

basal, lunate, with a lining of white callus a
n, heavier and bearing a small tooth on the
l a rather short white lamella toward the outer
lip-edge thin and acute, suddenly expanded at
ion, half covering the umbilical perforation.

m.
nm.

irty-four specimens, from Knoxville, Tenn.;
Tenn. (A. G. Wetherby); Knox Co., Tenn.,
, and Nashville, Tenn. (G. A. Lathrop).
ed in the height of spire and the degree of de-
of the basal lamella. It is most nearly allied
trinoidea, being smaller than the former, with
mature, and larger, duller and more elevated

first called to this form by Mr. A. G. Weth-
ens from Nashville had long been in the collec-
of Natural Sciences. It seems to be a fairly
bly confined to the "Cumberland Subregion"

orm. it is a pleasure to add that so competent
etherby agrees with me that it is a new spe-
living naturalist is more experienced than he
ells of the beautiful mountain region it in-

NORTH AMERICAN PISIDIA.

BY DR. V. STERKI.

size, rather much inflated, irregularly quad-
cks slightly posterior, rather large and prom-
ctly flattened on top; superior margin little
and scutellum well developed and marked
joining the posterior and anterior margins;
pendicularly, and with an obtuse, rounded
the moderately curved and comparatively
antero-superior margin little curved or
he inferior in a well marked somewhat

rounded angle situated rather inferior. Surface with irregular,
rather fine striæ, slightly shining; color of epiconch pale or grayish
horn; shell moderately thick; nacre whitish-glassy; hinge rather
stout; cardinal teeth lamellar, the right moderately curved, not
reaching the inferior edge of the hinge plate, with a rather deep
groove below; the left anterior cardinal tooth moderately or rather
strongly curved, the posterior oblique, moderately curved, with a
deep groove between them; lateral teeth rather strong, finely crenu-
lated or rugulose, those of the left valve strongly, those of the right
valve slightly projecting over the valve edge, and the latter also
into the cavity of the mussel; ligament strong.

Size: long. 4.2-4.7, alt. 2.5-3.0, diam. 2.5-3 mill.

Habitat. The species has a wide geographical distribution;
Michigan, many places in the Upper and Lower Peninsula; south-
ern Minnesota; Pedan River, Canada; Philadelphia, Pa.; Adams-
ville, N. J.; Comal Co., Texas.

It is surprising that such a well characterized *Pisidium* has not
been noticed before this. Careful comparison with the earlier de-
scriptions of *T. Prime* shows that it cannot be identical with any of
those species.

Pis. trapezoideum is somewhat variable in size and shape; the
angles at the scutum and scutellum are more rounded in some forms,
and so the superior margin is more curved, the beaks are more or
less flattened on top, sometimes almost imperceptibly.

New Philadelphia, Ohio, February, 1896.

(To be Continued.)

ANNOTATED LIST OF THE MOLLUSCA FOUND IN THE VICINITY OF CLEARWATER, WRIGHT CO., MINNESOTA.

BY H. E. SARGENT, WOODVILLE, ALA.

Part Second—Aquatic Species.

In searching for aquatic specimens a ten quart tin pail and a wire
gauze dip net were the implements made use of. Sediment and
specimens were dipped into the pail and washed by repeated stirring
and decantation. By this means the most minute specimens were
retained for future sifting and sorting.

Sargent

The stations searched have been fully described and located in the first part of this article. They will be hereafter referred to by letter as follows:

- Station B. Belle Lake.
- Station C. Clearwater Lake.
- Station D. Mississippi River at Bellevue, Ia.
- Station F. Clearwater River.
- Station H. Heath Lake.
- Station M. Mississippi River at Clearwater, Minn.
- Station R. Crow River, Rockford, Minn.
- Station S. A dry meadow at St. Michaels, Minn.
- Station T. Among damp moss in tamarack swamp at Clearwater, Minn.

- 39. *Pleurocera subulare* Lea. M.
- 40. *Bythinella obtusa* Lea. M.
- 41. *Annicola lustrica* Pils. B, C, H, in all cases feeding upon weeds.
- 42. *Annicola limosa* Say. B, C, F, R, M, H.
- 43. *Annicola limosa* Say var. *porata* Say. M.
- 44. *Annicola cincinnatiensis* Anth. R.
- 45. *Valvata tricarinata* Say. B, F, M, H, R, T, C.
- 46. *Valvata tricarinata* Say var. *bicarinata* Lea. B, F, H, R, T, C.
- 47. *Valvata tricarinata* Say var. *simplex* Gld. C.

Notes.—Typical specimens occurred alone in the Mississippi River only. Of 132 specimens taken from there, none show any tendency toward the varieties. The carinae are very prominent; specimens mostly large and dark colored. At all the other stations, specimens were much smaller, light in color and only in exceptional cases having three distinct carinae. In most cases the middle one is entirely wanting. The few specimens taken at Clearwater Lake are about equally divided among the three forms.

- 48. *Lyogyrus browni* H. F. Carpenter. B, F, in muddy bottom.
- 49. *Campeloma rufum* Hald. F, M. 3 sinistral specimens of this species were taken.
- 50. *Campeloma subsolidum* Anth. D. Adult specimens are curiously depressed, closely resembling *Vivipara subpurpurea* Say with which it is found.
- 51. *Vivipara subpurpurea* Say. D.

- 52. *Vivipara intertexta* Say. D.
- 53. *Limnæa megasoma* Say. The only station in this vicinity, so far as known, is a small lily-pond on the Mississippi River just below St. Cloud. It was discovered many years ago by Prof. Hubbard of the St. Cloud State University. The snails are to be seen floating on the surface of the lily-leaves. They are shy, sinking almost instantly when touched.
- 54. *Limnæa stagnalis* L. C, H, B, feeding on decaying matter found putrifying at the roots of grass in sloughs.
- 55. *Limnæa emarginata* Say. C. Two quite different forms of texture were taken. One corneous, translucent, the other both young and adult specimens; the other more opaque and heavier, with much thickened margin. Both forms were found together. One was found on the sandy bottom.
- 56. *Limnæa gracilis* Jay. After finding several beautiful species in Belle Lake, I was told by a friend that he took it alive in Heath Lake the previous fall on the side of lily-leaves. Later a thorough search was made of the same original locality, but only two dead specimens were found—where do they keep themselves in summer?
- 57. *Limnæa reflexa* Say. C, B, S.
- 58. *Limnæa reflexa zebra* Tryon. B.
- 59. *Limnæa columella* Say. R.
- 60. *Limnæa catascopium* Say. M.
- 61. *Limnæa caperata* Say. S.
- 62. *Limnæa palustris* Mull. R, on slough grass.
- 63. *Limnæa humilis* Say. C, B, M, F.
- 64. *Limnæa desidiosa* Say. C, B, M, F.
- 65. *Aplexa hypnorum* L. R, T, S.
- 66. *Physa gyrina* Say. D, F, B, M.
- 67. *Physa integra* Hald. St. Cloud, Minn.;
- 68. *Physa oleacea* Tryon. D.
- 69. *Physa vinosa* Gld. F.
- 70. *Planorbis campanulatus* Say. Abundant.
- 71. *Planorbis bicarinatus* Say. Abundant everywhere.
- 72. *Planorbis trivolvis* Say. Abundant everywhere.
- 73. *Planorbis exacutus* Say. C, B, R, F, H.
- 74. *Planorbis hirsutus* Gld. C, B, T, F, H.
- 75. *Planorbis umbilicatellus* Ckll. B.

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54. *Limnaea stagnalis* L. C, H, B, feeding upon weeds. R, found putrifying at the roots of grass in slough near the river.
55. *Limnaea emarginata* Say. C. Two quite distinct varieties of texture were taken. One corneous, translucent and rather thin in both young and adult specimens; the other nearly white, opaque and heavier, with much thickened margin. Both forms were plentiful and near together. One was found on the pebbles, the other on the sandy bottom.
56. *Limnaea gracilis* Jay. After finding dead specimens of this beautiful species in Belle Lake, I was told by Prof. Hubbard that he took it alive in Heath Lake the previous fall upon the under side of lily-leaves. Later a thorough search was made for them in the same original locality, but only two dead specimens were found. Query—where do they keep themselves in summer?
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73. *Planorbis exacutus* Say. C, B, R, F, H.
74. *Planorbis hirsutus* Gld. C, B, T, F, H.
75. *Planorbis umbilicatus* Ckll. B.

76. *Planorbis parvus* Say. B, T, F, D.
 77. *Segmentina armigera* Say. Everywhere abundant.
 78. *Ancylus* (sp.?). M, D.
 79. *Sphaerium sulcatum* Lam. B, F, H. Mississippi River at St. Cloud. Specimens extra large and fine.
 80. *Sphaerium striatinum* Lam. R, F, D, M.
 81. *Sphaerium transversum* Say. D.
 82. *Sphaerium truncatum* Linsley. R, F, S, B, F.
 83. *Sphaerium rhomboideum* Say. B, H. Mississippi River at St. Cloud.
 84. *Sphaerium solidulum* Prime. M, F.
 85. *Sphaerium Jayanum* Prime. Marshes near Clearwater.
 86. *Sphaerium securis* Prime. H.
 87. *Pisidium virginicum* Gmel. F.
 88. *Pisidium abditum* Hald. F, H, B, T, C. Spring at Bellevue, Iowa.
 89. *Pisidium Walkeri* Sterki. F, M.
 90. *Pisidium politum* Sterki. F, B.
 91. *Pisidium variabile* Prime. F, C, H.
 92. *Pisidium compressum* Prime. F, M, C.
 93. *Pisidium ferrugineum* Prime. F, M, H.
 94. *Pisidium rotundatum* Prime. B, T.
 95. *Unio occidentalis* Lea. M.
 96. *Unio rectus* Lam. C, M, F. Red River of the North, Fargo, N. D.
 97. *Unio luteolus* Lam. C.
 98. *Unio ligamentinus* Lam. M.
 99. *Anodonta footiana* Lea.

The *Pisidia* enumerated above are certified to by Dr. Sterki; the *Sphaerium* by Mr. E. W. Roper; and such other species as there was any doubt concerning by Prof. H. A. Pilsbry.

TRANSACTIONS OF THE ISAAC LEA CHAPTER.

[Conducted in the interest of the Isaac Lea Conchological Chapter of the Agassiz Association by its General Secretary, Mrs. M. Burton Williamson.]

Owing to the delay of some of our reports the volume of Transactions was not started promptly on its annual round, but we hope our members will make allowance for the delay. The volume will

be found interesting and suggestive. Extracts will be found in this department of THE NAUTILUS.

A member who has joined our Chapter during the following when forwarding her report for only because I understood that was the one thing she desired the privilege of reading the 'Transactions' for 1889 and 1891, and am willing to cede the power for the pleasure and profit of reading. Please bear in mind that one week is the limit of the retention of the volume of Transactions.

The Secretaries of Sections for our Chapter have been provided for in Section 1, of our By-Laws, and are as follows:—Section A.—Marine shells of the West Coast, Mrs. M. B. Keen, College, Cal.

Section B.—Mrs. E. P. Wentworth, Portland, Me.

Section C.—Land shells east of the Rocky Mountains (Secretary not yet chosen).

Section D.—Fresh water shells east of Rocky Mountains, Mrs. M. B. Keen, Lewistown, Ill.

Section E.—Land and fresh water shells west of the Rocky Mountains (Secretary not yet chosen).

Section F.—Fossil shells, Hon. Delos Arnold, Wash. D. C.

Section G.—Juvenile Section, Mrs. Mary P. Keen, Wash. D. C.

Section H.—Microscopic shells, Mrs. T. S. Old, Cal.

Section I.—Marine shells of the S.-Eastern States, Mrs. M. B. Keen, Rockledge, Florida.

The Executive Committee consists of the "President, Secretary and one other member" (Art. IV). Delos Arnold has been appointed a member of the Executive Committee.

WEST COAST SPECIES OF HALIOTIS.

Report of the President, Professor Josiah Keep. From the Transactions of the Isaac Lea Chapter for 1895.

The recent revision of the genus *Haliotis* and the introduction of new specific names since the publication of my little book