

SUPPLEMENTARY MATERIAL SM 3 TO:

Wozniak, P., Halamski, A. T. & Racki, G., 2022. Cyclic ecological replacement of brachiopod assemblages in the top-Eifelian Dobruchna Brachiopod Shale Member (Skaly Formation) of the Holy Cross Mountains (Poland). *Annales Societatis Geologorum Poloniae*, 92: 445–464. <https://doi.org/10.14241/asgp.2022.13>

SPEARMAN CORRELATION MATRIX FOR TAXA (EXCLUDING THE MOST RARE SPECIES)

TAXA	<i>P. varians</i>	<i>E. diluviano-ides</i>	<i>D. zeuschneri</i>	<i>P. anagyphia</i>	<i>A. (P.) depressa</i>	<i>Reitculariida</i>	<i>A. prisca</i>	<i>X. umbroculum</i>	<i>C. cancellata</i>	<i>D. subzonata</i>	<i>Cyrtina</i> sp.	<i>C. „inflata”</i>	<i>S. schmirri</i>	<i>P. schmirri</i>	<i>G. interstitialis</i>	<i>P. spp.</i>	<i>B. lepidoda</i>	<i>Spinatrypa</i> sp.	<i>K. sp. A</i>	<i>P. minor</i>	<i>N. lens</i> s.l.	<i>A. concentrica</i> s.l.	<i>L. analogaeformis</i>
<i>Polonioproductus varians</i>	0	0.492	0.039	0.180	0.937	0.764	0.490	0.630	1	0.164	0.057	0.867	0.772	0.226	0.311	0.579	0.353	0.514	0.866	0.594	0.399	0.516	0.654
<i>Eleutherokomma diluvianooides</i>	-0.23	0	0.905	0.947	0.361	0.232	0.076	0.427	0.112	0.451	0.152	0.053	0.471	0.165	0.599	0.509	0.026	0.396	0.010	0.528	0.022	0.504	0.708
<i>Devonaria zeuschneri</i>	0.627	-0.041	0	0.401	0.043	0.053	0.031	0.120	0.327	0.632	0.079	0.705	0.073	0.041	0.822	0.038	0.813	0.434	0.906	0.338	0.844	0.610	0.183
<i>Parasprophonella anagyphi</i>	0.436	-0.023	0.282	0	0.832	0.722	0.592	0.884	0.361	0.000	0.029	0.497	0.334	0.601	0.311	0.234	0.875	0.902	0.551	0.950	0.875	0.893	0.941
<i>Atrypa (Planatrypa) depressa</i>	-0.03	0.305	0.618	-0.07	0.000	0	0.139	0.325	0.327	0.672	0.892	0.203	0.076	0.102	0.326	0.049	0.969	0.280	0.419	0.217	0.969	0.528	0.109
<i>Reitulariida</i>	-0.10	0.393	0.597	0.121	0.872	0	0.189	0.301	0.266	0.743	0.944	0.249	0.050	0.110	0.570	0.047	0.936	0.172	0.676	0.129	0.888	0.194	0.132
<i>Aulacella prisca</i>	0.233	-0.556	0.648	0.182	0.476	0.428	0	0.631	0.001	0.623	0.031	0.262	0.001	0.950	0.717	0.001	0.022	0.005	0.042	0.006	0.018	0.043	0.369
<i>Xystostrophia umbraculum</i>	0.164	0.267	0.497	-0.05	0.328	0.344	0.164	0	0.951	0.413	0.956	0.101	0.382	0.502	0.124	0.302	0.330	0.805	0.358	0.638	0.421	0.786	0.547
<i>Costisorthis cancellata</i>	0.000	-0.507	0.326	0.305	0.326	0.367	0.843	0.021	0	0.568	0.054	0.391	0.000	0.289	0.719	0.001	0.006	0.009	0.047	0.022	0.005	0.004	0.863
<i>Dagnachonetes supragibbosus</i>	0.451	-0.254	0.163	0.875	-0.14	-0.11	0.167	-0.8	0.194	0	0.082	0.209	0.644	0.695	0.571	0.424	0.968	0.646	0.478	0.701	0.793	0.565	0.674
<i>Desquamatia subzonata</i>	0.588	-0.463	0.550	0.653	-0.05	0.024	0.648	-0.02	0.594	0.547	0	0.111	0.085	0.961	0.437	0.082	0.258	0.306	0.038	0.351	0.239	0.305	0.673
<i>Cyrtina</i> sp.	-0.03	-0.137	0.111	0.585	-0.08	0.233	0.326	-0.33	0.376	0.425	0.555	0	0.113	0.748	0.708	0.430	0.146	0.254	0.034	0.286	0.104	0.325	0.879
<i>Cyrtospina „inflata”</i>	0.057	-0.596	-0.129	0.229	-0.42	-0.38	0.370	-0.52	0.288	0.411	0.508	0	0.608	0.228	0.767	0.663	0.046	0.173	0.002	0.198	0.035	0.438	0.426
<i>Schizophoria schmirri</i>	0.099	-0.243	0.560	0.322	0.555	0.603	0.870	0.293	0.896	0.157	0.542	0.175	0	0.737	0.546	0.000	0.084	0.002	0.215	0.002	0.057	0.004	0.654
<i>Phragmophora schmirri</i>	0.397	0.450	0.622	0.178	0.519	0.508	-0.02	0.227	-0.35	0.134	0.017	-0.40	-0.115	0	0.600	0.982	0.091	0.365	0.199	0.528	0.091	0.160	0.071
<i>Gibbodontivillina interstitialis</i>	0.337	-0.179	0.077	0.337	-0.33	-0.19	0.124	0.492	0.123	0.192	0.262	0.101	0.205	-0.178	0	0.464	0.967	0.719	0.706	0.619	0.675	0.733	0.875
<i>Prinipitaria</i> spp.	0.188	-0.224	0.630	0.392	0.605	0.608	0.870	0.343	0.838	0.269	0.547	0.149	0.978	0.008	0.247	0	0.159	0.010	0.310	0.007	0.105	0.031	0.433
<i>Bifida lepidoda</i>	-0.31	-0.662	-0.081	-0.05	0.013	0.028	0.678	-0.32	0.765	-0.01	0.374	0.468	0.610	-0.534	0.014	0.456	0	0.006	0.001	0.021	1.3E-8	0.030	0.912
<i>Spinatrypa</i> sp.	-0.22	-0.285	0.263	-0.04	0.358	0.443	0.778	0.084	0.744	-0.16	0.340	0.443	0.815	-0.303	0.123	0.735	0.765	0	0.047	1.4E-8	0.005	4.9E-5	1
<i>Kyrtatrypa</i> sp. A	-0.06	-0.736	0.040	0.202	-0.27	-0.14	0.620	-0.31	0.609	0.240	0.629	0.815	0.407	-0.419	0.129	0.337	0.840	0.609	0	0.085	0.001	0.097	0.740
<i>Peratos minor</i>	-0.18	-0.214	0.320	-0.02	0.405	0.487	0.766	0.160	0.679	-0.13	0.312	0.420	0.814	-0.214	0.169	0.756	0.680	0.988	0.542	0	0.014	0.002	0.861
<i>Nucleospira lens</i>	-0.28	-0.676	-0.067	0.054	-0.01	0.048	0.692	-0.27	0.781	0.090	0.387	0.516	0.638	-0.534	0.143	0.515	0.980	0.781	0.857	0.712	0	0.024	0.912
<i>Athyris concentrica</i> s.l.	-0.22	-0.226	0.173	0.046	0.214	0.424	0.617	0.093	0.783	-0.20	0.341	0.328	0.261	-0.455	0.116	0.649	0.652	0.870	0.526	0.820	0.669	0	0.600
<i>Leptagonia analogaeformis</i>	0.153	-0.128	0.433	0.025	0.510	0.484	0.301	0.204	0.059	0.143	-0.14	0.052	-0.27	0.153	0.054	0.264	-0.04	0.000	-0.11	0.060	0.038	-0.18	0

Positive correlation

Negative correlation

p < 0.05 rs > 0.60
p < 0.01 rs > 0.73

p < 0.05 rs < -0.60
p < 0.01 rs < -0.73