STERKIANA

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ANNOUNCEMENT

STERKIANA is named after Dr. Victor Sterki (1846-1933) of New Philadelphia, Ohio, famed for his work on the Sphaeriidae, Pupillidae, and Valloniidae. It is fitting that this serial should bear his name both because of his association with the Midwest and his lifelong interest in non-marine Mollusca.

The purpose of STERKIANA is to serve malacologists and paleontologists interested in the living and fossil non-marine Mollusca of North and South America by disseminating information in that special field. Since its resources are modest, STERKIANA is not printed by conventional means. Costs are kept at a minimum by utilizing various talents and services available to the Editor. Subscription and reprint prices are based on cost of paper and mailing charges.

STERKIANA accepts articles dealing with non-marine Mollusca of the Americas in English, French, or Spanish, the three official languages of North America. Contributors are requested to avoid descriptions of new species or higher taxa in this serial as the limited distribution of STERKIANA would probably prevent recognition of such taxa as validly published. Papers on distribution, ecology, and revised checklists for particular areas or formations are especially welcome but those on any aspect of non-marine Mollusca will be considered.

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STERKIANA est une collection de travaux sur les Mollusques extra-marins des deux Amériques, distribuée par un groupe de malacologues du centre des Etats-Unis. STERKIANA publie des travaux en anglais, en français et en espagnol acceptés par le conseil de rédaction. Prière d'adresser toute correspondance au Rédacteur.

ABONNEMENT: 50¢ le numéro, par chèque ou mandat payable au Rédacteur.

STERKIANA es una coleccion de trabajos sobre los Moluscos extra-marinos viventes y fosiles de las dos Americas, editada por un grupo de malacólogos de los Estados Unidos centrales. Contenirá en el porvenir trabajos en inglés, francés, y español que serán acceptados por la mesa directiva. La correspondencia deberá ser dirigida al Editor.

PRECIO: 50¢ el número.

LISTE DES SPHAERIIDAE DU FLEUVE SAINT-LAURENT REGION DE GENTILLY

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RESUME

Comme prélude à une étude écologique des Sphaeriidae, les auteurs ont procédé à l'inventaire qualitatif et quantitatif des eaux du fleuve Saint-Laurent dans la région de Gentilly. Nous donnons ici la liste des seize espèces qui ont été recensées.

ABSTRACT

As a prelude to an ecologic study of Sphaeriidae, the authors made a qualitative and quantitative inventory of the waters of the St. Lawrence River in the Gentilly area. We give here the list of the sixteen species which have been recorded.

INTRODUCTION

En vue d'étudier les effets d'un apport thermique provenant de la Centrale Nucléaire de Gentilly sur les organismes vivant dans ce secteur du fleuve Saint-Laurent, nous avons entrepris au mois de mai 1970, le projet Thermo-Pol. Une des étapes de cette étude est d'inventorier la faune de ce secteur du fleuve avant l'opération de la Centrale, afin de déterminer l'évolution des populations d'organismes conséquemment au réchauffement de l'eau résultant de l'exploitation de la Centrale.

Les échantillons de benthos, tant qualitatifs que quantitatifs, montrent que les mollusques occupent une place prépondérante; la famille des Sphaeriidae représentant le groupement dominant. Peu d'études de ce groupe ont été effectuées dans les eaux du fleuve Saint-Laurent. L'une d'elles, publiée par Brinkhurst, Hamilton et Herrington (1968) donne les résultats d'un inventaire des Sphaeriidae de la baie Georgienne et des lacs Erié et Ontario (bassin hydrographique du fleuve Saint-Laurent). C'est dans le but d'accroître nos connaissances sur la distribution des mollusques appartenant à cette famille que nous proposons cette liste. Nous espérons que ce travail initiera l'inventaire exhaustif de la faune malacologique du fleuve Saint-Laurent.

MATERIEL ET METHODE

Pour la collection de nos spécimens, nous avons utilisé une benne Ekman de

22,86 cm de côté (mesure intérieure), tel que recommandé par Baker (1966). Pour plus d'efficacité, nous avons ajouté sur chaque côté de l'appareil, un poids de 2,27 kg.

La fréquence des prélèvements s'établit comme suit: un prélèvement hebdomadaire de mai à août et un prélèvement mensuel de septembre 1970 à avril 1971.

L'identification des spécimens a été effectuée par le Révérend H. B. Herrington de Westbrook, Ontario, et par les auteurs. Les travaux de référencesutilisés pour l'identification de nos espèces sont: Prime (1865); Moquin-Tandon (1855); Goodrich (1932); Chamberlin et Jones (1929); Gould (1841); Walker (1918); Baker (1928); La Rocque (1953).

DESCRIPTION DE LA REGION INVENTORIEE

Le choix de nos stations (Figure 1) se fonde d'une part sur l'étude de la capacité de dilution du fleuve Saint-Laurent à la hauteur de Gentilly et d'autre part sur le débit du fleuve mesuré en amont de la jetée Glaverbel et face à la Centrale Nucléaire de Gentilly.

Nous avons jugé nécessaire de travailler à sept (7) stations s'échelonnant sur une distance de 6,8 kilomètres. Nos points d'échantillonnage sont orientés de l'amont de la Centrale Nucléaire vers l'aval.

La position géographique des stations se trouve au tableau I. Nous y donnons également la distance de chacune des stations perpendiculairement à la rive sud et de la Centrale Nucléaire.

La texture du fond a été déterminée par la méthode de Boyoucos (1936) et les résultats sont exprimés au tableau II. Au même tableau, nous donnons également les mesures de profondeur effectuées à marée basse. Au tableau III, nous présentons la liste des Sphaeriidae et précisons le nombre d'organismes échantillonnés.

TABLEAU II. PROFONDEUR ET TEXTURE DU FOND AUX DIFFERENTES STATIONS

ST	PROFONDEUR (mètres)	TEXTURE DU FOND *
1	2,17	Loam sableux argileux
2	2,02	Argile
3	0,97	Galet
4	2,56	Loam argileux
5	1,86	Sable
6	1,14	Argile
7	2,87	Loam argileux

* Texture du fond établie d'après l'abaque textural de U.S.D.A. (1951) tel que modifié par Hills (1955).

DISCUSSION ET CONCLUSION

En examinant la texture du fond, aucune corrélation précise n'apparaît entre le type de substrat et la répartition des espèces mentionnées au tableau III.

Douze espèces sur 16 (75%), soit les numéros 1, 2, 3, 4, 8, 9, 10, 11, 12, 14,

(suite page 4)

TABLEAU I. POSITION GEOGRAPHIQUE DES STATIONS

STATION	LONGITUDE OUEST			LATITUDE NORD			DISTANCE A LA RIVE SUD (mètres)	DISTANCE DE LA CENTRALE NUCLEAIRE (mètres)
	o	'	"	o	'	"		
1	72	23	48	46	23	48	800	2 800
2	72	21	42	46	23	57	600	600
3	72	21	12	46	23	57	400	500
4	72	20	54	46	24	06	850	800
5	72	20	36	46	23	56	300	1 000
6	72	20	54	46	23	42	150	600
7	72	18	54	46	24	51	1 100	4 000

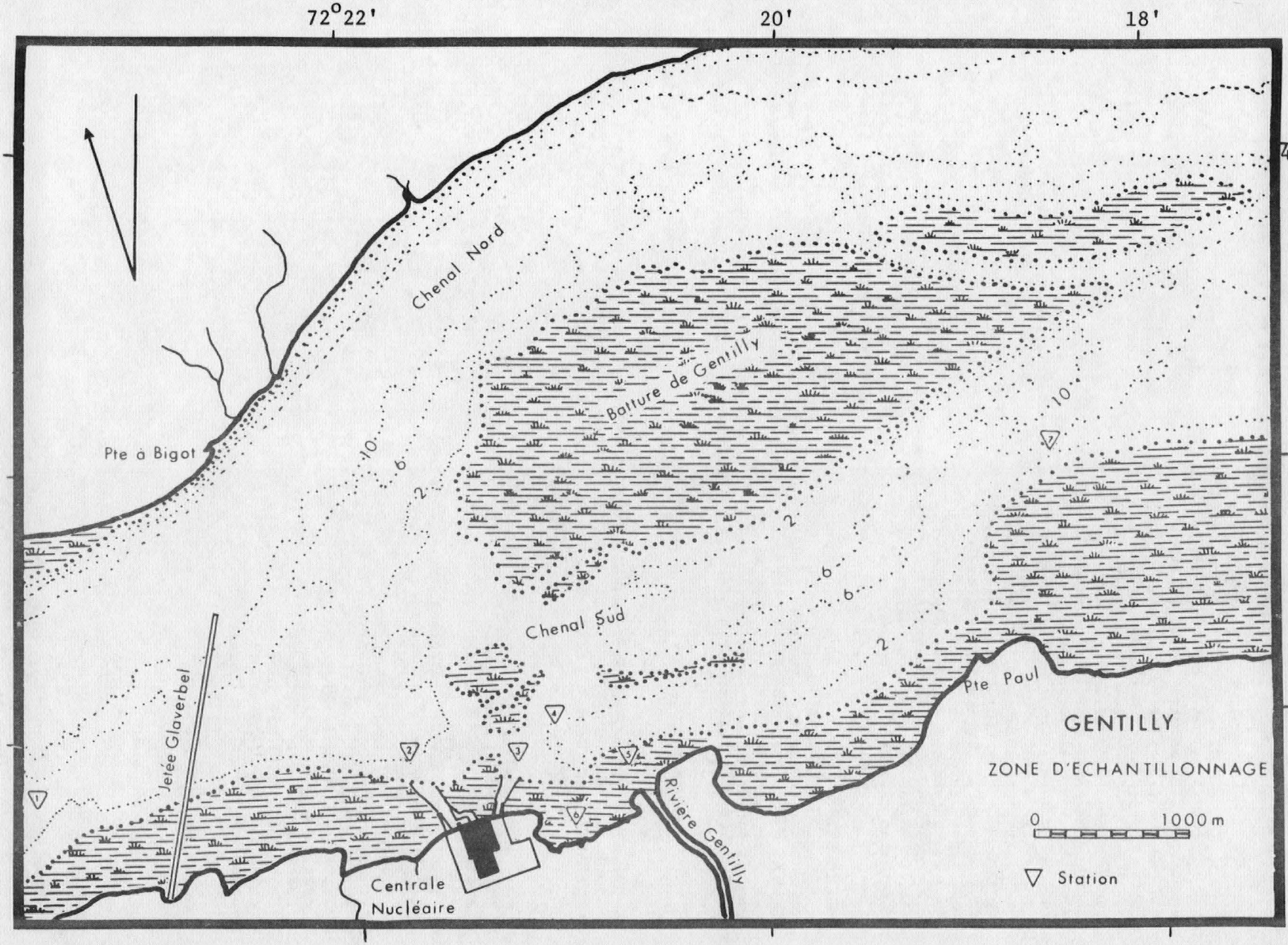

FIG. I. LOCALISATION DES STATIONS D'ECHANTILLONNAGE

15 et 16 se retrouvent à quatre (4) stations et plus. Le substrat à ces stations va du galet à l'argile.

Quatre espèces sur 16 (25%), soit les numéros 5, 6, 7 et 13 sont présentés à moins de trois (3) stations.

Il ne semble pas avoir à l'inspection, une corrélation quelconque entre le substrat et la répartition de ces espèces. De plus, il ne semble n'y avoir aucune relation entre l'abondance et la texture si ce n'est pour *Sphaerium corneum* qui est plus abondant sur les galets que sur les autres types de fond.

Nous souhaitons que cette étude contribue à accroître les connaissances des composantes de la faune malacologique du fleuve Saint-Laurent.

REMERCIEMENTS

Les auteurs tiennent à remercier le Révérend H. B. Herrington de Westbrook, Ontario, pour sa généreuse participation à l'identification de nos spécimens. Nos remerciements vont également au professeur Richard Couture pour ses conseils judicieux et au Dr. A. H. Clarke du Musée National des Sciences naturelles du Canada ainsi qu'à toute l'équipe qui travaille à ce projet.

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(Suite du texte à la page 5)

TABLEAU III. NOMBRE DE SPHAERIIDAE PRELEVE PENDANT LA PERIODE D'ECHANTILLONNAGE. LE NOMBRE REPRESENTE LA SOMME DES ORGANISMES PRELEVES EN 24 COUPS DE BENNE A CHACUNE DE NOS STATIONS ECHELONNEE SUR LA PERIODE DE MAI 1970 A MAI 1971.

NO.		STATIONS 1	2	3	4	5	6	7
1	*Pisidium adamsi adamsi* Prime	-	1	1	-	-	1	7
2	*Pisidium amnicum* (Müller)	131	77	56	37	9	123	18
3	*Pisidium casertanum* (Poli)	17	4	1	4	1	22	1
4	*Pisidium compressum compressum* Prime	7	25	11	19	5	16	4
5	*Pisidium fallax fallax* Sterki	-	2	2	2	-	-	-
6	*Pisidium ferrugineum* Prime	-	-	1	-	-	-	-
7	*Pisidium henslowanum* Sheppard	1	-	2	-	3	-	-
8	*Pisidium nitidum* f. *pauperculum* Sterki	-	1	1	-	-	4	2
9	*Pisidium punctatum* Sterki	7	2	14	5	1	21	4
10	*Pisidium supinum* Schmidt	3	7	19	17	12	1	-
11	*Sphaerium corneum* (Linné)	3	6	791	1	4	22	-
12	*Sphaerium lacustre* (Müller)	2	36	-	2	1	7	30
13	*Sphaerium partumeium* (Say)	-	-	-	-	-	11	-
14	*Sphaerium securis* Prime	-	1	6	-	-	28	1
15	*Sphaerium striatinum* (Lamarck)	128	11	75	44	199	24	157
16	*Sphaerium transversum* (Say)	61	1	3	40	2	1	33

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MOLLUSCAN RECORDS FROM WEST TEXAS *

E.P. CHEATUM, RICHARD FULLINGTON,

AND LLOYD PRATT**

This report is based upon molluscan species collected in West Texas by the writers during the past eight years. Four of the collecting trips were made within the past three years and were sponsored by the Dallas Natural Science Association. Eighteen other collecting trips were sponsored by the Fort Worth Museum of Science and History. Therefore, this is a joint listing of collections. Lloyd Pratt who has worked independently from the other writers has done intensive collecting of mollusks in the Trans-Pecos, particularly in the Chisos Mountain range.

Although most of the following reports are from the Texas Trans-Pecos, these reports also include drift shells collected along major streams on the westward and the return trips. Many of the drift shells were doubtlessly washed out from alluvial deposits, but all the drift shells, with the exception of those collected in the Pecos River and in Maravillas Canyon adjacent to the Rio Grande River were from streams of Texas origin.

A total of 138 species and varieties of mollusks are reported. Among these are the following species which are new reports for Texas: *Gastrocopta dalliana* Sterki from the Davis Mountains, Jeff Davis County; *Columella columella alticola* (Ingersoll), *Pupilla hebes* (Ancey), *Radiodiscus millecostatus* Pilsbry and Ferriss and *Microphysula ingersolli* (Bland) from the Chisos Mountains, Brewster County; *Holospira danielsi* Pilsbry and Ferriss, *Holospira montivaga* Pilsbry and *Ashmunella carlsbadensis* Pilsbry from the Guadalupe Mountains, Culberson County; *Humboldtiana* sp.*** from the Sierra Vieja Mountains, Presidio County; *Helicodiscus notius notius* Hubricht for Dallas and Tarrant Counties, and *Pisidium fallax* Sterki collected on the Woodward Ranch in Brewster County.

To our knowledge the following species included in this report occur only as Pleistocene fossils and should not be considered as Recent for Texas: *Promenetus umbilicatellus* (Cockerell), *Promenetus exacuous* (Say), *Planorbula crassilabris* (Walker), *Discus cronkhitei* (Newcomb), *Nesovitrea electrina* (Gould), *Vallonia gracilicosta* Reinhardt, *Pupilla blandi* Morse, *Gastrocopta pilsbryana* (Sterki), and *Pupoides hordaceus* (Gabb).

PELECYPODA

Order Prionodesmacea

Family Unionidae

Anodonta imbecilis Say - Menard.
Amblema plicata (Say) - Kimble and Coryell, Menard.

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* All reports are listed by county.

** E.P. Cheatum, Professor Emeritus of Biology and Associate Curator of the Shuler Museum of Paleontology, Southern Methodist University; Richard Fullington, Curator of Invertebrates, Dallas Museum of Natural History; and Lloyd Pratt, Research Assistant, Fort Worth Museum of Science and History.

*** A new species of *Humboldtiana* to be described later in Nautilus.

Cyrtonaias berlandieri (Lea) - Menard.
Lampsilis bracteata Gould - Kimble Menard.
Lampsilis radiata siliquoidea (Barnes) - Kimble.
Potamilus laevissima (Lea) - Kimble.
Potamilus purpurata (Lamarck) - Kimble, Menard.
Quadrula pustulosa (Lea) - Kimble.
Quadrula petrina Gould - Menard.

ORDER TELEODESMACEA

Family Sphaeriidae

**Pisidium casertanum* (Poli) - Culberson.
**Pisidium nitidum* Jenyns - McCulloch.
Sphaerium lacustre (Müller) - McCulloch.
Sphaerium striatinum (Lamarck) - Kimble.
Sphaerium sulcatum (Lamarck) - Kimble.
Sphaerium transversum (Say) - McCulloch, Kimble, San Saba.
** *Eupera cubensis* (Prime) -Kimble, McCulloch, Hamilton, Menard, Somervell.

AQUATIC GASTROPODA

ORDER MESOGASTROPODA

Family Pleuroceridae

Oxytrema comalensis (Pilsbry) - San Saba, Menard.

Family Hydrobiidae

Amnicola lustrica Pilsbry - Kimble.
Tryonia cheatumi (Pilsbry) - Jeff Davis.
Cochliopa riograndensis (Pilsbry & Ferriss) - Terrell (Living in Independence-Pecos R. drainage).
Cochliopa texana (Pilsbry) - Jeff Davis, Sutton.

ORDER BASOMMATOPHORA

Family Lymnaeidae

Lymnaea bulimoides techella (Haldeman) - McCulloch, Kimble, Mason, Coleman, Presidio.
Lymnaea dalli Baker - Hamilton, Crosby.
Lymnaea humilis (Say) -McCulloch, Uvalde, Kimble, Brewster, Culberson, Presidio, Terrell.

Family Physidae

Physa virgata Gould - Mason, Scurry, Culberson, McCulloch, Brewster, Crockett, Uvalde, Kimble, Coleman, Hudspeth, Jeff Davis, Hamilton, Coryell, Crosby, Presidio, Terrell.

Family Planorbidae

Gyraulus parvus (Say) -McCulloch, Kimble, Culberson, Scurry, Hamilton, Coleman, Mason, Brewster, Terrell, Presidio.
Helisoma anceps (Menke) - Kimble, Uvalde, Howard, Presidio, Terrell.
Helisoma trivolvis lentum (Say) - Culberson, McCulloch, Mason, Uvalde, Hemphill, Lubbock, Brewster, Jeff Davis.
Menetus dilatatus (Gould) - Callahan, Menard, Somervell.
Menetus sampsoni (Ancey) - Tarrant.
Promenetus exacuous (Say) -Callahan (Brazos R. drift).
Promenetus umbilicatellus (Cockerell) - Howard, Uvalde.
Planorbula crassilabris (Walker) - Presidio, Sutton.
Biomphalaria gracilentus (Gould) - McCulloch, Mason, Uvalde, Kimble, Brewster, Hamilton, Terrell.
Biomphalaria obstructus (Morelet) - Uvalde, San Saba, Brewster, Mason, Kinney, Kimble, McCulloch, Scurry, Hamilton, Presidio.

LAND GASTROPODA

ORDER BASOMMATOPHORA

Family Carychiidae

Carychium floridanum (Say) -Hamilton, McCulloch, Kimble.

ORDER ARCHAEOGASTROPODA

Family Helicinidae

Oligyra orbiculata tropica (Pfeiffer) - Val Verde, Uvalde, San Saba, Coryell, Kinney, Comal, Kimble, McCulloch, Hamilton, Sutton, Mason.

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* Identified by Rev. H. B. Herrington, Westbrook, Ontario, Canada.

** Identified by Richard H. Guckert, Florida State University, Tallahassee, Fla.

ORDER STYLOMMATOPHORA

Family Cionellidae

Cionella sp. - Uvalde, Culberson, Brewster.

Family Helminthoglyptidae

Humboldtiana agavophila Pratt - Brewster.
Humboldtiana cheatumi Pilsbry - Jeff Davis.
Humboldtiana palmeri Clench & Rehder - Jeff Davis.
Humboldtiana chisosensis Pilsbry - Brewster.
Humboldtiana ferrissiana Pilsbry - Jeff Davis.
Humboldtiana texana Pilsbry - Terrell.
Humboldtiana ultima Pilsbry - Culberson.
Humboldtiana sp. - Presidio.
Sonorella hachitana orientis Pilsbry - Presidio.

Family Achatinidae

Rumina decollata (Linné) - Brewster, Irion, Runnels, Comal, Scurry, Coryell, Terrell, Menard, Uvalde.

Family Spiraxidae

Pseudosubulina cheatumi Pilsbry - Brewster.
Euglandina singleyana (Binney) - Comal, Kimble, Val Verde, Terrell.

Family Helicidae

Helix aspersa Müller - Brewster.
Otala lactea Müller - Coryell.

Family Bulimulidae

Rhabdotus alternatus alternatus (Say) - Val Verde.
Rhabdotus alternatus hesperius (Pilsbry and Ferriss) - Brewster, Presidio, Terrell, Sutton, Val Verde.
Rhabdotus dealbatus dealbatus (Say) - Kimble, Mason, Coryell, McCulloch, San Saba.
Rhabdotus dealbatus ragsdalei (Pilsbry) - Kinney, Hamilton, Val Verde, Crockett, Terrell, Erath, Palo Pinto.
Rhabdotus dealbatus neomexicanus (Pilsbry) - Culberson.
Rhabdotus mooreanus (W.G. Binney) - Crockett, Kinney, Brewster, Val Verde, Uvalde, Callahan, San Saba, Mills, Kimble.
Rhabdotus pasonis (Pilsbry) - Brewster, Presidio.
Rhabdotus pilsbryi Ferriss - Terrell, Brewster.

Family Sagdidae

Thysanophora horni (Gabb) - Brewster, Uvalde, Jeff Davis, Culberson, Presidio, Sutton.
Microphysula ingersolli (Bland) - Brewster.

Family Polygyridae

Ashmunella bequaerti Clench & Miller - Jeff Davis.
Ashmunella carlsbadensis Pilsbry - Culberson.
Ashmunella edithae (Pilsbry and Cheatum) - Culberson.
Ashmunella mudgii Cheatum - Jeff Davis.
Mesodon roemeri (Pfeiffer) - Mason, McCulloch, San Saba, Menard.
Polygyra auriformis Bland - Kimble, San Saba, Mason.
Polygyra chisosensis Pilsbry - Brewster.
Polygyra hippocrepis (Pfeiffer) - Comal.
Polygyra mooreana (Binney) - Uvalde, Comal, Hamilton, Kimble, Mason, San Saba.
Polygyra tamaulipasensis Lea - Val Verde, McCulloch, Pecos, Kimble, Uvalde, Terrell, Brewster.
Polygyra tamaulipasensis X *P. t. texasensis* - Hamilton, Sutton.
Polygyra texasiana texasiana (Moricand) - Brewster, McCulloch, Kimble, Kinney, Scurry, Val Verde, Runnels, Tom Green, San Saba, Uvalde, Coleman, Hamilton, Coryell, Taylor, Shackleford, Mitchell, Palo Pinto, Somervell.
Polygyra texasiana texasensis Pilsbry - San Saba, McCulloch, Uvalde, Kimble, Val Verde, Crockett.
Polygyra tholus (Binney) - Kimble, San Saba, Mason.
Praticolella berlandieriana (Moricand) - Comal, Hamilton, San Saba, Somervell.
Praticolella pachyloma (Menke) - Coryell.
Stenotrema leai aliciae (Pilsbry) - Mason, Kimble, McCulloch.

Family Strobilopsidae

Strobilops labyrinthica (Say) - Culberson, Hamilton.
Strobilops texana (Pilsbry & Ferriss) - Hamilton, Uvalde, San Saba, Somervell.

Family Philomycidae

Pallifera sp. - Brewster.

Family Endodontidae

Radiodiscus millecostatus Pilsbry & Ferriss - Brewster.

Discus cronkhitei (Newcomb) - Culberson.
Punctum vitreum H. B Baker - Brewster, Terrell.
Helicodiscus eigenmanni Pilsbry-Brewster, Uvalde, Eastland, Culberson, Edwards, Kimble, Mason, Hamilton.*
Helicodiscus notius notius Hubricht - Tarrant, Dallas.
Helicodiscus arizonensis (Pilsbry & Ferriss) - Culberson, Jeff Davis, Presidio.
Helicodiscus singleyanus (Pilsbry) - Presidio, Brewster.
Helicodiscus tridens (Morrison) - Callahan, Somervell, Palo Pinto, Wise.
Helicodiscus nummus (Vanatta) - Terrell, Somervell, Callahan.

Family Urocoptidae

Holospira danielsi Pilsbry & Ferriss - Culberson.
Holospira goldfussi (Menke) - Brewster, Uvalde, Comal.
Holospira goldfussi anachensis Bartsch - Uvalde.
Holospira mesolia Pilsbry - Pecos, Terrell.
Holospira hamiltoni Dall - Brewster.
Holospira montivaga Pilsbry - Culberson.
** *Holospira montivaga breviara* Pilsbry-Culberson.
Holospira oritis (Pilsbry & Cheatum) - Culberson.
Holospira pityis Pilsbry & Cheatum - Culberson.
Holospira riograndensis Pilsbry-Brewster.
Holospira yucatanensis Bartsch - Brewster.
Metastoma roemeri (Pfeiffer) - Brewster, Culberson, Mason, Pecos, Val Verde, Kimble, Uvalde, Terrell, Presidio.
Metastoma roemeri brevissima (Pilsbry) - Uvalde.
Microceramus texana (Pilsbry) - Uvalde, Comal.

Family Zonitidae

Euconulus chersinus trochulus (Reinhardt) - Uvalde, Crockett, Comal, Kimble.
Euconulus fulvus (Müller) - Brewster, Culberson.
Hawaiia minuscula (Binney) - Brewster, Hudspeth, Uvalde, Scurry, Hamilton, Pecos, Crockett, Culberson, McCulloch, Howard, Kimble, King, Coryell, Jeff Davis, Presidio, Sutton, Terrell, Palo Pinto, Callahan, Somervell.
Striatura meridionalis (Pilsbry & Ferriss) - Brewster, Culberson.
Nesovitrea electrina (Gould) - Uvalde.
Glyphyalinia indentata (Say) - Jeff Davis, Brewster, Comal, McCulloch, Uvalde, Mason, Culberson, Kimble, Hamilton, Sutton, Somervell.
Glyphyalinia roemeri (Pilsbry & Ferriss) - Hamilton, Culberson, Kimble, McCulloch, Sutton.
Zonitoides arboreus (Say) - Uvalde, Culberson, McCulloch, Brewster.

Family Valloniidae

Vallonia gracilicosta Reinhardt - Culberson, Presidio.
Vallonia parvula (Sterki) - Culberson, Sutton.
Vallonia perspectiva (Sterki) - Culberson, Brewster, Terrell.

Family Pupillidae

Gastrocopta armifera (Say) - Brewster, Culberson, Hamilton, Uvalde, Scurry, Kimble.
Gastrocopta dalliana (Sterki) - Jeff Davis.
Gastrocopta ashmuni (Sterki) - Culberson, Brewster.
Gastrocopta contracta (Say) - Uvalde, Coryell, Culberson, Kimble, Hamilton, Jeff Davis, Hamilton, Presidio, Sutton.
Gastrocopta pentodon (Say) - Culberson, Brewster.
Gastrocopta pilsbryana (Sterki) - Culberson.
Gastrocopta procera Pilsbry - McCulloch, Kimble, Hamilton, San Saba, Callahan, Presidio.
Columella columella alticola (Ingersoll) - Brewster.
Pupilla blandi Morse - Culberson, Jeff Davis, Mason, Uvalde (all fossil).
Pupilla hebes (Ancey) - Brewster.

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* We are grateful to Mr. Leslie Hubricht for identifications of the *Helicodiscus* species.

** Pilsbry (1946, pp. 124-125) lists this form of *Holospira montivaga* from the eastern slope of the Guadalupe Mountains in 'New Mexico.' He collected it in Pine Springs Canyon which is in Texas. This report has been documented by Metcalf (1970, p. 29).

Pupoides albilabris (C. B. Adams) - Brewster, Scurry, Culberson, McCulloch, Hamilton, Crockett, Uvalde, Hudspeth, Presidio, Sutton, Terrell, Callahan.
Pupoides hordaceus (Gabb) - Culberson, Presidio.
Vertigo milium (Gould) - Culberson.
Vertigo ovata Say - Culberson, Hamilton, Presidio, Brewster.

Family Succineidae

Catinella texana Hubricht - Crockett, Mason, Scurry.
Succinea solastra Hubricht - Brewster.
Succinea luteola Gould - Kinney, Crockett, Val Verde, Brewster, Irion, Runnels, Jeff Davis.
Succinea grosvenori Lea - Howard, Kimble, Jeff Davis, King.
Succinea sp. - Val Verde, Brewster, Presidio.

LITERATURE CITED

METCALF, Artie (1970) Field Journal of Henry A. Pilsbry pertaining to New Mexico and Trans-Pecos Texas. -- Sterkiana 39:23-37.

PILSBRY, Henry (1946) Land Mollusca of North America (North of Mexico). -- Acad. Nat. Sci. Phila., Monogr. III, 2(1): 124-125.

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ERRATA - STERKIANA 45, P. 33.

The Editor regrets the omission of the following after *Vertigo alabamensis alabamensis* Clapp:

Vertigo alabamensis conecuhensis Clapp

Please note accordingly on copies of Sterkiana No. 45, p. 33, right hand column.

RECENT MOLLUSCA OF ELLSWORTH COUNTY, KANSAS*

BARRY B. MILLER** AND CLAUDE W. HIBBARD***

ABSTRACT

Thirty-nine species of Mollusca were identified from collections made during 1970 and 1971. Twenty-three of these species represent new records for Ellsworth County. Our material from Ellsworth County and west-central Kansas suggests that a fairly diverse unionid fauna extends farther westward into the state than was previously suspected.

INTRODUCTION

One important aspect of Pleistocene malacological studies involves the reconstruction of paleoclimates. These investigations require accurate data on Recent molluscan distributions to serve as a basis for interpretation of fossil assemblages. To obtain these data the paleontologist must frequently make collections of the Recent fauna in conjunction with the acquisition of fossil materials. During the summer months of 1970 and 1971 23 localities were sampled (Figure 1; Table 1) to provide data for interpreting the fossil Mollusca recovered from the White Construction Company, Sand and Gravel Pit at Kanopolis, Ellsworth County, Kansas. The object of this report is to provide information on the natural living molluscan fauna of this area based on these 1970-71 collections. These materials are housed in the collections of the Department of Geology, Kent State University, and University of Michigan Museum of Zoology.

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DISCUSSION

Thirty-nine different kinds of molluscs were identified from these collections (Table 2), and include 13 species of unionid mussels, four species of sphaeriids, 17 species of terrestrial snails, and five species of aquatic snails. Although some of these species have been reported from

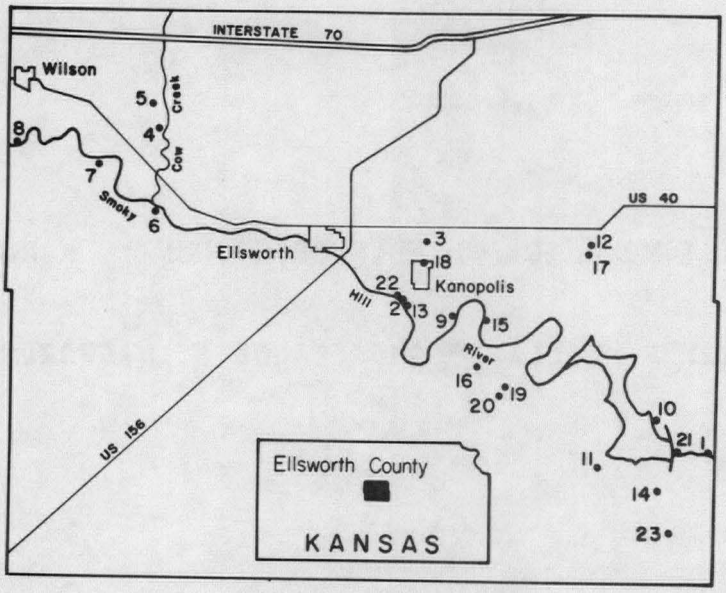

FIGURE 1. Map showing distribution of Recent mollusc collection localities in Ellsworth County, Kansas.

counties farther to the west (cf. Leonard, 1959; Murray and Leonard, 1962), 23 of these species represent new records for Ellsworth County. As far as we can determine, the Ellsworth County records of *Euconulus chersinus, Fusconaia flava, Gastrocopta corticaria, Lampsilis siliquoidea, Nesovitrea indentata, Quadrula pustulosa,* and *Tritogonia verrucosa* now represent the westernmost limits for these species in the state. *Gastrocopta armifera* and *G. contracta* are the two most commonly encountered species both in occurrence at different localities and in terms of absolute numbers within our collections. In contrast, *E. chersinus, Fossaria* cf. *dalli* and *5. verrucosa* are represented in our collections by single specimens.

The Ellsworth County collections, together with other materials on hand from west-central Kansas, suggest that much about the unionid fauna of the state remains almost unknown in spite of the studies by Scammon (1906) and Murray and Leonard (1962) on this group. Our collections contain specimens of *Anodontoides ferussacianus* from the Smoky Hill River in both Ellsworth and Ellis counties, as well as *Quadrula quadrula, Leptodea fragilis,* and *L. laevissima* from the Smoky Hill River in Ellsworth County, and the Arkansas River, near Great Bend, in Barton County.

Gastrocopta corticaria showed a rather erratic distribution pattern within the county. The species was only collected at locality 20 (Table 1), during June of 1971. These specimens were alive and constituted the most abundant species (43 individuals) from this locality. Collections made from this same general area in October, 1970 and July, 1971 produced no individuals of this species.

We are aware of no fossil records of the species from within the state which indicate that it was at one time more widespread. *G. corticaria* may actually be in the process of spreading westward in Kansas. Franzen and Leonard (1947) only record the species in Cherokee, Wyandotte, and Douglas counties. Leonard (1959: 178) places it in these counties and extends it westward to Marshall County. Our collection from locality 20 indicates that the species now occurs about 130 miles southwest of the nearest previous reported occurrence in Marshall County. We are not

certain if this apparent extension of range into the Great Plains of Kansas is real or simply the result of more intensive collecting in this area.

CONCLUSIONS

1. Our collections record 39 living species of Mollusca in Ellsworth County, 23 of which represent new records for the county.
2. Thirteen species of unionid mussels were collected from the Smoky Hill River and its tributaries, within the county. The fauna is the same as that found in the Kansas River drainage further to the east in the Central Lowlands, but the diversity is reduced.
3. After almost 100 years of collecting and study, knowledge of the distribution of living molluscs in Kansas must still be considered inadequate. Our unionid material from west-central Kansas indicates that the absence of records from thia area is probably due in large part to the lack of any serious effort to collect.

ACKNOWLEDGMENTS

The authors would like to thank the members of the 1970 and 1971 University of Michigan fieldparties (who were supported by NSF project GB - 20249); Mr. W. T. Kay, Kent State University; Mr. Clayton Griggs, McPherson, Kansas; Mr. John Maddox, Kanopolis, Kansas; Mrs. Art Zeman, Ellsworth, Kansas; and Dr. Richard J. Zakrzewski, Hays, Kansas; for their help in collecting the materials reported herein. Dr. David H. Stansbery of the Ohio State University was kind enough to identify most of the unionids.

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SCAMMON, R. E. (1906) The Unionidae of Kansas, Part I. --Univ. Kansas Sci. Bull. 3(9): 279-373.

TABLE 1. REGISTER OF LOCALITIES. The species collected from a locality are indicated by the numerals within parentheses. These numbers correspond to those preceding the species names in Table 2. The four and/or six digit numbers following parentheses are respectively, Kent State University and the University of Michigan Museum of Zoology catalog numbers.

1. NE¼ SE¼ section 1, T. 17 S., R. 6 W.; sand and gravel bars along Smoky Hill River. (2) 231521; (7) 231534; (22) 231530; (23) 231531; (24) 231535; (30) 231533; (31) 231532.
2. SE¼ SE¼ section 35, T. 15 S., R. 8 W.; Smoky Hill River, southwest of Kanopolis, near old Fort Ellsworth. (23) 231529.
3. NE¼ section 24, T. 15 S., R. 8 W.; north of Kanopolis in tributary to Spring Creek. (37) 231528.
4. SE¼ section 31, T. 14 S., R. 9 W.; Cow Creek. (3) 231525; (6) 2263; (15) 2264; (18) 2265; (19) 2266; (21) 231523; (24) 231526; (26) 2267; (27) 2268; (28) 2269; (29) 2322; (32) 2270; (33) 2271; (35) 2272; (37) 231524, 231527.
5. S½ section 30, T. 14 S., R. 9 W.; tributary to Cow Creek. (15) 2313; (26) 2314; (27) 2315; (35) 2316; (37) 231522.
6. Section 7, T. 15 S., R. 9 W.; just south of Black Wolf, from sandbars in Smoky Hill River. (1) 231513; (2) 231515; (7) 231519; (20) 231518; (23) 231516; (24) 231512; (31) 231514; (32) 231508; (36) 231520; (37) 231517.
7. NW¼ section 2 and NE¼ section 3, T. 15 S., R. 10 W.; from gravel bars in Smoky Hill River. (1) 231505; (2) 231506; (22) 231510; (23) 231511; (24) 231507; (31) 231509; (37) 231574.
8. SW¼ section 31, T. 14 S., R. 10 W.; south of Wilson; from gravel bar in Smoky Hill River. (1) 231503; (23) 231502; (37) 231504.
9. Section 6, T. 16 S., R. 7 W.; near bridge over Smoky Hill River. (37) 231501.
10. SE¼ section 21, T. 16 S., R. 6 W.; woodlot behind picnic area across the road from park headquarters, Kanopolis State Park. (4) 2312; (9) 2310; (35) 2309; (39) 2311.
11. Just north of section line in SW¼ section 6, T. 17 S., R. 6 W.; along east side of Bluff Creek and south of road. (8) 2278, 2283, 231536; (9) 2282, 231537, 231538; (12) 2280; (14) 231539, 231540; (34) 2284, 231541, 231542; (35) 2279, 231543; (38) 2254, 231544; (39) 2281, 231545.

12. SE¼ SW¼ section 19, T. 15 S., R. 6 W.; west side of Alum Creek, north of road, Mushroom Rock State Park. (8) 2244, 2245; (9) 2246, 2247; (10) 2248; (12) 2249, 231570; (13) 2251; (16) 2252; (17) 2253, 231571; (26) 2255; (29) 2256; (35) 2257; (38) 2258, 2259; (39) 2260, 2261.

13. SW corner of SW¼ section 36, T. 15 S., R. 8 W. (8) 2273; (9) 2296; (17) 2274; (34) 2275; (38) 2276; (39) 2277.

14. SW¼ SE¼ section 10, T. 17 S., R. 6 W.; first old stock pond on south side of road 0.4 mile west of route 141. (26) 2262.

15. East side of NW¼ section 4, T. 16 S., R. 7 W. (8) 2321; (26) 2319; (34) 2320.

16. NW¼ NW¼ section 16, T. 16 S., R. 7 W.; along creek on east side of dirt road. (8) 2306; (11) 2308; (13) 2305; (16) 2307; (35) 2304.

17. NE¼ NW¼ section 30, T. 15 S., R. 6 W.; east side of Alum Creek, joining Mushroom Rock State Park. (4) 231546, 231547; (8) 2250, 231548; (9) 231549, 231550; (11) 231551; (29) 231552; (35) 231553, 231554; (38) 231555, 231556.

18. SW¼ NE¼ section 25, T. 15 S., R. 8 W.; pond at White Sand and Gravel Pit. (19) 2318; (26) 2317.

19. NE corner of NW¼ SW¼ section 28, T. 16 S., R. 7 W.; east side of Thompson Creek. (4) 231557; (8) 231558; (9) 231559; (25) 231560; (34) 231561; (35) 231573; (38) 231562; (39) 231563.

20. SE¼ SE¼ section 28, T. 16 S., R. 7 W. (5) 2298; (8) 2299; (25) 2301; (29) 2297; (34) 2302; (35) 2303; (39) 2300.

21. SW¼ SW¼ section 35, T. 16 S., R. 6 W.; woods along south side of Sand Creek, below Kanopolis Dam. (4) 2290; (8) 2454; (9) 2293; (11) 2291; (13) 2285; (14) 2289; (16) 2287; (29) 2286; (34) 2292; (35) 2288; (38) 2294; (39) 2295.

22. SE corner of section 35, T. 15 S., R. 8 W.; east bank of Smoky Hill River, under logs. (8) 231564; (34) 231565; (39) 231566.

23. Center of NE¼ section 22, T. 17 S., R. 6 W.; old Griggs farm just south across spring runoff, under cottonwood log. (8) 231567; (35) 231568; (39) 231569.

TABLE 2. List of molluscs collected from 23 localities in Ellsworth County, Kansas. The numbers in parentheses after the name are the localities from which the species was collected.

1. *Anodonta grandis* (6, 7, 8)
2. *Anodontoides ferussacianus* (1, 6, 7)
3. *Carunculina parva* (4)
4. *Deroceras laeve* (10, 17, 19, 21)
5. *Euconulus chersinus* (20)
6. *Fossaria* cf. *F. dalli* (4)
7. *Fusconaia flava* (1, 6)
8. *Gastrocopta armifera* (11, 12, 13, 15, 16, 17, 19, 20, 21, 22, 23)
9. *Gastrocopta contracta* (10, 11, 12, 13, 17, 19, 21)
10. *Gastrocopta corticaria* (12)
11. *Gastrocopta cristata* (16, 17, 21)
12. *Gastrocopta holzingeri* (11, 12)
13. *Gastrocopta procera* (12, 16, 21)
14. *Gastrocopta tappaniana* (11, 21)
15. *Gyraulus parvus* (4, 5)
16. *Hawaiia minuscula* (12, 16, 21)
17. *Helicodiscus parallelus* (12, 13)
18. *Helisoma anceps* (4)
19. *Helisoma trivolvis* (4, 18)
20. *Lampsilis anodontoides* (6)
21. *Lampsilis siliquoidea* (4) missing.
22. *Leptodea fragilis* (1, 7)
23. *Leptodea laevissima* (1, 2, 6, 7, 8)
24. *Ligumia subrostrata* (1, 4, 6, 7)
25. *Nesovitrea indentata* (19, 20)
26. *Physa anatina* (4, 5, 12, 14, 15, 18)
27. *Pisidium casertanum* (4, 5)
28. *Pisidium compressum* (4)
29. *Pupoides albilabris* (4, 12, 17, 20, 21)
30. *Quadrula pustulosa* (1)
31. *Quadrula quadrula* (1, 6, 7)
32. *Sphaerium striatinum* (4, 6)
33. *Sphaerium transversum* (4)
34. *Stenotrema leai* (11, 13, 15, 19, 20, 21, 22)
35. Succineids (4, 5, 10, 11, 12, 16, 17, 20, 21, 23)
36. *Tritogonia verrucosa* (6)
37. *Uniomerus tetralasmus* (3, 4, 5, 6, 7, 8, 9)
38. *Vallonia parvula* (11, 12, 13, 17, 19, 21)
39. *Zonitoides arboreus* (10, 11, 12, 13, 19, 20, 21, 22, 23).

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THE LAND SNAILS OF ARKANSAS

LESLIE HUBRICHT

This paper reports the land snail records for Arkansas as represented by specimens in the collection of the author. For western Arkansas it is fairly complete for the larger species, but for the small species more collecting needs to be done. For some of the small species it is necessary to be there after a rain to collect them. This is difficult when one must plan collecting trips months in advance. The Mississippi Delta which occupies the eastern half of the State, for the most part, is either under cultivation or is swamp; and land snails are difficult to find. As a result there are few records for the Delta and these are of widely distributed species.

POLYGYRA LEPORINA (Gould). Jefferson, Prairie.

POLYGYRA TEXASIANA (Moricand). Hale, Hempstead, Jefferson, Logan.

POLYGYRA PEREGRINA Rehder. Izard, Marion, Newton, Searcy, Stone.

POLYGYRA JACKSONI (Bland). Boone, Carroll, Franklin, Logan, Scott, Washington.

POLYGYRA DORFEUILLIANA Lea. Baxter, Benton, Boone, Crawford, Dallas, Faulkner, Franklin, Hot Springs, Izard, Jackson, Lawrence, Logan, Marion, Miller, Montgomery, Newton, Perry, Polk, Pulaski, Saline, Scott, Sharp, Stone, Van Buren, Washington, Yell.

POLYGYRA LITHICA Hubricht. Baxter, Montgomery, Stone.

STENOTREMA LABROSUM (Bland). Baxter, Benton, Carroll, Cleburne, Conway, Crawford, Franklin, Garland, Independence, Izard, Johnson, Logan, Madison, Marion, Montgomery, Newton, Polk, Pope, Scott, Searcy, Stone, Van Buren, Washington, Yell.

STENOTREMA STENOTREMA STENOTREMA (Pfeiffer). Baxter, Izard, Madison, Marion, Perry, Searcy, Stone, Yell.

STENOTREMA BLANDIANUM (Pilsbry). Izard, Marion, Stone.

STENOTREMA UNCIFERUM (Pilsbry). Hot Springs, Montgomery, Pike, Polk, Scott.

Archer described *Stenotrema caddoense* from Arkansas but I can find no shell difference to warrant its recognition, even as a subspecies. Its records are included with *S. unciferum*.

STENOTREMA LEAI ALICIAE (Pilsbry). Jefferson, Little River, Marion, Miller, Perry, Saline, Scott, Washington, Yell.

STENOTREMA FRATERNUM IMPERFORATUM (Pilsbry). Montgomery, Polk, Scott.

MESODON THYROIDUS (Say). Benton, Izard, Jefferson, Lee, Madison, Marion, Miller, Prairie, Pulaski, St. Francis, Sharp, Stone, Washington, Yell.

MESODON CLAUSUS CLAUSUS (Say). Marion.

MESODON ZALETUS (Binney). Benton, Carroll, Cleburne, Franklin, Hot Springs, Logan, Madison, Marion, Montgomery, Newton, Polk, Pope, Saline, Scott, Searcy, Van Buren, Washington.

MESODON ELEVATUS (Say). Benton, Marion, Sharp.

MESODON INDIANORUM (Pilsbry). Scott.

MESODON BINNEYANUS (Pilsbry). Garland, Logan, Montgomery, Polk, Scott.

MESODON KIOWAENSIS (Simpson). Logan, Scott, Yell.

MESODON CLENCHI (Rehder). Izard, Yell.

MESODON PERIGRAPTUS Pilsbry. Baxter, Conway, Franklin, Izard, Johnson, Madison, Marion, Newton, Stone, Van Buren, Washington, Yell.

MESODON INFLECTUS (Say). Baxter, Benton, Carroll, Cleburne, Conway, Craighead,

Crawford, Faulkner, Franklin, Garland, Hot Springs, Howard, Independence, Izard, Jackson, Jefferson, Johnson, Logan, Madison, Marion, Miller, Monroe, Montgomery, Perry, Polk, Pope, Prairie, Pulaski, Randolph, Saline, Scott, Searcy, Sebastian, Sharp, Stone, Union, Van Buren, Washington, Yell.

MESODON EDENTATUS (Sampson). Baxter, Boone, Carroll, Crawford, Franklin, Izard, Madison, Marion, Newton, Washington.

This species is anatomically distinct from *M. inflectus*. The penis of *M. inflectus* is of uniform diameter throughout its length. The penis of *M. edentatus* becomes abruptly narrower near the middle. The basal half is quite slender. The penis of *M. magazinensis* tapers gradually toward the base, being shaped much like a baseball bat.

MESODON MAGAZINENSIS (Pilsbry & Ferriss). Logan.

TRIODOPSIS NEGLECTA (Pilsbry). Benton, Carroll, Cleburne, Faulkner, Independence, Madison, Marion, Searcy, Stone, Washington.

TRIODOPSIS CRAGINI Call. Scott.

TRIODOPSIS OCCIDENTALIS (Pilsbry). Independence, Stone.

TRIODOPSIS FOSTERI FOSTERI (F.C. Baker). Jefferson, Prairie.

TRIODOPSIS ALLENI (Wetherby). Baxter, Benton, Boone, Cleburne, Conway, Garland, Howard, Independence, Izard, Logan, Madison, Marion, Montgomery, Newton, Polk, Pulaski, Scott, Searcy, Sharp, Stone, Van Buren, Washington, Yell.

TRIODOPSIS DIVESTA (Gould). Carroll, Conway, Crawford, Dallas, Franklin, Garland, Johnson, Logan, Madison, Nevada, Newton, Perry, Pope, Pulaski, Saline, Sharp, Stone, Washington, Yell.

RHABDOTUS DEALBATUS DEALBATUS (Say). Baxter, Boone, Hempstead, Independence, Izard, Logan, Marion, Stone.

HAPLOTREMA CONCAVUM (Say). Baxter, Carroll, Cleburne, Independence, Logan, Marion, Newton, Poinsett, Saline, Searcy, Stone.

EUCONULUS CHERSINUS CHERSINUS (Say). Benton, Carroll, Columbia, Franklin, Garland, Logan, Madison, Miller, Montgomery, Polk, Randolph, Saline, Scott, Searcy, Sharp, Washington, Yell.

GUPPYA STERKII (Dall). Logan, Madison.

GLYPHYALINIA WHEATLEYI (Bland). Baxter, Benton, Carroll, Conway, Montgomery, Newton, Perry, Searcy, Washington, Yell.

GLYPHYALINIA LEWISIANA (Clapp). Izard.

GLYPHYALINIA INDENTATA (Clapp). Baxter, Benton, Cleburne, Conway, Cross, Franklin, Jackson, Johnson, Lawrence, Logan, Madison, Marion, Miller, Montgomery, Newton, Perry, Prairie, Polk, Pulaski, Saline, Scott, Sharp, Stone, Van Buren, Washington, Yell.

GLYPHYALINIA SOLIDA (H.B. Baker). Logan, Montgomery, Saline, Scott, Sharp.

GLYPHYALINIA LUTICOLA Hubricht. Grant.

MESOMPHIX GLOBOSUS (MacMillan). Craighead, Lee.

MESOMPHIX FRIABILIS (W.G. Binney). Conway, Marion, Perry, Pulaski, Scott, Sevier, Yell.

MESOMPHIX CAPNODES (W.G. Binney). Baxter, Benton, Carroll, Cleburne, Conway, Independence, Johnson, Logan, Montgomery, Newton, Perry, Polk, Pulaski, Saline, Van Buren, Yell.

PARAVITREA MULTIDENTATA (Binney). Benton.

PARAVITREA SIGNIFICANS (Bland). Baxter, Benton, Franklin, Garland, Lawrence, Logan, Madison, Montgomery, Polk, Saline, Searcy, Sharp, Washington, Yell.

PARAVITREA SIMPSONI (Pilsbry). Benton, Boone, Carroll, Conway, Franklin, Garland, Independence, Logan, Newton, Perry, Polk, Saline, Scott, Stone, Van Buren, Washington, Yell.

PARAVITREA PETROPHILA (Bland). Polk.

HAWAIIA MINUSCULA MINUSCULA (Binney). Madison, Monroe.

VENTRIDENS BRITTSI (Pilsbry). Baxter, Franklin, Garland, Hot Springs, Howard, Independence, Izard, Logan, Madison, Marion, Miller, Montgomery, Newton, Perry, Pike, Polk, Pope, Pulaski, Saline, Scott, Searcy, Sevier, Stone, Van Buren, Yell.

VENTRIDENS LIGERUS (Say). Baxter, Chicot, Craighead, Independence, Jefferson, Marion, Mississippi, Phillips.

ZONITOIDES ARBOREUS (Say). Baxter, Benton, Carroll, Craighead, Faulkner, Franklin, Grant, Izard, Jefferson, Lawrence, Logan, Madison, Marion, Polk, Pulaski, St. Francis, Saline, Scott, Sharp, Washington, Yell.

STRIATURA MERIDIONALIS (Pilsbry & Ferriss). Benton, Franklin, Logan, Madison, Polk, Scott, Searcy, Washington, Yell.

ANGUISPIRA ALTERNATA (Say). Baxter, Conway, Izard, Lee, Logan, Newton, Phillips, Pope, Stone.

ANGUISPIRA STRONGYLODES (Pfeiffer). Benton, Conway, Dallas, Garland, Jefferson, Little River, Montgomery, Perry, Polk, Prairie, St. Francis, Saline, Scott, Washington, Yell.

DISCUS PATULUS EDENTULUS Hubricht. Baxter, Benton, Boone, Carroll, Cleburne, Conway, Crawford, Faulkner, Franklin, Independence, Johnson, Logan, Madison, Marion, Montgomery, Newton, Polk, Pope, Saline, Searcy, Sharp, Stone, Van Buren, Washington, Yell.

HELICODISCUS NOTIUS NOTIUS Hubricht.

Baxter, Benton, Carroll, Conway, Franklin, Independence, Logan, Madison, Montgomery, Polk, Pope, Saline, Scott, Sharp, Washington, Yell.

HELICODISCUS PARALLELUS (Say). Benton, Cleburne, Craighead, Hot Springs, Lawrence, Logan, Madison, Miller, Montgomery, Newton, Searcy, Stone, Van Buren.

HELICODISCUS JACKSONI Hubricht. Logan.

PUNCTUM MINUTISSIMUM (Lea). Baxter, Benton, Madison, Miller, Scott.

PUNCTUM VITREUM H.B. Baker. Franklin.

MILAX GAGATES (Draparnaud). Chicot.

DEROCERAS LAEVE (Müller). Chicot.

LIMAX FLAVUS Linné. Pulaski.

LEHMANNIA POIRIERI (Mabille). Chicot, Jefferson, Logan.

PHILOMYCUS CAROLINIANUS (Bosc). Baxter, Lee, Marion, Perry, Saline.

PALLIFERA MUTABILIS Hubricht. Izard, Logan, Montgomery.

PALLIFERA RAGSDALEI (Webb). Logan, Madison, Perry, Saline, Searcy, Stone.

PALLIFERA MARMOREA Pilsbry. Baxter, Benton, Carroll, Columbia, Conway, Faulkner, Independence, Logan, Madison, Marion, Montgomery, Newton, Perry, Polk, Saline, Scott, Searcy, Sharp, Stone, Washington, Yell.

OXYLOMA SALLEANA (Pfeiffer). Chicot, Jefferson.

SUCCINEA CONCORDIALIS Gould. Chicot, Drew.

SUCCINEA INDIANA Pilsbry. Jefferson.

SUCCINEA LUTEOLA Gould. Chicot.

SUCCINEA WITTERI Shimek. Franklin, Madison, Marion, Sebastian, Yell.

CATINELLA VERMETA (Say). Craighead, Grant, Poinsett, Yell.

CATINELLA TEXANA Hubricht. Chicot, Jefferson.

CATINELLA OKLAHOMARUM (Webb). Logan.

CATINELLA WANDAE (Webb). Polk.

STROBILOPS LABYRINTHICA (Say). Baxter, Benton, Cleburne, Crawford, Franklin, Izard, Logan, Madison, Polk, Saline, Scott, Searcy, Sharp, Washington, Yell.

STROBILOPS TEXASIANA Pilsbry & Ferriss. Columbia, Craighead, Logan, Marion, Miller, Newton, Saline, Scott, Sharp, Yell.

STROBILOPS AENEA Pilsbry. Baxter, Benton, Carroll, Columbia, Franklin, Logan, Madison, Montgomery, Polk, Scott, Sharp, Washington, Yell.

GASTROCOPTA ARMIFERA (Say). Baxter, Boone, Jefferson, Madison, Marion, Washington.

GASTROCOPTA CONTRACTA (Say). Baxter, Carroll, Franklin, Jefferson, Logan, Madison, Newton, Polk, Prairie, Sharp, Washington.

GASTROCOPTA PENTODON (Say). Baxter, Miller, Polk, Scott.

GASTROCOPTA PROCERA PROCERA (Gould). Boone, Jefferson, Monroe.

PUPOIDES ALBILABRIS (C.B. Adams). Baxter, Independence, Izard, Jefferson, Lawrence, Logan, Madison, Marion, Monroe, Poinsett, Polk.

VERTIGO OSCARIANA Sterki. Franklin.

CIONELLA MORSEANA Doherty. Baxter, Carroll.

CARYCHIUM EXILE H.C. Lea. Baxter, Benton, Conway, Crawford, Franklin, Hot Springs, Logan, Madison, Miller, Polk, Searcy, Sharp.

HELICINA ORBICULATA ORBICULATA (Say). Baxter, Benton, Garland, Independence, Izard, Little River, Logan, Marion, Phillips, Searcy, Stone, Washington, Yell.

POMATIOPSIS LAPIDARIA (Say). Benton, Logan, Newton, Searcy, Stone, Van Buren, Washington.

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REPRINTS OF RARE PAPERS ON MOLLUSCA

BRYANT WALKER (1918)

SYNOPSIS AND CLASSIFICATION

CONCLUDED

With this instalment of Walker's Synopsis and Catalogue, reprinting of this work is complete. A title page precedes page 171 and a few notes will appear in the next number of *STERKIANA* explaining the extraneous material that has crept into the reprint.

The work itself seems as remarkable an achievement now as when it appeared in 1918. It is presented to a new generation of malacologists as an example of the painstaking and thorough work that is characteristic of Bryant Walker together with the simplicity and clarity which he seemed to manage without effort—an example of perfection which conceals the travail of conception and elaboration. May his example be followed and his memory honored.

A. L.

UNIVERSITY OF MICHIGAN

MUSEUM OF ZOOLOGY

Miscellaneous Publications No. 6

A Synopsis of the Classification of the Fresh-Water Mollusca of North America, North of Mexico,

AND

A Catalogue of the More Recently Described Species, With Notes

BY

BRYANT WALKER

REPRINTED WITH PERMISSION OF THE MUSEUM OF ZOOLOGY

UNIVERSITY OF MICHIGAN

ANN ARBOR, MICHIGAN
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DECEMBER 30, 1918

Genus AMBLEMA Rafinesque, 1820.

Amblema Rafinesque, Monographie, 1820, p. 314.
Crenodonta Schluter, Verz. meiner Conch., 1836, p. 33; Simpson, Syn., 1900, p. 766; Desc. Cat., 1914, p. 813.
Type: *Amblema costata* Raf.

Genus MEGALONAIAS Utterback, 1915

Megalonaias Utterback, Amer. Mid. Nat., IV, 1915, p. 123.
Type: *Unio heros* Say.

Genus ROTUNDARIA Rafinesque, 1820.

Rotundaria Rafinesque, Monographie, 1820, p. 308; Simpson, Syn., 1900, p. 794; Desc. Cat., 1914, p. 903.
Type: *Obliquaria tuberculata* Raf.

Genus FUSCONAIA Simpson, 1900.

Fusconaia Simpson, Syn., 1900, p. 784; Desc. Cat., 1914, p. 865.
Type: *Unio trigonus* Lea.

Genus PLETHOBASUS Simpson, 1900.

Plethobasus Simpson, Syn., 1900, p. 764; Desc. Cat., 1914, p. 805.
Type: *Unio æsopus* Green.

Genus PLEUROBEMA Rafinesque.

PLEUROBEMA ÆSOPUS (Green).

This species has been referred to *Obliquaria cyphya* Raf. by Call, Ortmann and others. Vanatta (140, p. 556) states that the shell in the Poulson collection so labelled is this species. If identifiable from the original description, *cyphya* would have priority.

This species is the type of Simpson's section *Plethobasus*, which Ortmann (79, p. 259) has raised to generic rank.

PLEUROBEMA ARGENTEUM PANNOSUM Simpson.

This is a *Fusconaia* and a synonym of *F. ozarkensis* (Call) according to Ortmann (84, p. 63).

PLEUROBEMA BARNESIANUM (Lea).

Is a *Fusconaia* and includes *meredithii* Lea, *pudicum* Lea, *lyonii* Lea, *tellicoensis* Lea and *lenticulare* Lea according to Ortmann (84, p. 59).

PLEUROBEMA BIGBYENSE (Lea).

Is a *Fusconaia* and a variety of *F. barnesiana* (Lea) and includes *estabrookianum* Lea, *fassinans* Lea and *fassinans rhomboidea* Simp. according to Ortmann (84, p. 59).

PLEUROBEMA BREVE SUBELLIPTICUM Simpson.

Is a *Fusconaia* and a synonym of *F. ozarkensis* (Call) according to Ortmann (84, p. 63).

PLEUROBEMA CLAVUS (Lamarck).

Unio consanquineus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 16.
Unio anaticulus ohiensis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 21, pl. 10, fig. 3.

Vanatta (140, p. 555) states that *Unio elliptica* Raf., *Obliquaria scalcnia* Raf. and *Pleurobema cuneata* Raf. as labelled in the Poulson collection are this species and expresses the opinion that *Pleurobema mytiloides* Raf. is also.

PLEUROBEMA CONRADI Vanatta.

This species was originally described by Conrad as *Unio maculatus,* but, as shown by Vanatta (140, p. 559), that name had already been used by Rafinesque for a variety of his *Unio nigra* and he has proposed *conradi* as a specific name for the *Pl. maculatum* (Con.) of Simpson's Desc. Catalogue.

PLEUROBEMA COR (Conrad).

The types of this species came from the Flint and Elk rivers in northern Alabama and as Frierson (44, p. 102) has shown is closely related to, if not identical with, *edgarianum* Lea or some other species of that group.

PLEUROBEMA CRUDUM (Lea).

Is a synonym of *Fusconaia barnesiana tumescens* (Lea) according to Ortmann (84, p. 59).

PLEUROBEMA ESTABROOKIANUM (Lea).

Is a *Fusconaia* and a synonym of *F. barnesiana bigbyensis* (Lea according to Ortmann (84, p. 59).

PLEUROBEMA DOLLABELLOIDES (Lea).

Unio tornhatonii duckensis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 20, pl. 11, figs. 2a-c.

PLEUROBEMA FASSINANS (Lea).

This species and its variety *rhomboides* Simp. are Fusconaias and synonyms of *F. barnesiana bigbyensis* (Lea) according to Ortmann (84, p. 59).

PLEUROBEMA LENTICULARIS (Lea).

Is a *Fusconaia* and a synonym of *F. barnesiana* (Lea) according to Ortmann (84, p. 59).

PLEUROBEMA LEWISII (Lea).

That this species is distinct from *P. cor* (Con.), to which it was referred by Simpson, has been shown by Walker (160, p. 114) and *U. crapulus* Lea, if not distinct, is made a synonym.

PLEUROBEMA MEREDITHII (Lea).

Is a *Fusconaia* and a synonym of *F. barnesiana* (Lea) according to Ortmann (84, p. 59).

LAMPSILIS OZARKENSIS (Call).

Is a *Fusconaia* and includes *Pleurobema argenteum pannese* Simp., *breve subellipticum* Simp. and *utterbacki* Fr. according to Ortmann (84, p. 63).

PLEUROBEMA PUDICUM (Lea).

Is a *Fusconaia* and a synonym of *F. barnesiana* (Lea) according to Ortmann (84, p. 59).

PLEUROBEMA SIMPSONI Vanatta.

Pleurobema simpsoni Vanatta, Pr. A. N. S. P., 1915, p. 559.

Originally described as *Unio striatus* Lea. Lea's name is not preoccupied by Rafinesque, but as suggested to me by Frierson it seems to have been by Goldfuss for a fossil species. I have not been able to examine or to have examined, Goldfuss' original description. Lea refers to Goldfuss' species in his Synopsis, but as usual gives no exact citation. A paleontological friend has supplied the following references, which seem sufficient to settle the question. Goldfuss' description of his *Unio striatus* is to be found in his "Pertrefakten Deutschlands," II, 1839, p. 182, pl. 132, fig. 3. Bronn in his "Index Paleontologicus," II, p. 1345, includes the species among his *"omnia dubii generis"*. D'Orbigny in his "Prodrome de Paleontologie" includes it in his genus *Hesione* (1847). These facts were probably known to Lea and explain why he did not rename his species, as in other

instances he had claimed that the reference of the prior species in such cases to another genus "liberated" his own subsequent name. This under the Code is quite erroneous.

PLEUROBEMA UTTERBACKI Frierson.

Pleurobema utterbacki Frierson, Amer. Mid. Nat., IV, 1915, p. 197, pl. V, figs. 12a-b and pl. XX, figs. 63a-d.

Type locality: White River, Hollister, Mo.

This species is a *Fusconaia* and a synonym of *F. ozarkensis* (Call) according to Ortmann (84, p. 63).

Genus LEXINGTONIA Ortmann, 1914.

Lexingtonia Ortmann, Naut., XXVIII, 1914, p. 28.

Type: *Unio subplanus* Conrad.

"This genus stands near *Pleurobema* and *Elliptio* and differs from either chiefly by the subcylindrical, red placentæ, and by the beak sculpture."

Genus UNIO Retzius, 1788.

UNIO COMPLANATUS (Dill).

Unio pullatus majusculus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 27, pl. 8, figs. a-d.

Haas has recently (50, p. 54) figured the original type of Spengler's *Unio violaceus,* which appears to be an abnormal specimen of this species and proposes to give precedence to Spengler's name. I have shown elsewhere (162, p. 3) that this is not competent under the Code and that Dillwin's name should be retained.

UNIO CRASSIDENS Lam.

According to Ortmann (79, p. 266) this is the *Unio nigra* Raf. Vanatta (140, p. 555) states that the shell so labelled in the Poulson collection is this species. If identifiable from the original description, Rafinesque's name would have priority. Utterback (135, p. 199) has quoted me as authority for the statement that *Quadrula trapezoides* (Lea) should be considered as the *Unio crassidens* of Lamarck. I have expressed that opinion in correspondence and if the process of elimination could be strictly applied that would be the result. But Dr. Pilsbry has suggested that the provisions of the Code in regard to designating generic types apply equally well to the cases of composite species, of which this is an example, and that, if this rule does apply, Lea's statement (Obs., I, p. 199) of his examination of Lamarck's types in 1832 amounted to such a designation and can not now

be changed. Pending further consideration and final decision of the questions involved, it would be better to allow the accepted identification of *crassidens* to stand.

UNIO GIBBOSUS Barnes.

Unio propeverutus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 8, pl. 3, figs. 1a-c.

This species has been referred to *Unio dilatata* Raf. by Conrad and others. Vanatta states (140, p. 355) that both *U. dilatata* Raf. and *Obliquaria sinuata* Raf. as represented in the Poulson collection are this species. If identifiable from the original descriptions, both of Rafinesque's names have priority. *Dilatata* has page priority in his Monograph.

UNIO PUSILLUS Lea.

Lea's name is not preoccupied in *Unio* by *Obliquaria pusilla* Raf. (1820) as stated by Vanatta (140, p. 555) and will stand.

UNIO RAFINESQUEI Vanatta.

Unio fuscatus Lea, Simpson, Desc. Cat., 1914, p. 643.

Vanatta has shown (140, p. 559) that *fuscata* was twice [illegible] by Rafinesque as varietal names for species of *Unio* and has proposed the name given above for Lea's species.

UNIO TUOMEYI Lea.

Unio arctior fisheropsis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 15, pl. 5, figs. 3a-c.

Genus LASTENA Rafinesque, 1820.

From an examination of the soft anatomy, Ortmann has recently (81, p. 106) shown that this group belongs in the *Unioninæ* and not in the *Anodontinæ*.

Hemistena Raf. is a synonym according to Frierson, (42, p. 7).

LASTENA LATA Raf.

Unio dehiscens oriensopsis De Gregorio, Moll. di aq. dul. di Amer., [illegible] p. 39, pl. 7, figs. 2a-b.

This variety (?) is made the type of a new genus or subgenus, *Sayunio*, the author does not seem to know which it should be considered.

Genus GONIDEA Conrad, 1857.

Ortmann has recently found from an examination of the soft anatomy (83, p. 50) that this genus belongs to the *Unioninæ*.

Subfamily ANODONTINÆ Ortmann, 1912.

Genus STROPHITUS Rafinesque, 1820.

STROPHITUS EDENTULUS (Say).

Anodonta foliopsis De Gregorio Moll. di aq. dul. di Amer., 1914, p. 33, pl. XI, figs. 4a-b.

There seems to be some uncertainty as to the proper name to be used for this species. Say described his *edentulus* in 1829. Swainson had already in 1822 described his *Anodon rugosus* from the "United States." Lea (Obs., I, p. 39) says that "it is well known" that Swainson's *rugosus* is the adult of Say's *undulata,* which has priority. Simpson, who considers *undulatus* and *edentulus* distinct, for some unexplained reason includes Swainson's species under *edentulus* as a synonym. Dall (32, p. 127) "on the face of the returns" gives the species to Swainson. I have not been able to examine Swainson's description and figure myself. Ortmann (78, p. 118) unites both species under the prior name of *undulatus.* If this is correct, the exact identity of Swainson's species becomes immaterial. Otherwise his description and figure should be critically examined again to determine, if possible, to which species it belongs.

STROPHITUS EDENTULUS SHÆFFERIANUS (Lea).

This seems to be a well marked race characteristic of the Tennessee drainage and as such entitled to varietal rank.

Genus ANODONTA Lamarck, 1799.

ANODONTA CATARACTA Say.

Anodonta ? subcylindracea propexilis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 33, pl. XII, figs. 1a-e.

ANODONTA GRANDIS Say.

Anodonta venusta De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 35, pl. XII, fig. 2.

This species founded on a single deformed valve is made the type of a new subgenus, *Nayadina.*

ANODONTA IMBECILIS Say.

Anodonta phalena De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 34, pl. XI, figs. 3a-e.

This species is *Lastena ohioensis* Raf. and a *Lastena* according to Utterback (135, p. 260).

ANODONTA SUBORBICULATA Say.

According to Utterback (135, p. 256) this species is a *Lastena.*

Genus ANODONTOIDES Simpson, 1898.

ANODONTOIDES FEUSSACIANUS (Lea).

Anodonta ferussaciana incertopsis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 34, pl. XI, fig. 5.

Genus LASMIGONA Rafinesque, 1831.

Symphynota Simpson (non Lea), Syn., 1890, p. 662; Desc. Cat., 1914, p. 480.

Frierson (Naut., XXVIII, 1914, p. 40) has shown that the original type of Lea's *Symphynota* was *Unio alatus* Say and it is therefore a synonym of *Proptera* Raf. and that consequently *Lasmigona* Raf. as the earliest available name becomes the generic type.

Subgenus PLATYNAIAS Walker, 1918.

Platynaias Walker, Occ. Pap., Mus. Zool., U. of M., No. 49, 1918, p. 1.
Type: *Symphynota compressa* Lea.

As the result of the disappearance of *Symphynota* Lea from this genus, the group typified by *S. compressa* Lea was left without any name and *Platynaias* has been proposed for it.

LASMIGONA COMPRESSA (Lea).

Unio compressa ? lindus De Gregorio, Moll. di aq. dul. di Amer [illegible] pl. 6, figs. 1a-d.

Frierson (43, p. 57) has argued that Rafinesque's *Unio viridis* is this species and consequently has priority. This has been contested by Walker (157, p. 74). Vanatta (140, p. 554) states that Poulson's shell labelled *Unio viridis fuscata* from the Kentucky River, is the *Sym. viridis* Con. of Simpson's Synopsis. This I have verified from a personal inspection of the shell. For the reason stated by Walker, (l. c., p. 78) Lea's name is superceded by *alasmodontina* Stimp. and will stand as the specific name.

LASMIGONA VIRIDIS Rafinesque.

For the conflicting opinions in regard to this species see the preceding note. Under all of the evidence that has been adduced I think that Rafinesque's name should be given precedence, with *subviridis* Con. (24, [illegible] p. 4), *viridis* "Con." Simp. and *tappanianus* Lea as synonyms.

Subgenus ALASMINOTA Ortmann, 1914.

Alasminota Ortmann, Naut., XXVIII, 1914, p. 41.
Type: *Margaritana holstonia* Lea.

Frierson (42, p. 7) has identified Rafinesque's *Alasmodon badium* as this species and has designated it as the type of *Sulcularia* Raf. If the species is identifiable from the original description and is Lea's *holstonia*, *Sulcularia* has precedence over *Alasminota*.

Genus ALASMIDONTA Say, 1818.

Subgenus PRESSODONTA Simpson, 1900.

I have recently (162, p. 2) proposed to supercede this name with that of *Calceola* Sw., 1840, on the ground of priority. Dr. Dall has since called my attention to the fact that *Calceola* had already been used by Lamarck in 1799 for a coral. Simpson's name will therefore stand.

Subgenus PROLASMIDONTA Ortmann, 1914.

Prolasmidonta Ortmann, Naut., XXVIII, 1914, p. 44.
Type: *Unio heterodon* Lea.

Subgenus PEGIAS Simpson, 1900.

According to Ortmann (81, p. 45) this group is a subgenus of *Alasmidonta*.

Subgenus RUGIFERA Simpson, 1900.

ALASMIDONTA MARGINATA Say.

Unio calceolus sciotincola De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 24, pl. IX, fig. 3.

Frierson (42, p. 7) has identified *Alasmodon scriptum* Raf. with this species, but Say's name has priority.

ALASMIDONTA RAVENELIANA (Lea).

Frierson (42, p. 7) has identified *Alasmodon atropurpureum* Raf. as being this species. If identifiable from the original description, it has priority.

On the basis of these identifications, he would substitute *Decurambis* Raf., 1831. for *Rugifera* Simp. as the subgeneric name.

Genus SIMPSONICONCHA Frierson, 1914.

Hemilastena Simpson, *non* Agassiz, Syn., 1900, p. 673; Desc. Cat., 1914, p. 323.
Simpsonaias Frierson, Naut., XXVIII, 1914, p. 7. (Preoccupied.)
Simpsoniconcha Frierson, Naut., XXVIII, 1914, p. 40.
Type: *Alasmodonta ambigua* Say.
For note on this name, see Walker, 162, p. 4.

Subfamily LAMPSILINÆ Ortmann, 1912.

Genus PTYCHOBRANCHUS Simpson.

Frierson, having identified (42, p. 7) *Obliquaria fasciolaris* Raf. with *P. phaseolus* (Hild.), has designated it as the type of *Ellipsaria* Raf. and gives the latter priority as the generic name.

PTYCHOBRANCHUS PHASEOLUS (Hild.).

Unio compressissimus performosus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 23, pl. V, fig. 2.

Unio lanceolatus blandus De Gregorio, Ibid, p. 22, pl. VIII, fig. 2.

Unio imperitus De Gregorio, Ibid, p. 15, pl. IX, fig. 1.

Say, Conrad and Frierson (1914, p. 7) have identified the *Obliquaria fasciolaris* Raf. as this species and Vanatta (140, p. 554) states that the shell so labelled in the Poulson collection is also that species. If identifiable from the original description, Rafinesque's name would have priority.

PTYCHOBRANCHUS SUBTENTUS (Say).

Unio subteritus purcheornatus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 31, pl. IX, fig. 2.

Genus CYPROGENIA Agassiz, 1852.

CYPROGENIA IRRORATA (Lea).

Is *Obovaria stegaria* Raf. according to Conrad and Vanatta (140, p. 554) states that the shell so labelled in the Poulson collection is this species. If identifiable from the original description *stegaria* has priority.

Genus PLAGIOLA (Rafinesque, 1819) Agassiz.

PLAGIOLA DONACIFORMIS (Lea).

Unio zig-zag illius De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 11, pl. IV, fig. 3.

Is an *Amygdalonaias* according to Ortmann (81, p. 67).

PLAGIOLA ELEGANS (Lea).

Unio elegans elegantopsis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 11, pl. IV, fig. 6.

Unio elegans magnelegans De Gregorio, Ibid, p. 11, pl. V, figs. 1a-c.

This species is an *Amygdalonaias* according to Ortmann, (79, p. 328).

Say and Conrad have identified the *Truncilla truncata* as this species. Vanatta states (140, p. 553) that both the *T. truncata* Raf. and *Unio metaplata* Raf. as represented in the Poulson collection are this species. If identifiable from the original description, *truncata* would have precedence. *Metaplata* is subsequent to both.

PLAGIOLA SECURIS (Lea).

Both *Obliquaria depressa* Raf. and *O. lineolata* Raf. are identified by Say and Conrad as this species and both authors give the preference to *lineolata* as the specific name. According to Vanatta (140, p. 553) these two species and also *O. ellipsaria* Raf. as represented in the Poulson collection are *securis* Lea. If identifiable from the original description, any one of Rafinesque's names would have priority.

Genus PARAPTERA Ortmann, 1911.

The type of this genus is *U. gracilis* Bar. If, as claimed by Frierson and others, this is the *Unio fragilis* Raf., which the latter in 1831 made the type of his genus *Lasmonos*, this name would have priority over *Paraptera*.

Frierson (42, p. 6) has suggested that if *leptodon* Raf. should prove to belong to this genus, *Leptodea* Raf., of which *leptodon* is the type, would have to be used.

Genus OBOVARIA Rafinesque, 1819.

OBOVARIA CIRCULUS (Lea).

Obliquaria subrotunda Raf. has been identified as this species by Say and Conrad and the latter adds *Obovaria striata* Raf. as a synonym. The specimens under both of these names in the Poulson collection, according to Vanatta (140, p. 552), are this species. If identifiable from the original descriptions, either of Rafinesque's names would have priority.

OBOVARIA ELLIPSIS (Lea).

Conrad has identified *Amblema olivaria* Raf. as this species and according to Vanatta (140, p. 553) so also is the shell in the Poulson collection under that name. If identifiable from the original description Rafinesque's name has priority.

OBOVARIA LENS (Lea).

According to Ortmann (79, p. 323) this species is not specifically distinct from *O. circulus* (Lea). Vanatta (140, p. 552) states that the shell labelled *Unio levigata* Raf. in the Poulson collection is this species. If identifiable from the original description, *levigata* would have precedence

OBOVARIA RETUSA (Lam.).

According to Vanatta (140, p. 552) this is the *Obovaria torsa* Raf. of the Poulson collection.

Genus CARUNCULINA Simpson, 1898.

This group is clearly entitled to generic rank as stated by Ortmann (81, p. 68), who has shown that the type is *Unio parvus* Bar. and not *texasensis* Lea.

Frierson (42, p. 7) has identified *C. glans* (Lea) as the *Unio* (*Toxolasma*) *lividus* Raf. and consequently substitutes *Toxolasma* Raf. for *Caruncula* Simp.

Genus LAMPSILIS Rafinesque, 1820.

LAMPSILIS ALATA (Say).

Vanatta (140, p. 552) states that the shell labelled *Metaptera megaptera* Raf. in the Poulson collection is this species. *Alata* is the type of *Proptera* Raf.

LAMPSILIS ANODONTOIDES (Lea).

This species belongs to *Lampsilis* s. s. according to Ortmann (79, p. 346). It has been identified with *U. teres* Raf. by Say, Conrad and others.

LAMPSILIS ARKANSENSIS (Lea).

This species is a *Micromya* according to Ortmann (81, p. 54).

LAMPSILIS AMŒNA (Lea).

Is a synonym of *L. nebulosa* (Con.) according to Ortmann (81, p. 64).

LAMPSILIS BOREALIS (Gray).

The citation of this species from Oneida Lake by Baker, (9, p. 257) has proved to be erroneous. See Baker, (10, p. 75).

LAMPSILIS BREVICULA (Call).

Is a *Micromya* according to Utterback (135, p. 434).

LAMPSILIS CAPAX (Green).

Is a *Proptera* according to Coker and Surber, (21, p. 179) and Ortmann (81, p. 67).

LAMPSILIS CARIOSA (Say).

Unio pallescens Lea var. De Gregorio, Moll. di aq. dul. di Amer., p. 9, *non* Lea, 1845.

LAMPSILIS CONSTRICTA (Con).

Is a *Micromya* according to Ortmann (81, p. 66).

LAMPSILIS ELLIPSIFORMIS (Con.).

Is a *Nephronaias* according to Utterback (135, p. 341).

LAMPSILIS FALLACIOSA Smith.

Is a *Lampsilis* s. s. and doubtfully distinct from *L. anodontoides* according to Ortmann (79, p. 347). But Surber (127, p. 5) states that the glochidia of the two species differ both in size and shape.

CARUNCULINA GLANS (Lea).

Unio castus mirus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 27.

Frierson (42, p. 7) has identified *Unio* (*Toxoclasma*) *lividus* Raf. as this species. If identifiable, and it is not at all certain that it might not be the *pullus* of Lea, it would have priority. If it can not be definitely determined what species it is, it should be rejected for indefiniteness.

LAMPSILIS GRACILIS Barnes.

This species has been identified by Frierson (42, p. 7) and others as the *Unio fragilis* Raf. (1820) and *Lasmonos fragilis* Raf. (1831) and either of these names, if identifiable from the original description, would have priority. The example under this name in the Poulson collection according to Vanatta (140, p. 552) is *gracilis* Bar.

Fragilis Raf. (1831) is the monotype of his genus *Lasmonos*.

LAMPSILIS IRIS (Lea).

Is a *Micromya* according to Ortmann (79, p. 341).

LAMPSILIS LEPTODON (Raf.).

Unio shepardianus f. duttonianus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 25.

This species is the type of *Leptodea* Raf. by designation (Frierson, 42, p. 6).

LAMPSILIS LIENOSA (Con.).

Is a *Micromya* according to Ortmann (79, p. 340).

LAMPSILIS LIGAMENTINA (Lam.).

Unio tecomensis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 26.

This species was at first referred to *Obovaria* by Ortmann (78, p. 119) and later to *Nephronaias* (79, p. 325). It should rather be referred to *Actinonaias* F. and C.

According to the specimens in the Poulson collection (Vanatta, 140, p. 551) *U. crassa* Raf., *fasciata* Raf. and *pallens* Raf. are this species.

LAMPSILIS LUTEOLA (Lam.).

Vanatta (140, p. 551) states that *L. fasciola* Raf. is this species.

LAMPSILIS NEBULOSA (Con.).

Is a *Micromya* according to Ortmann (81, p. 64).

LAMPSILIS NIGERRIMA (Lea).

Is a variety of *L. concestator* Lea according to Frierson (41, p. 135).

LAMPSILIS OCCIDENTALIS (Con.).

Is *Ptychobranchus clintonensis* Simp. and has priority according to Utterback (135, p. 317).

LAMPSILIS ORBICULATA (Hild.).

Belongs to *Lampsilis* s. s. and does not group with *L. ligamentina* Lam. according to Ortmann (79, p. 353).

LAMPSILIS OZARKENSIS (Call).

Is a *Nephronaias* according to Utterback (135, p. 344). Ortmann (84, p. 62) has more recently determined it to be a *Fusconaia.*

LAMPSILIS PARVA (Bar.).

Unio pertenuis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 31, pl. VI, figs. 4a-f, *non* Lea, 1863.

This species is the true type of *Carunculina* according to Ortmann (81, p. 68).

LAMPSILIS PERDIX (Lea).

Is a *Nephronaias* according to Ortmann (79, p. 326). It is rather an *Actinonaias.*

LAMPSILIS PERPURPUREA (Lea).

Is a *Micromya* according to Ortmann (81, p. 63).

LAMPSILIS PICTA (Lea).

Is a *Micromya* according to Ortmann (79, p. 342).

LAMPSILIS PLEASII (Marsh).

Is a *Nephronaias* according to Utterback (135, p. 343). It is rather an *Actinonaias.*

LAMPSILIS RADIATA (Gmel.).

Unio muhlfeldianus plurimaffinis De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 8, pl. III, figs. 2a-d.

LAMPSILIS RADIATA ONEIDENSIS Baker.

Lampsilis borealis Baker, Tech. Pub. N. Y. Coll. For., 4, 1916, p. 257, fig. 44, nos. 1-4.

Lampsilis radiata oneidensis Baker, Naut., XXX, 1916, p. 74, pl. IJ.

Type locality: Oneida Lake, N. Y.

LAMPSILIS RECTA (Lam.).

Unio sageri Conrad, Mon., VI, 1836, p. 53, pl. xxix, fig. 1.

Lampsilis recta sageri Simpson, Desc. Cat., 1914, p. 96.

Lamarck's type came from Lake Erie and is the small form characteristic of the Great Lakes that Conrad described as *Unio sageri.* The large, normal form from the Ohio and elsewhere may be distinguished under Rafinesque's name.

LAMPSILIS RECTA LATISSIMA (Raf.).

Unio latissima Rafinesque, Mon., 1820, p. 297, pl. lxxx, figs. 14-15.
Unio angustatus cuniculus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 22, pl. X, fig. 1.
Type locality: Ohio River.

This is the form represented in the Poulson collection (Vanatta 140, p. 551).

LAMPSILIS SIMPSONI Ferriss.

Belongs to *Lasmonos* Raf. according to Utterback (135, p. 367).

LAMPSILIS SUBROSTRATA (Say).

Belongs to *Eurynia* s. s. according to Ortmann (81, p. 55).

LAMPSILIS TENERA (Ravenel, Mss.) Mazyck.

Lampsilis tenerus (Rav. Mss.) Mazyck, Cat. Moll. S. C., 1913, p. 23.
Type locality: Santee Canal, St. John's, Berkeley, S. C.

The specific name is preoccupied by Lea, 1840.

LAMPSILIS TRABALIS (Con.).

Is a *Micromya* according to Ortmann (79, p. 340).

LAMPSILIS VANUXEMENSIS (Lea).

Is a *Micromya* according to Ortmann (79, p. 342; 81, p. 65).

LAMPSILIS VENTRICOSA (Bar.).

According to Say and Conrad this is the *L. cardium* Raf., 1820, and if so ,the latter name has priority. Vanatta (140, p. 551) states that the shell so labelled in the Poulson collection is the *ventricosa* Bar.

According to Ortmann (79, p. 351) it "is probably only a variety of *L. ovata* (Say).

LAMPSILIS VENTRICOSA COHONGORONTA Ortmann.

Lampsilis ventricosa cohongoronta Ortmann, Naut., XXVI, 1912, p. 53.
Type locality not specified. Found in the Potomac River, Hancock, Washington Co., Md., and in the South Branch of the Potomac at Southbranch and Romney, W. Va., and in the Shenandoah River, Harper's Ferry, W. Va.

LAMPSILIS VENTRICOSA SATURA (Lea).

Frierson (41, p. 136) says that this is not a variety of *L. ventricosa,* but is the same as *L. excavata* Lea and has priority as the proper specific name. I do not agree with this. Ortmann (81, p. 56) deals with it as a form of *ventricosa* and intimates a "suspicion" that it may prove to be a distinct species.

LAMPSILIS VENUSTA (Lea).

Is a variety of *L. ellipsiformis* (Lea) according to Utterback (135, p. 343).

LAMPSILIS VIBEX (Con.).

Is a *Micromya* according to Ortmann (79, p. 340).

Genus MICROMYA (Agassiz, 1852) Simpson.

MICROMYA CÆLATA Conrad.

Unio propecælatus De Gregorio, Moll. di aq. dul. di Amer., 1914, p. 30, pl. VIII, figs. 1a-d.

This species has been identified by Frierson (42, p. 7) and Ortmann (82, p. 39) as *Unio* (*Lemiox*) *rimosus* Raf. and the latter (l. c.) has raised *Lemiox* to generic rank. The identification seems too doubtful (Walker, 162, p. 4) to be relied upon, the species should therefore retain Conrad's name and a new generic name proposed.

MICROMYA FABALIS (Say).

Unio donacopsis De Gregorio, Moll. di dul. di Amer., 1914, p. 30, pl. X, figs. 5a-b.

Genus TRUNCILLA Rafinesque, 1819.

TRUNCILLA CURTISII Frierson and Utterback.

Truncilla curtisii Frierson and Utterback, Am. Mid. Nat., IV, 1916, p. 453, pl. VI, figs. 14a-d, pl. XXVIII, figs. 109A-D.

Type locality: White River, Hollister, Mo.

This is the form that was collected by Ferriss in 1900 and distributed by him as *T. deviata* (Anth.). It has also been found in Bear Creek, Franklin Co., Ala., a tributary of the Tennessee. It does not seem to be more than a light colored form of that species.

TRUNCILLA LEFEVREI Utterback.

Truncilla lefevrei Utterback, Am. Mid. Nat., IV, 1916, p. 455, pl. VI, figs. 13 -d, pl. XXVIII, figs. 108A-D.

Type locality: Black River, Williamsville, Mo.

TRUNCILLA FOLIATA (Hild.).

This species has been identified as Rafinesque's *Obliquaria flexuosa* by Conrad and the specimen in the Poulson collection under that name is stated by Vanatta (140, p. 550) to be this species. If identifiable from the original description, Rafinesque's name would have priority. It has also been identified by Frierson (42, p. 7) as Rafinesque's *Epioblasma biloba*.

TRUNCILLA BREVIDENS (Lea).

Vanatta (140, p. 550) states that the shell in the Poulson collection labelled *Obliquaria interrupta* Raf. is this species. If identifiable from the original description, Rafinesque's name has precedence.

TRUNCILLA PERPLEXA (Lea).

This species has been identified by Conrad and others as *Amblema torulosa* Raf. and *Amblema gibbosa* Raf. According to Vanatta (140, p. 550) the shells so labelled in the Poulson collection are this species. Either name, if identifiable from the original description, would have priority.

TRUNCILLA SULCATA (Lea).

Unio stewardsoni stevensoni De Gregorio, Moll. di aq. dul. di Amer., 1914. p. 15, pl. VI, fig. 3.

Unio propesulcatus De Gregorio, Ibid. p. 30, pl. X, fig. 2.

Vanatta (140, p. 550) states that the shell in the Poulson Collection under the name of *Obliquaria obliquata* Raf. is this species. If identifiable from the original description, it would take precedence.

TRUNCILLA TRIQUETRA Rafinesque.

Unio triangularis pergibbosa De Gregorio, Moll. di aq. dul. di Amer., 1914. p. 10, pl. II, fig. 4.

Unio triangularis longiusculus De Gregorio, Ibid, p. 10, pl. II, fig. 5.

TRUNCILLA TRIQUETRA TRIANGULARIS (Barnes).

Barnes' types of his *Unio triangularis* came from Bois Blanc Island in the Detroit River and the form is fairly entitled to varietal rank, being like nearly all of the *Unionidæ* of the Great Lakes a characteristically depauperate race.

TRUNCILLA WALKERI Wilson and Clark.

Truncilla walkeri Wilson and Clark, Bur. of Fish. Doc. No. 781, 1914, p. 46, pl. I, fig. 1.

Type locality: East Fork of Stone's River, Walterville, Tenn.

Subgenus DYSNOMIA Agassiz, 1852.

Frierson (42, p. 7) identifies Rafinesque's *Unio* or *Epioblasma* [illegible] with *T. foliata* (Hild.) and consequently replaces Agassiz' subgeneric [illegible] by *Epioblasma* Raf.

Genus *incertæ sedis.*

COKERIA Marshall, 1916.

Cokeria Marshall, Naut., XXIX, 1916, p. 133.
Type: *Cakeria southalli* Marshall.

COKERIA SOUTHALLI Marshall.

Cokeria southalli Marshall, Naut., XXIX, 1916, p. 133, pl. IV.
Type locality: James River, Huron, S. D.

This genus and species are founded on an unique specimen collected by the U. S. Bureau of Fisheries. It seems to combine the characters of both *Quadrula* and *Lampsilis,* although the preponderance of the characters appear to be Quadruline. Indeed, but for the hinge teeth, which are quite like those of *Lampsilis,* it would be considered a *Quadrula.* It is quite possibly an abnormality of *Quadrula undulata* (Bar.). Unfortunately nothing is known of the soft parts. Additional material is greatly to be desired.

Family CYRENIDÆ.

Genus CYRENA Lamarck, 1818.

Section POLYMESODA Rafinesque, 1820.

CYRENA ALABAMENSIS Clessin.

Cyrena alabamensis Clessin, Con. Cab., Cycladeen, 1869, p. 114, pl. XVIII, figs. 3-4.
Type locality: Alabama.

CYRENA DONACIFORMIS Sowerby.

Cyrena donaciformis Sowerby, Con. Icon., Cyrena, 1878, p. 108, pl. XIX, fig. 108.
Type locality: Florida.

Is *floridana* Con. according to von Martens (Zool. Rec., Moll., 1877, p. 81) and Dall (29, p. 1447).

CYRENA PROTEXTA Conrad.

Cyrena protexta Conrad, Am. J. of Con., V, 1869, p. 107, pl. XII, fig. 3.
Type locality: Tampa Bay, Fla.

Is *floridana* Con. according to Tryon, (A. J. of C., V, 1870, p. 227) and Dall (29, p. 1447).

Family SPHÆRIIDÆ.

Sterki's "Preliminary Catalog" (125, p. 429) has brought the subject down to July 1, 1916.

For valuable papers on the anatomy, reproduction and growth of *Sphærium* and *Musculium*, see Drew (36, p. 173) and Gilmore (46, p. 16).

Genus SPHÆRIUM Scopoli, 1777.

SPHÆRIUM LENTICULARE Sowerby.

Sphærium lenticularis Sowerby, Con. Icon., Sphærium, Sp. 6, pl. I, fig. 6.
Type locality: ?

SPHÆRIUM MAGNUM Sterki Mss.

Sphærium magnum "Sterki", Springer, Pr. A. N. S. P., 1902, p. 513.
This undescribed species is quoted from Arroyo Pecos, Las Vegas, N. M. (pleistocene) by Springer.

SPHÆRIUM MEDIUM (Sowerby).

Cyclas medium "Sowerby", Richardson, Fauna Bor. Amer. III, 1836, p. 316.
Type locality: Methy Lake, Athabaska.
Probably never described, see Dall (32, p. 140).

SPHÆRIUM RUGOSUM "Whitmore" Sowerby.

Sphærium rugosum "Whitmore" Sowerby, Con. Icon., Sphærium, Sp. 16, pl. II, fig. 16.
Type locality: ?

SPHÆRIUM STAGNICOLUM (Sowerby).

Cyclas stagnicola "Sowerby" Richardson, Fauna Bor. Amer. III, 1836, p. 316.
Type locality: Methy Lake, Athabaska.
Probably never described, see Dall (32, p. 140).

Genus MUSCULIUM Link, 1807.

Musculium Link, Beschr. Rostock Samm I, 1807, p. 152.
Calyculina Clessin, Mal. Blätt., XIX, 1871, p. 150.
Primella Cooper, Pr. Cal. Acad. Sci., (2), III, 1891, p. 82.

MUSCULIUM COOPERIANUM (Prime) Mss.

Sphærium cooperianum Prime, Cat. Corbic., Am. J. of Con., V, 1869, p. 152.
Type locality: Johnson's Pass, Eldorado Co., Cal.
Listed as a new species, but never described. Probably the young of *M. raymondi* according to Cooper (26, p. 81).

MUSCULIUM ERRANS (Lewis).

Cyclas errans Lewis, *Ubi ?*

Lewis (Pr. A. N. S. P., 1872, p. 105) says that he "proposed" this species a number of years before, but that Prime considered it a synonym of *rosaceum*. That from further study, he is "induced" to reclaim his species. I have been unable to find any other reference to the species.

Genus PISIDIUM C. Pfeiffer, 1821.

The use of *Corneocyclas* Fer. for this genus proposed by Dall (30, p. 7 and 29, p. 1459) is disputed by Woodward (165, p. 367 and 166, p. 1) and has not been followed by Sterki (125, p. 473) and until the question has been definitely settled, it seems preferable to use the name that has been in common use for so many years.

PISIDIUM BOREALE Westerlund.

Pisidium boreale Westerlund, Kongl. Sv. Vet. Ak. Forh., 1877, p. 70, fig. 23.
Type locality: Lusino, Siberia. ? Port Clarence, Alaska.

PISIDIUM CALIFORNICUM (Newcomb ?).

Listed by Berry (Naut., XXIII, 1909, p. 79) from Bluff Lake, San Bernardino Co., Cal. I have not been able to find any other reference to it.

PISIDIUM COMPRESSUM LIMNICOLUM Sterki.

Pisidium compressum limnicolum Sterki, Naut., XIX, 1905, p. 81.
Type locality: Fox River, Wis.

PISIDIUM COMPRESSUM SMITHII Sterki.

Pisidium compressum smithii Sterki, Naut., XIX, 1905, p. 83.
Type locality: Shoal Creek, Ala.

PISIDIUM NOVEBORACENSE PROCLIVE Sterki.

Pisidium noveboracense proclive Sterki, Naut. XIX, 1906, p. 119.
Type locality: New Philadelphia, O.

PISIDIUM OBTUSALE C. Pfeiffer.

This European species has been listed from near Lake James, Steuben Co., Ind. by Sterki (Naut., XVII, 1903, p. 43).

PISIDIUM SIBIRICUM Westerlund.

Pisidium sibiricum Westerlund Nachr. Blätt. Gess. 1876, p. 103; Clessin, Con. Cab., Cycladeen, 1877, p. 66, pl. VII, figs. 15-17.
Type locality: Yenesei River, Siberia.

? Port Clarence, Alaska according to Dall (32, p. 144). Dall's reference for this species in K. Svenska Vet. Ak. Forh. is erroneous. It should be p. 69, fig. 21, not p. 70, fig. 23.

Family CYRENELLIDÆ.

Genus CYRENELLA Deshayes, 1835.

CYRENELLA FLORIDANA (Dall).

Cyrenoida floridana Dall, Naut. X, 1896, p. 52; Pr. U. S. N. M. XXIII, 1901, p. 829, pl. XLII, fig. 7.

Type locality not specified.

Habitat: Brunswick, Ga., south to the Everglades on the east, and, on the west, north to Charlotte Harbor and vicinity.

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ADDENDA

Genus IO Lea, p. 149.

For an elaborate paper on "The Variations and Ecological Distribution of the Snails of the Genus Io" by Charles C. Adams, see, Memoirs of the National Academy of Sciences, XII, 1915, Part II, Second Memoir.

The following "races and forms" are recognized and described:—

NAME.	PAGE.	TYPE LOCALITY.
Powellensis C. C. Ads.	11.	Powell R., Olinger, Va.
Clinchensis C. C. Ads.	11.	Clinch R., Cleveland, Va.
Fluvialis Say.	11.	N. Fork, Holston R., Saltville, Va.
Verrucosa Rve.	12.	S. Fork, Holston R., Bluff City, Tenn.
Lyttonensis C. C. Ads.	12.	Powell R., Pennington Gap, Va.
Paulensis C. C. Ads.	12.	Clinch R., St. Paul, Va.
Recta Rve.	12.	Holston R., Kingsport, Tenn.
Brevis Anth.	12.	Clinch R., Kyle Ford, Tenn.
Spinosa Lea.	13.	Holston R., Morristown, Tenn.
Unakensis C. C. Ads.	13.	Nolichucky R., Conkling, Tenn.
Nolichuckyensis C. C. Ads.	13.	Nolichucky R., White Pine, Tenn.
Angitremoides C. C. Ads.	14.	Tennessee R., Looney's Id., Knoxville, Tenn.
Loudonensis C. C. Ads.	14.	Tennessee R., Loudon, Tenn.
Turrita Anth.	14.	Tennessee R., Bellefonte, Tenn.

Genus STROPHITUS Rafinesque, p. 56.

Add:—

Section JUGOSUS Simpson, 1914.

Shell with the dorsal slope strongly subradially plicate; teeth unusually strong.

Type: *S. wrightianus* Walker.

Genus SPHÆRIUM Scopoli, p. 188.

In his "Preliminary Catalog of the North American Sphæriidæ (125. p. 472) Sterki recognizes three subgenera, but they are not so defined as to be included in the systematic portion of this paper. They are:—

Sphæriastrum Bourguignat.	Type: *S. rivicolum* (Leach).
Cyrenastrum Bourguignat.	Type: *S. solidum* Normand.
Corneola Clessin.	Type: *S. corneum* (Linné).

The first is not represented in our fauna.

As *Tellina cornea* L. is the type of the genus *Sphærium, Corneola* Cless. is equivalent to *Sphærium s. s.* and is entirely superfluous.

Subject to this amendment, his arrangement is the same as that proposed by Dall (30, p. 7) in 1903.

Genus PISIDIUM C. Pfeiffer, p. 189.

Dall (l. c.) has proposed the following arrangement for *Corneocyclas* (*Pisidium*).

Genus CORNEOCYCLAS Ferussac, 1818.

Subgenus *Corneocyclas s. s.*	
Section *Corneocyclas* s. s.	Type: *C. pusilla* Gmelin.
Section *Phymesoda* Rafinesque.	Type: *Tellina virginica* Gmelin.
Section *Pisidium* C. Pfeiffer, 1821.	Type: *Tellina amnica* Müller.
Section *Cyclocalyx* Dall, 1903.	Type: *Pisidium scholtzi* Clessin.
Subgenus *Cymatocyclas* Dall, 1903.	Type: *Pisidium compressum* Prime.
Subgenus *Tropidocyclas* Dall, 1903.	Type: *Pisidium henslowianum* Sheppard.

Only the typical species are mentioned and no attempt is made to distribute the North American species among the different groups.

Sterki (l. c.) tentatively and without definition proposes the following "groups":—

Fluminina Clessin, 1879.	Type: *P. amnicum* (Müll).

This is equivalent to *Pisidium s. s.* and therefore unnecessary.

Lacustrina Sterki, 1916.	Type: *P. idahoense* Roper.
Rivulina (Clessin, 1879) Sterki.	Type: *P. supinum* A. Schmidt.
Fontinalina Sterki, 1916.	Type: *P. fontinale* Pfr.
Fossarina Clessin, 1879 (restricted).	Type: *P. obtusale* Pfr.

PLEUROCERA, p. 151.

PLEUROCERA KNOXENSE (Lea).

According to Tryon (134, p. 427) this name will take the place of *P. modestum* (Lea), 1862, because *Io modesta* Lea, 1861, is also a *Pleurocera*. This, of course, is conditional upon the latter proving to be a valid species.

PLEUROCERA PARKERI Tryon.

This name has been proposed by Tryon (134, p. 427) for *Trypanostoma tortum* Lea (Ibid, p. 84), 1862, on the ground that *Melania torta* (Ibid, p. 117), 1845, has priority, being also a *Pleurocera*.

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