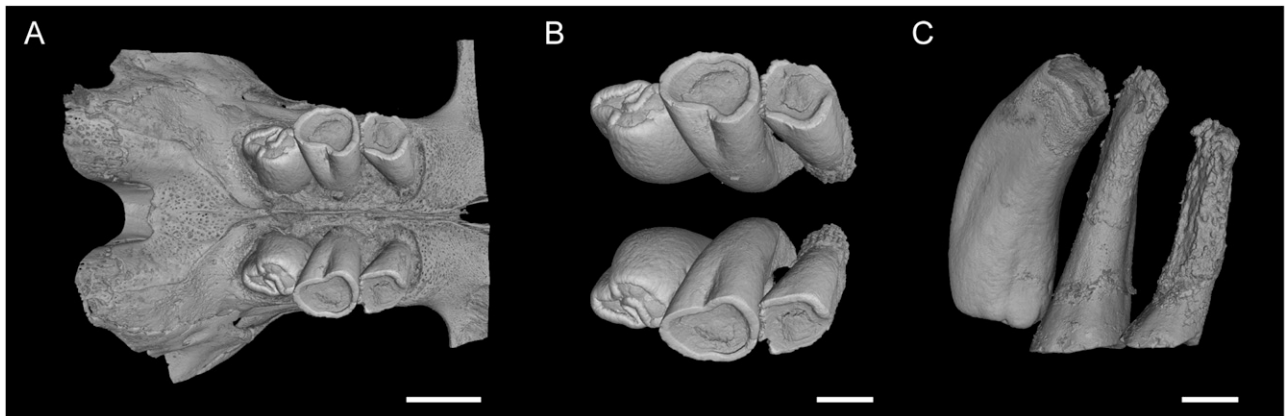
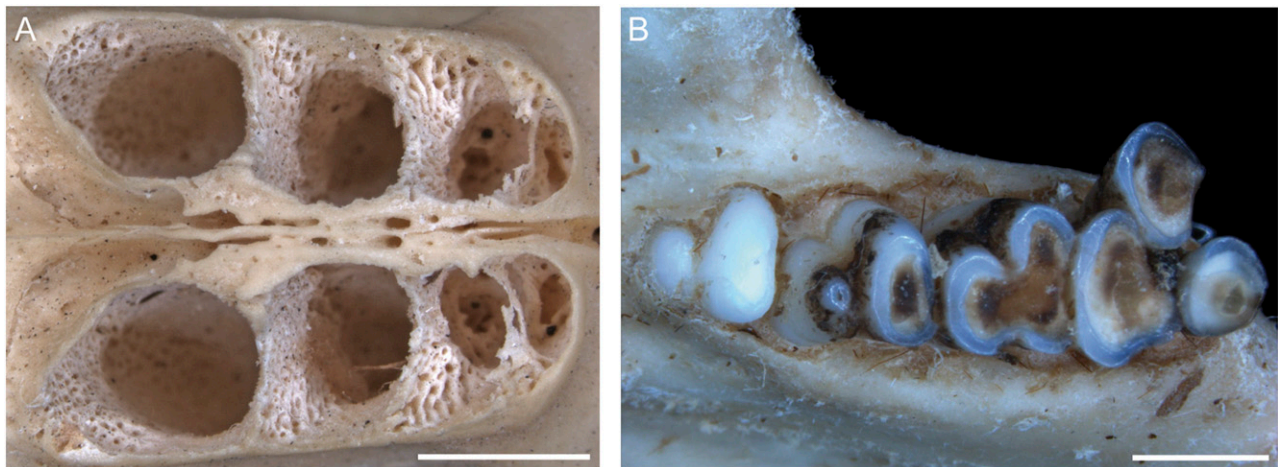


# Supporting Information

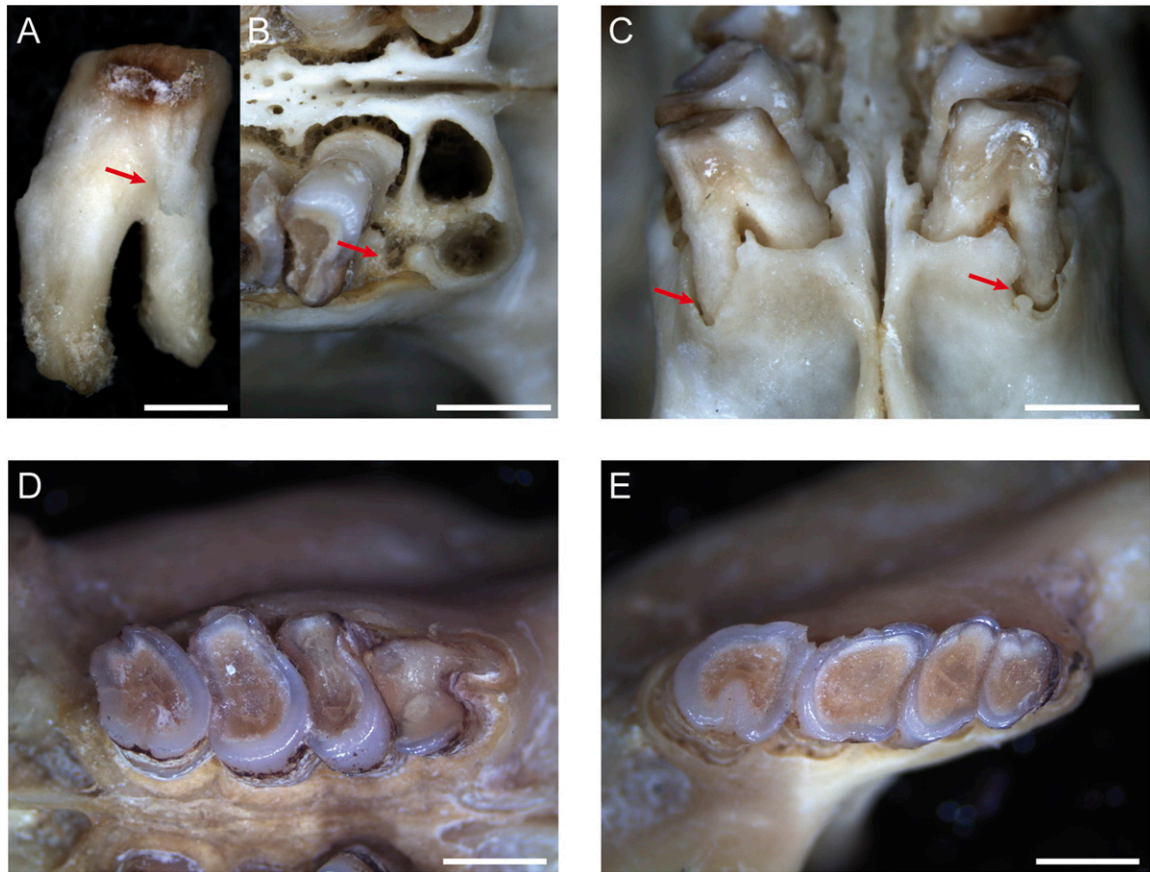
Gomes Rodrigues et al. 10.1073/pnas.1109615108



**Fig. S1.** X-ray synchrotron microtomographic 3D rendering of the upper dentition of a young specimen of *Heliophobius* (RMCA96.036-M-5462). RMCA, Royal Museum for Central Africa of Tervuren, Belgium. (A) Upper jugal teeth on skull (scale bar, 2 mm). (B) Upper jugal teeth extracted (scale bar, 1 mm). (C) Lingual view of right upper tooth row (scale bar, 1 mm).



**Fig. S2.** Photographs showing a few consequences of mesial drift in *Heliophobius*. (A) Maxillae showing bone remodeling (RMCA8846-M). (B) Hemimandible with a misalignment of the second tooth (RMCA96.036-M-5459). (Scale bars, 2 mm.)



**Fig. 53.** Photographs showing consequences of a slight mesial drift and dental wear gradient in *Georychus*. (A) Upper fourth premolar showing the distal root partially resorbed as in manatees (MNHN-CG1988-111). (Scale bar, 1 mm.) MNHN, Museum National d'Histoire Naturelle, Paris. (B) Upper dentitions showing the bone socket of a distal root of a fourth premolar partially resorbed (MNHN-CG1988-111). (Scale bar, 2 mm.) (C) Upper dentition from a mesial view showing bone resorption (MNHN-CG1988-111). (Scale bar, 2 mm.) (D and E) Dental wear gradient on upper and lower dentitions (NHM66.6.16.2). NHM, National History Museum, London (Scale bars, 2 mm.) Red arrows indicate resorption.



Table S1. Cont.

Institution	Specimen	Left lower teeth			Right lower teeth			Left upper teeth			Right upper teeth			Skull length, mm
		Erupting	Functional	Worn out	Erupting	Functional	Worn out	Erupting	Functional	Worn out	Erupting	Functional	Worn out	
RMCA	96.037-M-5643	1	4	0	1	4	0	1	4	0	1	4	0	34.5
RMCA	96.037-M-5646	1	3	1	1	3	1	1	3	1	1	3	1	33.2
RMCA	96.037-M-5648	1	4	1	1	4	1	0	5	1	1	5	0	35.3
RMCA	96.037-M-5649	0	4	1	1	4	1	1	4	1	1	4	1	39.6
RMCA	96.037-M-5658	0	4	0	0	4	0	0	4	0	0	4	0	31.0
RMCA	96.037-M-5664	1	3	1	1	4	0	1	4	0	1	4	0	34.9
RMCA	96.037-M-5676	1	4	0	1	4	0	0	4	0	0	4	0	34.1
RMCA	96.037-M-5680	0	5	0	0	5	0	1	4	1	1	4	1	36.9
RMCA	96.037-M-5681	0	4	0	0	4	0	0	4	0	0	3	1	31.9
RMCA	96.037-M-5682	1	4	0	1	3	1	1	4	1	1	5	0	37.9
RMCA	96.037-M-5687	1	4	0	1	4	0	0	5	0	0	5	0	35.6
RMCA	96.037-M-5691	1	4	1	0	4	1	1	4	1	1	4	1	32.8
RMCA	96.037-M-5694	0	4	1	0	4	0	0	4	1	0	4	1	35.4
RMCA	96.037-M-5700	1	4	1	0	4	1	0	5	0	0	5	0	32.7
RMCA	96.037-M-5709	0	4	1	1	4	1	0	5	0	0	5	0	33.2
RMCA	96.037-M-5716	1	4	0	1	4	0	0	5	0	0	5	0	32.6
RMCA	96.037-M-5724	1	4	1	0	5	1	1	4	1	0	5	1	39.0
RMCA	96.037-M-5725	1	4	1	0	5	0	1	4	1	1	5	0	33.0
RMCA	96.037-M-5727	1	4	1	1	3	1	1	4	1	1	5	0	38.9
RMCA	96.037-M-5736	1	4	0	1	4	0	0	4	1	0	4	1	35.3
MNHN	CG1892-1225	0	4	0	0	4	0	0	4	0	0	4	0	30.4
MNHN	CG1892-1226	1	4	0	1	4	0	1	4	0	1	4	0	31.3
MNHN	CG1893-38	1	4	0	1	4	0	1	4	0	1	4	0	33.2
MNHN	CG1893-40	1	4	0	0	4	0	1	3	1	1	3	1	27.3
MNHN	CG1893-41	1	4	0	1	4	0	1	4	0	1	4	0	30.5
MNHN	CG1893-42	0	4	1	0	4	1	1	4	1	1	4	1	30.8

**Table S2. Statistics on *Heliophobius* dentitions**

Statistics	Left lower teeth			Right lower teeth			Left upper teeth			Right upper teeth		
	Erupting	Functional	Worn out	Erupting	Functional	Worn out	Erupting	Functional	Worn out	Erupting	Functional	Worn out
Percentages	70.9		45.5	60.0		36.4	69.1		41.8	67.3		41.8
Two functional teeth		1.8			1.8			3.6			1.8	
Three functional teeth		30.9			25.5			14.5			21.8	
Four functional teeth		58.2			61.8			58.2			49.1	
Five functional teeth		9.1			10.9			23.6			27.3	

**Table S3. Data concerning the jugal dentition of each *Georychus* specimen**

Institution	Specimen	Functional teeth	Erupting teeth	Skull length, mm
NHM	37.9.26.111	P4		20
MNHN	1988-111	P4	M1	22
NHM	43.2.28.5	P4-M1		27.9
NHM	95.9.3.18	P4-M1	M2	32.3
NHM	859b	P4-M1-M2		33.9
NHM	859e	P4-M1-M2		36.7
NHM	95.9.3.15	P4-M1-M2		34.3
NHM	95.9.3.14	P4-M1-M2		33.7
MNHN	1988-112	P4-M1-M2		38.3
NHM	46.11.18.46	P4-M1-M2	M3	39.4
NHM	43.2.28.4	P4-M1-M2	M3	33.7
NHM	859c	P4-M1-M2	M3	39
NHM	95.9.3.16	P4-M1-M2-M3		39.4
NHM	66.6.16.2	P4-M1-M2-M3		—
MNHN	1988-113	P4-M1-M2-M3		49.1