













Worldwide Donkey Breeds Project®

European Regional Focal Point for Animal Genetic Resources
General Assembly, 26 – 27th August, 2023, Lyon (France)

RBI: RARE BREEDS INTERNATIONAL

The Worldwide Donkey Breeds Project

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RBI Secretariat
PhD, MSc, DVMZ, Ramón y Cajal Researcher

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The hair follicles keratinize and although nuclear DNA persists, it is only present in very low quantities that do not allow a sufficient quality extraction.

Molecular Particularities

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Issues related to sample size and data structure

↓

Microsatellite vs SNP markers for filiation control and genotyping

↓

Small sample sizes that do not allow reliable results

Quantitative Particularities

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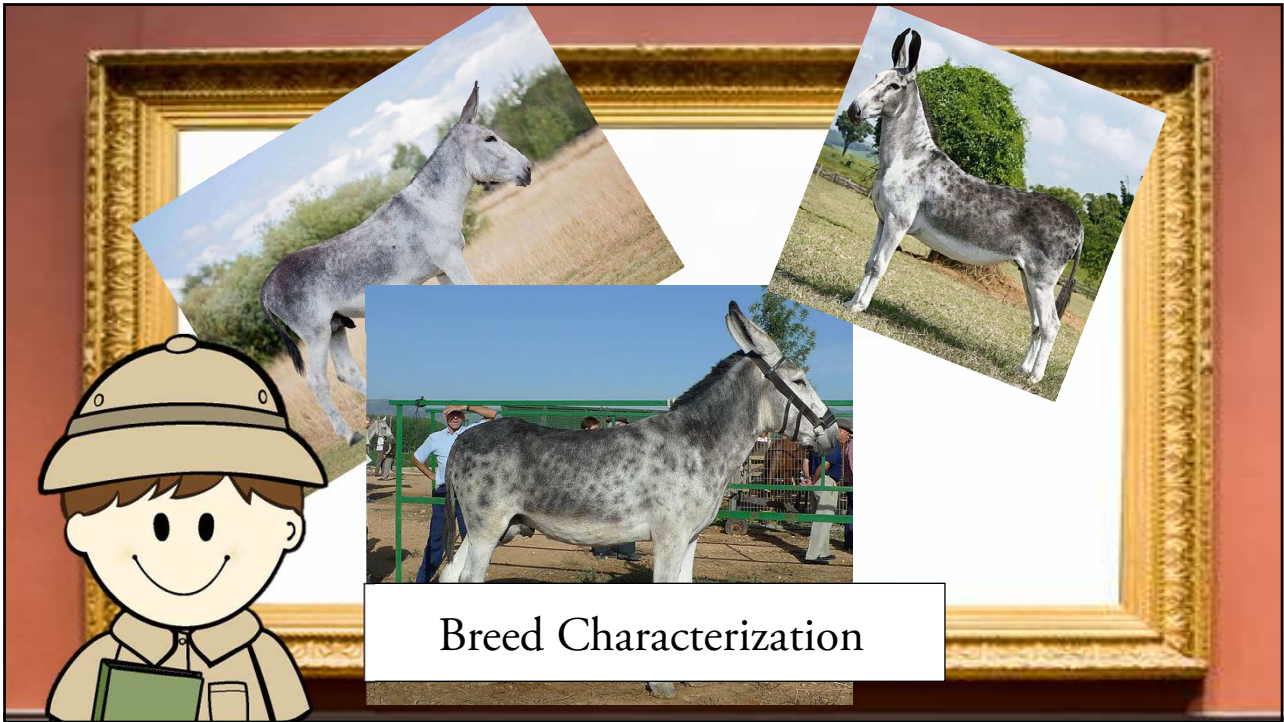


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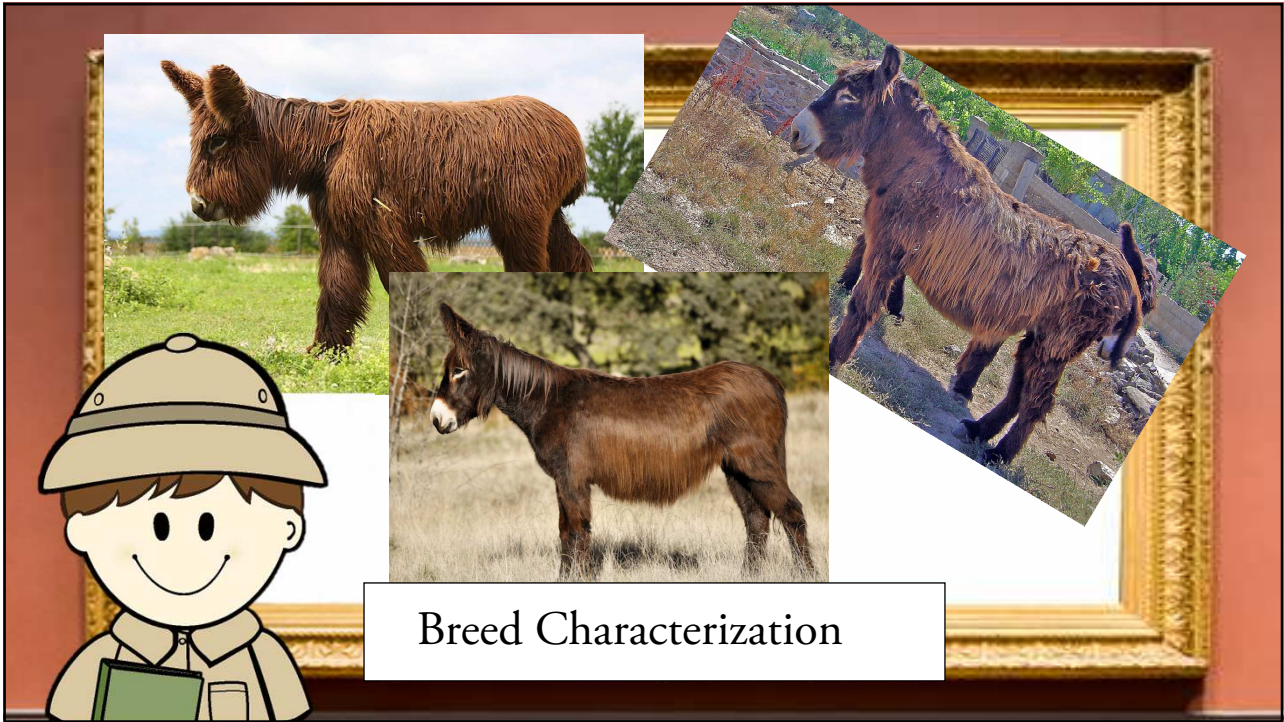
- Very controversial, and several definitions can be found.
- It is a population of a subspecies formed by individuals that show hereditary morphological, functional and genetic characteristics that distinguish them with respect to other populations of the species as much as for them to be recognized socioculturally and/or administratively.

Breed

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Breed Characterization

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Italian Journal of Animal Science

ISSN (Print) (Online) journal homepage: <http://www.taylorandfrancis.com/doi/10.1080/1828051X.2020.1790997>

Known loci in the *KIT* and *TYR* genes do not explain the depigmented white coat colour of Austro-Hungarian Baroque donkey

Gertrud Grilz-Seger, Valerio Joe Utzeri, Anisa Ribani, Valeria Taurisano, Luca Fontanesi & Gottfried Brem

To cite this article: Gertrud Grilz-Seger, Valerio Joe Utzeri, Anisa Ribani, Valeria Taurisano, Luca Fontanesi & Gottfried Brem (2020) Known loci in the *KIT* and *TYR* genes do not explain the depigmented white coat colour of Austro-Hungarian Baroque donkey, *Italian Journal of Animal Science*, 19:1, 739-743, DOI: [10.1080/1828051X.2020.1790997](https://doi.org/10.1080/1828051X.2020.1790997)

To link to this article: <https://doi.org/10.1080/1828051X.2020.1790997>

ANIMAL GENETICS Immunogenetics, Molecular Genetics and Functional Genomics

SHORT COMMUNICATION doi: 10.1111/age.12386

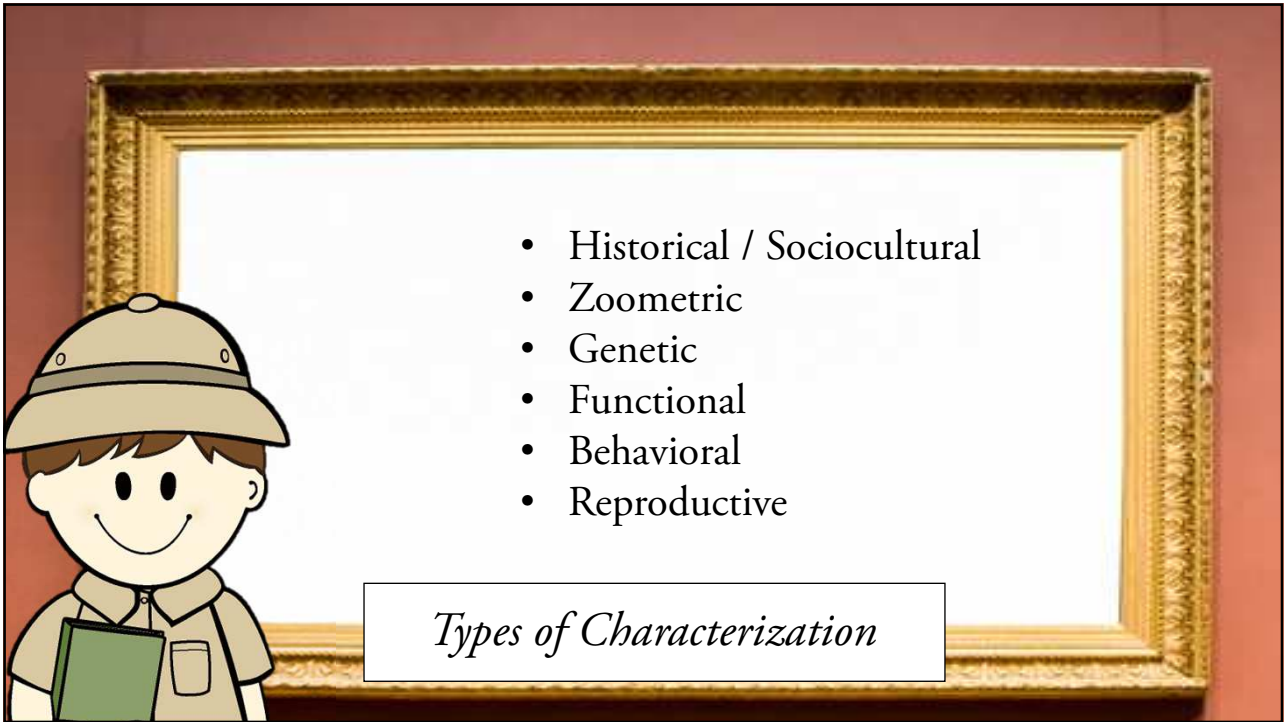
The albinism of the feral Asinara white donkeys (*Equus asinus*) is determined by a missense mutation in a highly conserved position of the tyrosinase (*TYR*) gene deduced protein

V. J. Utzeri, F. Bertolini, A. Ribani, G. Schiavo, S. Dall'Olio and L. Fontanesi
Department of Agricultural and Food Sciences, Division of Animal Sciences, University of Bologna, Viale Fanin 46, 40127 Bologna, Italy.

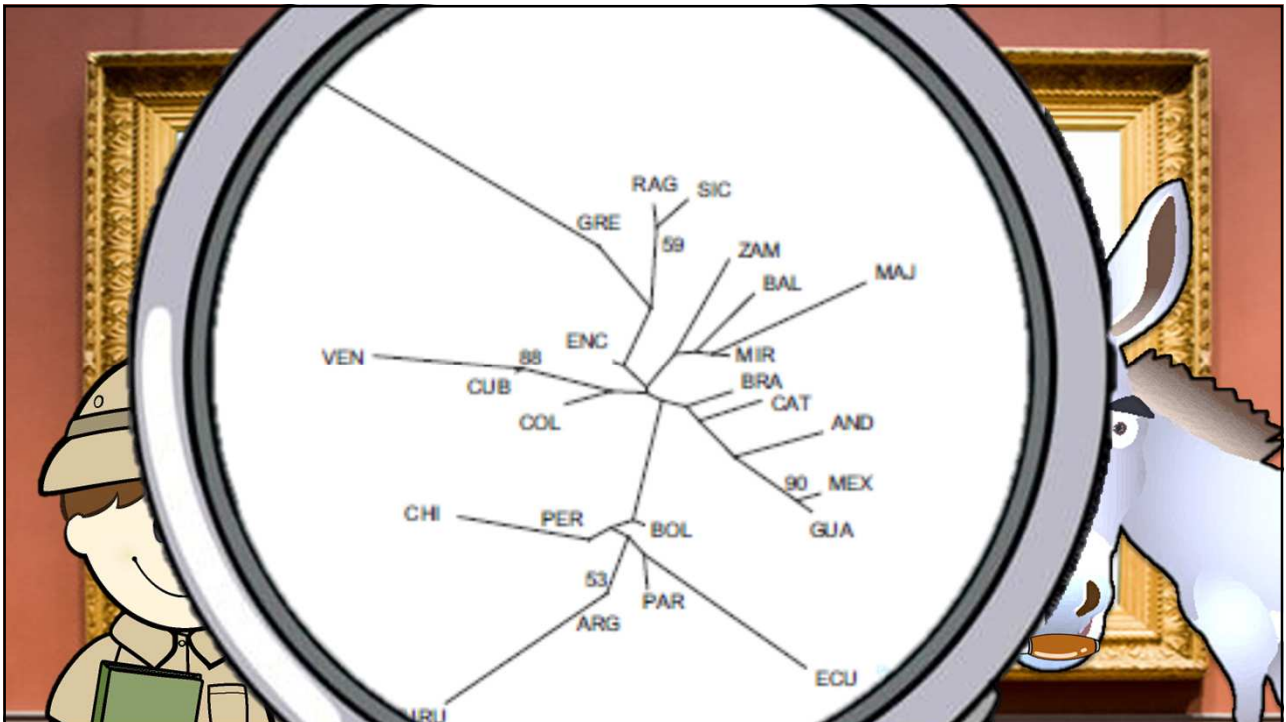
Historical information indicated that the della Asinara white (albino) donkey breed and the Austro-Hungarian Baroque white donkey breed could be genetically related. The *TYR* mutation identified in Asinara donkeys and the known polymorphic sites in the *KIT* gene associated with depigmented coat color in donkeys are not segregated in the white Austro-Hungarian Baroque donkey. Due to the different genetic backgrounds underlying an identical phenotype in two populations, no common ancestry can be assumed between the Asinara donkey and the white Austro-Hungarian Baroque donkey during the last century.

Breed Characterization

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- Marchetti and Engstrom (2016) present their paradox of species which are threatened in their native location but are considered threatening in other places where they have thrived.

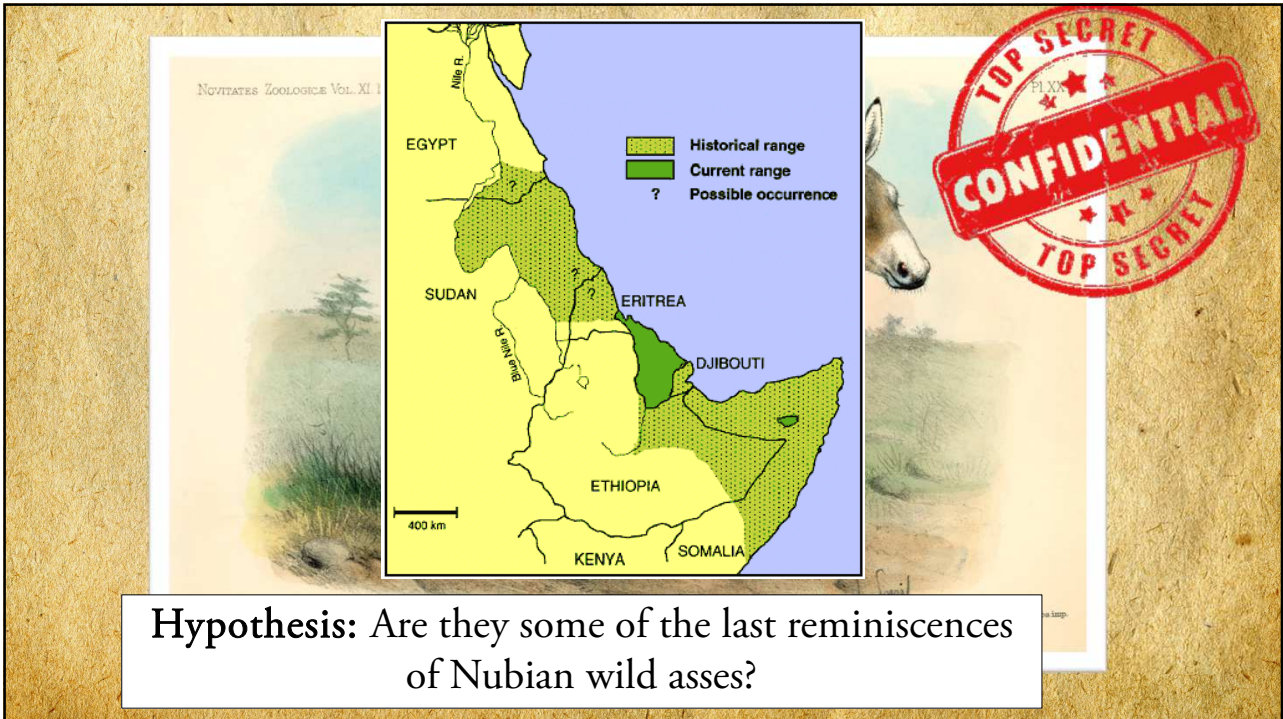
The Paradox of Conservation

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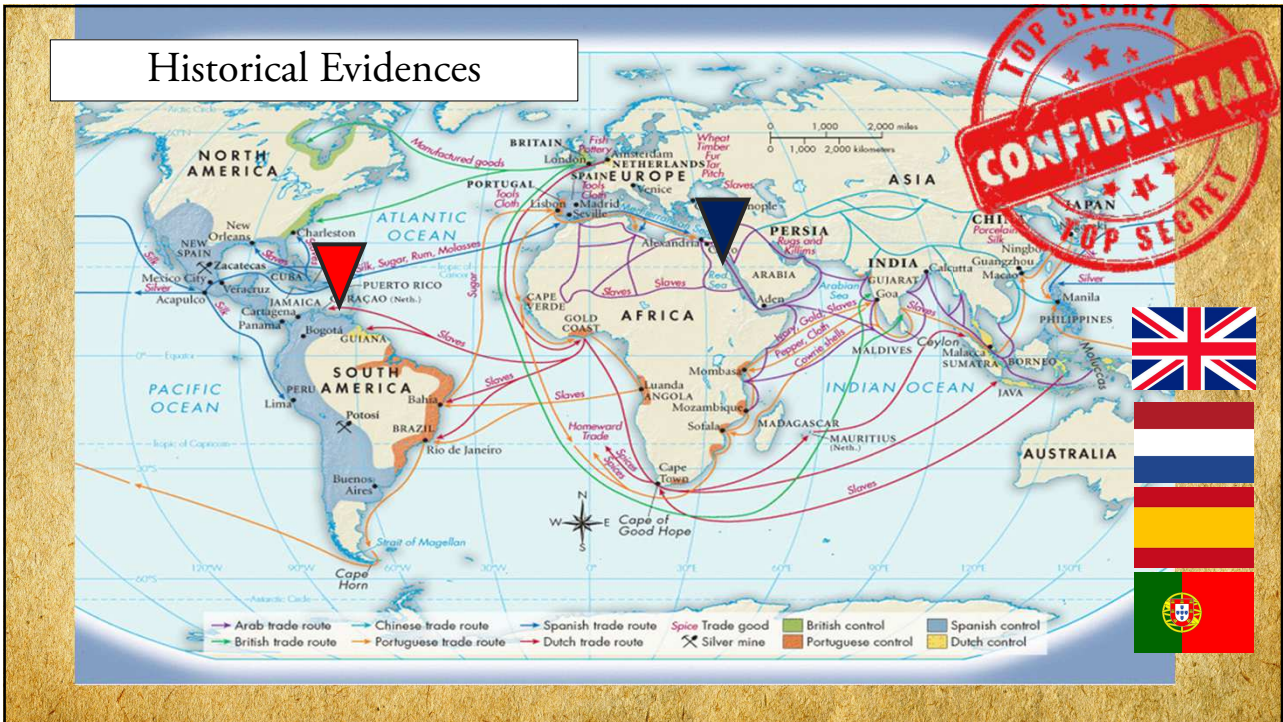


Feral Donkeys in Bonaire (Venezuela)

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The Egyptian Empire
XVth century BC

Black Sea
Mediterranean Sea
Sardes
Wycinae
HITTITE EMPIRE
CILICIA

CONFIDENTIAL TOP SECRET

A PRESENT TO THE QUEEN FROM THE SIRDAR.

Egyptian donkey present to Queen Victoria of the Sirdar of Sudan; of the navy and the army illustrate 1899.

A PRESENT TO THE QUEEN FROM THE SIRDAR.

THE WHITE "SARDAR" COMPASSION: The white donkey is the main donkey breed raised in the Nile Valley, but the called the "Sardar" of the "Shake of Asut".

Abydos

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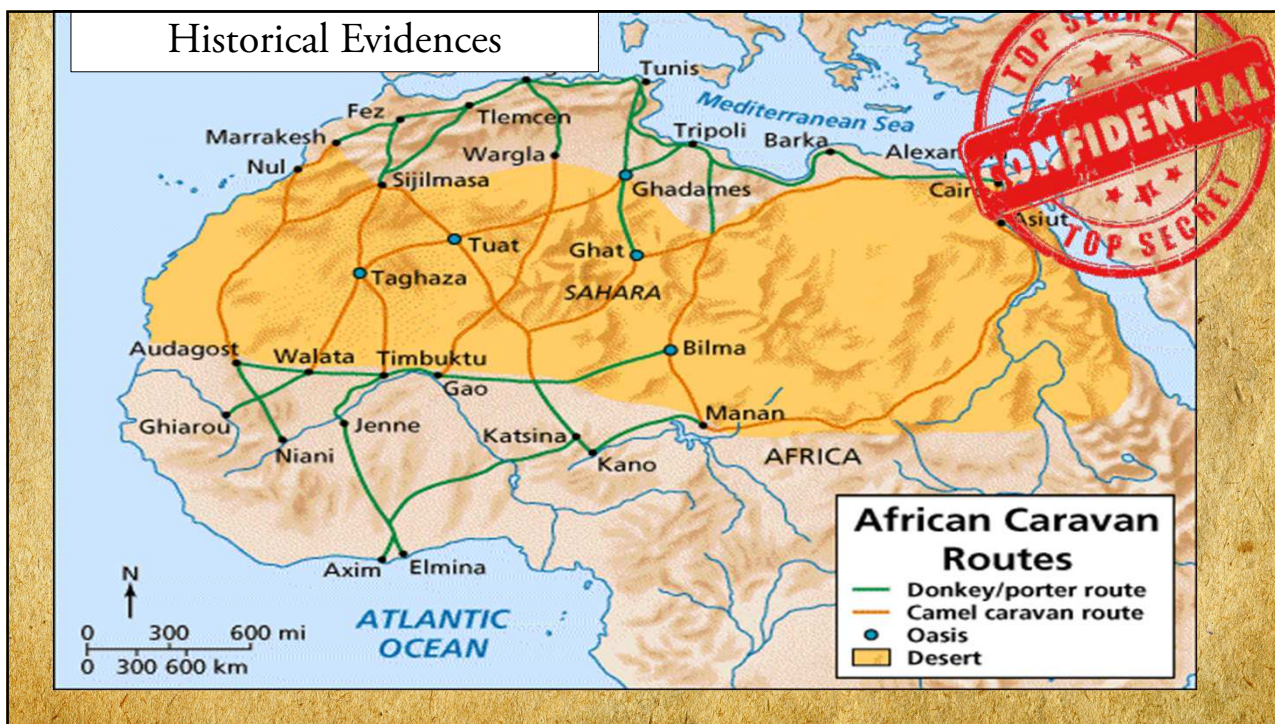
CONFIDENTIAL TOP SECRET

FROM TOMB TA. GHIZEH

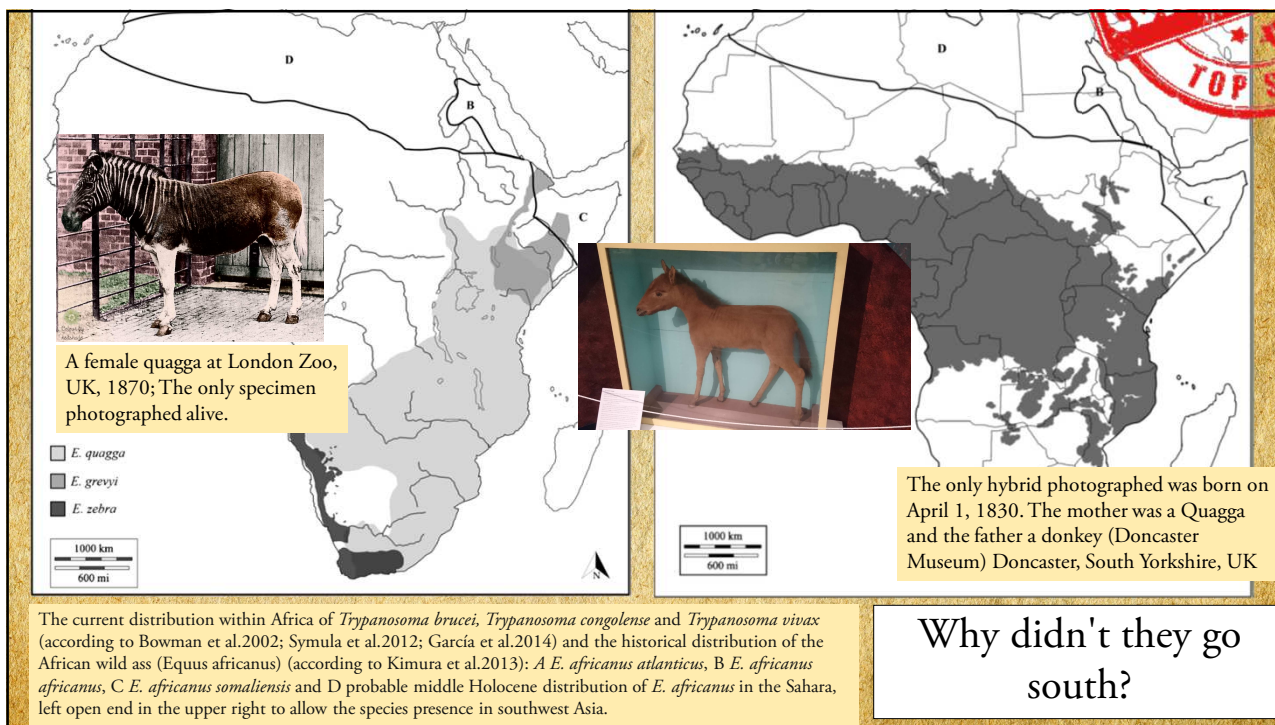
Reliefs about the handling of donkeys. Ancient Memphis (UNESCO World Heritage List, 1979). Saqqara. Necropolis. Private funeral mastaba of Mereruka, Sixth Dynasty, 2349 BC.

Domestication cradle

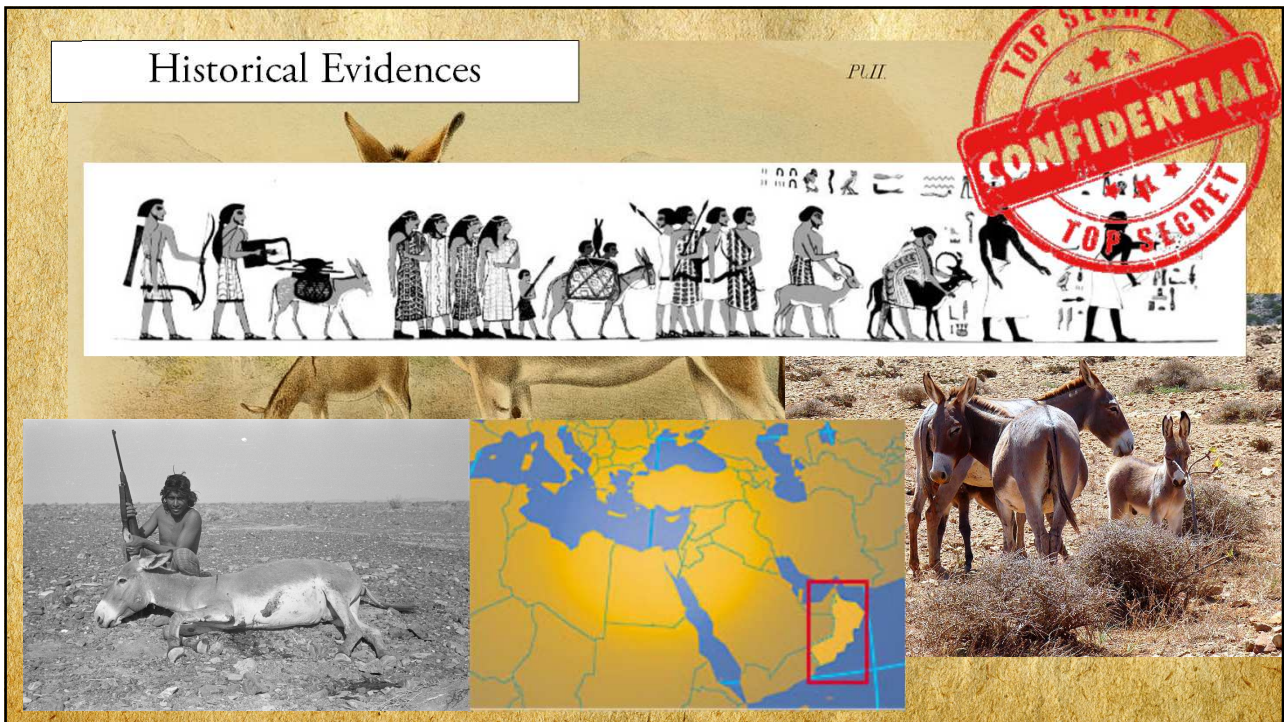
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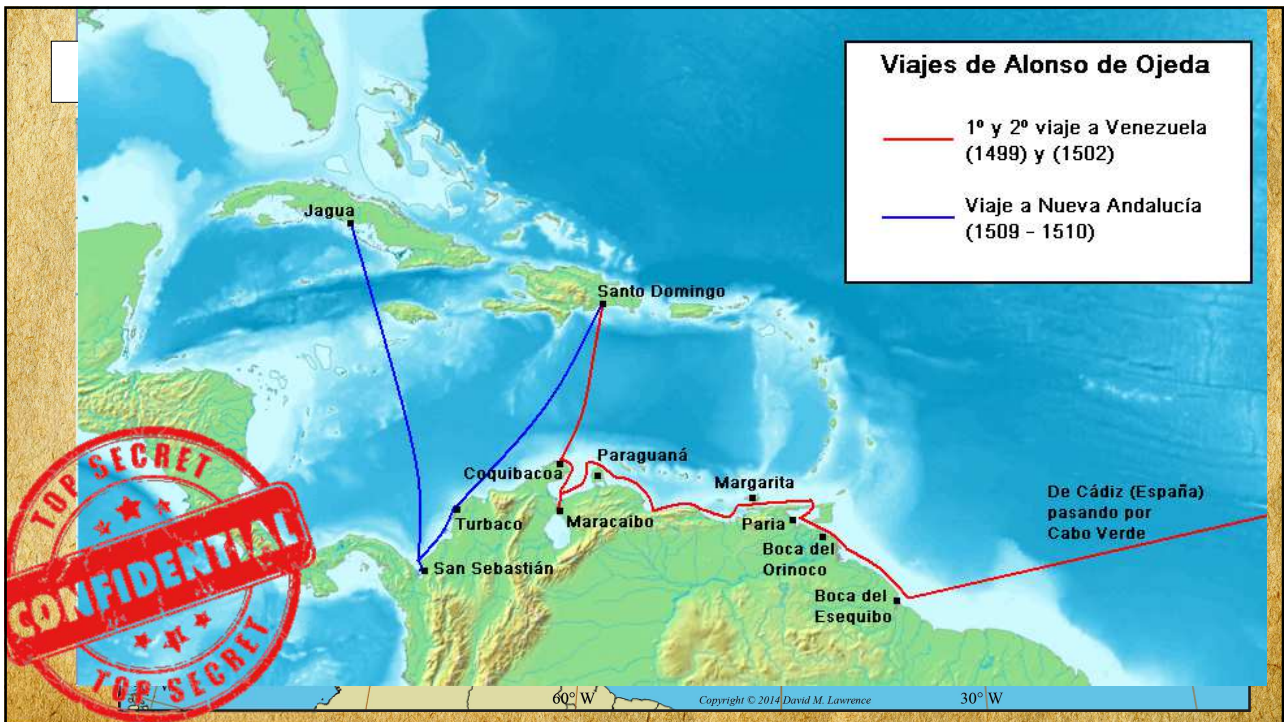
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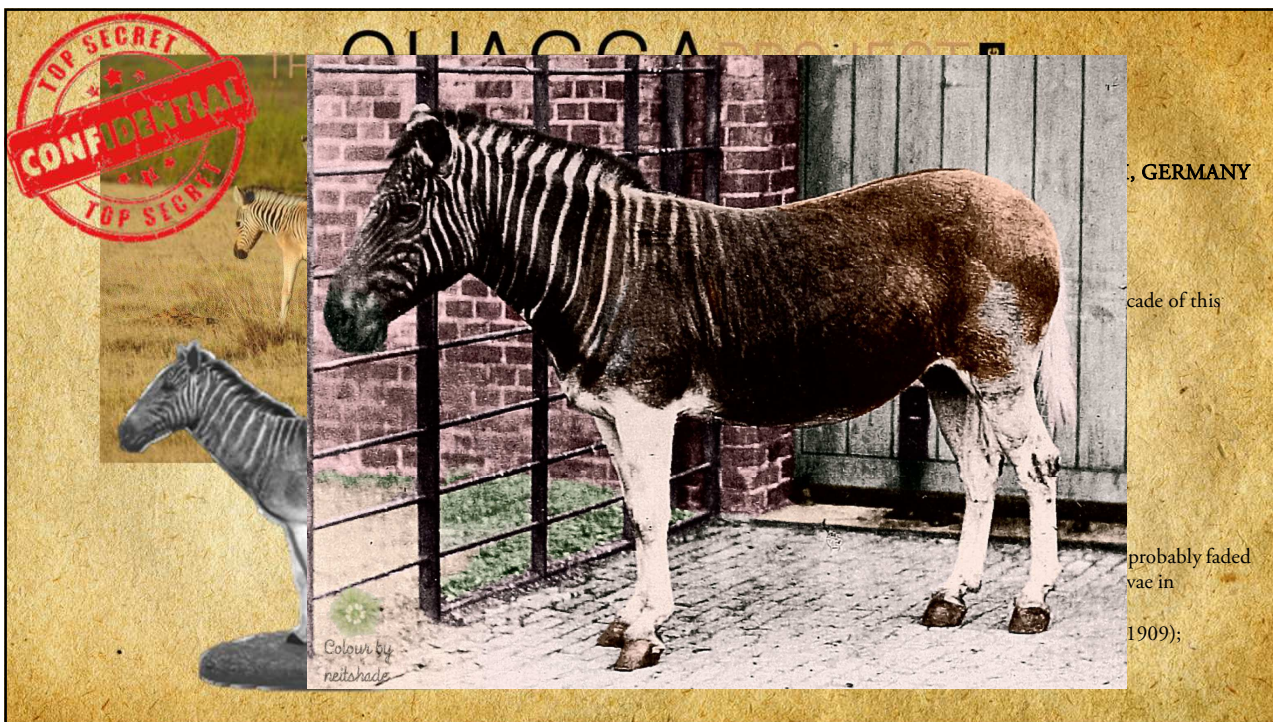
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Gippoliti, S. (2014). The forgotten donkey's history. Remarks on African wild asses of the Giardino Zoologico in Rome and their relevance for *Equus africanus* (von Heuglin & Fitzinger, 1866) taxonomy and conservation. *Der Zoologische Garten*, 83(4-6), 146-154.

This paper reviews the history of African wild asses in the Giardino Zoologico of Rome, highlighting their relevance to taxonomy of *Equus africanus* (von Heuglin & Fitzinger, 1866). Specifically, it is demonstrated that the so-called Munich/Catskill stock of African wild ass originated from three animals imported in Rome from Eritrean Danakil in August 1932.

Catskill Game Farm Inc. was a family owned petting zoo in the town of Catskill, New York, United States, which operated from 1933 to 2006.

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The Egyptian Empire XVth century BC

Regions shown: LIBYA, EGYPTIAN EMPIRE, KUSH, SYRIA, MESOPOTAMIA, ARABIA, PUNT (under Egyptian influence).

Cities: Mycenae, Sardes, Carchemish, Nineveh, Assur, Damascus, Babylon, Nippur, Ur, Memphis, Thebes, Elephantine, Syene, Napata.

Geographical features: Black Sea, Mediterranean Sea, Red Sea, Persian Gulf, Bab el Mandeb strait, Socotra.

Historical evidences

Abydos

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PNAS

Domestication of the donkey: Timing, processes, and indicators

Stine Rosell^{1*}, Fiona Marshall^{1§}, Joris Peters[§], Tom Pilgram¹, Matthew D. Adams^{**}, and David O'Connor^{**}

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Edited by Dolores R. Piperno, Smithsonian Institution, Washington, DC, and Balboa, Panama, and approved January 25, 2008 (received for review October 16, 2007)

Height at the withers estimation in the horses based on the internal dimension of cranial cavity

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[Received 1 October 2013; Accepted 5 November 2013]

Estimación práctica de los parámetros zoométricos en la raza Asnal Andaluza

Navas, E.J.; Arando, A.; Pizarro, G.; Miranda, J.C.; Miró-Arias, M.; Delgado, J.V.

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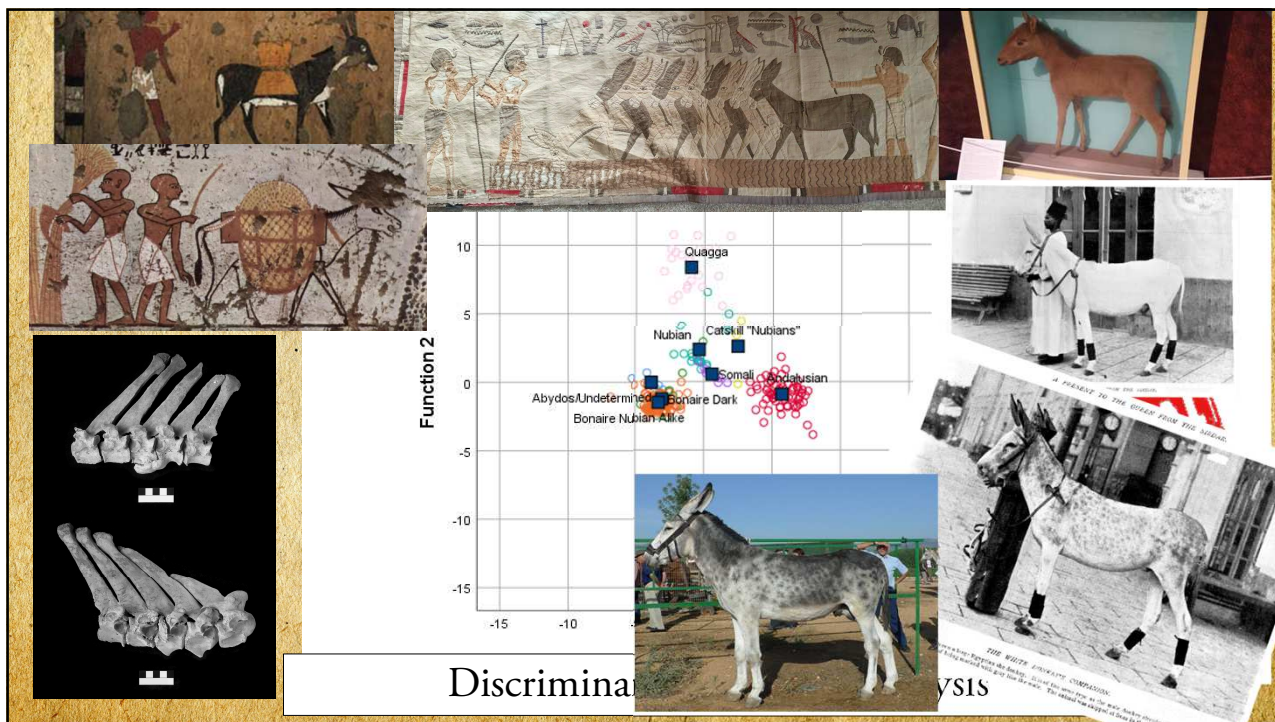
The estimation of withers height of ancient horse : New estimation formulations by using the metacarpal measurements of living horse

V. ONAR^{1*}, K.O. KAHVECIOĞLU¹, D. OLGÜN ERDIKMEŇ², H. ALPAK¹, Ç. PARKAN YARAMIŞ³

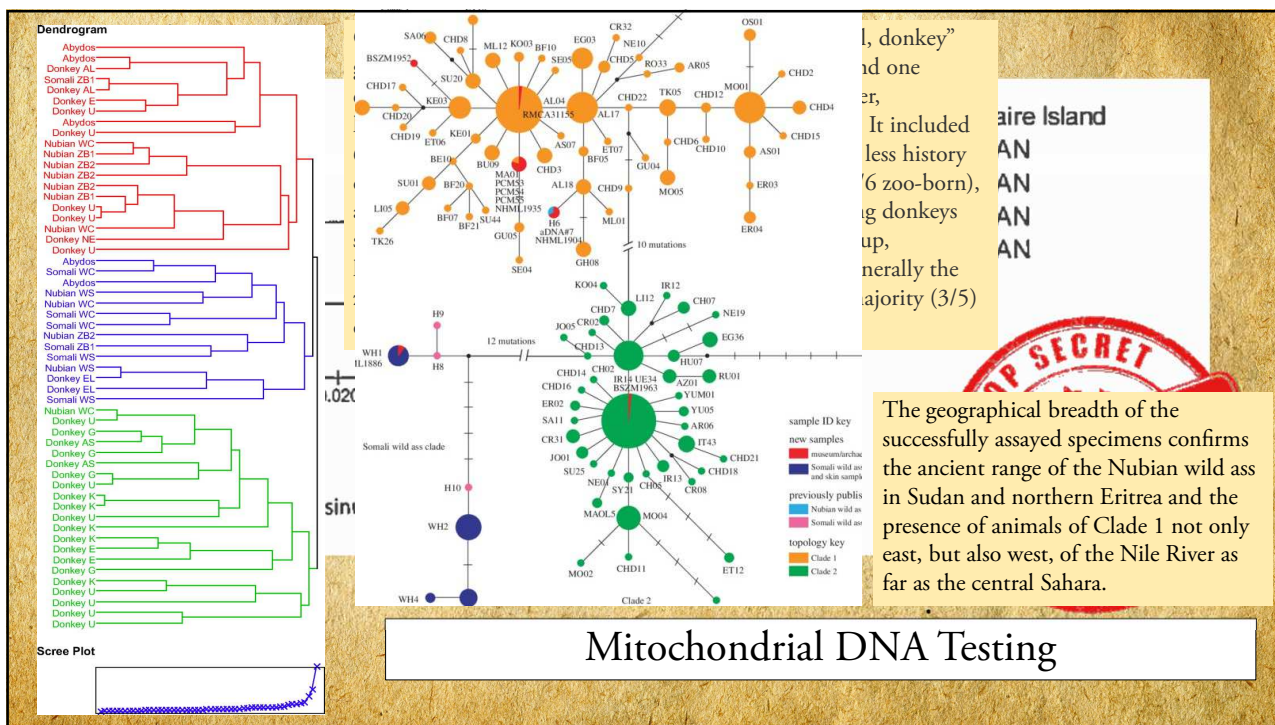
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