Supplementary data file 1. Partitioned nexus file with alignments of ddRAD sequence loci.

Supplementary data file 2. Sequence file for the multispecies coalescent analysis in BPP.

Supplementary data file 3. Coancestry matrix in pajek format, input for infomap clustering.

Supplementary data file 4. Input file for the fossilized birth-death divergence dating.

Supplementary data file 5. Supplementary Tables in a single Excel spreadsheet file.

Available at a figshare repository: https://doi.org/10.6084/m9.figshare.27952362

Supplementary video file 1. Visualization of skull and molar morphology of *H. phillipsi* (SOM512). The complete absence of M^3 on the right side and a very small partly erupted M^3 (red) on the left side are visible. M^1 (blue) and M^2 (green) are fully developed. All lower molars are present, nevertheless both M_3 are again very small and partly hidden in the mandible.

Supplementary video file 2. Visualization of skull and molar morphology of *H. phillipsi* (SOM558). All upper and lower molars are present. M^1 and M_1 (blue) and M^2 and M_2 (green) are fully developed. M^3 and M_3 (red) are again very small but not as hidden in the mandible as in *H. phillipsi* SOM512.

Supplementary video file 3. Visualization of skull and molar morphology of *H. glaber* (SOM585). All upper and lower molars are present and well developed. M^1 and M_1 in blue, M^2 and M_2 in green, and M^3 and M_3 in red.

Supplementary video file 4. Visualization of skull and molar morphology of *H. ansorgei* (ETH1081). All upper and lower molars are present and well developed. M^1 and M_1 in blue, M^2 and M_2 in green, and M^3 and M_3 in red.

Available at a figshare repository: https://doi.org/10.6084/m9.figshare.27952233

Supplementary Table 1. Individuals used in genetic analyses, information about the locality of origin, and source of data.

Supplied as a separate spreadsheet table.

Supplementary Table 2. Average K2P distances of *CYTB* sequences, calculated between and within the naked male-rat species and expressed as % of divergence.

	phillipsi	*glaber*	*ansorgei*
phillipsi	2.1	14.5	14.1
glaber	14.5	1.4	11.2
ansorgei	14.1	11.2	3.0

Supplementary Table 3. Posterior means of migration rate (*M*) and their 95% highest posterior density (HPD) intervals estimated in various models, together with support for their non-zero value (Bayes Factor approximated by Savage-Dickey ratio on logarithmic scale).

Model	*M*	95% HPD	log BF
glaber -> *phillipsi*	0.0063	0.0024-0.0103	25.82
phillipsi -> *glaber*	0.0002	0.0000-0.0006	0.01
ansorgei -> *phillipsi*	0.0046	0.0013-0.0083	2.35
phillipsi -> *ansorgei*	0.0002	0.0000-0.0005	0.01
ansorgei -> *glaber*	0.0003	0.0000-0.0008	0.01
glaber -> *ansorgei*	0.0003	0.0000-0.0008	0.01

Supplementary Table 4. Fossils used in the divergence dating analysis.

Clade	Genus	Species	Age (Ma)	Age range (Ma)	Locality	Ref. (descr.)	Ref. (classif.)
Bathyergidae	Bathyergoides	neotertiarius	20.0	19-21	N Sperrgebeit: Elisabethfeld, Grillental, Fiskus, Langental	31, 24	36
Bathyergidae	Geofossor	corvinusae	17.3	17.5-17	Arrisdrift, Namibia	22	36
Bathyergidae	Geofossor	moralesi	20.0	19-21	Elisabethfeld	24	36
Bathyergidae	Gypsorhychus	minor	2.5	2.4-2.6	Taung	3	36
Bathyergidae	Gypsorhychus	darti	2.7	2.6-2.8	Taung	1	36
Bathyergidae	Gypsorhychus	makapani	2.8	2.6-3.0	limeworks Makapansgat	3	36
Bathyergidae	Proheliophobius	leakeyi	20.0		Rusinga Island, Kenya	18	36
Bathyergidae	Richardus	excavans	13.7	13.4-14.0	Fort Ternan, Kenya	19, 5	36
Bathyergus	Bathyergus	hendeyi	5.0		Langebaanweg	7	36
Cryptomys-Fukomys	Cryptomys	broomi	5.0		Langebaanweg	7	36
Heterocephalinae	Microfossor	biradiculatus	20.0	19-21	Elisabethfeld	24	24
Heterocephalus	Heterocephalus	jaegeri	1.8	1.75-1.9	Olduvai Bed I, Tanzania	6	8
Heterocephalus	Heterocephalus	atikoi	2.2	2.0-2.3	Omo Shungura F, G, Ethiopia	32	8
Heterocephalus	Heterocephalus	quenstedti	3.7	3.6–3.85	Laetoli, Upper Laetolil Beds	9, 8	8
Heterocephalus	Heterocephalus	manthii	4.3		Kakesio, Lower Laetolil Beds, Tanzania	8	8
Petromuridae	Apodecter	shipmani	13.7	13.4-14.0	Fort Ternan, Kenya	5	20
Petromuridae	Apodecter	orangeus	17.3	17.5-17	Arrisdrift, Namibia	22	23
Petromuridae	Apodecter	stromeri	20.0	19-21	Elisabethfeld, Bohrloch Betrieb IV, Grillental, Langental, E-Bay (=Lüderitz Bay)	14, 24	27
Petromuridae	Apodecter	Waypoint160	4.3	4.0-4.5	Waypoint 160 (Bolt's Farm)	28	23
Petromuridae	Apodecter	aequatorials	5.9		Kapsomin, Lukeino Formation, Kenya	23	23
Petromuridae	Apodecter	australis	8.5	8.5-10	Harasib 3a, Namibia	25	27
Petromuridae	Apodecter	roessneri	8.5	8.5-10	Harasib 3a, Namibia	25, 26	27
Petromus	Petromus	minor	2.6		Taung	2	36
Petromus	Petromus	antiquus	4.3	4.0-4.5	Waypoint 160 (Bolt's Farm)	29	27
Phyiomyid	Epiphiomys	coryndioni	19.5	early Miocene	Koru Fauna Locality 29	18	20

Phyiomyid	Kochalia	geespei	15.0		middle part of the Lower Manchar Formation, Pakistan	4	20
Phyiomyid	Neosciuromys	africanus	20.0	19-21	Elisabethfeld, Bohrloch Betrieb IV, Grillental, Fiskus, Glastal	30, 24	27
Phyiomyid	Neosciuromys	fractus	20.0	19-21	Elisabethfeld, Grillental, Fiskus, Glastal	14, 24	27
Phyiomyid	Paraphiomys	occidentalis	11.9	11.2-12.5	Beni Mellal + Azdal, Morocco	17	20
Phyiomyid	Paraphiomys	knolli	16.0	15-17	As-Sarrar, Saudi Arabia	20	20
Phyiomyid	Paraphiomys	pigotti	17.7	early Miocene	Bed 24, Kachuku, Karungu area, Kenya	18	27
Phyiomyid	Paraphiomys	hopwoodi	19.0	early Miocene	Songhor, Kenya	18	20
Phyiomyid	Paraphiomys	renelavocati	19.0	early Miocene	Rusinga, Kenya	18, 21	20
Phyiomyid	Paraphiomys	afarensis	8.5	8.5-10	Ch'orora	11, 12	20
Thryonomyidae	Paraulacodus	indicus	12.7	12.5-12.9	Siwalik ‘series’ in Pakistan	13, 10	27
Thryonomyidae	Paraulacodus	Lukeino	6.0		Kapcheberek + Aragai, Lukeino Formation, Kenya	23	23
Thryonomyidae	Paraulacodus	johanesi	8.5	8.5-10	Ch'orora	15	27
Thryonomyidae	Protohummus	dango	7.0	6.0-8.0	Baynunah Fm, United Arab Emirates	16	27
Thryonomys	Thryonomys	wesselmani	2.7		Upper Ndolanya Beds	8	8
Thryonomys	Thryonomys	Tabarin	4.5		Tabarin, Chemeron Fm, Tugen Hills, Kenya	34	23
Thryonomys	Thryonomys	UpperNawata	5.2		Upper Nawata, Kenya	35	23
Thryonomys	Thryonomys	asakomae	5.7	5.6-5.7	Middle Awash, Adu-Asa Formation, Ethiopia	33	36

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Supplementary Table 5. Dental measurements of *Heterocephalus*, based on our data and [Denys 2022]. The abbreviations are: GPS – latitude and longitude, GSL – greatest skull length, UMR and LMR – upper and lower molar row length, M^1L – length of the first upper molar, M_2W – width of the second lower molar and similarly for the other molar dimensions.

ID	Lineage	Locality	GPS	GSL	UMR, LMR	M1-3L, M1-3W, M1-3L, M1-3W
NHMUK-1951.702	ansorgei	Kenya		25.60	3.50, 3.74	1.45,1.20,0.95,1.55,1.55,1.40,1.30,1.30,1.40,1.25,1.35,1.50
NHMUK-1974.169	ansorgei	Kenya, Kipsing R.		21.40	3.54, 4.12	1.40,1.15,1.10,1.35,1.50,1.20,1.35,1.45,1.50,1.35,1.35,1.20
NHMUK-1974.170	ansorgei	Kenya, Kipsing R.		23.20	3.40, 3.64	1.20,1.25,0.95,1.35,1.50,1.35,1.30,1.25,1.50,1.20,1.20,1.35
NHMUK-1974.173	ansorgei	Kenya, Kipsing R.		23.10	3.50, 3.94	1.15,1.20,0.95,1.70,1.58,1.20,1.25,1.25,1.50,1.15,1.40,1.45
NHMUK-1911.12.1.122	ansorgei	Kenya, Ngama Nyango		24.20	3.70, 3.64	1.25,1.25,1.25,1.35,1.30,1.25,1.30,1.35,1.35,1.05,1.30,1.50
NHMUK-1915.10.12.1	ansorgei	Kenya, Juba R.		22.30	3.44, 3.58	1.30,1.15,1.05,1.45,1.40,1.20,1.30,1.40,1.50,1.10,1.30,1.30
NHMUK-1915.10.12.2	ansorgei	Kenya, Juba R.		19.90	3.44, 3.64	1.30,1.35,1.00,1.50,1.30,1.15,1.50,1.45,1.25,1.25,1.45,1.05
MNHN-ZM-MO-1884-1578	glaber	Djibouti		26.00	3.85, 3.65	1.50,1.30,1.20,1.50,1.70,1.45,1.10,1.20,1.45,1.10,1.40,1.65
MNHN-ZM-MO-1911-572	glaber	Ethiopia, Harrar	9.3120, 42.1206	26.79	3.73, 3.73	1.20,1.15,1.20,1.25,1.40,1.30,1.10,1.20,1.60,1.10,1.35,1.35
NHMUK-1903.12.3.1	phillipsi	Somalia, Mogadishu	2.0647, 45.3192	18.70	2.40, 2.70	1.10,1.15, NA,1.10,0.90, NA,1.25,1.50, NA,0.90,1.25, NA
NHMUK-1904.5.9.22	glaber	Somaliland, Hargeisa		25.30	3.68, 3.76	1.40,1.25,1.25,1.50,1.90,1.75,1.35,1.25,1.60,1.05,1.60,1.70
NHMUK-1904.5.9.23	phillipsi	Ethiopia, Wardairi	6.9700, 45.3400	26.00	2.90, 3.95	1.08,1.10,0.40,1.40,1.30,0.70,1.25,1.50,1.20,1.00,1.30,1.05
NHMUK-1906.3.4.10	glaber	Somalia, Sheikh		24.80	3.84, 4.00	1.45,1.30,1.25,1.50,1.75,1.30,1.50,1.40,1.30,1.25,1.45,1.50
NHMUK-1885.12.10.1	phillipsi	Ethiopia, Gerlogobie	6.8833, 44.9167	19.40	2.60, 3.10	1.35,1.25, NA,1.25,1.30, NA,1.50,1.60, NA,1.10,1.05, NA
NHMUK-1909.6.1.28	ansorgei	Kenya, Banissa, Boran	3.9420, 40.3452	24.80	3.32, 3.62	1.25,1.15,1.00,1.48,1.60,1.35,1.10,1.35,1.50,1.05,1.50,1.45
NHMUK-1898.9.25.3	ansorgei	Kenya, Ngomeni - Kinani	-2.8800, 38.3450	26.00	3.20, 3.30	1.18,1.20,1.05,1.25,1.35,1.25,1.20,1.25,1.55,0.95,1.10,1.10
NHMUK-99.5.31.1	glaber	Somaliland, Golis Mts		25.00	3.80, 4.16	1.40,1.40,1.10,1.95,1.80,1.15,1.35,1.35,1.40,1.05,1.30,1.40
ETH1080	ansorgei	Ethiopia, Geralle NP	4.4089, 39.4658	20.94	3.00, 3.27	1.01,1.18,0.95,1.21,1.35,1.11,1.14,1.07,1.05,1.07,1.29,1.31
ETH1081	ansorgei	Ethiopia, Geralle NP	4.4089, 39.4658	23.55	3.24, 3.33	1.22,1.18,0.92,1.34,1.47,1.20,1.17,1.17,1.05,1.10,1.33,1.26
MNHN-ZM-MO-1978-268	ansorgei	Somalia, Afmadu	0.4500, 42.0833	24.97	3.34, 3.71	1.35,1.30,1.20,1.65,1.95,1.55,1.05,1.10,1.50,1.25,1.53,1.55

SOM344	glaber	Somaliland, Habas	10.4113, 42.8152	21.05	3.37, 3.77	1.14,1.21,0.96,1.33,1.53,1.15,1.16,1.32,1.27,1.17,1.43,1.39
SOM345	glaber	Somaliland, Habas	10.4113, 42.8152	26.72	3.64, 3.98	1.16,1.17,1.12,1.58,1.59,1.30,1.10,1.28,1.47,1.20,1.40,1.50
SOM369	glaber	Somaliland, Xeego	10.2404, 43.0515	24.65	3.56, 3.99	1.17,1.29,0.97,1.44,1.59,1.12,1.27,1.41,1.29,1.26,1.47,1.29
SOM406	glaber	Somaliland, Agabar	9.9330, 43.9048	26.03	3.30, 3.51	1.17,1.15,0.92,1.27,1.43,1.09,0.97,1.09,1.26,1.10,1.37,1.38
SOM512	phillipsi	Somaliland, Shanshacade	8.6604, 45.9569	20.01	2.04, 2.19	1.04,1.02,0.69,1.13,1.23,0.72,1.02,1.22,0.80,0.85,1.06,0.68
SOM558	phillipsi	Somaliland, Xangay	8.9474, 45.5263	19.61	2.71, 2.95	1.05,1.05,0.65,1.24,1.16,0.78,1.20,1.14,0.82,0.94,1.15,0.89
SOM584	glaber	Somaliland, Sheikh	9.9413, 45.1813	26.80	3.37, 3.65	1.20,1.21,1.02,1.30,1.61,1.11,1.10,1.20,1.27,1.18,1.40,1.35
SOM585	glaber	Somaliland, Sheikh	9.9413, 45.1813	24.62	3.41, 3.85	1.13,1.26,1.00,1.27,1.53,1.13,1.15,1.24,1.28,1.14,1.41,1.39

Supplementary Table 6. Presence records of *Heterocephalus*, based on our collections and published data. When in bold the lineage labels are based on genetic data, otherwise on dental measurements. The type series of *scorteccii* is no longer available (believed to be destroyed) and upper molar row lengths in de Beaux (1934) seem to be biased as they are often out of the range otherwise observed in the genus. Nevertheless, the upper molar row lengths are still markedly shorter in the types of *scorteccii*, compared to other material, which allowed us to classify it to *phillipsi*. The classification of *progrediens* types to *ansorgei* is due to Denys (2022) and consistent with its area of origin. The other types are: NHMUK-1885.12.10.1 (*phillipsi*), NHMUK-1898.9.25.3 (*ansorgei*) and NHMUK-1904.5.9.23 (*dunni*). The precise collection site of SMNS-855 (*glaber*) is not known.

ID	Lineage	Country	Site	Latit.	Longit.	Source
Capanna1980-War		Somalia	War Mahn	2.4000	45.0100	Capanna and Merani 1980
Capanna1980-Warshek		Somalia	Warshek	2.3200	45.8000	Capanna and Merani 1980
CAS-15941		Kenya	Laisumis	1.6000	37.8000	museum record
CAS-15942		Kenya	Buna	2.7833	39.5167	museum record
CUNI-ETH756		Ethiopia	Kebri Dehar	6.5556	44.2512	unpublished record
deBeaux1934-Abruzzi		Somalia	Villagio Duca degli Abruzzi (Jowhaar)	2.7775	45.5018	de Beaux 1934
deBeaux1934-Afgoi		Somalia	Afgoi (Afgoye)	2.1431	45.1176	de Beaux 1934
deBeaux1934-Belet		Somalia	Belet Amin	2.7000	45.2833	de Beaux 1934
deBeaux1934-Brava		Somalia	Brava (Baraawe)	1.1165	44.0314	de Beaux 1934
deBeaux1934-Gelib		Somalia	Gelib (Jilib)	0.4921	42.7783	de Beaux 1934
deBeaux1934-Guban		Ethiopia	Guban-Gubu	6.9448	42.6117	de Beaux 1934
Djibouti131	***glaber***	Djibouti	Assamo	10.9730	42.8660	this study
ETH1080	***ansorgei***	Ethiopia	Geralle NP	4.4089	39.4658	this study
Faulkes1997-Rungno		Somalia	Rungno waterhole	4.1618	47.1719	Faulkes et al. 1997
FMNH-220950	***ansorgei***	Kenya	Meru NP, Leopard Rock Lodge	0.2226	38.2009	museum record
FMNH-8184		Somalia	Jerato Pass, Golis Mts	9.8500	44.7167	museum record
FMNH-8185		Somalia	Hullier	9.6126	43.9191	museum record
iNaturalist-105983370		Kenya	Meru NP	0.2157	38.0203	iNaturalist
iNaturalist-106962057		Ethiopia	East Hararghe	9.6111	41.7222	iNaturalist
iNaturalist-161089922		Kenya	Ngurunit	1.7299	37.3079	iNaturalist
iNaturalist-246726321		Ethiopia	Zone 3 Gabi Rasu	9.4734	40.3101	iNaturalist
iNaturalist-31518		Kenya	West Gate Com. Cons.	0.8699	37.3148	iNaturalist
iNaturalist-38385931		Somaliland	Hargeisa	9.5624	44.0770	iNaturalist
iNaturalist-6870593		Ethiopia	North Shewa	9.5561	39.8605	iNaturalist
Jarvis2002-02		Kenya		3.3000	39.0000	Jarvis & Sherman 2002
Jarvis2002-03		Kenya		-0.5000	39.5000	Jarvis & Sherman 2002
Jarvis2002-05		Somalia		0.0000	42.5000	Jarvis & Sherman 2002
Jarvis2002-06		Somalia		2.6000	43.2000	Jarvis & Sherman 2002

Jarvis2002-07		Somalia		1.1000	43.7000	Jarvis & Sherman 2002
Jarvis2002-08		Somalia		9.0000	44.0000	Jarvis & Sherman 2002
Jarvis2002-09		Somalia		4.6000	45.1000	Jarvis & Sherman 2002
Jarvis2002-10		Somaliland		9.7000	45.8000	Jarvis & Sherman 2002
Jarvis2002-11		Somaliland		10.5000	47.6000	Jarvis & Sherman 2002
JJ072	***ansorgei***	Kenya	Mtito Andei	-2.6926	38.1668	this study
Kenya4962	***ansorgei***	Kenya	Meru NP	0.1557	38.2243	this study
LACM-39679		Kenya	Il Gerai; Milgis R; Barsaloi	1.5667	37.3167	museum record
LAV1704	***glaber***	Ethiopia	Babile Eleph. Sanctuary	9.1520	42.2570	Zemlemerova et al. 2020a
LAV2953	***ansorgei***	Ethiopia	Borena NP	4.5660	38.3150	Zemlemerova et al. 2020a
LAV2984	***ansorgei***	Ethiopia	Borena NP	4.5480	38.2770	Zemlemerova et al. 2020a
LAV3119	***ansorgei***	Ethiopia	AreroForest	4.8190	38.8190	Zemlemerova et al. 2020a
LAV3193	***ansorgei***	Ethiopia	Borena NP -Megadu block	3.8040	38.0990	Zemlemerova et al. 2020a
LAV3411	***glaber***	Ethiopia	Jeldessa	9.7620	42.2820	Zemlemerova et al. 2020b
LAV3430	***glaber***	Ethiopia	Dire Dawa	9.6210	41.8410	Zemlemerova et al. 2021
LAV3508	***glaber***	Ethiopia	Babile Elep.Sanctuary	9.1780	42.2480	Zemlemerova et al. 2020b
LAV4202		Ethiopia	Kebri Dehar	6.6387	44.3208	unpublished record
LAV4209		Ethiopia	Kebri Dehar	6.6713	44.1879	unpublished record
LAV4243		Ethiopia	Kebri Dehar	6.8347	44.2561	unpublished record
MCZ-59861		Kenya	8 km N and 3 km W of Mitito Andei	-2.6167	38.0500	museum record
MCZ-59997		Kenya	6 km N and 3 km W of Mitito Andei	-2.6333	38.1333	museum record
MCZ-60047		Kenya	Mbuvu, 4 km N, 12 km E of Nguni	-0.7750	38.4250	museum record
MHNG-MAM-926.056		Kenya	Mitunguu	-0.0240	37.8870	museum record
MNHN-ZM-MO-1978-268		Somalia	Afmadu	0.4500	42.0833	museum record
MNHN-ZM-MO-1978-269	*ansorgei*	Somalia	Genale	1.8100	44.6900	museum record
MVZ-Mamm-170982		Kenya	5 km N Mtito Andai	-2.6667	38.3833	museum record
NHMUK-1885.12.10.1	*phillipsi*	Ethiopia	Gerlogobie (Gedlegube)	6.8833	44.9167	Thomas 1885
NHMUK-1898.9.25.3	*ansorgei*	Kenya	between Ngomeni and Kinani	-2.8800	38.3450	Thomas 1903
NHMUK-1903.12.3.1	*phillipsi*	Somalia	Mogadishu	2.0647	45.3192	museum record
NHMUK-1904.5.9.23	*phillipsi*	Ethiopia	Wardairi	6.9700	45.3400	Thomas 1904
NHMUK-1909.6.1.28	*ansorgei*	Kenya	Banissa, Boran	3.9420	40.3452	museum record
NHMUK-1932.2.19.9	*ansorgei*	Kenya	Garba Tula	0.5267	38.5144	museum record
NHMUK-1951.702	*ansorgei*	Kenya	Sankuri Tana R.	-0.1268	39.5438	museum record
NHMUK-1987.950		Somalia	Balcad	2.3600	45.3860	museum record
NMK-3050		Kenya	Horr Valley	2.2800	36.8800	GBIF

NMK-Tana		Kenya	Lower Tana	-0.8522	37.6219	GBIF
NMK-TsavoEast		Kenya	Tsavo East NP	-2.7817	38.8332	GBIF
ROM-73304		Kenya	Voi	-3.3833	38.5833	museum record
SOM344	***glaber***	Somaliland	Habas	10.4113	42.8152	this study
SOM369	***glaber***	Somaliland	Xeego	10.2404	43.0515	this study
SOM406	***glaber***	Somaliland	Agabar	9.9330	43.9048	this study
SOM416	***glaber***	Somaliland	Boorama Amound Univ.	9.9469	43.2231	this study
SOM512	***phillipsi***	Somaliland	Shanshacade	8.6604	45.9569	this study
SOM558	***phillipsi***	Somaliland	Xangay	8.9474	45.5263	this study
SOM584	***glaber***	Somaliland	Sheikh	9.9413	45.1813	this study
type-progrediens	*ansorgei*	Kenya	Thornbush country N of Northern Guaso Nyiro	0.9000	38.5000	Lönnberg 1911
type-scorteccii	*phillipsi*	Somalia	Gardo (Qardho)	9.5100	49.0900	de Beaux 1934
U87521	***ansorgei***	Ethiopia	Dembalawachu	4.8830	38.1000	Faulkes et al. 1997
U87522	***ansorgei***	Kenya	Lerata	0.6170	37.6500	Faulkes et al. 1997
USNM-083925		Somalia	Luuq (Lugh)	3.8000	42.5500	museum record
USNM-484012		Kenya	Samburu Game Lodge, Ewaso Nyiro River	0.5700	37.5500	museum record
UWBM-Mamm-36466		Kenya	Nuu; Kitui	-1.0667	38.3333	museum record
Yalden1976-ArsuRiver		Ethiopia	Arsu River	10.0830	40.0000	Yalden et al. 1976
Yalden1976-AuataRivver		Ethiopia	Auata River	5.2500	39.1300	Yalden et al. 1976
Yalden1976-AwashNP		Ethiopia	Awash NP	8.9000	39.9170	Yalden et al. 1976
Yalden1976-Elolo		Kenya	Elolo	4.3800	36.2300	Yalden et al. 1976
Yalden1976-Harar		Ethiopia	Harar, 30km E	9.2500	42.3330	Yalden et al. 1976
Yalden1976-Meghenlo		Ethiopia	Meghenlo	6.6670	46.4170	Yalden et al. 1976
Yalden1976-Milmil		Ethiopia	Milmil	8.3000	43.8830	Yalden et al. 1976
Yalden1976-Sassabane		Ethiopia	Sassabane	7.8830	43.6670	Yalden et al. 1976
Yalden1976-SofOmar		Ethiopia	Sof Omar	6.9000	40.8000	Yalden et al. 1976
Zemanova2012-Makindu		Kenya	Makindu	-2.2300	37.8200	Zemanová et al. 2012

The museum records were accessed either directly or through http://vertnet.org or https://www.gbif.org.

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Supplementary Table 7. Ecological variables and their means and extremes at places with recorded presence of particular lineage. The variables included in Maxent model are marked with asterisk.

Variable			Lineage		
	Definition	Unit	*ansorgei*	*glaber*	*phillipsi*
Climate					
BIO01*	Annual mean temperature	°C	23.9 (20.2-26.9)	23.2 (20.9-27.1)	25.7 (24.8-26.7)
BIO02*	Mean diurnal range of temperatures	°C	9.4 (6.1-10.4)	11.1 (10.2-11.6)	10.3 (5.9-11.6)
BIO03*	Isothermality (BIO2/BIO7)		0.7 (0.6-0.8)	0.6 (0.5-0.7)	0.7 (0.6-0.7)
BIO04*	Temperature seasonality (st. dev.)	°C	1.1 (0.8-1.3)	2.0 (0.8-3.3)	1.3 (0.9-2.1)
BIO05*	Max temperature of warmest month	°C	31.1 (28.5-33.6)	31.5 (28.0-37.3)	32.7 (31.9-33.9)
BIO06*	Min temperature of coldest month	°C	17.9 (14.4-22.7)	14.1 (12.2-17.5)	17.9 (15.3-22.6)
BIO07	Temperature annual range	°C	13.2 (9.6-14.4)	17.4 (15.2-19.9)	14.8 (9.3-17.4)
BIO08	Mean temperature of wettest quarter	°C	24.1 (20.3-27.9)	23.7 (20.9-26.5)	26.4 (25.7-27.2)
BIO09*	Mean temperature of driest quarter	°C	23.6 (21.3-27.9)	21.1 (18.4-30.7)	24.5 (21.8-27.5)
BIO10*	Mean temperature of warmest quarter	°C	25.6 (22.2-28.6)	25.5 (21.9-31.1)	27.2 (26.7-28.0)
BIO11	Mean temperature of coldest quarter	°C	22.6 (18.8-25.5)	20.1 (18.4-22.5)	23.7 (21.8-25.2)
BIO12*	Annual precipitation	mm	589 (363-790)	515 (323-750)	302 (117-556)
BIO13	Precipitation of wettest month	mm	148 (87-199)	95 (56-122)	72 (33-106)
BIO14*	Precipitation of driest month	mm	9 (1-23)	8 (5-11)	1 (0-1)
BIO15*	Precipitation seasonality (coef. var.)	%	92 (63-114)	65 (60-69)	104 (74-124)
BIO16	Precipitation of wettest quarter	mm	362 (233-488)	251 (161-335)	193 (90-283)
BIO17	Precipitation of driest quarter	mm	28 (3-72)	28 (15-40)	3 (0-5)
BIO18*	Precipitation of warmest quarter	mm	108 (17-168)	118 (58-190)	50 (35-89)
BIO19*	Precipitation of coldest quarter	mm	72 (11-245)	32 (15-44)	78 (0-185)
Soil					
bulk	Bulk density	kg/dm3	1.4 (1.2-1.5)	1.4 (1.3-1.5)	1.5 (1.4-1.5)
carbon	Carbon content	g/kg	9.9 (3.8-18.2)	12.1 (4.8-25.8)	9.2 (8.0-11.4)
clay*	Proportion of clay particles (< 0.002 mm) in the fine fraction	mass %	31.4 (22.9-48.8)	31.0 (18.9-37.9)	36.0 (32.4-42.7)
coarse	Volumetric fraction of coarse fragments (> 2 mm)	vol. %	11.0 (4.9-20.3)	33.8 (10.0-53.6)	20.2 (11.9-33.2)
sand*	Proportion of sand particles (> 0.05 mm) in the fine fraction	mass %	47.5 (6.5-58.5)	45.4 (33.3-59.8)	30.8 (19.2-40.4)

Supplementary Table 8. A list of Sanger-sequenced loci with primers and lengths of final products.

Gene	Sequences of primers (5´-3´)	Length (bp)	Reference
CYTB	L: CGAAGCTTGATATGAAAAACCATCGTTG H: AACTGCAGTCATCTCCGGTTTACAAGAC	1126	Irwin et al. 1991
CYTB (Djibouti)	L: CCRTAAATWGGNGAAGGYTT H: CTGGTTGRCYYCCRATTCATG	1012	this study
CYTB (museum spec.)	L: CGAAGCTTGATATGAAAAACCATCGTTG H: TTGGCGTGTARGTATCGG	236	Irwin et al. 1991 this study
	L: CACYGCAGACACAGCCACCG H: GCTGAGAATAGGTTTGTGATGACTGT	245	this study
	L: CCATGAGGACAAATATCATTCTGAGGTGC H: AGTCTTTAAATGAGTAGTAGGGGTGGAATGG	195	this study
	L: CTTCGCCTTCCACTTCATCCTA H: TGCTGGTGTGTAGTTATCGGGGT	199	this study
	L: ACTAACACTATTCCACCCAGACCTACTA H: TAGTTTGTTGGGAATAGAGCGTAGG	73	this study
	L: TCCAAACAACGCAGCATAATA H: TCTCCATTTCTGGTTTACAAGAC	192	this study Lecompte et al. 2002
RAG1	L: GCTTTGATGGACATGGAAGAAGACAT H: GAGCCATCCCTCTCAATAATTTCAGG	983	Teeling et al. 2000
DHCR	L: CAGGACATGCTGGTGCCCATGAA H: CCTGGCTGGCTGGGCAGGATGAA	301	Rodríguez-Prieto et al. 2014
FGB	L: GGGGAGAACAGAACCATGACCATCCAC H: ACCCCAGTAFTATCTGCCATTCGGATT	750	Wickliffe et al. 2003
SMO	L: GCCACCCTGCTCATCTGGAGGCG H: TTGGCRATCATCTTGCTYTTCTTGA	395	Rodríguez-Prieto et al. 2014
TRPV	L: TTACCRBACCACVGYGGACTACCT H: CTGGAAGGAGCCRTCGAYGAAGA	352	Rodríguez-Prieto et al. 2014

Each 10 µl PCR reaction contained 5 µl of Qiagen Multiplex PCR Master Mix or Qiagen HotStarTaq Master Mix Kit, 0.3 µl of each forward and reverse primer (10 µM), 0.5 µl of DNA, and 3.9 µl ddH2O. PCR conditions for cytochrome b marker followed instructions of Faulkes et al (1997). The PCR program for amplification of short museum fragments included an initial denaturation at 95°C for 3 min, 45 cycles of 95°C for 30 s, 51°C for 30 s, 72°C for 30 s, and a final extension at 72°C for 6 min. The thermocycling conditions for RAG1, DHCR, SMO, and TRPV consisted of initial denaturation step at 95°C for 15min, 10 cycles of 94°C for 30s, 65°C for 30s (decreasing by 1°C with each cycle), 72°C for 1min, then 25 cycles of 94°C for 30s, 55°C for 30s, and 72°C for 1min, with the final step of 72°C for 10min. Amplification for FGB gene started with initial denaturation at 95°C for 15min, following by 35 cycles of 94°C for 40s, 59°C for 45s, 72°C 1min 30s, and ending with final extension at 72°C for 10min. The quality and lengths of fragments were verified by an electrophoresis in an 1% agarose gel. The purification of all amplified PCR products was performed by two enzymes (Exonuclease I,

E.coli (Exo I, 20,000 units/ml) and Alkaline Phosphatase, Calf Intestinal (CIP, 10,000 units/ml) from New England BioLabs)) according to the following protocol: 0.05 µl Exo I, 0.1 µl CIP, 1 µl ddH2O and 5 µl of PCR product; 37°C for 30min, 85°C for 15min in thermocycler. All genes were commercially sequenced with forward primers and those with lower quality results, were sequenced from reverse side for the verification. The sequencing process was accomplished by GenSeq s.r.o. company.

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Supplementary Table 9. Parameters used in the ipyrad assembly of ddRAD sequence loci.

heterocephalus	## [0] [assembly_name]: Assembly name.
./	## [1] [project_dir]: Project directory.
	## [2] [raw_fastq_path]: Location of raw non-demultiplexed fastq files.
	## [3] [barcodes_path]: Location of barcodes file.
*fastq	## [4] [sorted_fastq_path]: Location of demultiplexed/sorted fastq files.
reference	## [5] [assembly_method]: Assembly method.
Heterocephalus_glaber_GCA_944319715.1_Naked_mole-rat_maternal_genomic.fna	## [6] [reference_sequence]: Location of reference sequence file.
pairddrad	## [7] [datatype]: Datatype.
CATGC, AATT	## [8] [restriction_overhang]: Restriction overhang (cut1, cut2).
5	## [9] [max_low_qual_bases]: Max low qual. base calls (Q<20) in a read.
33	## [10] [phred_Qscore_offset]: phred Q score offset (33 is very standard).
10	## [11] [mindepth_statistical]: Min depth for statistical base calling.
10	## [12] [mindepth_majrule]: Min depth for majority-rule base calling.
10000	## [13] [maxdepth]: Max cluster depth within samples.
0.85	## [14] [clust_threshold]: Clustering threshold for de novo assembly.
1	## [15] [max_barcode_mismatch]: Max no. of mismatches in barcodes.
2	## [16] [filter_adapters]: Filter for adapters/primers (1 or 2=stricter).
35	## [17] [filter_min_trim_len]: Min length of reads after adapter trim.
2	## [18] [max_alleles_consens]: Max alleles per site in consensus seq.
0.05	## [19] [max_Ns_consens]: Max N's (uncalled bases) in consensus.
0.05	## [20] [max_Hs_consens]: Max Hs (heterozygotes) in consensus.
4	## [21] [min_samples_locus]: Min # samples per locus for output.
0.2	## [22] [max_SNPs_locus]: Max # SNPs per locus.
8	## [23] [max_Indels_locus]: Max # of indels per locus.
0.5	## [24] [max_shared_Hs_locus]: Max # heterozygous sites per locus.
0, 0, 0, 0	## [25] [trim_reads]: Trim raw read edges (R1>, <R1, R2>, <R2).
0, 0, 0, 0	## [26] [trim_loci]: Trim locus edges (R1>, <R1, R2>, <R2).
*	## [27] [output_formats]: Output formats.
	## [28] [pop_assign_file]: Path to population assignment file