

Endodontidæ.

Helicodiscus parallelus Say. Alt. 1.4 mm., diam. 4.7 mm.

Succinidæ.

Succinea avara Say. Alt. 12.1 mm., diam. 6.4 mm.

Succinea grosvenori Lea.

Limnæidæ.

Lymnæa cubensis Pfr. Alt. 11.8 mm., diam 6.6 mm.

Planorbis antrosus Conr. (*bicarinatus* Say). Alt. 4.9 mm., diam. 9.9 mm.

Planorbis parvus Say. Alt. 1.0 mm., diam. 4.0 mm.

Planorbis trivolvis Say. Alt. 7.3 mm., diam. 19.5 mm.

Physidæ.

Physa gyrina Say. Alt. 14.7 mm. diam. 7.6 mm.

Amnicolidæ.

Amnicola cincinnatiensis Anth. Alt. 4.7 mm., diam. 3.2 mm.

In this connection it may be mentioned that while gastropods are abundant in the ponds, small creeks and the larger streams tributary to the Cimarron, not a single form of molluscan life was found in the Cimarron River, in Payne county, although the dredge was used at frequent intervals along a stretch of fifteen miles.

MOLLUSCA OF SOUTH DAKOTA.

BY W. H. OVER.

(Concluded from page 81).

All species listed were collected by me and are in my private collection of land and freshwater Mollusca now on exhibition in the Museum of the University of South Dakota.

For the determination of species I am grateful to Messrs H. A. Pilsbry, J. E. G. Vanatta, Bryant Walker, Dr. Sterki, L. S. Frierson, F. C. Baker and A. A. Hinkley. But for the latter I probably never would have become interested in the study and collecting of shells.

Vallonia costata Müll. Deuel Co.

Vallonia pulchella Müll. Deuel Co.

Vallonia parvula Sterki. Clay, Deuel and Brule Co.
Vallonia gracilicosta Reinh. Common over the State.
Vallonia perspectiva Sterki. Deuel Co.
Oreohelix cooperi W. G. B. Spearfish Canyon.
Polygyra monodon Rack. Woods along Vermilion

Co.
Pupoides marginatus Say. Common in the State. Also Clay Co.

Pupoides inornatus Vanatta. Type lot from Spearfish River, Washington Co. Also collected along eastern Pennington Co.

Bifidaria tappaniana Ads. Clay and Deuel Co.
Bifidaria clappi Sterki. Pennington Co.
Bifidaria holzingeri Sterki. One specimen along Spearfish Creek in Lawrence Co.

Bifidaria agna Pils. and Van. Quite general in eastern part of State.

Bifidaria contracta Say. Clay Co.
Bifidaria procera Gld. All through the State.
Bifidaria armifera Say. Common over the State.
Bifidaria armifera abbreviata Sterki. Perkins Co.
Bifidaria pentodon Say. Over the State.

Pupilla muscorum L. Washington Co.
Pupilla blandi Morse. Pennington and Brule Co.
Vertigo ovata Say. Deuel and Clay Co. common in eastern part of State.

Vertigo milium Gld. Found in drift along Chamberlain, Brule Co.

Cochlicopa lubrica Müll. Clay, Lawrence and Brule Co.
Vitrina alaskana Dall. Lawrence Co.
Polita hammonis Ström. Clay, Deuel and Brule Co.

Euconulus fulvus Müll. Pennington, Lawrence and Deuel Counties.

Zonitoides arborea Say. Locally over the State.
Zonitoides minuscula Binn. Common over the State.
Zonitoides nitida Müll. Clay, Deuel and Brule Co.
Zonitoides singleyana Pils. Brule, Clay and Lawrence Co.
Agriolimax campestris Binn. Harding Co. part of State.

Endodontidae.

Uelus Say. Alt. 1.4 mm., diam. 4.7 mm.

Succinidae.

Uelus Say. Alt. 12.1 mm., diam. 6.4 mm.

Lea.

Limnæidae.

Pfr. Alt. 11.8 mm., diam 6.6 mm.

Conr. (bicarinatus Say). Alt. 4.9 mm.

Say. Alt. 1.0 mm., diam. 4.0 mm.

Say. Alt. 7.3 mm., diam. 19.5 mm.

Physidae.

Alt. 14.7 mm. diam. 7.6 mm.

Amnicolidae.

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Vallonia parvula Sterki. Clay, Deuel and Brule Counties.

Vallonia gracilicosta Reinh. Common over the State.

Vallonia perspectiva Sterki. Deuel Co.

Oreohelix cooperi W. G. B. Spearfish Canyon, Lawrence Co.

Polygyra monodon Rack. Woods along Vermilion River, Clay
Co.

Pupoides marginatus Say. Common in the semi-arid districts.
Also Clay Co.

Pupoides inornatus Vanatta. Type lot from drift along White
River, Washington Co. Also collected along Indian Creek,
eastern Pennington Co.

Bifidaria tappaniana Ads. Clay and Deuel Counties.

Bifidaria clappi Sterki. Pennington Co.

Bifidaria holzingeri Sterki. One specimen taken in woods
along Spearfish Creek in Lawrence Co.

Bifidaria agna Pils. and Van. Quite general over the State.

Bifidaria contracta Say. Clay Co.

Bifidaria procera Gld. All through the southern part of State.

Bifidaria armifera Say. Common over the State.

Bifidaria armifera abbreviata Sterki. Perkins Co.

Bifidaria pentodon Say. Over the State.

Pupilla muscorum L. Washington Co.

Pupilla blandi Morse. Pennington and Brule Counties.

Vertigo ovata Say. Deuel and Clay Counties. Probably
common in eastern part of State.

Vertigo milium Gld. Found in drift along Missouri River at
Chamberlain, Brule Co.

Cochlicopa lubrica Müll. Clay, Lawrence and Deuel Counties.

Vitrina alaskana Dall. Lawrence Co.

Polita hammonis Ström. Clay, Deuel and Pennington Coun-
ties.

Euconulus fulvus Müll. Pennington, Lawrence, Harding and
Deuel Counties.

Zonitoides arborea Say. Locally over the State.

Zonitoides minuscula Binn. Common over the State.

Zonitoides nitida Müll. Clay, Deuel and Washabaugh Counties.

Zonitoides singleyana Pils. Brule, Clay and Custer Counties.

Agriolimax campestris Binn. Harding Co. Probably in eastern
part of State.

- Pyramidula alternata* Say. Clay Co.
Pyramidula cronkhitei Newc. Deuel Co.
Pyramidula cronkhitei anthonyi Pils. Clay, Pennington and Lawrence Counties.
Helicodiscus parallelus Say. Clay, Washington, Deuel and Brule Counties.
Punctum pygmæum Drap. Deuel and Lawrence Counties.
Punctum californicum Pils. Clay Co.
Succinea nuttalliana Say. Deuel Co.
Succinea higginsii Gld. Deuel Co.
Succinea avara Say. Common over the State.
Succinea grosvenorii Lea. Common over the plains and prairies.
Carychium exile H. C. Lea. Stanley Co.
Carychium exiguum Say. Clay and Deuel Counties.
Lymnæa elodes Say. Clay Co.
Lymnæa tryoni Lea. Deuel Co.
Lymnæa obrussa Say. Black Hills.
Lymnæa palustris Mull. Generally distributed over the State.
Lymnæa palustris michiganensis Walker. Deuel Co.
Lymnæa parva Lea. Perkins and Deuel Counties.
Lymnæa caperata Say. Common over the State.
Lymnæa humilis modicella Say. Deuel, Clay, Butte, Perkins and Harding Counties.
Lymnæa stagnalis appressa Say. Deuel Co. Probably over eastern part of State.
Lymnæa cockerelli Pils. and Ferr. Over the State.
Lymnæa techella Hald. Harding Co.
Physa sayi Tapp. Perkins, Deuel and Harding Counties.
Physa arcillaria Say. Codington Co.
Physa humerosa Gld. Spink Co.
Physa crandalli Baker. Fish ponds at hatchery, Lawrence Co.
Physa walkeri Crandall (?) Spink Co. Turtle River.
Physa integra Hald. Rare over the State.
Physa gyrina Say. Abundant over the State.
Aplexa hypnorum L. Deuel Co.
Planorbis umbilicatellus Okll. Perkins Co.
Planorbis antrosus Conrad. Locally found over the State. Reported by Audubon in 1840 from Missouri River. Probably at mouth of some creek flowing in from the east.

- Planorbis parvus* Say. Deuel, Pennington, and Lawrence Counties.
Planorbis exacius Say. Deuel Co. near Altin
Planorbis trivolvus Say. Quite common over collected in Beadle Co. in 1895 by S. F. Adams
Planorbis deflectus Say. Clay, Perkins, Deuel and Washabaugh Counties.
Planorbis tumidus Pfr. Perkins and Deuel Counties.
Segmentina armigera Say. Clay and Deuel Counties.
Segmentina christyi Dall. Dead shells were small pond in Deuel Co. in 1908.
Ancylus parallelus Hald. Deuel Co.
Valvata tricarinata Say. Codington, Clay and
Campeloma integrum Say. Clay Co. Vermillion sinistral.
Somatogyrus subglobosus Say. Deuel Co.
Somatogyrus integer Say. Deuel Co.
Amnicola cincinnatiensis Anth. Spink Co. T
Amnicola limosa Say. Codington and Clay Counties.
Amnicola emarginata Küst. Codington and Clay
Lampsilis luteolus Lam. Clay, Deuel, Codington Counties. One "dead" specimen was found in Missouri River in Harding Co. It is doubtful if it present, but may be found in the same river at present and in a sandy loam formation in Montana.
Lampsilis ventricosus Barnes.
Lampsilis lævissimus Lea.
Lampsilis alatus Say.
Lampsilis parvus Barnes. Vermillion River, Clay
Lampsilis gracilis Barnes. The above five specimens more or less common in the Big Sioux, Vermillion Rivers.
Lampsilis anodontoides Lea. Clay Co.
Lampsilis subrostratus Say. Rare in Brule County.
Lampsilis rectus Lamk. Brule Creek, Union County.
Plagiola elegans Lea. Clay Co.
Strophitus edentulus Say. Lake Kampeska, Cod

- ta* Say. Clay Co.
itei Newc. Deuel Co.
itei anthonyi Pils. Clay, Pennington and
lus Say. Clay, Washington, Deuel and
 Drap. Deuel and Lawrence Counties.
m Pils. Clay Co.
 Say. Deuel Co.
 ld. Deuel Co.
 Common over the State.
 Lea. Common over the plains and prairies.
 C. Lea. Stanley Co.
 Say. Clay and Deuel Counties.
 Clay Co.
 Deuel Co.
 Black Hills.
 ll. Generally distributed over the State.
chiganensis Walker. Deuel Co.
 Perkins and Deuel Counties.
 y. Common over the State.
icella Say. Deuel, Clay, Butte, Perkins
pressa Say. Deuel Co. Probably over east-
 ls. and Ferr. Over the State.
 d. Harding Co.
 Perkins, Deuel and Harding Counties.
 Codington Co.
 Spink Co.
 r. Fish ponds at hatchery, Lawrence Co.
 ll (?) Spink Co. Turtle River.
 Rare over the State.
 Abundant over the State.
 Deuel Co.
 s Ckl. Perkins Co.
 nrad. Locally found over the State.
 in 1840 from Missouri River. Probably
 flowing in from the east.

- Planorbis parvus* Say. Deuel, Pennington, Clap and Hard-
 ing Counties.
Planorbis exacvus Say. Deuel Co. near Altimont.
Planorbis trivolvis Say. Quite common over the State. Also
 collected in Beadle Co. in 1895 by S. F. Adams.
Planorbis deflectus Say. Clay, Perkins, Deuel, Washington
 and Washabaugh Counties.
Planorbis tumidus Pfr. Perkins and Deuel Counties.
Segmentina armigera Say. Clay and Deuel Counties.
Segmentina christyi Dall. Dead shells were abundant at a
 small pond in Deuel Co. in 1908.
Ancylus parallelus Hald. Deuel Co.
Valvata tricarinata Say. Codington, Clay and Deuel Counties.
Campeloma integrum Say. Clay Co. Vermillion River. One
 sinistral.
Somatogyrus subglobosus Say. Deuel Co.
Somatogyrus integer Say. Deuel Co.
Amnicola cincinnatiensis Anth. Spink Co. Turtle River.
Amnicola limosa Say. Codington and Clay Counties.
Amnicola emarginata Küst. Codington and Clay Counties.
Lampsilis luteolus Lam. Clay, Deuel, Codington and Spink
 Counties. One "dead" specimen was found in the Little Mis-
 souri River in Harding Co. It is doubtful if it exists there at
 present, but may be found in the same river at higher elevation
 and in a sandy loam formation in Montana.
Lampsilis ventricosus Barnes.
Lampsilis laevissimus Lea.
Lampsilis alatus Say.
Lampsilis parvus Barnes. Vermillion River, Clay Co.
Lampsilis gracilis Barnes. The above five species are no doubt
 more or less common in the Big Sioux, Vermillion and James
 Rivers.
Lampsilis anodontoides Lea. Clay Co.
Lampsilis subrostratus Say. Rare in Brule Creek, Union
 County.
Lampsilis rectus Lamk. Brule Creek, Union Co.
Plagiola elegans Lea. Clay Co.
Strophitus edentulus Say. Lake Kampeska, Codington Co.

- Strophitus edentulus pavonius* Lea. Hidewood Creek, Deuel Co.
Anodonta dakota Frierson. Clear Lake, Deuel Co.
Anodonta grandis Say. Perkins, Deuel, Spink, Clay and Codrington Counties.
Anodonta grandis footiana Lea. Deuel and Codrington Counties.
Anodonta grandis gigantea Lea. Deuel Co.
Anodontooides ferussacianus Lea. Washabaugh and Deuel Counties.
Anodontooides ferussacianus subcylindraceus Lea. Deuel Co.
Symphynota compressa Lea. Deuel Co.
Symphynota complanata Barnes. Clay and Deuel Counties.
Symphynota complanata katherina Lea. Lake Kampeska, Codrington Co.
Arcidens confragosus Say. Clay Co.
Quadrula lachrymosa Lea. Clay Co.
Quadrula pustulosa Lea.
Quadrula undulata Barnes. Deuel, Clay and Spink Counties.
Sphærium sulcatum Lam. Washabaugh and Deuel Counties.
Sphærium rhomboideum Say. Hidewood Creek, Deuel Co.
Sphærium simile Say. Deuel Co.
Sphærium stramineum Conr. Lake Kampeska, Codrington Co.
Sphærium striatinum Lam. Deuel Co.
Sphærium striatinum acuminatum Prime. Ziebach, Harding, Perkins and Butte Counties.
Musculium partumeium Say. Deuel Co.
Musculium secure Prime. Pennington and Perkins Counties.
Musculium jayense Prime. Ziebach, Perkins and Deuel Counties.
Pisidium contortum Prime. Harding Co.
Pisidium mainense Sterki. (or near) Deuel Co.
Pisidium affine Sterki. Deuel Co.
Pisidium subrotundum Sterki. Pennington Co.
Pisidium abditum Hald. Pennington and Washington Counties.
Pisidium variabile Prime. Washabaugh Co.
Pisidium kirklandi Sterki. Deuel Co.
Pisidium compressum Prime. Deuel Co.

- Pisidium compressum lævigatum* Sterki. D
Pisidium sargentii Sterki. Deuel Co.
Pisidium overi Sterki. Deep waterhole in south of Clear Lake, Deuel Co.
Pisidium walkeri Sterki. Hidewood Creek
Pisidium pauperculum crystalense Sterki.

The following post-glacial fossils, Wisconsin from a well 20 feet beneath the surface, 3 miles view, Douglas Co., in 1883 by Prof. J. E. State Geologist. The specimens were identified by Baker.

- | | |
|-------------------------------------|----------------|
| <i>Pisidium compressum</i> Prime. | <i>Lymnaea</i> |
| <i>Pisidium variabile</i> Prime. | Say. |
| <i>Pisidium medianum</i> Sterki (?) | Planorbis |
| <i>Valvata tricarinata</i> Say. | Planorbis |
| <i>Valvata lewisii</i> Currier. | (anterior) |
| <i>Succinea avara</i> Say. | Planorbis |
| <i>Physa</i> sp. (immature) | Baker |
| <i>Lymnaea (Galba) palustris</i> | Planorbis |
| Mull. | Planorbis |

PUPOIDES INORNATUS N

E. G. VANATTA.

Shell small, cylindrical, rimate; aperture white; the lower part of the shell opaque with a few irregular growth striæ; suture at the aperture; whorls $5\frac{1}{2}$, convex, slightly the suture; base obtusely angular. Aperture third the height of the shell; oval, truncate or plicæ; parietal callus transparent; lip white, thick, broadly reflexed. Alt. 8 alt. 1.30, diam. 1.07 mm.

Type in the collection of the Académie

us pavonius Lea. Hidewood Creek, Deuel Co.
 Frierson. Clear Lake, Deuel Co.
s Say. Perkins, Deuel, Spink, Clay and
footiana Lea. Deuel and Codington Coun-
gigantea Lea. Deuel Co.
ssacianus Lea. Washabaugh and Deuel
sacianus subcylindraceus Lea. Deuel Co.
essa Lea. Deuel Co.
anata Barnes. Clay and Deuel Counties.
anata katherina Lea. Lake Kampeska, Cod-
us Say. Clay Co.
sa Lea. Clay Co.
Lea.
 Barnes. Deuel, Clay and Spink Counties.
 Lam. Washabaugh and Deuel Counties.
leum Say. Hidewood Creek, Deuel Co.
y. Deuel Co.
m Conr. Lake Kampeska, Codington Co.
a Lam. Deuel Co.
n acuminatum Prime. Ziebach, Harding
 Counties.
um Say. Deuel Co.
 ime. Pennington and Perkins Counties.
 Prime. Ziebach, Perkins and Deuel Coun-
 Prime. Harding Co.
 terki. (or near) Deuel Co.
 i. Deuel Co.
 n Sterki. Pennington Co.
 ld. Pennington and Washington Coun-
 ime. Washabaugh Co.
 terki. Deuel Co.
 Prime. Deuel Co.

Pisidium compressum lævigatum Sterki. Deuel Co.
Pisidium sargentii Sterki. Deuel Co.
Pisidium overi Sterki. Deep waterhole in creek one half mile
 south of Clear Lake, Deuel Co.
Pisidium walkeri Sterki. Hidewood Creek, Deuel Co.
Pisidium pauperculum crystalense Sterki. Deuel Co.

The following post-glacial fossils, Wisconsin drift, were taken
 from a well 20 feet beneath the surface, 3 miles north of Grand-
 view, Douglas Co., in 1883 by Prof. J. E. Todd, at that time
 State Geologist. The specimens were identified by Frank C.
 Baker.

<i>Pisidium compressum</i> Prime.	<i>Lymnaea stagnalis appressa</i>
<i>Pisidium variabile</i> Prime.	Say.
<i>Pisidium medianum</i> Sterki (?)	<i>Planorbis trivolvis</i> Say.
<i>Valvata tricarinata</i> Say.	<i>Planorbis bicarinatus</i> Say.
<i>Valvata lewisii</i> Currier.	(<i>antrosus</i> Conrad)
<i>Succinea avara</i> Say.	<i>Planorbis antrosus striatus</i>
<i>Physa</i> sp. (immature)	Baker.
<i>Lymnaea (Galba) palustris</i>	<i>Planorbis deflectus</i> Say.
Mull.	<i>Planorbis parvus</i> Say.
	<i>Planorbis exacutus</i> Say.

PUPOIDES INORNATUS N. SP.

E. G. VANATTA.

Shell small, cylindrical, rimate; apex obtusely rounded,
 white; the lower part of the shell opaque flesh colored; surface
 with a few irregular growth striæ; suture impressed, ascending
 at the aperture; whorls $5\frac{1}{4}$, convex, slightly shouldered below
 the suture; base obtusely angular. Aperture more than one-
 third the height of the shell; oval, truncate, without lamellæ
 or plicæ; parietal callus transparent; lip and columella opaque,
 white, thick, broadly reflexed. Alt. 3.61, diam. 1.37, apert.
 alt. 1.30, diam. 1.07 mm.

Type in the collection of the Academy of Natural Sciences,