. Nat. Hist., 1881, p. 68.

- '84a. List of Shells presented to the State Museum by Dr. James Lewis, March 15, 1875. Thirty-fifth Ann. Rep. N. Y. State Mus. Nat. Hist., 1881, p. 112.

- '95. *Planorbis sampsoni* Ancey in Illinois. *Nautilus*, Vol. IX., p. 36.

- '06. Output of American Pearls. *Nautilus*, Vol. XX., p. 9.

Anthony, J. G.

- '60. Descriptions of New Species of American Fluvial Gas-teropods. *Proc. Acad. Nat. Sci. Phila.*, 1860, p. 55.

Baker, F. C.

- '96. On the Correct Position of the Aperture in *Planorbis*. *Journ. Cin. Soc. Nat. Hist.*, Vol. XIX., p. 45.

- '97. On a Collection of Mollusks from Grand Tower, Illinois. *Nautilus*, Vol. XI., p. 28.

- '97a. On the Pulsations of the Molluscan Heart. *Journ. Cin. Soc. Nat. Hist.*, Vol. XIX., p. 73.

- '97b. Notes on *Radulæ*. *Journ. Cin. Soc. Nat. Hist.*, Vol. XIX., p. 81.

- '97c. Collecting about Chicago. *Sports Afield*, Vol. XIX., No. 2, Aug.

- '98. A Day on the Chicago Drainage Canal. *Nautilus*, Vol. XII., p. 63.

- '98a. A New *Sphærium*. *Nautilus*, Vol. XII., p. 65.

- '98-'02. The Mollusca of the Chicago Area. The Pelecypoda. 1898. The Gastropoda. 1902. Parts I. and II. *Bull. No. III.*, *Nat. Hist. Surv. Chicago Acad. Sci.*

- '99. Notes on the Mollusks of Lilycash Creek. *Nautilus*, Vol. XIII., p. 30.

*This list of references to publications on Illinois Mollusca is believed to be measurably complete. Absolute completeness can not be claimed for it, as it is possible that some references have escaped the writer's notice, owing to inaccessible or obscure publication. It is believed, however, to embrace all of the more important references.

- '00. A Revision of the Physaæ of Northeastern Illinois. *Nautilus*, Vol. XIV., p. 16.
- '00a. Mollusks in Grass. *Nautilus*, Vol. XIV., p. 93.
- '01. New Varieties of Fresh-water Shells. *Nautilus*, Vol. XV., p. 17.
- '01a. *Limnæa auricularia* in America. *Nautilus*, Vol. XV., p. 59.
- '01b. The Digitations of the Mantle in Physa. *Bull. Chicago Acad. Sci.*, Vol. II., p. 225.
- '01c. Description of a New Species of *Limnæa*. *Bull. Chicago Acad. Sci.*, Vol. II., p. 229.
- '01d. A Revision of the *Limnæas* of Northern Illinois. *Trans. St. Louis Acad. Sci.*, Vol. XI., p. 1.
- '03. Shell Collecting on the Mississippi. *Nautilus*, Vol. XVI., p. 102.
- '04. Spire Variation in *Pyramidula alternata*. *Am. Nat.*, Vol. XXXVIII., p. 661.
- '04a. Notes on *Planorbis truncatus* Miles. *Trans. St. Louis Acad. Sci.*, Vol. XIV., p. 107.
- '04b. New Varieties of American *Limnæas*. *Nautilus*, Vol. XVIII., p. 10.
- '05. A New Species of *Lymnæa* from Ohio, with Notes on *Lymnæa parva* Lea. *Nautilus*, Vol. XIX., p. 51.
- '05a. Notes on the Genitalia of *Lymnæa*. *Am. Nat.*, Vol. XXXIX., p. 665.
- '06. A New Locality for *Planorbis nautileus* Linné. *Nautilus*, Vol. XIX., p. 120.
- '06a. A New *Sphærium* from Illinois. *Nautilus*, Vol. XX., p. 21.

Binney, Amos.

- '52, '57. The Terrestrial Air-breathing Mollusks of the United States and the Adjacent Territories of North America, described and illustrated by Amos Binney; edited by A. A. Gould. Vols. I. and II., 1852; Vol. III., 1857. Boston.

Binney, W. G.

- '58. Notes on American Land Shells. No. 2. *Proc. Acad. Nat. Sci. Phila.*, 1857, p. 183.
- '59, '78. The Terrestrial Air-breathing Mollusks of the United States. Vol. IV. (1859). New York. Vol. V. (1878), in *Bull. Mus. Comp. Zool.*, Vol. IV.

- '65. Land and Fresh-water Shells of North America. Part II. Pulmonata, Linnophila and Thalassophila. Smith. Misc. Coll., No. 143, 1865.
- '65a. Land and Fresh-water Shells of North America. Part III. Ampullariidæ, Valvatidæ, Fresh-water Rissoidæ, etc. Smith. Misc. Coll., No. 144, 1865.
- '83. A Supplement to the Fifth Volume of the Terrestrial Air-breathing Mollusks of the United States and Adjacent Territories. Bull. Mus. Comp. Zool., Vol. XI., No. 8, p. 135.
- '85. A Manual of American Land Shells. Bull. U. S. Nat. Mus., No. 28, 1885.
- '90. A Third Supplement to the Fifth Volume of the Terrestrial Air-breathing Mollusks of the United States and Adjacent Territories. Bull. Mus. Comp. Zool., Vol. XIX., No. 4, p. 183.
- '91. A Fourth Supplement to the Fifth Volume of the Terrestrial Air-breathing Mollusks of the United States and Adjacent Territories. Bull. Mus. Comp. Zool., Vol. XXII., No. 4, p. 163.
- Binney, W. G., and Bland, Thomas.
- '69. Land and Fresh-water Shells of North America. Part I. Pulmonata Geophila. Smith. Misc. Coll., No. 194, 1869.
- Bland, Thomas.
- '58, '62. Remarks on Certain Species of North American Helicidæ. Ann. Lyc. Nat. Hist. N. Y., Vol. VI. (1858), pp. 280, 336; Vol. VII. (1862), p. 115.
- Blatchley, W. S., and Daniels, L. E.
- '03. On Some Mollusca known to occur in Indiana. Twenty-seventh Ann. Rep. Dept. Geol. and Nat. Resources Ind., 1902, p. 577.
- Calkins, W. W.
- '74. Land and Fresh-water Shells of La Salle Co., Illinois. Proc. Ottawa Acad. Sci., 1874.
- '74a. Notes on Fresh-water Mollusca found in the Vicinity of Chicago, Ill. Cin. Quart. Journ. Sci., Vol. I., p. 242.
- '74b. Notes on the Molluscan Fauna of Northern Illinois. Cin. Quart. Journ. Sci., Vol. I., p. 321.
- '75. Notes on Mollusca of La Salle County. Cin. Quart. Journ. Sci., Vol II., p. 95.

- '80. ——— ——— ——— ——— Valley Naturalist, St. Louis, Vol. II., No. 4, Dec.
- '81. ——— ——— ——— ——— Home and Science Gossip, Rockford, Ill., March.
- Call, R. Ellsworth.
- '83. Note on the Genus *Campeloma* of Rafinesque. *Am. Nat.*, Vol. XVII., p. 603.
- '85. A Geographic Catalogue of the Unionidæ of the Mississippi Valley. *Bull. Des Moines Acad. Sci.*, Vol. I., p. 5.
- '86. On the Genus *Campeloma* Rafinesque, with a Revision of the Species, Recent and Fossil. *Bull. Washb. Coll. Lab. Nat. Hist.*, Vol. I., No. 5, p. 149.
- '94. On the Geographic and Hypsometric Distribution of North American Viviparidæ. *Am. Journ. Sci.*, 3d ser., Vol. XLVIII., p. 132.
- '95. A Study of the Unionidæ of Arkansas, with incidental Reference to their Distribution in the Mississippi Valley. *Trans. St. Louis Acad. Nat. Sci.*, Vol. VII., p. 1.
- '00. A Descriptive, Illustrated Catalogue of the Mollusca of Indiana. Twenty-fourth Ann. Rep. Dept. Geol. and Nat. Resources Ind., p. 335.
- Call, R. E., and Pilsbry, H. A.
- '86. On *Pyrgulopsis*, a New Genus of Rissoid Mollusk, with Descriptions of two New Forms. *Proc. Dav. Acad. Nat. Sci.*, Vol. V., p. 9.
- Chenu, J. C.
- '45. *Bibliothèque Conchyliologique*. Tome III.
- Clessin, S.
- '79. Die Familie der Cycladeen. *Conch. Cab.*, Ed. 2, 1879.
- '82. Die Familie der Ancylinen. *Conch. Cab.*, Ed. 2, 1882.
- Conrad, Timothy A.
- '34. New Fresh-water Shells of the United States, with Colored Illustrations and a Monograph of the Genus *Auculotus* of Say. Also a Synopsis of the American Naiades. Philadelphia.
- '35-'38. A Monograph of the Family Unionidæ, or Naiades of Lamarck, of North America. Philadelphia.
- Dall, William H.
- '05. Land and Fresh-water Mollusks of Alaska and Adjoining Regions. *Harriman Alaska Expedition*, Vol. XIII.

Downing, Elliott R.

- '02. Variation in the Position of the Adductor Muscles of *Anodonta grandis* Say. *Am. Nat.*, Vol. XXXVI., p. 395.

Forbes, S. A.

- '77. The Food of Illinois Fishes. *Bull. Ill. State Lab. Nat. Hist.*, Vol. I., No. 2, p. 71.
- '80-'83. Studies of the Food of Birds, Insects, and Fishes made at the Illinois State Laboratory of Natural History. *Bull. Ill. State Lab. Nat. Hist.*, Vol. I., No. 3, p. 18 (2d ed. 1903) and No. 6, p. 1.
- '88. Studies of the Food of Fresh-water Fishes. *Bull. Ill. State Lab. Nat. Hist.*, Vol. II., Art. VII., p. 433.
- '88a. On the Food Relations of Fresh-water Fishes: a Summary and Discussion. *Bull. Ill. State Lab. Nat. Hist.*, Vol. II., Art. VIII., p. 475.

Garman, H.

- '90. A Preliminary Report on the Animals of the Mississippi Bottoms near Quincy, Illinois, in August, 1888. Part I. *Bull. Ill. State Lab. Nat. Hist.*, Vol. III., Art. IX. Mollusca, pp. 149-154.

Gratacap, L. P.

- '01. Catalogue of the Binney and Bland Collection of the Terrestrial Air-breathing Mollusks of the United States and Territories in the American Museum of Natural History, with Enumeration of Types and Figured Specimens, and Supplementary Notes. *Bull. Am. Mus. Nat. Hist.*, Vol. XIV., p. 335.

Haldeman, S. S.

- '40-'45. A Monograph of the Fresh-Water Univalve Mollusca of the United States. Philadelphia.

Harper, George W.

- '86. Catalogue of the Unionidæ of the Mississippi Valley. *Journ. Cin. Soc. Nat. Hist.*, Vol. IX., p. 10.

Hinkley, A. A.

- '87. Record of a Collecting Trip in White, Hardin, and Gallatin Counties, Ill. *Conchologists' Exchange*, Vol. I., p. 56.
- '06. Some Shells of Mississippi and Alabama. *Nautilus*, Vol. XX., p. 40.

Hodgson, C. S.

- '02. A Large Pearl. *Nautilus*, Vol. XVI., p. 60.

- Hoy, P. R.
 '73. Deep-water Fauna of Lake Michigan. *Ann. Mag. Nat. Hist.*, ser. 4, Vol. XI., p. 319.
- Huett, J. W.
 '98. Essay toward a Natural History of La Salle County, Illinois. Part II. Geology and Zoology. Mollusca, p. 93.
- Jay, John C.
 '52. A Catalogue of Shells contained in the Collection of John C. Jay. 4th ed., 1852.
- Kelly, H. M.
 '99. A Statistical Study of the Parasites of the Unionidæ. *Bull. Ill. State Lab. Nat. Hist.*, Vol. V., Art. VIII., p. 399.
- Kennicott, Robert.
 '55. Catalogue of Animals observed in Cook County, Illinois. *Trans. Ill. State Agr. Soc.*, Vol. I. (1853-54), p. 577. Mollusca, p. 595.
- Küster, H. C.
 '48. Die Flussperlmuscheln; Unio, etc. *Conch. Cab.*, Ed. 2, 1848.
 '52. Die Gattung Paludina. *Conch. Cab.*, Ed. 2, 1852.
- Küster, H. C., and Clessin, S.
 '62, '66. Die Familie der Limnæiden. *Conch. Cab.*, Ed. 2, 1862 and 1866.
- Kunz, George F.
 '98. A Brief History of the Gathering of Fresh-water Pearls in the United States. *Bull. U. S. Fish Comm.*, Vol. XVII., 1897, p. 321.
 '98a. The Fresh-water Pearls and Pearl Fisheries of the United States. *Bull. U. S. Fish Comm.*, Vol. XVII., 1897, p. 375.
- Lea, Isaac.
 '36-'70. A Synopsis of the Family of Naiades. Four editions.
 '34-'74. Observations on the Genus Unio. 13 vols. Philadelphia.
 '41. Descriptions of New Fresh-water and Land Shells. *Proc. Am. Phil. Soc.*, Vol. II. (1841), p. 30.
 '44. Continuation of Mr. Lea's paper on Fresh-water and Land Shells. *Trans. Am. Phil. Soc.*, Vol. IX., p. 1.
 '62. Description of a New Genus (*Trypanostoma*) of the Fami-

ly Melanidæ, and of forty-five New Species. Proc. Acad. Nat. Sci. Phila., 1862, p. 169.

- '62a. Description of a New Genus (*Goniobasis*) of the Family Melanidæ, and eighty-two New Species. Proc. Acad. Nat. Sci. Phila., 1862, p. 262.

Lewis, James.

- '78. On *Unio subrostratus* Say. Proc. Acad. Nat. Sci. Phila., 1878, p. 273.

Marsh, William A.

- '87-'88. Brief Notes on the Land and Fresh-water Shells of Mercer Co., Ill. Conchologists' Exchange, Vol. I., pp. 42, 50, 62, 74; Vol. II., pp. 4, 20, 36, 48, 65, 80, 90, 103, 110.

- '89. Brief Notes on the Land and Fresh-water Shells of Mercer Co., Illinois. Nautilus, Vol. III., pp. 23, 34.

Nason, William A.

- '06. A New Subspecies of *Polygyra multilineata* Say. Nautilus, Vol. XIX., p. 141.

Pilsbry, Harry A.

- '86. Notes on some Eastern Iowa Snails. Am. Nat., Vol. XX., p. 75.

- '89. Nomenclature and Check-list of North American Land Shells. Proc. Acad. Nat. Sci. Phila., 1889, p. 191.

- '90. A New Species of Fresh-water Mollusk. Review of paper by B. Shimek. Nautilus, Vol. IV., p. 48.

- '90a. Preliminary Notices of New Amnicolidæ. Nautilus, Vol. IV., p. 52.

- '95. Notes on American Forms [of *Gundlachia*]. Nautilus, Vol. IX., p. 63.

- '96. New American Ancyliidæ. Nautilus, Vol. IX., p. 137.

- '97. A Classified Catalogue of American Land Shells, with Localities. Nautilus, Vol. XI., p. 45, *et seq.*

- '98. Notes on New and Little-known Amnicolidæ. Nautilus, Vol. XII., p. 42.

- '99. New American Land Shells. Nautilus, Vol. XII., p. 101.

- '06. *Vitrea rhoadsi* and *Succinea retusa magister*. Nautilus, Vol. XIX., p. 109.

Pilsbry, H. A., and Vanatta, E. G.

- '00. A Partial Revision of the Pupæ of the United States. Proc. Acad. Nat. Sci. Phila., 1900, p. 582.

Prime, Temple.

'62. Monograph of the Species of Sphærium of North and South America. Proc. Acad. Nat. Sci. Phila., 1862, p. 28.

'65. Monograph of American Corbiculidæ. Smith. Misc. Coll., No. 145, 1865.

Roper, Edward W.

'90. Notes on Sphærium secure Prime. Nautilus, Vol. IV., p. 39.

Say, Thomas.

'16-'19. Conchology. Nicholson's Encyclopedia: first ed., Vol. II., 1816; sec. ed., Vol. IV., 1818; third ed., Vol. IV., 1819.

'21. Descriptions of Univalve Shells of the United States. Journ. Acad. Nat. Sci. Phila., Vol. II., p. 149.

'30-'34. American Conchology; or Descriptions of the Shells of North America. New Harmony, Ind.

'58. The Complete Writings of Thomas Say on the Conchology of the United States; edited by W. G. Binney. New York.

Shimek, B.

'04. *Helicina occulta* Say. Proc. Dav. Acad. Sci., Vol. IX., p. 173.

Simpson, Charles T.

'95. The Classification and Geographical Distribution of the Pearly Fresh-Water Mussels. Proc. U. S. Nat. Mus., Vol. XVIII., p. 295.

'96. Notes on the Parvus Group of Unionidæ and its Allies. Nautilus, Vol. X., p. 57.

'98. The Pearly Fresh-Water Mussels of the United States; their Habits, Enemies and Diseases, with Suggestions for their Protection. Bull. U. S. Fish Comm., Vol. XVIII., p. 279.

'00. Synopsis of the Naiades, or Pearly Fresh-water Mussels. Proc. U. S. Nat. Mus., Vol. XXII., p. 501.

Smith, Hugh M.

'98. The Mussel Fishery and Pearl-button Industry of the Mississippi River. Bull. U. S. Comm., Vol. XVIII., p. 289.

Stearns, R. E. C.

'81. Observations on Planorbis. Proc. Acad. Nat. Sci. Phila., 1881, p. 92.

Sterki, Victor.

'89. Pupa *Holzingeri*, n. sp. Nautilus, Vol. III., p. 37.

- '89a. Pupa Holzingeri. *Nautilus*, Vol. III., p. 96.
 '90. On New Forms of Vertigo. *Proc. Acad. Nat. Sci. Phila.*,
 1890, p. 31.
 '92. Some Notes on North American Forms of Vallonia. *Nautilus*,
 Vol. V., p. 100.
 '93. Observations on Vallonia. *Proc. Acad. Nat. Sci. Phila.*,
 1893, p. 234.
 '95. Descriptions of New Pisidia. *Nautilus*, Vol. IX., p. 74.
 '98. Descriptions of New Pisidia. *Nautilus*, Vol. XI., p. 124.
 '98a. New Pisidia. *Nautilus*, Vol. XII., p. 77.
 '99. Pisidia New to our Country, and New Species. *Nautilus*,
 Vol. XIII., p. 9.
 '99a. *Pisidium handwerki*, n. sp. *Nautilus*, Vol. XIII., p. 90.
 '00. New Pisidia and some General Notes. *Nautilus*, Vol.
 XIV., p. 5.
 '01. New Pisidia. *Nautilus*, Vol. XV., p. 66.
 '02. Some Notes on the North American Calyculinæ with New
 Species. *Nautilus*, Vol. XVI., p. 89.
 '06. New Varieties of North American Pisidia. *Nautilus*, Vol.
 XIX, pp. 80, 118.

Stimpson, William.

- '65. Researches upon the Hydrobiinæ and Allied Forms;
 chiefly made upon the Materials in the Smithsonian Insti-
 tution. *Smith. Misc. Coll.*, No. 201, 1865.
 '70. On the Deep-water Fauna of Lake Michigan. *Am. Nat.*,
 Vol. IV., p. 403.

Strode, W. S.

- '91. Mollusks of Thompson's Lake, Illinois. *Nautilus*, Vol.
 IV., p. 133.
 '91a. Mollusks of Spoon River, Illinois. *Nautilus*, Vol. V., p.
 61.
 '91b. Destruction of *Anodonta corpulenta* Carpenter, at Thomp-
 son's Lake, Illinois. *Nautilus*, Vol. V., p. 89.
 '92. The Unionidæ of Spoon River, Fulton Co., Illinois. *Am.*
Nat., Vol. XXVI., p. 495.
 '95. A Day on the Spoon River in Illinois. *Nautilus*, Vol. IX.,
 p. 19.
 '95a. Helices in Illinois. *Nautilus*, Vol. IX., p. 28.

- '96. The Size of Mussels. *Nautilus*, Vol. IX., p. 115.
- '96a. The Unionidæ, or Fresh-Water Mussels. *The Museum*, Vol. II., p. 107.
- '97. Unios. *Nautilus*, Vol. X., p. 106.
- '98. Unio Collecting on Spoon River. *Nautilus*, Vol. XII., p. 8.
- Tryon, George W., Jr.
- '65. Catalogue of the Species of *Limnæa* inhabiting the United States. *Am. Journ. Conch.*, Vol. I., p. 247.
- '65-'66. Monograph of the Family Strepomatidæ. *Am. Journ. Conch.*, Vol. I., p. 299; Vol. II., pp. 14, 115.
- '66-'67. Monograph of the Terrestrial Mollusca of the United States. *Am. Journ. Conch.*, Vol. II., p. 218; Vol. III., p. 34.
- '70. Continuation of Haldeman's Monograph of the Fresh-water Mollusca of the United States. Philadelphia.
- '73. Land and Fresh-water Shells of North America. Part IV. Strepomatidæ. *Smith. Misc. Coll.*, Vol. XVI., No. 253, 1873.
- Ulfers, H. A.
- '55. Mollusca of Southern Illinois. *Trans. Ill. State Agr. Soc.*, Vol. I. (1853-54), p. 610.
- Walker, Bryant.
- '02. A Revision of the Carinate Valvatas of the United States. *Nautilus*, Vol. XV., p. 121.
- '03. On the Specific Validity of *Campeloma milesii* Lea. *Nautilus*, Vol. XVI., p. 121.
- '03a. Notes on East American Ancyli. *Nautilus*, Vol. XVII., p. 13.
- '04. Notes on East American Ancyli. II. *Nautilus*, Vol. XVIII., p. 25.
- '05. The Distribution of *Polygyra* in Michigan. *Rep. Mich. Acad. Sci.*, Vol. VII., p. 92.
- '06. New and Little-Known Species of Amnicolidæ. *Nautilus*, Vol. XIX., p. 114.
- '06a. Notes on Valvata. *Nautilus*, Vol. XX., p. 25.
- Wolf, John.
- '70. Descriptions of Three New Species of Shells. *Am. Journ. Conch.*, Vol. V., p. 198.
- '70a. Catalogue of the Shell-bearing Mollusca of Fulton County, Illinois. *Am. Journ. Conch.*, Vol. VI., p. 27.

INDEX

- A
- Acella, 103.
Achatinidæ, 118.
Agnatha, 118.
Agnathomorpha, 118.
Agriolimax, 121.
Akteophila, 109.
Alasmidonta, 75.
Albinula, 111.
Amnicola, 92.
Amnicolidæ, 92.
Anculosa, 98.
Ancylidæ, 101.
Ancylus, 101.
Angitrema, 95.
Angustula, 112.
Anisopleura, 88.
Anodonta, 72.
Anodontoides, 73.
Aplexa, 101.
Arcidens, 74.
Ariophantinae, 120.
Armiger, 109.
Aulacopoda, 118.
Auriculidæ, 109.
- B
- Basommatophora, 99.
Bifidaria, 111.
Bythinia, 92.
Bythiniinæ, 92.
- C
- Calyculina, 84.
Campeloma, 89.
Carunculina, 67.
Carychium, 109.
Cincinnatia, 93.
Circinaria, 118.
Circinariidæ, 118.
Cochlicopa, 113.
Cochlicopidæ, 113.
Corneocyclas, 85.
Crenodonta, 78.
Cyprogenia, 71.
Cyrenacea, 82.
- D
- Diagenæ, 71.
Digenæ, 70.
Dromus, 71.
Dysnomia, 63.
- E
- Elasmognatha, 113.
Elliptio, 76.
Endodontidæ, 122.
Endodontinæ, 122.
Eschatigenæ, 71.
Euconulus, 119.
Euryntia, 65.
Euthyneura, 99.
- F
- Ferrissia, 101.
- G
- Galba, 103.
Gastrodonta, 121.
Gastropoda, 88.
Glyphyalina, 119.
Goniobasis, 97.
Gonyodiscus, 122.
Gundlachia, 102.
Gyraulus, 108.
- H
- Helicidæ, 114.
Helicina, 88.
Helicinidæ, 88.

Helicodiscus, 123.
 Helisoma, 106.
 Hemilastena, 76.
 Heterogenæ, 63.
 Heterurethra, 113.
 Hippeutis, 108.
 Holopoda, 114.
 Homogenæ, 72.
 Hydrobiinæ, 92.
 Hygrophila, 99.

L

Lævapex, 101.
 Lampsilis, 64.
 Lasmigona, 74.
 Lastena, 73.
 Limacidae, 121.
 Limax, 121.
 Lioplax, 89.
 Lithasia, 95.
 Lymnaea, 102.
 Lymnaeidae, 102.
 Lymnaeinae, 102.

M

Margaritana, 76.
 Menetus, 108.
 Mesogenæ, 71.
 Micromya, 64.
 Monotremata, 110.
 Musculium, 84.

N

Naiadacea, 63.

O

Obliquaria, 71.
 Obovaria, 69.
 Omphalina, 118.
 Opeas, 118.
 Orthurethra, 110.

P

Paludestrina, 94.
 Patula, 122.
 Pelecypoda, 63.
 Philomycidae, 121.
 Philomycus, 121.
 Physa, 99.
 Physidae, 99.
 Pterosoma, 107.
 Pilea, 63.
 Pisidium, 85.
 Plagiola, 69.
 Planorbella, 107.
 Planorbina, 106.
 Planorbinae, 106.
 Planorbis, 106.
 Planorbula, 109.
 Plethobasus, 77.
 Pleurobema, 77.
 Pleurocera, 96.
 Pleuroceridae, 95.
 Polygyra, 114.
 Polygyrinae, 114.
 Pomatiopsinae, 95.
 Pomatiopsis, 95.
 Pressodonta, 75.
 Prionodesmacea, 63.
 Proptera, 68.
 Prosobranchiata, 88.
 Pseudohyalina, 120.
 Pseudoön, 69.
 Pterosygna, 75.
 Ptychobranchus, 71.
 Ptychogenæ, 71.
 Pulmonata, 99.
 Punctinæ, 123.
 Punctum, 123.
 Pupidae, 110.
 Pupilla, 112.
 Pupoides, 110.
 Pyramidula, 122.
 Pyrgulopsis, 95.

Q

Quadrula, 78, 79.

R

Radix, 102.
 Rhipidoglossa, 88.
 Rotundaria, 81.
 Rugifera, 75.

S

Scalenaria, 63.
 Segmentina, 109.
 Sigmurethra, 114.
 Somatogyrus, 94.
 Sphæriidæ, 82.
 Sphærium, 82.
 Sphyradium, 123.
 Stagnicola, 104.
 Stenotrema, 117.
 Strobilops, 110.
 Strophitus, 71.
 Stylommatophora, 110.
 Succinea, 113.
 Succineidæ, 113.
 Symphynota, 74.

T

Tænioglossa, 88.
 Teleodesmacea, 82.
 Testacella, 118.
 Testacellidæ, 118.
 Tetragenæ, 78.

Theliderma, 79.
 Torquis, 108.
 Triodopsis, 114.
 Tritogonia, 70.
 Truncilla, 63.

U

Unio, 76.
 Uniomerus, 77.
 Unionidæ, 63.

V

Vallonia, 110.
 Valloniidæ, 110.
 Valvata, 91.
 Valvatidæ, 91.
 Vasopulmonata, 110.
 Vertigo, 112.
 Vertigopsis, 112.
 Vitrea, 119.
 Vitrina, 119.
 Vivipara, 88.
 Viviparidæ, 88.

Z

Zonitidæ, 118.
 Zonitinae, 118.
 Zonitoides, 120.