Data repository materials for "Tropical weathering of the Taconic orogeny as a driver for Ordovician cooling"

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Compiled chemostratigraphic data

The compilation shown in Figure 2 of the main text utilizes the following data sets:

- The $^{87}Sr/^{86}Sr$ composite from brachiopods and conodonts published in Prokoph et al. (2008).
- The $^{87}Sr/^{86}Sr$ composite from conodonts published in Saltzman et al. (2014).
- A compilation of Laurentia ϵ_{Nd} isotope data developed in conjunction with this study and split by data from distal margin sediments that from foreland basin sediments. These data can be found in Table DR2 and includes data from: Andersen and Samson (1995); Gleason et al. (1995); Bock et al. (1996); Patchett (1999); Gleason et al. (2002); Macdonald et al. (2017).
- The $\delta^{18}O$ isotope composite from tropical brachiopods published in Viezer (2015).
- A compilation of $\delta^{18}O$ isotope data developed from conodonts. These data can be found in Table DR3 and includes data from: Bassett et al. (2007); Trotter et al. (2008); Quinton and MacLeod (2014); Trotter et al. (2016).

In addition to the materials in this Data Repository, all of the code used for data analysis and figure generation as well as files containing the underlying data sets are available in this Github repository: `https://github.com/Swanson-Hysell/2017_Taconic`. The code and associated output can also be viewed on this webpage: `https://nbviewer.jupyter.org/github/Swanson-Hysell/2017_Taconic/blob/master/Code/Taconic_Arc_Paleogeography.html`.

Compiled paleomagnetic data

Cratonic Laurentia

The paleomagnetic poles used for cratonic Laurentia are as compiled in Torsvik et al. (2012) aside from exclusion of the Tablehead Group and St. George Group poles. As explained in the main text, the Hodych (1989) study that published data from the Tablehead Group showed that the limestones were remagnetized after deposition, but before folding (positive fold test and negative conglomerate test). Therefore, it and the underlying St. George Group limestone poles are not robust constraints on Laurentia's position at the time of their deposition in the Ordovician.

Another paleomagnetic pole from Laurentia that is not included in the compilation of Torsvik et al. (2012), but discussed elsewhere in the literature comes from data developed from red beds of the late Ordovician Juniata Formation (Miller et al., 1989). While the remanence is dated to be pre-Alleghenian on the basis of a tilt test, it can't be excluded whether or not the single component remanence is a post-depositional remagnetization (Miller et al., 1989). The poles calculated from the Juniata Formation are quite similar to younger Silurian poles compiled within Torsvik et al. (2012). The revised reconstruction for Laurentia's position in the Ordovician in this work satisfies the pole calculated from the south salient limb for the Juniata Formation, but not that from the north salient limb.

Allochthonous terranes of North America

Paleomagnetic and geochronological data from allochthonous terranes that were used for the paleogeographic reconstruction and plotted in Figures 1 and 2 of the main text are reported in Table DR1 and are from the following references:

Arnott et al. (1985); Ayuso et al. (2003); Cutts et al. (2012); Greenough et al. (1993); Hamilton and Murphy (2004); Hodych and Buchan (1998); Johnson and Van der Voo (1985); Johnson et al. (1991); Liss et al. (1993); Potts et al. (1995, 1993); Schoonmaker et al. (2014); Smethurst and McEnroe (2003); van Staal et al. (2016); Stamatakos et al. (1995); Sullivan and van Staal (1995); Thompson et al. (2010); Todaro et al. (1996); Van der Voo et al. (December, 1991); Wellensiek et al. (1990); White et al. (1994); Zagorevski et al. (2012, 2015)

Data from Britain north of Iapetus suture

Ordovician data from Britain north of Iapetus suture were reviewed and interpreted to provide little in the way of firm constraints and therefore are not discussed in the main text. The constraints, or lack thereof, from these data are described below:

- In some cases, the remanence post-dates the age of deposition or emplacement such that the data are difficult to interpret. This situation is the case for data from the Port Askaig Tillite overprint (Stupavsky et al., 1982), the Aberdeenshire Gabbros (Watts and Briden, 1984), the Barrovian of Angus (Watts, 1985) and the Tourmakeady Glensau quartz porphyries (Deutsch and Storetvedt, 1988).
- The Ballantrae Complex comprises an early Ordovician obducted ophiolite. Data from the Ballantrae Instrusive Complex were developed by Piper (1978) from gabbros and serpentinites. The mean gabbro direction is (Dec=147.6, Inc=36.2,a95=16.1, N=7) which gives paleolatitude constraints of -20.1°(-10.4°to -32.9°at 95% confidence). The needed tilt-correction is not constrained although Piper (1978) argues the effect would be minimal and the age of magnetization can not be firmly constrained. If the direction is primary and indeed can be considered without tilt-correction, its paleolatitude is consistent with having formed within the Iapetus.
- Piper (1978) also developed data from five flows of the Bail Hill Volcanic Group of the Southern Uplands of Scotland which come from a volcanic complex that is within an Ordovician turbidite succession (Phillips et al., 1998). Existing age constraints on the volcanics come from a K-Ar biotite date of ca. 456 Ma and reports of correlative Caradoc graptolites (ca. 458 to 448) (Phillips et al., 1998). The tilt-corrected mean direction from these volcanics is (Dec=7.3, Inc=-3.5,a95=11.9, N=5) which gives a paleolatitude -1.8º (4.2°to -7.8°at 95% confidence). This paleolatitude is consistent with the new paleogeographic reconstruction, but not with the classic reconstruction. While this result appears to support the new model, the data are of single polarity without a accompanying field test limiting the robustness of the constraint.
- Paleomagnetic data from the Loch Borralan Pluton used to be considered Ordovician in age (Turnell and Briden, 1983), but U-Pb age constraints now show the early suite of the pluton to be 431.1 ± 1.2 Ma and 429.2 ± 0.5 Ma thereby firmly constraining it to be Silurian (Goodenough et al., 2011). The Loch Ailsh Pluton has been dated at 430.6 ± 0.3 Ma rendering that paleomagnetic data to be Silurian as well (Goodenough et al., 2011). A concordant zircon from the Loch Loyal Syenite Complex at ca. 425 Ma (Goodenough et al., 2011) points towards the Ben Loyal paleomagnetic data of Turnell and Briden (1983) also being Silurian. Data from these Silurian plutons are consistent with the paleolatitude of the Scottish Highlands in both the classic and revised model which converge by 430 Ma.

Development of the paleogeographic reconstruction

In our revised paleogeographic framework for Laurentia in the Ordovician, we sought to honor the following constraints:

- The Cambrian and Silurian Laurentia poles should be satisfied. These constraints are effectively summarized by the 500 Ma and 430 Ma running mean poles of Torsvik et al. (2012).
- The margin of Laurentia should be equatorward of the Notre Dame arc (Moreton's Harbor Group) at ca. 477 Ma when paleomagnetic data show it to be at ∼11ºS (Table DR1). Allowing for a Taconic seaway, Laurentia may be northward of that constraint by ∼5º.
- The margin of Laurentia should be equatorward of the Lawrence Head Volcanics at ca. 465 Ma when paleomagnetic data reveal a paleolatitude of ∼12ºS (Table DR1).
- The margin of Laurentia should be equatorward of the Winterville Volcanics at ca. 456 Ma when paleomagnetic data reveal they erupted at ∼11ºS (Table DR1).
- Ganderia should collide at ca. 435 Ma and we will follow the interpretation of van Staal et al. (2012) that was it co-traveling on the same plate as Carolinia.
- It is difficult to ascertain when the Tablehead Group limestones were remagnetized and if they were flat-lying when that remagnetization occurred. Given the positive tilt-test is possible that it is a burial remagnetization and that Laurentia should honor the Tablehead pole sometime between deposition and Devonian folding.

For the classic reconstruction of Laurentia, we utilize the **?** reconstruction which has a similar position of Laurentia through the Ordovician as in Mac Niocaill et al. (1997). This reconstruction was developed using the rotation file and polygon files of Torsvik and Cocks (2017) available here: `http://www.earthdynamics.org/earthhistory/Data_Software.html`. The position of Laurentia within this reconstruction is compared to the paleolatitudinal constraints from Taconic arc terranes in Figure 1 of the manuscript. This comparison reveals that the Appalachian margin is further south than suggested by the Taconic terrane constraints.

Our updated reconstruction sought to satisfy the constraints for Laurentia articulated above and was implemented as a modification of the Torsvik and Cocks (2017) rotation file. The updated rotation file can be found in the Github repository associated with this study (`https://github.com/Swanson-Hysell/Ordovician_Arc_Paleogeo`) as TC2017_modified.rot and applies to the CEED6_LAND.gpml polygons published by Torsvik and Cocks (2017).

Figure 1 of the main text shows the reconstruction at 465 Ma. Figure DR1 shows the reconstructed position of the continents at 475 Ma, 465 Ma, 455 Ma and 445 Ma in both the classic and new reconstruction. The continuous reconstruction can be viewed by opening the .rot and .gmpl files in the software GPlates (`http://www.gplates.org`). Note that when these files are first opened, the default will be to show the reconstruction in the mantle reference frame which has a specified plate ID of 0. These reconstructions are made in the paleogeographic spin-axis reference frame by specifying the plate ID as 1 in the option "Specify Anchored Plate ID" which is in the "Reconstruction" menu.

The GPlates API pygplates was used to create shapefiles at different snapshots for the reconstruction files and to reconstruct the position of the paleomagnetic localities for the figures. The code used for this analysis which made the figures is openly available on Github: `https://github.com/Swanson-Hysell/Ordovician_Arc_Paleogeo`.

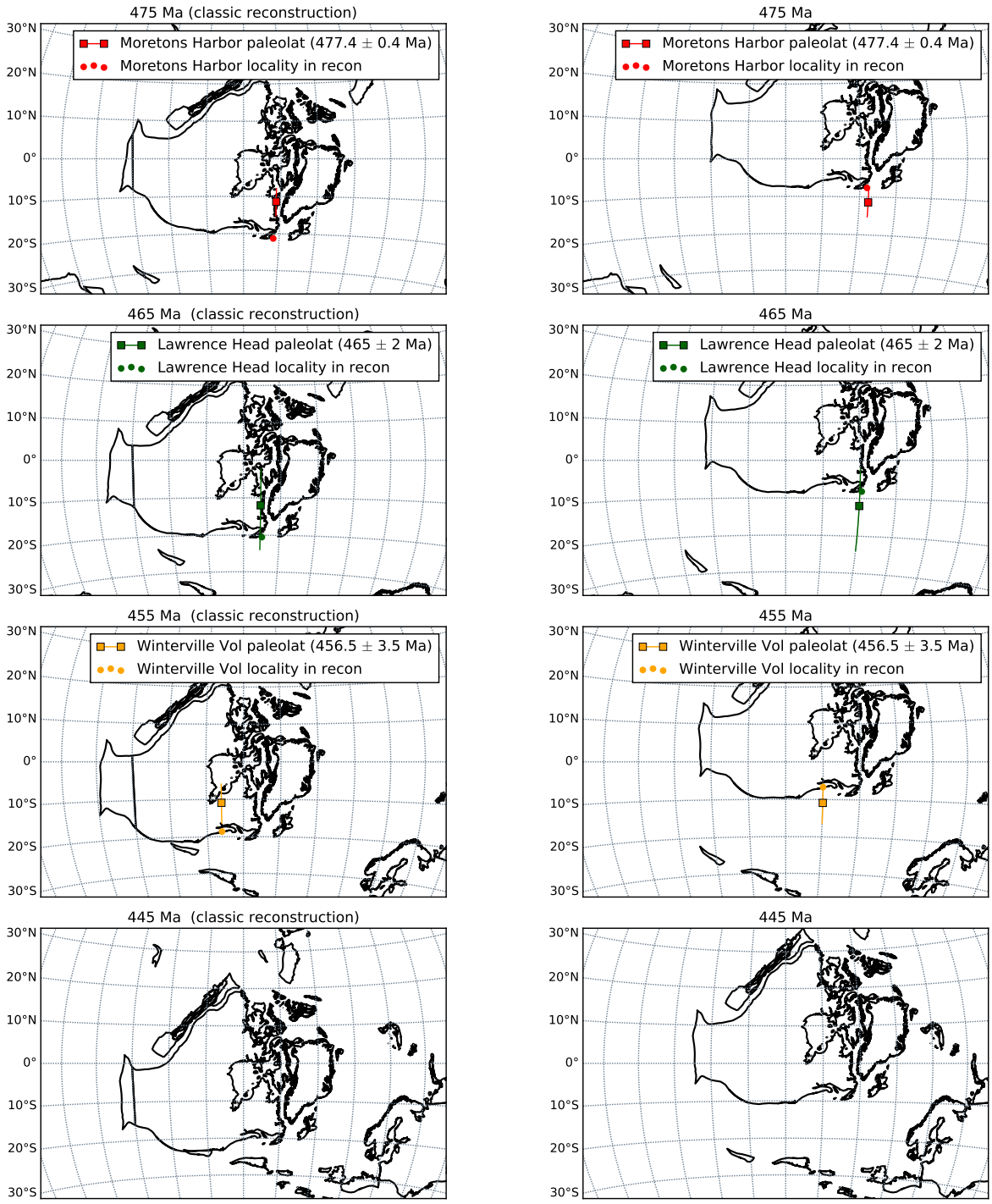

Figure DR1: Paleogeographic reconstructions with data constraints for the classic reconstruction on the left and the new reconstruction on the right.

Table DR1: Paleomagnetic and geochronologic data from Taconic and Salinic terranes of the Appalachians

Formation	Terrane	Slat (º)	Slon (º)	Dec (º)	Inc (º)	n	k	a95 (º)	Plat (º)	Plat max	Plat min	Age (Ma)	Age Note	Age ref	Pmag ref	Notes
Springdale and Wigwam redbeds	Popelogan-Victoria	49.0	-55.5	37.2	-36.7	7	25	12.4	-20.4	-30.0	-12.7	433.0 ± 6.0	upper Llandovery to Wenlock	Arnott et al., 1985	Stamatakos et al., 1995	red beds
Lawrenceton Formation Volcanics	Popelogan-Victoria	49.2	-55.2	15.5	-27.2	10	18	8.1	-14.4	-19.5	-9.8	433.0 ± 6.0	upper Llandovery to Wenlock	Arnott et al., 1985	Smethurst and McEnroe, 2003	subaerial rhyolitic lava flows; passes tilt test
Winterville Volcanics	Bronson Hill	46.8	-68.7	327.0	-21.0	10	28	9.3	-10.9	-16.3	-5.9	456.5 ± 3.5	upper Darawillian to Sandbian, overlain by Katian graptolites	van Staal et al., 2016 and references therein	Potts et al., 1995	extrusive pillow lavas; passes tilt test
Bluffer Pond Volcanics	Bronson Hill	46.5	-69.0	339.0	-28.0	14	12	11.9	-14.9	-22.7	-8.2	456.5 ± 3.5	upper Darawillian to Sandbian, overlain by Katian graptolites	van Staal et al., 2016 and references therein	Potts et al., 1993	extrusive pillow lavas (11 sites); gabbro (3 sites); passes tilt test; magnetite remanence
Tetagouche Group Volcanics	Gander	47.0	-66.0	240.0	-69.0	7	22	13.0	-52.5	-74.3	-36.5	463.5 ± 6.5	U-Pb multigrain TIMS dates of 457 ± 3 Ma, 470 ± 5 Ma, and 465 ± 2 Ma	Sullivan & van Staal, 1996; van Staal et al., 2016	Liss et al., 1993	extrusive pillow lavas; passes tilt test; dual polarity
Stacyville Volcanics	Bronson Hill	46.0	-68.6	270.0	-36.0	4	12	11.8	-20.0	-28.9	-12.7	467.0 ± 5.0	U-Pb zircon date on dacite at top of sequence; van Staal et al., 2016 assigns an age of 470-467	Ayuso et al., 2003	Wellensiek et al., 1990	extrusive pillow lavas; magnetite remanence
Lawrence Head Volcanics	Popelogan-Victoria	49.4	-55.1	236.0	-23.0	6	14	18.5	-12.0	-23.9	-2.3	465.0 ± 2.0	Darawillian	Schoonmaker et al., 2014	Todaro et al., 1996	extrusive pillow lavas; magnetite remanence; passes tilt test
Roberts Arm Volcanics	Annieopsquotch	49.5	-55.8	341.0	-52.0	16	14	11.0	-32.6	-44.5	-23.5	468.5 ± 4.5	473-464 Ma SHRIMP U-Pb zircon	Zagorevski et al., 2015	Van der Voo et al., 1991	extrusive pillow lavas; passes tilt test; dual polarity; pre-accretion remanence based on pole
Summerford Volcanics	Popelogan-Victoria	49.5	-54.8	342.0	-50.0	9	31	9.0	-30.8	-39.8	-23.5	469.0 ± 4.0	U-Pb TIMS on Coaker porphry; syn depositional with Tremadocian to Darriwilian fossils	Zagorezski et al., 2012	Van der Voo et al., 1991	extrusive pillow lavas; pre-accretion remanence based on pole
Chanceport-Cortell's Cove Volcanics	Annieopsquotch	49.5	-54.8	352.0	-49.0	10	50	7.0	-29.9	-36.5	-24.2	468.5 ± 4.5	473-464 Ma by correlation with Roberts Arm; a 484 Ma age has been obtained, but is interpreted as inherited	Zagorevski et al., 2015	Van der Voo et al., 1991	extrusive pillow lavas; pre-accretion remanence based on pole
Moreton's Harbour Group Volcanics	Notre Dame	49.6	-54.9	346.0	-22.0	23	23	6.5	-11.4	-15.2	-7.9	477.4 ± 0.4	U-Pb single grain zircon CA-ID-TIMS date on Trondhjemite associated with mafic dikes	Cutts et al., 2012	Johnson et al., 1991	extrusive pillow lavas (16 sites) and intrusives (7 sites); inclination is the same if flows only; positive baked contact test; passes tilt test
Bourinot Group Volcanics	West Avalonia	46.0	-60.3	293.0	-66.0	9	42	8.1	-48.3	-60.3	-38.6	505.0 ± 3.0	U-Pb multigrain TIMS date on interbedded volcanics	White et al. 1993	Johnson and Van der Voo, 1985	extrusive volcanics; passes tilt test; dual polarity; Mira Terrane of Barr (2013)
Nahant Intrusives	West Avalonia	42.4	-70.9	278.5	-76.7	10	152	3.9	-64.7	-71.7	-58.2	489.0 ± 1.0	U-Pb single grain zircon CA-ID-TIMS dates of 488.53 ± 0.81 Ma (gabbro), 488.48 ± 0.79 Ma (syenite), 490.19 ± 0.90 Ma (syenodiorite), 489.03 ± 0.82 Ma (felsic dike)	Thompson et al., 2010	Thompson et al., 2010	passes tilt and reversal tests
Dunn Point Volcanics	West Avalonia	45.8	-62.1	344.0	-60.0	NaN	NaN	4.1	-40.9	-45.8	-36.4	460.0 ± 3.4	U-Pb multigrain zircon TIMS date	Hamilton and Murphy, 2004	as compiled in Domeier 2016	
Cape St. Mary Sills	West Avalonia	46.8	-54.0	343.8	-50.8	12	25	9.0	-31.5	-40.7	-24.1	441.0 ± 2.0	U-Pb multigrain baddeleyite date	Grenough et al., 1993	Hodych and Buchan, 1998	gabbroic sills; passes tilt test

Table DR2: **Compilation of neodymium isotope data from fine-grained siliciclastic rocks of Laurentia**

Sample #	Fm	Biozone / age model	$^{147}Sm/^{144}Nd$	$^{143}Nd/^{144}Nd$	$\epsilon_{Nd}(0)$	$\epsilon_{Nd}(t)^*$	$\epsilon_{Nd}(t)$	Age	Location	Reference	Setting
C-207404	Cass Fjord	Dresbachian (501-497)	0.1019	0.511019	-31.6	-25.6	-25.6	499	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-074538	Hazen	Early Cambrian to Early Silurian	0.1201	0.511319	-25.7	-21.2	-21.2	470	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-074603	Hazen	Early Cambrian to Early Silurian	0.0878	0.511889	-14.6	-8.6	-8.6	435	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-074684	Danish River	Wenlockian to Ludlovian (433.4-426)	0.1091	0.511873	-14.9	-10.2	-10.1	433	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-174631	Danish River	Wenlockian to Ludlovian (433.4-426)	0.1177	0.511875	-14.9	-10.6	-10.5	433	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-174627	Danish River	Wenlockian to Ludlovian (433.4-426)	0.1137	0.511851	-15.4	-10.9	-10.8	430	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-096220	Lands Lokk	Wenlockian to Ludlovian (433.4-426)	0.1121	0.511712	-18.1	-13.6	-13.5	426	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-096220	Lands Lokk	Wenlockian to Ludlovian (433.4-426)	0.1120	0.511724	-17.8	-13.4	-13.2	426	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-096146	Lands Lokk	Wenlockian to Ludlovian (433.4-426)	0.1129	0.511921	-14.0	-9.5	-9.4	426	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-207277	Canrobert	Tremacocian-Arenigian (479-475)	0.0982	0.511379	-24.6	-18.4	-18.6	477	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-140155	Ibbett Bay	middle Arenigian (475) to late Llandeilian (460)	0.1014	0.511369	-24.8	-19.1	-19.1	470	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-133811	Ibbett Bay	late Llandoverian (439-433.5)	0.1075	0.511970	-13.0	-8.1	-8.1	434	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-133815	Ibbett Bay	Ludlovian (427-423)	0.0630	0.511856	-15.3	-8.1	-8.0	425	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-133815	Ibbett Bay	Ludlovian (427-423)	0.0625	0.511854	-15.3	-8.2	-8.0	425	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-207041	Cape Philips	Late Ordovician to Late Silurian (449-408)	0.1162	0.511946	-13.5	-9.1	-9.1	428	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-132828	Ibbett Bay	Pragian (410.8-407.6)	0.1305	0.512038	-11.7	-8.3	-8.2	410	Ellesmerian	Patchett et al., 1999	N. Interior foreland
C-207064	Stuart Bay	Pragian (410.8-407.6)	0.1077	0.511770	-16.9	-12.4	-12.3	407	Ellesmerian	Patchett et al., 1999	N. Interior foreland
OUA-25	Crystal Mt.	Tremacocian-Arenigian (479-475)	0.0959	0.511676	-18.8	-12.3	-12.6	477	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-25	Crystal Mt.	Tremacocian-Arenigian (479-475)	0.0964	0.511651	-19.3	-12.8	-13.2	477	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-19	Mazarn	Arenigian-Blackhillsian (477-470)	0.1095	0.511689	-18.5	-13.1	-13.2	474	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-19	Mazarn	Arenigian-Blackhillsian (477-470)	0.1096	0.511712	-18.1	-12.6	-12.8	474	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-26	Mazarn	Arenigian-Blackhillsian (477-470)	0.0990	0.511495	-22.3	-16.2	-16.4	474	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-26	Mazarn	Arenigian-Blackhillsian (477-470)	0.0991	0.511507	-22.1	-16.0	-16.2	474	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-28	Blakely	H. teretiusculus (461.5-458.4)	0.0890	0.511534	-21.5	-14.9	-15.2	460	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-28	Blakely	H. teretiusculus (461.5-458.4)	0.0894	0.511543	-21.4	-14.8	-15.1	460	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-27	Lower Womble	Lower N. gracilis (458.4-453.0)	0.1041	0.511566	-20.9	-15.5	-15.5	458	Ouachita	Gleason et al., 1995; 2002	S. Interior foreland
OUA-29	Lower Womble	Lower N. gracilis (458.4-453.0)	0.1077	0.511583	-20.6	-15.4	-15.4	458	Ouachita	Gleason et al., 1995; 2002	S. Interior foreland
OUA-29	Lower Womble	Lower N. gracilis (458.4-453.0)	0.1081	0.511605	-20.2	-14.9	-15.0	458	Ouachita	Gleason et al., 1995	S. Interior foreland

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Table DR2 – continued from previous page

Sample #	Fm	Biozone / age model	$^{147}Sm/^{144}Nd$	$^{143}Nd/^{144}Nd$	$\epsilon_{Nd}(0)$	$\epsilon_{Nd}(t)^*$	$\epsilon_{Nd}(t)$	(Ma)	Location	Reference	Setting
OUA-45	Bigfork	G. spiniferus(?)	0.1185	0.512050	-11.5	-7.0	-7.0	451	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-37	Polk Creek	D. complanatus	0.1271	0.512074	-11.0	-7.1	-7.0	448	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-38	Polk Creek	D. complanatus	0.1150	0.512086	-10.8	-6.2	-6.1	448	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-39	Polk Creek	D. complanatus	0.1135	0.512047	-11.5	-6.8	-6.8	448	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-17	Blaylock	M. gregarius (443-441)	0.1422	0.512126	-10.0	-7.0	-6.9	442	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-17	Blaylock	M. gregarius (443-441)	0.1417	0.512116	-10.2	-7.2	-7.1	442	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-18	Blaylock	M. gregarius (443-441)	0.0909	0.511958	-13.3	-7.5	-7.3	442	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-18	Blaylock	M. gregarius (443-441)	0.0900	0.511952	-13.4	-7.5	-7.4	442	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-35	Blaylock	M. gregarius (443-441)	0.1000	0.511921	-14.0	-8.7	-8.5	442	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-36	Blaylock	M. gregarius (443-441)	0.1465	0.512108	-10.3	-7.6	-7.5	442	Ouachita	Gleason et al., 1995, 2002	S. Interior foreland
OUA-36	Blaylock	M. gregarius (443-441)	0.1466	0.512132	-9.9	-7.1	-7.0	442	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-43	Missouri Mt.	Rhuddanian-Aeronian (441-438)	0.1374	0.511993	-12.6	-9.5	-9.3	440	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-43	Missouri Mt.	Rhuddanian-Aeronian (441-438)	0.1387	0.512006	-12.3	-9.3	-9.1	440	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-44	Missouri Mt.	Rhuddanian-Aeronian (441-438)	0.1005	0.511917	-14.1	-9.6	-8.7	440	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-24	Novaculite	Devonian	0.1219	0.512042	-11.6	-8.0	-7.8	400	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA-40	Novaculite	Devonian	0.1222	0.512050	-11.5	-7.7	-7.7	400	Ouachita	Gleason et al., 1995	S. Interior foreland
MAR91-4	Alsate	Arenigian (472-470)	0.1123	0.511617	-19.9	-14.8	-14.9	471	Ouachita	Gleason et al., 1995	S. Interior foreland
SYL-911	Sylvan	Richmondian-Gamachian (449-443)	0.1077	0.511975	-12.9	-7.9	-7.9	445	Ouachita	Gleason et al., 1995	S. Interior foreland
OUA97-1	Lower Womble	Upper N. gracilis (458.4-456.0)	0.1186	0.511584	-20.6	-16.1	-16.0	458	Ouachita	Gleason et al., 2002	S. Interior foreland
99SF-2	Middle Womble	Upper N. gracilis (458.4-456.0)	0.0961	0.511553	-21.2	-15.4	-15.3	456	Ouachita	Gleason et al., 2002	S. Interior foreland
99SF-3	Middle Womble	Upper N. gracilis (458.4-456.0)	0.0895	0.511509	-22.0	-15.9	-15.8	456	Ouachita	Gleason et al., 2002	S. Interior foreland
99SF-4	Middle Womble	Upper N. gracilis (458.4-456.0)	0.0977	0.511610	-20.1	-14.4	-14.3	456	Ouachita	Gleason et al., 2002	S. Interior foreland
99SF-5	Middle Womble	Upper N. gracilis (458.4-456.0)	0.1021	0.511736	-17.6	-12.2	-12.1	456	Ouachita	Gleason et al., 2002	S. Interior foreland
99SF-6	Middle Womble	Upper N. gracilis (458.4-456.0)	0.1117	0.511741	-17.5	-12.6	-12.6	456	Ouachita	Gleason et al., 2002	S. Interior foreland
99SF-7	Middle Womble	Upper N. gracilis (458.4-456.0)	0.0939	0.511631	-19.6	-13.7	-13.7	456	Ouachita	Gleason et al., 2002	S. Interior foreland
OUA97-2	Upper Womble	C. bicornis (456-453)	0.1346	0.512034	-11.8	-8.2	-8.2	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-22	Upper Womble	C. bicornis (456-453)	0.1175	0.511951	-13.4	-9.4	-8.8	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-23	Upper Womble	C. bicornis (456-453)	0.1257	0.511987	-12.7	-8.6	-8.6	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-24	Upper Womble	C. bicornis (456-453)	0.1193	0.511979	-12.9	-8.4	-8.4	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-25	Upper Womble	C. bicornis (456-453)	0.1289	0.511894	-14.5	-10.6	-10.6	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-1	Upper Womble	C. bicornis (456-453)	0.1259	0.512023	-12.0	-7.9	-7.9	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-5	Upper Womble	C. bicornis (456-453)	0.1093	0.511708	-18.1	-13.1	-13.1	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-5c	Upper Womble	C. bicornis (456-453)	0.1093	0.511719	-17.9	-12.9	-12.9	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-8	Upper Womble	C. bicornis (456-453)	0.1205	0.511833	-15.7	-11.3	-11.3	453	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-12	Lower Bigfork	C. americanus	0.1374	0.512218	-8.2	-4.8	-4.8	452	Ouachita	Gleason et al., 2002	S. Interior foreland
BKR97-15	Lower Bigfork	C. americanus	0.1313	0.512192	-8.7	-4.5	-4.9	452	Ouachita	Gleason et al., 2002	S. Interior foreland
SQ-126	Upper Bigfork	G. spiniferus	0.1120	0.511988	-12.7	-7.8	-7.8	451	Ouachita	Gleason et al., 2002	S. Interior foreland

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Table DR2 – continued from previous page

Sample #	Fm	Biozone / age model	$^{147}Sm/^{144}Nd$	$^{143}Nd/^{144}Nd$	$\epsilon_{Nd}(0)$	$\epsilon_{Nd}(t)^*$	$\epsilon_{Nd}(t)$	(Ma)	Location	Reference	Setting
87-031	Flat Creek	C. americanus	0.1151	0.511777	-16.8	-12.1	-12.1	452	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
87-033	Flat Creek	C. americanus	0.1167	0.511816	-16.0	-11.4	-11.4	452	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
87-034	Flat Creek	C. americanus	0.1143	0.511748	-17.4	-12.6	-12.6	452	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
87-041	Flat Creek	C. americanus	0.1128	0.511774	-16.9	-12.0	-12.0	452	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
93-04	Flat Creek	C. americanus	0.1153	0.511832	-15.7	-11.1	-11.0	452	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
90-015	Indian Castle	C. spiniferus	0.1202	0.511979	-12.9	-8.5	-8.5	451	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
90-017	Indian Castle	C. spiniferus	0.1163	0.511920	-14.0	-9.4	-9.4	451	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
88-034	Indian Castle	C. spiniferus	0.1190	0.511911	-14.2	-9.7	-9.7	451	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
88-042	Indian Castle	C. spiniferus	0.1229	0.511954	-13.3	-9.1	-9.1	451	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
OC-16	Indian Castle	G. pygmaeus	0.1111	0.511934	-13.7	-8.8	-8.8	450	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
93-20	Schenectady	G. pygmaeus	0.1184	0.511980	-12.8	-8.4	-8.4	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
93-20	Schenectady	G. pygmaeus	0.1178	0.511982	-12.8	-8.4	-8.3	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
93-26	Schenectady	G. pygmaeus	0.1146	0.511928	-13.8	-9.1	-9.2	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
OC-11	Frankfort	G. pygmaeus	0.1555	0.512069	-11.1	-8.7	-8.7	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
OC-7	Frankfort	G. pygmaeus	0.1440	0.512043	-11.6	-8.6	-8.6	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
OC-4	Frankfort	G. pygmaeus	0.1111	0.511933	-13.8	-8.8	-8.9	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
OC-4	Frankfort	G. pygmaeus	0.1112	0.511940	-13.6	-8.7	-8.7	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
OC-3	Frankfort	G. pygmaeus	0.1116	0.511958	-13.3	-8.4	-8.4	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
OC-2	Frankfort	G. pygmaeus	0.1761	0.512115	-10.2	-9.0	-9.0	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
OC-1	Frankfort	G. pygmaeus	0.1405	0.512039	-11.7	-8.5	-8.5	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
AGS	Austin Glen	G. pygmaeus	0.1034	0.511940	-13.6	-8.3	-8.3	449	Taconic Foreland	Andersen and Samson, 1995	C. Interior foreland
US	Flat Creek	C. americanus	0.1066	0.511722	-17.9	-12.7	-12.7	452	Taconic Foreland	Bock et al., 1996	C. Interior foreland
Usb	Flat Creek	C. americanus	0.1139	0.511693	-18.4	-13.7	-13.7	452	Taconic Foreland	Bock et al., 1996	C. Interior foreland
DS	Dolgeville	Rhuddemani	0.1177	0.512022	-12.0	-7.5	-7.5	451	Taconic Foreland	Bock et al., 1996	C. Interior foreland
C-5	Rich Valley	G. pygmaeus	0.1100	0.511878	-14.8	-9.7	-9.9	449	Sevier	Andersen and Samson, 1995	Distal margin
M-1	Lower Blockhouse	G. teretiusculus	0.1132	0.511876	-14.9	-10.0	-10.0	461	Sevier	Andersen and Samson, 1995	Distal margin
M-2	Lower Blockhouse	G. teretiusculus	0.1108	0.511899	-14.4	-9.4	-9.4	461	Sevier	Andersen and Samson, 1995	Distal margin
SHD-8-3	Upper Blockhouse	N. gracilis (458.4-456.0)	0.1318	0.512045	-11.6	-7.8	-7.8	457	Sevier	Andersen and Samson, 1995	Distal margin
SHD-6-2	Upper Blockhouse	N. gracilis (458.4-456.0)	0.1254	0.512031	-11.8	-7.7	-7.7	457	Sevier	Andersen and Samson, 1995	Distal margin
SHD-3-6	Tellico	N. gracilis (458.4-456.0)	0.1154	0.512031	-11.8	-7.1	-7.1	457	Sevier	Andersen and Samson, 1995	Distal margin
SHD-3-4	Tellico	N. gracilis (458.4-456.0)	0.1218	0.512010	-12.3	-7.9	-7.9	457	Sevier	Andersen and Samson, 1995	Distal margin
311-2	Bays	N. gracilis (458.4-456.0)	0.1333	0.512131	-9.9	-6.2	-6.2	457	Sevier	Andersen and Samson, 1995	Distal margin
HOL-1	Tellico	Blackriverian (458-455)	0.1127	0.512001	-12.4	-7.5	-7.5	456	Sevier	Gleason et al., 1995	Distal margin
HOL-2	Tellico	Blackriverian (458-455)	0.1139	0.512028	-11.9	-7.0	-7.1	456	Sevier	Gleason et al., 1995	Distal margin
TH-2	Martinsburg	Blackriverian-Richmondian(456-448)	0.1355	0.512000	-12.4	-8.9	-8.9	450	Sevier	Gleason et al., 1995	Distal margin
TH-1	Juniata	Maysvillian-Hirnantian (449-443)	0.1337	0.512095	-10.6	-7.0	-7.0	445	Sevier	Gleason et al., 1995	Distal margin

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Table DR2 – continued from previous page

Sample #	Fm	Biozone / age model	$^{147}Sm/^{144}Nd$	$^{143}Nd/^{144}Nd$	$\epsilon_{Nd}(0)$	$\epsilon_{Nd}(t)^*$	$\epsilon_{Nd}(t)$	(Ma)	Location	Reference	Setting
TH-5	Clinch	Rhuddanian-Telychian (443-433)	0.1272	0.512044	-11.6	-7.7	-7.7	440	Sevier	Gleason et al., 1995	Distal margin
V-1	Lower Athens	D. murchisoni (463.5-461.5)	0.1162	0.511896	-14.5	-9.9	-9.7	463	Sevier	Gleason et al., 2002	Distal margin
17-2	Middle Athens	H. teretiusculus (461.5-458.4)	0.1141	0.511939	-13.6	-8.9	-8.8	460	Sevier	Gleason et al., 2002	Distal margin
26/28	Middle Athens	H. teretiusculus (461.5-458.4)	0.1163	0.511932	-13.8	-9.2	-9.1	460	Sevier	Gleason et al., 2002	Distal margin
84/3	Upper Athens	Upper N. gracilis (458.4-456.0)	0.1139	0.511921	-14.0	-9.2	-9.2	458	Sevier	Gleason et al., 2002	Distal margin
106-1	Upper Athens	Upper N. gracilis (458.4-456.0)	0.1134	0.511941	-13.6	-8.8	-8.7	458	Sevier	Gleason et al., 2002	Distal margin
BN1402-1	Hatch Hill	Franconian-Trempealeauan (495-485)	0.0974	0.511654	-19.2	-12.9	-12.9	500	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-7.3	Hatch Hill	Franconian-Trempealeauan (495-485)	0.0903	0.511607	-20.1	-13.4	-13.4	498	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-12.0	Hatch Hill	Franconian-Trempealeauan (495-485)	0.1087	0.511741	-17.5	-11.9	-11.9	496	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-17.5	Hatch Hill	Franconian-Trempealeauan (495-485)	0.1148	0.511640	-19.5	-14.3	-14.3	494	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-23	Hatch Hill	Franconian-Trempealeauan (495-485)	0.1201	0.511727	-17.8	-13.0	-13.0	492	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-28.5	Hatch Hill	Franconian-Trempealeauan (495-485)	0.1066	0.511693	-18.4	-12.8	-12.8	490	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-34	Hatch Hill	Franconian-Trempealeauan (495-485)	0.0969	0.511687	-18.6	-12.3	-12.3	488	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-39.3	Poultney	Tremadocian-Whiterock (485-469)	0.1134	0.511754	-17.2	-12.1	-12.1	486	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-45.4	Poultney	Tremadocian-Whiterock (485-469)	0.1199	0.511704	-18.2	-13.5	-13.5	484	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-52.0	Poultney	Tremadocian-Whiterock (485-469)	0.0998	0.511635	-19.6	-13.6	-13.6	482	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-58.5	Poultney	Tremadocian-Whiterock (485-469)	0.1114	0.511736	-17.6	-12.4	-12.4	480	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-65.0	Poultney	Tremadocian-Whiterock (485-469)	0.1095	0.511629	-19.7	-14.4	-14.4	478	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-70.0	Poultney	Tremadocian-Whiterock (485-469)	0.1276	0.511669	-18.9	-14.7	-14.7	476	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1402-76.1	Poultney	Tremadocian-Whiterock (485-469)	0.1256	0.511656	-19.2	-14.9	-14.9	474	Taconic Allochthon	Macdonald et al., 2017	Distal margin
F1458-0.5	Indian River	470-463 (U-Pb zircon)	0.1302	0.511832	-15.7	-11.8	-11.8	463	Taconic Allochthon	Macdonald et al., 2017	Distal margin
F1458-4.0	Mt. Merino	462-455	0.1201	0.511933	-13.8	-9.2	-9.2	461	Taconic Allochthon	Macdonald et al., 2017	Distal margin
F1458-12.0	Mt. Merino	462-455	0.1189	0.511929	-13.8	-9.3	-9.3	458	Taconic Allochthon	Macdonald et al., 2017	Distal margin
F1458-40.0	Mt. Merino	462-455	0.1263	0.511938	-13.7	-9.6	-9.6	455	Taconic Allochthon	Macdonald et al., 2017	Distal margin
F1458-47.5	Austin Glen	455-450	0.1215	0.511950	-13.4	-9.1	-9.1	453	Taconic Allochthon	Macdonald et al., 2017	Distal margin
F1458-55.0	Austin Glen	455-450	0.1145	0.511917	-14.1	-9.3	-9.3	453	Taconic Allochthon	Macdonald et al., 2017	Distal margin
F1458-55.0	Austin Glen	455-450	0.1284	0.511938	-13.7	-9.7	-9.7	451	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1401-.5	Indian River	470-463 (U-Pb zircon)	0.1110	0.511640	-19.5	-14.4	-14.4	467.5	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1401-0.7	Indian River	470-463 (U-Pb zircon)	0.2390	0.511731	-17.7	-20.2	-20.2	467	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1401-1.7	Indian River	470-463 (U-Pb zircon)	0.1149	0.511670	-18.9	-14.0	-14.0	466.5	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1401-2.1	Indian River	470-463 (U-Pb zircon)	0.1159	0.511599	-20.3	-15.5	-15.5	466	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1401-7.6	Indian River	470-463 (U-Pb zircon)	0.1134	0.511771	-16.9	-12.0	-12.0	465.5	Taconic Allochthon	Macdonald et al., 2017	Distal margin

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Table DR2 – continued from previous page

Sample #	Fm	Biozone / age model	$^{147}Sm/^{144}Nd$	$^{143}Nd/^{144}Nd$	$\epsilon_{Nd}(0)$	$\epsilon_{Nd}(t)^*$	$\epsilon_{Nd}(t)$	(Ma)	Location	Reference	Setting
BN1401-10.5	Indian River	470-463 (U-Pb zircon)	0.1140	0.511658	-19.1	-14.2	-14.2	465	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1401-10.9	Indian River	470-463 (U-Pb zircon)	0.1159	0.511864	-15.1	-10.3	-10.3	464.5	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1401-12.2	Indian River	470-463 (U-Pb zircon)	0.1028	0.511794	-16.5	-10.9	-10.9	464	Taconic Allochthon	Macdonald et al., 2017	Distal margin
BN1401-15	Indian River	470-463 (U-Pb zircon)	0.1159	0.511882	-14.7	-10.0	-10.0	463.5	Taconic Allochthon	Macdonald et al., 2017	Distal margin
IR	Indian River	470-463 (U-Pb zircon)	0.1095	0.511745	-17.4	-12.2	-12.3	465	Taconic Allochthon	Bock et al., 1996	Distal margin
MM	Mt. Merino	462-455	0.1233	0.511820	-16.0	-11.7	-11.6	461	Taconic Allochthon	Bock et al., 1996	Distal margin
AG	Austin Glen	455-450	0.1185	0.511978	-12.9	-8.4	-8.4	451	Taconic Allochthon	Bock et al., 1996	Distal margin

Table DR3: **Compilation of oxygen isotope data from conodonts**

Locality	Sample	$\delta^{18}O_phos$	Age (Ma)	Biozone Taxon	Reference
Cornwallis Island, Canadian Arctic	3ARW-13	19.03	427.2	Lobograptus progenitor (Kockelella variabilis variabilis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	3ARW-37	19.07	427.3	Lobograptus progenitor (Kockelella variabilis variabilis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	3ARW-34	18.71	427.5	Colonograptus? deubeli? (Kockelella ortus absidata)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	3ARW-12	19.12	427.8	Colonograptus? deubeli? (Kockelella ortus absidata)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	3ARW-9	19.3	428.1	Colonograptus? deubeli? (Kockelella ortus absidata)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	3ARW-5	19.07	429.2	M. testis – Cyrt. lundgreni (Ozarkodina bohemica longa)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	3ARW-4	18.72	429.4	M. testis – Cyrt. lundgreni (Ozarkodina sagitta sagitta)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	3ARW-2	19.12	429.6	M. testis – Cyrt. lundgreni (Ozarkodina sagitta sagitta)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	2ARW-3	18.5	429.8	Cyrtograptus lundgreni (Ozarkodina sagitta sagitta)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	2ARW-1	18.44	430	Cyrtograptus lundgreni (Ozarkodina sagitta sagitta)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	ARW-13	18.62	430.6	Cyrtograptus perneri (Kockelella ortus ortus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	ARW-10	18.9	430.8	Cyrtograptus perneri (Kockelella ortus ortus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP55	19.06	431	Cyrt. perneri – M. opimus (Kockelella ortus ortus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	ARW-6	18.77	431.2	Cyrtograptus perneri (Kockelella ortus ortus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP53	18.82	431.5	Cyrt. perneri – M. opimus (Kockelella walliseri)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP49A	19.97	432.2	M. instrenuus – Cyrt. kolobus (Ozarkodina sagitta rhenana)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP47	19.87	432.4	M. instrenuus – Cyrt. kolobus (Kockelella ranuliformis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	ARE-6	18.94	433.6	"Cyrtograptus insectus (Pt. am. amorphognathoides)"	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	ARE-5	18.96	433.7	"Cyrtograptus sakmaricus (Pt. am. amorphognathoides)"	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	ARE-1	18.88	434	"Cyrtograptus sakmaricus (Pt. am. amorphognathoides)"	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP31	17.88	434.5	"Cyrtograptus sakmaricus (Pt. am. amorphognathoides)"	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP28	18.06	435	"Cyrtograptus sakmaricus (Pt. am. amorphognathoides)"	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP27	18.46	435.1	"Cyrtograptus sakmaricus (Pt. am. amorphognathoides)"	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP25	18.28	435.5	Cyrtograptus sakmaricus (Pt. am. lithuanicus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP20	18.01	436	Cyrtograptus sakmaricus (Pt. am. angulatus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP17	18.38	436.2	Monoclimacis griestonensis (Pt. am. angulatus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP13	17.54	436.5	Monoclimacis griestonensis (Pterospathodus eopennatus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CP4	17.54	437	Streptograptus crispus? (Pterospathodus eopennatus)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-28	18.01	437.5	Spirograptus turriculatus (Distomodus staurognathoides)	Trotter et al., 2016

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Locality	Sample	$\delta^{18}O_phos$	Age (Ma)	Biozone Taxon	Reference
Cornwallis Island, Canadian Arctic	CM2C-26	18.45	438	Spirograptus turriculatus (Distomodus staurognathoides)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-19	17.7	438.2	Spirograptus guerichi (Distomodus staurognathoides)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-18	17.87	438.4	Spirograptus guerichi (Distomodus staurognathoides)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-16	18.52	438.5	Spirograptus guerichi (Distomodus staurognathoides)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-14	18.25	438.7	Lituigraptus convolutus? (Distomodus staurognathoides)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-11	18.08	439	Lituigraptus convolutes (Distomodus staurognathoides)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-10	18.54	439.2	Campograptus curtus (Distomodus staurognathoides)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-9	18.51	440	Campograptus curtus (Pterospathodus tenuis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-7	18.28	441	Coronograptus cyphus (Aspelundia expansa)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-5	18.43	441.2	Coronograptus cyphus (Distomodus kentuckyensis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2C-3	19.44	441.6	Huttagraptus acinaces (Distomodus kentuckyensis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CM2B-1	18.28	442	Atavograptus atavus (Distomodus kentuckyensis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CPS16	18.99	442.7	Atavograptus atavus (Distomodus kentuckyensis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CPS14	18.56	443	Para. acuminatus ("sinitzini") (Distomodus kentuckyensis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CPS10	18.81	443.3	Para. acum. (moderniilubricus) (Distomodus kentuckyensis)	Trotter et al., 2016
Cornwallis Island, Canadian Arctic	CPS7	18.66	443.5	Para. acum. (moderniilubricus) (Distomodus kentuckyensis)	Trotter et al., 2016
Anticosti Island, Quebec	9699	18.56	437.5	Distomodus staurognathoides	Trotter et al., 2016
Anticosti Island, Quebec	A79-C88	19.07	439	Ozarkodina clavula (Distomodus staurognathoides)	Trotter et al., 2016
Anticosti Island, Quebec	A79-C85	19.71	439.1	Ozarkodina clavula (Distomodus staurognathoides)	Trotter et al., 2016
Anticosti Island, Quebec	27	18.82	440.5	Ozarkodina clavula (Aspelundia expansa)	Trotter et al., 2016
Anticosti Island, Quebec	A79-C57	18.76	440.8	Ozarkodina strena (Aspelundia expansa)	Trotter et al., 2016
Anticosti Island, Quebec	A79-C70	18.85	441.1	Ozarkodina strena (Aspelundia expansa)	Trotter et al., 2016
Anticosti Island, Quebec	62	19.51	442	Ozarkodina strena (Distomodus kentuckyensis)	Trotter et al., 2016
Anticosti Island, Quebec	68	19.35	442	Ozarkodina strena (Distomodus kentuckyensis)	Trotter et al., 2016
Anticosti Island, Quebec	A79-C173	19.01	442.4	Ozarkodina strena (Distomodus kentuckyensis)	Trotter et al., 2016
Anticosti Island, Quebec	A-011T	19.66	443	Ozarkodina strena (Distomodus kentuckyensis)	Trotter et al., 2016
Anticosti Island, Quebec	A79-C166	19.15	443.2	Ozarkodina hassi (Distomodus kentuckyensis)	Trotter et al., 2016
Anticosti Island, Quebec	A79-C32	19.49	443.5	Ozarkodina hassi (Distomodus kentuckyensis)	Trotter et al., 2016
Anticosti Island, Quebec	A79-C150	20.09	443.8	Ozarkodina hassi (Distomodus kentuckyensis)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-3.15A	18.56	423.5	Ozarkodina eosteinhornensis (Ozarkodina crispa)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-3.15.2	17.93	425.1	Saetograptus leintwardinensis (Polygnathoides siluricus)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-3.13	18.29	425.4	Saetograptus leintwardinensis (Ancoradella ploekensis)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-3.12.2	17.65	425.5	Saetograptus leintwardinensis (Ancoradella ploekensis)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-3.12.1	17.06	425.7	Prist. tumescens – Saet.incipiens (Kockelella variabilis variabilis)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-3.7	18.29	425.9	Prist. tumescens – Saet.incipiens (Kockelella variabilis variabilis)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-3.4A	18.01	426.5	Lobograptus scanicus (Kockelella variabilis variabilis)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-3.1	18.31	427.5	Colonograptus ludensis (Kockelella ortus absidata)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-2.3	19.23	430	Colonograptus ludensis (Ozarkodina sagitta sagitta)	Trotter et al., 2016
Welsh Borderlands, UK, Avalonia	GBR-2.1	18.51	433.4	"Cyrtograptus centrifugus (Pt. am. amorphognathoides)"	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_164.0-164.3	17.96	421	Oulodus elegans detortus	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_172.7-173.0	17.87	421.2	Ozarkodina eosteinhornensis	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_180.2-181.0	18.24	421.3	Ozarkodina eosteinhornensis	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_191.0-191.3	18.17	421.5	Ozarkodina eosteinhornensis	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_197.7-198.0	18.51	421.7	Ozarkodina eosteinhornensis	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_227.5	18.21	422.4	Ozarkodina eosteinhornensis	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_253.6-253.8	18.48	422.8	Ozarkodina eosteinhornensis	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_362.30-362.61	19.34	427.53	Kockelella ortus absidata	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_407	20.47	428.5	Ozarkodina bohemica longa	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_412.0-412.4	19.79	428.85	Ozarkodina bohemica longa	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_427.4-427.7	19.72	429.8	Ozarkodina sagitta sagitta	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_436.7-437.0	19.35	430.05	Ozarkodina sagitta sagitta	Trotter et al., 2016
Latvia (northwest), Baltica	Kolka-54_448.0-448.3	19.41	430.35	Ozarkodina sagitta sagitta	Trotter et al., 2016
Latvia (west), Baltica	Aizpute_C97-76	18.6	435.1	Pt. am. amorphognathoides	Trotter et al., 2016
Latvia (west), Baltica	Aizpute_C97-94	18.07	436.35	Pt. am. angulatus	Trotter et al., 2016
Latvia (west), Baltica	Aizpute_C97-96	18.73	436.45	Pterospathodus eopennatus	Trotter et al., 2016
Latvia (west), Baltica	Aizpute_C97-107	19.15	437.6	Dist. staurognathoides	Trotter et al., 2016
Latvia (west), Baltica	Aizpute_C97-112	18.61	438.9	Dist. staurognathoides	Trotter et al., 2016
Latvia (west), Baltica	Aizpute_C00-6	18.18	439.45	Pranognathus tenuis	Trotter et al., 2016

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Locality	Sample	$\delta^{18}O_phos$	Age (Ma)	Biozone Taxon	Reference
Latvia (west), Baltica	Aizpute_C00-2	18.45	441	Aspelundia? expansa	Trotter et al., 2016
Latvia (west), Baltica	Pavilosta_763.00-.30	18.14	425	Polygnathoides siluricus	Trotter et al., 2016
Latvia (west), Baltica	Pavilosta_779.00-.30	18.54	425.7	Kockelella variabilis variabilis	Trotter et al., 2016
Latvia (west), Baltica	Pavilosta_792.1	18.88	426.2	Kockelella variabilis variabilis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-321	19.84	432.45	Kockelella ranuliformis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-317	19.74	432.48	Kockelella ranuliformis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-315	19.79	432.49	Kockelella ranuliformis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-313	19.1	432.63	Kockelella ranuliformis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-311	19.42	432.78	Kockelella ranuliformis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-306	18.96	433.19	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-302	18.89	433.48	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-300	19.39	433.59	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-298	18.71	433.71	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-296	18.67	433.8	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-294	18.5	433.92	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-290	18.53	434.11	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-286	18.19	434.3	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-282	18.77	434.5	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-278	18.7	434.68	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-270	18.64	435.1	Pt. am. amorphognathoides	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-268	18.75	435.25	Pt. am. lithuanicus	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-264	18.69	435.5	Pt. am. lithuanicus?	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-262	18.71	435.61	Pt. am. lennarti?	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-256	18.39	436.1	Pt. am. angulatus	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-250	18.38	436.4	Pt. eopennatus ssp. n. 2	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-248	18.28	436.45	Pt. eopennatus ssp. n. 2	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-244	18.27	436.65	Pt. eopennatus ssp. n. 2	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-240	18.77	436.8	Pt. eopennatus ssp. n. 2	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-238	18.36	436.9	Pt. eopennatus ssp. n. 1	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	863_C95-234	18.38	437.1	Pt. eopennatus ssp. n. 1	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Ohesaare_3.15-9.0	19.04	421.8	Ozarkodina eosteinhornensis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Ohesaare_20.10-20.35	18.86	422.2	Ozarkodina eosteinhornensis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Ohesaare_52.0-52.25	18.07	422.8	Ozarkodina eosteinhornensis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Ohesaare_76.7-76.9	18.7	423.2	Ozarkodina crispa	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Ohesaare_90.75-91.0	18.75	423.6	Ozarkodina snajdri	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Ohesaare_95.95-96.20	18.24	423.8	Ozarkodina snajdri	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Ohesaare_100.8-101.05	18.57	424.1	Ozarkodina snajdri	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_30.30-.45	18.79	425.8	Kockelella variabilis variabilis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_33.50-.65	18.68	426.2	Kockelella variabilis variabilis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_39.10-.25	19.12	426.7	Kockelella variabilis variabilis	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_50.25-.35	18.66	427.7	Kockelella ortus absidata	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_54.20-.30	18.95	427.8	Kockelella ortus absidata	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_62.3	19.72	428.7	Ozarkodina bohemica longa	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_64.60-.80	18.93	429.1	Ozarkodina bohemica longa	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_75.80-.90	19.09	430.4	Ozarkodina sagitta sagitta	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_84.70-.80	19.08	430.7	Kockelella ortus ortus	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_89.25-.40	19.77	430.9	Kockelella ortus ortus	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_103.60-.75	19.68	431.1	Kockelella ortus ortus	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_107.10-.30	19.15	431.2	Kockelella walliseri	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_115.35-.45	19.52	431.5	Kockelella walliseri	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_120.00-.20	20.26	431.6	Kockelella walliseri	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_126.80-.90	20.01	431.8	Kockelella walliseri	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_132.35-.50	20.15	431.9	Ozarkodina sagitta rhenana	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_136.60-.80	19.99	432	Ozarkodina sagitta rhenana	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_141.50-.70	20.11	432.1	Ozarkodina sagitta rhenana	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_146.40-.50	20.15	432.2	Ozarkodina sagitta rhenana	Trotter et al., 2016
Saaremaa (southwest), Estonia, Baltica	Riksu_153.40-.50	20.04	432.4	Kockelella ranuliformis	Trotter et al., 2016
Broken River, Queensland, Australia	COG_47.8	17.76	424.6	Middle Icriodontid Sb-Z	Trotter et al., 2016
Broken River, Queensland, Australia	COG_45.8	18.75	424.65	Lower Icriodontid Sb-Z	Trotter et al., 2016
Broken River, Queensland, Australia	COG_45.4	17.9	424.7	Lower Icriodontid Sb-Z	Trotter et al., 2016
Broken River, Queensland, Australia	COG_44.9	17.62	424.75	Lower Icriodontid Sb-Z	Trotter et al., 2016
Broken River, Queensland, Australia	COG_44.8	17.67	424.9	Po. siluricus (excavata interval)	Trotter et al., 2016
Broken River, Queensland, Australia	COG_44.3	17.02	424.95	Upper Po. siluricus (upper)	Trotter et al., 2016
Broken River, Queensland, Australia	COG_43.9	18.26	425.05	Upper Po. siluricus (mid)	Trotter et al., 2016
Broken River, Queensland, Australia	COG_43.7	18.17	425.07	Upper Po. siluricus (mid)	Trotter et al., 2016
Broken River, Queensland, Australia	COG_41.9	16.72	425.1	Polygnathoides siluricus	Trotter et al., 2016
Boree Creek, New South Wales, Australia	BM_48.60	18.84	432.5	Kockelella ranuliformis (upper?)	Trotter et al., 2016
Boree Creek, New South Wales, Australia	BM_16.17	18.23	432.52	Kockelella ranuliformis	Trotter et al., 2016
Boree Creek, New South Wales, Australia	BM_13.80	17.76	432.54	Kockelella ranuliformis	Trotter et al., 2016
Boree Creek, New South Wales, Australia	BM_12.50	17.79	432.56	Kockelella ranuliformis	Trotter et al., 2016
Boree Creek, New South Wales, Australia	BM_11.70	17.73	432.58	Kockelella ranuliformis	Trotter et al., 2016
Boree Creek, New South Wales, Australia	BM_11.09	17.58	433.3	Pt. am. am.– ranuliformis bdry.	Trotter et al., 2016
Boree Creek, New South Wales, Australia	BM_10.90	17.67	433.4	Pt. am. amorphognathoides	Trotter et al., 2016
Cincinatti Arch	60BCK-11	19.2	452.3	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-13.5	19	452.2	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-26	19.1	452.2	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-56.5	18.2	452.1	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-56.5	18.7	452.1	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-67.5	18.9	452.1	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-91	18.3	452	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-97	19.6	452	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-109	18.8	451.9	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	60BCK-109	18.9	451.9	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-5	20.3	451.7	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-5	19	451.7	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-15	18.7	451.7	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-15	19	451.7	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-15	18.6	451.7	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-25	19.8	451.7	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-35	18.5	451.6	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-35	19.3	451.6	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-35	18.6	451.6	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-45	19.1	451.6	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-65	18.2	451.5	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-65	17.7	451.5	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-70	20.2	451.5	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HA-70	18.9	451.5	P. tenuis	Quinton and MacLeod, 2014

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Locality	Sample	$\delta^{18}O_phos$	Age (Ma)	Biozone Taxon	Reference
Cincinatti Arch	75HB-0	19.2	451.7	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-0	19.3	451.7	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-10	18.3	451.6	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-25	18.5	451.6	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-25	19.4	451.6	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-25	18.9	451.6	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-40	19.4	451.5	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-50	19.4	451.5	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-60	19.1	451.5	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-60	19.7	451.5	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-70	18.9	451.4	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-70	19.7	451.4	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HB-70	18.8	451.4	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-20	19.6	451.4	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-45	18.2	451.4	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-45	18.4	451.4	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-65	18.5	451.3	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-70	19	451.3	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-85	18.8	451.2	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-95	19.2	451.2	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-95	18.4	451.2	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-110	19.2	451.1	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-125	19.3	451.1	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-135	18.5	451.1	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-135	18.9	451.1	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-145	18.2	451	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	75HC-220	18.8	449.9	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-76	18.4	449.2	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-86	17.7	449.1	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-100	19.3	448.8	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-116	18.1	448.5	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-116	19.2	448.5	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-124	18.8	448.4	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-132	18.3	448.2	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-132	18	448.2	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-140	19.4	448.1	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-148	18.7	447.9	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-148	19.3	447.9	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-178	18.8	447.6	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-186	18	447.5	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-186	19.2	447.5	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-194	19.6	447.5	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-194	17.5	447.5	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-210	19.1	447.3	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-238	19.6	447	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-242	18.3	447	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-242	19.2	447	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-274	18.3	446.7	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-282	18.7	446.6	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AA-289	19	446.6	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AB-128	19.8	448.5	D. suberectus	Quinton and MacLeod, 2014
Cincinatti Arch	63AB-128	19.8	448.5	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AB-136	19.1	448.4	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	63AB-144	18.7	448.3	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AB-152	18.6	448.1	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AB-160	18.8	448	P. undatus	Quinton and MacLeod, 2014
Cincinatti Arch	63AB-160	19.2	448	P. tenuis	Quinton and MacLeod, 2014
Cincinatti Arch	63AB-192	19.3	447.7	P. undatus	Quinton and MacLeod, 2014
Georgina Basin, Australia	GB003/2	15.33	485.5	Tremadoc-1a	Trotter et al., 2008
Georgina Basin, Australia	GB003/3	15.63	485	Tremadoc-1a	Trotter et al., 2008
Cow Head, Newfoundland	WB14	16.16	478	Tremadoc-1d	Trotter et al., 2008
Cow Head, Newfoundland	StPl42	16.77	478	Arenig-2a	Trotter et al., 2008
Canning Basin, Australia	WCB705/168	16.32	477	Arenig-2b	Trotter et al., 2008
Canning Basin, Australia	WCB105/168	16.73	475.5	Arenig-2b	Trotter et al., 2008
Cow Head, Newfoundland	StPl71	17.19	474	Arenig-2c	Trotter et al., 2008
Cow Head, Newfoundland	WB26	17.71	473	Arenig 3b	Trotter et al., 2008
Cow Head, Newfoundland	WB30	17.82	472	Arenig-4a	Trotter et al., 2008
Amadeus Basin, Australia	2001/27	18.3	465	Llanvirn-4b	Trotter et al., 2008
Devon Island	8116	18.17	460	Llanvirn-4c	Trotter et al., 2008
Devon Island	8119	17.66	455	Caradoc-5b	Trotter et al., 2008
Devon Island	8135	17.93	450	Caradoc-5d	Trotter et al., 2008
Manitoba	79134	18.73	448	Ashgilll-6a	Trotter et al., 2008
Manitoba	79134	17.63	447.5	Ashgilll-6a	Trotter et al., 2008
Devon Island	9623	18.61	447	Ashgill-6b	Trotter et al., 2008
Anticosti Island, Quebec	E39	19.56	446.5	Ashgill-6c	Trotter et al., 2008
Anticosti Island, Quebec	E43	19.58	446	Ashgill-6c	Trotter et al., 2008
Anticosti Island, Quebec	E46	19.6	445.5	Ashgill-6c	Trotter et al., 2008
Anticosti Island, Quebec	E51	18.89	445	Ashgill-6c	Trotter et al., 2008
Anticosti Island, Quebec	C155	19.42	442	Llandovery: Rhuddanian	Trotter et al., 2008
Cornwallis Island	CP56	18.1	432	Wenlockian	Trotter et al., 2008
Texas	1500c	16.3	480	Rossodus manitouensis (480.5-480)	Bassett et al., 2007
Texas	1700mc	16.6	479.8		Bassett et al., 2007
Texas	1700mc	15.7	479.6		Bassett et al., 2007
Texas	1715mc	16.3	479.4		Bassett et al., 2007
Texas	1725a	16.1	479.2		Bassett et al., 2007
Texas	1740mc	16.2	479		Bassett et al., 2007
Texas	1745mc	15.8	478.8		Bassett et al., 2007
Texas	1750mc	16.7	478.6		Bassett et al., 2007
Texas	1750mc	15.6	478.4		Bassett et al., 2007

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