

Appendix 1: Data set used to develop the W_s equation for *Leuciscus cephalus* in Italy:

Italian region of provenance (REGION); code of the population (POPULATION); number of specimens (N); minimum (MIN) and maximum (MAX) total length in mm [L_T (mm)]; minimum and maximum weight in g [$W(g)$]; r^2 , estimated intercept [$\log_{10}(a)$] and estimated slope (b) of the L_T - W regression for each population.

REGION	POPULATION	N	L_T (mm)		W (g)		L_T -W equation		
			MIN	MAX	MIN	MAX	r^2	$\log_{10}(a)$	b
ABRUZZO	ABR ORTA 01	104	38.5	298.9	0.4	263.6	1.000	-5.351	3.139
	ABR ORTA 02	95	59.3	395.6	1.5	441.0	0.998	-5.018	2.922
	ABR ORTA 03	100	73.6	440.7	7.3	867.0	0.975	-5.072	3.016
	ABR ORTA 04	69	46.2	241.8	0.8	84.0	1.000	-4.864	2.848
	ABR PESC	30	71.4	342.9	2.0	316.0	0.968	-5.276	3.038
	ABR TAVO	39	44.0	406.6	0.9	738.0	0.998	-4.997	3.010
BASILICATA	BAS BASE	70	40.0	215.0	1.0	112.0	0.966	-4.905	2.948
	BAS BRAD	29	53.0	257.0	1.0	178.0	0.987	-5.378	3.167
	BAS NOCE	32	54.0	151.0	2.0	35.0	0.979	-4.646	2.832
	BAS OFAN	62	41.0	215.0	0.7	114.0	0.952	-4.602	2.821
CAMPANIA	CAM ALEN	108	22.0	351.6	1.0	374.0	0.956	-4.667	2.797
	CAM LAMB	100	38.5	245.1	1.0	122.0	0.972	-5.067	2.972
	CAM MING	87	57.1	263.7	1.0	153.0	0.996	-5.857	3.341
	CAM SELE	58	49.5	252.7	1.0	134.0	0.995	-5.656	3.247
EMILIA ROMAGNA	EMI AVET 01	43	158.2	351.6	37.0	414.0	0.988	-4.933	2.956
	EMI AVET 02	155	92.3	373.6	4.0	502.0	0.985	-5.474	3.177
	EMI AVET 03	40	161.5	302.2	44.0	255.0	0.958	-5.099	3.031
	EMI AVET 04	59	151.6	296.7	31.0	246.0	0.960	-5.408	3.162
	EMI AVET 05	59	118.7	291.2	11.0	277.0	0.974	-5.377	3.155
	EMI AVET 06	87	58.2	331.9	2.0	359.0	0.977	-5.000	2.993
	EMI NURE	74	74.7	354.9	4.0	513.0	0.992	-5.387	3.164
	EMI TREB 01	56	115.4	368.1	12.0	560.0	0.991	-5.480	3.219
	EMI TREB 02	98	87.9	346.2	8.0	395.0	0.981	-4.992	3.001

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
EMILIA ROMAGNA	EMI TREB 03	43	128.6	370.3	27.0	554.0	0.978	-5.196	3.091
FRIULI-VEN GIULIA	FVG ALBE	75	112.0	300.0	11.0	331.0	0.970	-5.155	3.068
	FVG CORN	78	30.0	350.0	0.3	498.0	0.994	-5.070	3.036
	FVG CORP	34	138.0	380.0	20.0	703.0	0.995	-5.867	3.352
	FVG GRIV	84	78.0	325.0	6.0	337.0	0.964	-4.563	2.811
	FVG GROI	70	35.0	345.0	1.0	363.0	0.980	-4.447	2.724
	FVG ISON 01	63	106.0	340.0	11.0	382.0	0.978	-5.314	3.129
	FVG ISON 02	41	25.0	327.0	0.3	387.0	0.991	-5.096	3.043
	FVG JUDR 01	92	25.0	345.0	0.3	475.0	0.993	-5.233	3.108
	FVG JUDR 02	99	30.0	350.0	0.6	498.0	0.991	-5.090	3.044
	FVG NATI 01	242	30.0	450.0	0.3	1121.0	0.993	-5.165	3.072
	FVG NATI 02	82	30.0	373.0	0.4	596.0	0.989	-4.910	2.963
	FVG NATI 03	48	68.0	297.0	2.0	270.0	0.990	-5.410	3.175
	FVG PIUM	28	45.0	283.0	1.0	225.0	0.992	-4.861	2.936
	FVG VERS 01	46	50.0	365.0	1.0	528.0	0.986	-5.442	3.177
	FVG VERS 02	134	30.0	175.0	0.5	53.0	0.948	-4.636	2.756
LAZIO	LAZ MART	327	54.0	406.0	2.0	755.0	0.988	-5.173	3.069
	LAZ MIGN 01	55	71.0	365.0	4.0	580.0	0.991	-5.113	3.025
	LAZ MIGN 02	30	75.0	305.0	4.0	244.0	0.992	-5.069	3.013
	LAZ PAGL 01	54	85.0	425.0	6.0	870.0	0.981	-5.282	3.097
	LAZ PAGL 02	113	67.0	470.0	2.0	900.0	0.990	-5.198	3.075
	LAZ TEVE 01	50	100.0	470.0	9.2	1243.9	0.994	-5.510	3.219
	LAZ TEVE 02	93	95.0	485.0	7.4	1400.0	0.987	-5.522	3.237
	LAZ TEVE 03	35	153.0	475.0	30.5	1320.0	0.979	-5.741	3.322

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
LAZIO	LAZ TREI 01	40	70.0	340.0	2.0	383.0	0.993	-5.368	3.162
	LAZ TREI 02	83	95.0	378.0	9.0	669.0	0.987	-5.339	3.158
	LAZ TREI 03	102	60.0	363.0	1.0	558.0	0.987	-5.884	3.385
LIGURIA	LIG CAOR	66	53.0	286.0	1.0	246.0	0.934	-5.429	3.202
	LIG CASL	32	52.0	157.0	1.0	34.0	0.903	-4.927	2.954
LOMBARDIA	LOM FVM0 01	242	30.0	360.0	0.2	570.0	0.954	-4.982	2.972
	LOM FVM0 02	104	50.0	260.0	1.0	156.0	0.991	-5.162	3.033
	LOM FVM0 03	404	30.0	295.0	0.2	275.0	0.996	-5.367	3.146
	LOM FVM0 04	169	30.0	290.0	0.2	282.0	0.997	-5.453	3.197
	LOM FVVA 01	59	30.0	380.0	0.2	607.0	0.998	-5.466	3.200
	LOM FVVA 02	144	30.0	265.0	0.2	172.0	0.965	-5.265	3.082
	LOM FVVA 03	206	20.0	335.0	0.2	368.0	0.945	-5.184	3.076
	LOM FVVA 04	312	30.0	225.0	0.2	110.0	0.996	-5.515	3.234
	LOM RIPA 01	126	45.0	270.0	1.0	225.0	0.952	-4.851	2.911
	LOM RIPA 02	36	125.0	330.0	13.0	482.0	0.927	-5.560	3.221
	LOM RIPM 01	34	50.0	325.0	1.0	414.0	0.958	-5.563	3.250
	LOM RIPM 02	139	30.0	340.0	0.2	475.0	0.996	-5.341	3.129
	LOM RIPM 03	144	35.0	340.0	0.5	452.0	0.938	-4.714	2.840
	LOM RIPM 04	250	30.0	310.0	0.2	313.0	0.978	-5.642	3.287
	LOM RIPM 05	125	30.0	320.0	0.2	434.0	0.986	-5.196	3.066
	LOM RIPM 06	128	30.0	175.0	0.2	61.0	0.987	-5.651	3.305
	LOM RIPM 07	64	40.0	230.0	0.5	113.0	0.980	-5.577	3.264
	LOM RIPM 08	507	35.0	300.0	0.3	248.1	1.000	-5.281	3.099
	LOM RIPM 09	80	40.0	265.0	0.5	224.0	0.999	-5.301	3.109

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
LOMBARDIA	LOM RIPM 10	97	40.0	260.0	0.5	159.2	1.000	-5.289	3.103
	LOM RIPV 01	42	60.0	300.0	1.0	248.1	0.962	-5.660	3.273
	LOM RIPV 02	81	30.0	215.0	0.2	91.0	0.965	-5.340	3.122
	LOM RIPV 03	79	30.0	350.0	0.2	422.0	0.992	-5.355	3.126
	LOM RIPV 04	38	45.0	220.0	0.7	96.0	0.943	-5.225	3.076
	LOM RIPV 05	55	20.0	270.0	0.1	190.0	0.994	-5.226	3.063
	LOM RIPV 06	162	20.0	355.0	0.1	483.0	0.931	-4.746	2.824
	LOM RIPV 07	126	50.0	305.0	1.1	345.0	0.971	-5.144	3.040
	LOM RIPV 08	62	50.0	445.0	1.0	1102.0	0.986	-5.438	3.180
	LOM RIPV 09	106	38.0	194.0	0.4	64.3	1.000	-5.275	3.095
LOM RIPV 10	49	30.0	355.0	0.2	549.0	0.979	-4.845	2.941	
MARCHE	MAR BURA	125	42.0	275.0	1.5	225.0	0.984	-4.529	2.803
MOLISE	MOL BIFE	104	50.0	360.0	3.0	558.0	0.962	-4.657	2.857
	MOL TRIG	384	45.0	370.0	1.0	534.0	0.974	-5.085	3.038
	MOL VOLT	104	50.0	360.0	3.0	558.0	0.962	-4.657	2.857
PIEMONTE	PIE FVMO	43	60.0	260.0	2.0	175.0	0.976	-5.076	3.010
	PIE FVVA	275	50.0	380.0	1.0	516.1	1.000	-5.281	3.099
TOSCANA	TOS ALBE	142	44.0	351.6	1.0	331.0	0.979	-5.144	3.001
	TOS BRU	74	87.9	362.6	5.0	445.0	0.979	-5.286	3.083
	TOS FIOR 01	52	68.1	297.8	2.0	203.0	0.984	-5.696	3.245
	TOS FIOR 02	114	49.5	336.3	1.0	402.0	0.994	-5.920	3.371
	TOS LANZ	73	65.9	379.1	2.0	454.0	0.972	-5.564	3.219
	TOS LENT 01	207	27.5	324.2	1.0	296.0	0.974	-5.626	3.249
	TOS LENT 02	79	57.1	233.0	1.0	104.0	0.994	-5.828	3.330

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
TOSCANA	TOS MELA	51	63.7	308.8	2.0	235.0	0.985	-5.103	2.982
	TOS OMBR 01	42	36.3	313.2	1.0	330.0	0.969	-5.220	3.079
	TOS OMBR 02	89	44.0	362.6	1.0	395.0	0.986	-4.615	2.783
TRENTINO	TRE ADIG	81	90.0	448.0	6.0	1044.0	0.993	-5.155	3.069
	TRE AVIS	69	71.0	385.0	4.0	682.0	0.988	-5.136	3.064
	TRE NOCE 01	41	69.0	402.0	6.0	770.0	0.985	-4.919	2.997
	TRE NOCE 02	39	26.0	361.0	0.5	537.0	0.988	-4.132	2.673
	TRE NOCE 03	95	172.0	448.0	54.0	1065.0	0.959	-5.192	3.127
	TRE NOCE 04	35	248.0	437.0	174.0	988.0	0.973	-5.585	3.256
	TRE NOCE 05	58	163.0	451.0	51.0	1010.0	0.988	-4.593	2.855
	TRE PIAZ	32	212.0	364.0	101.0	625.0	0.969	-5.610	3.267
	TRE SARC	34	51.0	450.0	2.0	1037.0	0.993	-5.197	3.082
	TRE SCOL	59	236.0	453.0	125.0	930.0	0.972	-4.438	2.759
UMBRIA	UMB ABBA 01	70	75.0	340.0	4.0	360.0	0.994	-5.030	3.024
	UMB ABBA 02	49	46.0	321.0	0.8	346.0	0.992	-5.072	3.026
	UMB AJAA 01	110	150.0	420.0	39.0	969.0	0.986	-5.341	3.165
	UMB AJAA 02	154	50.0	450.0	1.5	1393.0	0.996	-5.859	3.378
	UMB AJAA 03	58	50.0	400.0	3.0	862.0	0.989	-5.001	3.021
	UMB AJAA 04	120	66.0	450.0	2.0	965.0	0.989	-5.139	3.050
	UMB ALNO 01	47	70.0	400.0	3.0	782.0	0.996	-5.274	3.135
	UMB ALNO 02	55	55.0	420.0	1.0	865.0	0.995	-5.412	3.182
	UMB ALNO 03	61	44.0	271.0	1.0	203.0	0.987	-4.965	2.971
	UMB ALNO 04	48	48.0	360.0	1.0	494.0	0.989	-5.226	3.087
	UMB ANTI 01	73	40.0	245.0	0.5	132.0	0.965	-5.249	3.112

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB ARGE 01	95	60.0	280.0	1.9	260.0	0.992	-5.293	3.139
	UMB ARGE 02	72	50.0	320.0	1.3	395.0	0.993	-5.246	3.098
	UMB ASSI 02	49	52.0	334.0	1.0	359.0	0.993	-5.429	3.182
	UMB ASSI 03	59	75.0	440.0	4.0	986.0	0.992	-5.057	3.034
	UMB ASSI 04	69	50.0	288.0	1.3	198.0	0.987	-5.116	3.044
	UMB ASSI 05	85	56.0	436.0	1.0	998.0	0.979	-5.633	3.280
	UMB ASSI 06	50	46.0	421.0	1.0	900.0	0.975	-4.845	2.938
	UMB ASSI 07	96	50.0	370.0	1.0	541.0	0.991	-5.077	3.039
	UMB ASSI 08	63	42.0	440.0	0.5	1061.0	0.991	-5.343	3.163
	UMB ASSI 09	169	47.0	337.0	1.0	394.0	0.975	-5.373	3.149
	UMB ASTR	115	60.0	220.0	1.0	130.0	0.955	-5.396	3.195
	UMB BTEV	62	45.0	320.0	1.0	357.0	0.992	-4.963	2.985
	UMB CALD	94	86.0	360.0	6.0	548.0	0.993	-5.084	3.053
	UMB CALV	80	40.0	200.0	1.0	89.0	0.888	-3.930	2.499
	UMB CARL 01	67	45.0	295.0	1.0	312.0	0.989	-5.235	3.131
	UMB CARL 02	55	103.0	312.0	9.0	275.0	0.991	-5.211	3.074
	UMB CARL 03	59	55.0	178.0	2.0	55.0	0.946	-4.987	2.987
	UMB CARL 04	54	77.0	355.0	3.0	435.0	0.987	-5.560	3.225
	UMB CARP 01	98	30.0	285.0	1.0	231.0	0.930	-4.606	2.770
	UMB CARP 02	82	50.0	295.0	1.0	266.0	0.974	-5.268	3.106
	UMB CARP 03	51	58.0	350.0	2.0	485.0	0.986	-5.469	3.164
	UMB CARP 04	40	53.0	273.0	2.0	212.0	0.984	-4.905	2.966
	UMB CARP 05	58	55.0	378.0	1.0	537.0	0.989	-5.402	3.173
	UMB CENE	61	60.0	208.0	2.0	90.0	0.950	-4.961	2.980

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB CERF 01	148	35.0	290.0	1.0	263.0	0.986	-4.760	2.890
	UMB CERF 02	111	40.0	128.0	0.3	18.0	0.915	-5.205	3.061
	UMB CERT 01	47	50.0	313.0	1.0	327.0	0.984	-5.507	3.235
	UMB CERT 02	49	65.0	300.0	2.0	301.0	0.988	-5.474	3.210
	UMB CESA 01	30	64.0	283.0	2.0	254.0	0.990	-5.440	3.184
	UMB CHIA 01	103	60.0	173.0	2.0	62.0	0.931	-5.334	3.158
	UMB CHIA 02	181	68.0	340.0	2.0	427.0	0.975	-5.541	3.265
	UMB CHIA 03	63	50.0	390.0	1.3	687.0	0.993	-5.158	3.061
	UMB CHIA 04	80	67.0	401.0	3.0	793.0	0.988	-5.290	3.142
	UMB CHIA 05	78	52.0	385.0	1.0	705.0	0.995	-5.570	3.261
	UMB CHIA 06	103	65.0	358.0	2.0	577.0	0.993	-5.214	3.105
	UMB CHIA 07	78	40.0	360.0	0.7	459.0	0.983	-5.151	3.060
	UMB CHIA 08	94	60.0	370.0	2.0	590.0	0.994	-5.315	3.167
	UMB CHIA 09	64	76.0	390.0	2.0	733.0	0.994	-5.662	3.286
	UMB CHIA 10	68	52.0	372.0	2.0	586.0	0.993	-5.241	3.104
	UMB CHIA 11	82	50.0	370.0	0.6	689.0	0.989	-5.822	3.349
	UMB CHIA 12	92	38.0	313.0	0.3	273.0	0.982	-5.244	3.086
	UMB CHIA 13	68	30.0	365.0	0.6	548.0	0.990	-4.911	2.961
	UMB CHSC 01	69	72.0	412.0	3.0	844.0	0.994	-5.312	3.144
	UMB CHSC 02	91	80.0	382.0	3.0	739.0	0.988	-5.708	3.302
	UMB CHSC 03	98	60.0	395.0	2.0	767.0	0.986	-5.696	3.296
	UMB CHSC 04	98	74.0	390.0	4.0	613.0	0.993	-5.296	3.131
	UMB CHSC 05	54	60.0	352.0	3.0	603.0	0.968	-4.702	2.871
	UMB CHSC 06	70	42.0	348.0	1.0	436.0	0.991	-4.723	2.873

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB CHSC 07	121	47.0	370.0	1.0	577.0	0.991	-5.215	3.121
	UMB CHSC 08	43	88.0	319.0	7.0	382.0	0.995	-5.263	3.142
	UMB CHSC 09	94	60.0	313.0	3.0	326.0	0.989	-5.196	3.091
	UMB CHSC 10	89	35.0	309.0	0.5	311.0	0.983	-4.675	2.849
	UMB CHSC 11	53	62.0	332.0	3.0	455.0	0.982	-5.059	3.044
	UMB CHSC 12	100	73.0	365.0	3.0	606.0	0.986	-5.312	3.122
	UMB CHSC 13	55	40.0	376.0	0.3	642.0	0.992	-5.325	3.134
	UMB CHSC 14	44	108.0	410.0	13.0	790.0	0.992	-5.067	3.045
	UMB CHSC 15	74	78.0	351.0	6.0	449.0	0.986	-5.103	3.046
	UMB CHSC 16	111	40.0	251.0	1.0	158.0	0.972	-5.499	3.201
	UMB CHSC 17	55	55.0	314.0	1.0	343.0	0.948	-4.758	2.880
	UMB CHSC 18	231	60.0	387.0	2.0	678.0	0.994	-5.155	3.067
	UMB CHSC 19	162	47.0	310.0	1.0	310.0	0.984	-4.967	2.961
	UMB CHSC 20	57	55.0	342.0	1.0	490.0	0.995	-5.167	3.070
	UMB CHSC 21	52	135.0	373.0	23.0	545.0	0.985	-5.260	3.104
	UMB CHSC 22	163	50.0	348.0	1.0	451.0	0.981	-5.095	3.024
	UMB CHSC 23	138	30.0	333.0	0.4	443.0	0.973	-5.088	3.020
	UMB CHSC 24	118	69.0	300.0	2.0	243.0	0.981	-5.409	3.163
	UMB CHSC 25	63	40.0	330.0	0.4	330.0	0.987	-5.107	3.024
	UMB FERS 01	60	50.0	270.0	2.0	202.0	0.971	-4.994	2.994
	UMB FERS 02	99	45.0	208.0	1.0	105.0	0.961	-5.246	3.103
	UMB FIOR	22	120.0	450.0	16.0	1440.0	0.988	-5.598	3.265
	UMB GRAA 01	60	70.0	250.0	3.0	172.0	0.988	-5.184	3.092
	UMB GRAA 02	104	35.0	330.0	0.3	393.0	0.985	-5.072	3.026

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB IERN	98	50.0	410.0	1.0	936.0	0.992	-5.575	3.244
	UMB LANN	120	40.0	228.0	0.7	115.0	0.966	-5.005	2.984
	UMB MOIA	144	35.0	304.0	0.5	312.0	0.980	-4.969	2.955
	UMB NAIA 01	74	45.0	288.0	0.8	266.0	0.992	-5.620	3.293
	UMB NAIA 02	51	53.0	278.0	1.0	237.0	0.977	-5.053	3.034
	UMB NAIA 03	87	40.0	310.0	0.7	318.0	0.996	-5.091	3.030
	UMB NAIA 04	59	65.0	270.0	2.0	218.0	0.988	-5.247	3.143
	UMB NAIA 05	106	40.0	250.0	0.5	180.0	0.993	-5.503	3.215
	UMB NERA 01	65	45.0	470.0	1.0	1855.0	0.995	-5.397	3.212
	UMB NERA 02	87	98.0	450.0	10.0	1243.0	0.995	-5.462	3.235
	UMB NEST 01	139	40.0	315.0	1.0	345.0	0.975	-4.714	2.872
	UMB NEST 02	61	40.0	320.0	1.0	395.0	0.992	-5.258	3.145
	UMB NEST 03	107	86.0	330.0	6.0	339.0	0.987	-5.192	3.078
	UMB NEST 04	52	72.0	280.0	3.0	252.0	0.989	-5.231	3.121
	UMB NEST 05	105	55.0	325.0	2.0	347.0	0.994	-5.141	3.062
	UMB NEST 06	121	81.0	321.0	5.0	470.0	0.992	-5.312	3.163
	UMB NEST 07	283	45.0	200.0	0.8	90.0	0.941	-5.332	3.105
	UMB NEST 08	86	50.0	192.0	1.0	58.0	0.929	-4.852	2.905
	UMB NICC	159	30.0	395.0	1.0	670.0	0.919	-4.268	2.637
	UMB PAGL 01	36	60.0	408.0	3.0	809.0	0.996	-4.984	3.010
	UMB PAGL 02	69	65.0	405.0	3.0	667.0	0.995	-5.299	3.119
	UMB PAGL 03	111	50.0	392.0	2.0	685.0	0.991	-4.973	2.982
	UMB PAGL 04	31	85.0	433.0	7.0	879.0	0.991	-5.076	3.031
	UMB PAGL 05	71	52.0	367.0	2.0	599.0	0.992	-5.150	3.053

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB PAGL 07	87	45.0	388.0	2.0	558.0	0.988	-5.131	3.045
	UMB PAGL 08	83	35.0	350.0	0.5	444.0	0.993	-5.011	3.001
	UMB PAGL 09	185	45.0	390.0	0.5	704.0	0.992	-5.441	3.179
	UMB PAGL 10	64	65.0	350.0	2.0	462.0	0.994	-5.305	3.139
	UMB PAGL 11	63	58.0	320.0	2.0	320.0	0.992	-4.860	2.946
	UMB PAGL 12	105	45.0	460.0	1.0	1037.0	0.990	-5.242	3.105
	UMB PAGL 13	58	65.0	270.0	2.0	204.0	0.978	-5.045	3.030
	UMB PAGL 14	81	45.0	410.0	0.6	751.0	0.989	-5.117	3.050
	UMB PAGL 15	110	35.0	318.0	0.5	351.0	0.993	-5.281	3.116
	UMB PAGL 16	127	30.0	370.0	0.4	563.0	0.982	-5.029	3.011
	UMB PAGL 17	70	50.0	340.0	1.0	462.0	0.995	-5.417	3.178
	UMB PAGL 18	61	45.0	290.0	0.6	235.0	0.988	-5.196	3.079
	UMB PAGL 19	84	40.0	414.0	0.7	819.0	0.991	-5.158	3.062
	UMB PUGL 01	37	40.0	310.0	1.0	323.0	0.987	-4.714	2.865
	UMB PUGL 02	60	65.0	280.0	2.0	261.0	0.992	-5.142	3.077
	UMB PUGL 03	60	45.0	162.0	0.7	48.0	0.925	-5.081	3.017
	UMB PUGL 04	82	55.0	287.0	2.0	260.0	0.979	-5.037	3.025
	UMB PUGL 05	49	45.0	338.0	1.0	462.0	0.993	-5.355	3.153
	UMB RCHI	55	48.0	310.0	0.9	376.0	0.996	-5.447	3.216
	UMB RECE	250	40.0	440.0	1.0	1392.0	0.981	-5.460	3.218
	UMB RESI 01	35	133.0	266.0	26.0	197.0	0.966	-4.752	2.902
	UMB RESI 02	198	45.0	287.0	0.5	257.0	0.971	-5.362	3.151
	UMB ROME 01	176	50.0	240.0	1.0	159.0	0.981	-5.272	3.146
	UMB ROME 02	167	45.0	275.0	0.7	245.0	0.979	-5.604	3.286

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB PAGL 07	87	45.0	388.0	2.0	558.0	0.988	-5.131	3.045
	UMB PAGL 08	83	35.0	350.0	0.5	444.0	0.993	-5.011	3.001
	UMB PAGL 09	185	45.0	390.0	0.5	704.0	0.992	-5.441	3.179
	UMB PAGL 10	64	65.0	350.0	2.0	462.0	0.994	-5.305	3.139
	UMB PAGL 11	63	58.0	320.0	2.0	320.0	0.992	-4.860	2.946
	UMB PAGL 12	105	45.0	460.0	1.0	1037.0	0.990	-5.242	3.105
	UMB PAGL 13	58	65.0	270.0	2.0	204.0	0.978	-5.045	3.030
	UMB PAGL 14	81	45.0	410.0	0.6	751.0	0.989	-5.117	3.050
	UMB PAGL 15	110	35.0	318.0	0.5	351.0	0.993	-5.281	3.116
	UMB PAGL 16	127	30.0	370.0	0.4	563.0	0.982	-5.029	3.011
	UMB PAGL 17	70	50.0	340.0	1.0	462.0	0.995	-5.417	3.178
	UMB PAGL 18	61	45.0	290.0	0.6	235.0	0.988	-5.196	3.079
	UMB PAGL 19	84	40.0	414.0	0.7	819.0	0.991	-5.158	3.062
	UMB PUGL 01	37	40.0	310.0	1.0	323.0	0.987	-4.714	2.865
	UMB PUGL 02	60	65.0	280.0	2.0	261.0	0.992	-5.142	3.077
	UMB PUGL 03	60	45.0	162.0	0.7	48.0	0.925	-5.081	3.017
	UMB PUGL 04	82	55.0	287.0	2.0	260.0	0.979	-5.037	3.025
	UMB PUGL 05	49	45.0	338.0	1.0	462.0	0.993	-5.355	3.153
	UMB RCHI	55	48.0	310.0	0.9	376.0	0.996	-5.447	3.216
	UMB RECE	250	40.0	440.0	1.0	1392.0	0.981	-5.460	3.218
	UMB RESI 01	35	133.0	266.0	26.0	197.0	0.966	-4.752	2.902
	UMB RESI 02	198	45.0	287.0	0.5	257.0	0.971	-5.362	3.151
	UMB ROME 01	176	50.0	240.0	1.0	159.0	0.981	-5.272	3.146
	UMB ROME 02	167	45.0	275.0	0.7	245.0	0.979	-5.604	3.286

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB SAON 01	84	41.0	425.0	1.0	931.0	0.982	-4.656	2.869
	UMB SAON 02	119	80.0	395.0	4.0	641.0	0.994	-5.371	3.153
	UMB SOAR 01	276	44.0	289.0	1.0	250.0	0.933	-5.411	3.164
	UMB SOAR 02	112	50.0	270.0	1.6	202.0	0.983	-4.917	2.949
	UMB SOVA 01	35	50.0	198.0	2.0	84.0	0.980	-5.060	3.042
	UMB SOVA 02	70	50.0	337.0	1.5	290.0	0.981	-4.413	2.699
	UMB TATA	61	60.0	363.0	1.0	517.0	0.989	-5.163	3.057
	UMB TEVE 01	72	62.0	316.0	3.0	425.0	0.974	-4.819	2.932
	UMB TEVE 02	35	50.0	312.0	2.0	345.0	0.995	-4.766	2.903
	UMB TEVE 03	36	104.0	348.0	10.0	511.0	0.985	-5.345	3.153
	UMB TEVE 04	47	90.0	460.0	5.0	937.0	0.978	-5.736	3.300
	UMB TEVE 05	55	76.0	215.0	3.0	91.0	0.978	-5.211	3.063
	UMB TEVE 06	60	67.0	350.0	4.0	587.0	0.973	-5.664	3.286
	UMB TEVE 07	74	63.0	339.0	2.0	414.0	0.983	-5.593	3.266
	UMB TEVE 08	162	45.0	338.0	2.0	391.0	0.960	-4.816	2.892
	UMB TEVE 09	76	55.0	414.0	2.0	790.0	0.978	-5.166	3.041
	UMB TEVE 10	75	60.0	414.0	2.0	638.0	0.994	-5.106	3.033
	UMB TEVE 11	34	133.0	442.0	27.0	850.0	0.974	-5.072	3.020
	UMB TEVE 12	74	82.0	376.0	7.0	492.0	0.990	-5.153	3.053
	UMB TEVE 13	34	55.0	340.0	1.0	495.0	0.990	-5.562	3.243
	UMB TEVE 14	52	70.0	403.0	2.0	608.0	0.991	-5.389	3.163
	UMB TEVE 15	46	111.0	437.0	10.0	978.0	0.981	-5.319	3.124
	UMB TEVE 16	31	72.0	305.0	4.0	305.0	0.987	-5.253	3.114
	UMB TEVE 17	56	62.0	310.0	3.0	315.0	0.994	-4.983	3.005

REGION	POPULATION	N	L _T (mm)		W (g)		L _T -W equation		
			MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB TEVE 18	48	50.0	370.0	3.0	598.0	0.975	-4.333	2.730
	UMB TEVE 19	43	60.0	314.0	2.0	302.0	0.979	-5.122	3.033
	UMB TEVE 20	48	50.0	370.0	3.0	598.0	0.975	-4.333	2.730
	UMB TEVE 21	39	56.0	311.0	2.0	309.0	0.996	-5.076	3.023
	UMB TEVE 22	49	46.0	409.0	2.0	715.0	0.973	-4.481	2.746
	UMB TEVE 23	99	65.0	445.0	1.0	1035.0	0.987	-5.434	3.195
	UMB TEVE 24	91	60.0	378.0	1.8	792.0	0.992	-5.657	3.295
	UMB TEVE 25	100	40.0	370.0	0.6	745.0	0.984	-5.198	3.114
	UMB TEVE 26	66	58.0	405.0	2.0	729.0	0.989	-5.305	3.134
	UMB TEVE 27	32	50.0	388.0	1.0	669.0	0.994	-5.139	3.065
	UMB TEVE 28	43	50.0	300.0	1.0	254.0	0.980	-5.173	3.051
	UMB TEVE 29	62	55.0	440.0	2.0	1003.0	0.993	-4.924	2.990
	UMB TEVE 30	67	40.0	360.0	0.5	508.0	0.999	-5.329	3.131
	UMB TEVE 31	98	60.0	198.0	1.0	72.0	0.976	-5.330	3.127
	UMB TEVE 32	53	60.0	475.0	2.0	1233.0	0.984	-5.436	3.168
	UMB TEVE 33	51	30.0	315.0	1.0	315.0	0.965	-4.927	2.945
	UMB TEVE 34	52	40.0	414.0	1.0	720.0	0.986	-5.245	3.073
	UMB TEVE 35	78	40.0	300.0	0.4	285.0	0.986	-5.372	3.147
	UMB TEVE 36	137	40.0	360.0	0.5	453.0	0.994	-5.130	3.033
	UMB TEVE 37	39	50.0	361.0	2.0	489.0	0.988	-5.140	3.055
	UMB TEVE 38	77	53.0	337.0	1.0	376.0	0.983	-5.392	3.150
	UMB TEVE 39	30	30.0	400.0	0.3	717.0	0.997	-4.913	2.977
	UMB TEVE 40	77	35.0	400.0	0.3	811.0	0.995	-5.710	3.303
	UMB TEVE 41	36	40.0	440.0	0.5	1131.0	0.993	-5.117	3.051

REGION	POPULATION	L _T (mm)			W (g)		L _T -W equation		
		N	MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
UMBRIA	UMB TEVE 42	126	35.0	350.0	0.4	483.0	0.965	-5.303	3.107
	UMB TEVE 43	54	45.0	410.0	1.0	746.0	0.983	-5.243	3.107
	UMB TEVE 44	49	110.0	350.0	12.0	478.0	0.989	-5.255	3.120
	UMB TEVE 45	49	40.0	360.0	0.7	603.0	0.989	-4.902	2.978
	UMB TEVO	138	50.0	470.0	1.0	1121.0	0.988	-5.103	3.041
	UMB TIMI 01	36	60.0	310.0	2.0	362.0	0.996	-5.198	3.093
	UMB TIMI 02	35	60.0	356.0	2.0	542.0	0.998	-5.573	3.248
	UMB TIMI 03	89	42.0	451.0	0.5	1000.0	0.989	-5.236	3.104
	UMB TIMI 04	53	50.0	404.0	0.8	626.0	0.995	-5.381	3.156
	UMB TIMI 05	100	60.0	440.0	2.0	876.0	0.989	-5.258	3.104
	UMB TOPI 01	63	128.0	372.0	18.0	618.0	0.987	-5.552	3.241
	UMB TOPI 02	272	50.0	320.0	1.0	302.0	0.985	-5.285	3.098
	UMB TOPI 03	99	99.0	360.0	9.0	360.0	0.979	-5.134	3.060
	UMB TOPI 04	96	40.0	380.0	0.4	651.0	0.994	-5.516	3.223
	UMB TOPI 05	85	60.0	304.0	2.0	317.0	0.992	-4.836	2.931
	UMB TOPI 06	55	52.0	279.0	1.0	222.0	0.988	-5.335	3.146
	UMB TOPI 07	77	55.0	328.0	1.7	501.0	0.992	-5.137	3.056
	UMB TOPI 08	119	51.0	362.0	1.0	488.0	0.992	-4.967	2.991
	UMB TOPI 09	370	30.0	320.0	0.3	264.8	0.994	-4.826	2.894
	UMB TOPI 10	67	55.0	345.0	1.0	493.0	0.994	-5.464	3.208
	UMB TOPI 11	48	55.0	381.0	1.0	630.0	0.993	-5.076	3.039
	UMB TOPI 12	64	40.0	361.0	1.0	538.0	0.993	-5.335	3.144
	UMB TOPI 13	60	43.0	408.0	1.0	743.0	0.987	-5.544	3.228
	UMB VENT	117	42.0	365.0	0.5	557.0	0.990	-5.173	3.074

REGION	POPULATION	L _T (mm)			W (g)		L _T -W equation		
		N	MIN	MAX	MIN	MAX	r ²	log ₁₀ (a)	b
VENETO	VEN ADIG 01	39	49.5	417.6	2.0	838.0	0.993	-4.858	2.959
	VEN ADIG 02	29	180.0	450.5	58.0	709.0	0.938	-5.110	3.035
	VEN ADIG 03	110	75.0	472.5	3.0	1090.0	0.974	-5.778	3.327
	VEN ASTI	68	120.9	298.9	15.0	288.0	0.983	-5.542	3.231
	VEN BALB	67	59.3	420.0	2.0	902.0	0.978	-5.538	3.226
	VEN BREN	32	62.1	337.4	3.0	410.0	0.984	-4.899	2.972
	VEN CBIA 01	45	120.9	461.5	14.0	902.0	0.976	-5.565	3.187
	VEN CBIA 02	49	65.9	428.6	3.0	710.0	0.961	-4.774	2.894
	VEN DESE	55	49.5	381.3	1.0	635.0	0.986	-5.043	3.034
	VEN LEME	47	104.4	494.5	13.0	1171.0	0.996	-4.750	2.903
	VEN LEOG	56	54.9	157.1	1.0	57.0	0.983	-5.811	3.423
	VEN NAVI	86	93.4	384.6	6.0	567.0	0.988	-4.893	2.964
	VEN NOVI	48	60.4	417.6	2.0	719.0	0.984	-5.039	3.021
	VEN PISI	44	44.0	386.8	1.1	576.0	0.970	-4.353	2.745
	VEN TAGL	47	38.5	417.6	1.0	719.0	1.000	-4.341	2.735