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SUPPLEMENTARY ONLINE MATERIAL FOR

A new early Pliocene murine rodent from the Iberian Peninsula and its biostratigraphic implications

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Supplementary Online Material

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SOM 1. Tables

Table S1. Measurements (mm) of each specimen of *Paraethomys baeticus* sp. nov. from Baza-1, early Pliocene, Guadix-Baza Basin, Spain.

Acronym	Element	Length	Width
BA1-2001-R7/1	left M1	-	1.77
BA1-2001-R7/2	left M1	2.76	1.76
BA1-2001-R7/3	left M1	2.58	1.73
BA1-2001-R7/4	left M1	2.55	1.70
BA1-2001-R7/5	right M1	2.62	1.70
BA1-2001-R7/6	right M1	2.71	1.84
BA1-2001-R7/7	right M1	2.73	1.81
BA1-2001-R7/8	right M1	2.60	1.73
BA1-2001-R7/9	right M1	2.66	1.82
BA1-2001-R7/10	right M1	2.73	1.81
BA1-2001-R7/11	right M1	-	1.80
BA1-2001-R7/12	right M1	2.55	1.75
BA1-2001-R7/13	right M1	-	-
BA1-2001-R7/14	left M1	2.56	1.73
BA1-2001-R7/15	left M1.	2.48	-
BA1-2001-R7/16	right M1	2.58	1.76
IPS89269	left M1	2.47	1.70
IPS89270	left M1	2.63	1.73
IPS89272	right M1	-	1.74
IPS89273	right M1	2.64	1.82
IPS89274	right M1	2.53	1.71
BA1-2018-R1/1	left M1	2.70	1.68
BA1-2018-R1/2	right M1	2.54	1.82
BA1-2018-R1/3	right M1	-	-
BA1-2018-R1/4	right M1	-	-
BA1-2018-R1/5	right M1	-	-
BA1-2001-R7/17	left M2	1.91	1.75
BA1-2001-R7/18	left M2	1.88	1.72
BA1-2001-R7/19	left M2	1.87	1.70
BA1-2001-R7/20	left M2	-	1.75
BA1-2001-R7/21	right M2	1.91	1.73
BA1-2001-R7/22	right M2	1.89	1.71
BA1-2001-R7/23	right M2	1.79	1.65
BA1-2001-R7/24	right M2	1.93	1.73
BA1-2001-R7/25	right M2	1.93	1.72
BA1-2001-R7/26	right M2	1.95	1.72
BA1-2001-R7/27	right M2	-	1.71
BA1-2001-R7/28	left M2	1.93	1.73
BA1-2001-R7/29	left M2	1.90	1.71
BA1-2001-R7/30	left M2	2.00	1.78
BA1-2001-R7/31	left M2	1.93	1.79
IPS89275	left M2	1.91	1.72

IPS89276	left M2	1.96	1.66
IPS89277	left M2	1.98	1.75
IPS89278	left M2	1.86	1.73
IPS89279	left M2	2.03	1.74
IPS89280	left M2	1.89	1.77
IPS89281	left M2	1.96	1.74
IPS89282	right M2	1.90	1.73
IPS89283	right M2	2.00	1.66
IPS89284	right M2	1.83	1.67
IPS89285	right M2	1.92	1.67
IPS89286	right M2	1.89	1.85
BA1-2018-R1/6	right M2	1.90	1.77
BA1-2001-R8/17	left M3	1.37	1.30
BA1-2001-R8/18	left M3	1.30	1.32
BA1-2001-R8/19	right M3	-	1.32
BA1-2001-R8/20	right M3	1.37	1.33
BA1-2001-R8/22	left M3	1.27	1.30
IPS89287	right M3	1.25	1.23
IPS89288	right M3	1.31	1.24
IPS89292	left M3	1.29	1.21
IPS89293	right M3	-	1.26
IPS89294	left M3	1.33	1.29
IPS89295	left M3	1.42	1.40
BA1-2018-R1/8	right M3	1.25	1.18
BA1-2001-R7/32	right m1	2.39	1.52
BA1-2001-R7/33	right m1	2.36	1.50
BA1-2001-R7/34	right m1	-	-
BA1-2001-R7/35	right m1	2.38	1.58
BA1-2001-R7/36	right m1	2.48	-
BA1-2001-R7/37	right m1	2.37	1.48
BA1-2001-R7/38	right m1	2.57	1.64
BA1-2001-R7/39	right m1	2.30	1.50
BA1-2001-R7/40	right m1	2.47	1.52
BA1-2001-R7/41	right m1	2.41	1.50
BA1-2001-R7/42	right m1	-	1.46
BA1-2001-R7/43	left m1	2.37	1.50
BA1-2001-R7/44	left m1	2.26	1.53
BA1-2001-R7/45	left m1	2.34	1.38
BA1-2001-R7/46	left m1	2.45	1.51
BA1-2001-R7/47	left m1	-	1.45
BA1-2001-R7/48	right m1	2.50	1.60
BA1-2001-R7/49	right m1	2.41	1.45
BA1-2001-R7/50	right m1	2.39	1.49
BA1-2001-R7/51	right m1	2.35	1.52
BA1-2001-R7/52	right m1	-	-
BA1-2001-R7/53	right m1	2.46	1.54
BA1-2001-R7/54	right m1	2.56	1.60
IPS8297	left m1	2.34	1.44

IPS8298	left m1	2.39	1.53
IPS8299	left m1	2.33	1.50
IPS8300	left m1	2.50	1.69
IPS8301	left m1	2.41	1.50
IPS8302	left m1	2.24	1.53
IPS8303	left m1	2.47	1.63
IPS8304	right m1	2.47	1.65
IPS8305	right m1	2.46	1.61
IPS8306	right m1	2.28	1.47
BA1-2018-R1/9	left m1	2.45	1.45
BA1-2018-R1/10	right m1	2.36	1.59
BA1-2018-R1/11	right m1	2.38	1.60
BA1-2018-R1/12	right m1	2.38	1.56
BA1-2001-R7/55	left m2	1.73	1.65
BA1-2001-R7/56	left m2	1.70	1.59
BA1-2001-R7/57	left m2	1.71	1.57
BA1-2001-R7/58	right m2	1.66	1.48
BA1-2001-R7/59	left m2	1.71	-
BA1-2001-R7/60	left m2	1.76	1.60
BA1-2001-R7/61	right m2	1.75	1.56
BA1-2001-R7/62	right m2	1.72	1.57
BA1-2001-R7/63	right m2	1.76	1.56
BA1-2001-R7/64	right m2	1.77	1.56
BA1-2001-R7/65	right m2	-	1.51
BA1-2001-R7/66	left m2	1.78	1.67
BA1-2001-R7/67	right m2	1.82	1.67
BA1-2001-R7/68	left m2	1.76	1.56
BA1-2001-R7/69	right m2	1.78	1.62
BA1-2001-R7/70	right m2	1.74	-
BA1-2001-R7/71	left m2	1.69	1.50
BA1-2001-R7/72	right m2	1.72	1.67
BA1-2001-R7/73	right m2	1.65	1.46
BA1-2001-R7/74	left m2	-	1.48
BA1-2001-R7/75	right m2	-	1.52
BA1-2001-R7/76	right m2	1.85	1.64
BA1-2001-R7/77	right m2	-	1.61
BA1-2001-R7/78	right m2	1.83	1.68
BA1-2001-R7/79	left m2	1.68	1.52
BA1-2001-R7/80	left m2	1.70	1.53
BA1-2001-R7/81	left m2	1.74	1.51
IPS89308	left m2	1.65	1.47
IPS89309	left m2	1.67	1.50
IPS89310	right m2	1.64	1.44
IPS89311	right m2	1.76	1.66
IPS89312	right m2	1.73	1.56
IPS89313	right m2	1.77	1.45
IPS89314	left m2	1.70	1.61
IPS89315	left m2	1.85	1.67

IPS89316	left m2	1.78	1.64
IPS89317	left m2	1.69	1.62
IPS89318	left m2	1.68	1.58
IPS89319	left m2	1.77	1.54
BA1-2018-R1/13	left m2	1.77	1.63
BA1-2018-R1/14	left m2	1.86	1.54
BA1-2018-R1/15	left m2	1.73	1.56
BA1-2018-R1/16	right m2	1.70	1.59
BA1-2018-R1/18	right m2	-	1.66
BA1-2001-R8/1	left m3	1.49	1.31
BA1-2001-R8/2	right m3	1.55	1.40
BA1-2001-R8/3	right m3	1.56	1.32
BA1-2001-R8/4	right m3	1.63	1.34
BA1-2001-R8/5	right m3	1.50	1.33
BA1-2001-R8/6	right m3	1.46	1.36
BA1-2001-R8/7	right m3	1.58	1.38
BA1-2001-R8/8	left m3	1.50	1.32
BA1-2001-R8/9	left m3	1.48	1.40
BA1-2001-R8/10	left m3	1.56	1.38
BA1-2001-R8/11	left m3	1.51	1.30
BA1-2001-R8/12	left m3	1.51	1.30
BA1-2001-R8/13	left m3	1.53	1.43
BA1-2001-R8/14	left m3	1.49	1.35
BA1-2001-R8/15	left m3	1.56	1.33
BA1-2001-R8/16	left m3	1.45	-
BA1-2001-R8/21	left m3	1.45	1.34
IPS89320	right m3	1.53	1.30
IPS89323	right m3	1.39	1.21
IPS89325	right m3	1.44	1.32
IPS89326	left m3	1.47	1.30
IPS89327	left m3	1.50	1.34
IPS89328	left m3	1.49	1.40
IPS89329	left m3	1.41	1.29
BA1-2018-R1/19	left m3	1.47	1.33
BA1-2018-R1/20	left m3	1.50	1.26
BA1-2018-R1/21	left m3	-	1.35

Table S2. Measurements (mm) of the dentition of *Paraethomys baeticus* sp. nov. from Iberian sites other than the type locality. Abbreviations: ABS, Alcoi Barranc Sud; AC, Alcoi Cristian; AL, Alcoy; CEL, Celadas; CLC, Calicasas; Go, Gorafe; LB, La Bullana; LG, La Gloria; PUR, Purcal; SIF-P, Sifón Pista.

Locality	Element	Length				Width				Reference
		N	Min	Mean	Max.	N	Min.	Mean	Max.	
PUR-13	M1	1		2.58		1		1.79		García-Alix et al. (2008)
	M2	7	1.74	1.82	1.91	6	1.64	1.69	1.76	
	M3	1		1.20		1		1.39		
	m1	1		2.46		1		1.51		
	m2	4	1.63	1.69	1.79	3	1.51	1.58	1.69	
	m3	3	1.38	1.41	1.43	3	1.27	1.29	1.32	
CLC-5A	m1	1		2.35		1		1.48		García-Alix et al. (2008)
	m3	1		1.48		1		1.34		
AL-2C	M1	1		2.54		1		1.84		Mansino et al. (2013)
	M2	2	1.83	1.94	2.06	3	1.66	1.75	1.80	
	m1	1		2.33		3	1.39	1.49	1.60	
	m2	4	1.73	1.85	1.92	5	1.46	1.58	1.68	
	m3	1		1.62		1		1.44		
AL-2D	M1	2	2.62	2.64	2.66	2	1.72	1.76	1.80	Mansino et al. (2013)
	M2	12	1.76	1.97	2.16	13	1.57	1.74	1.84	
	M3	8	1.26	1.36	1.47	8	1.28	1.33	1.47	
	m1	3	2.34	2.42	2.53	6	1.40	1.46	1.54	
	m2	3	1.67	1.81	1.89	3	1.52	1.61	1.72	
	m3	3	1.56	1.60	1.62	3	1.31	1.38	1.43	
CEL-1	M2	1		1.95		1		1.70		Adrover et al. (1993)
CEL-9	M1	2	2.62	2.64	2.66	2	1.72	1.76	1.80	Adrover et al. (1993)
	M2	14	1.71	1.80	1.96	14	1.52	1.62	1.77	
	M3	1		1.37		1		1.22		
	m1	2	2.30	2.37	2.43	2	1.51	1.52	1.53	
	m2	6	1.44	1.56	1.61	6	1.42	1.47	1.58	
	m3	1		1.42		1		1.28		
LG-4	M1	13	2.33	2.45	2.63	13	1.58	1.67	1.81	Adrover et al. (1993)
	M2	1		1.95		1		1.7		
	M3	5	1.14	1.21	1.36	5	1.15	1.21	1.27	
	m1	10	2.07	2.18	2.33	10	1.36	1.41	1.49	
	m2	2	2.30	2.37	2.43	2	1.51	1.52	1.53	
	m3	10	1.22	1.33	1.47	10	1.20	1.26	1.33	
SIF-P	M1	2	2.55	2.58	2.6	4	1.51	1.62	1.68	Piñero and Agustí (2019)
	M2	6	1.61	1.74	1.87	3	1.49	1.60	1.73	
	M3	2	1.16	1.22	1.27	2	1.07	1.15	1.23	
	m1	2	2.30	2.33	2.35	5	1.37	1.47	1.55	
	m2	2	1.67	1.68	1.69	1		1.50		
	m3	2	1.46	1.50	1.53	2	1.33	1.34	1.34	
ABS-2	M2	1	1.74	1.83	1.91					Mansino et al. (2015a)
	m3					1		1.28		

ABS-3	M1					1		1.73		Mansino et al. (2015a)
	M3	1		1.23		1		1.17		
	m1	1		2.29		2	1.42	1.45	1.48	
	m2	1		1.63		1		1.40		
ABS-3A	M2	3	1.80	1.84	1.91	3	1.59	1.66	1.7	Mansino et al. (2015a)
	M3	2	1.23	1.26	1.30	3	1.18	1.20	1.23	
	m2	1		1.71		2	1.43	1.46	1.49	
AC-0	M1	2	2.55	2.62	2.69	3	1.58	1.63	1.68	Mansino et al. (2015a)
	M2	2	1.78	1.82	1.85	3	1.52	1.59	1.69	
	M3	1		1.23		2	1.23	1.24	1.25	
	m1	1		2.22		2	1.44	1.46	1.48	
	m2	3	1.63	1.67	1.69	5	1.46	1.53	1.61	
AC-0B	M2					1		1.69		Mansino et al. (2015a)
LB-2B	M1	4	2.53	2.56	2.61	4	1.67	1.7	1.74	Mansino et al. (2015b)
	M2	5	1.79	1.87	1.96	6	1.6	1.67	1.73	
	M3	4	1.23	1.29	1.38	4	1.23	1.27	1.34	
	m1	1		2.36		3	1.49	1.52	1.57	
	m2	7	1.65	1.71	1.76	9	1.45	1.53	1.62	
	m3	7	1.43	1.47	1.51	7	1.25	1.31	1.37	
LB-3	m1	1		2.36		1		1.54		Mansino et al. (2015b)
	m2	3	1.66	1.71	1.76	3	1.51	1.53	1.58	
Go-4	M2	2	1.68	1.74	1.79	1		1.77		Martín Suárez (1988)
	m1	1		2.32		1		1.53		
	m2	3	1.61	1.66	1.73	3	1.42	1.49	1.629	
	m3	2	1.47	1.50	1.53	2	1.39	1.39	1.391	
Go-A	M1	3	2.47	2.52	2.54	3	1.72	1.72	1.72	Ruiz Bustos et al. (1986)
	M2	5	1.69	1.75	1.81	5	1.50	1.69	1.81	
	m1	4	2.32	2.34	2.36	4	1.36	1.43	1.49	
	m2	3	1.65	1.72	1.78	3	1.56	1.58	1.60	
	m3	2	1.30	1.35	1.40	2	1.30	1.32	1.34	
Go-1	M1	9	2.45	2.52	2.65	9	1.52	1.75	1.86	De Bruijn (1974); this work

SOM 2. Figures

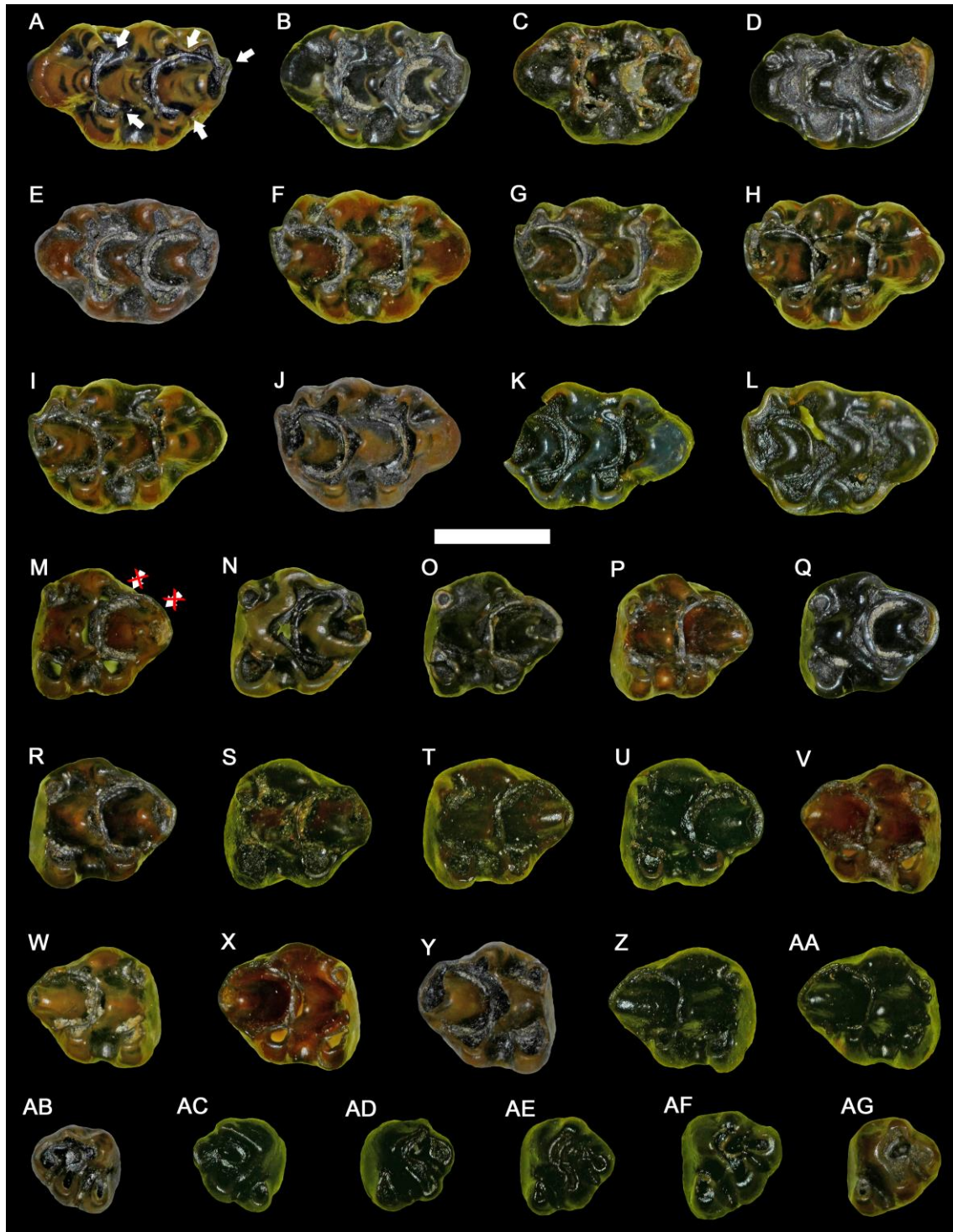


Figure S1. Digital images of isolated upper teeth (occlusal view) of *Paraethomys baeticus* sp. nov. from Baza-1, early Pliocene, Spain. **A.** BA1-2001-R7/2, left M1 (Holotype); **B.** BA1-2001-R7/3, left M1; **C.** BA1-2001-R7/4, left M1; **D.** BA1-2001-R7/15, left M1; **E.** BA1-2018-R1/1, left M1; **F.** BA1-2001-R7/10, right M1; **G.** BA1-2001-R7/12, right M1; **H.** BA1-2001-R7/6, right M1; **I.** BA1-2001-R7/9, right M1; **J.** BA1-2018-R1/2, right M1; **K.** IPS89272, right M1; **L.** IPS89273, right M1; **M.** BA1-2001-R7/17, left M2; **N.** BA1-2001-R7/18, left M2; **O.** BA1-2001-R7/19, left M2; **P.** BA1-2001-R7/28, left M2; **Q.** BA1-2001-R7/29, left M2; **R.** BA1-2001-R7/30, left M2; **S.** IPS89277, left M2; **T.** IPS89279, left M2; **U.** IPS89281, left M2; **V.** BA1-2001-R7/21, right M2; **W.** BA1-2001-R7/23, right M2; **X.** BA1-2001-R7/26, right M2; **Y.** BA1-2018-R1/6, right M2; **Z.** IPS89283, right M2; **AA.** IPS89285, right M2; **AB.** BA1-2018-R1/8, right M3; **AC.** IPS89287, right M3; **AD.** IPS89292, left M3; **AE.** IPS89294, left M3; **AF.** IPS89295, left M3; **AG.** BA1-2001-R8/18, left M3. . The white arrows (in A, M) indicate diagnostic characters. Scale bar equals 1 mm.

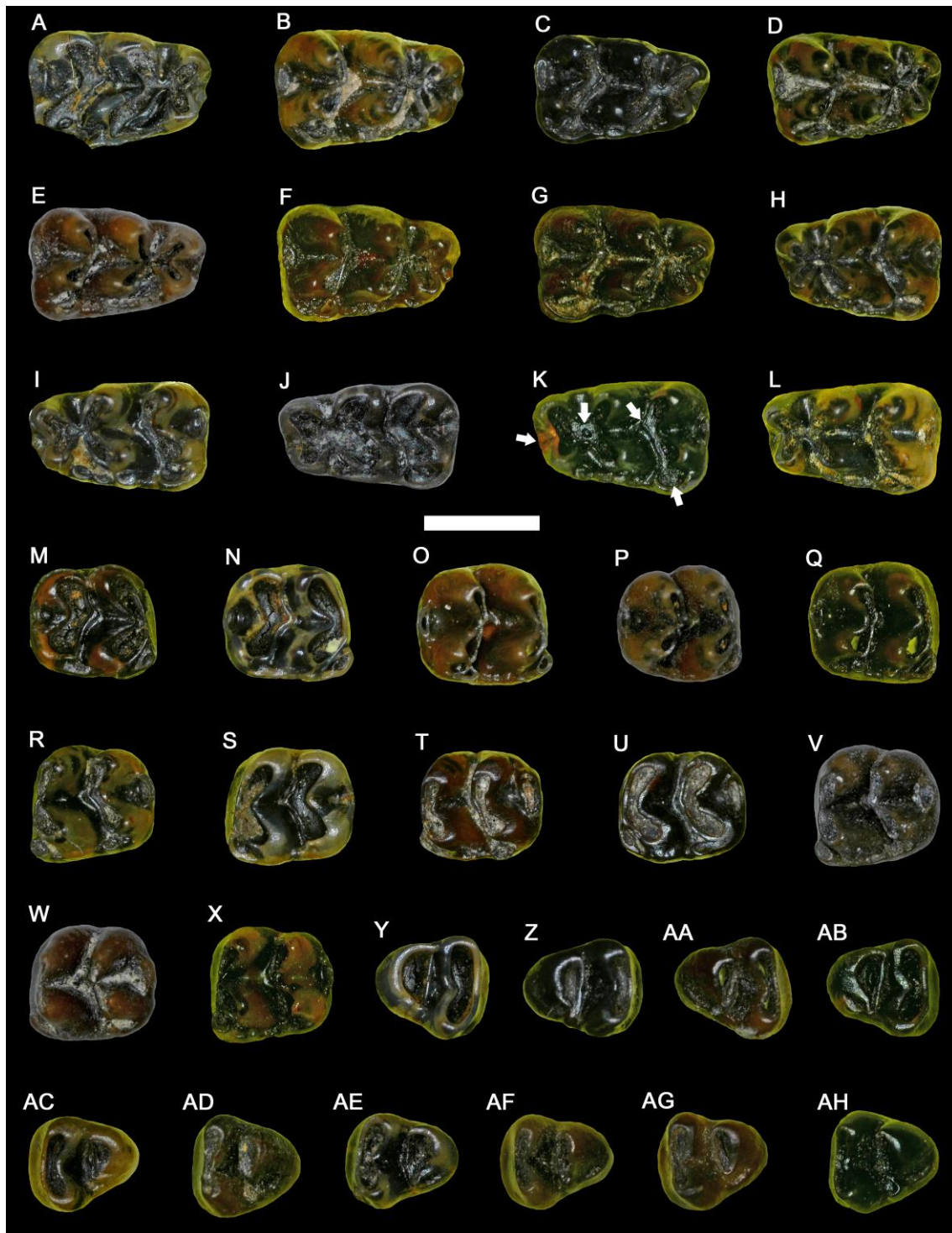


Figure S2. Digital images of isolated lower teeth (occlusal view) of *Paraethomys baeticus* sp. nov. from Baza-1, early Pliocene, Guadix-Baza Basin, Spain. **A.** BA1-2001-R7/36, right m1; **B.** BA1-2001-R7/38, right m1; **C.** BA1-2001-R7/50, right m1; **D.** BA1-2001-R7/51, right m1; **E.** BA1-2018-R1/12, right m1; **F.** IPS89304, right m1; **G.** IPS89305, right m1; **H.** BA1-2001-R7/44, left m1; **I.** BA1-2001-R7/46, left m1; **J.** BA1-2018-R1/9, left m1; **K.** IPS89298, left m1; **L.** IPS89301, left m1; **M.** BA1-2001-R7/61, right m2; **N.** BA1-2001-R7/63, right m2; **O.** BA1-2001-R7/76, right m2; **P.** BA1-2018-R1/16, right m2; **Q.** IPS89311, right m2; **R.** BA1-2001-R7/57, left m2; **S.** BA1-2001-R7/60, left m2; **T.** BA1-2001-R7/79, left m2; **U.** BA1-2001-R7/81, left m2; **V.** BA1-2018-R1/13, left m2; **W.** BA1-2018-R1/15, left m2; **X.** IPS89318, left m2; **Y.** BA1-2001-R8/2, right m3; **Z.** BA1-2001-R8/4, right m3; **AA.** BA1-2001-R8/7, right m3; **AB.** IPS89327, right m3; **AC.** BA1-2001-R8/1, left m3; **AD.** BA1-2001-R8/9, left m3; **AE.** BA1-2001-R8/11, left m3; **AF.** BA1-2001-R8/12, left m3; **AG.** BA1-2001-R8/14, left m3; **AH.** IPS89328, left m3. The white arrows (in K) indicate diagnostic characters. Scale bar equals 1 mm.