Supplementary material

Supplementary Methods

Scans were obtained at one of three beamtimes, two at SLS Tomcat, the other at DLS I13-2. For the first SLS Tomcat session, four samples were scanned as a trial at high resolution (0.65 µm voxel size), but this was decreased for later experiments to give a larger field of view (See table S1). During analyses, the pixels were converted to µm so that absolute measurements are comparable.

For DLS datasets, and 0.65 voxel size SLS datasets, scans were slightly noisier than 1.6 µm voxel size SLS datasets, so a Gaussian blur (1 pixel kernel size) was applied before thresholding. Ideally, the same image processing would be applied to both sets of scans, but given the differences in scan quality, it was not possible to find a workflow which was optimised for both.

Images were binarised using a minimum cross entropy thresholding algorithm (Li and Tam, 1998). The bone volume was separated from small image artefacts and noise by a single-voxel erosion and dilation, followed by a component labelling process to remove all except the largest object (*i.e.*, the cortical bone tissue), resulting in a cleaned dataset. The pores within the bone cortex were filled by dilation and erosion operations to create a solid cortical mask. This mask was used to define the edges of the canal network and to extract the intracortical pores (intracortical canals and osteocyte lacunae) by applying an AND function with the inverted cleaned dataset or in other words, by applying the mask to the inverted cleaned dataset that represents the intracortical pores, the medullary cavity and the space around the respective long bone. Intracortical microstructures with volumes of 50-500 μm^3 were

considered to be osteocyte lacunae (D'Emic and Benson, 2013) and excluded, while features with volumes >1000 µm^3 were classified as vascular canals.

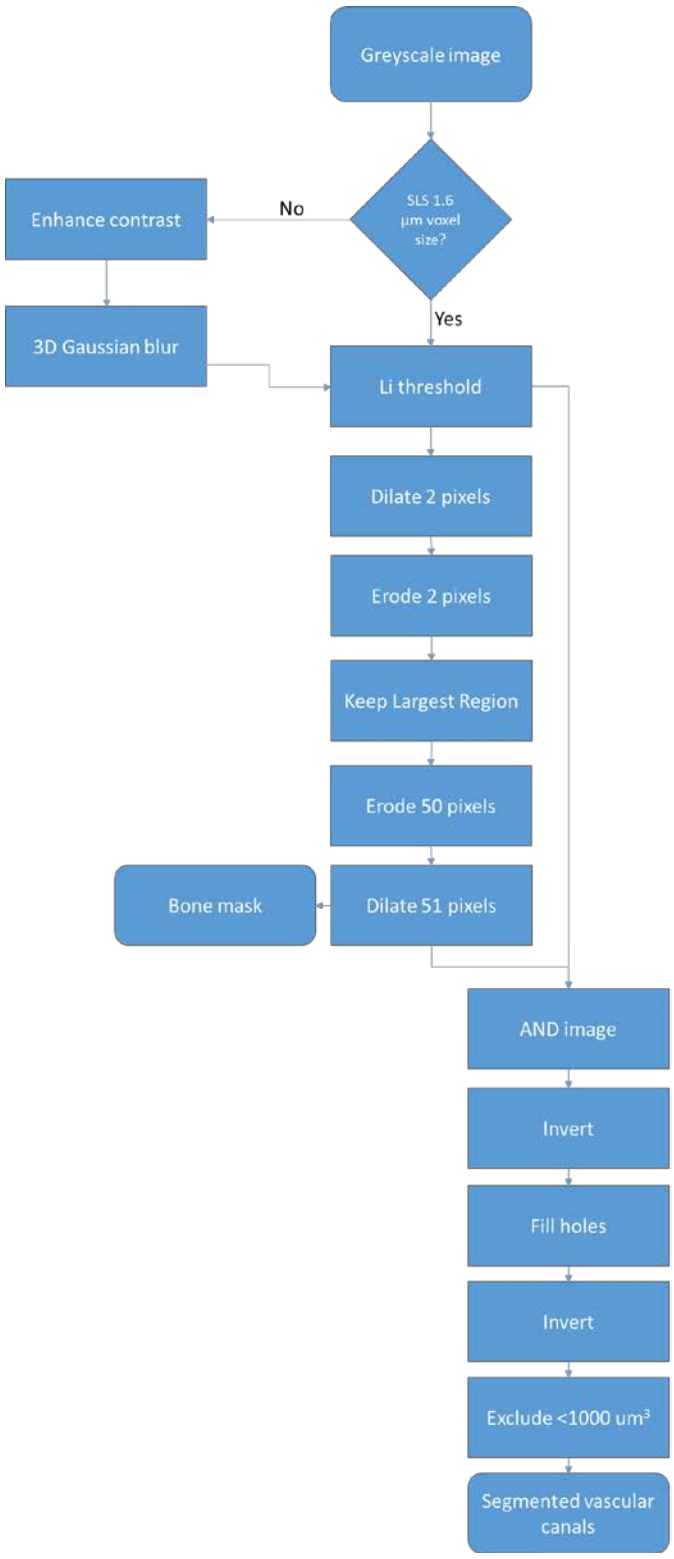

Figure S1: Image processing workflow for segmentation of intracortical vascular canals.

Table S1: Summary of duck tibiotarsus samples imaged during two synchrotron beamtimes.

Duck ID	Mass (g)	Age (days)	Bone	Beamline	Voxel size (µm)	Binning	Final voxel size (µm)
2	39	1	Tibiotarsus	SLS Tomcat	0.65	2x	1.3
4	66	2.07	Tibiotarsus	SLS Tomcat	0.65	2x	1.3
7	67	2.11	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
5	84	2.79	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
6	108	3.74	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
9	119	4.18	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
3	121	4.26	Tibiotarsus	SLS Tomcat	0.65	2x	1.3
1	253	9.50	Tibiotarsus	SLS Tomcat	0.65	2x	1.3
21	392	15.02	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
14	401	15.38	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
10	469	18.08	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
11	492	18.00	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
12	624	24.24	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
20	525	20.31	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
22	585	22.69	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
23	530	20.51	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
13	1071	42	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
18	1900	90	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6
16	1180	120	Tibiotarsus	SLS Tomcat	1.6	n/a	1.6

Table S2: Summary of duck humerus samples imaged during two synchrotron beamtimes.

Duck ID	Mass	Age	Bone	Beamline	Voxel size (µm)	Binning	Final voxel size (µm)
2	39	1	Humerus	SLS	1.6	n/a	1.6
4	66	2.07	Humerus	SLS	1.6	n/a	1.6
7	67	2.11	Humerus	SLS	1.6	n/a	1.6
5	108	2.79	Humerus	SLS	1.6	n/a	1.6
6	84	3.74	Humerus	SLS	1.6	n/a	1.6
9	119	4.18	Humerus	SLS	1.6	n/a	1.6
3	121	4.26	Humerus	SLS	1.6	n/a	1.6
1	253	9.50	Humerus	SLS	1.6	n/a	1.6
21	392	15.02	Humerus	SLS	1.6	n/a	1.6
14	401	15.38	Humerus	SLS	1.6	n/a	1.6
10	469	18.08	Humerus	SLS	1.6	n/a	1.6
11	492	18.00	Humerus	SLS	1.6	n/a	1.6
12	624	24.24	Humerus	SLS	1.6	n/a	1.6
20	525	20.31	Humerus	SLS	1.6	n/a	1.6

22	585	22.69	Humerus	SLS	1.6	n/a	1.6
23	530	20.51	Humerus	SLS	1.6	n/a	1.6
13	1071	42	Humerus	DLS	0.8	2x	1.6
15	1181	120	Humerus	SLS	1.6	n/a	1.6
16	1180	120	Humerus	SLS	1.6	n/a	1.6
19	1695	120	Humerus	SLS	1.6	n/a	1.6

Table S3: Summary of duck femur samples imaged during two synchrotron beamtimes.

Duck ID	Mass	Age	Bone	Beamline	Voxel size (µm)	Binning	Final voxel size (µm)
2	39	1	Femur	SLS	1.6	n/a	1.6
4	66	2.07	Femur	SLS	1.6	n/a	1.6
7	67	2.11	Femur	SLS	1.6	n/a	1.6
5	108	2.79	Femur	SLS	1.6	n/a	1.6
6	84	3.74	Femur	SLS	1.6	n/a	1.6
9	119	4.18	Femur	SLS	1.6	n/a	1.6
3	121	4.26	Femur	SLS	1.6	n/a	1.6
1	253	9.50	Femur	SLS	1.6	n/a	1.6
21	392	15.02	Femur	SLS	1.6	n/a	1.6
14	401	15.38	Femur	SLS	1.6	n/a	1.6
10	469	18.08	Femur	SLS	1.6	n/a	1.6
11	492	18.00	Femur	SLS	1.6	n/a	1.6
12	624	24.24	Femur	SLS	1.6	n/a	1.6
20	525	20.31	Femur	SLS	1.6	n/a	1.6
22	585	22.69	Femur	SLS	1.6	n/a	1.6
23	530	20.51	Femur	SLS	1.6	n/a	1.6
13	1071	42	Femur	SLS	1.6	n/a	1.6
15	1181	120	Femur	SLS	1.6	n/a	1.6
16	1180	120	Femur	SLS	1.6	n/a	1.6
19	1695	120	Femur	SLS	1.6	n/a	1.6

Table S4: Summary of pheasant femur samples imaged at Diamond Light Source.

Pheasant ID	Mass (g)	Age	Bone	Beamline	Voxel size (µm)	Binning	Final voxel size (µm)
2a	67.5	14	Femur	DLS	0.8	2x	1.6
2b	67	14	Femur	DLS	0.8	2x	1.6
2c	67.6	14	Femur	DLS	0.8	2x	1.6
3a	90	21	Femur	DLS	0.8	2x	1.6
5a	250	35	Femur	DLS	0.8	2x	1.6
5b	300	35	Femur	DLS	0.8	2x	1.6
5c	269	35	Femur	DLS	0.8	2x	1.6

6a	204.8	42	Femur	DLS	0.8	2x	1.6
6b	292.6	42	Femur	DLS	0.8	2x	1.6
6c	306.7	42	Femur	DLS	0.8	2x	1.6

Table S5: Summary of pheasant humerus samples imaged at Diamond Light Source.

Pheasant ID	Mass (g)	Age	Bone	Beamline	Voxel size (µm)	Binning	Final voxel size (µm)
2a	67.5	1	Humerus	DLS	0.8	2x	1.6
2b	67	2.07	Humerus	DLS	0.8	2x	1.6
2c	67.6	2.11	Humerus	DLS	0.8	2x	1.6
3a	90	2.79	Humerus	DLS	0.8	2x	1.6
5a	250	3.74	Humerus	DLS	0.8	2x	1.6
5b	300	4.18	Humerus	DLS	0.8	2x	1.6
5c	269	4.26	Humerus	DLS	0.8	2x	1.6
6a	204.8	9.50	Humerus	DLS	0.8	2x	1.6
6c	306.7	15.38	Humerus	DLS	0.8	2x	1.6

Table S6: Summary of pheasant tibiotarsus samples imaged at Diamond Light Source.

Pheasant ID	Mass (g)	Age	Bone	Beamline	Voxel size (µm)	Binning	Final voxel size (µm)
2a	67.5	14	Tibiotarsus	DLS	0.8	2x	1.6
2b	67	14	Tibiotarsus	DLS	0.8	2x	1.6
2c	67.6	14	Tibiotarsus	DLS	0.8	2x	1.6
3a	90	21	Tibiotarsus	DLS	0.8	2x	1.6
5a	250	35	Tibiotarsus	DLS	0.8	2x	1.6
5b	300	35	Tibiotarsus	DLS	0.8	2x	1.6
5c	269	35	Tibiotarsus	DLS	0.8	2x	1.6
6a	204.8	42	Tibiotarsus	DLS	0.8	2x	1.6
6b	292.6	42	Tibiotarsus	DLS	0.8	2x	1.6
6c	306.7	42	Tibiotarsus	DLS	0.8	2x	1.6

Scan	Mass	Age	Duck ID	Bone	Flen	Tlen	Hlen
20160807_1249_KW_I	39	1	2	f	1.765944	3.029688	1.197792
20160807_SLS	39	1	2	h	1.765944	3.029688	1.197792
D2TBoneV(SLS	39	1	2	t	1.765944	3.029688	1.197792
20160807_SLS	66	2.072745	4	f	2.056	3.832	1.256
20160807_SLS	66	2.072745	4	h	2.056	3.832	1.256
D4TBoneV(SLS	66	2.072745	4	t	2.056	3.832	1.256
20160807_SLS	67	2.112475	7	t	2.056	3.832	1.256
20160807_SLS	67	2.112475	7	f	2.056	3.832	1.256
20160807_SLS	67	2.112475	7	h	2.056	3.832	1.256
20160807_SLS	84	2.787882	5	f	2.032	3.888	1.28
20160807_SLS	108	2.787882	5	h	2.13516	3.607632	1.307232
20160807_SLS	84	2.787882	5	t	2.032	3.888	1.28
20160807_SLS	108	3.741398	6	t	2.13516	3.607632	1.307232
20160807_SLS	108	3.741398	6	f	2.13516	3.607632	1.307232
20160807_SLS	84	3.741398	6	h	2.032	3.888	1.28
20160807_SLS	119	4.178427	9	t	2.432	4.384	1.4
20160807_SLS	119	4.178427	9	f	2.432	4.384	1.4
20160807_SLS	119	4.178427	9	h	2.432	4.384	1.4
20160807_SLS	121	4.257886	3	f	2.304	4.608	1.288
20160807_SLS	121	4.257886	3	h	2.304	4.608	1.288
D3TBoneV(SLS	121	4.257886	3	t	2.304	4.608	1.288
20160807_SLS	253	9.502225	1	h	2.84724	5.012928	1.59372
20160807_SLS	253	9.502225	1	f	2.84724	5.012928	1.59372
D1TBoneV(SLS	253	9.502225	1	t	2.84724	5.012928	1.59372
20160807_SLS	392	15.02467	21	h	4.4	7.1	2.9
20160807_SLS	392	15.02467	21	t	4.4	7.1	2.9
20160807_SLS	392	15.02467	21	f	4.4	7.1	2.9
20160807_SLS	401	15.38224	14	h	4.1	6.7	3.4
20160807_SLS	401	15.38224	14	t	4.1	6.7	3.4
20160807_SLS	401	15.38224	14	f	4.1	6.7	3.4
20160807_SLS	469	18.08387	10	h	4.3	7.5	3.2
20160807_SLS	469	18.08387	10	t	4.3	7.5	3.2
20160807_SLS	469	18.08387	10	f	4.3	7.5	3.2
20160807_SLS	492	18.99766	11	t	4.2	7.1	3.1
20160807_SLS	492	18.99766	11	h	4.2	7.1	3.1
20160807_SLS	624	24.24131	12	h	4.5	7.5	3.7
20160807_SLS	624	24.24131	12	t	4.5	7.5	3.7
20160807_SLS	492	18.99766	11	f	4.2	7.1	3.1
20160807_SLS	624	24.24131	12	f	4.5	7.5	3.7
20160807_SLS	525	20.30874	20	h	4.4	7.3	3.1
20160807_SLS	525	20.30874	20	t	4.4	7.3	3.1
20160807_SLS	525	20.30874	20	f	4.4	7.3	3.1
20160807_SLS	585	22.69253	22	h	4.6	7.5	3.4
20160807_SLS	585	22.69253	22	t	4.6	7.5	3.4
20160807_SLS	585	22.69253	22	f	4.6	7.5	3.4
20160807_SLS	1071	42	13	t	6.3	9.8	7.5
20160807_SLS	1071	42	13	f	6.3	9.8	7.5
985290000 DLS	1071	42	13	h	6.4	9.8	7.5
20160807_SLS	1900	90	18	t	6.7	10.7	10.4

D18FS1_Bc	SLS	1900	90	18	f	6.7	10.7	10.4
20160807_	SLS	1181	120	15	h	6.4	10.4	10.8
20160807_	SLS	1180	120	16	h	6.1	10	10.4
20160807_	SLS	1180	120	16	t	6.1	10	10.4
20160807_	SLS	1695	120	19	h	6.2	10.3	10.4
D15FS1Bor	SLS	1181	120	15	f	6.4	10.4	10.8
D16FS1Bor	SLS	1180	120	16	f	6.1	10	10.4
D19FS1Bor	SLS	1695	120	19	f	6.2	10.3	10.4

Fwid	Twid	Hwid	Porosity	CorticalThi	CanalThick	SDthicknes	MaxThickn	LongIn
0.289512	0.328464	0.13932	0.315417	186.4768	25.9328	12.7968	79.4224	0.17954
0.289512	0.328464	0.13932	0.362649	158.8608	34.336	12.7296	68.7072	0.152255
0.289512	0.328464	0.13932	0.222926	373.536	30.6	13.144	67.8816	0.430194
0.192	0.1944	0.1216	0.230936	122.24	27.608	11.064	65.6592	0.111251
0.192	0.1944	0.1216	0.120972	67.4176	18.9968	6.0048	31.6784	0.27068
0.192	0.1944	0.1216	0.329008	328.5504	27.3744	13.2064	68.3328	0.493126
0.192	0.1944	0.1216	0.305252	336.9664	21.808	7.2848	46.592	0.545656
0.192	0.1944	0.1216	0.383442	342.1376	31.2416	14.248	86.9312	0.285249
0.192	0.1944	0.1216	0.154941	103.7184	22.2928	10.4544	48.8464	0.386642
0.1976	0.2152	0.1176	0.354922	417.5808	32.8208	11.8368	73.6	0.17509
0.338616	0.384984	0.151776	0.470907	264.5696	48.5104	19.8032	91.7456	0.210418
0.1976	0.2152	0.1176	0.394488	439.552	34.3264	12.7952	67.9584	0.427046
0.338616	0.384984	0.151776	0.398573	445.2928	35.7168	14.7312	72.76	0.318999
0.338616	0.384984	0.151776	0.401494	427.0272	35.2608	14.2848	82.1472	0.115811
0.1976	0.2152	0.1176	0.193351	104.6912	19.272	6.2304	35.0544	0.065334
0.2416	0.3	0.1416	0.440936	496.48	35.9264	14.0992	73.8784	0.322328
0.2416	0.3	0.1416	0.342142	368.1984	26.3552	10.1248	57.3328	0.149392
0.2416	0.3	0.1416	0.413495	200.9792	37.7776	14.3104	69.0784	0.185537
0.312	0.236	0.1544	0.402113	469.2032	32.6784	12.5232	74.9792	0.131604
0.312	0.236	0.1544	0.360208	141.088	31.552	13.896	63.84	0.133225
0.312	0.236	0.1544	0.33703	511.0464	35.3888	13.1744	78.384	0.493126
0.330336	0.490752	0.215496	0.364114	292.896	31.6208	11.048	68.184	0.27329
0.330336	0.490752	0.215496	0.383769	880.2048	36.328	14.8352	76.1312	0.140159
0.330336	0.490752	0.215496	0.266346	589.1392	34.6672	18.04	107.5696	0.445037
0.4	0.4	0.3	0.333855	243.9232	46.1072	29.5712	115.9088	0.335159
0.4	0.4	0.3	0.373339	839.4368	42.2672	15.0848	81.8352	0.476915
0.4	0.4	0.3	0.26288	587.7184	31.088	14.0816	72.2656	0.223535
0.4	0.3	0.2	0.448151	338.7776	34.984	12.2896	77.3984	0.179739
0.4	0.3	0.2	0.380942	869.4464	32.5264	13.7776	100.6352	0.303544
0.4	0.3	0.2	0.269659	628.672	24.4752	9.5344	74.7728	0.160947
0.4	0.4	0.2	0.327937	323.5776	29.32	11.2384	74.704	0.32095
0.4	0.4	0.2	0.351417	805.7856	40.8976	15.2256	111.6336	0.342908
0.4	0.4	0.2	0.225679	675.072	25.4384	9.7312	65.9696	0.1459
0.3	0.4	0.3	0.312676	725.9968	39.56	27.9168	107.9504	0.627462
0.3	0.4	0.3	0.329429	251.2832	30.5328	12.1584	60.7152	0.265938
0.5	0.4	0.3	0.354353	403.3216	32.7696	17.0128	100.8896	0.24777
0.5	0.4	0.3	0.350048	1035.744	44.3696	19.2304	109.4096	0.403148
0.3	0.4	0.3	0.230171	561.1584	27.3536	13.3184	75.8608	0.138525
0.5	0.4	0.3	0.343908	1011.462	37.6816	15.184	86.9312	0.159553
0.4	0.4	0.3	0.349077	208.1024	26.4512	10.6512	65.8928	0.177743
0.4	0.4	0.3	0.324138	889.4912	30.952	10.5888	63.84	0.413321
0.4	0.4	0.3	0.326495	787.6288	31.5504	11.8784	98.5792	0.171153
0.5	0.4	0.3	0.376322	405.0304	35.4448	13.7072	84.9664	0.155724
0.5	0.4	0.3	0.344801	1025.536	42.136	16.9904	86.1024	0.402995
0.5	0.4	0.3	0.254005	709.2224	28.216	12.1824	76.6	0.122619
0.6	0.6	0.6	0.101099	593.7856	24.1904	15.6704	86.4592	0.274505
0.6	0.6	0.6	0.160151	705.8688	26.6032	13.408	68.3328	0.08997
0.6	0.6	0.6	0.434347	795.8144	18.696	9.9728	65.6592	0.292258
0.7	0.6	0.85	0.04367	681.28	14.064	4.1056	27.3408	0.489202

0.7	0.6	0.85	0.031121	490.048	10.1344	3.4592	27.7136	0.361861
0.7	0.7	0.9	0.014102	755.3984	7.4176	2.7296	25.6	0.168839
0.6	0.7	0.9	0.011269	683.6032	8.9408	3.6576	27.528	0.386107
0.6	0.7	0.9	0.018228	766.6688	15.0528	10.16	49.6768	0.377336
0.8	0.7	0.9	0.029602	748.1408	13.1968	10.8064	68.0336	0.176765
0.7	0.7	0.9	0.017514	592.5632	13.4416	8.4944	46.7024	0.25068
0.6	0.7	0.9	0.030531	784.3456	25.6592	21.9312	88.2752	0.188192
0.8	0.7	0.9	0.03442	527.584	24.0352	18.3648	76.3312	0.277278

CircIn	Radin	OblIn	SecondMoment
0.25228	0.200795	0.367386	1.462156
0.26668	0.085734	0.495332	0.119266
0.227784	0.082411	0.259611	3.67839
0.179288	0.351099	0.358362	0.280202
0.224186	0.151709	0.353425	0.040254
0.216197	0.073569	0.217108	0.566428
0.152871	0.078574	0.222898	0.573334
0.220559	0.162857	0.331335	0.552614
0.184852	0.117612	0.310894	0.056535
0.180772	0.229453	0.414685	0.665221
0.170924	0.231261	0.387398	0.213594
0.079342	0.064424	0.429188	0.923916
0.224336	0.133193	0.323471	7.018596
0.199754	0.249365	0.435069	4.435678
0.149424	0.276363	0.508879	0.051032
0.188573	0.160191	0.328908	3.179563
0.152905	0.232493	0.46521	1.281809
0.16851	0.236338	0.409615	0.14544
0.150599	0.155755	0.562042	3.53955
0.253378	0.030601	0.582795	0.15453
0.216197	0.073569	0.217108	1.365432
0.315286	0.090683	0.320741	0.760977
0.187463	0.244483	0.427896	5.566908
0.242977	0.078528	0.233458	18.97796
0.243903	0.115402	0.305536	2.021043
0.135747	0.087987	0.299351	11.14153
0.321638	0.10049	0.354337	9.44191
0.317606	0.149848	0.352807	0.635264
0.015166	0.025792	0.655498	3.851919
0.247253	0.143332	0.448468	9.788863
0.333177	0.06652	0.279353	0.620975
0.098742	0.055891	0.502459	10.96895
0.293859	0.14152	0.418722	10.14613
0.157798	0.045606	0.169133	10.49732
0.41407	0.081178	0.238814	2.066464
0.409945	0.070757	0.271529	2.840003
0.060125	0.053945	0.482782	11.88739
0.269662	0.171104	0.420709	3.365896
0.230326	0.175517	0.434604	26.82369
0.404023	0.124235	0.293999	1.788305
0.013912	0.066339	0.506427	11.37189
0.295493	0.137824	0.39553	10.86956
0.30776	0.128637	0.407879	2.847067
0.055964	0.035283	0.505759	11.85818
0.349504	0.089821	0.438055	22.6025
0.182951	0.173629	0.368915	37.28869
0.169582	0.269561	0.470887	41.86206
0.400443	0.056655	0.250644	45.07841
0.218938	0.046071	0.245789	40.91426

0.230473	0.13654	0.271127	53.39319
0.434127	0.105389	0.291645	167.6392
0.306506	0.088341	0.219046	155.4512
0.239123	0.106432	0.27711	74.01999
0.212598	0.137368	0.47327	166.4385
0.276528	0.156256	0.316536	61.73709
0.393103	0.179866	0.238839	44.68955
0.381145	0.05558	0.285997	86.87487

Scan	Mass	Age	Age (days)	Animal	Bone	Flen	Tlen	Hlen
98498Bone	67.5	2	14	a	t	4.4	3.4	3.2
984990014	67.5	2	14	a	h	4.4	3.4	3.2
985020008	67.5	2	14	a	f	4.4	3.4	3.2
985070028	67	2	14	b	f	4.4	3.4	3.2
98508Bone	67	2	14	b	t	4.4	3.4	3.2
985090008	67	2	14	b	h	4.4	3.4	3.2
98542Bone	67.6	2	14	c	h	4.3	3.3	3.2
98559Bone	67.6	2	14	c	f	4.3	3.3	3.2
98565Bone	67.6	2	14	c	t	4.3	3.3	3.2
98501Bone	90	3	21	a	f	5.4	4.1	4
985050019	90	3	21	a	h	5.4	4.1	4
985060045	90	3	21	a	t	5.4	4.1	4
984770012	250	5	35	a	t	7	5.6	5.3
984840017	250	5	35	a	f	7	5.6	5.3
984850006	250	5	35	a	h	7	5.6	5.3
985100002	300	5	35	b	h	7.7	5.8	5.4
985180011	300	5	35	b	f	7.7	5.8	5.4
985430009	269	5	35	c	t	7.4	5.3	5.4
985440011	269	5	35	c	f	7.4	5.3	5.4
985460017	269	5	35	c	h	7.4	5.3	5.4
985500005	269	5	35	b	t	7.7	5.8	5.4
984820015	204.8	6	42	a	f	7.4	5.4	5.3
984830015	204.8	6	42	a	t	7.4	5.4	5.3
98488Bone	204.8	6	42	a	h	7.4	5.4	5.3
985190001	292.6	6	42	b	t	7.3	5.5	5.4
985470011	306.7	6	42	c	t	7.4	5.8	5.5
985480028	306.7	6	42	c	h	7.4	5.8	5.5
985490028	306.7	6	42	c	f	7.3	5.5	5.4
985670013	292.6	6	42	b	f	7.4	5.8	5.5

Fwid	Twid	Hwid	Porosity	CorticalThi	CanalThick	SDthicknes	MaxThickn	LongIn
0.27	0.25	0.3	0.197549	422.5344	19.8432	6.5904	45.2544	0.298049
0.27	0.25	0.3	0.194946	321.472	18.9104	7.056	51.2992	0.331106
0.27	0.25	0.3	0.12747	249.3504	15.5232	6.1152	38.6656	0.158198
0.25	0.2	0.3	0.170598	277.8752	6.4	0	6.4	0.224202
0.25	0.2	0.3	0.236203	345.0944	22.9664	9.232	56.0688	0.455752
0.25	0.2	0.3	0.243887	318.0544	24.4432	8.3424	51.4	0.183145
0.2	0.2	0.25	0.254502	360.736	22.2016	6.6096	45.8176	0.108745
0.2	0.2	0.25	0.134425	335.36	15.5072	5.5776	34.4656	0.420093
0.2	0.2	0.25	0.188068	421.5488	18.728	6.6352	48.9504	0.578058
0.3	0.3	0.4	0.343384	757.9712	37.8944	11.4608	49.8832	0.118906
0.3	0.3	0.4	0.271151	1102.464	30.1744	11.4656	76.0624	0.040145
0.3	0.3	0.4	0.320059	780.7104	37.2288	14.5184	79.0336	0.158022
0.4	0.45	0.5	0.188375	681.536	29.6448	15.5936	75.5904	0.319585
0.4	0.45	0.5	0.130759	461.44	22.984	12.1088	61.5536	0.285123
0.4	0.45	0.5	0.099368	411.072	22.1312	14.3504	77.5296	0.371671
0.5	0.4	0.5	0.293897	906.6496	33.7152	16.344	107.1408	0.070948
0.5	0.4	0.5	0.110866	430.3296	13.0208	4.3088	35.7776	0.205086
0.4	0.4	0.5	0.14099	518.6112	24.1248	11.9408	56.7936	0.508253
0.4	0.4	0.5	0.251989	776.5632				0.122144
0.4	0.4	0.5	0.206254	581.9072	31.8064	14.7936	71.3392	0.083818
0.5	0.4	0.5	0.179	754.4192	27.472	15.4912	75.928	0.205884
0.4	0.4	0.45	0.048667	263.7184	9.3264	2.4416	22.6272	0.10338
0.4	0.4	0.45	0.063155	436.8	13.624	3.9072	28.8	0.426625
0.4	0.4	0.45	0.017861	560.4992	8.52	2.1136	13.1936	0.313506
0.4	0.4	0.5	0.134235	531.7184	25.4848	13.584	64.8736	0.332635
0.4	0.4	0.4	0.122606	593.4848	25.7216	14.904	68.4832	0.254234
0.4	0.4	0.4	0.17844	403.104	26.7952	13.0304	67.504	0.302669
0.4	0.4	0.5	0.214203	477.6704	29.8176	18.1056	100.3808	0.270137
0.4	0.4	0.4	0.120452	367.04	22.376	10.6336	52.1904	0.210658

CircIn	Radin	Oblin	SecondMoment
0.235989	0.142206	0.323755	1.549271
0.326295	0.058067	0.284532	2.46095
0.248215	0.165571	0.428015	1.456085
0.19083	0.18378	0.401188	1.216056
0.198142	0.07924	0.266865	0.640919
0.261092	0.148938	0.406825	2.443298
0.17503	0.280081	0.436144	1.426328
0.169625	0.076907	0.333375	0.632136
0.182352	0.04967	0.189921	0.697464
0.243981	0.186828	0.450285	3.737971
0.25697	0.181964	0.520921	12.05669
0.159284	0.286799	0.395895	3.765843
0.255444	0.11225	0.31272	15.37567
0.250809	0.11536	0.348708	8.165408
0.231207	0.11258	0.284542	15.72471
0.179735	0.284457	0.464859	25.61747
0.424887	0.063899	0.306128	16.2686
0.258147	0.035395	0.198206	8.783982
0.279778	0.177813	0.420265	10.80676
0.37622	0.130045	0.409917	20.04876
0.256667	0.155887	0.381562	10.67587
0.430632	0.087829	0.378159	5.428469
0.195331	0.092511	0.285534	7.876638
0.249604	0.147661	0.289229	13.72973
0.239684	0.10688	0.320801	8.916081
0.33354	0.093822	0.318404	9.492627
0.37118	0.073365	0.252786	7.459011
0.323114	0.107356	0.299392	8.348195
0.301365	0.152534	0.335442	6.981771