

Supplemental Information

Morphotype codings for 626 Cambro-Devonian gastropod species. See Table 1 for the compound characters and their “states.” Number in parentheses give the morphotype number.

| Species                                | Morphotype | Species                                 | Morphotype |
|--|------------|---|------------|
| <i>Coelocaulus turritiformis</i>       | 11331 (1)  | <i>Coelocaulus cingulata</i>            | 11431 (2)  |
| <i>Cyrtostropha coralli</i>            | 11331 (1)  | <i>Coelocaulus concinnus</i>            | 11431 (2)  |
| <i>Ectomaria adelina</i>               | 11331 (1)  | <i>Coelocaulus insignis</i>             | 11431 (2)  |
| <i>Ectomaria</i> aff. <i>E. prisca</i> | 11331 (1)  | <i>Donaldiella filosa</i>               | 11431 (2)  |
| <i>Ectomaria callahanensis</i>         | 11331 (1)  | <i>Donaldiella</i> Zeehan Fm. sp.       | 11431 (2)  |
| <i>Ectomaria laticarinata</i>          | 11331 (1)  | <i>Ectomaria</i> aff. <i>E. pagoda</i>  | 11431 (2)  |
| <i>Ectomaria nieszkowski</i>           | 11331 (1)  | <i>Goniosstropha deflexa</i>            | 11431 (2)  |
| <i>Ectomaria pagoda</i>                | 11331 (1)  | <i>Lophospira conoidea</i>              | 11431 (2)  |
| <i>Ectomaria prisca</i>                | 11331 (1)  | <i>Lophospira</i> Curdsville Fm. sp.    | 11431 (2)  |
| <i>Eoscoliostoma norrisi</i>           | 11331 (1)  | <i>Lophospira decursa</i>               | 11431 (2)  |
| <i>Hormotoma centervillensis</i>       | 11331 (1)  | <i>Lophospira perangulata</i>           | 11431 (2)  |
| <i>Hormotoma</i> Gordon Ls. sp.        | 11331 (1)  | <i>Lophospira producta</i>              | 11431 (2)  |
| <i>Hormotoma gracilis</i>              | 11331 (1)  | <i>Lophospira ventricosa</i>            | 11431 (2)  |
| <i>Hormotoma salteri</i>               | 11331 (1)  | <i>Morania paradoxa</i>                 | 11431 (2)  |
| <i>Hormotomina maia</i>                | 11331 (1)  | <i>Murchisonia cava</i>                 | 11431 (2)  |
| <i>Loxonema australis</i>              | 11331 (1)  | <i>Murchisonia lawlessi</i>             | 11431 (2)  |
| <i>Loxonema gracillium</i>             | 11331 (1)  | <i>Murchisonia</i> Sadler Fm. sp.       | 11431 (2)  |
| <i>Loxonema murryana</i>               | 11331 (1)  | <i>Murchisonia turbinata intermedia</i> | 11431 (2)  |
| <i>Loxonema rude</i>                   | 11331 (1)  | <i>Murchisonia turris</i>               | 11431 (2)  |
| <i>Michelia</i> aff. <i>M. darwini</i> | 11331 (1)  | <i>Murchisonia vicariana</i>            | 11431 (2)  |
| <i>Murchisonia dowlingi</i>            | 11331 (1)  | <i>Pagodospira cicelia</i>              | 11431 (2)  |
| <i>Murchisonia jackjelli</i>           | 11331 (1)  | <i>Pagodospira derwidui</i>             | 11431 (2)  |
| <i>Murchisonia monoliniformis</i>      | 11331 (1)  | <i>Pagodospira dorothea</i>             | 11431 (2)  |
| <i>Murchisonia pritchardi</i>          | 11331 (1)  | <i>Paupospira tenuistriata</i>          | 11431 (2)  |
| <i>Murchisonia wandovalensis</i>       | 11331 (1)  | <i>Stegocoelia bononi</i>               | 11431 (2)  |
| <i>Omospira alexandra</i>              | 11331 (1)  | <i>Turritoma acrea</i>                  | 11431 (2)  |
| <i>Omospira laticincta</i>             | 11331 (1)  | <i>Hormotoma pinguis</i>                | 11431 (2)  |
| <i>Omospira trentonensis</i>           | 11331 (1)  | <i>Bembexia procteri</i>                | 21422 (3)  |
| <i>Ostioma albanica</i>                | 11331 (1)  | <i>Clathrospira trochiformis</i>        | 21422 (3)  |
| <i>Phanerotrema lloydi</i>             | 11331 (1)  | <i>Clathrospira amouguerana</i>         | 21422 (3)  |
| <i>Pragozyga costata</i>               | 11331 (1)  | <i>Clathrospira conica</i>              | 21422 (3)  |
| <i>Pseudomitchellia macqueeni</i>      | 11331 (1)  | <i>Clathrospira euconica</i>            | 21422 (3)  |
| <i>Rhabdostropha primitiva</i>         | 11331 (1)  | <i>Clathrospira subconica</i>           | 21422 (3)  |
| <i>Spiroecus excavata</i>              | 11331 (1)  | <i>Deacheospira inflata</i>             | 21422 (3)  |
| <i>Stylonema mater</i>                 | 11331 (1)  | <i>Deacheospira maritima</i>            | 21422 (3)  |
| <i>Stylonema potens</i>                | 11331 (1)  | <i>Eotomaria labrosa</i>                | 21422 (3)  |
| <i>Ulrichospira othemensis</i>         | 11331 (1)  | <i>Eunema concinula</i>                 | 21422 (3)  |
| <i>Ulrichospira similis</i>            | 11331 (1)  | <i>Eunema quadrisulcata</i>             | 21422 (3)  |
| <i>Batteniella rarissima</i>           | 11431 (2)  | <i>Frillbeastia queenslandica</i>       | 21422 (3)  |
| <i>Brachytomaria baltica</i>           | 11431 (2)  | <i>Longstaffia centervillensis</i>      | 21422 (3)  |
| <i>Catazone cuneus</i>                 | 11431 (2)  | <i>Longstaffia cyclonema</i>            | 21422 (3)  |

| <u>Species</u>                            | <u>Morphotype</u> | <u>Species</u>                             | <u>Morphotype</u> |
|---|-------------------|--|-------------------|
| <u>Longstaffia laquetta</u>               | 21422 (3)         | <u>Balbinococoncha kosmasi</u>             | 11241 (6)         |
| <u>Proturritella bicarinata</u>           | 21422 (3)         | <u>Clathronema batteni</u>                 | 11241 (6)         |
| <u>Ptychozone aberrans</u>                | 21422 (3)         | <u>Clathronema cloughi</u>                 | 11241 (6)         |
| <u>Quadricarina gradata</u>               | 21422 (3)         | <u>Cyrtostropha notata</u>                 | 11241 (6)         |
| <u>Ruedemannia? holmi</u>                 | 21422 (3)         | <u>Subulites</u> Jose Fm. sp.              | 11241 (6)         |
| <u>Burdikinia axionides</u>               | 43221 (4)         | <u>Fusispira</u> Smithville sp.            | 11241 (6)         |
| <u>Euomphalus bundtzeni</u>               | 43221 (4)         | <u>Ianthinopsis ornatus</u>                | 11241 (6)         |
| <u>Euryzone onoi</u>                      | 43221 (4)         | <u>Loxonema</u> aff. <u>L. walcotti</u>    | 11241 (6)         |
| <u>Helicotoma blodgetti</u>               | 43221 (4)         | <u>Loxonema altivolvis</u>                 | 11241 (6)         |
| <u>Helicotoma brocki</u>                  | 43221 (4)         | <u>Loxonema cingulatum</u>                 | 11241 (6)         |
| <u>Helicotoma planulata</u>               | 43221 (4)         | <u>Loxonema walcotti</u>                   | 11241 (6)         |
| <u>Helicotoma robinsoni</u>               | 43221 (4)         | <u>Macrochilina bulimina</u>               | 11241 (6)         |
| <u>Helicotoma tennesseeensis</u>          | 43221 (4)         | <u>Macrochilina cancellata</u>             | 11241 (6)         |
| <u>Nodeuomphalus labadayi</u>             | 43221 (4)         | <u>Macrochilina capillosa</u>              | 11241 (6)         |
| <u>Nodeuomphalus leunissi</u>             | 43221 (4)         | <u>Macrochilina reticosta</u>              | 11241 (6)         |
| <u>Ophiletina bromidensis</u>             | 43221 (4)         | <u>Arjamannia aulangonensis</u>            | 21322 (7)         |
| <u>Pararaphistoma damesi</u>              | 43221 (4)         | <u>Arjamannia cancellata</u>               | 21322 (7)         |
| <u>Pararaphistoma schmidtii</u>           | 43221 (4)         | <u>Arjamannia inexpectans</u>              | 21322 (7)         |
| <u>Pararaphistoma vaginati</u>            | 43221 (4)         | <u>Arjamannia thraivensis</u>              | 21322 (7)         |
| <u>Philoxene laevis</u>                   | 43221 (4)         | <u>Boucotspira ordovicia</u>               | 21322 (7)         |
| <u>Platyloron dispar</u>                  | 43221 (4)         | <u>Brachytomaria kiari</u>                 | 21322 (7)         |
| <u>Serpulospira serpens</u>               | 43221 (4)         | <u>Brachytomaria kindlei</u>               | 21322 (7)         |
| <u>Straparollus cottrelli</u>             | 43221 (4)         | <u>Cataschisma convexa</u>                 | 21322 (7)         |
| <u>Catazone allevata</u>                  | 11421 (5)         | <u>Decorospira tasselli</u>                | 21322 (7)         |
| <u>Catazone argolis</u>                   | 11421 (5)         | <u>Kitikamispira ukulundensis</u>          | 21322 (7)         |
| <u>Coelocaulus decipiens</u>              | 11421 (5)         | <u>Kitikamispira? minuitonodosa</u>        | 21322 (7)         |
| <u>Hormotoma? simulatrix</u>              | 11421 (5)         | <u>Palaeoschisma? globosa</u>              | 21322 (7)         |
| <u>Hormotoma amii</u>                     | 11421 (5)         | <u>Ptychonema marocanum</u>                | 21322 (7)         |
| <u>Hormotoma confusa</u>                  | 11421 (5)         | <u>Trochonemella</u> Seward Fm. sp.        | 21322 (7)         |
| <u>Lophospira spironema</u>               | 11421 (5)         | <u>Trochonemella</u> Manitoulin sp.        | 21322 (7)         |
| <u>Murchisonia angulata</u>               | 11421 (5)         | <u>Cookiloxa pulchra</u>                   | 11231 (8)         |
| <u>Murchisonia bilineata</u>              | 11421 (5)         | <u>Kjerulfonema cancellata</u>             | 11231 (8)         |
| <u>Murchisonia coronata</u>               | 11421 (5)         | <u>Kjerulfonema quinquecincta</u>          | 11231 (8)         |
| <u>Murchisonia sculpta</u>                | 11421 (5)         | <u>Loxonema altacostatum</u>               | 11231 (8)         |
| <u>Paupospira bowdeni</u>                 | 11421 (5)         | <u>Loxonema crossmanni</u>                 | 11231 (8)         |
| <u>Paupospira trilineata</u>              | 11421 (5)         | <u>Loxonema sinuosum</u>                   | 11231 (8)         |
| <u>Plethospira</u> aff. <u>P. cassina</u> | 11421 (5)         | <u>Mitchellia</u> aff. <u>M. striatula</u> | 11231 (8)         |
| <u>Straparollina? dubia</u>               | 11421 (5)         | <u>Mitchellia striatula</u>                | 11231 (8)         |
| <u>Turritoma</u> cf. <u>acrea</u>         | 11421 (5)         | <u>Palaeozygopleura cannigensis</u>        | 11231 (8)         |
| <u>Turritoma ornate acrea</u>             | 11421 (5)         | <u>Palaeozygopleura chlupaci</u>           | 11231 (8)         |
| <u>Australoxa tasselli</u>                | 11241 (6)         | <u>Palaeozygopleura devonicans</u>         | 11231 (8)         |

| <u>Species</u>                                 | <u>Morphotype</u> | <u>Species</u>                              | <u>Morphotype</u> |
|--|-------------------|---|-------------------|
| <i>Palaeozygopleura dodgeyi</i>                | 11231 (8)         | <i>Pachystrophia triquetrus</i>             | 54111 (11)        |
| <i>Pseudomitchellia bohémica</i>               | 11231 (8)         | <i>Anomphalus pajelli</i>                   | 31221 (12)        |
| <i>Stylonema domesticum</i>                    | 11231 (8)         | <i>Antirorella helicinaeformis</i>          | 31221 (12)        |
| <i>Trinema heideckeri</i>                      | 11231 (8)         | <i>Bassotrochus ?angulatus</i>              | 31221 (12)        |
| <i>Aulacostrepsis simplex</i>                  | 11341 (9)         | <i>Labroscopsis kobayashii</i>              | 31221 (12)        |
| <i>Branzovya maturoglabra</i>                  | 11341 (9)         | <i>Labroscopsis nodosa</i>                  | 31221 (12)        |
| <i>Eroicaspira augustina</i>                   | 11341 (9)         | <i>Orecoxia aff. O. murrayi</i>             | 31221 (12)        |
| <i>Eroicaspira bellicincta</i>                 | 11341 (9)         | <i>Orecoxia cotei</i>                       | 31221 (12)        |
| <i>Eroicaspira</i> Setul Fm. sp.               | 11341 (9)         | <i>Orecoxia mccoysi</i>                     | 31221 (12)        |
| <i>Michelia attenuata</i>                      | 11341 (9)         | <i>Pseudomphalotrochus? clarkii</i>         | 31221 (12)        |
| <i>Morania attenuata</i>                       | 11341 (9)         | <i>Pycnomphalus acutus</i>                  | 31221 (12)        |
| <i>Murchisonia morinensis</i>                  | 11341 (9)         | <i>Pycnomphalus obesus</i>                  | 31221 (12)        |
| <i>Murchisonia subplicata</i>                  | 11341 (9)         | <i>Turbocheilus immaturum</i>               | 31221 (12)        |
| <i>Plethospira cannonensis</i>                 | 11341 (9)         | <i>Bembexia sulcomarginata</i>              | 32322 (13)        |
| <i>Rhabdostropha</i> Seward Fm. Sp.            | 11341 (9)         | <i>Boucotspira fimbriata</i>                | 32322 (13)        |
| <i>Rhabdostropha grindoorii</i>                | 11341 (9)         | <i>Euomphalopterus carinifera</i>           | 32322 (13)        |
| <i>Spiroecus girvanensis</i>                   | 11341 (9)         | <i>Paraliospira aff. P. angulatum</i>       | 32322 (13)        |
| <i>Centrifugus planorbis</i>                   | 53111 (10)        | <i>Paraliospira angulatum</i>               | 32322 (13)        |
| <i>Lecanospira compacta</i>                    | 53111 (10)        | <i>Paraliospira larvata</i>                 | 32322 (13)        |
| <i>Lecanospira lecanospiroides</i>             | 53111 (10)        | <i>Paraliospira mundula</i>                 | 32322 (13)        |
| <i>Lecanospira nereine</i>                     | 53111 (10)        | <i>Paraliospira supracingulata</i>          | 32322 (13)        |
| <i>Maclurina</i> aff. <i>M. manitobensis</i> A | 53111 (10)        | <i>Stenoloron shelvensis</i>                | 32322 (13)        |
| <i>Maclurina</i> aff. <i>M. manitobensis</i> B | 53111 (10)        | <i>Stenoloron subglobosa</i>                | 32322 (13)        |
| <i>Maclurina manitobensis</i>                  | 53111 (10)        | <i>Straparollina circe</i>                  | 32322 (13)        |
| <i>Macluritella ?ponderosus</i>                | 53111 (10)        | <i>Arjamannia bellicarinata</i>             | 11322 (14)        |
| <i>Maclurites magna</i>                        | 53111 (10)        | <i>Arjamannia woodlandi</i>                 | 11322 (14)        |
| <i>Maclurites oceana</i>                       | 53111 (10)        | <i>Boucotspira</i> aff. <i>B. ordovicia</i> | 11322 (14)        |
| <i>Pleuronotus decewi</i>                      | 53111 (10)        | <i>Boucotspira? lamellosa</i>               | 11322 (14)        |
| <i>Teiichispira auricula</i>                   | 53111 (10)        | <i>Frodospira cochleata</i>                 | 11322 (14)        |
| <i>Teiichispira odenvillensis</i>              | 53111 (10)        | <i>Frodospira imbricata</i>                 | 11322 (14)        |
| <i>Asgardaspira gerulus</i>                    | 54111 (11)        | <i>Frodospira munda</i>                     | 11322 (14)        |
| <i>Asgardaspira measuresae</i>                 | 54111 (11)        | <i>Loxoplocus ?hyaecinthisis</i>            | 11322 (14)        |
| <i>Asgardaspira yochelsoni</i>                 | 54111 (11)        | <i>Loxoplocus gotlandicus</i>               | 11322 (14)        |
| <i>Bridgeina ?disjuncta</i>                    | 54111 (11)        | <i>Loxoplocus sedgewicki</i>                | 11322 (14)        |
| <i>Ecculiomphalus bucklandi</i>                | 54111 (11)        | <i>Loxoplocus soluta</i>                    | 11322 (14)        |
| <i>Ecculiomphalus harrisae</i>                 | 54111 (11)        | <i>Bembexia? neapolitana</i>                | 22422 (15)        |
| <i>Macluritella stantoni</i>                   | 54111 (11)        | <i>Clathrospira "laflinensis"</i>           | 22422 (15)        |
| <i>Mastigospira ingens</i>                     | 54111 (11)        | <i>Clathrospira? virguncula</i>             | 22422 (15)        |
| <i>Odontomaria semiplicata</i>                 | 54111 (11)        | <i>Deachospira elliptica</i>                | 22422 (15)        |
| <i>Pachystrophia circinnatus</i>               | 54111 (11)        | <i>Dictyobembix bella</i>                   | 22422 (15)        |
| <i>Pachystrophia subulitioides</i>             | 54111 (11)        | <i>Eotomaria canalifera</i>                 | 22422 (15)        |

| <u>Species</u>                         | <u>Morphotype</u> | <u>Species</u>                              | <u>Morphotype</u> |
|--|-------------------|---|-------------------|
| <i>Eotomaria dryope</i>                | 22422 (15)        | <i>Discordichilus harmonia</i>              | 22223 (20)        |
| <i>Longstaffia tubulosa</i>            | 22422 (15)        | <i>Hawletrochus pragensis</i>               | 22223 (20)        |
| <i>Quadricarina pioni</i>              | 22422 (15)        | <i>Pseudophorus profundus</i>               | 22223 (20)        |
| <i>Straparollina turgida</i>           | 22422 (15)        | <i>Pseudophorus stuxbergi</i>               | 22223 (20)        |
| <i>Brachytomaria semele</i>            | 21421 (16)        | <i>Trochonema canadensis</i>                | 22223 (20)        |
| <i>Eunema helicteres</i>               | 21421 (16)        | <i>Trochonema eccentrica</i>                | 22223 (20)        |
| <i>Lophospira debagensis</i>           | 21421 (16)        | <i>Trochonema madisonense</i>               | 22223 (20)        |
| <i>Lophospira milleri</i>              | 21421 (16)        | <i>Trochonema umbilicata</i>                | 22223 (20)        |
| <i>Raphistomina fissurata</i>          | 21421 (16)        | <i>Astralites fimbriatus</i>                | 22323 (21)        |
| <i>Ruedemannia humilis</i>             | 21421 (16)        | <i>Brachytomaria</i> aff. <i>B. furcata</i> | 22323 (21)        |
| <i>Ruedemannia laevisissima</i>        | 21421 (16)        | <i>Hystricoceras?</i> <i>lundgreni</i>      | 22323 (21)        |
| <i>Ruedemannia lirata</i>              | 21421 (16)        | <i>Playfordia australis</i>                 | 22323 (21)        |
| <i>Ruedemannia robusta</i>             | 21421 (16)        | <i>Trochonemella knoxvillensis</i>          | 22323 (21)        |
| <i>Ruedemannia subrobusta</i>          | 21421 (16)        | <i>Trochonemella montrealensis</i>          | 22323 (21)        |
| <i>Euryzone hullensis</i>              | 22322 (17)        | <i>Trochonemella</i> Tyrone Fm. sp.         | 22323 (21)        |
| <i>Kitikamispira?</i> <i>ormistoni</i> | 22322 (17)        | <i>Trochonemella notablis</i>               | 22323 (21)        |
| <i>Pseudocryptaenia majewski</i>       | 22322 (17)        | <i>Ceratopea ?laurentia</i>                 | 32321 (22)        |
| <i>Ptychonema desideratum</i>          | 22322 (17)        | <i>Ceratopea medfraensis</i>                | 32321 (22)        |
| <i>Quadricarina scutulata</i>          | 22322 (17)        | <i>Ceratopea unguis</i>                     | 32321 (22)        |
| <i>Stenoloron aequilatera</i>          | 22322 (17)        | <i>Pragoloron nummularia</i>                | 32321 (22)        |
| <i>Stenoloron biformis</i>             | 22322 (17)        | <i>Raphistomina lapicida</i>                | 32321 (22)        |
| <i>Straparollina erigione</i>          | 22322 (17)        | <i>Stenoloron bohémica</i>                  | 32321 (22)        |
| <i>Straparollina grandis</i>           | 22322 (17)        | <i>Stenoloron pollens</i>                   | 32321 (22)        |
| <i>Euomphalopterus frenata</i>         | 22221 (18)        | <i>Asinomphalus ruzickai</i>                | 22222 (23)        |
| <i>Euomphalopterus togata</i>          | 22221 (18)        | <i>Discordichilus "incisus"</i>             | 22222 (23)        |
| <i>Kitikamispira octavia</i>           | 22221 (18)        | <i>Euomphalopterus subcarinata</i>          | 22222 (23)        |
| <i>Pseudomphalotrochus bonapartens</i> | 22221 (18)        | <i>Straparollina pelagica</i>               | 22222 (23)        |
| <i>Pseudomphalotrochus hoffmanni</i>   | 22221 (18)        | <i>Straparollus?</i> <i>obtusa</i>          | 22222 (23)        |
| <i>Pseudomphalotrochus linsleyi</i>    | 22221 (18)        | <i>Trochonema</i> Seward Fm. Sp.            | 22222 (23)        |
| <i>Pseudomphalotrochus philosophus</i> | 22221 (18)        | <i>Trochonema bellulum</i>                  | 22222 (23)        |
| <i>Spinicharybdis wilsoni</i>          | 22221 (18)        | <i>Burdikinia burdekinensis</i>             | 42321 (24)        |
| <i>Straparollus caementarius</i>       | 22221 (18)        | <i>Ceratopea pygmaea</i>                    | 42321 (24)        |
| <i>Ophileta complanata</i>             | 43421 (19)        | <i>Euangyomphalus klapperi</i>              | 42321 (24)        |
| <i>Ophileta supraplana</i>             | 43421 (19)        | <i>Pachystrophia contiguous</i>             | 42321 (24)        |
| <i>Porcellia aberrans</i>              | 43421 (19)        | <i>Pachystrophia devexa</i>                 | 42321 (24)        |
| <i>Porcellia bifida</i>                | 43421 (19)        | <i>Pachystrophia gotlandicus</i>            | 42321 (24)        |
| <i>Porcellia cornuarietis</i>          | 43421 (19)        | <i>Palaeomphalus gradata?</i>               | 42321 (24)        |
| <i>Porcellia primordialis</i>          | 43421 (19)        | <i>Chlupacispira spinosa</i>                | 42421 (25)        |
| <i>Porcellia spinosa</i>               | 43421 (19)        | <i>Paraporcellia rohri</i>                  | 42421 (25)        |
| <i>Porcellia</i> Virgin Hill Fm. sp.   | 43421 (19)        | <i>Porcellia denayi</i>                     | 42421 (25)        |
| <i>Strepsodiscus major</i>             | 43421 (19)        | <i>Porcellia kindlei</i>                    | 42421 (25)        |

| <u>Species</u>                     | <u>Morphotype</u> | <u>Species</u>                        | <u>Morphotype</u> |
|------------------------------------|-------------------|---------------------------------------|-------------------|
| <i>Raphistomina rugata</i>         | 42421 (25)        | <i>Ceratopea lemoni</i>               | 33421 (32)        |
| <i>Stenoloron minor</i>            | 42421 (25)        | <i>Orospira bigranosa</i>             | 33421 (32)        |
| <i>Westralodiscus robertsi</i>     | 42421 (25)        | <i>Schizopea normalis</i>             | 33421 (32)        |
| <i>Pachystrophia esthetica</i>     | 42221 (26)        | <i>Schizopea subrotunda</i>           | 33421 (32)        |
| <i>Pachystrophia spiralis</i>      | 42221 (26)        | <i>Schizopea typica</i>               | 33421 (32)        |
| <i>Poleumita walmstedti</i>        | 42221 (26)        | <i>Alaskozygopleura crassicostata</i> | 11242 (33)        |
| <i>Straparollus cyclostomus</i>    | 42221 (26)        | <i>Hyphantozygia granifera</i>        | 11242 (33)        |
| <i>Straparollus paveyi</i>         | 42221 (26)        | <i>Loxonema crispa</i>                | 11242 (33)        |
| <i>Straparollus sodalis</i>        | 42221 (26)        | <i>Macrochilina elongata</i>          | 11242 (33)        |
| <i>Straparollus? filifora</i>      | 42221 (26)        | <i>Macrochilina fenestrata</i>        | 11242 (33)        |
| <i>Eccyliopterus declivis</i>      | 53221 (27)        | <i>Macrochilina arcuata</i>           | 11342 (34)        |
| <i>Eccyliopterus owenanus</i>      | 53221 (27)        | <i>Macrochilina arcuata carinata</i>  | 11342 (34)        |
| <i>Liomphalus northi</i>           | 53221 (27)        | <i>Paupospira sumnerensis</i>         | 11342 (34)        |
| <i>Macluritella uniangulata</i>    | 53221 (27)        | <i>Plethospira ventricosa</i>         | 11342 (34)        |
| <i>Malayaspira annulata</i>        | 53221 (27)        | <i>Plethospira? Coolibah Fm. sp.</i>  | 11342 (34)        |
| <i>Teiichispira "undulatus"</i>    | 53221 (27)        | <i>Maclurina bigsbyi</i>              | 52111 (35)        |
| <i>Brachytomaria "laquetta"</i>    | 21332 (28)        | <i>Maclurina logani</i>               | 52111 (35)        |
| <i>Haplospira nereis</i>           | 21332 (28)        | <i>Maclurina sedgwicki</i>            | 52111 (35)        |
| <i>Palaeoschisma? elevata</i>      | 21332 (28)        | <i>Palliseria acuminatus</i>          | 52111 (35)        |
| <i>Phanerotrema ?vitellia</i>      | 21332 (28)        | <i>Palliseria crenulata</i>           | 52111 (35)        |
| <i>Phanerotrema calliaudi</i>      | 21332 (28)        | <i>Eunema strigillatum</i>            | 11321 (36)        |
| <i>Phanerotrema lindstroemi</i>    | 21332 (28)        | <i>Globonema kayesi</i>               | 11321 (36)        |
| <i>Lophospira rectistriatus</i>    | 21431 (29)        | <i>Globonema kokeni</i>               | 11321 (36)        |
| <i>Lophospira selecta</i>          | 21431 (29)        | <i>Globonema turritum</i>             | 11321 (36)        |
| <i>Murchisonia turbinata curta</i> | 21431 (29)        | <i>Loxonema winnipegense</i>          | 11321 (36)        |
| <i>Paupospira burginensis</i>      | 21431 (29)        | <i>Euomphalopterus undulans</i>       | 32221 (37)        |
| <i>Paupospira moorei</i>           | 21431 (29)        | <i>Euomphalopterus valeria</i>        | 32221 (37)        |
| <i>Paupospira oweni</i>            | 21431 (29)        | <i>Poleumita alata</i>                | 32221 (37)        |
| <i>Amphelissa carinatum</i>        | 42121 (30)        | <i>Spinicharybdis canteriata</i>      | 32221 (37)        |
| <i>Amphelissa isisensis</i>        | 42121 (30)        | <i>Trochomphalus cf. T. "circe"</i>   | 32221 (37)        |
| <i>Poleumita discors</i>           | 42121 (30)        | <i>Taemasotrochus giganticus</i>      | 32223 (38)        |
| <i>Poleumita granulosa</i>         | 42121 (30)        | <i>Trochonema liljevalli</i>          | 32223 (38)        |
| <i>Poleumita rugosa</i>            | 42121 (30)        | <i>Trochonema panderi</i>             | 32223 (38)        |
| <i>Spinicharybdis elora</i>        | 42121 (30)        | <i>Trochonema wilsoni</i>             | 32223 (38)        |
| <i>Eunema centralis</i>            | 21423 (31)        | <i>Turbinopsis shumardi</i>           | 32223 (38)        |
| <i>Gyronema pulchellum</i>         | 21423 (31)        | <i>Bridgeites supraconvexa</i>        | 53211 (39)        |
| <i>Gyronema semicarinatum</i>      | 21423 (31)        | <i>Malayaspira cannigensis</i>        | 53211 (39)        |
| <i>Ptychomphalina aurorae</i>      | 21423 (31)        | <i>Malayaspira hintzei</i>            | 53211 (39)        |
| <i>Ptychomphalina vesiculosa</i>   | 21423 (31)        | <i>Malayaspira rugosa</i>             | 53211 (39)        |
| <i>Tasselliana australis</i>       | 21423 (31)        | <i>Pleuronotus radiatus</i>           | 53211 (39)        |
| <i>Ceratopea canadensis</i>        | 33421 (32)        | <i>Raphistoma eucharis</i>            | 42242 (40)        |

| <u>Species</u>                                | <u>Morphotype</u> | <u>Species</u>                            | <u>Morphotype</u> |
|---|-------------------|---|-------------------|
| <i>Raphistoma gubanovii</i>                   | 42242 (40)        | <i>Pagodea concomitans</i>                | 11223 (50)        |
| <i>Raphistoma striatum</i>                    | 42242 (40)        | <i>Purkynespira reticulata</i>            | 11223 (50)        |
| <i>Scalites kanesi</i>                        | 42242 (40)        | <i>Holopella regularis</i>                | 11332 (51)        |
| <i>Scalites tellerensis</i>                   | 42242 (40)        | <i>Loxonema beraultensis</i>              | 11332 (51)        |
| <i>Auriptygma parvulum</i>                    | 11243 (41)        | <i>Palaeozygopleura machenryi</i>         | 11332 (51)        |
| <i>Leptoptygma australe</i>                   | 11243 (41)        | <i>Anarconcha pulchra</i>                 | 11423 (52)        |
| <i>Leptoptygma queenslandica</i>              | 11243 (41)        | <i>Quadricarina cancellata</i>            | 11423 (52)        |
| <i>Macrochilina</i> aff. <i>M. subcostata</i> | 11243 (41)        | <i>Vladanella avia</i>                    | 11423 (52)        |
| <i>Astralites sublimbatus</i>                 | 21223 (42)        | <i>Devonorhineoderma orbignyana</i>       | 22423 (53)        |
| <i>Discordichilus dali</i>                    | 21223 (42)        | <i>Quadricarina glabrobasis</i>           | 22423 (53)        |
| <i>Globonema salteri</i>                      | 21223 (42)        | <i>Westralospira dickinsi</i>             | 22423 (53)        |
| <i>Hystricoceras?</i> <i>incisus</i>          | 21223 (42)        | <i>Cataschisma exquisita</i>              | 22523 (54)        |
| <i>Pachystrophia inornatum</i>                | 32222 (43)        | <i>Pleurorima wisbeyensis</i>             | 22523 (54)        |
| <i>Sylvestria soetnichensis</i>               | 32222 (43)        | <i>Prosolarium hallei</i>                 | 22523 (54)        |
| <i>Trochonema trochonemoides</i>              | 32222 (43)        | <i>Leptozone esthetica</i>                | 32423 (55)        |
| <i>Trochonemopsis tricarinata</i>             | 32222 (43)        | <i>Mourlonia teichertii</i>               | 32423 (55)        |
| <i>Asgardaspira</i> “ <i>sublaxa</i> ”        | 54121 (44)        | <i>Quadricarina</i> n. sp. A              | 32423 (55)        |
| <i>Bicarina coluber</i>                       | 54121 (44)        | <i>Bicarina</i> Denay Ls. sp. A           | 53121 (56)        |
| <i>Lytospira angelini</i>                     | 54121 (44)        | <i>Serpulospira annulatus</i>             | 53121 (56)        |
| <i>Lytospira subrotundus</i>                  | 54121 (44)        | <i>Teiichispira kobayashi</i>             | 53121 (56)        |
| <i>Cataschisma primum</i>                     | 21523 (45)        | <i>Daidia</i> aff. <i>D. cerithioides</i> | 11232 (57)        |
| <i>Pleurorima migrans</i>                     | 21523 (45)        | <i>Daidia cerithioides</i>                | 11232 (57)        |
| <i>Pleurorima moydartensis</i>                | 21523 (45)        | <i>Palaeozygopleura muoni</i>             | 11232 (57)        |
| <i>Pleurorima pragensis</i>                   | 21523 (45)        | <i>Eroicaspira artemesia</i>              | 11441 (58)        |
| <i>Eocryptaulina filitexta</i>                | 31422 (46)        | <i>Eroicaspira zelleri</i>                | 11441 (58)        |
| <i>Liospira marklandensis</i>                 | 31422 (46)        | <i>Michelia tenera</i>                    | 11441 (58)        |
| <i>Liospira micula</i>                        | 31422 (46)        | <i>Scalaetrochus lindströmi</i>           | 22213 (59)        |
| <i>Liospira progne</i>                        | 31422 (46)        | <i>Siluriphorus gotlandicus</i>           | 22213 (59)        |
| <i>Denayella conoidea</i>                     | 42322 (47)        | <i>Siluriphorus undulans</i>              | 22213 (59)        |
| <i>Denayella lomandarensis</i>                | 42322 (47)        | <i>Sinuopea basiplanata</i>               | 22421 (60)        |
| <i>Eocryptaulina helcinia</i>                 | 42322 (47)        | <i>Sinuopea emminencis</i>                | 22421 (60)        |
| <i>Umbotropis albicans</i>                    | 42322 (47)        | <i>Sinuopea sweeti</i>                    | 22421 (60)        |
| <i>Lophonema frydai</i>                       | 43321 (48)        | <i>Balbinipleura bohémica</i>             | 11323 (61)        |
| <i>Lophonema peccatonica</i>                  | 43321 (48)        | <i>Loxoplocus nelsonae</i>                | 11323 (61)        |
| <i>Lophonema taneyensis</i>                   | 43321 (48)        | <i>Catazone latona</i>                    | 12421 (62)        |
| <i>Platyloron voluta</i>                      | 43321 (48)        | <i>Sinuopea st. clairi</i>                | 12421 (62)        |
| <i>Bridgeites planodorsalis</i>               | 53321 (49)        | <i>Lophospira serrulata</i>               | 12431 (63)        |
| <i>Hypomphalocirrus manitobensis</i>          | 53321 (49)        | <i>Turritoma anna</i>                     | 12431 (63)        |
| <i>Hypomphalocirrus rugosus</i>               | 53321 (49)        | <i>Murchisonia nevadana</i>               | 12521 (64)        |
| <i>Omphalocirrus goldfussi</i>                | 53321 (49)        | <i>Ptychocaulus verneulli</i>             | 12521 (64)        |
| <i>Dongiovania pragensis</i>                  | 11223 (50)        | <i>Globonema fatua</i>                    | 21221 (65)        |

| <u>Species</u>                         | <u>Morphotype</u> | <u>Species</u>                       | <u>Morphotype</u> |
|--|-------------------|--------------------------------------|-------------------|
| <u>Westwooditrochus westwoodensis</u>  | 21221 (65)        | <u>Pernericirrus sinistorsus</u>     | 53421 (86)        |
| <u>"Acanthrotopis" "meglacantha"</u>   | 21232 (66)        | <u>Zlatokonia eximia</u>             | 53421 (86)        |
| <u>Devononerita brevispira</u>         | 21232 (66)        | <u>Hanuspira fermioni</u>            | 11422 (87)        |
| <u>Auriptygma fortior</u>              | 21242 (67)        | <u>Hanuspira tienshanica</u>         | 11422 (87)        |
| <u>Naticopsis manitobensis</u>         | 21242 (67)        | <u>Brachytomaria papillosa</u>       | 21331 (88)        |
| <u>Boucospira? visbeyensis</u>         | 21323 (68)        | <u>Brachytomaria striata</u>         | 21331 (88)        |
| <u>Trochonema peraltum</u>             | 21323 (68)        | <u>Semizona bella</u>                | 21534 (89)        |
| <u>Kitikamispira speciosum</u>         | 21333 (69)        | <u>Semizona glindmeyeri</u>          | 21534 (89)        |
| <u>Phanerotrema dolia</u>              | 21333 (69)        | <u>Euconia etna</u>                  | 22522 (90)        |
| <u>Paupospira tropidophora</u>         | 21432 (70)        | <u>Jarlopsis conicus</u>             | 22522 (90)        |
| <u>Semizona cf. S. glindmeyeri</u>     | 21432 (70)        | <u>Holopea ampla</u>                 | 31342 (91)        |
| <u>Pseudotectus kolmodini</u>          | 22214 (71)        | <u>Holopea appressa</u>              | 31342 (91)        |
| <u>Scalaetrochus tectiformis</u>       | 22214 (71)        | <u>Mourlonia hoffmanni</u>           | 31423 (92)        |
| <u>Ruedemannia ?tolli</u>              | 22321 (72)        | <u>Pleurorima famula</u>             | 31423 (92)        |
| <u>Spinulrichospira cheeneetnukens</u> | 22321 (72)        | <u>Liospira decipens</u>             | 32422 (93)        |
| <u>Prosolarium limata</u>              | 22513 (73)        | <u>Liospira subconcava</u>           | 32422 (93)        |
| <u>Prosolarium procerum</u>            | 22513 (73)        | <u>Buechelia goldfussi</u>           | 42243 (94)        |
| <u>Kitikamispira armatus</u>           | 31233 (74)        | <u>Buechelia tyrellii</u>            | 42243 (94)        |
| <u>Naticopsis taemasensis</u>          | 31233 (74)        | <u>Ophiletina angularis</u>          | 43311 (95)        |
| <u>Genuspira nodosa</u>                | 31322 (75)        | <u>Ophiletina sublaxa</u>            | 43311 (95)        |
| <u>Paraliospira rugata</u>             | 31322 (75)        | <u>"Serpulospira" Taemas Fm. sp.</u> | 44221 (96)        |
| <u>Phanerotrema jugosum</u>            | 31332 (76)        | <u>Serpulospira centrifugus</u>      | 44221 (96)        |
| <u>Phanerotrema occidens</u>           | 31332 (76)        | <u>Lesueurilla infundibulum</u>      | 52211 (97)        |
| <u>Blodgettina reticulata</u>          | 32323 (77)        | <u>Lesueurilla louderbacki</u>       | 52211 (97)        |
| <u>Euryzone delphinuloides</u>         | 32323 (77)        | <u>Eccyliopterus ?princeps</u>       | 54221 (98)        |
| <u>Euryzone infranodosa</u>            | 32333 (78)        | <u>Eccyliopterus regularis</u>       | 54221 (98)        |
| <u>Phanerotrema australis</u>          | 32333 (78)        | <u>Palliseria longwelli</u>          | 62131 (99)        |
| <u>Coelozone verna</u>                 | 32523 (79)        | <u>Palliseria robusta</u>            | 62131 (99)        |
| <u>Euryzone connulastus</u>            | 32523 (79)        | <u>Hesperrella ebbighauseni</u>      | 62223 (100)       |
| <u>Palaeomphalus Shalloch Fm. sp.</u>  | 33321 (80)        | <u>Hesperrella cannigensis</u>       | 62223 (100)       |
| <u>Umbotropis mesoni</u>               | 33321 (80)        | <u>Agnesiella aratula</u>            | 32413 (101)       |
| <u>Pachystrophia tuba</u>              | 42222 (81)        | <u>Alaskiella medfraensis</u>        | 62321 (102)       |
| <u>Straparollus leptoni</u>            | 42222 (81)        | <u>Antitrotella "michiganensis"</u>  | 41221 (103)       |
| <u>Mestoronema bipatellera</u>         | 42231 (82)        | <u>Antitrochus nodulosus</u>         | 61223 (104)       |
| <u>Wisconsinella clelandi</u>          | 42231 (82)        | <u>Asgardaspira ?norvegica</u>       | 54211 (105)       |
| <u>Deacheospira hotzi</u>              | 42422 (83)        | <u>Baylea teicherti</u>              | 22232 (106)       |
| <u>Eotomaria notablis</u>              | 42422 (83)        | <u>Bicarina Denay Ls. sp. B</u>      | 44121 (107)       |
| <u>Barrandecirrus filiformis</u>       | 43322 (84)        | <u>Branzovya innocens</u>            | 21341 (108)       |
| <u>Linsleyella johnsoni</u>            | 43322 (84)        | <u>Clathrospira thraivensis</u>      | 21342 (109)       |
| <u>Lesueurilla beloitensis</u>         | 52221 (85)        | <u>Conotoma claustrata</u>           | 11522 (110)       |
| <u>Lesueurilla prima</u>               | 52221 (85)        | <u>Conotoma glandiformis</u>         | 12533 (111)       |

| <u>Species</u>                      | <u>Morphotype</u> | <u>Species</u>                               | <u>Morphotype</u> |
|-------------------------------------|-------------------|--|-------------------|
| <i>Devononerita brevis</i>          | 31223 (112)       | <i>Murchisonia turbinata spinosa</i>         | 21441 (138)       |
| <i>Discordichilus mollis</i>        | 31224 (113)       | <i>Scalites giganteus</i>                    | 42241 (139)       |
| <i>Eccylopterus alatus</i>          | 53231 (114)       | <i>Scalites peracutum</i>                    | 42331 (140)       |
| <i>Eleutherospira medfraensis</i>   | 12222 (115)       | <i>Sinistracirsa altera</i>                  | 11221 (141)       |
| <i>Eleutherospira sinistralis</i>   | 13222 (116)       | <i>Stenoloron angulifer</i>                  | 43422 (142)       |
| <i>Epiptychia potens</i>            | 11514 (117)       | <i>Stenoloron subaequilatera</i>             | 32421 (143)       |
| <i>Euconia umbilicata</i>           | 22512 (118)       | <i>Straparollus turris</i>                   | 23222 (144)       |
| <i>Euconospira nodosa</i>           | 11513 (119)       | <i>Tragatoma extensa</i>                     | 33323 (145)       |
| <i>Euomphalopterus alatus</i>       | 33221 (120)       | <i>Trochomphalus borkholmensis</i>           | 32231 (146)       |
| <i>Euomphalopterus praetexta</i>    | 12221 (121)       | <i>Trochonemella churkini</i>                | 21324 (147)       |
| <i>Euomphalus incrustatus</i>       | 22121 (122)       | <i>Trochonemella reusingi</i>                | 22324 (148)       |
| <i>Euryzone burdekinensis</i>       | 43121 (123)       | <i>Mestoronema scotica</i>                   | 52331 (149)       |
| <i>Gasconadia putilla</i>           | 11433 (124)       | <i>Michelia brazieri</i>                     | 11521 (150)       |
| <i>Globonema murricatum</i>         | 21321 (125)       | <i>Mestoronema</i> aff. <i>M. marginalis</i> | 42111 (151)       |
| <i>Grantlandispira christei</i>     | 21231 (126)       | <i>Naticopsis bowsheri</i>                   | 41243 (152)       |
| <i>Holopea pyrene</i>               | 42342 (127)       | <i>Palaeomphalus olsoni</i>                  | 43222 (153)       |
| <i>Holopea rotunda</i>              | 21343 (128)       | <i>Paraliospira rupestris</i>                | 32332 (154)       |
| <i>Holopea symmetrica</i>           | 21233 (129)       | <i>Pararaphistoma qualteriatum</i>           | 42211 (155)       |
| <i>Hystricoceras astraciformis</i>  | 22313 (130)       | <i>Plethospira cassina</i>                   | 11442 (156)       |
| <i>Jedria deckeri</i>               | 31243 (131)       | <i>Pseudotectus carinatus</i>                | 22224 (157)       |
| <i>Kitikamispira ornata</i>         | 31323 (132)       | <i>Pseudotectus comes</i>                    | 21214 (158)       |
| <i>Kuskokwimia moorei</i>           | 21143 (133)       | <i>Quadricarina senilis</i>                  | 23322 (159)       |
| <i>Liospira angustata</i>           | 31421 (134)       | <i>Raphistomina aperta</i>                   | 32431 (160)       |
| <i>Lophospira "debganensis"</i>     | 22241 (135)       | <i>Roemiella alticonicus</i>                 | 11222 (161)       |
| <i>Manitobiella "michiganensis"</i> | 43343 (136)       | <i>Scalites angulatus</i>                    | 22242 (162)       |
| <i>Manitobiella goniostoma</i>      | 32243 (137)       |  |                   |