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SUPPLEMENTARY ONLINE MATERIAL FOR

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Theropod teeth from the upper Maastrichtian Hell Creek Formation “Sue”

Quarry: new morphotypes and faunal comparisons

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Supplementary Online Material

SOM 1. Correlation between percentage of missing data per specimen and the amount of movement of that specimen in the PCA space

SOM 2. Measurements of teeth used in PCA, discriminant analysis, and plots.

	Mean substitution				0
	0 Axis 1	Axis 2	Axis 3	Axis 4	
FMNH PR 2899	-5.6494	5.9087	-0.51011	-0.34026	FMNH PR 2899
FMNH PR2896	-1.2802	3.2128	-0.56779	-0.19915	FMNH PR2896
FMNH PR2894	-3.7637	2.4873	0.20876	-0.49333	FMNH PR2894
FMNH PR2895	-2.963	1.5508	0.1327	-0.29231	FMNH PR2895
FMNH PR2898	-1.9766	3.1039	0.44209	-0.51584	FMNH PR2898
FMNH PR2893	-3.0929	2.5365	0.254	-0.38859	FMNH PR2893
UCMP 186891	10.164	0.55213	-1.6692	-0.37536	UCMP 186891
UCMP 187070	-2.6353	1.1205	-0.34207	0.40136	UCMP 187070
UCMP 124401	0.96835	0.33452	0.013869	-0.11775	UCMP 124401
UCMP 187079	-3.6622	1.0415	-0.17587	0.44093	UCMP 187079
UCMP 187129	1.7014	-0.064665	-0.83137	0.18024	UCMP 187129
UCMP 187124	5.2699	-0.35278	-0.45197	-0.35776	UCMP 187124
UCMP 187105	1.174	0.3222	0.42361	-0.31692	UCMP 187105
UCMP 187125	-1.5471	-1.0681	3.6638	-1.3955	UCMP 187125
UCMP 187054	-2.9518	2.0607	0.32061	0.12443	UCMP 187054
UCMP 187027	-0.21125	1.2562	0.063079	-0.036301	UCMP 187027
UCMP 119718	3.3924	0.47024	0.41901	-0.55541	UCMP 119718
UCMP 119926	10.559	0.7565	-0.83896	-0.78239	UCMP 119926
UCMP 119788	-1.5092	1.1513	0.35288	-0.020705	UCMP 119788
UCMP 119921	-2.4296	1.1082	0.067674	0.20218	UCMP 119921
UCMP 187042	-3.1222	1.5752	-0.11259	0.3425	UCMP 187042
UCMP 187043	-3.3332	1.0218	0.47971	0.12226	UCMP 187043
UCMP 187044	-2.3592	0.11246	0.020762	0.23998	UCMP 187044
UCMP 187045	2.4405	0.031534	-1.5712	0.41951	UCMP 187045
UCMP 187037	-2.5399	0.095196	0.10317	0.22399	UCMP 187037
UCMP 120153	1.2092	-0.17565	0.40015	-0.29803	UCMP 120153
UCMP 120287	11.057	-0.49285	-0.077177	-1.1342	UCMP 120287
UCMP 120305	0.92788	0.26671	1.0394	-0.55606	UCMP 120305
UCMP 120338	11.021	0.0049954	-0.053721	-1.1531	UCMP 120338
UCMP 120339	7.9805	-0.093756	-1.6881	-0.11798	UCMP 120339
UCMP 124987	0.69229	1.3425	-0.34896	0.043627	UCMP 124987
UCMP 187041	-2.7057	2.1162	-0.29515	0.36356	UCMP 187041
UCMP 187163	-2.2299	0.60046	0.37201	0.061744	UCMP 187163
UCMP 186962	2.4464	0.52692	-1.4658	0.36078	UCMP 186962
UCMP 134801	0.25994	-0.89547	2.8397	-1.2357	UCMP 134801
UCMP 123543	-0.21125	1.2562	0.063079	-0.036301	UCMP 123543
UCMP 123565	6.0207	0.73419	-0.981	-0.23596	UCMP 123565
UCMP 187048	-3.7619	3.0305	-0.0001	0.32551	UCMP 187048
UCMP 187046	-0.29351	1.2611	-0.10082	0.043368	UCMP 187046
UCMP 128913	-1.2382	1.1773	0.22927	0.0032737	UCMP 128913
UCMP 128941	0.10002	-0.24967	0.40245	-0.17878	UCMP 128941
UCMP 186957	-1.5261	1.1945	-0.34436	0.28211	UCMP 186957
UCMP 187010	1.1036	1.3179	0.47052	-0.35471	UCMP 187010
UCMP 187083	1.8719	0.42086	-0.39817	-0.037824	UCMP 187083
UCMP 187039	0.40623	-0.25238	0.76633	-0.36906	UCMP 187039
UCMP 129085	-2.271	0.60292	0.29006	0.10158	UCMP 129085
UCMP 186957	3.0163	-0.002967	-0.42392	-0.13817	UCMP 186957

UCMP 186886	-3.1106	-1.9869	0.21507	-0.50828
UCMP 187076	-4.4958	-1.0529	-0.14546	-0.22766
UCMP 187071	-0.70858	-0.70511	-1.7151	-0.070017
UCMP 187078	-0.66745	-0.70758	-1.6332	-0.10985
UCMP 187075	-2.9349	-0.93568	-0.35378	-0.30694
UCMP 187072	-0.78109	-0.69789	-1.8395	0.10095
UCMP 187073	-2.9883	-1.4534	-0.091373	-0.2924
UCMP 187074	-3.1962	-0.95929	-0.19061	-0.23962
UCMP 187071	-0.43251	-1.7131	-1.3523	-0.2314
UCMP 187067	-3.5321	-1.494	-0.088807	-0.34399
UCMP 187068	-4.2761	-0.55624	0.16458	-0.3979
UCMP 187069	-3.2963	-0.97021	-0.18896	-0.33891
UCMP 187066	-3.6446	-2.0251	0.25719	-0.46858
UCMP 187062	-0.76537	-1.2003	-1.942	-0.06275
UCMP 187063	-3.6101	-0.98238	-0.39196	-0.32669
UCMP 187065	-3.5138	-1.9487	-0.80951	-0.02228
UCMP 187061	-0.6009	-0.21007	-1.3667	-0.025822
UCMP 187060	-0.67337	-1.203	-1.7386	-0.051121
UCMP 187058	-4.1703	-1.6441	1.4754	-1.1689
UCMP 187059	-4.4461	-0.042016	-0.34202	-0.39223
UCMP 187057	-0.40118	-0.71778	-1.0624	-0.16626
UCMP 119919	-0.019493	-0.74352	-0.32205	-0.63666
UCMP 214060	-0.95325	0.29815	-2.0356	-0.039769
UCMP 186885	-4.6014	-0.55942	-0.32262	-0.48061
UCMP 128787	-2.3005	-2.4267	0.54908	0.03831
UCMP 128845	-2.6291	-0.93707	0.054316	-0.40682
UCMP 214061	-0.62632	-0.71004	-1.5512	-0.14969
UCMP 214062	-0.74378	-0.20726	-1.6917	-0.088913
UCMP 186868	-4.5959	-1.0638	-0.14381	-0.32695
UCMP 186904	-4.5721	-1.5527	-0.45148	-0.40299
MOR 553	0.49717	-0.85117	0.95426	0.32423
MOR 553	2.139	-2.6543	1.7056	0.43827
MOR 553	2.3261	-2.6212	1.4339	0.62281
MOR 553	0.79598	-2.7462	1.5881	0.37195
MOR 553	1.6927	-1.9785	0.6189	0.26068
MOR 553	-0.81812	-2.3405	0.69386	-0.27242
FMNH PR 2901	-1.894	0.1782	-0.82576	0.054264
GIN 100/1	-1.1758	-0.069246	0.48025	0.96237
GIN_100/1	-0.27933	0.011438	0.1564	1.0159
GIN_100/1	-0.84702	-0.087637	0.96427	0.46611
GIN_100/1	0.38401	0.063018	-0.097511	0.82385
GIN_100/1	-1.0234	-0.089605	0.84953	0.60041
GIN_100/1	-0.14397	0.012133	0.0061789	0.59557
GIN_100/1	-2.8855	-0.1967	0.5765	0.90918
GIN_100/1	-1.6779	-0.15079	1.192	0.63294
FMNH PR 2900	-3.1381	-4.9316	-0.84394	0.027385
UCMP 186826	-2.4135	-4.8878	-0.70743	-0.000664
UCMP 214056	-6.7819	-5.2975	1.228	-0.25319
UCMP 214057	-2.1858	-4.8478	-0.83671	0.46817

UCMP 186886
UCMP 187076
UCMP 187071
UCMP 187078
UCMP 187075
UCMP 187072
UCMP 187073
UCMP 187074
UCMP 187071
UCMP 187067
UCMP 187068
UCMP 187069
UCMP 187066
UCMP 187062
UCMP 187063
UCMP 187065
UCMP 187061
UCMP 187060
UCMP 187058
UCMP 187059
UCMP 187057
UCMP 119919
UCMP 214060
UCMP 186885
UCMP 128787
UCMP 128845
UCMP 214061
UCMP 214062
UCMP 186868
UCMP 186904
MOR 553
MOR 553
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FMNH PR 2901
GIN 100/1
GIN_100/1
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GIN_100/1
GIN_100/1
FMNH PR 2900
UCMP 186826
UCMP 214056
UCMP 214057

UCMP 214058 1.2495 -4.6009 -0.72941 0.70605

UCMP 214058

Pairwise deletion			
Axis 1	Axis 2	Axis 3	Axis 4
-5.6633	5.9067	-0.47507	0.13024
-1.308	3.194	-0.64001	-0.03303
-3.7796	2.4977	0.22012	-0.25681
-2.9685	1.5606	0.17524	-0.094948
-1.994	3.1122	0.3281	-0.48297
-3.1009	2.5477	0.24751	-0.21958
10.022	0.44327	-2.2631	-0.88281
-2.5967	1.131	-0.15759	0.65703
0.95392	0.32734	-0.072123	-0.20336
-3.6092	1.063	0.069793	0.74874
1.6799	-0.09408	-0.86669	0.20162
5.1953	-0.3998	-0.77759	-0.6877
1.155	0.32201	0.2801	-0.4957
-1.5376	-0.97975	3.4366	-1.942
-2.9119	2.0859	0.42124	0.26497
-0.20954	1.2573	0.021631	-0.052586
3.341	0.45369	0.1071	-0.91298
10.408	0.66166	-1.557	-1.4808
-1.4897	1.168	0.38063	0.014005
-2.3955	1.1256	0.19463	0.36469
-3.0778	1.5933	0.065393	0.58625
-3.2874	1.0545	0.63334	0.28099
-2.3251	0.12982	0.18737	0.42256
2.4109	-0.018656	-1.5872	0.5192
-2.5035	0.11559	0.27511	0.40582
1.1903	-0.17589	0.27647	-0.46677
10.897	-0.57383	-0.86149	-1.9943
0.91022	0.2811	0.85168	-0.82989
10.861	-0.07593	-0.85786	-2.0232
7.8709	-0.18631	-2.0937	-0.43659
0.68235	1.3285	-0.41709	0.031117
-2.6671	2.1268	-0.15034	0.59917
-2.1994	0.62347	0.47277	0.15975
2.4159	0.47818	-1.5131	0.4318
0.2462	-0.83742	2.5592	-1.7746
-0.20954	1.2573	0.021631	-0.052586
5.9362	0.66931	-1.3499	-0.54493
-3.7099	3.0535	0.15475	0.57453
-0.28998	1.2594	-0.11926	0.064351
-1.2221	1.1893	0.24902	0.039116
0.097265	-0.24173	0.36297	-0.25813
-1.5037	1.1968	-0.24409	0.4484
1.0846	1.3178	0.28735	-0.55357
1.8458	0.3985	-0.51084	-0.11965
0.39765	-0.23914	0.66636	-0.54115
-2.2396	0.62453	0.40233	0.21822
2.974	-0.033567	-0.60097	-0.29936

	Square of difference	
	Axis 1	Axis 2
FMNH PR 2899	0.0001932	4E-06
FMNH PR2896	0.0007728	0.0003534
FMNH PR2894	0.0002528	0.0001082
FMNH PR2895	3.025E-05	9.604E-05
FMNH PR2898	0.0003028	6.889E-05
FMNH PR2893	6.4E-05	0.0001254
UCMP 186891	0.020164	0.0118505
UCMP 187070	0.00149	0.0001102
UCMP 124401	0.0002082	5.155E-05
UCMP 187079	0.002809	0.0004622
UCMP 187129	0.0004623	0.0008652
UCMP 187124	0.0055652	0.0022109
UCMP 187105	0.000361	3.61E-08
UCMP 187125	9.025E-05	0.0078057
UCMP 187054	0.001592	0.000635
UCMP 187027	2.924E-06	1.21E-06
UCMP 119718	0.002642	0.0002739
UCMP 119926	0.022801	0.0089946
UCMP 119788	0.0003803	0.0002789
UCMP 119921	0.0011628	0.0003028
UCMP 187042	0.0019714	0.0003276
UCMP 187043	0.0020976	0.0010693
UCMP 187044	0.0011628	0.0003014
UCMP 187045	0.0008762	0.002519
UCMP 187037	0.001325	0.0004159
UCMP 120153	0.0003572	5.76E-08
UCMP 120287	0.0256	0.0065578
UCMP 120305	0.0003119	0.0002071
UCMP 120338	0.0256	0.0065489
UCMP 120339	0.0120122	0.0085662
UCMP 124987	9.88E-05	0.000196
UCMP 187041	0.00149	0.0001124
UCMP 187163	0.0009303	0.0005295
UCMP 186962	0.0009302	0.0023756
UCMP 134801	0.0001888	0.0033698
UCMP 123543	2.924E-06	1.21E-06
UCMP 123565	0.0071402	0.0042094
UCMP 187048	0.002704	0.000529
UCMP 187046	1.246E-05	2.89E-06
UCMP 128913	0.0002592	0.000144
UCMP 128941	7.59E-06	6.304E-05
UCMP 186957	0.0005018	5.29E-06
UCMP 187010	0.000361	1E-08
UCMP 187083	0.0006812	0.0005
UCMP 187039	7.362E-05	0.0001753
UCMP 129085	0.000986	0.000467
UCMP 186957	0.0017893	0.0009363

-0.17431	0.7594	0.018003	-0.023652
5.1248	0.59601	-0.77033	-0.74557
-1.3025	1.1915	0.10813	0.15605
-0.38184	2.2664	-0.37216	0.1912
-1.5741	2.1926	-0.23684	0.39053
-1.8692	1.1591	0.11616	0.28961
1.155	0.32201	0.2801	-0.4957
1.155	0.32201	0.2801	-0.4957
-1.7133	0.65798	0.32386	0.14314
-2.119	0.62134	0.61366	0.042815
-3.5188	2.0545	0.35882	0.45699
0.43101	0.34118	-0.98789	0.55673
3.4467	-1.04	0.096219	-0.82618
-2.466	2.1214	0.20188	0.30682
6.4894	-0.33928	-0.51187	-1.1887
-0.20954	1.2573	0.021631	-0.052586
6.4894	-0.33928	-0.51187	-1.1887
4.793	-0.38914	-1.482	-0.10302
3.4115	-0.54212	0.099846	-0.85511
-0.62177	0.27428	-0.83095	0.7069
0.59191	0.33692	-0.70612	0.32286
-4.1256	2.0232	0.29641	0.64902
-3.4483	1.0587	0.35157	0.51486
-0.28615	-0.22103	-0.53119	0.45281
-0.4961	0.76792	-0.54555	0.4441
6.4894	-0.33928	-0.51187	-1.1887
-2.129	-0.37234	0.46552	0.21762
5.16	0.098109	-0.77396	-0.71664
-1.1719	2.182	0.4676	-0.19416
0.08666	-1.2248	-0.008924	0.071178
0.08666	-1.2248	-0.008924	0.071178
2.3664	0.42772	0.58005	0.57737
4.0787	1.2081	1.6533	-0.38638
4.0341	1.6874	1.206	-0.4346
3.469	1.5577	1.3831	-0.57334
-0.063473	1.2993	1.6122	-0.34543
5.3335	1.4262	1.1246	-0.30096
8.0154	-0.75187	0.46819	0.69032
6.1385	-1.1409	0.82891	0.47359
8.5513	-0.68907	0.56534	0.43945
4.4042	-0.27725	0.77686	0.15976
4.9474	-0.96469	1.0235	0.1419
3.0668	-1.0009	0.91586	0.41233
-1.5079	1.1653	0.13169	-0.041886
-2.4303	1.1024	0.35981	0.027161
0.17521	-0.002444	-0.16082	-0.27553
1.2371	2.8772	-0.13918	0.12073
0.70041	2.8294	-0.58902	-0.10543
-4.1368	-1.9881	-0.13861	0.7034

UCMP 186960	2.993E-06	1.102E-06
UCMP 187038	0.0055801	0.0022005
UCMP 187006	0.0003204	8.649E-05
UCMP 186944	2.401E-05	5.476E-05
UCMP 187201	0.0005018	5.76E-06
UCMP 187049	0.000697	0.0001613
UCMP 187194	0.000361	3.61E-08
UCMP 187036	0.000361	3.61E-08
UCMP 186899	0.0005617	0.0002829
UCMP 187030	0.000818	0.0006662
UCMP 187197	0.0024305	0.0007344
UCMP 187199	7.022E-06	0.0006441
UCMP 187198	0.0026317	0.0002789
UCMP 186961	0.001156	0.0003063
UCMP 186968	0.0090821	0.0023232
UCMP 186959	2.924E-06	1.21E-06
UCMP 186971	0.0090821	0.0023232
UCMP 79095	0.0043034	0.0037222
UCMP 186967	0.0026317	0.0002776
UCMP 187033	0.0001593	0.0002493
UCMP 186972	3.931E-05	0.0003912
UCMP 186973	0.0034574	0.0008468
UCMP 187143	0.0024404	0.000729
UCMP 187200	4.651E-05	0.0001111
UCMP 186958	8.064E-05	0.000103
UCMP 186964	0.0090821	0.0023232
UCMP 187139	0.0009302	0.0005244
UCMP 186970	0.0055801	0.0022053
UCMP 174796	0.0001769	0.000269
UCMP 187034	2.916E-09	1E-08
UCMP 187025	2.916E-09	1E-08
YPM 523266-11	0.0083906	0.0007623
YPM_523266-11	0.0065286	0.0021902
YPM_523266-11	0.0030581	0.0009364
YPM 5232612	0.00248	0.001225
YPM_5232612	0.0039059	0.0026936
YPM 5232557	0.0044756	0.000784
AMNH 5356	0.0135722	0.0002843
AMNH 5356	0.0114276	0.0007896
AMNH_5356	0.0107952	0.0002304
AMNH_5356	0.0054908	0.0005679
AMNH_5356	0.007225	0.0009554
AMNH_5356	0.0085378	0.0011903
AMNH 6515	2.89E-06	4.761E-05
AMNH_6515	0.0002161	0.0003028
AMNH_6515	0.0009211	0.0001155
AMNH_6515	0.0004884	5.29E-06
AMNH_6515	0.000535	0.000458
UCMP 214059	0.0004537	0.0001369

-3.137	-1.9762	0.34657	-0.24793
-4.5016	-1.0409	0.088099	0.19518
-0.7738	-0.75607	-1.6305	0.34189
-0.73358	-0.75714	-1.5601	0.28342
-2.9627	-0.93945	-0.21776	0.028397
-0.83481	-0.7483	-1.7156	0.53931
-3.0059	-1.4481	0.063035	0.0041391
-3.2108	-0.95515	-0.030354	0.083772
-0.50223	-1.7572	-1.2855	0.10742
-3.5518	-1.4872	0.085717	-0.001261
-4.2868	-0.54011	0.32963	-0.059253
-3.3194	-0.96792	-0.042271	-0.005084
-3.6634	-2.0096	0.42504	-0.17284
-0.83846	-1.2575	-1.8308	0.40728
-3.6379	-0.9846	-0.22165	0.073096
-3.5305	-1.9563	-0.54263	0.46206
-0.64948	-0.25007	-1.304	0.29852
-0.73858	-1.254	-1.6341	0.37083
-4.2064	-1.6054	1.4967	-1.0614
-4.4728	-0.041056	-0.17441	0.051555
-0.45336	-0.75224	-1.0258	0.093583
-0.089995	-0.76802	-0.4112	-0.54334
-1.0246	0.23835	-1.9608	0.43741
-4.6354	-0.55884	-0.14608	-0.016737
-2.2697	-2.3961	0.752	0.16075
-2.6529	-0.93201	0.14638	-0.17509
-0.69336	-0.7582	-1.4896	0.22496
-0.80903	-0.25817	-1.6269	0.31296
-4.6102	-1.0536	0.076182	0.10633
-4.6051	-1.5536	-0.22378	0.0996
0.55725	-0.81553	1.0007	0.10171
2.2259	-2.5989	1.7352	-0.039226
2.4193	-2.5708	1.4939	0.17879
0.87897	-2.6897	1.6815	0.031489
1.7277	-1.9595	0.63667	0.027377
-0.8175	-2.3198	0.75233	-0.29496
-1.9092	0.16265	-0.70423	0.36931
-1.0653	-0.025837	0.72084	0.94281
-0.17974	0.041813	0.36395	0.98399
-0.76612	-0.042586	1.082	0.33559
0.45389	0.077787	0.041348	0.79113
-0.93347	-0.044078	1.0051	0.50402
-0.088727	0.027192	0.1284	0.59205
-2.7684	-0.14345	0.89958	1.0148
-1.5697	-0.090751	1.3834	0.52296
-3.1576	-4.9385	-0.48147	0.5388
-2.4341	-4.8946	-0.39305	0.42394
-6.7359	-5.2295	1.6981	0.16111
-2.1692	-4.8486	-0.4424	0.88792

UCMP 186886	0.000697	0.0001145
UCMP 187076	3.364E-05	0.000144
UCMP 187071	0.0042536	0.0025969
UCMP 187078	0.0043732	0.0024562
UCMP 187075	0.0007728	1.421E-05
UCMP 187072	0.0028858	0.0025412
UCMP 187073	0.0003098	2.809E-05
UCMP 187074	0.0002132	1.714E-05
UCMP 187071	0.0048609	0.0019448
UCMP 187067	0.0003881	4.624E-05
UCMP 187068	0.0001145	0.0002602
UCMP 187069	0.0005336	5.244E-06
UCMP 187066	0.0003534	0.0002403
UCMP 187062	0.0053421	0.0032718
UCMP 187063	0.0007728	4.928E-06
UCMP 187065	0.0002789	5.776E-05
UCMP 187061	0.00236	0.0016
UCMP 187060	0.0042523	0.002601
UCMP 187058	0.0013032	0.0014977
UCMP 187059	0.0007129	9.216E-07
UCMP 187057	0.0027228	0.0011875
UCMP 119919	0.0049705	0.0006003
UCMP 214060	0.0050908	0.003576
UCMP 186885	0.001156	3.364E-07
UCMP 128787	0.0009486	0.0009364
UCMP 128845	0.0005664	2.56E-05
UCMP 214061	0.0044944	0.0023194
UCMP 214062	0.0042576	0.0025918
UCMP 186868	0.0002045	0.000104
UCMP 186904	0.001089	8.1E-07
MOR 553	0.0036096	0.0012702
MOR 553	0.0075516	0.0030692
MOR 553	0.0086862	0.0025402
MOR 553	0.0068873	0.0031922
MOR 553	0.001225	0.000361
MOR 553	3.844E-07	0.0004285
FMNH PR 2901	0.000231	0.0002418
GIN 100/1	0.0122103	0.0018843
GIN_100/1	0.0099182	0.0009226
GIN_100/1	0.0065448	0.0020296
GIN_100/1	0.0048832	0.0002181
GIN_100/1	0.0080874	0.0020727
GIN_100/1	0.0030518	0.0002268
GIN_100/1	0.0137124	0.0028356
GIN_100/1	0.0117072	0.0036047
FMNH PR 2900	0.0003802	4.761E-05
UCMP 186826	0.0004244	4.624E-05
UCMP 214056	0.002116	0.004624
UCMP 214057	0.0002756	6.4E-07

1.2754	-4.609	-0.48147	0.81176
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UCMP 214058	0.0006708	6.561E-05
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Column average	0.0031805	0.0011691
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Axis 3	Axis 4	Sample average	Average ranked samples	Percent mi	
0.0012278	0.2213703	0.0556988	UCMP 120338	0.3589656	0.25
0.0052157	0.0275959	0.0084845	UCMP 120287	0.3467692	0.25
0.000129	0.0559417	0.0141079	UCMP 119926	0.2587884	0.75
0.0018097	0.0389518	0.0102219	AMNH_5356	0.1972505	0
0.0129937	0.0010804	0.0036115	AMNH 5356	0.1618525	0
4.212E-05	0.0285644	0.007199	UCMP 186891	0.1605593	0.25
0.3527172	0.2575055	0.1605593	YPM 5232557	0.1583596	0
0.0340329	0.0653671	0.0252501	YPM_523266-11	0.1478934	0
0.0073946	0.0073291	0.0037459	YPM_523266-11	0.1236431	0
0.0603503	0.094747	0.0395921	UCMP 186964	0.1231245	0.25
0.0012475	0.0004571	0.000758	UCMP 186968	0.1231245	0.25
0.1060284	0.1088604	0.0556662	UCMP 186971	0.1231245	0.25
0.0205951	0.0319623	0.0132296	AMNH 5356	0.1205958	0
0.0516198	0.2986623	0.0895445	YPM 5232612	0.1180185	0
0.0101264	0.0197515	0.0080262	AMNH_5356	0.1013663	0
0.0017179	0.0002652	0.0004968	UCMP 214056	0.0998446	0
0.0972878	0.1278563	0.057015	FMNH PR 2900	0.0983394	0
0.5155814	0.4877765	0.2587884	UCMP 134801	0.093163	0.25
0.0007701	0.0012048	0.0006585	UCMP 187125	0.0895445	0.25
0.0161178	0.0264095	0.0109982	UCMP 214059	0.0847684	0
0.0316779	0.0594141	0.0233477	UCMP 214057	0.0829867	0
0.0236022	0.0251952	0.0129911	AMNH_5356	0.0773597	0
0.0277582	0.0333355	0.0156395	UCMP 187065	0.0765367	0
0.000256	0.0099381	0.0033973	UCMP 186904	0.0763835	0
0.0295634	0.0330621	0.0160916	UCMP 120339	0.0716505	0.25
0.0152967	0.0284732	0.0110318	UCMP 186826	0.0698986	0
0.6151469	0.739772	0.3467692	UCMP 187038	0.0659292	0.25
0.0352388	0.0749829	0.0276852	UCMP 186885	0.0618752	0
0.6466395	0.757074	0.3589656	UCMP 123565	0.0607248	0.25
0.1645114	0.1015123	0.0716505	UCMP 186970	0.0606752	0.25
0.0046417	0.0001565	0.0012733	UCMP 214060	0.0604904	0.25
0.0209699	0.0555121	0.0195211	UCMP 187062	0.0604769	0.25
0.0101526	0.0096052	0.0053044	MOR 553	0.0598748	0
0.0022373	0.0050438	0.0026467	UCMP 186868	0.0591091	0
0.0786803	0.2904132	0.093163	UCMP 187076	0.0583803	0
0.0017179	0.0002652	0.0004968	UCMP 119718	0.057015	0.25
0.1360872	0.0954625	0.0607248	UCMP 187059	0.056438	0
0.0239786	0.062011	0.0223056	FMNH PR 2899	0.0556988	0
0.00034	0.0004403	0.0001989	UCMP 187124	0.0556662	0.25
0.0003901	0.0012847	0.0005195	UCMP 187072	0.0532344	0.25
0.0015587	0.0062964	0.0019814	MOR 553	0.052995	0
0.0100541	0.0276524	0.0095534	UCMP 187060	0.0489541	0.25
0.0335512	0.0395453	0.0183644	UCMP 186967	0.0477327	0.25
0.0126945	0.0066955	0.0051428	UCMP 187063	0.047403	0
0.009994	0.029615	0.0099645	AMNH_5356	0.0473412	0
0.0126046	0.0136049	0.0069156	UCMP 187071	0.0459188	0.25
0.0313467	0.0259822	0.0150136	UCMP 187198	0.0434655	0.25

0.0004674	3.903E-05	0.0001276
0.1334222	0.122514	0.0659292
0.0018278	0.0053448	0.0018949
0.0007049	0.0032753	0.0010147
0.0036736	0.0213774	0.0063896
0.00821	0.016162	0.0063076
0.0205951	0.0319623	0.0132296
0.0205951	0.0319623	0.0132296
0.0057638	0.0066042	0.0033032
0.0060451	0.0036893	0.0028046
0.0255968	0.04545	0.0185529
0.0040462	0.0245361	0.0073084
0.0637214	0.1072301	0.0434655
0.0076195	0.0202863	0.007342
0.2184057	0.262687	0.1231245
0.0017179	0.0002652	0.0004968
0.2184057	0.262687	0.1231245
0.0443103	0.0206212	0.0182393
0.0741222	0.1138995	0.0477327
0.0185668	0.0517108	0.0176715
0.0003077	0.0067404	0.0018697
0.0481149	0.0817102	0.0335323
0.0398601	0.0544149	0.0243611
0.0091394	0.0209352	0.007558
0.0049576	0.0204004	0.0063854
0.2184057	0.262687	0.1231245
0.0197178	0.0139441	0.0087791
0.1193288	0.1155864	0.0606752
0.0029626	0.0016112	0.0012549
0.0023793	0.0006098	0.0007473
0.0023793	0.0006098	0.0007473
0.0008208	0.1053911	0.0288412
0.05067	0.5321848	0.1478934
0.0661518	0.4244262	0.1236431
0.0659462	0.4024228	0.1180185
0.0052853	0.1190632	0.032737
0.0733326	0.5548462	0.1583596
0.0135862	0.6199673	0.1618525
0.0053013	0.4648649	0.1205958
0.0343287	0.7436475	0.1972505
0.0101687	0.2932114	0.0773597
0.0094673	0.3878176	0.1013663
0.0004964	0.1791406	0.0473412
0.0001491	0.0069346	0.0017835
0.0042968	0.0159717	0.0051968
0.0041078	7.639E-05	0.0013052
0.0126317	0.0230008	0.0090315
0.0212956	0.0003957	0.0056711
0.1195431	0.2189398	0.0847684

UCMP 214062	0.0431376	0.25
UCMP 187078	0.0417086	0.25
UCMP 187079	0.0395921	0.25
UCMP 214061	0.0377427	0.25
UCMP 187067	0.0370891	0
UCMP 187068	0.0355745	0
MOR 553	0.0336792	0
UCMP 186973	0.0335323	0.25
UCMP 187069	0.0333741	0
GIN_100/1	0.0330211	0.25
UCMP 187075	0.0329348	0
YPM_5232612	0.032737	0
UCMP 187074	0.0326237	0
UCMP 187071	0.0315167	0.25
UCMP 187066	0.0290574	0
YPM 523266-11	0.0288412	0
FMNH PR 2901	0.0286241	0
UCMP 187061	0.0282723	0.25
UCMP 187073	0.0280288	0
UCMP 120305	0.0276852	0.25
UCMP 187070	0.0252501	0.25
UCMP 187143	0.0243611	0.25
UCMP 187042	0.0233477	0.25
UCMP 187048	0.0223056	0.25
UCMP 186886	0.0214715	0
UCMP 187041	0.0195211	0.25
UCMP 187197	0.0185529	0.25
UCMP 187010	0.0183644	0.25
UCMP 214058	0.0183463	0
UCMP 79095	0.0182393	0.25
UCMP 187057	0.018192	0.25
GIN 100/1	0.0180902	0.25
UCMP 187033	0.0176715	0.25
UCMP 187037	0.0160916	0.25
GIN_100/1	0.0160104	0.25
UCMP 128845	0.0156917	0
UCMP 187044	0.0156395	0.25
UCMP 186957	0.0150136	0.25
UCMP 128787	0.0145133	0
MOR 553	0.0141379	0
FMNH PR2894	0.0141079	0
MOR 553	0.014083	0
GIN_100/1	0.013734	0.25
UCMP 187036	0.0132296	0.25
UCMP 187105	0.0132296	0.25
UCMP 187194	0.0132296	0.25
UCMP 187043	0.0129911	0.25
UCMP 120153	0.0110318	0.25
UCMP 119921	0.0109982	0.25

0.0172923	0.0677821	0.0214715
0.0545498	0.1787937	0.0583803
0.0071572	0.1696674	0.0459188
0.0053436	0.1546613	0.0417086
0.0185014	0.1124509	0.0329348
0.0153512	0.1921595	0.0532344
0.0238418	0.0879354	0.0280288
0.025682	0.1045824	0.0326237
0.0044622	0.114799	0.0315167
0.0304586	0.1174633	0.0370891
0.0272415	0.1146818	0.0355745
0.0215177	0.1114399	0.0333741
0.0281736	0.0874621	0.0290574
0.0123654	0.2209282	0.0604769
0.0290055	0.1598288	0.047403
0.0712249	0.2345852	0.0765367
0.0039313	0.1051977	0.0282723
0.0109203	0.1780426	0.0489541
0.0004537	0.0115563	0.0037027
0.0280931	0.1969451	0.056438
0.0013396	0.0675184	0.018192
0.0079477	0.0087086	0.0055568
0.005595	0.2276998	0.0604904
0.0311664	0.2151782	0.0618752
0.0411765	0.0149916	0.0145133
0.0084758	0.0536988	0.0156917
0.0037946	0.1403626	0.0377427
0.004199	0.1615019	0.0431376
0.0483965	0.1877316	0.0591091
0.0518473	0.2525967	0.0763835
0.0021567	0.0495152	0.0141379
0.0008762	0.2280024	0.0598748
0.0036	0.1971538	0.052995
0.0087236	0.1159137	0.0336792
0.0003158	0.0544303	0.014083
0.0034187	0.0005081	0.0010889
0.0147695	0.099254	0.0286241
0.0578835	0.0003826	0.0180902
0.043077	0.0010182	0.013734
0.0138604	0.0170355	0.0098676
0.0192818	0.0010706	0.0063634
0.024202	0.009291	0.0109133
0.014938	1.239E-05	0.0045572
0.1043807	0.0111556	0.0330211
0.036634	0.0120956	0.0160104
0.1313845	0.2615453	0.0983394
0.0988348	0.1802889	0.0698986
0.220994	0.1716445	0.0998446
0.1554804	0.1761901	0.0829867

GIN_100/1	0.0109133	0.25
FMNH PR2895	0.0102219	0
UCMP 187039	0.0099645	0.5
GIN_100/1	0.0098676	0.25
UCMP 186957	0.0095534	0.25
AMNH_6515	0.0090315	0.25
UCMP 187139	0.0087791	0.25
FMNH PR2896	0.0084845	0
UCMP 187054	0.0080262	0.25
UCMP 187200	0.007558	0.25
UCMP 186961	0.007342	0.25
UCMP 187199	0.0073084	0.25
FMNH PR2893	0.007199	0
UCMP 129085	0.0069156	0.25
UCMP 187201	0.0063896	0.25
UCMP 186958	0.0063854	0.25
GIN_100/1	0.0063634	0.25
UCMP 187049	0.0063076	0.25
AMNH_6515	0.0056711	0
UCMP 119919	0.0055568	0.5
UCMP 187163	0.0053044	0.25
AMNH_6515	0.0051968	0
UCMP 187083	0.0051428	0.25
GIN_100/1	0.0045572	0.25
UCMP 124401	0.0037459	0.25
UCMP 187058	0.0037027	0.25
FMNH PR2898	0.0036115	0
UCMP 187045	0.0033973	0.25
UCMP 186899	0.0033032	0.25
UCMP 187030	0.0028046	0.25
UCMP 186962	0.0026467	0.25
UCMP 128941	0.0019814	0.25
UCMP 187006	0.0018949	0.25
UCMP 186972	0.0018697	0.25
AMNH 6515	0.0017835	0
AMNH_6515	0.0013052	0
UCMP 124987	0.0012733	0.25
UCMP 174796	0.0012549	0.25
MOR 553	0.0010889	0
UCMP 186944	0.0010147	0.5
UCMP 187129	0.000758	0.25
UCMP 187025	0.0007473	0.25
UCMP 187034	0.0007473	0.25
UCMP 119788	0.0006585	0.25
UCMP 128913	0.0005195	0.25
UCMP 123543	0.0004968	0.25
UCMP 186959	0.0004968	0.25
UCMP 187027	0.0004968	0.25
UCMP 187046	0.0001989	0.25

0.0614742 0.0111746 0.0183463

0.046414 0.1157979

UCMP 186960 0.0001276 0.25

Squared difference vs percent missing data ranked correlation
p(uncorr) Permutation p

Spearman	D:	72451	1.58E-24	0.0001
Spearman	rs:	0.8489	1.04E-41	0.0001
Kendall	tau:	0.7047	1.63E-36	0.0001

SOM 2

Measurements of teeth used in PCA, discriminant analysis, and plots. All UCMP specimens are from Sankey (2008). *Deinonychus*, *Dromaeosaurus*, *Saurornithoides*, *Troodon*, and *Velociraptor* are from Smith et al. (2005).

Taxon	Specimen number	Locality	Fore-aft basal length (mm)	Medio lateral basal width (mm)	Height (mm)	Denticles/mm	Denticles/height	Height/FABL	Apical length (mm)
Dromaeosaurid	FMNH PR 2893		3.08	1.23	4.4	3.5	0.80	1.43	5.37
Dromaeosaurid	FMNH PR 2894		2.81	1.05	3.8	3.5	0.92	1.35	4.73
Dromaeosaurid	FMNH PR 2895		3.02	1.26	4.49	3	0.67	1.49	5.41
Dromaeosaurid	FMNH PR 2896		3.11	1.31	6.45	3	0.47	2.07	7.16
Dromaeosaurid	FMNH PR 2897		?	?	?	2.5	?	?	?
Dromaeosaurid	FMNH PR 2898		3.73	1.31	5.37	4	0.74	1.44	6.54
Dromaeosaurid	FMNH PR 2899		1.3	0.8	2.7	5.5	2.04	2.08	3.00
Aviale	FMNH PR 2900		2.22	1	4.35	0	0.00	1.96	4.88
Troodontid	FMNH PR 2901		2.75	1.29	5.85	2	0.34	2.13	6.46
Tryrannosaurid	FMNH PR 2902		4.82	2.87	12.16	0	0.00	2.52	13.08
Dromaeosaurid	UCMP 186891	5618	7	?	17	4.5	0.26	2.43	18.38
Dromaeosaurid	UCMP 187070	5620	2.5	?	5	6	1.20	2.00	5.59
Dromaeosaurid	UCMP 124401	5620	4.5	?	8	5	0.63	1.78	9.18
Dromaeosaurid	UCMP 187079	5620	2.2	?	4	6	1.50	1.82	4.57
Dromaeosaurid	UCMP 187129	5620	4	?	9	4.5	0.50	2.25	9.85
Dromaeosaurid	UCMP 187124	5620	6	?	12	4	0.33	2.00	13.42
Dromaeosaurid	UCMP 187105	5620	5	?	8	5	0.63	1.60	9.43
Dromaeosaurid	UCMP 187125	56201	7	?	4	4	1.00	0.57	8.06
Dromaeosaurid	UCMP	5815	3	?	4.5	7	1.56	1.50	5.41

	187054								
Dromaeosaurid	UCMP 187027	5818	4	?	7	6	0.86	1.75	8.06
Dromaeosaurid	UCMP 119718	72199	6	?	10	5	0.50	1.67	11.66
Dromaeosaurid	UCMP 119926	72203	8	?	17	?	?	2.13	18.79
Dromaeosaurid	UCMP 119788	72206	3.7	?	5.7	6	1.05	1.54	6.80
Dromaeosaurid	UCMP 119921	72208	3	?	5	6	1.20	1.67	5.83
Dromaeosaurid	UCMP 187042	72208	2.5	?	4.5	6.5	1.44	1.80	5.15
Dromaeosaurid	UCMP 187043	72208	3	?	4	6	1.50	1.33	5.00
Dromaeosaurid	UCMP 187044	72208	3	?	5	5	1.00	1.67	5.83
Dromaeosaurid	UCMP 187045	72208	3.6	?	10	4.5	0.45	2.78	10.63
Dromaeosaurid	UCMP 187037	72213	3	?	4.8	5	1.04	1.60	5.66
Dromaeosaurid	UCMP 120153	72215	5	?	8	4.5	0.56	1.60	9.43
Dromaeosaurid	UCMP 120287	73078	9	?	17	3.5	0.21	1.89	19.24
Dromaeosaurid	UCMP 120305	73083	5.5	?	7.5	5	0.67	1.36	9.30
Dromaeosaurid	UCMP 120338	73085	9	?	17	4	0.24	1.89	19.24
Dromaeosaurid	UCMP 120339	73085	6	?	15	4	0.27	2.50	16.16
Dromaeosaurid	UCMP 124987	73087	4	?	8	6	0.75	2.00	8.94
Dromaeosaurid	UCMP 187041	73087	2.5	?	5	7	1.40	2.00	5.59
Dromaeosaurid	UCMP 187163	73087	3.4	?	5	5.5	1.10	1.47	6.05
Dromaeosaurid	UCMP 186962	73090	3.7	?	10	5	0.50	2.70	10.66
Dromaeosaurid	UCMP 134801	73092	7	?	6	4	0.67	0.86	9.22
Dromaeosaurid	UCMP 123543	73093	4	?	7	6	0.86	1.75	8.06
Dromaeosaurid	UCMP 123565	73097	5.8	?	13	5	0.38	2.24	14.24
Dromaeosaurid	UCMP 187048	73102	2.3	?	4	8	2.00	1.74	4.61
Dromaeosaurid	UCMP 187046	73102	3.8	?	7	6	0.86	1.84	7.96
Dromaeosaurid	UCMP 128913	74118	3.7	?	6	6	1.00	1.62	7.05
Dromaeosaurid	UCMP 128941	75157	4.5	?	7	4.5	0.64	1.56	8.32
Dromaeosaurid	UCMP 186957	75161	3	?	6	6	1.00	2.00	6.71
Dromaeosaurid	UCMP 187010	75165	5	?	8	6	0.75	1.60	9.43
Dromaeosaurid	UCMP 187083	75165	4.5	?	9	5	0.56	2.00	10.06
Dromaeosaurid	UCMP 187039	75173	5	?	?	4.5	?	?	?
Dromaeosaurid	UCMP 129085	75173	3.3	?	5	5.5	1.10	1.52	5.99

Dromaeosaurid	UCMP 186957	75175	5	?	10	4.5	0.45	2.00	11.18
Dromaeosaurid	UCMP 186960	75178	4	?	7	5.5	0.79	1.75	8.06
Dromaeosaurid	UCMP 187038	75178	6	?	12	5	0.42	2.00	13.42
Dromaeosaurid	UCMP 187006	76157	3.5	?	6	6	1.00	1.71	6.95
Dromaeosaurid	UCMP 186944	76167	3.5	?	?	7	?	?	?
Dromaeosaurid	UCMP 187201	77118	3	?	6	7	1.17	2.00	6.71
Dromaeosaurid	UCMP 187049	80091	3.2	?	5.5	6	1.09	1.72	6.36
Dromaeosaurid	UCMP 187194	82013	5	?	8	5	0.63	1.60	9.43
Dromaeosaurid	UCMP 187036	82060	5	?	8	5	0.63	1.60	9.43
Dromaeosaurid	UCMP 186899	83118	3.5	?	5.5	5.5	1.00	1.57	6.52
Dromaeosaurid	UCMP 187030	83256	3.6	?	5	5.5	1.10	1.39	6.16
Dromaeosaurid	UCMP 187197	87022	2.6	?	4	7	1.75	1.54	4.77
Dromaeosaurid	UCMP 187199	87022	3.2	?	8	5	0.63	2.50	8.62
Dromaeosaurid	UCMP 187198	87022	6	?	10	3.5	0.35	1.67	11.66
Dromaeosaurid	UCMP 186961	87030	3	?	5	7	1.40	1.67	5.83
Dromaeosaurid	UCMP 186968	87038	7	?	13	4	0.31	1.86	14.76
Dromaeosaurid	UCMP 186959	87038	4	?	7	6	0.86	1.75	8.06
Dromaeosaurid	UCMP 186971	87040	7	?	13	4	0.31	1.86	14.76
Dromaeosaurid	UCMP 79095	87041?	5	?	12	4	0.33	2.40	13.00
Dromaeosaurid	UCMP 186967	87049	6	?	10	4	0.40	1.67	11.66
Dromaeosaurid	UCMP 187033	87059	2.8	?	7	5	0.71	2.50	7.54
Dromaeosaurid	UCMP 186972	87067	3.6	?	8	5	0.63	2.22	8.77
Dromaeosaurid	UCMP 186973	87072	2.2	?	3.5	7	2.00	1.59	4.13
Dromaeosaurid	UCMP 187143	87084	2.6	?	4	6	1.50	1.54	4.77
Dromaeosaurid	UCMP 187200	87098	3.3	?	?	4.5	?	?	?
Dromaeosaurid	UCMP 186958	87098	3.2	?	7	5.5	0.79	2.19	7.70
Dromaeosaurid	UCMP 186964	87098	7	?	13	4	0.31	1.86	14.76
Dromaeosaurid	UCMP 187139	87105	3.4	?	5	4.5	0.90	1.47	6.05
Dromaeosaurid	UCMP 186970	87153	6	?	12	4.5	0.38	2.00	13.42
Dromaeosaurid	UCMP 174796	90084	4	?	6	7	1.17	1.50	7.21
Dromaeosaurid	UCMP 187034	91051	?	?	?	3.5	?	?	?
Dromaeosaurid	UCMP 187025	91051	?	?	?	3.5	?	?	?
Troodontid	UCMP 214059	V5616	1.9	1.3	3.4	3	0.88	1.79	3.89

Troodontid	UCMP 186886	V5616	3.2	1	4	3	0.75	1.25	5.12
Troodontid	UCMP 187076	V5620	2.2	1	3	4	1.33	1.36	3.72
Troodontid	UCMP 187071	V5620	2.4	0.9	?	4	?	?	?
Troodontid	UCMP 187078	V5620	2.5	0.9	?	4	?	?	?
Troodontid	UCMP 187075	V5620	2.7	1	4.5	4	0.89	1.67	5.25
Troodontid	UCMP 187072	V5620	2.2	1	?	4	?	?	?
Troodontid	UCMP 187073	V5620	2.9	1.1	4.3	3.5	0.81	1.48	5.19
Troodontid	UCMP 187074	V5620	2.7	1.1	4.2	4	0.95	1.56	4.99
Troodontid	UCMP 187071	V5620	2.9	0.9	?	3	?	?	?
Troodontid	UCMP 187067	V5620	2.7	1	3.8	3.5	0.92	1.41	4.66
Troodontid	UCMP 187068	V5620	2.6	1	3.1	4.5	1.45	1.19	4.05
Troodontid	UCMP 187069	V5620	2.7	1	4.1	4	0.98	1.52	4.91
Troodontid	UCMP 187066	V5620	3	1	3.5	3	0.86	1.17	4.61
Troodontid	UCMP 187062	V5620	2.2	0.8	?	3.5	?	?	?
Troodontid	UCMP 187063	V5620	2.4	0.9	3.9	4	1.03	1.63	4.58
Troodontid	UCMP 187065	V5620	2	1	4.1	3	0.73	2.05	4.10
Troodontid	UCMP 187061	V5620	2.7	1.1	?	4.5	?	?	?
Troodontid	UCMP 187060	V5620	2.4	0.9	?	3.5	?	?	?
Troodontid	UCMP 187058	V5620	?	0.8	2.5	3.5	1.40	?	?
Troodontid	UCMP 187059	V5620	2.1	0.8	3.2	5	1.56	1.52	3.83
Troodontid	UCMP 187057	V72208	3.1	1.1	?	4	?	?	?
Troodontid	UCMP 119919	V72208	?	1	?	4	?	?	?
Troodontid	UCMP 214060	V73087	2	0.8	?	5	?	?	?
Troodontid	UCMP 186885	V73087	2.1	0.7	3	4.5	1.50	1.43	3.66
Troodontid	UCMP 128787	V73102	3.6	1.7	4.6	2.5	0.54	1.28	5.84
Troodontid	UCMP 128845	V74116	3.2	1.1	4.6	4	0.87	1.44	5.60
Troodontid	UCMP 214061	V75172	2.6	0.9	?	4	?	?	?
Troodontid	UCMP 214062	V75172	2.4	0.9	?	4.5	?	?	?
Troodontid	UCMP 186868	V75172	2.2	0.9	2.9	4	1.38	1.32	3.64
Troodontid	UCMP 186904	V84130	2	0.7	3	3.5	1.17	1.50	3.61
Avialan	UCMP 186826	V73087	2.6	1.1	4.8	0	?	1.85	5.46
Avialan	UCMP 214056	V73087	2.5	1.2	?	0	?	?	?
Avialan	UCMP 214057	V73087	2.4	1.5	5.1	0	?	2.13	5.64

Avialan	UCMP 214058	V73087	3.8	2.1	8.2	0	?	2.16	9.04
Deinonychus	YPM 523266-11		5.07	3	9.05	4.96	0.55	1.78	10.37
Deinonychus	YPM_523266-11		7.07	3.2	10.08	5.68	0.56	1.43	12.31
Deinonychus	YPM_523266-11		6.76	2.93	10.26	6.16	0.60	1.52	12.29
Deinonychus	YPM 5232612		6.74	2.8	9.66	6.08	0.63	1.43	11.78
Deinonychus	YPM_5232612		5.35	2.41	6.41	6.06	0.95	1.20	8.35
Deinonychus	YPM 5232557		7.15	3.23	11.45	5.8	0.51	1.60	13.50
Dromaeosaurus	AMNH 5356		7.21	4.06	14.06	3.38	0.24	1.95	15.80
Dromaeosaurus	AMNH 5356		6.84	3.7	12.18	3.14	0.26	1.78	13.97
Dromaeosaurus	AMNH_5356		7.64	4.02	14.48	3.42	0.24	1.90	16.37
Dromaeosaurus	AMNH_5356		6.28	3.13	10.69	4.14	0.39	1.70	12.40
Dromaeosaurus	AMNH_5356		6.69	3.32	11.02	3.42	0.31	1.65	12.89
Dromaeosaurus	AMNH_5356		5.7	3.11	9.41	3.5	0.37	1.65	11.00
Velociraptor	AMNH 6515		3.55	1.54	5.79	6	1.04	1.63	6.79
Velociraptor	AMNH_6515		3.3	1.54	4.87	6	1.23	1.47	5.88
Velociraptor	AMNH_6515		4.17	1.45	7.31	?	?	1.75	8.42
Velociraptor	AMNH_6515		4.35	2.15	8.49	7.5	0.88	1.95	9.54
Velociraptor	AMNH_6515		3.95	1.61	8.19	7.5	0.92	2.07	9.09
Troodon	MOR 553		4.93	2.43	7.12	3.88	0.54	1.44	8.66
Troodon	MOR 553		6.22	2.95	8.15	2	0.25	1.31	10.25
Troodon	MOR 553		6	3.03	8.45	2	0.24	1.41	10.36
Troodon	MOR 553		5.6	2.71	6.97	2	0.29	1.24	8.94
Troodon	MOR 553		5.2	2.33	8.24	2.66	0.32	1.58	9.74
Troodon	MOR 553		4.45	1.62	5.86	2.5	0.43	1.32	7.36
Sauornithoides	GIN 100/1		3.58	2.68	5.92	?	?	1.65	6.92
Sauornithoides	GIN_100/1		3.66	2.69	6.88	?	?	1.88	7.79
Sauornithoides	GIN_100/1		4.31	2.45	5.98	?	?	1.39	7.37
Sauornithoides	GIN_100/1		3.8	2.48	7.57	?	?	1.99	8.47
Sauornithoides	GIN_100/1		4.09	2.51	5.88	?	?	1.44	7.16
Sauornithoides	GIN_100/1		3.76	2.26	7.03	?	?	1.87	7.97
Sauornithoides	GIN_100/1		2.98	2.5	4.32	?	?	1.45	5.25
Sauornithoides	GIN_100/1		4.09	2.61	5.14	?	?	1.26	6.57
Richardoestesia	UMCP 186835	V80091	4.2	?	8.5	10			

Richardoestesia	UCMP 186837	V77118	3.3	?	6.7	10.5			
Richardoestesia	UCMP 186840	V87082	4.4	?	9.2	6.5			
Richardoestesia	UCMP 186842	V73103	2.7	?	5.3	8			
Richardoestesia	UCMP 186825	V80092	3.3	?	9.1	8			
Richardoestesia	UCMP 186827	V80088	4.5	?	10.5	6			
Richardoestesia	UCMP 213980	V87072	2.7	?	5.2	6.5			
Richardoestesia	UCMP 213927	V73087	3.2	?	6.2	6.5			
Richardoestesia	UCMP 213931	V73087	3.6	?	7.6	8			
Richardoestesia	UCMP 213929	V73087	4.1	?	9.5	7			
Richardoestesia	UCMP 213924	V73087	3.6	?	7.7	8			
Richardoestesia	UCMP 213933	V73087	3.0	?	4.8	8			
Richardoestesia	UCMP 213935	V73087	2.3	?	4.4	8			
Richardoestesia	UCMP 213938	V73087	2.1	?	3.5	8.5			
Richardoestesia	UCMP 213943	V73087	4.5	?	11.1	7			
Richardoestesia	UCMP213944	V73087	3.8	?	9.1	9			
Richardoestesia	UCMP 213945	V73087	3.0	?	6.7	9			
Richardoestesia	UCMP 213946	V73087	3.2	?	7.0	8.5			
Richardoestesia	UCMP 213949	V73087	3.0	?	6.8	7			
Richardoestesia	UCMP 213950	V73087	4.4	?	13.9	9			
Richardoestesia	UCMP 213951	V73087	4.2	?	13.0	8			
Richardoestesia	UCMP 213953	V73087	3.8	?	8.9	7.5			
Richardoestesia	UCMP 213965	V73087	3.9	?	7.7	9			
Richardoestesia	UCMP 213966	V73087	3.8	?	8.6	7.5			
Richardoestesia	UCMP 213971	V73087	3.0	?	6.1	9.5			
Richardoestesia	UCMP 213972	V73087	4.1	?	8.5	8			
Richardoestesia	UCMP 213969	V73087	2.1	?	4.4	12.5			
Richardoestesia	UCMP 213994	V73087	2.9	?	5.8	10			
Richardoestesia	UCMP 213995	V73087	3.5	?	8.6	5.5			
Richardoestesia	UCMP 213997	V73087	2.9	?	5.9	10			
Richardoestesia	UCMP 213996	V73087	5.3	?	12.3	5.5			