

Contents



Introduction	1	Family Leptellinidae Ulrich & Cooper, 1936	26
Geological setting	2	Subfamily Leptellininae Ulrich & Cooper, 1936	26
Study area	3	Genus <i>Leptellina</i> Ulrich & Cooper, 1936	26
Extraction methods	3	Subgenus <i>Leptellina</i> (<i>Leptellina</i>) Ulrich & Cooper, 1936 ..	26
Age of the fauna	3	<i>Leptellina</i> (<i>Leptellina</i>) <i>occidentalis</i>	
The brachiopod fauna	4	Ulrich & Cooper, 1936	26
Palaeoecological aspects	5	<i>Leptellina</i> (<i>Leptellina</i>) <i>tennesseensis</i>	
Palaeogeographical significance	7	Ulrich & Cooper, 1936	26
Systematic palaeontology	12	Genus <i>Leptelloidea</i> Jones, 1928	27
Phylum Brachiopoda Duméril, 1806	12	<i>Leptelloidea leptelloides</i> Bekker, 1921	27
Subphylum Linguliformea Williams,		Family Leptestiidae Öpik, 1933	27
Carlson & Brunton, 1996	12	Genus <i>Diambonia</i> Cooper & Kindle, 1936	27
Class Lingulata Gorjansky & Popov, 1985	12	<i>Diambonia discuneata</i> Lamont, 1935	27
Order Lingulida Waagen, 1885	12	Family Xenambonitidae Cooper, 1956	27
Superfamily Discinoidea Gray, 1840	12	Subfamily Xenambonitinae Cooper, 1956	28
Family Discinidae Gray, 1840	12	Genus <i>Xenambonites</i> Cooper, 1956	28
Genus <i>Acrosaccus</i> Willard, 1928	12	<i>Xenambonites revelatus</i> Williams, 1962	28
<i>Acrosaccus</i> cf. <i>shuleri</i> Willard, 1928	12	Subfamily Aegiromeninae Havlíček, 1961	28
Subphylum Rhynchonelliformea Williams <i>et al.</i> , 1996	13	New genus aff. <i>Aegiria</i>	29
Class Strophomenata Williams <i>et al.</i> , 1996	13	Family Hesperomenidae Cooper, 1956	29
Order Strophomenida Öpik, 1934	13	Genus <i>Anoptambonites</i> Williams, 1962	29
Superfamily Strophomenoidea King, 1846	13	<i>Anoptambonites grayae</i> (Davidson, 1883)	29
Family Strophomenidae King, 1846	13	<i>Anoptambonites pulchra</i> (Cooper, 1956)	
Subfamily Strophomeninae King, 1846	13	new combination	30
Genus <i>Tetraphalerella</i> Wang, 1949	13	<i>Anoptambonites</i> sp.	31
<i>Tetraphalerella planobesa</i> (Cooper, 1956)		Genus <i>Kassinella</i> (<i>Trimurellina</i>) Mitchell 1977	31
new combination	13	<i>Kassinella</i> (<i>Trimurellina</i> ?) sp.	31
Subfamily Furcitellinae Williams, 1965	14	Genus <i>Sampo</i> Öpik, 1933	31
Genus <i>Transridgeia</i> n. gen.	14	<i>Sampo?</i> sp.	31
<i>Transridgeia costata</i> n. gen. et n. sp.	14	Plectambonitoidea gen. et sp. indet. 1.	32
Family Rafinesquinidae Schuchert, 1893	15	Order Billingsellida Schuchert, 1893	32
Subfamily Leptaeninae Hall & Clarke, 1894	15	Suborder Clitambonitidina Öpik, 1934	32
Genus <i>Leptaena</i> Dalman, 1828	15	Superfamily Clitambonitoidea Winchell & Schuchert, 1893 ..	32
Subgenus <i>Leptaena</i> (<i>Leptaena</i>) Dalman, 1828	15	Family Clitambonitidae Winchell & Schuchert, 1893	32
<i>Leptaena</i> (<i>Leptaena</i>) sp.	15	Genus <i>Atelelasma</i> Cooper, 1956	32
Subgenus <i>Leptaena</i> (<i>Septomena</i>) Roomusoks, 1989	15	<i>Atelelasma?</i> sp.	32
<i>Leptaena</i> (<i>Septomena</i>) <i>alaskensis</i> n. sp.	15	Order Orthotetida Waagen, 1884	32
Family Christianiidae Williams, 1953	16	Suborder Triplesiidina Moore, 1952	32
Genus <i>Christiania</i> Hall & Clarke, 1892	16	Superfamily Triplesioidea Schuchert, 1913	32
<i>Christiania aseptata</i> n. sp.	16	Family Triplesiidae Schuchert, 1913	32
Family Unknown	17	Genus <i>Triplesia</i> Hall, 1859	32
Strophomenoidea gen. et sp. indet.	17	<i>Triplesia</i> sp.	32
Strophomenoidea gen. et sp. indet. 2	17	Genus <i>Grammoplectia</i> Wright & Jaanusson, 1993	33
Strophomenoidea gen. et sp. indet. 3	18	<i>Grammoplectia?</i> sp.	33
Strophomenoidea gen. et sp. indet. 4	18	Class Rhynchonellata Williams <i>et al.</i> , 1996	33
Superfamily Plectambonitoidea Jones, 1928	18	Order Protorthida Schuchert & Cooper, 1931	33
Family Sowerbyellidae Öpik, 1930	18	Superfamily Skenidioidea Kozłowski, 1929	33
Subfamily Sowerbyellinae Öpik, 1930	18	Family Skenidiidae Kozłowski, 1929	33
Genus <i>Sowerbyella</i> Jones, 1928	18	Genus <i>Skenidioidea</i> Schuchert & Cooper, 1931	33
Subgenus <i>Sowerbyella</i> (<i>Sowerbyella</i>) Jones, 1928	18	<i>Skenidioidea multifarius</i> Potter, 1990b	33
<i>Sowerbyella</i> (<i>Sowerbyella</i>) <i>rectangularis</i> n. sp.	19	Genus <i>Replicoskenidioidea</i> Potter, 1990b	34
Subgenus <i>Sowerbyella</i> (<i>Rugosowerbyella</i>) Mitchell, 1977 ..	20	<i>Replicoskenidioidea</i> sp.	34
<i>Sowerbyella</i> (<i>Rugosowerbyella</i>) <i>praecursor</i> n. sp.	20	Skenidiid gen. nov. sp. indet.	34
<i>Sowerbyella</i> (<i>Rugosowerbyella</i>) sp. 1.	20	Order Orthida Schuchert & Cooper, 1932	35
Genus <i>Anisopleurella</i> Cooper, 1956	21	Suborder Orthidina Schuchert & Cooper, 1932	35
<i>Anisopleurella tricostata</i> n. sp.	21	Superfamily Plectorthoidea Schuchert & LeVene, 1929	35
Genus <i>Eoplectodonta</i> (<i>Eoplectodonta</i>) Kozłowski, 1929 ..	21	Family Plectorthidae Schuchert & LeVene, 1929	35
<i>Eoplectodonta</i> (<i>Eoplectodonta</i>) sp.	22	Subfamily Plectorthinae Schuchert & LeVene, 1929	35
Subfamily Ptychoglyptinae Cooper, 1956	22	Genus <i>Plectorthis</i> Hall & Clarke, 1892	35
Genus <i>Ptychoglyptus</i> Willard, 1928	22	<i>Plectorthis</i> sp. 1	35
<i>Ptychoglyptus pauciradiatus</i> Reed, 1932	22	<i>Plectorthis</i> sp. 2	35
<i>Ptychoglyptus alaensis</i> n. sp.	23	Genus <i>Desmorthis</i> Ulrich & Cooper, 1936	36
Family Syndielasmatidae Cooper, 1956	24	<i>Desmorthis?</i> sp.	36
Genus <i>Sowerbyites</i> Teichert, 1937	24	Genus <i>Doleroides</i> Cooper, 1930	36
<i>Sowerbyites</i> sp.	24	<i>Doleroides</i> sp.	36
Family Bimuriidae Cooper, 1956	24	<i>Doleroides</i> n. sp. aff. <i>D. panna</i> (Andreeva)	36
Genus <i>Bimuria</i> (<i>Bimuria</i>) Ulrich & Cooper, 1942	24	Subfamily Orthostrophinae Schuchert & Cooper, 1931	37
<i>Bimuria</i> (<i>Bimuria</i>) <i>gilbertella</i> Potter, 1991	24	Genus <i>Gelidorthis</i> Havlíček, 1968	37
Genus <i>Craspedelia</i> Cooper, 1956	25	<i>Gelidorthis perisiberiaensis</i> n. sp.	37
<i>Craspedelia potterella</i> n. sp.	25	Family Cyclocoeliidae Schuchert & Cooper, 1931	38

Cyclocoeliidae gen. <i>et sp. indet.</i>	38	Family Linoporellidae Schuchert & Cooper, 1931	52
Family Crennorthidae Williams, 1963	38	<i>Genus Laticrura</i> Cooper, 1956	52
<i>Genus Phragmorthis</i> Cooper, 1956	38	<i>Laticrura</i> aff. <i>pionodema</i> Cooper, 1956	52
<i>Phragmorthis butsi</i> Cooper, 1956	38	Order Pentamerida Schuchert & Cooper, 1931	53
Family Rhactorthidae Williams, 1963	39	Suborder Syntrophiidina Ulrich & Cooper, 1936	53
<i>Genus Rhactorthis</i> Williams, 1963	39	Superfamily Camerelloidea Hall & Clarke, 1894	53
<i>Rhactorthis</i> sp.	39	Family Camerellidae Hall & Clarke, 1894	53
Family Giraldiellidae Williams & Harper, 2000	39	Subfamily Camerellinae Hall & Clarke, 1894	53
<i>Genus Scaphorthis</i> Cooper, 1956	39	<i>Genus Camerella</i> Billings, 1859	53
<i>Scaphorthis virginiensis</i> Cooper, 1956	39	<i>Camerella</i> sp.	53
Superfamily Orthoidea Woodward, 1852	40	<i>Genus Brevicamera</i> Cooper, 1956	53
Family Orthidae Woodward, 1852	40	<i>Brevicamera?</i> sp.	53
<i>Genus Diochthofera</i> Potter, 1990a	40	<i>Genus Perimecocoelia</i> Cooper, 1956	53
<i>Diochthofera</i> aff. <i>conspicua</i> Potter, 1990a	40	<i>Perimecocoelia semicostata</i> Cooper, 1956	54
<i>Genus Taphrorthis</i> Cooper, 1956	40	Subfamily Stenocamarinae Cooper, 1956	54
<i>Taphrorthis immatura</i> Williams & Curry, 1985	41	<i>Genus Stenocamara</i> Cooper, 1956	54
Family Plaesiomyidae Schuchert, 1913	42	<i>Stenocamara?</i> sp.	54
Subfamily Plaesiomyinae Schuchert, 1913	42	<i>Genus Eoanastrophia</i> Nikiforova & Sapelnikov, 1973	54
<i>Genus Austinella</i> Foerste, 1909	42	<i>Eoanastrophia?</i> sp.	54
<i>Austinella?</i> sp.	42	Family Parallelelasmataidae Cooper, 1956	55
<i>Genus Dinorthis</i> Hall & Clarke, 1892	42	<i>Genus Didymelasma</i> Cooper, 1956	55
<i>Dinorthis</i> sp.	42	<i>Didymelasma?</i> sp.	55
Family Hesperorthidae Schuchert & Cooper, 1931	43	<i>Genus Schizostrophina</i> Fu, 1982	55
<i>Genus Ptychopleurella</i> Schuchert & Cooper, 1931	43	<i>Schizostrophina?</i> sp.	56
<i>Ptychopleurella uniplicata</i> Cooper, 1956	43	Suborder Pentameridina Schuchert & Cooper, 1931	56
Family Glyptorthidae Schuchert & Cooper, 1931	44	Superfamily Pentameroidea M'Coy, 1844	56
<i>Genus Glyptorthis</i> Foerste, 1914	44	Family Virgianidae Boucot & Amsden, 1963	56
<i>Glyptorthis</i> sp.	44	Subfamily Mariannaellinae Sapelnikov & Rukavishnikova,	
Family Hesperorthidae Schuchert & Cooper, 1931	44	1975	56
<i>Genus Hesperorthis</i> Schuchert & Cooper, 1931	44	<i>Genus Brevilammulella</i> Amsden, 1974	56
<i>Hesperorthis</i> sp.	44	<i>Brevilammulella</i> sp.	56
<i>Hesperorthis</i> sp. 2	45	<i>Genus Galeatellina</i> Sapelnikov & Rukavishnikova, 1976	57
Family Orthidae Woodward, 1852	45	<i>Galeatellina</i> n. sp.	57
<i>Genus Duolobella</i> n. gen.	45	Order Rhynchonellida Kuhn, 1949	57
<i>Duolobella sandiae</i> n. gen. <i>et n. sp.</i>	45	Superfamily Rhynchotrematoidea Schuchert, 1913	57
<i>Genus Palaeowingella</i> n. gen.	46	Family Orthorhynchulidae Cooper, 1956	57
<i>Palaeowingella farewellensis</i> n. gen. <i>et n. sp.</i>	46	<i>Genus Orthorhynchuloides</i> Williams, 1962	57
Family Unknown	46	<i>Orthorhynchuloides?</i> sp.	57
Orthoidea gen. <i>et sp. indet.</i> 1	47	Order Atrypida Rzhonsnitskaia, 1960	57
Orthidina gen. <i>et sp. indet.</i> 1	47	Suborder Anazygidina Copper & Gourvennec, 1996	57
Orthidina gen. <i>et sp. indet.</i> 2	47	Superfamily Anazygoidea Davidson, 1883	58
Orthidina gen. <i>et sp. indet.</i> 3	47	Family Anazygidae Davidson, 1883	58
Orthidina gen. <i>et sp. indet.</i> 4	47	Subfamily Anazyginae Davidson, 1883	58
Orthidina gen. <i>et sp. indet.</i> 5	48	<i>Genus Anazyga</i> Davidson, 1882	58
Orthidina gen. <i>et sp. indet.</i> 6	48	<i>Anazyga</i> sp.	58
Suborder Dalmanellidina Moore, 1952	48	<i>Genus Zygospira</i> Hall, 1862	58
Superfamily Dalmanelloidea Schuchert, 1913	48	<i>Zygospira?</i> sp.	58
Family Dalmanellidae Schuchert, 1913	48	Subfamily Catazyginae Copper, 1977	58
Subfamily Dalmanellinae Schuchert, 1913	48	<i>Genus Catazyga</i> Hall & Clarke, 1893	58
<i>Genus Paucicrura</i> Cooper, 1956	48	<i>Catazyga?</i> sp.	58
<i>Paucicrura?</i> sp.	48	Suborder Lissatrypidina Copper & Gourvennec, 1996	58
Family Dicoelosiidae Cloud, 1948	49	Superfamily Protozygoidea Copper, 1986	58
<i>Genus Dicoelosia</i> King, 1850	49	Family Cyclospiridae Schuchert, 1913	58
<i>Dicoelosia jonesridgensis</i> Ross & Dutro, 1966	49	<i>Genus Cyclospira</i> Hall & Clarke, 1893	59
<i>Genus Epitomyonia</i> Wright, 1968	49	<i>Cyclospira orbis</i> Cocks & Modzalevskaya, 1997	59
<i>Epitomyonia relicina</i> Potter, 1990b	49	<i>Cyclospira elegantula</i> Rozman, 1964	59
Superfamily Enteleteoidea Waagen, 1884	50	Order Unknown	59
Family Draboviidae Havlicek, 1950	50	Family Unknown	59
Subfamily Draboviinae Havlicek, 1950	50	Fam., gen. <i>et sp. indet.</i> 1	60
<i>Genus Diorthelasma</i> Cooper, 1956	50	Fam., gen. <i>et sp. indet.</i> 2	60
<i>Diorthelasma parvum</i> Cooper, 1956	50	Fam., gen. <i>et sp. indet.</i> 3	60
<i>Genus Oanduporella</i> Hints, 1975	50	Fam., gen. <i>et sp. indet.</i> 4	60
<i>Oanduporella kuskokwimensis</i> n. sp.	50	Fam., gen. <i>et sp. indet.</i> 5	60
<i>Genus Salopina</i> Boucot, 1960	51	Fam., gen. <i>et sp. indet.</i> 6	60
<i>Salopina?</i> sp.	51	Fam., gen. <i>et sp. indet.</i> 7	60
Family Saukrodictyidae Wright, 1964	51	Acknowledgements	61
<i>Genus Callositella</i> n. gen.	51	References cited	61
<i>Callositella cheeneetnukensis</i> n. sp.	52	Plates 1–17	69–103