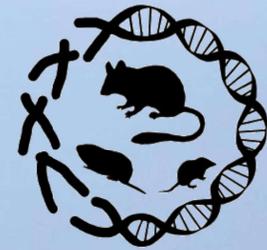




# Генетическое разнообразие голового землекопа (*Heterocephalus glaber*)



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## Genome sequencing reveals insights into physiology and longevity of the naked mole rat

Eun Bae Kim<sup>1\*</sup>, Xiaodong Fang<sup>2\*</sup>, Alexey A. Fushan<sup>1\*</sup>, Zhiyong Huang<sup>2\*</sup>, Alexei V. Lobanov<sup>3</sup>, Lijuan Han<sup>2</sup>, Stefano M. Marino<sup>3</sup>, Xiaoping Sun<sup>2</sup>, Anton A. Turanov<sup>3</sup>, Pengcheng Yang<sup>2</sup>, Sun Hee Yim<sup>3</sup>, Xiang Zhao<sup>2</sup>, Marina V. Kasaikina<sup>3</sup>, Nina Stoletzki<sup>3</sup>, Chunfang Peng<sup>2</sup>, Paz Polak<sup>3</sup>, Zhiqiang Xiong<sup>2</sup>, Adam Kiezun<sup>3</sup>, Yabing Zhu<sup>2</sup>, Yuanxin Chen<sup>2</sup>, Gregor V. Kravkov<sup>3,4</sup>, Qiang Zhang<sup>2</sup>

## Adaptations to a Subterranean Environment and Longevity Revealed by the Analysis of Mole Rat Genomes

Xiaodong Fang,<sup>1,2,10</sup> Inge Seim,<sup>3,4,10</sup> Zhiyong Huang,<sup>1</sup> Maxim V. Gerashchenko,<sup>3</sup> Zhiqiang Xiong,<sup>2</sup> Yabing Zhu,<sup>1</sup> Alexei V. Lobanov,<sup>3</sup> Dingding Fan,<sup>1</sup> Sun Hee Yim,<sup>3</sup> Xiaoming Yao,<sup>1</sup> Siming Ma,<sup>3</sup> Lan

## NEOTENY, PROLONGATION OF YOUTH: FROM NAKED MOLE RATS TO “NAKED APES” (HUMANS)

Vladimir P. Skulachev, Susanne Holtze, Mikhail Y. Vyssokikh, Lora E. B. ...  
Maxim V. Skulachev, Alexander V. Markov, Thomas B. Hildebrandt, and

## Family Wide Molecular Adaptations to Underground Life in African Mole-Rats Revealed by Phylogenomic Analysis

Kalina T.J. Davies,<sup>\*</sup> Nigel C. Bennett,<sup>2</sup> Georgia Tsagkogeorga,<sup>1</sup> Stephen J. Rossiter,<sup>\*</sup> and Christopher G. Faulkes<sup>\*</sup>



## Opportunities for new insight into aging from the naked mole-rat and other non-traditional models

Non-traditional model organisms can facilitate discovery when their natural properties provide insight into biological mechanisms that are invariant across standard-use lab species. Long-lived naked mole-rats provide insights for healthy aging.

Rochelle Buffenstein and J. Graham Ruby

## Resistance to experimental tumorigenesis in cells of a long-lived mammal, the naked mole-rat (*Heterocephalus glaber*)

BIOLOGICAL  
REVIEWS

Cambridge  
Philosophical Society

*Biol. Rev.* (2020), pp. 000–000.  
doi: 10.1111/brev.12660

## Surprisingly long survival of premature conclusions about naked mole-rat biology

Stan Braude<sup>1†\*</sup>, Susanne Holtze<sup>2†\*</sup>, Sabine Begall<sup>3</sup>, Julia Brenmoehl<sup>4</sup>, Hynek Burda<sup>5</sup>, Philip Dammann<sup>3,6</sup>, Delphine del Marmol<sup>7</sup>, Ekaterina Gorshkova<sup>8,9</sup>, Yoshiyuki Henning<sup>6,10</sup>, Andreas Hoefflich<sup>11</sup>, Annika Höhn<sup>12,13</sup>, Tobias Jung<sup>12</sup>, Dania Hamo<sup>14,15</sup>, Arne Sahn<sup>16</sup>, Yury Shebzukhov<sup>8,14</sup>, Radim Šumbera<sup>17</sup>, 2

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ГЕНЕТИКА, 2020, том 56, № 3, с. 355–360

КРАТКИЕ  
СООБЩЕНИЯ

УДК 599.324.11

## ПРЕДВАРИТЕЛЬНЫЕ СВЕДЕНИЯ ПО ФИЛОГЕОГРАФИИ ГОЛОГО ЗЕМЛЕКОПА *Heterocephalus glaber* (Rodentia: Heterocephalidae)

© 2020 г. Е. Д. Землемерова<sup>1</sup>, \*, Д. С. Костин<sup>1</sup>, А. Р. Громов<sup>1</sup>,  
А. А. Мартынов<sup>1</sup>, Д. Ю. Александров<sup>1</sup>, Л. А. Лавренченко<sup>1</sup>, \*\*

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ORIGINAL ARTICLE

JOURNAL OF  
ZOOLOGICAL SYSTEMATICS  
AND EVOLUTIONARY RESEARCH

WILEY

## Genetic diversity of the naked mole-rat (*Heterocephalus glaber*)

Elena D. Zemlemerova<sup>1</sup>  | Danila S. Kostin<sup>1</sup>  | Vladimir S. Lebedev<sup>2</sup> |  
Aleksey A. Martynov<sup>1</sup> | Anton R. Gromov<sup>1</sup> | Dmitry Yu. Alexandrov<sup>1</sup> |  
Leonid A. Lavrenchenko<sup>1</sup> 

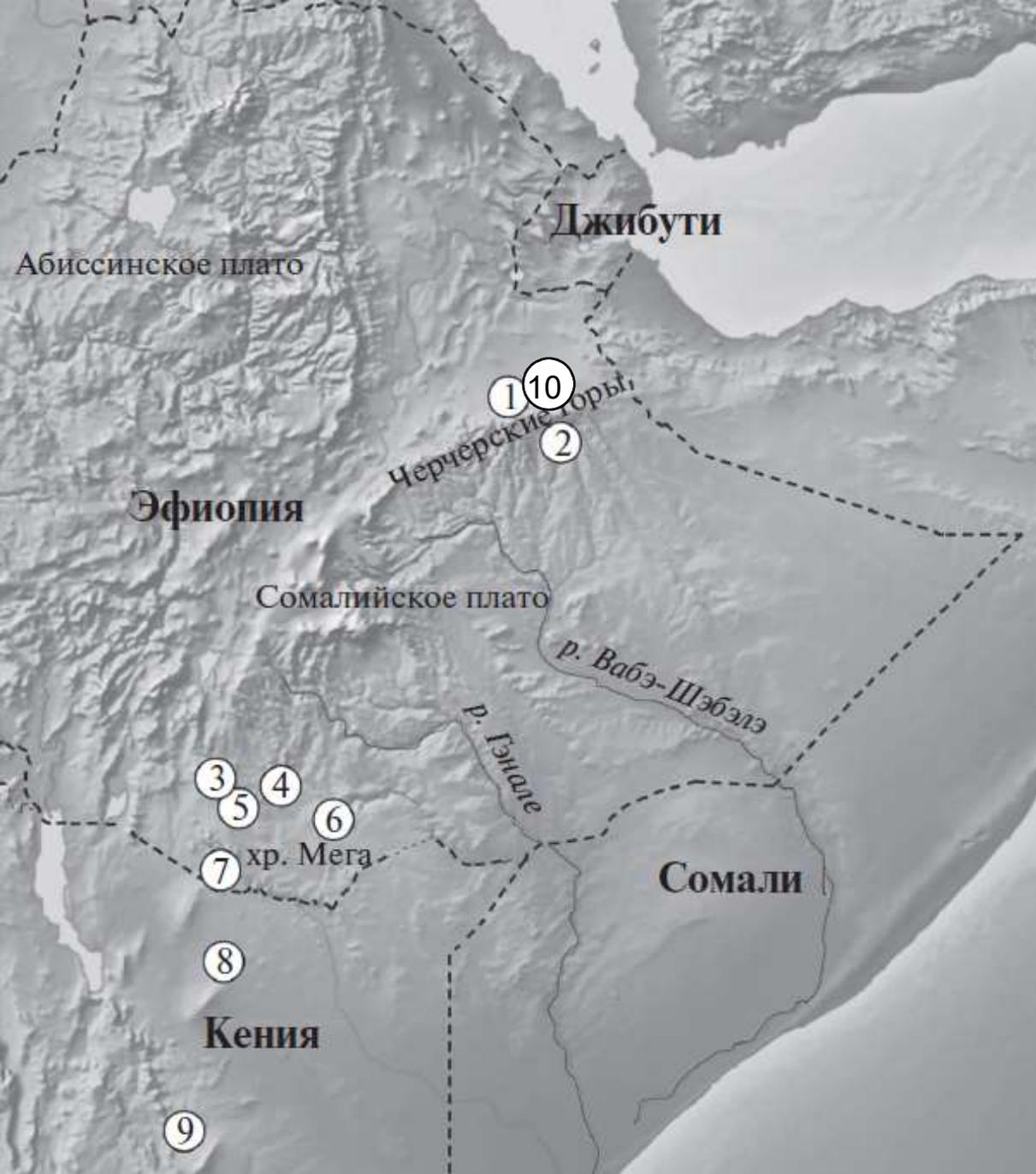
ГЕНЕТИКА, 2020, том 56, № 8, с. 964–968

КРАТКИЕ  
СООБЩЕНИЯ

УДК 599.324.11

## О МОНОМОРФИЗМЕ КАРИОТИПА ГОЛОГО ЗЕМЛЕКОПА *Heterocephalus glaber* (Rodentia: Heterocephalidae)

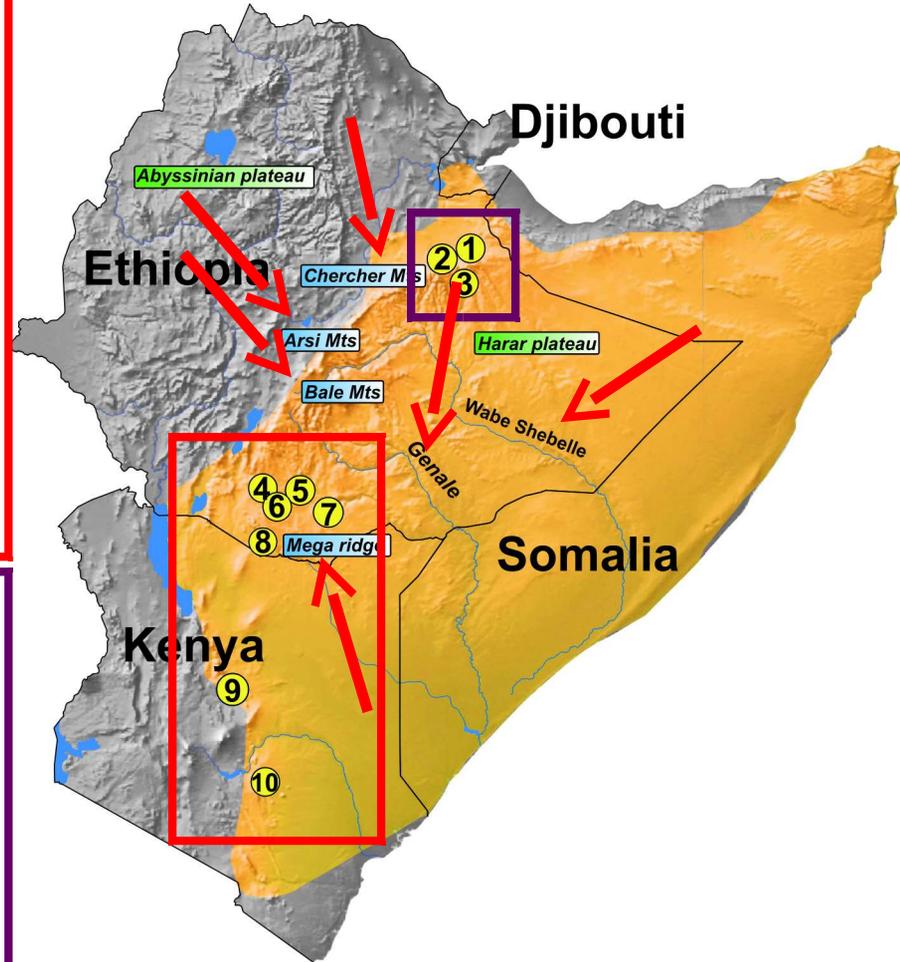
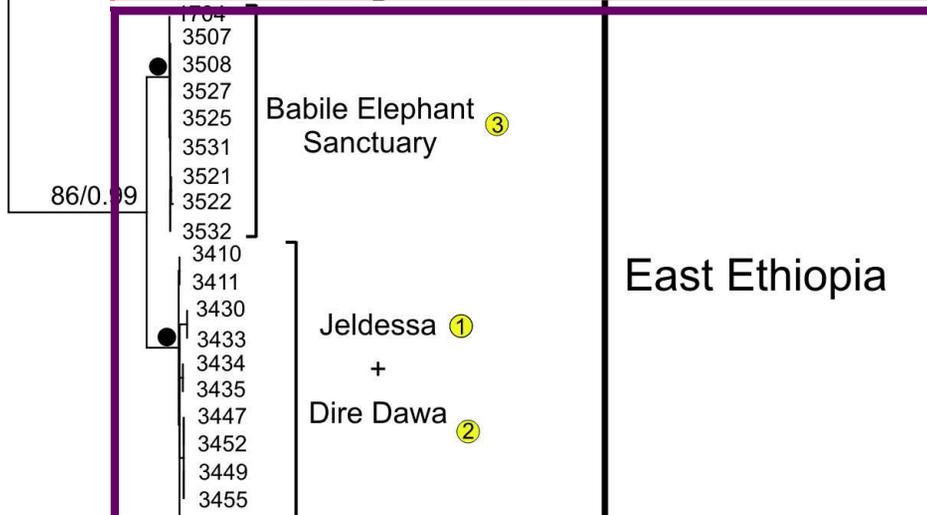
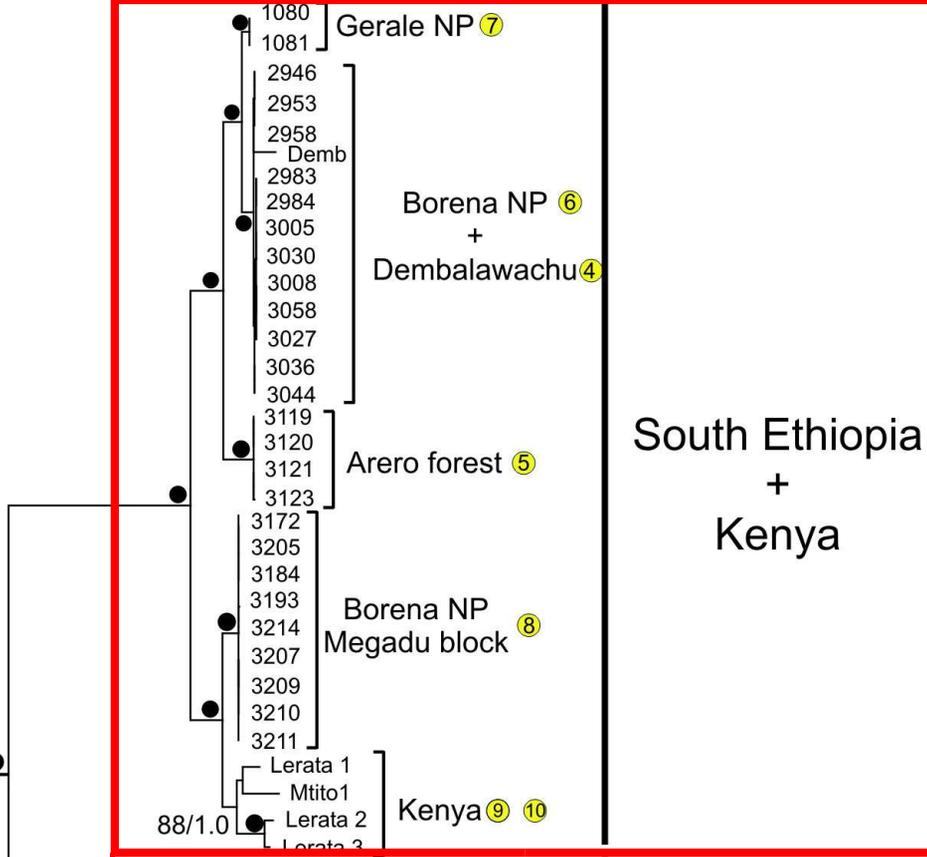
# 125 образцов из 25 колоний



- 1 - Дыре-Дауа
- 2 - Слоновый заказник Бабиле
- 3 - Дембалавачу
- 4 - Ареро
- 5 - НП Борена
- 6 - НП Герале
- 7 - НП Борена, блок Мегаду
- 8 - Лерата
- 9 - Мтито Андеи
- 10 - Джельдесса



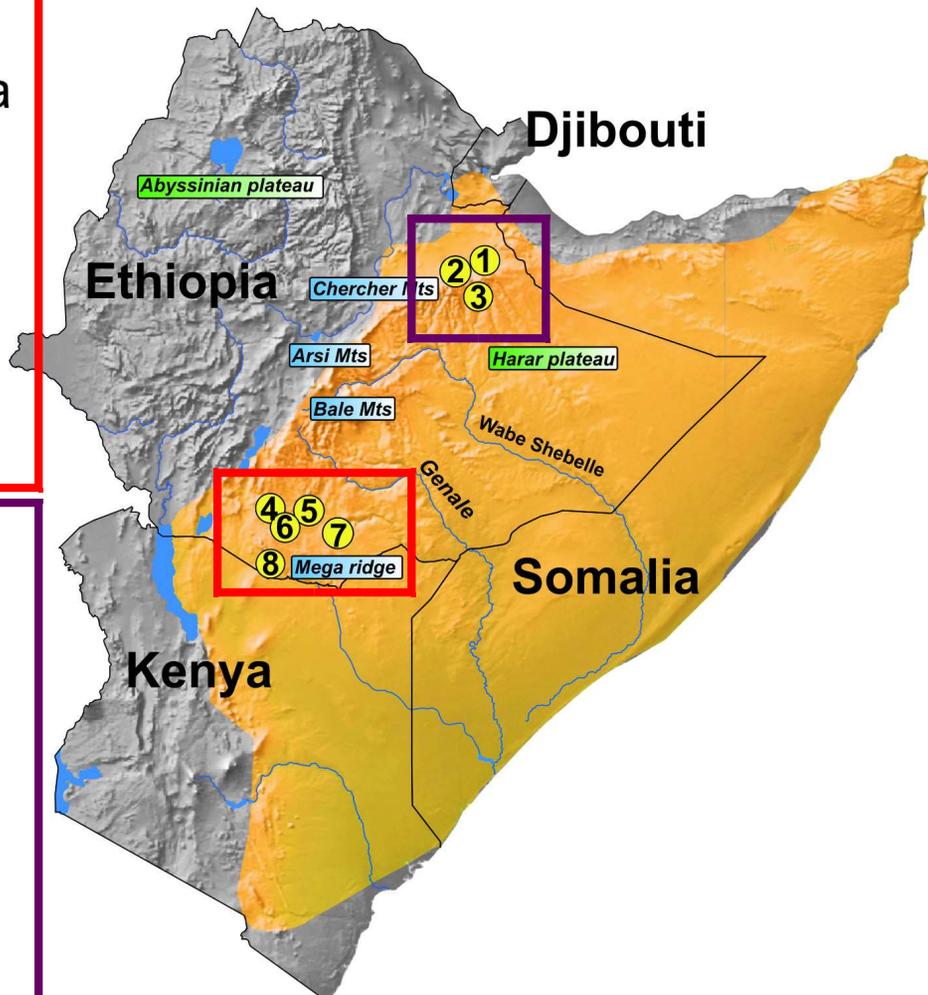
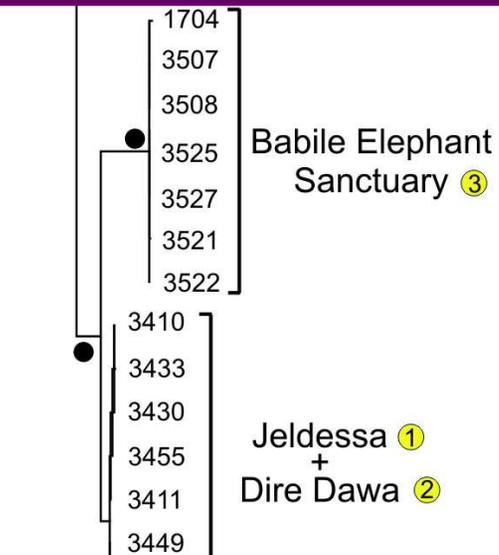
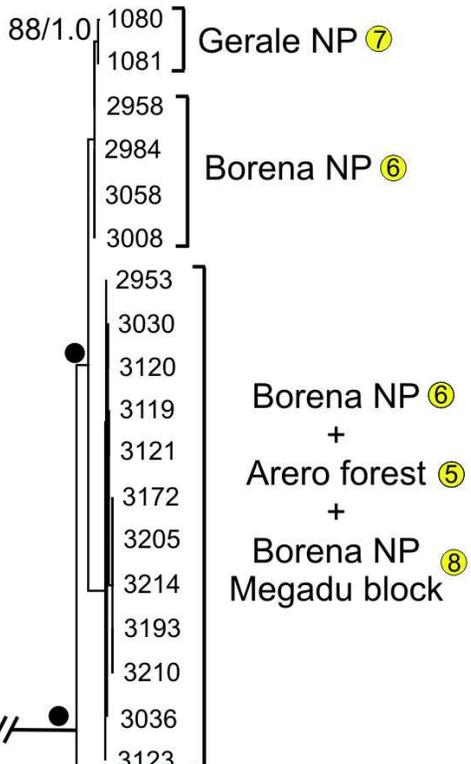
# Cytb+D-loop 2139 п.н.



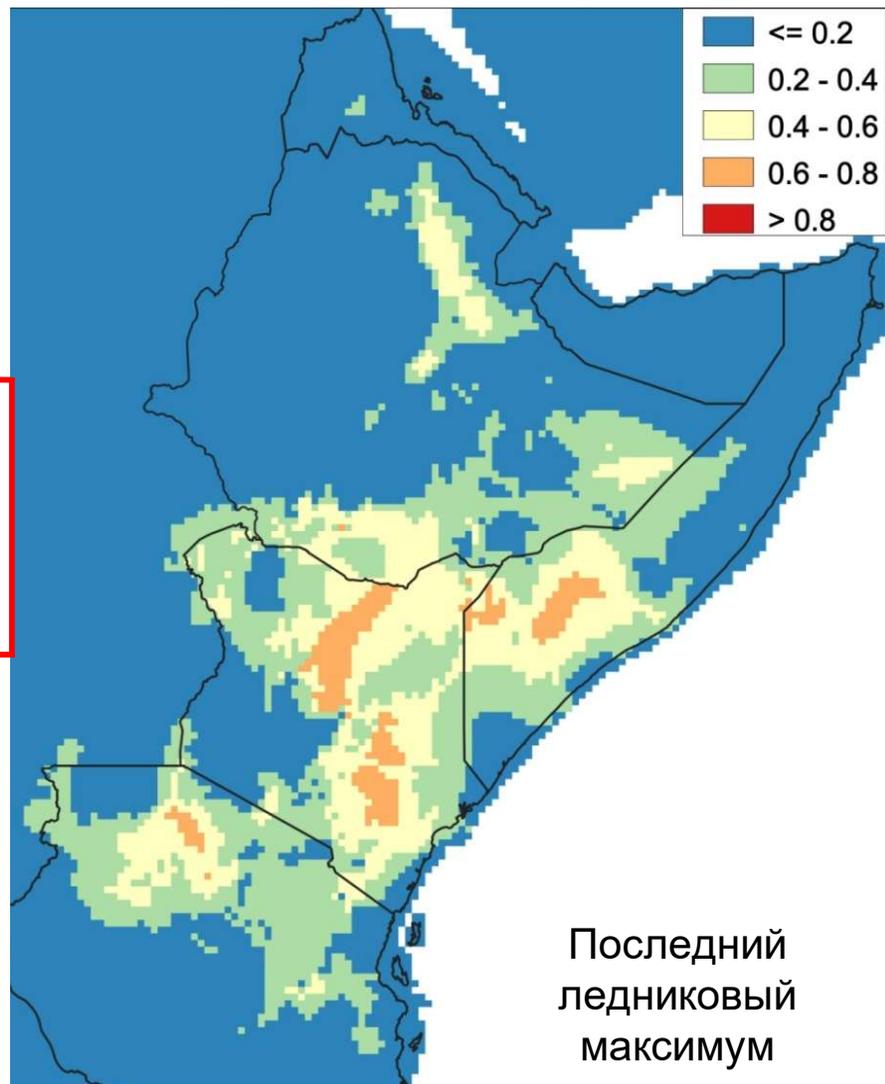
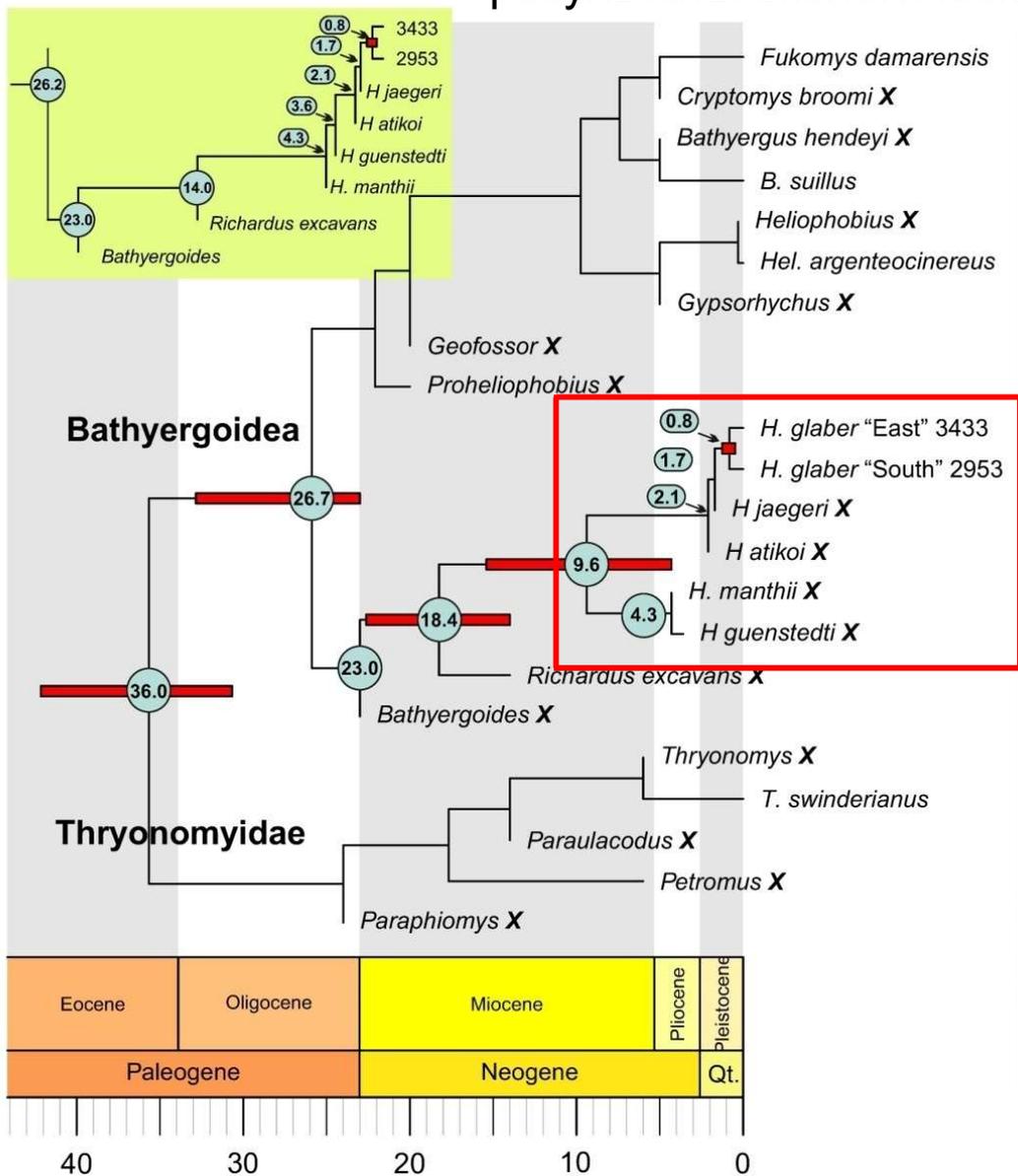
***A2ab+BRCA1+GHR+RAG1+vWF+IRBP***  
**6273 п.н.**

South Ethiopia

East Ethiopia



# результаты экологического моделирования



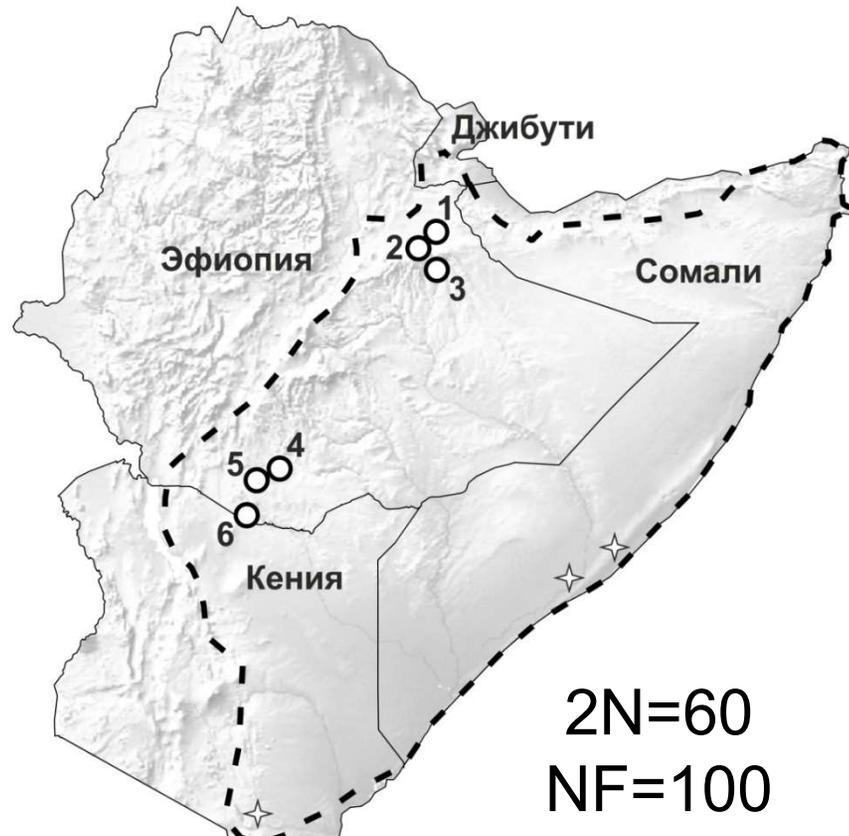
КРАТКИЕ  
СООБЩЕНИЯ

УДК 599.324.11

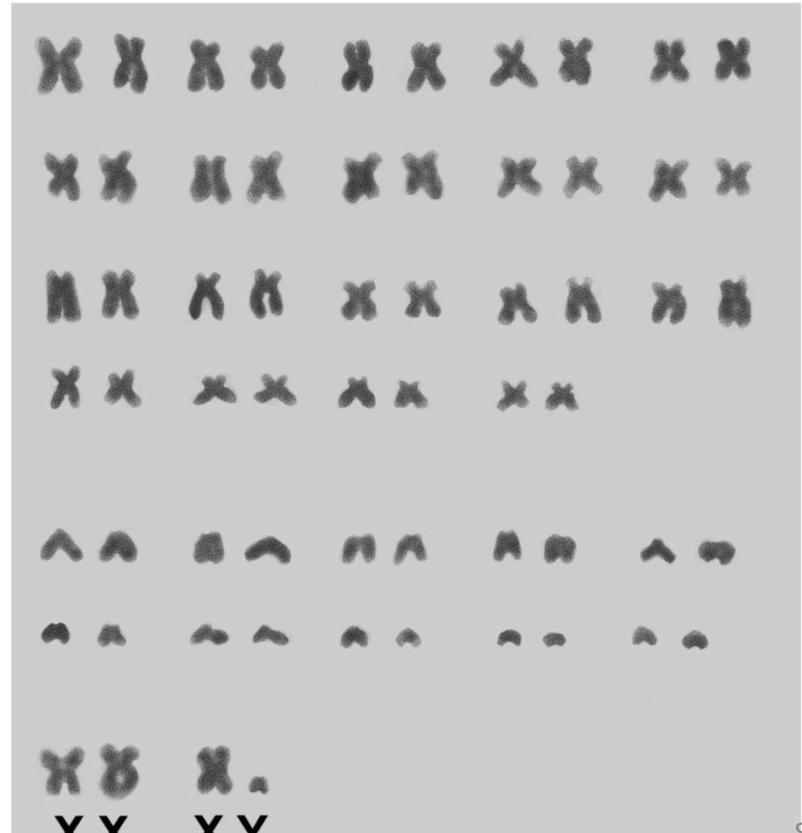
О МОНОМОРФИЗМЕ КАРИОТИПА ГОЛОГО ЗЕМЛЕКОПА  
*Heterocephalus glaber* (Rodentia: Heterocephalidae)

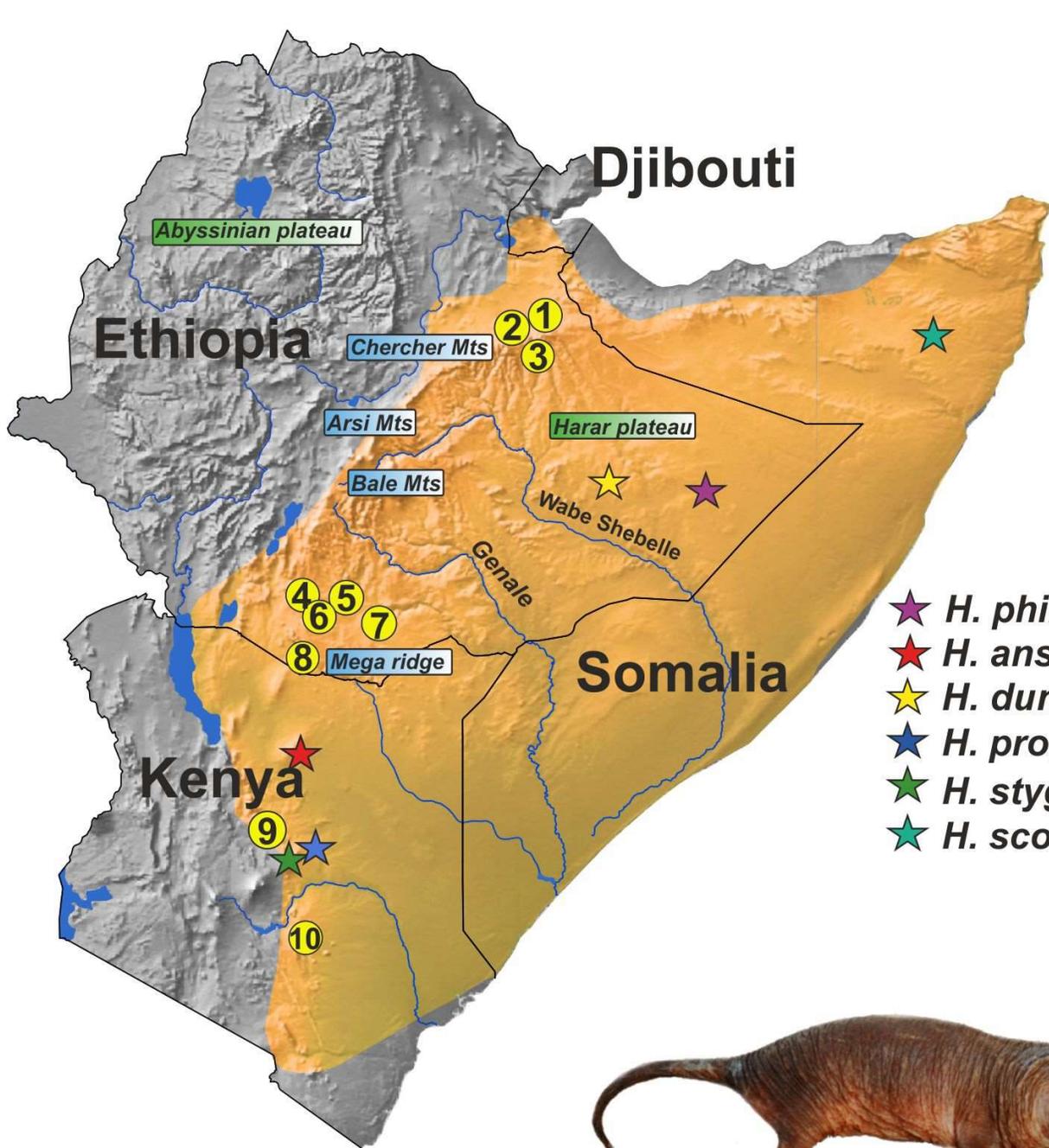
© 2020 г. Е. Д. Землемерова<sup>1, \*</sup>, Д. С. Костин<sup>1, \*\*</sup>, Л. А. Лавренченко<sup>1, \*\*\*</sup>

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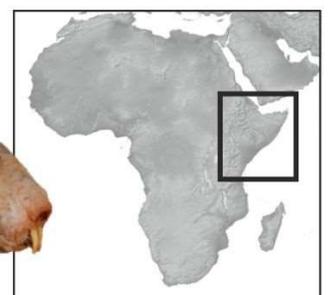
$2N=60$   
 $NF=100$





- 1 Jeldessa
- 2 Dire Dawa
- 3 Babile Elephant Sanctuary
- 4 Dembalawachu
- 5 Arero forest
- 6 Borena NP
- 7 Gerale NP
- 8 Borena NP Megadu block
- 9 Kenya, Lerata
- 10 Kenya, Mtito

- ★ *H. phillipsi* Thomas, 1885
- ★ *H. ansorgei* Thomas, 1903
- ★ *H. dunni* Thomas, 1909
- ★ *H. progreadiens* Lönnberg, 1911
- ★ *H. stygius* Allen, 1912
- ★ *H. scorteccii* de Beaux, 1934



**Спасибо за внимание**

