NEW SPECIES OF BRACHIOPODS FROM THE UPPER DEVONIAN OF HAY RIVER, WESTERN CANADA

by A. E. H. PEDDER

ABSTRACT. *Nervostrophia borealis*, *N. maclareni*, and *Cyrtina lapidea* are described and figured as new species from the Hay River formation of the North West Territories, Canada. *Douvillinella? crickmayi* is described and figured as a new species from the lower Grumbler formation of the same area. All the fossils are of Frasnian age.

THE fossils described were collected by Dr. P. E. Kent of BP Exploration (Canada) Limited and by Dr. E. W. Best, R. L. Pemberton, and A. E. H. Pedder of Triad Oil Co. Ltd. in June 1958. The author is much indebted to these companies for permission to publish the work and to present the type specimens to the Geological Survey of Canada.

Biostratigraphy. Stratigraphical thicknesses in the Hay River area have mostly been obtained from scattered incomplete river sections and various published estimates differ considerably. Warren and Stelck (1950, p. 68) gave the thickness of the type Hay River formation (as later restricted by Crickmay) as about 270 feet; Crickmay's figure for the same interval is 630 feet (1957, p. 6). Farmilo is quoted by Law (1955, p. 1977) as having measured about 900 feet of Hay River shale on Hay River and deWit (unpublished) has obtained for Triad Oil Co. Ltd. a total thickness of 1,250 feet for the Hay River shales. Both of these latter measurements include Crickmay's Simpson formation, but, even so, indicate a thickness in excess of 630 feet for the type Hay River formation (restricted). Bore-hole evidence (Law 1955, fig. 5) also indicates a greater thickness than quoted by Crickmay.

The new species were obtained from three beds. The lowest is a grey argillaceous limestone grading to a pure coquina bed in part, and is exposed on Hay River opposite mile 14 of the Mackenzie Highway (Grimshaw Road). Part of its fauna is: *Eliasopora sp.*, *Hederella sp.*, *Orbiculoidea sp.*, *Productella sp.*, *Nervostrophia borealis* sp. nov., *Monelasmina besti* Pedder, *Schizophoria sp.*, *Atrypa sp.*, *Spinatrypa sp.*, *Eleutherokomma reidfordi* Crickmay, *Cyrtospirifer* [= *Regelia*] *glaucus* Crickmay, *Cyrtina lapidea* sp. nov., *Spirorbis sp.*, *Tentaculites mackenziensis* Kindle, ostracods, and a trilobite. The horizon is the lowest assigned to the Hay River formation as restricted by Crickmay.

The second bed is a limestone exposed just above Louise Falls on Hay River. Stratigraphically it is immediately below the topmost shale and siltstone of the Hay River formation and is currently regarded as being from 30 to 40 feet below the top of that formation. The rock is very fossiliferous, but only those specimens exposed are easily collected and these are generally water worn. Part of the fauna is: *Macgeea proteus* Smith, *Nervostrophia maclareni* sp. nov., *Productella sp.*, *Atrypa sp.*, *Cyrtospirifer sp.*, *Adolfia sp.*, pelecypods, *Tentaculites sp.*, *Devonocidaris sp.*, and *Decadocrinus sp.*

The highest bed is a maroon argillaceous limestone exposed on Hay River opposite mile 38 of the Mackenzie Highway. It is near the base of the Grumbler formation and

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the following is part of the bed's fauna: *Clionoides sp.*, *Spongophyllum imperfectum* Smith, *Aulocaulis sp.*, *Thamnopora sp.*, *Vinelloidea sp.*, *Leptotrypella sp.*, *Hederella sp.*, *Hernodia sp.*, *Petrocrania sp.*, *Stropheodonta sp.*, *Douvillinella? crickmayi* sp. nov., *Schuchertella sp.*, *Schizophoria sp.*, *Gypidula sp.*, *Atrypa rubromitra* Crickmay, *A. spp.*, *Cyrtospirifer sp.*, *Tenticospirifer sp.*, *Adolfia spp.*, *Cyrtina sp.*, *Cranaea sp.*, pelecypods, cephalopods, *Cornulites sp.*, *Spirorbis angulosus* Fenton and Fenton, crinoid fragments.

SYSTEMATIC PALAEONTOLOGY

Superfamily STROPHOMENACEA Schuchert 1896
Family STROPHEODONTIDAE Caster 1939
Genus NERVOSTROPHIA Caster 1939 emended Williams 1953

Genoholotype (by author's original designation) *Stropheodonta nervosa* Hall = *Strophomena nervosa* Hall 1843, text-figs. 1, 1*a* on p. 266, Chemung group, Bath and Campbelltown, New York.

Nervostrophia borealis sp. nov.

Plate 35, figs. 1–10

1950 *Douvillinaria variabilis* (Calvin); Warren and Stelck, p. 69.
1956 *Douvillinaria variabilis* (Calvin); Warren and Stelck, pl. 16, fig. 26.
1959 *Nervostrophia sp.* Pedder, p. 472.
Non *Douvillinaria variabilis* Calvin sp.

Name derivation. Latin, *borealis* = northern.

Types. Holotype, specimen originally Triad Oil Co. Ltd. collection no. X46e, now Geological Survey of Canada type no. 14,598. Six paratypes, specimens originally Triad Oil Co. Ltd. collection nos. X46f–k, now Geological Survey of Canada type nos. 14,599 to 14,604.

Type stratum. Hay River formation, coquina bed 630 feet below top (Crickmay 1957, p. 6; not 1953, p. 11); Upper Devonian, Frasnian.

Type locality. Canada, North West Territories, Hay River opposite mile 14 of the Mackenzie Highway measured south-westward, about 80 feet above water-level and 10 feet below bank top. Latitude 60° 41′ N., longitude 115° 54′ W.

Description. Shell small and fragile. Profile plano-convex. Outline semicircular anteriorly, posteriorly just flexed at pedicle beak, cardinal extremities with small mucrones, postero-lateral margins weakly concave. Anterior commissure rectimarginate. Shell substance very thin, calcitic and pseudopunctate.

Pedicle valve weakly convex centrally and postero-centrally, plane near lateral and anterior margins. Umbonal region, small, longer than broad and only slightly elevated. Beak minute and blunt. Beak ridges sharp along entire length. Interarea plane, apsaclinal, very broadly equilaterally triangular with an apical angle of about 168°. Delthyrium open anteriorly, closed posteriorly by a strongly medianly arched pseudodeltidium. Hinge-line straight, denticulate along most of its length in young valves and for about two-thirds of its length in adults. Process pits deep as thin shell permits, slightly posteriorly directed. Ventral process low and narrow. Muscle scars petal-shaped, about one-half as long as the valve, lightly impressed, bounded postero-laterally by heavy ridges, open antero-laterally and anteriorly. Adductor and diductor scars not differentiated in the type specimens. Median septum very fine, about one-half the length of the muscle scars. Interior surface, with the exception of the muscle scars and cardinalia, entirely and finely papillose; postero-lateral muscle bounding ridges less finely papillose.

External surface ornament variable, of more or less continuous, generally straight, rarely sinuous costae, separated by from one to four intercalated costellae; costellae rare in gerontic specimens; costae and costellae number about seven per millimetre near margins of valve. Concentric micro-fila superimposed on entire surface, numbering about fifteen per millimetre. Interarea with growth striae parallel to hinge-line and with clear traces of denticles, especially anteriorly.

Brachial valve plane. Umbo and beak not developed. Interarea linear. Notothyrium displaced by cardinalia. Chilidium degenerate. Hinge-line straight, socketed opposite denticles of pedicle valve. Cardinal process lobes, stout, disjunct, with attachment faces posteriorly directed. Socket plates small, attached to and parallel to cardinal process lobes. Muscle scars subtriangular, lightly impressed, bounded postero-laterally by large hummocks divergent 90° to each other, open anteriorly; each muscle divided anteriorly by low, broad, elongate elevations parallel to postero-lateral muscle ridges. Median septum broad posteriorly, rapidly tapered to a fine ridge anteriorly, three-fourths the length of the valve. Interior surface, with the exception of the cardinalia and deeper parts of muscle scars, finely and irregularly papillose; postero-lateral muscle ridges and elevations in anterior part of muscles less finely papillose; exterior ornament similar to that of pedicle valve, but costae less developed and approaching the size of the costellae. Denticle sockets visible from exterior through a thin shell layer.

Dimensions (partly reconstructed and estimated from the contour of the concentric micro fila). Holotype, paratypes 2, 4 (pedicle valves), and 5 (brachial valve), length 11·4, 5·1, 5·4, and 5·0 mm., width 14·0, 8·0, 8·3, and 6·6 mm., depth 1·3, 1·1?, and 0·1 (not including depth of process lobes) mm.

Remarks. No similar fossil has been named from the Upper Devonian. The species superficially resembles *Douvillinaria variabilis* (Calvin) from the Independence formation of Iowa, but is not congeneric with it.

Nervostrophia maclareni sp. nov.

Plate 36, figs. 1–5

Name derivation. Patronym for Dr. D. J. McLaren, Geological Survey of Canada, Ottawa.

Types. Holotype, specimen originally Triad Oil Co. Ltd. collection no. X38s, now Geological Survey of Canada type no. 14,605. Three paratypes, specimens originally Triad Oil Co. Ltd. collection nos. X38t–v, now Geological Survey of Canada type nos. 14,606 to 14,608.

Type stratum. Hay River formation, upper unnamed siltstone, shale, and limestone unit, 30 to 40 feet below the top of the formation (Crickmay, 1957, p. 6; not 1953, p. 11); Upper Devonian, Frasnian.

Type locality. Canada, North West Territories, a few feet above Louise Falls on Hay River. Latitude 60° 30′ N., longitude 116° 14′ W.

Description. Shell large and thin for genus. Profile plano-convex. Outline variably sub-semicircular. Hinge-line straight, cardinal extremities strongly mucronate, postero-lateral margins moderately concave. Anterior margin rectimarginate. Shell substance very thin, calcitic and pseudopunctate.

Pedicle valve very weakly convex, mostly plane, but anterior and lateral margins slightly convex. Umbonal region very slightly inflated. Beak minute and blunt. Beak ridges sharp along entire length. Interarea very broadly equilaterally triangular, plane surfaced. Nature of delthyrium and its cover not revealed in the primary material.

Hinge line denticulate for about 75 per cent. of its length. Process pits shallow. Nature of cardinalia and musculature not revealed in the primary material. Internal ornament centrally finely and closely papillose with traces of the external ornament visible near the margins. External ornament of continuous, straight, or slightly sinuous costae developed from costellae, latter number from two to nine, generally five, between each costae; costae and costellae number about six per millimetre near the margins of the valve. Faint concentric micro-fila superimposed on most, if not all, the surface.

Brachial valve plane. Umbo not developed. Beak represented by a minute projection of the base of the cardinal process. Notothyrium displaced by cardinalia. Chilidium probably degenerate. Hinge-line socketed opposite the denticles of the pedicle valve. Cardinal process lobes not well preserved in type material, disjunct, with attachment faces posteriorly directed. Socket plates larger than average relative size for the genus, attached to and divergent from, the cardinal process lobes. Muscle scars small, petal-shaped, superficial, bounded postero-laterally by large crescent-shaped hummocks, open in other directions. Median septum degenerate. Postero-lateral muscle bounding hummocks strongly papillose, other parts of the interior surface not markedly papillose, external ornament visible from the interior near the valve margins. External ornament similar to that of the pedicle valve. Denticle sockets visible from the exterior through a very thin shell layer.

Dimensions. Holotype and paratype 3, length 20·0 and 13·5 mm., width (less mucrones) 26·8 and 25·0 mm. (with mucrones)? and 36·0 mm. depth (pedicle valve only) 1·5 and 1·2 mm.

Remarks. In several respects this species is not typical of *Nervostrophia*. The shell is exceptionally thin and delicate, a median septum is scarcely developed in the brachial valve; the relatively large, divergent socket plates and unimpressed muscle scars of the brachial valve are also exceptional for the genus.

From *Nervostrophia calvini* Stainbrook, occurring in the Independence formation of Iowa, this species is distinguished by its lack of a strong geniculation near the anterior and antero-lateral commissure and also, perhaps, by internal details, which have not been illustrated for *N. calvini*.

From *N. vestita* Crickmay, occurring lower in the Hay River formation on Hay River, this species is distinguished by its shorter median septum and postero-lateral muscle bounding ridges in the pedicle valve and by its less nervose surface ornament.

Genus DOUVILLINELLA Spriestersbach 1926 emended Williams 1953

Genoholotype (by monotypy) *Douvillina filifer* Schmidt 1913, pp. 313, 314, pl. 23, figs. 1*a*–7. *Cultrijugatus* zone (Couvinian, or lower Middle Devonian), südlich der Attendorn-Elsper Doppelmulde, Germany.

Remarks. Spriestersbach proposed *Douvillinella* as a subgenus of *Stropheodonta*, differing from that genus by possession of brace plates (Stützplatten) and in having concave ventral and convex dorsal valves instead of convex ventral and concave dorsal valves. The species described below is associated with *Douvillinella* only because it is a resupinate *Douvillina*-like stropheodontid. It is possibly not congeneric with *Douvillina filifer* Schmidt.

Douvillinella? crickmayi sp. nov.

Plate 36, figs. 7–11; text-fig. 1*n*

1950 *Strophonella sp.* Warren and Stelck, p. 67.

Name derivation. Patronym for Dr. C. H. Crickmay, Imperial Oil Ltd., Calgary, Alberta.

Types. Holotype, specimen originally Triad Oil Co. Ltd. collection no. X28v, now Geological Survey of Canada type no. 14,609. Four paratypes, specimens originally Triad Oil Co. Ltd. collection nos. X28w–z, now Geological Survey of Canada type nos. 14, 610 to 14,613.

Type stratum. Grumbler formation, maroon argillaceous limestone about 80 feet above the base of the formation; uppermost Frasnian.

Type locality. Canada, North West Territories, Hay River opposite mile 38 of the Mackenzie Highway (Grimshaw Road), measured south-westward. Latitude 60° 29′ N., longitude 116° 19′ W.

Description. Shell small and robust. Profile very gently resupinate, concavo-convex immediately anterior of hinge, convexi-plane or just convexi-concave centrally, biconvex near anterior margin (text-fig. 1*n*). Outline semicircular anteriorly, postero-lateral margins nearly straight, cardinal extremities with small mucrones. Anterior commissure rectimarginate. Shell substance relatively thick, calcitic and pseudopunctate.

Pedicle valve almost plane, very gently convex umbonally, plane or just concave centrally, very gently convex near anterior and lateral margins. Umbonal region feebly developed. Beak minute, projecting only very slightly. Beak ridges sharp along entire length. Inter-area plane, apsaclinal, subrectangular. Delthyrium equilaterally triangular with an

EXPLANATION OF PLATE 35

All illustrations unretouched, photographed by K. S. Wilson. Specimen numbers refer to Geological Survey of Canada type numbers. All specimens are from the Hay River coquina bed, Hay River opposite mile 14 of the Mackenzie Highway, North West Territories, Canada.

Figs. 1–10. *Nervostrophia borealis* sp. nov. 1, 2, Holotype, 14,598, external and internal pedicle views, ×4 and ×4. 3, 4, Paratype 2, 14,600, internal and external views, ×5 and ×5·6. 5, 6, Paratype 5, 14,603, external and internal brachial views, ×4·3 & ×4. 7, Paratype 3, 14,601, lateral brachial view, ×4. 8, Paratype 4, 14,602, external pedicle view, ×4. 9, Paratype 1, 14,599, internal brachial view, ×4. 10, Paratype 6, 14,604, external brachial view, ×4.

Figs. 11–17. *Cyrtina lapidea* sp. nov. 11–13, Holotype, 14,614, anterior view, ×4, anterior view, ×2, brachial view, ×1. 14, 15, Paratype 1, 14,615, lateral view, ×3·5, posterior view, ×3·6. 16, 17, Paratype 2, 14,616, internal view, ×4, external view, ×2.

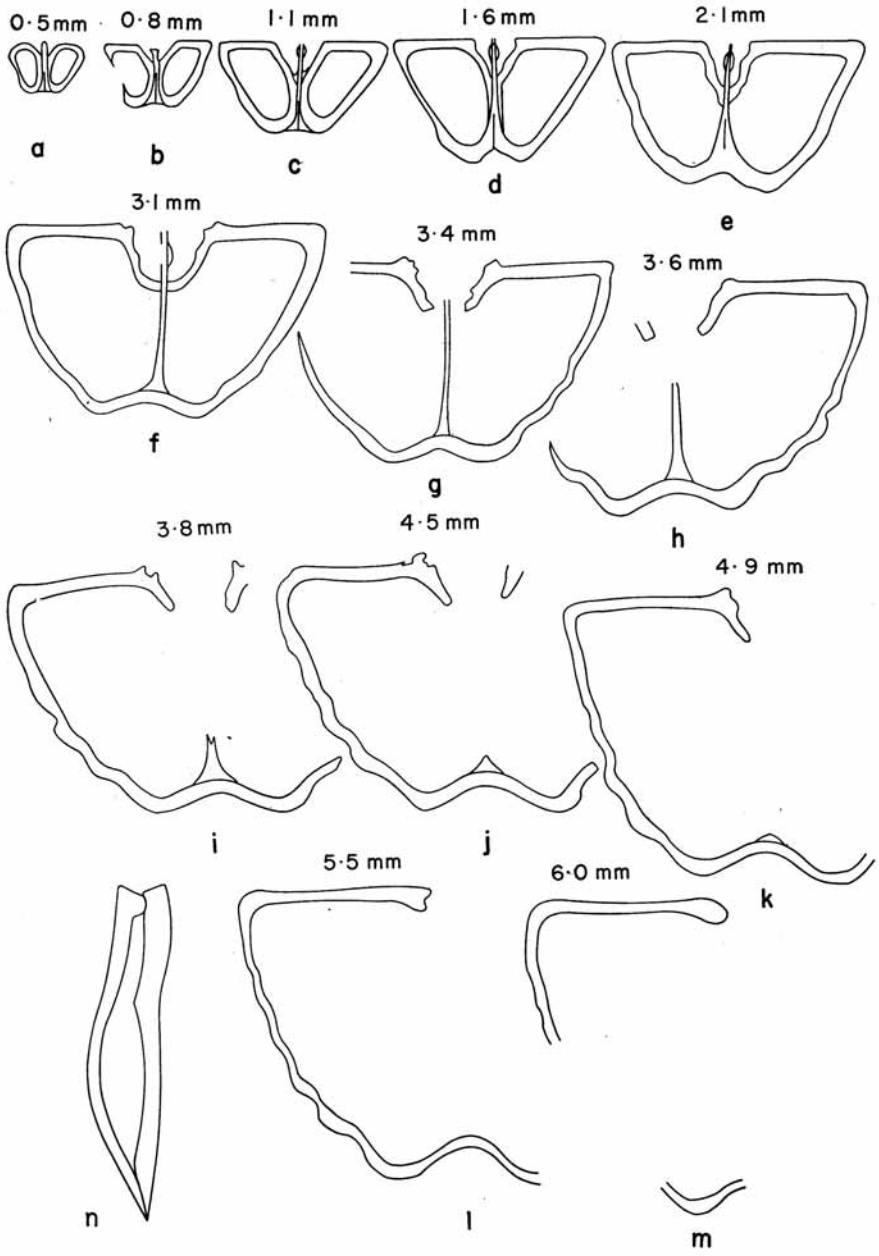
EXPLANATION OF PLATE 36

All illustrations unretouched, photographed by K. S. Wilson. Specimen numbers refer to Geological Survey of Canada type numbers.

Figs. 1–5. *Nervostrophia maclareni* sp. nov., 30–40 feet below top of the Hay River formation, a few feet above Louise Falls on Hay River, North West Territories, Canada. 1, 2, Holotype, 14,605, external pedicle views, ×1 and ×2. 3, Paratype 1, 14,606, internal brachial view, ×2. 4, Paratype 2, 14,607, external brachial view (left side of crack) and external pedicle cast (right side of crack), ×2. 5, Paratype 3, 14,608, external pedicle view (partly obscured by matrix), ×1·8.

Fig. 6. *Cyrtina lapidea* sp. nov., Hay River formation coquina bed, Hay River opposite mile 14 of the Mackenzie Highway, North West Territories, Canada, paratype 3, 14,617, external brachial view, ×2·4.

Figs. 7–11. *Douvillinella? crickmayi* sp. nov., about 80 feet above the base of the Grumbler formation, Hay River opposite mile 38 of the Mackenzie Highway, North West Territories, Canada. 7, 8, Holotype, 14,609, external and internal pedicle views, ×2 and ×2. 9, Paratype 4, 14,613, external brachial view, ×2. 10, Paratype 3, 14,612, external pedicle view, ×5. 11, Paratype 1 (right), 14,610, internal brachial view and paratype 2 (left), 14,611, internal pedicle view, ×2.



TEXT-FIG. 1. *a–m, Cyrtina lapidea* sp. nov., Hay River formation coquina bed, Hay River opposite mile 14 of the Mackenzie Highway, North West Territories, Canada, paratype 4 (now destroyed), series of sections of pedicle valve, ×10, measurements above each figure indicate distance from beak. *n, Douvillinella? crickmayi* sp. nov., diagrammatic but based on holotype and paratypes, longitudinal section, ×5.

apical angle of about 12°, entirely closed by a completely and strongly arched pseudodeltidium. Hinge-line straight, denticulate along entire length. Process pits deep, slightly posteriorly directed. Ventral process robust, anteriorly prolonged to a fine low median ridge, extending to the anterior edge of the muscle scars. Muscle scars prominent, elevated to the form of a saucer, posterior edge at a variable angle of about 20° with the hinge-line, anterior edge parallel with hinge-line, lateral margins rounded, more sharply so laterally than anteriorly. Interior surface, apart from the muscle scars and cardinalia, finely and evenly papillose; cardinalia smooth, muscle scars with faint radial striations. External ornament of fine, variable, primary and intercalated costae of different sizes, numbering about six per millimetre at the poster-lateral margins and about four per millimetre at the anterior margin of adult valves. Growth lines strong, but developed only near the margins of some valves. Interarea smooth with faint traces of denticles visible anteriorly.

Brachial valve generally very slightly concave immediately anterior of the central part of the hinge-line, gently convex elsewhere (text-fig. 1*n*). Outline similar to that of the pedicle valve, but less or not mucronate. Umbo and beak not developed. Interarea apsaclinal and almost linear. Notothyrium displaced by cardinalia. Chilidium vestigial, gently convex. Hinge-line straight, socketed opposite the denticles of the pedicle valve. Cardinal process lobes of average size, disjunct, with attachment faces posteriorly directed. Muscle scars asymmetrically petal-shaped with long narrow extensions parallel to and laterally adjacent posteriorly, to the brace plates, deeply impressed. Median septum broad, relatively low, anteriorly bifurcated, bifurcated parts confluent with the elongated brace plates. Interior surface of cardinalia smooth, muscle scars without papillae, but irregularly pitted, rest of central part of surface finely and evenly papillose, valve borders with clear traces of surface costae. Exterior surface ornament same as that of pedicle valve with denticle sockets visible through a very thin shell layer.

Dimensions. Holotype (dissociated pedicle valve) and paratype 4 (dissociated brachial valve), length 12·1 and 11·8 mm., width 14·1 and 15·5 mm., depth 1·9 and 1·8 mm.

Remarks. Strophonella does not occur in the Grumbler formation. Warren and Stelck (1950, p. 67) were probably referring to this species, since it is common in the lower Grumbler maroon beds, while other resupinate strophеodontids are either rare or absent. No similar species has been named.

Superfamily PUNCTOSPIRACEA Cooper 1944
Family CYRTINIDAE Stehli 1954
Genus CYRTINA Davidson 1858

Genolectotype (by Dall 1877, p. 24). *Cyrtia helteroclita* Defrance 1824, p. 306, pl. 80, figs. 3, 3*a*.

Cyrtina lapidea sp. nov.

Plate 35, figs. 11–17; Plate 36, fig. 6; text-fig. 1*a–m*

1950 *Cyrtina sp.* Warren and Stelck, p. 69.
1959 *Cyrtina sp.* Pedder, p. 472.

Name derivation. Latin, *lapideus* = made of stone.

Types. Holotype, specimen originally Triad Oil Co. Ltd. collection no. X461, now Geological Survey

of Canada type no. 14,614. Three preserved paratypes, specimens originally Triad Oil Co. Ltd. collection nos. X46m–0, now Geological Survey of Canada type nos. 14,125 to 14,617. Fourth paratype, specimen originally Triad Oil Co. Ltd. collection no. X46p, subsequently destroyed for serial sectioning.

Type stratum. Hay River formation coquina bed 630 feet below top (Crickmay 1957, p. 6; not 1953 p. 11); Upper Devonian, Frasnian.

Type locality. Canada, North West Territories, Hay River opposite mile 14 of the Mackenzie Highway (Grimshaw Road) measured south-westward, about 80 feet above water-level and 10 feet below bank top. Latitude 60° 41′ N., longitude 115° 54′ W.

Description. Shell small, subpyramidal, generally slightly asymmetrical rarely strongly asymmetrical or symmetrical. Profile subtriangular. Outline nearly semicircular. Hinge-line 95–100 per cent. of total shell width, just flexed centrally. Cardinal extremities abruptly rounded or minutely mucronate. Anterior commissure uniplicate. Shell substance moderately thick, calcitic, finely and closely endopunctate.

Pedicle valve subpyramidal, weakly convex along posterior midline, almost straight, but steeply inclined anteriorly; lateral slopes only very gently convex but steeply inclined. Sulcus with origin at beak, shallow, gently concave transversely, produced to a short semicircular tongue. Umbonal region not differentiated. Beak blunt, just projecting, straight. Beak ridges variable, either sharp or rounded. Interarea equilaterally triangular, orthoclinal, or proclinal and plane surfaced towards hinge, apsaclinal and concave towards beak, apical angle about 90°. Delthyrium with an apical angle of about 26°, closed near hinge by an arched pseudodeltidium. Foramen triangular towards beak, semi-elliptical towards pseudodeltidium, long axis four-fifths of the length of the delthyrium. Hinge teeth tear-shaped in section, of moderate size. Dental plates ankylosed to median septum in posterior 1·5 mm., of valve, withdrawn forming a spondylium from 1·5 to 3·2 mm. from beak tip, gradually reduced anteriorly, disappearing about 5·7 mm. from beak tip. Median septum high and produced to a tichorhinum in posterior 3·2 mm., gradually reduced anteriorly. Muscle scars not seen in primary material.

Brachial valve weakly convex. Fold transversely convex posteriorly, flat-topped anteriorly, low, elevated only in anterior three-fifths of adult valve. Umbonal region and beak not differentiated. Interarea linear. Hinge-plate well developed about the sockets and socket plates, divided by a median ridge. Sockets large, bounded internally by, and partly excavated into, strong socket plates, divergent to each other at 90°. Cardinal process bilobed, smooth. Spiralia not preserved in primary material, attachment confluent with the anterior parts of both the socket and hinge plates. Median septum extremely low and fine, absent in anterior two-fifths of valve.

Ornamented by from 5 to 8, typically 7, costae on the pedicle valve and by from 4 to 7, typically 6, on the brachial valve; costae rounded and progressively diminished laterally. Sulcus smooth. Fold smooth or with very weak anterior median furrow. Interarea with vertical striae. Growth lines irregular, mostly very fine and crowded, especially on the interarea, but gerontic specimens may bear coarser growth lines near the commissure. Abundant fine endopunctae clearly visible on shell surface, except on the interarea.

Dimensions. Holotypes and paratypes 1 to 3, length 4·7, 5·3, 5·2, and 6·4 mm., width 7·7, 7·0, 6·6, and 8·0 mm., depth 5·4, 5·1 (both valves), 1·1 and 1·8 (brachial valves only) mm.

Distinctions. From *C. inulta* Stainbrook, occurring in the Independence formation of Iowa, this species is distinguished by its smaller ($\times\frac{2}{3}$) average size, finer costae, less

developed sulcus and tongue and by the absence of a micro-ornament of fine radial granulose ridges described on *C. inulta*. The internal structure of *C. inulta* is undescribed in literature; there may be, therefore, further distinctions between the two species.

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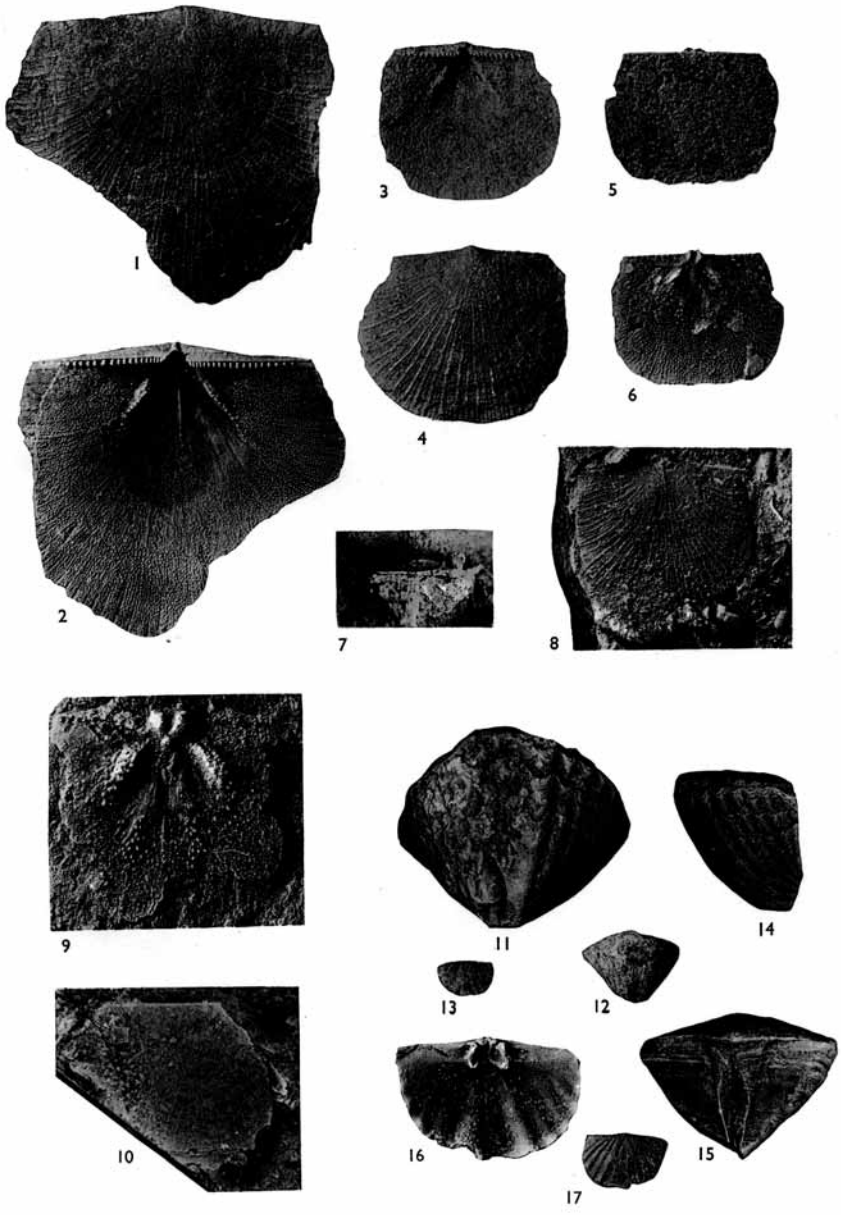
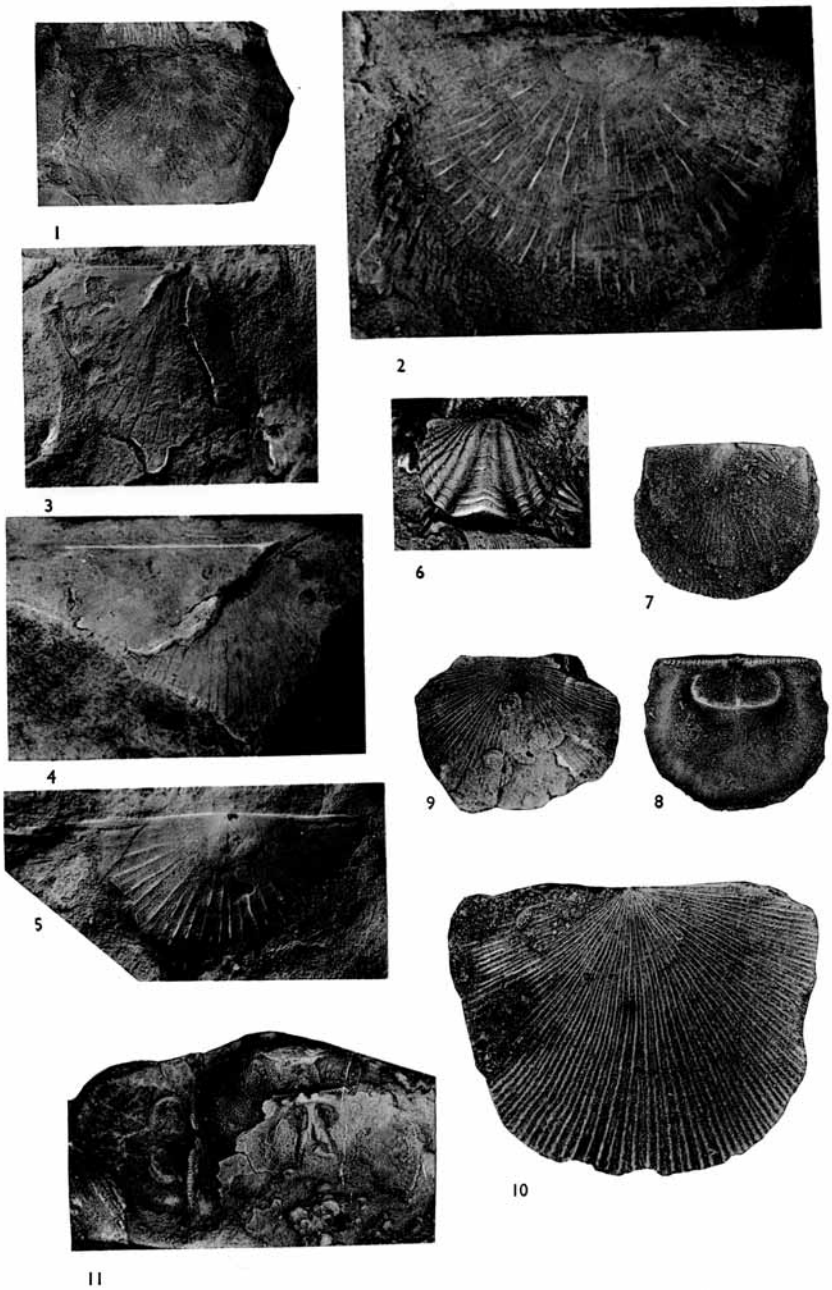


PEDDER, Devonian Brachiopoda from Canada



PEDDER, Devonian Brachiopoda from Canada