

University of Aberdeen

## **Ancient dental calculus reveals oral microbiome shifts associated with lifestyle and disease in Great Britain**

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*Published in:*  
Nature Microbiology

*Publication date:*  
2023

*Document Version*  
Peer reviewed version

[Link to publication](#)

### *Citation for published version (APA):*

Gancz, A., Ferrer, A., Nixon, M., Wright, S., Arriola, L., Christina, A., Davenport, E., Gully, N., Cooper, A., Britton, K., Dobney, K., Silverman, J., & Weyrich, L. (2023). Ancient dental calculus reveals oral microbiome shifts associated with lifestyle and disease in Great Britain. *Nature Microbiology*, 8, 2315.

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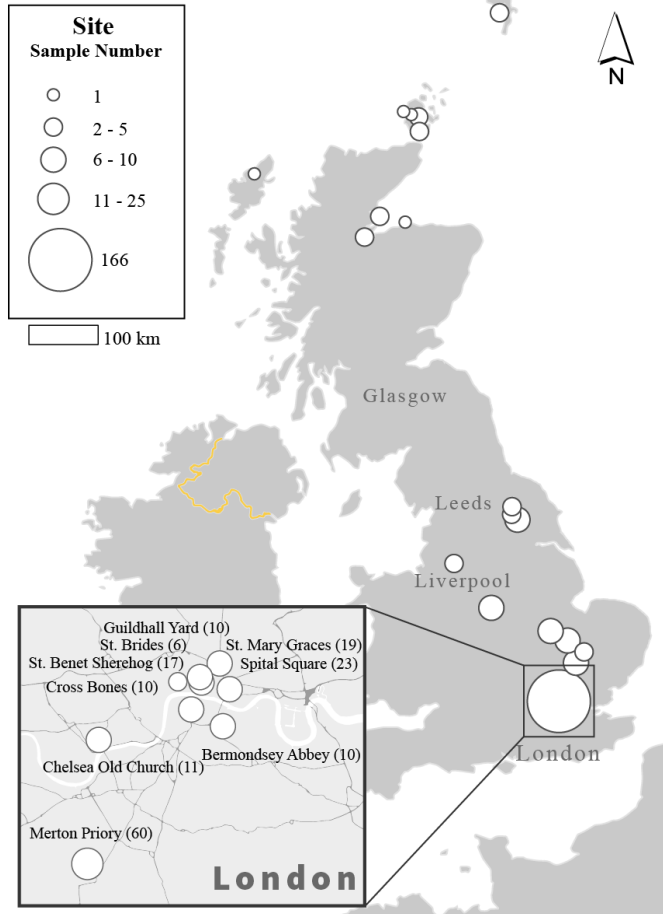
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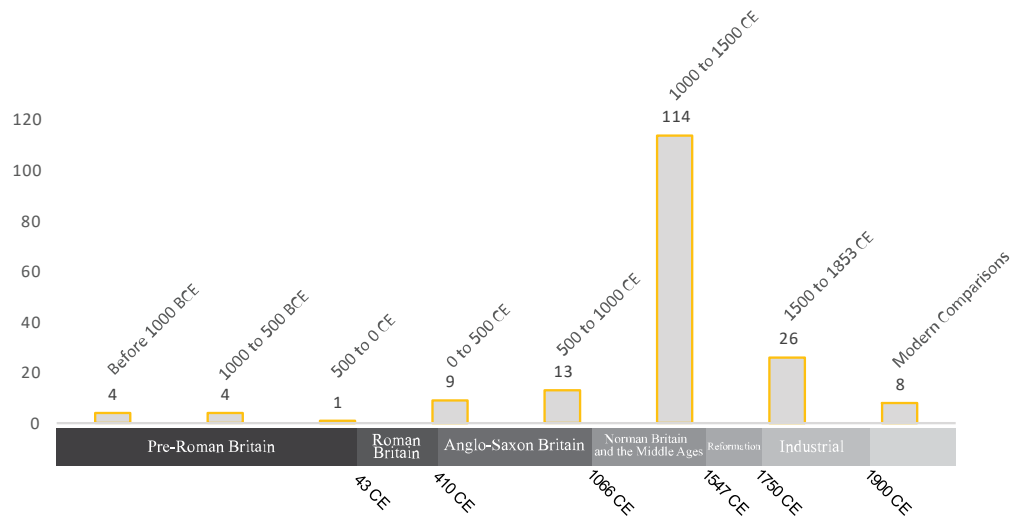
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# Figure 1

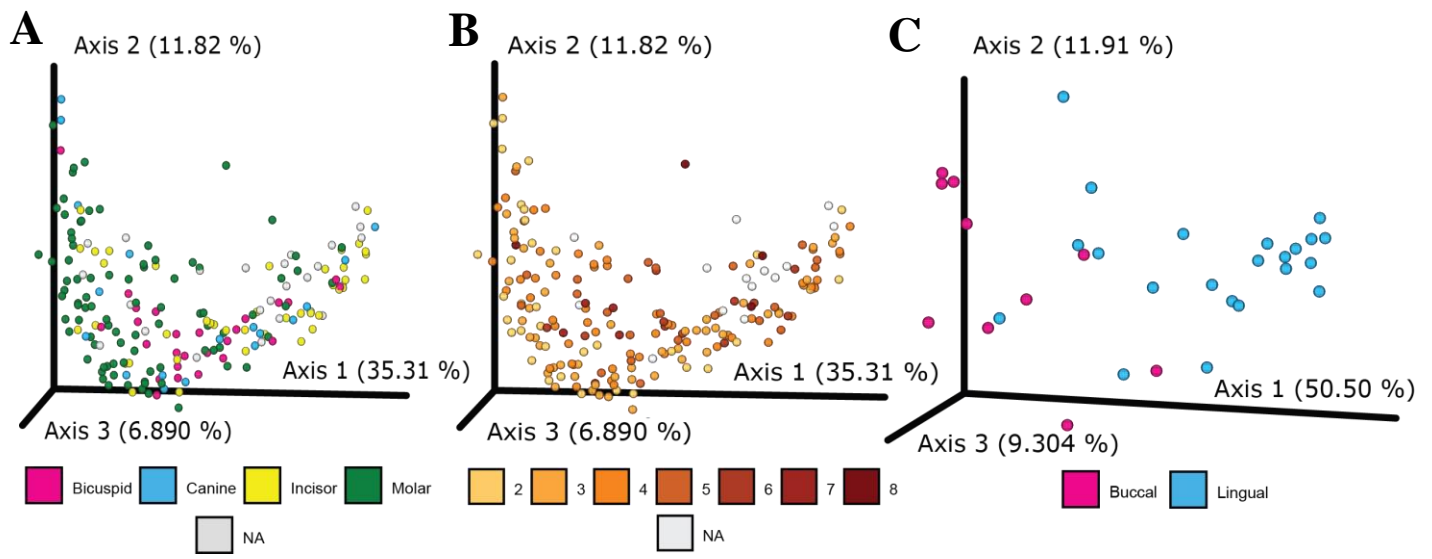
**A**



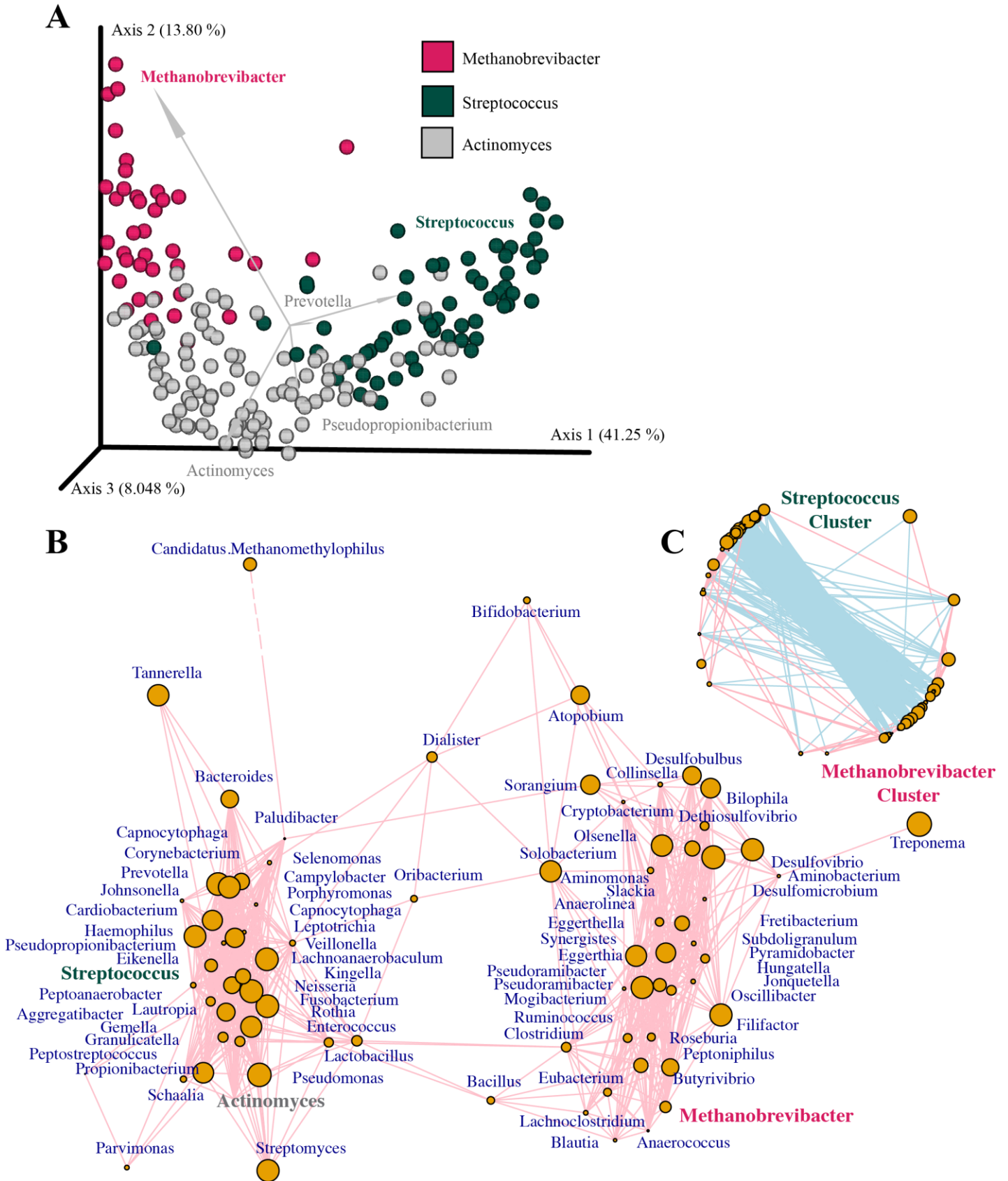
**B**



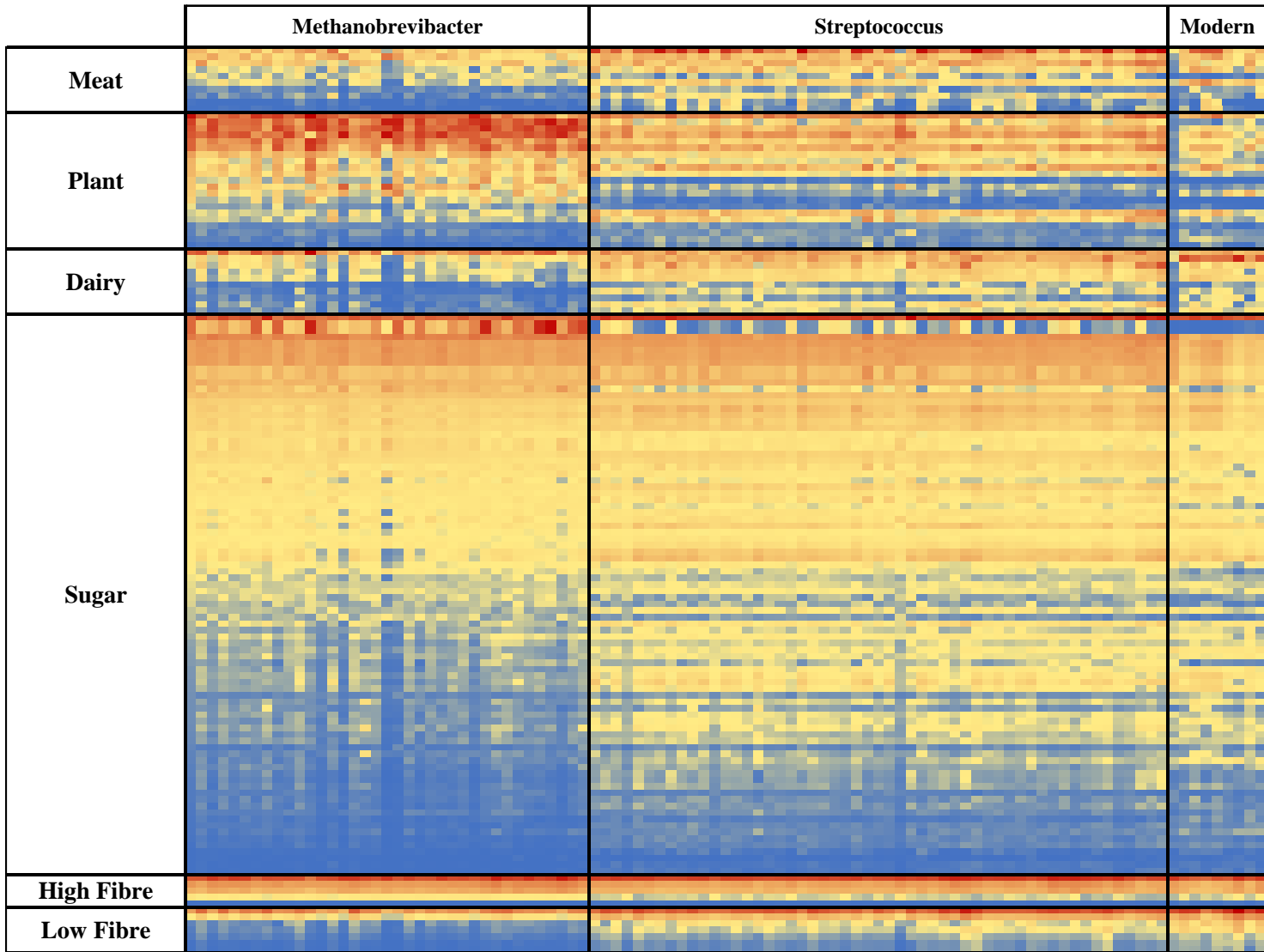
**Figure 2**



**Figure 3**



# Figure 4



# Table 1

	Variable	SPECIES		GENERA		ALL TAXA	
		R2	Pr(>F)	R2	Pr(>F)	R2	Pr(>F)
A L L  T E E T H	<b>BlackDeath (1346-1353)</b>	0.042271	0.013	0.030313	0.048	0.025943	0.115
	CivilWar (Pre, Post, or During)	0.016108	0.135	0.011964	0.283	0.01031	0.342
	<b>Date (300 year intervals)</b>	0.034836	0.048	0.024156	0.198	0.022078	0.221
	<b>Date (400 year intervals)</b>	0.029446	0.013	0.016392	0.12	0.013127	0.203
	Overall Pathology	0.006137	0.755	0.008607	0.449	0.004815	0.737
	Blood Disorder	0.004924	0.874	0.006369	0.667	0.003584	0.875
	Non Specific Periostitis	0.011312	0.376	0.008351	0.485	0.006533	0.55
	Overall Vertebral Pathology	0.007189	0.668	0.006596	0.6	0.002856	0.936
	Vertebral Pathology (Facets)	0.011992	0.398	0.011231	0.326	0.008289	0.482
	Vertebral Pathology (Schmorls Nodes)	0.01889	0.163	0.014865	0.201	0.012520	0.248
	Vertebral_Anomaly	0.003516	0.975	0.00074	0.999	0.003231	0.928
	Overall Joint Score	0.014469	0.339	0.013742	0.278	0.008986	0.476
	Osteophitic Lipping (Joints)	0.016424	0.252	0.015658	0.2	0.013047	0.293
	Porosity (Joint)	0.018879	0.2	0.016178	0.216	0.008034	0.561
	Dental Abcess	0.007348	0.802	0.006688	0.831	0.008883	0.689
	Caries	0.013519	0.365	0.010129	0.552	0.006764	0.742
	Hypoplasia	0.016002	0.315	0.014795	0.32	0.012569	0.413
	Periodontitis	0.007565	0.738	0.006348	0.791	0.003939	0.936
	Class	0.050463	0.817	0.047845	0.842	ND	ND
	Hospital	0.008254	0.583	0.006867	0.68	0.003706	0.89
	Rank	0.024601	0.375	0.022691	0.419	0.013996	0.698
	Religion	0.069326	0.37	0.065258	0.523	ND	ND
	Empire	0.022583	0.161	0.024645	0.121	0.009261	0.296
	Sex	0.012235	0.229	0.010149	0.346	0.007244	0.506
	Cemetry	0.078145	0.066	0.06099	0.307	0.056177	0.38
	Rural vs. Urban	0.015152	0.454	0.013429	0.55	0.008919	0.73
	Medieval vs. Post Medieval	0.013773	0.126	0.013609	0.107	0.009232	0.233
Age	0.0334	0.14	0.040031	0.053	0.039874	0.074	
<b>Dominant Community</b>	0.295798	<b>0.001</b>	0.278079	<b>0.001</b>	0.270359	<b>0.001</b>	
		SPECIES		GENERA		ALL TAXA	
	Variable	R2	Pr(>F)	R2	Pr(>F)	R2	Pr(>F)
M O L A R S	BlackDeath (1346-1353)	0.051076	0.141	0.034373	0.529	ND	ND
	CivilWar (Pre, Post, or During)	0.030608	0.245	0.025953	0.287	0.22388	0.33
	Date (300 year intervals)	0.045842	0.356	0.040998	0.438	0.033105	0.646
	Date (400 year intervals)	0.033868	0.137	0.027913	0.238	0.023156	0.329
	Overall Pathology	0.036885	0.071	0.053478	0.119	0.047454	0.014
	Blood Disorder	0.029438	0.135	0.04632	0.157	0.029031	0.121
	<b>Non Specific Periostitis*</b>	0.073858	<b>0.001</b>	0.068745	<b>0.04</b>	0.066492	<b>0.002</b>
	Overall Vertebral Pathology	0.032115	0.101	0.022347	0.595	0.027613	0.146
	Vertebral Pathology (Facets)	0.017843	0.464	0.034455	0.369	0.011874	0.801
	Vertebral Pathology (Schmorls Nodes)	0.020959	0.367	0.0136	0.908	0.017336	0.485
	Vertebral_Anomaly	0.007946	0.931	0.005958	0.998	0.012164	0.737
	<b>Overall Joint Score</b>	0.064592	<b>0.007</b>	0.100103	<b>0.018</b>	0.059902	<b>0.012</b>
	<b>Osteophitic Lipping (Joints)</b>	0.064268	0.007	0.099268	0.022	0.060218	0.006
	<b>Porosity (Joint)</b>	0.057578	0.014	0.099376	0.016	0.05229	0.022
	Dental Abcess	0.034019	0.262	0.035143	0.531	0.036956	0.209
	Caries	0.019593	0.573	0.031298	0.502	0.024434	0.334
	Hypoplasia	0.027694	0.268	0.036616	0.442	0.026032	0.291
	<b>Periodontitis</b>	0.011512	0.833	0.025481	0.633	0.015703	0.026032
	Class	ND	ND	ND	ND	ND	ND
	Hospital	0.023396	0.234	0.035948	0.274	0.026313	0.177
	Rank	0.024147	0.82	ND	ND	0.022222	0.852
	Religion	0.095904	0.117	ND	ND	0.093495	0.104
	Empire	0.032085	0.089	0.026332	0.185	0.019894	0.321
	Sex	0.0239	0.376	0.032519	0.187	0.023802	0.365
	Cemetry	0.087245	0.159	0.088173	0.158	0.06858	0.385
	Medieval or Post Medieval	0.030868	0.117	0.025388	0.169	0.019233	0.346
	Rural vs. Urban	0.033662	0.503	0.062878	0.296	0.037808	0.393
Age	0.049095	0.619	0.058474	0.37	0.047467	0.573	
<b>Dominant Community</b>	0.221255	<b>0.001</b>	0.237476	<b>0.001</b>	0.187197	<b>0.001</b>	