the railway cuttings north and south of Bray Head, up to a height of about 200 feet, there are shelly gravels interstratified with *Glacialoid drift*; portions of the latter drift being, apparently, in both places the uppermost member in the section. In the co. Wexford, according to the published geological maps, most of the country below the 250 feet contour line is occupied by shelly drifts; but in this area of shelly drift are rocky tracts or exposures of "Rocky" and Boulder-clay drift, while some of the land above the 250 feet contour line is also surrounded by it. The shelly drift in general is more or less gravelly on the south of these exposures, and to the north margin of the area; while marls and clays are found to the north of the exposures and in the wide open spaces. Associated with these arenaceous and argillaceous accumulations the *Glacialoid drift* occurs, but mostly with the latter, dovetailed into them or graduating into them, and in places overlying them. As this *Glacialoid drift* has previously been noticed, it is unnecessary here to repeat the description.

(To be concluded in our next Number.)

IV.—DESCRIPTIONS OF NEW FOSSILS FROM THE DEVONIAN FORMATION OF CANADA.

By H. ALLEYNE NICHOLSON, M.D., D.Sc., F.R.S.E.;
Professor of Natural History in University College, Toronto.

(PLATE VI.)

(Continued from page 60.)

Genus *PRODUCTELLA*, Hall.

"Shells having the general form of *Productus*, but uniformly with a narrow area on each valve, a foramen or callosity on the ventral area, small teeth, and more or less distinct teeth-sockets. The reniform vascular impression, rising from between the anterior and posterior ocluser muscular impressions, curves gently outwards, and, following a curvature somewhat parallel with the margin of the shell to below the middle of its length, is abruptly re-curved, and the extremity, turned a little backwards, terminates about halfway between the margin and the anterior extremity of the mesial septum. The cardinal process, seen from the inner side, is bilobed, and from the exterior side each of these divisions is usually bilobed.

"These shells differ from *Strophalosia* in the extremely narrow linear cardinal area, greater extension of the hinge-line, more extreme arcuation or ventricosity of the vental valve in many or most of the species, and especially in the direction and termination of the reniform vascular impressions, which resemble those of *Anulosteges* and of some species of *Productus*. It differs from *Productus* in the constant presence of an area, hinge-teeth, and sockets." (Hall, Pal. N. Y. vol. iv. p. 153.)

Productella is considered by Hall as a mere sub-genus of *Producta*; a considerable thickness of gravel. The base of this cliff is a huge kitchen-midden. Consequently it could not be examined. Therefore I cannot say if the upper portion of this section is typical Boulder-clay drift, or if the underlying gravels are similar to the shelly gravels in the adjacent country to the south.

but it seems to me that the articulation of the valves by distinct teeth and the presence of a distinct hinge-area are quite sufficient characters to separate the two generically. Whether *Productella* can be kept apart from *Strophalosia*, King, is another matter, the chief characters by which the two are separated being merely questions of degree. In external appearance, however, the shells referred to *Productella* resemble *Producta* much more nearly than do those referred to *Strophalosia*.

Hall has described many species of *Productella* from the Devonian rocks of the State of New York, chiefly from the Hamilton and Chemung groups, but also from the Corniferous Limestone. I have only met with a single species of the genus in the Devonian rocks of Western Ontario; but this, though exceedingly abundant in the Corniferous Limestone of various localities, seems to be distinct from any recorded by Hall, and I shall therefore describe it as new.

PRODUCTELLA ERIENSIS, Nicholson. Pl. VI. Fig. 10.

Shell minute, thick, semi-oval, or nearly semi-circular, the length about one-fourth less than the width as a general rule. Hinge-line as wide or wider than the greatest width of the shell; the cardinal angles rounded or more commonly auriculate.

Ventral valve exceedingly gibbous and ventricose, strongly and regularly arched from the beak to the front margin, but depressed towards the cardinal angles. Umbo obtuse, prominent, strongly incurved. Area very narrow and difficult to make out.

Dorsal valve depressed convex, not gibbous, depressed towards the cardinal angles. When partially decorticated, it shows very distinctly from six to eight concentric imbricating lines of growth. In this condition it also exhibits a more or less defined median longitudinal ridge, which extends from a small elongated pit just in front of the umbo to the front margin—two generally stronger ridges diverging from the umbo on either side of the central ridge. The beak is scarcely prominent, whilst there is an extremely narrow linear area and a small cardinal process.

The cast of the ventral valve exhibits a longitudinal slit extending from the beak about one-fourth or one-third of the shell, and indicating that the cavity of the beak was divided by a low mesial partition ("rostral septum"). In front of this slit there is often a horseshoe-shaped elevation representing the cast of the pit where the divaricator muscles were attached; but this is not always conspicuous. On one or both sides of the mesial slit there is also generally a slighter and shallower groove bounding the umbo laterally, but the general surface of the cast is quite smooth and not pitted.

The interior of the dorsal valve exhibits radiating lines of minute pits, which cover its whole surface, or are most abundant in the central portion of the valve, and diminish as the margin is approached. Besides these, on either side of the middle line are two pairs of deep slightly curved sulci, which extend from beneath the beak to near the margin. Those of the innermost pair are most constant, and are placed close to the central line of the valve. Those of the outer pair are more variable, and there are often two or three

radiating grooves on either side in place of one. Immediately beneath the beak, lastly, are placed two elongated grooves, one on each side, which only diverge slightly from the direction of the hinge-line, and extend only a short way into the shell. These are apparently dental sockets.

The surface of the ventral valve is rarely preserved, but appears to have been quite smooth. The surface of the dorsal valve exhibits faint concentric striæ. No radiating striæ can be made out, nor are there any traces of spines either on the hinge-line or upon the surface of either valve.

The width of the hinge-line of the ventral valve is two lines, the length about a line and two-thirds, and the height about three-quarters of a line to a line. The dimensions of the dorsal valve are the same, except that the height is much less. Hardly any departure from these measurements can be observed even in a large number of specimens; but a few individuals are very slightly larger, and many have the proportion of the length to the width slightly less, owing to the greater extension of the cardinal angles.

Amongst the numerous species of *Productella* described by Prof. Hall from the Devonian rocks of the State of New York, there are only *P. sub-aculeata* and *P. Fullia* which have the dorsal valve convex, all the others being concavo-convex. From these, however, as indeed from all the rest, *P. Eriensis* is distinguished by the total absence of spines and by the internal characters of both valves. There may, in fact, be some doubt as to the reference of this form to *Productella* at all, and for the positive decision of this doubt our materials are unfortunately insufficient; since, though I have examined some hundreds of specimens, I have not succeeded in finding a single example in which the characters of the hinge-line and areas are satisfactorily shown. Still, the ventral valve, in its great gibbosity, its extended hinge-line, and its produced and depressed ears, is singularly Productoid; and the presence of distinct areas on each valve, together with the fact that the valves are articulated by teeth and sockets, would remove the species from *Producta*, and would seem to warrant its reference to *Productella*. The muscular impressions in the ventral valve unluckily cannot be made out, and no help consequently can be derived from this source; whilst the interior of the dorsal valve is certainly unlike that of the typical *Productellæ*, and in some respects approaches *Leptæna*.

Productella Eriensis presents a considerable superficial resemblance to *Spirifera lorii*, Fleming; but the latter has a hinge-line shorter than the greatest width of the shell, rounded cardinal angles, both valves with mesial furrows, and a sufficiently conspicuous area. Our species is also very like *Ambocælia umbonata*, Conrad (= *Orthis umbonata*, Conrad, and *O. nucleus*, Hall), which is very closely allied to *Spirifera lorii*. The latter, however, is distinguished from *P. Eriensis* by its very elevated umbo, the existence of a well-marked mesial sinus in the ventral valve, and the presence of a comparatively large and high area, which extends conspicuously to the cardinal extremities.

Locality and Formation.—Very abundant in certain beds of the Corniferous Limestone at Port Colborne and Hagersville.

Genus LEIORHYNCHUS, Hall.

"The shells of this genus are ovate, circular, or transverse, with valves unequally convex, and marked by a median sinus and fold in the ventral and dorsal valves respectively. The surface is plicated by rounded bifurcating plications, which are always more conspicuous on the mesial fold and sinus, whilst they often become obsolete on the lateral portions of the shell; concentrically marked by strong lines of growth. Substance of the shell fibrous, usually thin. Valves articulating by teeth and sockets; the apex of the ventral valve perforate at some period of its growth, the lower side being completed by deltidial plates. On the interior of the ventral valve, two short diverging dental lamellæ extend into and are joined to the sides or bottom of the rostral cavity; the muscular impression occupies a narrow triangular or ovate-triangular space below the dental lamellæ. The dorsal valve has a well-defined septum, often reaching below the middle of the valve, and divided above, leaving a triangular or spoon-shaped depression. The hinge-plates are narrow strong processes with sockets embracing the teeth of the opposite valve." (Hall, Pal. N. Y. vol. iv. p. 355.)

I am not in the position to pronounce any opinion as to the validity of the genus *Leiorhynchus*, or as to the propriety of separating it from *Rhynchonella*, to which it is certainly most closely allied. In the meanwhile, as Hall has described under this title several species from the Hamilton and Chemung formations, I shall accept the genus for the reception of two forms which occur in the Hamilton Group of Ontario, one of them being the previously recorded *L. multicastrata*, Hall (= *Rhynchonella*? *Laura*, Billings), and the other being new.

LEIORHYNCHUS HURONENSIS, Nicholson. Pl. VI. Fig. 11.

Shell elongate-ovate, the greatest width being from one-sixth to nearly one-fifth less than the length, whilst the greatest width is placed nearly about the middle of the shell. Ventral valve convex, very gibbous in the umbonal region, abruptly curving to the sides, and depressed from about the middle to the front margin of the shell. A very broad and exceedingly shallow mesial sinus, which is obsolete near the beak, but occupies almost all the front margin of the shell, and supports about five low rounded plications. Beak of the ventral valve large, prominent, and incurved, apparently not perforated by a foramen, in close contact with the umbo of the dorsal valve. Dorsal valve convex, strongly curved towards the sides, its centre occupied by a broad mesial fold, which corresponds with the ventral sinus, and carries five rounded plications. Margins of the fold and sinus more or less distinctly interlocking. Beak of the dorsal valve deeply buried beneath that of the ventral valve. Surface marked with rounded plications, which are very obscure except upon the fold and sinus, and which become nearly or quite obsolete in the neighbourhood of the beaks. The plications are crossed with very fine concentric striæ, and with strong and very well-marked lines of

growth, which become close set and imbricating towards the margin of the valves.

The dimensions of a large individual are:—Length, one inch; greatest width, ten lines; height, eight lines. A smaller and narrower individual has a length of eleven lines, a greatest width of eight lines, and a height of six lines.

There is no doubt as to the entire distinctness of this species from *Leiorhynchus multicastrata*, Hall, though there may perhaps be some question as to its reference to *Leiorhynchus*; since Hall states that the fold and sinus in this genus never interlock, which they certainly do in some, if not in all, of the examples of this species. In other respects there is a close general resemblance between this and *L. multicastrata*, especially as regards the surface-characters, and I do not think the two species can be generically separated. *L. Huronensis* is distinguished from *L. multicastrata* by its much more elongated and contracted form, the greater convexity of the valves in the umbonal region, the much more prominent and strongly incurved beak of the ventral valve, the absence of a foramen in the adult, the much greater width and shallowness of the sinus and fold, and the stronger and more crowded lines of growth. I have not seen any example which exhibits the interior.

Locality and Formation.—Shales of the Hamilton Group, Widder, Township of Bosanquet. (Collected by Mr. Geo. Jennings Hinde.)

Genus TÆNIOPORA, Nicholson.

Polyzoary calcareous, composed of a flattened linear expansion, which branches dichotomously, and is celluliferous on both sides. Each side of the polyzoary is furnished with a strong median ridge or keel, which has a longitudinal direction, and separates the frond into two lateral halves. The cells have very prominent apertures, and are arranged in from three to five longitudinal rows on each side of the central keel; the cells of contiguous rows alternating, so that a series of short oblique rows of cells are produced, which diverge from the keel like the barbs of a feather. The margins of the polyzoary are usually plain and non-celluliferous, and the cells are not separated by longitudinal striae or elevated ridges. No fenestrules are present, and the entire frond forms a continuous expansion, within which the cells are immersed.

Two species of *Polyzoa* which agree in the above characters are not uncommon in the Hamilton Formation of Western Ontario; and their structure appears to me to be sufficiently distinctive to entitle them to be considered as constituting a distinct genus, which I propose to term *Tæniopora*, from the ribband-like form of the coenœcium. The affinities of *Tæniopora* are clearly with *Ptilodictya*; and though there are some important points in the structure of the former which I have been unable to make out, I nevertheless find the external characters of *Tæniopora* are alone sufficient to warrant generic distinction. One of the chief characters of *Ptilodictya* is the presence of a striated laminar axis, separating the two celluliferous aspects of the polyzoary. I have not been able to establish clearly either the absence or presence of such an axis in *Tæniopora*, but my

specimens lead me to believe that it is absent, and that there is instead a vertical septum traversing the short diameter of the frond, and prolonged on either face into a keel. Leaving this point, however, out of the question, as uncertain, there remain the following differences: 1. In *Ptilodictya* the cells are not furnished with prominent mouths, but with depressed apertures, and these are arranged in rows which are separated by distinct thread-like elevated lines or striae. On the other hand, the cells of *Tæniopora* have prominent pustuliform mouths, and they are usually not separated by any lines or ridges of any kind. In some examples from the Hamilton Shales of the State of New York, the first row of cells on either side of the keel has a limiting thread-like line; but I cannot detect any such structure in our Canadian specimens, and even the former have the remaining rows of cells not marked off in this way. 2. There is no mesial keel or elevated ridge in *Ptilodictya*, by which the cœnocœcium is separated into two symmetrical lateral halves. On the other hand, one of the most conspicuous features about *Tæniopora* is a strong elevated keel on each aspect of the frond, on either side of which the cells are arranged in alternating lines. 3. While some species of *Tæniopora* show a distinct non-celluliferous marginal zone, such as exists in *Ptilodictya*, others show no such character, and in any case, even when present, this zone is smooth and not striated. Upon the whole, therefore, whilst recognizing the general affinities of *Tæniopora* to *Ptilodictya*, I think the former may safely be regarded as a distinct genus. The following two species of *Tæniopora* have come under my notice from the Hamilton Formation of Canada.

TÆNIOPORA EXIGUA, Nicholson. Pl. VI. Fig. 13.

Polyzoary forming linear flattened expansions, which branch dichotomously at angles of about 60°, and at intervals of from one and a half to three lines. The width of the frond is about a line or a little over, and its thickness in the centre is about one-third of a line, from which point it rapidly diminishes in thickness till the sharp-edged lateral margins are reached. Both sides of the cœnocœcium carry a well-marked longitudinal carina, which occupies a mesial position, and on either side of which are three or four longitudinal rows of cells. The cells are alternately disposed in contiguous rows, so as to form a series of short transverse obliquely-ascending lines consisting each of three or four cells. The cells are immersed in the substance of the cœnocœcium, and their mouths are circular and prominently elevated above the general surface. About six cells occupy the space of one line, measured longitudinally, and the intervals between them are equal to, or slightly greater than, the diameter of the cell-mouths themselves. The cells extend on either side of the midrib quite to the edge of the cœnocœcium, and there appears to be no non-celluliferous marginal zone.

From the following species, *Tæniopora exigua* is distinguished by its much smaller width, its more frequent division, its much less strongly elevated midrib, and the apparent absence of any distinct marginal non-poriferous area.

One specimen (Fig. 13, *a*, *b*) exhibits at the base a small conical

expansion, from which the branches proceed distally, and which terminates proximally in a singular, and clearly natural, circular perforation of about one-fourth of a line in diameter. There are also indications that the branches of the frond were disposed bilaterally or radially round this central point. It is to be regretted, however, that with the imperfect materials at my command, I am at present compelled to leave this and other points of interest in the structure of this curious form unelucidated.

Locality and Formation.—Common in the Hamilton Group near Arkona, Township of Bosanquet. Also in shales of the same formation near Canandaigua, State of New York.

TENIOPORA PENNIFORMIS, Nicholson. PL. VI. Fig. 12.

Polyzoary forming a linear flattened expansion, which probably divides dichotomously. The total width of the frond is about two lines, and its thickness in the middle is about two-thirds of a line, whence it gradually thins away to the margins. Both sides of the coenœcium are furnished with an exceedingly strong, blunt, mesial, longitudinal ridge or keel, the height of which is about a fourth of a line, and its thickness about the same. On either side of the mesial keel are four rows of cells in alternating lines. The mouths of the cells are circular and prominent, about five or six occupying the space of one line measured longitudinally. Outside the rows of cells on either side is a plain non-celluliferous space, about one-third of a line in width, by which the margin is constituted.

In most of its essential characters, *Teniorpora penniformis* (Fig. 12) agrees with *T. exigua*; but it is a much more robust form, with a broader and more elevated keel, and possessing a marginal non-celluliferous area which is apparently wanting in the latter. I have only fragments of the species, and am unable to state anything as to its general form of growth or its total dimensions.

Locality and Formation.—Hamilton group, Arkona, Township of Bosanquet.

Genus PTILODICTYA, Lonsdale.

The genus *Ptilodictya*, Lonsd. (= *Stictopora*, Hall) includes a number of curious *Polyzoa* which are essentially Silurian, but which extend into the Devonian rock, and appear even to have survived into the Carboniferous period. The presence of a non-celluliferous striated margin is very usual, but hardly appears to be universal or essential; and the central laminar axis or septum, which separates the cells of opposite sides, is sometimes longitudinally striated, as well as being concentrically wrinkled. A single species of the genus, which I cannot identify with any previously recorded form, occurs plentifully in parts of the Corniferous Limestone, and, more rarely, in the Hamilton formation of Western Ontario.

PTILODICTYA MEEKI, Nicholson. PL. VI. Fig. 14.

Polyzoary having the form of thin, very much flattened cylindrical branches, which have an average width of about a line, rarely reaching a line and a half or two lines, with a thickness in the middle of about half a line; dividing dichotomously at angles of 50° or 60°,

generally at intervals of from four to six lines. No developed non-poriferous margins, the whole exterior surface seeming to be occupied by the cells. Cells tubular, curved, opening by oval mouths, arranged in rows, which are separated by delicate thread-like lines or striæ. About ten rows of cells in the space of one line, the cells of each row alternating with the next, so that the cell-mouths have a quincuncial arrangement. About five cell-mouths in the space of one line measured longitudinally, the interspaces between them being generally considerably longer than the long diameter of the cell-mouths themselves. The partition or laminar axis between the cells on the two sides of the polyzoary is marked with delicate longitudinal striæ, which correspond with the rows of cells, together with obscure concentric wrinkles, the convexity of which is directed towards the apex of the frond.

This species presents a close resemblance to *P. Gilberti*, Meek, from the Corniferous Limestone of Ohio (Geol. Survey, Ohio, Palæontology, vol. i. pl. xviii. fig. 1), with which I was at first disposed to identify it. I have, however, been compelled to separate it as a distinct species upon the following grounds:—1. *P. Gilberti* is stated to have eight or ten rows of cells in the space of two and a half lines; whereas *P. Meeki* has never less than ten in the space of one line, which would give twenty-five rows in two and a half lines. 2. The central laminar axis of *P. Gilberti* is said to be covered with regular arched transverse striæ; whereas that of *P. Meeki* exhibits well-defined longitudinal striæ, with either no transverse striæ, or with but obscure transverse wrinkles. 3. *P. Gilberti*, in common with the typical species of the genus, possesses well-marked striated and non-poriferous margins; but I have been unable to detect any traces of these in the numerous specimens of *P. Meeki* which have passed under my notice. 4. *P. Gilberti* appears, upon the whole, to be a larger and more robust species, sometimes attaining a width of three lines, whereas the average width of *P. Meeki* is only one line or a little over. I have, therefore, thought it safest to separate *P. Meeki* under a distinct specific title, and I have named it in honour of Mr. F. B. Meek, one of the most distinguished palæontologists of America.

In some respects, *P. Meeki* presents considerable resemblance to *P. fenestrata*, Hall, from the Chazy Limestone; but in the absence of any sufficiently detailed description of the latter species, and especially of accurate measurements, it is impossible to say how close this resemblance may really be.

So far as at present known, *P. Gilberti*, Meek, and the present species are the only forms of the genus *Phylodictya* which have hitherto been detected in the Devonian Formation.

Locality and Formation.—Common in the Corniferous Limestone of Port Colborne. Rare in the Hamilton Formation, Arkona, Township of Bosanquet.

Genus CLATHROPORA, Hall.

Polyzoary composed of membranous flattened expansions, which either branch without anastomosis, or, more typically, divide into branches which inosculate at short intervals, till there is produced a

broad frond perforated at regular intervals by rounded or oval fenestrules of considerable size. Both sides of the polyzoary carry cells; but the cells which open upon one aspect are separated from those which open upon the outer aspect by a thin concentrically-striated laminar axis or membrane, precisely similar to the axis of *Ptilodictya*. In the clathrate species, the margins of the fenestræ are surrounded by a strong striated non-celluliferous margin.

The two most important points in the above definition, namely, the presence of an axis, and the non-poriferous margins of the fenestræ, were not recognized by Hall: but they establish a very close relationship between *Clathropora* and *Ptilodictya*, and they render it doubtful if the former can be retained apart from the latter. The presence of a thin laminar axis exactly similar to that of *Ptilodictya* I have determined not only in a Corniferous species of *Clathropora*, but also in *C. frondosa*, Hall, a Niagara Limestone form, and the type-species of the genus. The striated non-celluliferous margins of *Ptilodictya* are also represented by precisely similar margins surrounding the fenestræ both in *C. frondosa*, Hall, and *C. intertexta*, Nich. It would appear, therefore, that the chief difference between *Clathropora* and *Ptilodictya* is to be found in the fact that the cells of the latter are arranged in rows separated by distinct elevated lines, which is certainly not the case in any examples of the former which I have seen, though the contrary is asserted by Hall. The mode of growth of *Clathropora* in itself clearly does not afford sufficient ground for generic distinction, and the more or less quadrangular form of the cell-mouths is merely occasional and accidental. Upon the whole, therefore, whilst retaining the genus *Clathropora* in deference to such a high authority as Prof. Hall, I am of opinion that the forms included under it may safely be considered as simply reticulated *Ptilodictyæ*.

CLATHROPORA INTERTEXTA, Nicholson. Fig. 15.

Polyzoary forming a thin flattened expansion, composed of broad branches, which inosculate so closely as to leave simply oval or rounded fenestræ perforating the frond. The width of the branches is from a line to a line and a half; and the fenestræ are oval or circular in shape, about a line and a half or a little more in diameter, and placed at intervals of about a line or a line and a half. The margins of the fenestræ are surrounded by a striated non-celluliferous

FIG. 15.—*Clathropora intertexta*, Nich. *a*. Portion of the frond, natural size. *b*. Fragment of the same enlarged to show a portion of the central membranous axis. From the Corniferous Limestone.

zone. The frond is celluliferous on both sides, forming two continuous layers, their proximal ends or bases being placed back to back, but separated by a delicate calcareous membranous or laminar axis, which exhibits numerous close-set transverse curved striæ. From six to ten cells occupy the space of a line measured diagonally, whilst the form of the cell-mouths is oval or circular, and the cells do not appear to be arranged in distinct rows separated by elevated striæ.

Clathropora intertexta is very closely allied to *C. frondosa*, Hall, a beautiful and not very rare species from the Niagara Limestone. It is clear, however, that Hall has included two species under this name. One of these, comprising all the specimens which I have collected personally from the Niagara Limestone, is very readily distinguished by the exceedingly small size of the fenestræ (see Pal. N.Y. vol. ii. pl. xl. B. fig. 5 b), which have a diameter of only about half a line, and look simply like little oval or circular perforations in the membranous cœnecium. The cells, also, are remarkably long and narrow, and about fourteen of them occupy the space of one line measured transversely. There can be no question as to the entire distinctness of this from *C. intertexta*, and I should be disposed to consider this as the type of *C. frondosa*, Hall. The other forms included by Hall under *C. frondosa* resemble our species in their proportions and in the size of the fenestræ (see Pal. N.Y. vol. ii. pl. xl. B. fig. 5 a); but in the absence of any sufficiently detailed description, it is impossible to say that they are absolutely identical with *C. intertexta*. Should this, however, by an actual comparison of specimens, prove to be the case, I should propose that the name of *C. frondosa* should be restricted to the specimens with small fenestræ and minute close-set cells; whilst the name of *C. intertexta* should be applied to the undoubtedly distinct examples with large fenestræ and comparatively large cells. In any case, as before remarked, both of these species of *Clathropora* might without impropriety be regarded as nothing more than reticulated *Psilodictya*.

Locality and Formation.—Corniferous Limestone, Jarvis, Township of Walpole. (Collected by Mr. George Jennings Hinde.)

EXPLANATION OF PLATE VI.

- FIG. 10.—*Productella Eriensis*, Nich. a. Exterior of the dorsal valve, partially exfoliated, enlarged. b. Cast of the ventral valve of a rather larger example, enlarged. c. Interior of the dorsal valve enlarged. d. Cast of the ventral valve of an example with extended ears, enlarged. From the Corniferous Limestone.
- FIG. 11.—*Leiorhynchus Huronensis*, Nich. a. Dorsal view. b. Ventral view of the same. c. Side view of a larger individual. From the Hamilton Group.
- FIG. 12.—*Tenipora penniformis*, Nich. a. Fragment, of the natural size. b. Transverse section of the same, enlarged and partly conjectural. c. Fragment enlarged. d. Fragment still further enlarged, showing the central keel and prominent cell-mouths. From the Hamilton Formation.
- FIG. 13.—*Tenipora exigua*, Nich. a. Portion of the frond, natural size. b. The same enlarged, the portion drawn in outline being conjectural. c. Portion of the same still further enlarged. From the Hamilton Group.
- FIG. 14.—*Psilodictya Meeki*, Nich. a. Portion of the frond magnified to show the branching and the longitudinally striated axis. b. A fragment enlarged still further to show the form and arrangement of the cells. c. Transverse section enlarged. From the Corniferous Limestone.

(To be continued.)

To illustrate Prof. H. A. Nicholson's paper on New Devonian Fossils.