

Table S1
Summary statistics

Taxon	Group	Element	Attribute	Sex	n	min (mm)	max (mm)	95%CI (mm)	95%CI (mm)	mean (mm)	Source
<i>Aenoycon dirus</i>	Rancho La Brea	cranium	post-orbital constriction	male	62	43.5	54.4	49.8	48.8	49.3	Nowak, 1979, Appendix B
<i>Canis lupus</i>	Great Lakes	cranium	post-orbital constriction	female	20	36.6	46.3	41.4	39.3	40.3	this study, Data S1
<i>Canis lupus</i>	Great Lakes	cranium	post-orbital constriction	male	18	38.3	45.3	43.0	40.9	41.9	this study, Data S1
<i>Canis lupus</i>	North America	cranium	post-orbital constriction	female	123	30.4	46.9	40.1	39.0	39.6	Goldman, 1964; Data S2
<i>Canis lupus</i>	North America	cranium	post-orbital constriction	male	176	31.4	49.5	41.9	40.8	41.3	Goldman, 1964; Data S2
<i>Canis rufus</i>	North America	cranium	post-orbital constriction	female	46	31.0	41.5	37.3	35.9	36.6	Goldman, 1964; Data S2
<i>Canis rufus</i>	North America	cranium	post-orbital constriction	male	64	31.4	42.1	37.4	37.1	36.7	Goldman, 1964; Data S2
<i>Aenoycon dirus</i>	Rancho La Brea	cranium	post-orbital processes	unknown	62	73.4	100.0	84.3	82.6	83.5	Nowak, 1979, Appendix C
<i>Canis lupus</i>	Great Lakes	cranium	post-orbital processes	female	20	55.0	75.7	63.0	58.5	60.7	this study, Data S1
<i>Canis lupus</i>	Great Lakes	cranium	post-orbital processes	male	18	58.6	72.5	65.5	61.8	63.7	this study, Data S1
<i>Aenoycon dirus</i>	Rancho La Brea	P4	mesiodistal length	unknown	62	28.7	35.3	32.3	31.2	31.8	Nowak, 1979, Appendix C
<i>Canis lupus</i>	Great Lakes	P4	mesiodistal length	female	21	20.8	24.7	23.3	22.4	22.9	this study, Data S1
<i>Canis lupus</i>	Great Lakes	P4	mesiodistal length	male	20	22.7	25.6	24.7	23.9	24.3	this study, Data S1
<i>Canis lupus</i>	North America	P4	mesiodistal length	female	122	21.0	26.5	24.3	23.9	24.1	Goldman, 1964; Data S2
<i>Canis lupus</i>	North America	P4	mesiodistal length	male	174	22.5	30.6	26.1	25.7	25.9	Goldman, 1964; Data S2
<i>Canis rufus</i>	North America	P4	mesiodistal length	female	46	19.1	28.8	22.7	21.7	22.2	Goldman, 1964; Data S2
<i>Canis rufus</i>	North America	P4	mesiodistal length	male	64	20.1	25.2	23.1	22.5	22.8	Goldman, 1964; Data S2
<i>Aenoycon dirus</i>	Maricopia	m1	mesiodistal length	unknown	17	33.5	37.0	36.0	34.0	35.0	Nowak, 1979, Appendix C
<i>Aenoycon dirus</i>	McKittrick	m1	mesiodistal length	unknown	15	33.7	37.0	36.0	34.6	35.3	Nowak, 1979, Appendix C
<i>Aenoycon dirus</i>	Rancho La Brea	m1	mesiodistal length	unknown	73	31.8	38.5	34.7	33.8	34.3	Nowak, 1979, Appendix C
<i>Canis lupus</i>	Great Lakes	m1	mesiodistal length	female	21	24.1	28.9	27.1	25.9	26.5	this study, Data S1
<i>Canis lupus</i>	Great Lakes	m1	mesiodistal length	male	21	26.0	30.1	28.4	27.4	27.9	this study, Data S1
<i>Canis lupus</i>	North America	m1	mesiodistal length	female	118	24.9	30.9	27.9	27.4	27.6	Goldman, 1964; Data S2
<i>Canis lupus</i>	North America	m1	mesiodistal length	male	173	24.9	33.8	29.7	29.2	29.4	Goldman, 1964; Data S2
<i>Canis rufus</i>	North America	m1	mesiodistal length	female	46	20.0	27.8	24.9	24.0	24.5	Goldman, 1964; Data S2
<i>Canis rufus</i>	North America	m1	mesiodistal length	male	64	22.3	27.9	25.6	24.9	25.2	Goldman, 1964; Data S2

<i>Aenoycon dirus</i>	Rancho La Brea	scapula	length of glenoid fossa	unknown	26	34.0	42.2	38.2	36.4	37.3	Koper, 2013, Table 4; Data S3
<i>Canis lupus</i>	Great Lakes	scapula	length of glenoid fossa	female	22	21.4	35.5	28.7	24.8	26.7	this study, Data S1
<i>Canis lupus</i>	Great Lakes	scapula	length of glenoid fossa	male	22	23.0	38.6	32.5	27.2	29.8	this study, Data S1
<i>Aenoycon dirus</i>	Rancho La Brea	humerus	greatest length	unknown	496	194.0	241.0	218.1	217.7	217.9	Stock and Lance, 1948
<i>Canis lupus</i>	Great Lakes	humerus	greatest length	female	20	190.0	235.0	216.6	207.4	212.0	this study, Data S1
<i>Canis lupus</i>	Great Lakes	humerus	greatest length	male	22	213.0	241.0	231.8	225.6	228.7	this study, Data S1
<i>Aenoycon dirus</i>	Rancho La Brea	humerus	midshaft breadth	unknown	17	16.9	22.0	19.8	18.2	19.0	Koper, 2013, Table 6; Data S3
<i>Canis lupus</i>	Great Lakes	humerus	midshaft breadth	female	21	13.5	16.8	15.5	14.6	15.1	this study, Data S1
<i>Canis lupus</i>	Great Lakes	humerus	midshaft breadth	male	22	14.9	17.7	16.8	16.1	16.5	this study, Data S1
<i>Aenoycon dirus</i>	Rancho La Brea	radius	greatest length	unknown	740	183.0	233.0	209.5	209.3	209.4	Stock and Lance, 1948
<i>Canis lupus</i>	Great Lakes	radius	greatest length	female	22	195.0	233.0	218.5	210.4	214.5	this study, Data S1
<i>Canis lupus</i>	Great Lakes	radius	greatest length	male	22	213.0	246.0	232.6	225.1	228.8	this study, Data S1
<i>Aenoycon dirus</i>	Rancho La Brea	metacarpal V	greatest length	unknown	1,298	62.0	87.0	74.0	73.6	73.8	Nigra, 1946, Table 8; Data S4
<i>Canis lupus</i>	Great Lakes	metacarpal V	greatest length	female	21	68.0	90.0	80.9	76.4	78.6	this study, Data S1
<i>Canis lupus</i>	Great Lakes	metacarpal V	greatest length	male	22	78.0	92.0	85.6	82.8	84.2	this study, Data S1
<i>Aenoycon dirus</i>	Rancho La Brea	tibia	greatest length	unknown	687	208.0	257.0	233.6	233.4	233.5	Stock and Lance, 1948
<i>Canis lupus</i>	Great Lakes	tibia	greatest length	female	21	217.0	263.0	241.7	231.2	236.8	this study, Data S1
<i>Canis lupus</i>	Great Lakes	tibia	greatest length	male	22	231.0	266.0	255.8	248.2	252.0	this study, Data S1
<i>Aenoycon dirus</i>	Rancho La Brea	calcaneus	greatest length	unknown	11	60.1	72.4	67.6	62.6	65.1	this study, Table 5
<i>Canis lupus</i>	Great Lakes	calcaneus	greatest length	female	22	54.0	63.0	58.5	56.5	57.5	this study, Data S1
<i>Canis lupus</i>	Great Lakes	calcaneus	greatest length	male	22	55.0	66.0	63.0	61.0	62.0	this study, Data S1