

29.27 Rhynchospira This species resembles the R. formosa but has a deeper sinus on the ventral valve and the two plications in this sinus reach the beak. The remaining plications are more elevated.

29.31 A single valve undistinguishable from the Rhynchonella (Atrypa) quadricosta of the Clinton group which is probably the young of the R. (Atrypa) congesta vol 11 pal N.S.

29.45 Rhynchonella This species is undistinguishable from R. equiradiata of the Clinton group. Pal N.S. vol 11 page 70. A comparison of specimens shows so little difference that there is no means for specific distinction. 29.45 contains Chonetes ~~congesta~~.

29.22 Rhynchonella Allied to R. Wilsoni and undistinguishable from a Tennessee species R. Daffordi which we suppose to be from the horizon of the Lower Helderberg.

29.44. Leptocoelia Closely allied if not identical to Atrypa hemispherica, vol 11 pal N.S. The differences between this shell and the one in the Clinton group in New York are that the present one has a proportionally shorter hinge line, and more rounded extremities, and the mesial elevation, on the ventral valve is stronger.

The specimen numbered 29.44. preserves only some impressions. In the collections you sent me a long time since, there several separate specimens.

2048. (Styppa emacerata) Rhynchonella emacerata of Pal N.S. val Clinton group, in Wayne Co N.S. The specimens from Nova Scotia are in no way specifically distinct from the N.S. specimens.

2043. Styppa reticularis

Lamellibranchiata -

2041. A species allied to Modiolopsis
~~2042~~ primigenius preserving the shell while 2042 is a cast in a more calcareous rock. There are features by which this may be distinguished from the specimens in our Medina sandstone. The fossil is subject to some little variations with us but the Nova Scotia specimens are always less ventricose.

206 Modiolopsis a species allied to Modiolopsis
machaeriformis of the Clinton group.

In a bit of red shale without member there is another Modiolopsis of almost precisely the form of M. nasutus of the Trenton limestone and I have seen a similar or identical species in the Hudson River group.

204 and 205 Modiolopsis ? The specimens are too imperfect to determine their specific characters, one in red shale Sandstone and the other in a fine shale.

Cleidophorus

These three specimens have each a part of a shell or an impression of the same species. The surface is marked by even bandlike striae - A part of a shell of the same species is seen on another specimen which has part of a larger shell marked in ink 4.

Another species of Cleidophorus in red sandy shale.

— — — — — A specimen of the same stone as 2042 also on 2042. Another species of Cleidophorus in hard impure limestone filled with shells.

— — — — — Another specimen in red sandy shale resembles Tellinomya Equilatera of the Clinton group, but may be a Cleidophorus. To distinguish it 10. 10.

A fragment not numbered - marked by me at this time as 10. 10. has a small Cleidophorus more similar to C. planulatus - In red shale.

Tellinomya probably an undescribed species. Associated with Modiolopsis and Cleidophorus.

This shell has all the external characters of Orthonota, but shows crenulations on the

anterior cardinal margin. It has likewise a transverse ridge anterior to the beak.

~~10. 10.~~

103. The generic relations not satisfactorily determined

102. The generic relations not satisfactorily determined

1020. *Avicula* a species not very unlike *A. emacrata*, but has been laterally compressed.

1016 Impression of a nuculoid shell, possibly however a *Cladophorus* - with concentric striae and on the posterior slope radiating striae.

1015 (*Sanguinolites* or *Leptodomus*) generic relations undetermined

1035 *Murchisonia* In the impure compact limestone with other shells.

1041^a A part of the same specimen as 1042 a more slender species of *Murchisonia* than 1035.

1036. A univalve with sinistral spire. *Halofsea? reversa*. *Bucania trilobata*. This seems undistinguishable from the species in our Medina sandstone and Clinton group.

1024 *Leptodomus* This species is more slender but closely resembles the *L. flexuosus* in the Clinton group of New York.

37 Homalonotus A very distinct species from any of ours in New York and differs from the Nova Scotian of species of beun, in the direction and elevation of the costae.

~~in part.~~
The head and tail of a species ~~of our specimens~~ ~~to Dalmanites~~ Dalmanites which more nearly approach the D. Phillipi of Barrande than any other known to me. It is quite unlike our ordinary form of Dalmanites, the head more resembling Proetus.

38 Calymene Sail apparently identical with C. blumenbachii - or with the American form C. senaria.

38 Beyrichia A species very similar if not identical with B. tuberculata, Kloden, as figured by Lons.

38 Beyrichia in fact, near the head of the Dalmanites are three small individuals of a very different species of Beyrichia unless the young of the B. tuberculata is remarkably ~~distinct~~ from the full grown specimens.

40 — — — — — A facoidal body, showing no structure or form by which it might be identified. ~~Chaetetes~~ ^{Chaetetes} or Stenopora - This is scarcely distinguishable from the species in the Clinton group of New York. The fibres or cells possibly a little finer and the mass more compact.

as to ————— Fragments of shale with Graptolithus.

This species seems to me identical with Gr. clintonenses the difference being only in a very slightly closer arrangement of the serratures, so that there may be about eight in the Nova Scotia species when there are seven in New York.

~~10.8~~

1051. a minute coral of the genus Helopora and closely allied to the H. fragilis of the Clinton group and perhaps identical with the same.

1052. The same specimens contain Sentaulites.
1052^a This Sentaulites is nearly allied to S. distans and without better specimens I hesitate to consider it distinct.

1012 The specimen was originally marked for a Discina and there is also a Clidophorus upon the same. This Discina is very much like the D. (Orbicula) tenuilamellata of the Niagara group.

1014 A joint of a crinoidal column which cannot be determined.

1032. A part of the arm of a crinoid preserving the Sentaculate

1050 Orthis testudinaria.

1051 Impressions of the exterior and interior of the valves of Orthis and of some other indeterminate shell.

1025 & 1026. A fragment of a lamellibranchiate shell of an undetermined genus.

1021 A fragment of an Orthoceras, showing two or three septa.

1053 a fragment of an annulated Orthoceras preserving six abrupt annulations which are about equal to the spaces between them.

The specimen is too imperfect to be described.

30. *Lingula*. closely allied if not identical with
L. oblonga.

39. The base of a valve of *Lingula* but too imperfect for specific identification. It may be the same as the preceding or its allied form -
L. oblata.

50. Two specimens *Orthis testudinaria*. I can find no means for specific distinction between this and the European form of *O. testudinaria*, nor does it differ from the same in our Trenton limestone except in the mesial depression of the dorsal valve which in this one corresponds more nearly with those from the Hudson River group.

I have sometimes thought that a distinction should be made among the varieties of form referred to this species.

46. *Strophomena*. An impression of the concave dorsal valve, marked by fine undulating thread like striae. This is not distinguishable from the *S. profunda* of the Clinton group of New York. There are small *Chonetes* and *Rhynchonella* on the same specimen.

41. *Strophomena*. The striae somewhat fascicled, the concentric striae wrinkled; shell flat - apparently identical with *S. corrugata* of the Clinton group in N.Y. The striae are more flattened than usual in well preserved specimens in

but not more so than in many specimens of the same species in this group in Maryland. Fragments of the same shell on this specimen ^{uses} ~~more~~ the striae more elevated.

~~10.1.~~

- 10.47. Strophomena rugosa This has the character of S. tenuistriata of Sowerby, and the same as that of our Hudson River group in the West, and is similar to the same in the shales of the Clinton group. There is a better specimen on 10.19.

19. Chonetes The specimen resembles C. cornuta of the Clinton group in New York, but is more finely and evenly striated, with the striae more closely arranged.

- ~~10.31.~~ Chonetes This shell is larger and more strongly striated than the S. cornuta.

- ~~10.29.~~ Spirifer I do not recognize this as any form described species and it is probably new.
also from no 10.3

- ~~10.28~~ Spirifer A small cast of the dorsal valve which bears considerable resemblance to Sf. sulcatus, but the concentric lamellae do not appear to have been as strong. I presume better specimens will show this to be a distinct species.

- ~~10.31.~~ Trematospira A species of this genus differing from S. canavua of the Niagara group and more nearly resembling S. perforata of the Lower Helderberg.
small label 32

89 Rhynchonella Saffordii.

Shell varying in form from ovoid to globose. Full grown specimens usually wider than long and sometimes becoming extremely ventricose, so that the diameter across the two valves much exceeds the length. Ventral valve depressed convex, with the beak minute, closely incurved; dorsal valve very ventricose, most prominent toward the front.

Cardinal slope a little depressed, sides rounded and the front in direct line flattened but not depressed.

Surface finely plicated, plications little elevated, rounded or scarcely subangular, about five or six depressed in the flattened sinus of the ventral valve and a corresponding number raised on the flattened mesial elevation, which rises abruptly though usually but slightly above the lateral portions of the shell. From ten to fourteen plications mark the surface on each side the mesial fold ^{and} sinus.

Plications in front marked by a sharp groove along the centre and those of each valve deeply interlocking.

This species resembles the R. nucleolata of the Lower Helderberg Rocks of Kentucky, but is ~~more finely plicated~~, and in some specimens it approaches to R. ventricosa, but is always much more finely plicated ^{than either}. It closely resembles the R. Wilsoni of Europe in its general form, but the plications are more rounded and somewhat coarser, and while in that species the sinus causes no depression in the ventral valve below the general surface of the shell, in ours

there is an abrupt depression as well as a slightly abrupt elevation on the dorsal valve, while there is no similar feature in the R. Wilsoni.*

The Nova Scotia specimens are in all respects identical with those from Tennessee.

The geological position of the specimen from Tennessee is in rocks of the age of the Lower Helderberg group, associated with Pentamerus galeatus, P. Verbeekii, Spinifer macropleura, Spinifer perlamellosa, Spinifer cycloptera, and others.

*. Doubly M. b. vol. II page 38 says. The "sinus at the front although deep does not alter the evenness of the" "surface."

~~10.13.~~

99 Leptocelia intermedia. n. sp.

Shell concavo-convex; shell semielliptical, cardinal extremities rounded; and the hinge line a little shorter than the greatest width of the shell; ventral valve moderately convex, carinate in the middle by a strong plication, with six or seven smaller ones on each side, the lateral ones slightly curved toward the outer extremity. Dorsal valve concave with a broad shallow mesial sinus, the margins on either side being bent ^{a little} upward, giving a ~~little~~ sinuous outline to the margin of the shell; surface marked by fine concentric striae.

This species resembles the L. hemispherica of the Clinton group in New York, in general form, but the hinge line is shorter and the extremities rounded, the mesial

14

elevation consists of a single strong plication, while in L. hemisphaerica the surface is regularly plicated with the central one sometimes a little stronger than the others.

~~10. 11.~~

16 Modiolopsis? rhomboides n. sp.

Shell subrhomboid, rounded in front, wider and obliquely truncate behind hinge line slightly ascending from the anterior end; beaks sub-terminal, posterior umbonal slope obtusely subangular below, ~~and~~ anterior to which the shell is flattened; basal margin nearly straight, the shell gradually widening behind and the posterior basal extremity abruptly rounded. Surface evenly striated concentrically.

Anterior muscular impression very strong, posterior muscular impression less strongly defined, but still very conspicuous and sub-duplicate, pallial line simple, nearly parallel to the basal margin, strongly and almost equally defined in all parts of its length between the two muscular imprints.

This shell bears some resemblance to M. primigenius but is less ventricose in the middle and the subangular umbonal slope is not so well defined in that species.

~~14a~~

17 Modiolopsis subnasutus n. sp.

Shell elongate subapalulate, the length being more than twice the greater width, hinge line slightly ascending posteriorly;

; beaks sub anterior, the anterior end very narrow, gibbous on the umbones with a subangular ridge on the umbonal slope which extends to the postero-basal angle, basal margin nearly straight the posterior end somewhat flattened and obliquely subtruncated at the extremity; Surface marked by concentric lines of growth.

This shell bears a close general resemblance to M. nasutus of the Trenton limestone but a careful comparison shows it to be wider and more abrupt at its posterior termination while the direction of the striae of growth is very distinctive, these marks being regularly curving toward the posterior end in M. nasutus, while in this one they are abruptly bent at the postero-basal angle and again on the cardinal side, corresponding with the truncate posterior extremity of the shell.

13 Glidophorus cuneatus. n. sp.

Shell ovoid, gibbous in the middle and on the umbones, gradually declining behind; beaks anterior subterminal, anterior end broadly rounded, the posterior end narrower and sub-acute, posterior umbonal slope marked by an obtuse rounded ridge which extends to the posterior extremity and below this an undefined sinus which expanding extends to the postero-basal extremity, while a less defined ridge bounds this sinuosity on its anterior side.

Surface marked by fine irregular concentric striae. In the casts of this shell there is a strong linear straight clavicle extending from a point just anterior to the beak two thirds across the valve.

14. Olidophorus concentricus nsp.

Shell sub-equilateral, very broadly oval-ovate, the anterior end the broader; height nearly four fifths the greatest length; anterior side a little shorter and more broadly rounded at the extremity. A slight depressed sinus on the posterior umbonal slope, which is more anterior than in the preceding species.

Surface marked by even band like concentric striae; shell thin, a linear curving clavicle extends from the cardinal line just anterior to the beak more than half way to the base.

The prominent points of distinction between this and the preceding shell, are the nearly central beaks, the band like striae, and the curving clavicle, the broad and nearly equal extremities of the valves.

~~10. 16.~~

15. Olidophorus erectus nsp.

Shell somewhat rhomboid-ovate, the height and length about equal; umbones prominent, beaks nearer the anterior end, somewhat curved, ^{and} elevated; posterior cardinal line curving, with a scarcely defined ridge along the umbonal slope; basal margin strongly rounded, sinuate on the postero-basal margin and regularly rounded and a

scarcely defined ridge extending down the slope just anterior to the clavicle.

Surface finely striated concentrically. a slightly curving clavicle extending from the cardinal line nearly two thirds the distance to the anterior basal margin.

This species differs from the preceding in the ~~equal~~ length and breadth and consequent greater proportional height; in the sinuosity of the postero-basal margin, and more abruptly rounded basal outline, and the curving forward of the beaks.

15 Clidophorus elongatus n. sp.

Shell sub-elliptical,

length about twice the height, beaks much nearer to the anterior end, which is narrowly rounded, umbones rounded, prominent; a defined gradually widening depression extending from the ~~umbo~~ to the posterior basal margin causing a straightening or slight sinuosity in the edge of the shell; a defined ridge along the posterior slope between the sinus and the cardinal margin.

Surface very finely striated. A slender clavicle extends from the anterior cardinal margin a little more than halfway to the base and curving slightly forward.

This species differs externally from all the others in its greater proportional length and in the rounded umbones.

The C. cuneata of the same size is a stronger and proportionally higher shell having a less defined sinus on the posterior slope, and a much stronger clavicle.

16.17 Clidophorus seminudatus. nsp. 17

Shell somewhat oval-ovate length about one third greater than the height. Surface marked by fine concentric band like striae, and the posterior slope by flattened dichotomized radiating striae, the two sets of striae gradually dying out at their junction. A faint line anterior to the beak marks the place of the clavicle.

18 Clidophorus? nuculiformis nsp

Shell nearly equilateral, sub-ventricose, height and length as seven to nine.

Anterior end rounded, basal margin regularly curved; posterior end sub acute, a slight flattening or depression along the posterior umbonal slope, and between this and the cardinal line a narrow ridge. On the anterior slope there is a depressed line almost parallel to the cardinal line, marking apparently the course of the clavicle.

Surface marked by fine concentric striae.

This species resembles in form the C. concentrica in its equilateral form, but the fine unequal concentric striae and the difference in direction of the clavicle are sufficient to distinguish it.

~~III~~

19 Clidophorus subovatus nsp

Shell ~~ovate~~, broadly oval or ovate, moderately and evenly convex; beaks near the anterior end; umbones moderately elevated; a scarcely defined depression extending from the umbos towards the postero-basal extremity; anterior extremity rounded, posterior extremity unknown; clavicle extending halfway from the anterior cardinal margin to the base of the shell. Surface marked by fine unequal sublamellose striae.

This shell is larger and more regularly convex than any of the others ^{here} described in this place and more inequilateral than any except the C. cuneata.

20 Nuculites [Orthonota] carinata n. sp.

Shell extremely elongate, nearly three times as long as wide, ^{sides} sub-parallel, hinge line straight, beaks appressed, sub-anterior, the anterior extremity rounded, posterior extremity obliquely truncate, longer on the hinge line than on the basal margin.

Surface marked by a sharp carina which extends from the umbro obliquely to the postero-basal angle, the space anterior to this carina marked by distinct elevated lamellose striae, and intermediate finer ones. The space between this and the cardinal line smooth and slightly depressed. Cardinal line anterior to the beak showing six or seven crenulations.

A strong clavicle extends from the anterior cardinal line with a gentle curve nearly to the base of the shell.

This shell presents characters not before observed combined in one species. It has the general form of Orthonota while the crenulated cardinal line and the anterior clavicle are characters of nuculites. The shell is readily distinguished from species of either genus heretofore described. The Orthonota yet known have the surface markings much less sharply defined.

1) ~~to precede Discina~~

b.) Orania acadiensis

Circular or broadly sub-oval,
moderately convex, the greatest convexity near the apex;
apex obtuse.

Several casts show a central elevated area with strong
muscular impressions; the more elevated portion being
surrounded by a flattened border which is radiatingly
striate.

These specimens are casts which appear to be the ventral
valve; and the form of the muscular impressions is also
characteristic of the genus that I can have little
~~hesitation~~ ^{referring} hesitation in thus characterising them.

and a mass to nearly twice the length. The ~~dorsal~~ ^{ventral} valve

Do not print the numbers

Description of New Species of fossils from the
Silurian Rocks of Nova Scotia. By James Hall
~~10.9.~~

1022 Discina tenuilamellata. var

Shell broadly elliptical, or suborbicular, externally depressed, apex subcentral; surface marked by thin sharply elevated lamellae.

This species closely resembles the Niagara species of Verbeek but may be distinct! Should further examination prove it a distinct species the name D. subflana may be adopted.

3 Chonetes ^{Nova Scotia}
~~Acadensis~~ ^{MS} or Dawsoni

Shell semielliptical, ^{width} with varying form, once and a half to nearly twice the length. The ^{ventral} dorsal valve variably convex, and often showing a flattened or slightly concave space down the middle of the ^{shell} valve; cardinal margin ornamented by four or five minute spines on each side of the beak, cardio-lateral margins often a little wrinkled; surface finely striated, striae flexuous, dichotomising and increasing by interstitial addition, so that there are more than one hundred on the margin of the shell; striae increasing in size below the umbo, concentric striae fine, close, rounded and slightly undulating.

Dorsal valve moderately concave; striae much stronger below the middle of the shell and sometimes bifurcating towards the margin.

This species resembles in form the Chonetes cornuta of

the Clinton group of New York, but is ^{a much} larger and more ventricose shell, the striae are proportionally less numerous and more closely arranged, the interstices being less than the striae, while in the C. comuta the interstices are wider than the striae, and the latter increase only by interstitial additions below the middle of the shell. A stronger and more elevated striae often marks the median line from beak to base of the ventral valve.

Chonetes tenuistriata nsp.

Shell semioval twice as wide as long; ventral valve moderately convex, hinge line equalling the width of the shell; surface marked by fine, ~~even~~ ^{not} closely arranged striae which apparently increase only by interstitial addition, and ~~are~~ ^{not} flexuous. The number of striae on the margin of the shell is nearly one hundred.

This species is more finely striated than the preceding the striae not flexuous, more even, and in shells of equal size ~~the striae are~~ much more numerous. This species is somewhat larger and more closely striated than the C. comuta of the Clinton Group of New York.

Spinifer rugicosta nsp.

Shell somewhat semioval, dorsal valve very convex with the mesial fold depressed along the centre; ventral valve with a wide deep mesial sinus; plications six or seven on each side of the mesial fold and sinus, strong, and much elevated, subangular, crossed by numerous strongly elevated, lamellose, imbricating concentric striae. The specimens examined are almost all imperfect casts, some of which preserve the impression of the strong concentric striae, and in one or two specimens an impression of the shell reveals the strength of the surface markings.

In many respects this species resembles the Sp. perlamellosa of the ~~Sower~~ Helderberg group in New York, but the mesial elevation of this species is flattened or depressed, a character never observed in New York specimens.

6. Spinifer subsulcatus nsp.

Shell semioval, hinge line equalling or greater than the length of the shell ^{below} plications ~~five~~ or six on each side of the mesial fold, mesial fold somewhat flattened or very slightly rounded on the summit; plications rounded; surface concentrically lamellose.

The specimens are all casts, or impressions of the shells.

They bear some resemblance to Sp. subsulcatus of the Niagara group and ^{are} intermediate between that one and the Sp. cyclopterus of the ^{Sower Helderberg group} ~~N.~~

8 Dremastospira ~~Nova Seclia~~ Acadiae. n. sp.

Shell wider than long; beak of the ventral valve produced and incurved; mesial depression marked by a small fold on each side which originates about ^{one} third of the length below the beak and continue to the margin; sinus bounded on each side by a more strongly elevated plication beyond which are six other plications on each side.

Surface marked by fine concentric striae.

This shell is referred to the genus Dremastospira from external characters alone, which are unlike Rhynchonella proper, and the shell is not a spirifer.

8 Rhynchospira sinuata n. sp.

Shell ovoid, ventricose beak of the ventral valve incurved; a mesial sinus beginning a little below the beak; surface marked by about eight or nine simple scarcely subangular plications on each side the mesial sinus.

Surface marked by concentric lines of growth.

This species differs from the R. furcata of the Lower Helderberg ~~group~~ rocks of New York in the plications being more slender, in the more defined sinus of the ventral valve, and the continuation of the two small folds in the sinus nearly to the beak.

19. Tellinomya attenuata. n.s.

Shell elongate, narrow, more than twice as long as high, anterior end short and rounded, beak elevated, situated a little in advance of the anterior third, posterior end narrow and abruptly rounded; basal margin slightly ~~curved~~ and impressed posterior to the centre; posterior cardinal line straight but gradually declining. Contour evenly convex.

Surface concentrically striated, shell thick.

This shell resembles the T. machaeriformis, but the anterior end is proportionally longer and more regularly rounded, the posterior narrower and more attenuated and the convexity of the shell much greater. It is ~~a~~ much smaller and proportionally ^{more} elongated ~~shell~~ than the T. nasuta of the Trenton Silurite.

20. Tellinomya angustata n.s.

Shell elongate, narrow, elliptical, more than twice as long as wide, beaks fully one third from the anterior end. The anterior and posterior ends similar and ~~equally~~ rounded; basal margin regularly ~~curved~~ without indentation or sinusity. Surface evenly convex and very finely concentrically striated.

27. Septodonus, (Sanguinolites), aratus, n. sp.

Shell

rhomboid-ovate, ventricose, beaks at the anterior third of the valve, incurved and pointed forward, umbones gibbous a slight depression from the umbo directly to the base of the shell leaving a slight impression in the ventral margin; posterior slope sub angular, the angle not defined anterior slope with a defined angular ridge which borders a large cordiform lunette; anterior sharply rounded, basal margin nearly parallel with the hinge line, curving upwards at the posterior extremity and somewhat obliquely ~~rounded~~ truncated from the cardinal line. Cardinal line straight posteriorly with ^a wide and deep ligamental area. Surface marked by strong unequal ridges and furrows parallel to the basal margin which becomes obsolete on the posterior cardinal slope.

It is scarcely possible to refer any fossil with satisfaction to the genera Sanguinolites or Septodonus of Mc. Coy since the grouping of species under these names appears to us to comprise a heterogeneous assemblage in either case. Our shell corresponds in its external features with Septodonus costellatus of Mc. Coy so far as the general form, surface markings, ligamental area etc. And is doubtless generically identical with that shell.

22 Megambonia? cancellata nsp

Shell sub-ovate widening posteriorly; beak anterior incurved, umbo gibbous, with a ~~gibbous~~ umbonal slope on the posterior side, which is scarcely diverging from the cardinal line; posterior extremity ~~rounded~~, the basal margin arcuate, with a slight impression anterior to the middle, the anterior end a little gibbous.

Surface cancellated by concentric and radiating elevated striae.

It is not possible from the specimen before me to refer this species satisfactorily to any known species genus.

23 Megambonia? striata nsp.

Shell somewhat oval, the basal and cardinal lines nearly parallel; beak sub-anterior, small; umbones convex, scarcely gibbous; umbonal slope regularly convex, below which, is a slight depression reaching to the postero-basal ^{margin} ~~posterior~~ end rounded, the longer part of the curve on the basal side, anterior end short and narrow, somewhat abruptly rounded. Surface marked by regularly radiating rounded striae with faint concentric lines of growth.

This differs from the preceding species in being less gibbous, in ~~and~~ the more nearly parallel cardinal and basal lines, in the direction of the umbonal ridge, and in the stronger radiating striae.

Arvicula ~~*Hemymag*~~ ~~*Acadica*~~ *scotica* nsp.

Left valve: body of the shell obliquely ovate convex and somewhat gibbous toward the umbilicus; anterior wing small rounded, posterior wing large triangular obtuse at the extremity, extending two thirds the length of the shell. The line between the wing and the body of the shell well defined by a slight abrupt depression along the junction. Surface marked by rounded radiating striae which are interrupted by fainter concentric undulations or lines of growth; the wing is marked only by concentric striae.

This species bears some resemblance to *A. emacerata* of the Niagara and Clinton groups of New York, but its form is slightly more oblique and the wing is marked only by concentric striae, while in the New York species the radiating lines on this part are stronger than the concentric ones.

25 *Murchisonia* nsp.

Shell perfectly conical, volutions about five, gradually increasing from the apex, rounded with a slight angulation or carina in the middle.

The surface is unknown and the angular band on the volution is the only means of determining its generic relations.

This differs from any of the described species of *Murchisonia* from American localities.

26. Murchisonia aciculata n. sp. Shell slender very gradually tapering, volutions about six or seven, the last ones moderately ventricose, aperture elongate oval or ovate, rounded at the anterior margin. Columella plain; volutions marked by a distinct band along the centre, and a sub-sutural carina marking the upper side of the volutions; Surface striated

27. Holopea reversa n. sp. Shell small, sinistral, apire depressed, volutions about three; the two first small and gradually expanding - the last one ~~very~~ rapidly expanding and ventricose, aperture wide expanded; Suture impressed. Surface unknown.

This shell has the general form of Holopea, but I have seen only a single specimen, which is a cast.

It is remarkable and readily recognised from the sinistral apire.

28. Orthoceras punctostriatum n. sp. Shell slender, very gradually tapering, almost cylindrical; Septa distant about one third the diameter. Siphuncle unknown.

Section circular. Surface very finely striated with ~~unequal~~ undulating striae, the interstices between which, are ~~marked~~ by punctae which are oblong indentations often becoming confluent.

This species is remarkable for its extremely gently tapering ^{form}; the fragment of ^{an} ~~one~~ than ^{an} inch long. Showing scarcely a perceptible diminution in diameter.

There are twelve and a half chambers in the space of one inch.

The surface markings are peculiar and among the specimens of the genus known to us constitute a distinctive character.

29. Comularia

A fragment of a species of this genus occurs on a specimen of the impure shelly limestone. The transverse ridges are extremely fine and closely arranged, differing from any known to me. The ridges are finely granulose and the indentations marked by the interspaces.

29. Comulites flexuosus. var. gracilis.

This species resembles the one in the Clinton group of New York, but is somewhat more slender and the annulations a little more closely arranged.

The specimens from the rocks of New York present some variation in form and the comparative distance of the annulations.

None of them, however are so slender as the Nova Scotia specimens.

~~Crustacea.~~Homalonotus Dawsoni n. sp.

Caudal shield

Somewhat parabolic, obtuse at the extremity, very convex, width at the anterior side greater than the length of the axis. Axis wider than the lateral lobes, distinguishable (in costs) from the lobes by a bending of the ribs and a scarcely perceptible depression along that line. Annulations ~~are~~, abruptly prominent; seven on the lateral lobes and nine on the axis, the anterior ones bending slightly backwards at the line of division between the axis and the lateral lobe; each successive one bending more and more abruptly till the last one approaches a rectangular turn, the whole curving gently forward at their extremities and all terminating abruptly before reaching the margin. Behind the seventh annulation the axis is marked by two more ^{annulations} leaving nearly one fourth of its length smooth.

This species is described from the costs and impressions of the caudal shield, so that the crustacean covering is unknown. It is readily distinguished by the broad not prominent axis, the rectangular direction of the annulations on the axis, and their abrupt bending at the lateral furrow.

An impression of a few imperfect annulations of the body shows that they are strongly elevated, much more so than in any known American species.

31

Calymene Blumenbachii - var.

Caudal shield somewhat

Semicircular, axis very prominent, marked by about seven annulations, lateral lobes marked by five ribs the four anterior ones bifurcating.

Surface granulate -

The specimens are not sufficient to make any satisfactory determinations regarding specific differences.

32.

Dalmanites ~~ax~~ Logani nsp

The specimens are two or three imperfect cephalic shields, one preserving the palpedal lobes and others consisting principally of the glabella, with two or three parts of caudal shields. There is a fragment of a cheek which may be of this species.

Cephalic shield somewhat semicircular.

Glabella ovate wider in front and truncate behind, depressed convex; occipital ring narrow, prominent, occipital furrow bending a little forward in the middle and curving gently backward in the middle of each side, and again turning forward; posterior furrows narrow and sharply impressed, each one extending about one third across the glabella and curving towards

at their outer extremities: central furrow linear obscure having a direction transverse to the axis; anterior furrow obscure oblique to the axis, linear, extending to the margin of the glabella a little forward of the eye; frontal lobe regularly rounded anteriorly.

A fragment of a cheek in the same association is broad produced posteriorly in a short strong spine and marked by a broad sub-marginal groove.

Caudal shield somewhat semi elliptical convex acute behind axis very prominent rounded and marked by about eight annulations, which are gently curved backwards at the extremities; lateral lobes with six simple flattened ribs which terminate in a thickened border, and separated from the axis by a strongly defined furrow; extremity abruptly pointed.

> The glabella of this species more nearly resembles Phacops in the general form and faintly impressed furrows of which the posterior one is conspicuous.

The form of the palpebral lobe, and the absence of tubercles at the base of the glabella together with the form of the caudal shield ally it with Calmania, and it may be compared with D. Phillipsi of Barrande, but has a more pointed caudal shield and the cheek if correctly ~~referred~~ ^{referred} is prolonged in a posterior spine.

33. Beyrichia pustulosa n. sp.

valves unequally semi-oval a little more than once and a half as long as wide; surface marked by three prominent ridges; a central, an anterior, and a posterior one. The central one is a single oblong oval tubercle which is directly transverse to the dorsal margin and a little nearer the anterior side.

The anterior ridge consists of a single highly elevated rounded or papillose tubercle near the dorsal margin, and an elongated elliptical tubercle placed obliquely near the antero-ventral margin, and in older specimens sometimes swelling and spreading over the margin. The posterior ridge rises near the dorsal margin and making a slightly broader curve than the posterior end of the valve approaches the ventral margin at the centre. the ridge is ~~high~~ and angular with a small prominent tubercle at the dorsal extremity and from four to six smaller spine like tubercles along its curve.

The central ridge ^{or} tubercle is separated from the lateral ridge by a distinct furrow and its continuation from the base of the tubercle passes between the lower ends of the two lateral ridges.

Ventral and lateral margins with a narrow thickened rim.

This species resembles very nearly the B. tuberculata of Kloden as described and figured by Mr. J. Rupert Jones. In our specimens the dorsal angles are more rounded;

the posterior ridge at its base is ^{28. extended} never beyond the middle of the valve, and is marked on its crest by several small spine like tubercles. The anterior ridge is usually more extended along the ventral margin in our specimens and the furrow is better defined, while the tubercles are never flattened above or overhanging the base as shown in the European specimens.

Smaller specimens which appear to be the young of this species present some slight variations of surface markings, but show less difference than the young of B. tuberculata.

34. Bayrichia equilatera n.sp.

nearly equilateral
very convex marked by three smooth or nearly smooth ridges. The central ridge is an oblong tubercle reaching from near the dorsal margin a little more than half way to the ventral margin. The posterior ridge is a little larger but, scarcely differing in form from the anterior one, its ventral extremity terminating beneath or a little in advance of the middle of the central tubercle.

The furrow is narrow but well defined on the two sides of the central tubercle, and becoming very shallow in its passage to the marginal furrow. Ventral and lateral margins thickened.

35 Leperditia sinuata n.sp.

Minute sub-ovate anterior end narrower, dorsal line one third shorter than the length of the valve. An extremely minute tubercle near the anterior end. Ventrals extremely convex or ventricose; ventral margin near the posterior end a little sinuous, or indented from the inner side. Surface smooth under an ordinary lens.

Two specimens only of this species have been observed and both of them having the same dimensions.

o Crania acadiensis n.sp.

Circular or broadly sub-oval; moderately convex; the greatest convexity near the apex; apex obtuse.

Several casts show a central elevated area with strong muscular impressions; the more elevated portion being surrounded by a flattened border which is radiatingly striate.

These specimens are casts of what appear to be the ventral valve, and the form of the muscular impressions is also characteristic of the genus that I can have little hesitation in thus characterising them.

36 Tentaculites distans var.

The specimens under examination do not present any important points of difference from those of the Clinton group in New York. In the Nova Scotia specimens there are ~~observed~~ numerous annulations near the apex which are not observable in the New York specimens.

Helopora fragilis, var. acadiensis

The specimens under examination offer no very important difference from those in New York. And as the Nova Scotia examples have been more or less compressed and worn they are scarcely in a satisfactory condition for nice discrimination.

My Dear Sir

I am compelled to send this
in haste and my preparations for
next week has prevented me
from giving that careful revision
to the whole that would have done.
I think there is no doubt but that
she is so designated on all new
Sewing Machine