

ART. IV.—*Catalogue of the Mollusca of Middlebury, Vt., and vicinity, with observations*; by C. B. ADAMS, Prof. Chem. and Nat. Hist. Middlebury College, Memb. Bost. Soc. Nat. Hist.

THE utility of catalogues of species, which inhabit distant parts of this country, as materials for ascertaining their geographical distribution, need not be urged. Even a single local catalogue cannot but be of interest and utility. It is obviously important that the stations and the abundance or scarcity of the several species should be designated. Such catalogues should also be drawn up by those whose residence in the region enables them to make numerous observations at all seasons, to detect the rare species and those which appear only for a very limited time during the year.

In obtaining materials for the following catalogue, my acknowledgments are due to Prof. George W. Benedict, of Burlington; also to Messrs. K. Prescott, Luther H. Sheldon, and M. W. Johnson, who have been my assistants in the department of Natural History, and who have detected some of the rare species, which might otherwise have escaped search. That other species may yet be found is by no means improbable, for a species, whose habitat should be as circumscribed as that of *Vitirina pellucida*, *Drap.*, (see following remarks,) appears to be in this vicinity, may elude the researches of many years. But after the careful search, which has been made in various places and in every station, especially by my assistants, it cannot be expected that any important additions will be made.

MELANIA.

M. depygis, *Say*. It is remarkable that no species of the family *Melaniana* occur in the New England States, with this single exception, although some are abundant in New York. This species occurs here only in Lake Champlain, where it was first found by my friend Prof. George W. Benedict, in Burlington. It is very rare. I have found several imperfect specimens, and but one with the animal, at Shoreham.

PALUDINA.

P. decisa, *Say*. This species, so common in the streams and ponds of New England, occurs plentifully in Otter Creek, but

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rarely in Lake Champlain. D as he has, (2d edit. Lam. An. young of *P. ponderosa*, *Say*, old in both species. This species *tegra*, *Say*, from which it is (Monog. Limniad. No. 1.)

P. lustrica, *Say*. This species Champlain and in the streams green in different localities.

VIT

V. tricarinata, *Say*. Abundant green color.

V. sincera, *Say*. This species swamp, on the New York side of port. It is so rare, that a description without interest.

Foot whitish, swelling and the anterior lobes sharply angu middle, less than .3 in. long; the lobes regularly rounded,—with on the top, deepening posteriorly. Tentacles filiform, whitish, more than shining, situated on the upper part of the protuberance at the base of blackish brown on the margin; the stem, on each side of which extend ten filiform obtuse branches, beneath the whole appearing like a feather longer than the tentacles, equally

LIMN

L. megasoma, *Say*. This species only at Burlington.

L. appressa, *Say*. This species near Lake Champlain. At Burlington it is nearly as much shouldered or *malis* of Europe, from which it differs.

L. gracilis, *Jay*. This species very rare Champlain. About half a dozen at Burlington, and have been distributed specimens, large and perfect, 1

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rarely in Lake Champlain. Deshayes could not have suggested,
 as he has, (2d edit. Lam. An. sans Vert. in loc.) that this is the
 young of *P. ponderosa*, Say, had he seen suites of young and
 old in both species. This species is more nearly related to *P. in-*
tegra, Say, from which it is well distinguished by Haldeman,
 (Monog. Limniad. No. 1.)

P. lustrica, Say. This species is very abundant in Lake
 Champlain and in the streams. Its color varies from brown to
 green in different localities.

VALVATA.

V. tricarinata, Say. Abundant in Lake Champlain, of a grass
 green color.

V. sincera, Say. This species occurs plentifully in Putts's
 swamp, on the New York side of Lake Champlain, opposite Brid-
 port. It is so rare, that a description of the animal may not be
 without interest.

Foot whitish, swelling and regularly rounded posteriorly, with
 the anterior lobes sharply angular, somewhat contracted in the
 middle, less than .3 in. long; *head* anteriorly obtuse and bilobed,
 —lobes regularly rounded,—whitish, with a tinge of slate color
 on the top, deepening posteriorly; *mouth* pale-yellowish; *tenta-*
cles filiform, whitish, more than .2 in. long; *eyes* minute, black,
 shining, situated on the upper and outer part of the posterior side
 of the protuberance at the base of the tentacles; *branchial cavity*
 blackish brown on the margin; *plumose branchia* consisting of a
 stem, on each side of which extend, at right angles to it, about
 ten filiform obtuse branches, bent in zigzag, shorter near the top,
 the whole appearing like a feather; *tentaculiform branchia* rather
 longer than the tentacles, equally slender and obtuse.

LIMNEA.

L. megasoma, Say. This large and rare species I have seen
 only at Burlington.

L. appressa, Say. This species has been found only in or
 near Lake Champlain. At Burlington it is common. Sometimes
 it is nearly as much shouldered on the body whorl as the *L. stag-*
nalis of Europe, from which it differs very slightly.

L. gracilis, Jay. This very remarkable species occurs in Lake
 Champlain. About half a dozen specimens were discovered near
 Burlington, and have been distributed by Prof. Benedict. A sin-
 gle specimen, large and perfect, but without the animal, I found

in Addison. The most striking character of this species is its elongation with a very few whorls. The specimen in my cabinet is one inch in length, and in the convexity of the penult whorl only .15 in. diameter. The last whorl is scarcely broader, except across the lips, both of which are expanded. Although nearly seven times longer than its average breadth, it has only 4½ whorls!

L. pallida, nob. This species has been found only at Shoreham. Since it was described, I have found three living specimens, of a dingy white!

L. elodes, Say. This species is not very common.

L. umbrosa, (?) Say. A *Limnæa* is very abundant in many parts of the New England States, which corresponds very nearly to Say's *umbrosa*. Some specimens, however, have a more prominent columellar fold than is ascribed to that species, and Dr. Gould (Mss.) has proposed for it the name *L. plebeia*. The prominence of this fold is subject to variation, and is not sufficiently marked to constitute alone a good specific character.

L. desidiosa, Say. This species is very common, and is subject to great variation of form, sometimes being elongated and scarcely to be distinguished from *L. elodes*. Other specimens are short, as in Say's fig. (Am. Conch.) and the upper part of the last whorl is much inflated and more or less shouldered, while the lower part is produced. This variety approaches *L. umbilicata, nob.*, which, however, has the umbilicus larger, and the lower part of the last whorl abbreviated, much inflated, and globular, so that the whole shell has the form of a cone with a hemispherical base.

L. caperata, Say. Although common in this vicinity, this species has not been found elsewhere in the eastern states.

PHYSA.

P. ancillaria, Say. This rare species occurs in Lake Champlain, and in some ponds in Sudbury. In the lake it is remarkable for being sometimes of a deep bay color. The young are not easily distinguished from the next species, although mature specimens differ widely.

P. heterostropha, Say. This species is common here as in many other parts of New England.

P. gyrina? Say. Of this species a very few specimens only have been found. Although I have not seen authenticated specimens, nor any figure, of Say's species, they correspond so well

with his description, that I have not referred them to it.

P. elongata, Say. This species is rarely seen in Mass., but has been found by my friend C. F. Shiverick, Esq.

The above four species of *Physa* differ in the proportions of the spire and aperture, and of the gradation in these two particulars being given in the following table. The ratio is, of course, in inverse proportion, even in mature specimens, when compared.

	Length.	Breadth.	Ratio.
<i>P. ancillaria,</i>	.65 in. :	.48 in. =	1.35
<i>P. heterostropha,</i>	.75 in. :	.45 in. =	1.67
<i>P. gyrina?</i>	.55 in. :	.25 in. =	2.2
<i>P. elongata,</i>	.58 in. :	.25 in. =	2.32

PLANORBIS.

P. lentus, Say, and *P. corpulentus, Say,* are edly varieties of the same species, the former being the result of a stunted growth of the latter. Very large specimens were found plentifully below the falls of this village, during the spring of 1839, and could be found. Some were 1.15 in. in diameter, and .55 in. in the height of the aperture. They were common in Lake Champlain.

P. campanulatus, Say. I have found it only in the Lemontare river, where it was abundant.

P. bicarinatus, Say. Common.

P. armigerus, Say. Common in swamps, where it takes refuge among the moist and decaying vegetation.

P. exacuus, [exacutus?] Say. This species is very compressed and fragile of all our Planorbes. Its diameter is only .05 in. in height, and weight is very light. It is found clinging to wood, in still water of Lakes George and Champlain, but is not plentifully found. W. Mighels, M. D., of Portland, has found it in the interior of Maine. In the eastern part of the State it has been found in several places.

P. parvus, Say. This species is common in my cabinet is $\frac{1}{4}$ in. in diameter.

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P. elongata, Say. This species is rather common here. It is rarely seen in Mass., but has been found in New Bedford by my friend C. F. Shiverick, Esq.

The above four species of *Physa* differ chiefly in the proportions of the spire and aperture, and of the length and breadth, the gradation in these two particulars being parallel, as appears in the following table. The ratio is, of course, subject to some variation, even in mature specimens, which alone should be compared.

	Length.	Breadth.	Ratio.	Length of spire.	of aperture.	Ratio.
<i>P. ancillaria</i> ,	.65 in.	: .48 in.	=1.35.	.1 in.	: .55 in.	=.18.
<i>P. heterostropha</i> ,	.75 in.	: .45 in.	=1.67.	.25 in.	: .5 in.	=.5.
<i>P. gyrina?</i>	.55 in.	: .25 in.	=2.2.	.23 in.	: .33 in.	=.7.
<i>P. elongata</i> ,	.58 in.	: .25 in.	=2.32.	.28 in.	: .30 in.	=.93.

PLANORBIS.

P. lentus, Say, and *P. corpulentus*, Say. These are undoubtedly varieties of the same species, the former being merely a stunted growth of the latter. Very large and beautiful specimens were found plentifully below the falls of Otter Creek, in this village, during the spring of 1839, but last year not one could be found. Some were 1.15 in. in their greatest breadth, and .55 in. in the height of the aperture. This species is common in Lake Champlain.

P. campanulatus, Say. I have found this species only in the Lemonfare river, where it was abundant.

P. bicarinatus, Say. Common.

P. armigerus, Say. Common in swamps. In the dry season it takes refuge among the moist and decaying leaves.

P. exacuous, [*exacutus?*] Say. This species is the most depressed and fragile of all our Planorbis. A specimen .24 in. in diameter is only .05 in. in height, and weighs only .05 of a grain. It is found clinging to wood, in still water, on the margins of Lakes George and Champlain, but is not plenty. My friend, J. W. Mighels, M. D., of Portland, has found it rather plentifully in the interior of Maine. In the eastern part of Massachusetts it has been found in several places.

P. parvus, Say. This species is common. One specimen in my cabinet is ¼ in. in diameter.

P. elevatus, nob. This species does not differ much from some varieties of the preceding, and perhaps may not prove entitled to rank as a species. All the specimens which I have seen, however, present that *constancy* of difference which is most important in distinguishing species. One or two specimens have been found in a swamp at Ticonderoga, N. Y.

P. hirsutus, Gould. This species, common in the vicinity of Boston, is rare in this region. It is found in company with *P. exacutus*.

P. deflectus, Say. A very few specimens have been found, in company with *Valvata sincera*.

SUCCINEA.

S. obliqua, Say. This species is frequently confounded, as perhaps it should be, with *S. campestris, Say.* In the Western States this shell is of a pale horn color, but in this vicinity it is of a deep shade of amber. It is common in low grounds under stones and wood. On the Brothers' Islands, opposite Burlington, Prof. Benedict has found very large specimens, one of which in my cabinet is .97 in. long, and .55 in. wide. The animal is more or less thickly mottled with dark purple. In October a thin transparent epiphragm is formed.

S. ovalis, Say. This very fragile species is found only very near water. In low ground, which is covered with a species of flag, and overflowed by Lake Champlain in the early part of summer, I have seen them in immense numbers on the upper part of the flags. *S. putris* of Europe is intermediate in form between this and the preceding species.

S. avara, Say. This species is the young of *S. vermeta, Say.* At this age a viscid substance attaches dirt to the shell, which becomes clean in a mature state. As the young was first described, the name of the adult must be rejected. This species is found in the same station with *S. obliqua*, and in this region is rather rare.

BULIMUS.

B. lubricus, Drap. This species is remarkable for its extensive geographical distribution, being dispersed over a large part of Europe. It is rather common in this vicinity, has been found in great abundance near Boston by Dr. Gould, and was seen near Lake Winnipeck and the Lake of the Woods by Say. With equal propriety the species has been referred to *Achatina*, but as

Deshayes remarks, (Lam. An. sans with some others, it establishes a p era, and proves the uselessness of c

PUGA

P. armifera, Say. Of this species the Alleghany Mountains, (Gould, Vol. III, p. 401,) I have found a v on the borders of Lake Champlain, it at Crown Point.

P. badia, nob. This species was the preceding by Prof. Benedict, that it is "almost precisely like" 2 species has a narrower aperture and possible however that a comparison establish their specific identity.

P. albilabris, Ward's letter. Th Say's *Cyclostoma marginata.* The Roscoe, Ohio, ascertained that it was cific name had been pre-occupied in tl name which we have given. A few gion have been found by Prof. Bened

P. ovata—syn. *Vertigo ovata, Sa* mistaken by some for *P. modesta, S* the teeth fully developed leaves no dc rectness of others, who have regarde in this vicinity, but is more common i

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P. exigua, Say. This very neat littl

P. milium, Gould. This is the ma been described in this country. Two gether weighed less than .06 gr., or .04 *nula serpuloides, nob.*, the least of the land, weighs precisely twice as much.

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era, and proves the uselessness of one of them.

PUPA.

P. armifera, Say. Of this species, not before known this side
the Alleghany Mountains, (Gould, Monog. Bost. Journ. Nat. Hist.
Vol. III, p. 401,) I have found a very few specimens in Bridport
on the borders of Lake Champlain, and Prof. Benedict has found
it at Crown Point.

P. badia, nob. This species was discovered in company with
the preceding by Prof. Benedict. Dr. Gould (op. cit.) remarks
that it is "almost precisely like" *P. marginata*, Drap. That
species has a narrower aperture and wider umbilicus. It is quite
possible however that a comparison of numerous specimens may
establish their specific identity.

P. albilabris, Ward's letter. This species is well known as
Say's *Cyclostoma marginata*. The late lamented Dr. Ward, of
Roscoe, Ohio, ascertained that it was a Pupa, and, as Say's spe-
cific name had been pre-occupied in this genus, proposed for it the
name which we have given. A few specimens only in this re-
gion have been found by Prof. Benedict.

P. ovata—syn. *Vertigo ovata*, Say. This species has been
mistaken by some for *P. modesta*, Say, but a specimen with all
the teeth fully developed leaves no doubt in my view of the cor-
rectness of others, who have regarded it as *P. ovata*. It is rare
in this vicinity, but is more common near Boston.

P. contracta, Say. This species is found quite plentifully.
Mature specimens vary considerably in size.

P. exigua, Say. This very neat little species is rather common.

P. milium, Gould. This is the most minute shell, which has
been described in this country. Twelve mature specimens to-
gether weighed less than .06 gr., or .005 gr. each. The *Delphi-*
nula serpuloides, nob., the least of the marine shells of New Eng-
land, weighs precisely twice as much. The dimensions of *Pupa*
milium are, length .06 in., breadth .03 in. The *Helix pygmaea*,
Drap., according to Turton, (Land and Fresh Water Shells of
Great Britain,) is .05 in. broad, and Deshayes remarks (op. cit.)
that it is "une des plus petites espèces connues." This Pupa
therefore is probably the most minute of known shells, with the
exception of the microscopic Cephalopods.

This species was not "first discovered" by Dr. Gould, as claimed by him, (op. cit.,) but was discovered in July, 1839, by Mr. Sheldon. I supposed, until the publication of Dr. G.'s description, that it had long been known to him, and the privilege of describing it was tacitly yielded to his claim of discovery.

HELIX.

H. albolabris, Say. This species is every where found, but is most abundant in company with *Succinea obliqua*, Say, at the Brothers' Islands, and in the same company on an island near the N. E. extremity of Lake George. A pink variety is rare. This species sometimes attains a size of 1.35 in. in its greatest diameter; but another mature specimen, from a different locality, is only .9 in. in its longest dimension. A specimen from Cincinnati, which I received from my friend J. G. Anthony, Esq., very nearly approaches in size to *H. major*, Binney, being 1.4 in. broad.

H. thyroidus, Say. Only three or four specimens of this species have been found in this vicinity. They had a tinge of pink.

H. pulliata, Say. This species is as rare here as the preceding.

H. monodon, Rack. and *H. fraterna*, Say. These species are common on hill sides. In some specimens now before me the umbilicus is entirely covered by the reflected lip, which is characteristic of the *fraterna*; but others have it scarcely encroached upon by the lip, and are therefore the *monodon*. As the very numerous specimens, which I have collected, present every intermediate condition, as well as also in respect of size and elevation of the spire, and especially as their gradations in these particulars are by no means parallel, I have not been able to find two species among them. With such authorities, however, as Say and Binney, for their specific difference, I cannot but distrust the correctness of my conclusion.

H. concava, Say. This species is rare in this vicinity.

H. pulchella, Müll. This species is very abundant in this town, so that I have taken eleven hundred specimens in one hour. The shell is stouter than in many other parts of the country. The species is remarkable for its very extensive geographical distribution. It is well known as a native of Great Britain and of a large part of Europe. In this country, it has been found in Maine by Dr. J. W. Mighels, of Portland, and was seen by Say as far west as Council Bluffs, on the Missouri river; from Prof.

Foreman, of Baltimore, I have received from Charleston, S. C. At many intermediate localities it is found by numerous observers.

H. Sayii, Binney. This species is a good specimen, and a few partially decayed specimens are in my collection. *H. tridentata*, Say. This species is common in this region. Its size is less than that of specimens from other states.

H. labyrinthica, Say. This singular species is very rare.

H. indentata, Say. This species is remarkable for being of a rather light blue color.

H. arborea, Say. This species is very common in both dry and wet lands. In the former it is of a pale horn color; in the latter it is of a pale black. The latter variety attains its greatest size in my cabinet being .3 in. broad.

H. inornata, Say. One specimen of this species is found here. With this exception, I believe it is not found in New England.

H. alternata, Say. This species is common on the Brothers' Islands, it attains its greatest size in this vicinity, one inch in diameter.

H. chersina, Say. In April, 1839, this species was first discovered near town. Not long after it was found near town.

H. lineata, Say. This species is not common in this vicinity, and is remarkable for its red color.

H. striatella, Anth. This species, which does not occur in this vicinity, was first recognized as a distinct species by Binney, while in Say's shell it is not more than one whorl in the former is also much larger. Binney's specimens are that Say's species is larger, and that it has the striæ more elevated than in the former.

H. fuliginosa, Griffith, is rare in this vicinity.

H. electrina, Gould, in Binney's *Mollusca* was discovered by me in Marion Co., Mo., in 1839, following, Col. A. Bourne, of Chillicothe, who had obtained specimens from that place. Subsequently I obtained specimens from that town and at Rogers's Rock, Lake Geor-

discovered" by Dr. Gould, as claimed in his publication of Dr. G.'s description, and the privilege of discovery.

LIX.

Species is every where found, but is very rare here. It is found in the company on an island near the town. A pink variety is rare. This variety is of 1.35 in. in its greatest diameter, from a different locality, is a specimen from Cincinnati, friend J. G. Anthony, Esq., very common. A specimen from Cincin-
ajor, Binney, being 1.4 in. broad. There are three or four specimens of this species. They had a tinge of pink. It is as rare here as the preceding.

caterna, Say. These species are very common. The specimens now before me have the reflected lip, which is characteristic. Others have it scarcely encroached upon. As the very common, present every intermediate in respect of size and elevation. In respect of size and elevation, in gradations in these particulars, I have not been able to find two species. I cannot but distrust the cor-

It is rare in this vicinity. The species is very abundant in this vicinity. One hundred specimens in one locality. In many other parts of the county, and its very extensive geographical range. It is a native of Great Britain and is common in this country, it has been found in Vermont, and was seen by Say at Portland, and was seen by Say at the Missouri river; from Prof.

Foreman, of Baltimore, I have received specimens collected at Charleston, S. C. At many intermediate places it has been found by numerous observers.

H. Sayii, Binney. This species is very rare here, only one good specimen, and a few partially decayed, having been found.

H. tridentata, Say. This species is not common in this region. Its size is less than that of specimens from the western states.

H. labyrinthica, Say. This singular little species is not rare.

H. indentata, Say. This species is rare. The animal is remarkable for being of a rather light blue color.

H. arborea, Say. This species is very common. It inhabits both dry and wet lands. In the former situation the shell is of a pale horn color; in the latter it is of a deep brown, and the animal is black. The latter variety attains a greater size, some specimens in my cabinet being .3 in. broad.

H. inornata, Say. One specimen only has been obtained here. With this exception, I believe this species has not been found in New England.

H. alternata, Say. This species is very common. At the Brothers' Islands, it attains its greatest size, some specimens being one inch in diameter.

H. chersina, Say. In April, 1839, this species was found in this town. Not long after it was found near Boston. It is not rare.

H. lineata, Say. This species is not rare. It is of a beautiful light green, and is remarkable for its resemblance to a *Planorbis*.

H. striatella, Anth. This species, long confounded with *H. perspectiva, Say*, which does not occur in New England, was first recognized as a distinct species by J. G. Anthony, Esq. In this species the last whorl much exceeds the umbilicus in diameter, while in Say's shell it is not more than equal to it. The last whorl in the former is also much larger. Less essential differences are that Say's species is larger, usually of a darker color, and that it has the striae more elevated. The *striatella* is quite common here.

H. fuliginosa, Griffith, is rare in this part of Vermont.

H. electrina, Gould, in Binney's Monog. This species was discovered by me in Marion Co., Mo., in Nov. 1837. In August, following, Col. A. Bourne, of Chillicothe, Ohio, forwarded to me specimens from that place. Subsequently I have found it in this town and at Rogers's Rock, Lake George, and Dr. Gould has

found it near Boston. It is not rare here, and is associated with *H. arborea*, under logs, &c., both in moist and in dry lands. Dr. Gould has found it only near the water's edge.

This species is remarkable for its close resemblance above to *H. indentata*, Say, and beneath to *H. arborea*, Say. This resemblance is so striking, that a view of either side alone would lead any one to place it with one or the other of these species. A comparison of both sides easily distinguishes it.*

H. multidentata, Binney. This beautiful little species was discovered by Dr. Binney several years since, in Strafford, Vt. Subsequently it has been found in this town very sparingly. It is remarkable for the roseate color of the animal, seen through the semi-transparent shell, and for the *teeth*. These are placed in rows, far within the aperture, on its outer and lower half. The rows are curved, with the convexity towards the aperture, and contain four to six closely approximate teeth, appearing through the shell like glass beads. The number of rows varies from two to four, of which never more than one is visible from the aperture.

H. minuscula, Binney. This species, recently discovered in Ohio, has also been found in this town. Under a log, in wet land, I found a large number, but have not found many elsewhere. It exactly resembles *H. pulchella*, Müll., in size and color, but that species is easily distinguished by its reflected lip, enlargement of the last whorl, and small umbilicus.

VITRINA.

V. pellucida, Drap. This species was observed first on this continent by Say, who remarks that it "was first found near Coldwater lake, in lat. $48\frac{3}{4}^{\circ}$ N., under stones, fallen timber, &c. It afterwards occurred, in similar situations, until we approached Lake Superior, when it was no more seen. No species of this genus has been hitherto found in this country; this shell is therefore the more interesting. The specimens which we collected do not appear to differ in any respect from those of Europe."† I

* A description of this species, under the name of *H. Janus*, had been prepared for this article, when I received, through the kindness of Dr. Binney, the remainder of his excellent monograph, printed in anticipation of the next No. of the *Bost. Jour. Nat. Hist.*, in which, not aware that any one had discovered it prior to Dr. Gould, he has quoted from Dr. G.'s MSS. The two following species are described by Dr. B. in the same paper.

† App. Long's Exped. to Source of St. Pet. River.

am not aware that it has since been discovered. In 1839, when on an excursion to the extremity of Lake George, N. Y., I found it crawling among moist leaves. On a subsequent autumn, a very few only were found. One was obtained in a niche in the rock, occupying the space of less than a square rod. The neighborhood enabled me to detect it at a distance of ten rods from the little cove. Although I have not seen specimens since, I do not doubt that this is the same species described by numerous authors. It differs from the one described by Say, in being destitute of the tinge of green, which is present in the other. Its delicacy of aspect, cannot be surpassed.

ANCYLUS.

A. parallelus, Haid., Mss. This species is found to be Say's *A. rivularis*, with the exception of the color, which agrees very well. But my friend S. S. Gould informs me that it is distinct. It is rather common in a pond in the east part of Brandon.

A. tardus, Say. Found rather plentifully in the east part of this town. Mr. Prescott discovered it in the southern part of this State.

Two species of naked Mollusca, of the genus *restria*, Cuv., are found in this region, with a naked like mantle, covering the whole back, the head, and the right side near the head, and the anus. As the latter orifice does not communicate with the cavity, which is immediately behind the head, they do not belong to the genus *VAGINULUS*, Ferrussac. I referred them on account of the extent of the mantle. Not having the means here of ascertaining the exact size, I have been described for their reception, I have preserved in spirit. One species is (after being preserved in spirit) $\frac{1}{4}$ inch in diameter. The mantle is blackish black, and the spots on the back are white. The other species (also in spirit) is about $\frac{1}{2}$ inch in diameter, and is of a nearly uniform blackish black.

Middlebury, Vt. and Vicinity.

It is not rare here, and is associated with &c., both in moist and in dry lands. Dr. near the water's edge.

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† St. Pet River.

an not aware that it has since been found, until the summer of 1839, when on an excursion to Rogers' Rock, near the N. E. ex- tremity of Lake George, N. Y., I found a number of individuals crawling among moist leaves. On a visit to the same place, last autumn, a very few only were found. These specimens were obtained in a niche in the rock, accessible only by water, within the space of less than a square rod. A careful search in the neighborhood enabled me to detect only one dead specimen, at a distance of ten rods from the little colony.

Although I have not seen specimens of the European shell, I do not doubt that this is the same species, which is figured and described by numerous authors. It differs only in being entirely destitute of the tinge of green, which is mentioned by some of them. It is perfectly hyaline, and for elegance of contour and delicacy of aspect, cannot be surpassed.

ANCYLUS.

A. parallelus, Hald., Mss. This species has been supposed to be Say's *A. rivularis*, with the brief description of which it agrees very well. But my friend S. S. Haldeman, Esq. informs me that it is distinct. It is rather common in Otter Creek, and in a pond in the east part of Brandon.

A. tardus, Say. Found rather plentifully in a brook in the east part of this town. Mr. Prescott has also found it in the southern part of this State.

Two species of naked Mollusca, of the family *Pulmonea ter- restria*, Cuv., are found in this region, which have a dense shield- like mantle, covering the whole back, the branchial orifice on the right side near the head, and the anus at the posterior extremity. As the latter orifice does not communicate with the branchial cavity, which is immediately behind the head, these species can- not belong to the genus *Vaginulus*, Fer., to which I had at first referred them on account of the extent of the shield-like mantle. Not having the means here of ascertaining whether any genus has been described for their reception, I am obliged to leave them. One species is (after being preserved in spirit) 1 $\frac{2}{3}$ inches long and $\frac{1}{2}$ inch in diameter. The mantle is thickly mottled with a gray- ish black, and the spots on the back are sometimes confluent. The other species (also in spirit) is about $\frac{1}{2}$ inch long and $\frac{1}{4}$ inch in diameter, and is of a nearly uniform blackish gray color. This

species is quite common. A species of LIMAX also occurs of the same size.

ANODONTA.

A. Benedictensis, Lea. This species occurs only in Lake Champlain, where it is abundant.

A. cataracta, Say. At Wallingford, Vt., a very few specimens have been obtained.

Two other species of Anodonta occur, which I have not been able to identify with any species known to me. One of them resembles *A. Wardiana, Lea.*

ALASMODONTA.

A. arcuata, Barnes. That this species is quite distinct from the *margaritifera* of Europe, I have had an opportunity of seeing from a specimen of the latter in the cabinet of Dr. Gould. Barnes's species occurs in Onion river, at Burlington.

A. rugosa, Barnes. This species occurs in Otter Creek and Lake Champlain, but is not common.

A. undulata, Say. This species occurs in Otter Creek.

UNIO.

U. alatus, Say. Abundant in Lake Champlain.

U. gracilis, Barnes. Common in Lake Champlain.

U. compressus, Lea. This species occurs, well characterized, in a rivulet a few miles west of this village. In the east part of this town are specimens which differ so much from the common type as perhaps to constitute a new species.

U. rectus, Lam. This species occurs rarely in Lake Champlain.

U. ventricosus, Barnes. This species is rather common in Lake Champlain. It is subject to great variations of form.

U. luteolus, Lam. This species is very abundant in Lake Champlain. Its variations in form, although less than in the preceding, are considerable. In both, however, the most marked are those of sex.

U. complanatus, Lea. Very abundant in Lake Champlain and elsewhere, but I have not seen one with a white nacre. *Rayed specimens are sometimes seen.*

I have found in Lake Champlain a single specimen of another species, which is unknown to me.

CYCLAS.

C. elegans, nob. Rather common of this village. One specimen occurs.

C. rhomboida, Say. Very abundant is the only species which I have seen in

C. partumeia, Say. Common in s

C. calyculata, Drap. In company species was found quite plenty. It h

town very numerous in a cavity one y

and it is remarkable that not one coul

Mighels has found it occurring plenti

same species of Cyclas should occur s

try and in Europe, may seem incredi

is so exact, that were specimens from

I do not think that they could be sepa

The descriptions of native species o

factory, that I do not venture to affix r

of which one is the largest and the o

species.

General Remarks.—Of the thirty t

merated above, three certainly, and pos

distributed in Europe; while of the

identity with those of Europe appears

Lake Champlain appears to be the r

continent of the entire family of *Mel*

boundary between two provinces of th

U. gracilis, U. rectus, U. ventricosus, a

common through the western states, occ

the exception of *U. rectus*, plentifully, l

ther eastward. *U. compressus*, and *Ala*

species, also occur in its vicinity, but ha

the Green Mountains. *U. complanatus*

mon as far at least as Eastport, Maine,* c

Champlain. The family of *Limneana*

dary.†

* Whence I have specimens, through the kindne

† Of most of the species enumerated in this arti

of upwards of 100 marine species of the shells of M

I shall be happy to exchange for native or foreign

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A species of LIMAX also occurs of the

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UNIO.

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species occurs rarely in Lake Cham-

This species is rather common in

species is very abundant in Lake

ry abundant in Lake Champlain and

explain a single specimen of another

CYCLAS.

C. elegans, nob. Rather common in a swamp five miles north

C. rhomboida, Say. Very abundant in Lake Champlain. This

C. partumeia, Say. Common in swamps.

C. calyculata, Drap. In company with *Valvata sincera*, this

The descriptions of native species of this genus are so unsatis-

General Remarks.—Of the thirty two terrestrial species enu-

Lake Champlain appears to be the most eastern limit on this

* Whence I have specimens, through the kindness of J. Ray, M. D. of that place.