PRINCIPII

Antonio Mingione

Evoluzione dell'Uomo

Da quadrupede a bipede

Storia e trasformazioni fisiche

1) Introduzione

2) Storia e Teorie

3) Fossili e Ricercatori

4) Variazioni fisiche evolutive

5) Vignette

XIX SECOLO

CREAZIONE DIVINA

secondo le

RELIGIONI MONOTEISTE

“ Il Signore Dio plasmò

l'uomo con polvere del suolo

e soffiò nelle sue narici

un alito di vita “

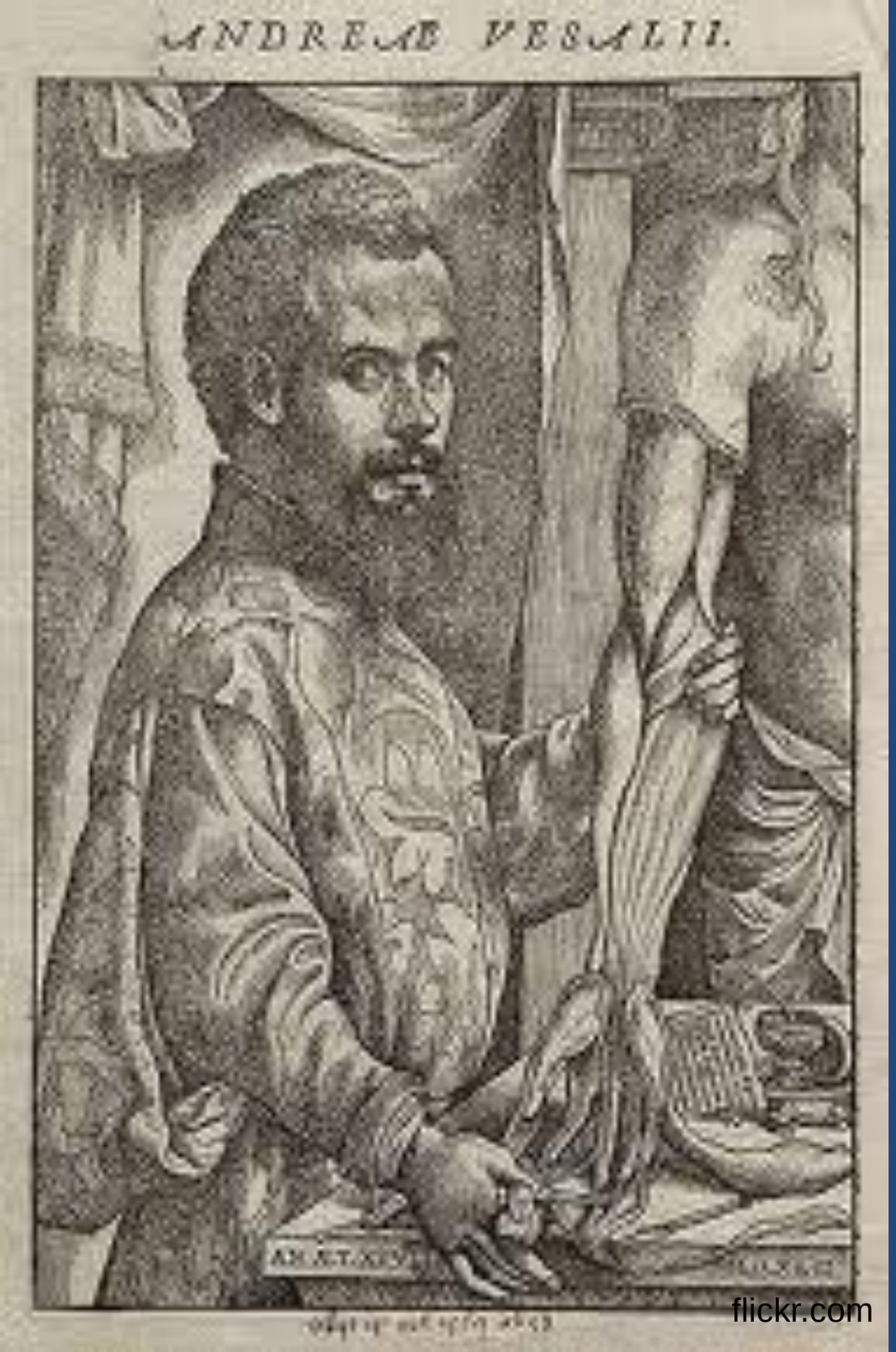
“ Genesi 1.7 “

“ Allora Dio il Signore fece cadere un sonno profondo sull’uomo, prese una delle costole di lui e richiuse la carne al posto di essa. Il Signore Dio plasmò, con le costole che aveva tolto all’uomo, una donna e la condusse all’uomo “

“ Genesi 1.21 “

“ In verità creammo l’uomo da un estratto di argilla.
Poi ne facemmo una goccia di sperma posta in un sicuro ricettacolo.
Poi di questa goccia facemmo un’aderenza e dell’aderenza un embrione; dell’embrione creammo le ossa e rivestimmo le ossa di carne.
E quindi ne facemmo un’altra creatura. “

“ Corano 23: 12 – 14 “



Andrea Vesalio

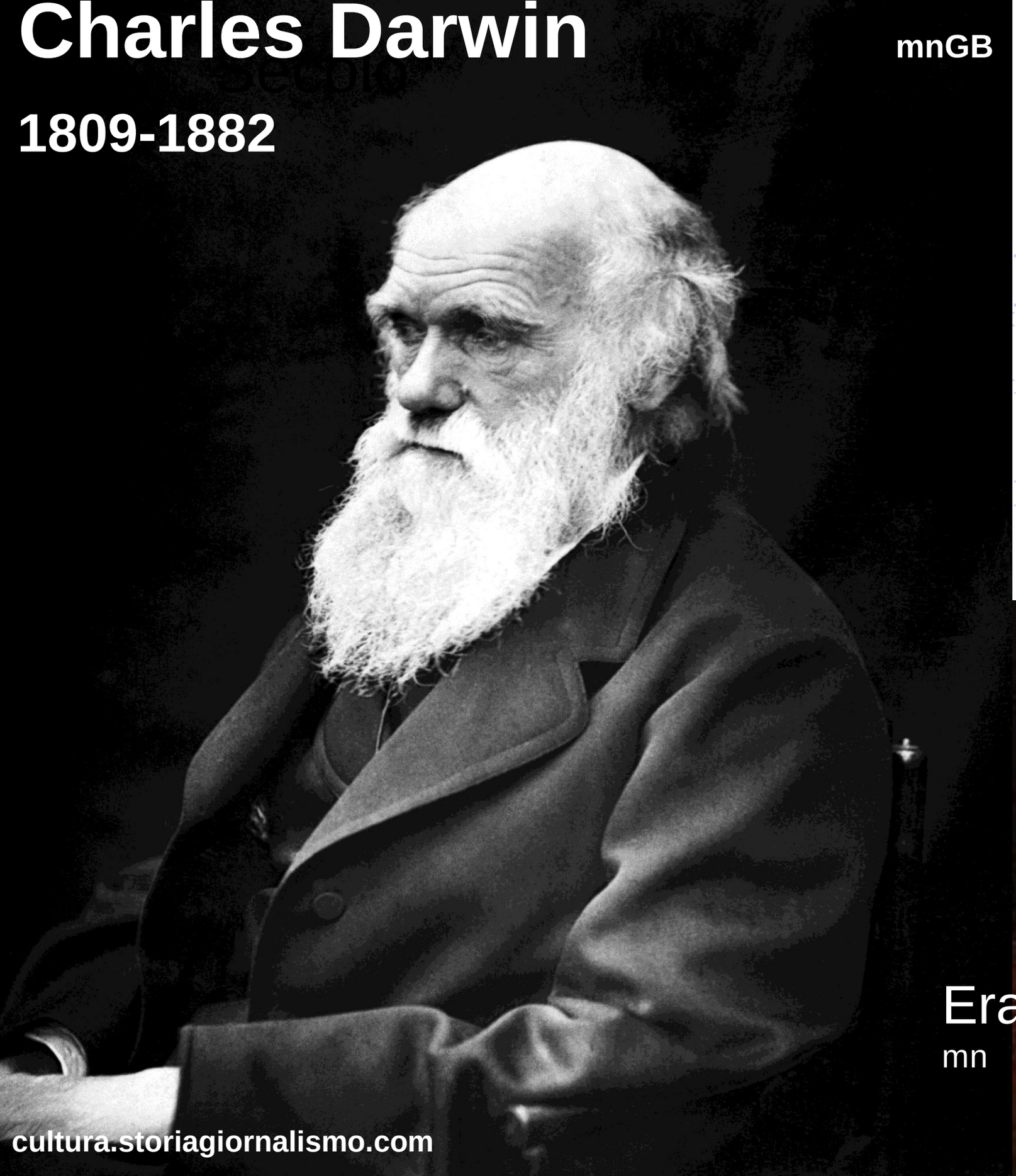
1514 - 1564

flickr.com

Charles Darwin

mnGB

1809-1882



cultura.storiagiornalismo.com

cittadelmonte.info

wapedia.mobi

Erasmus Darwin

mn

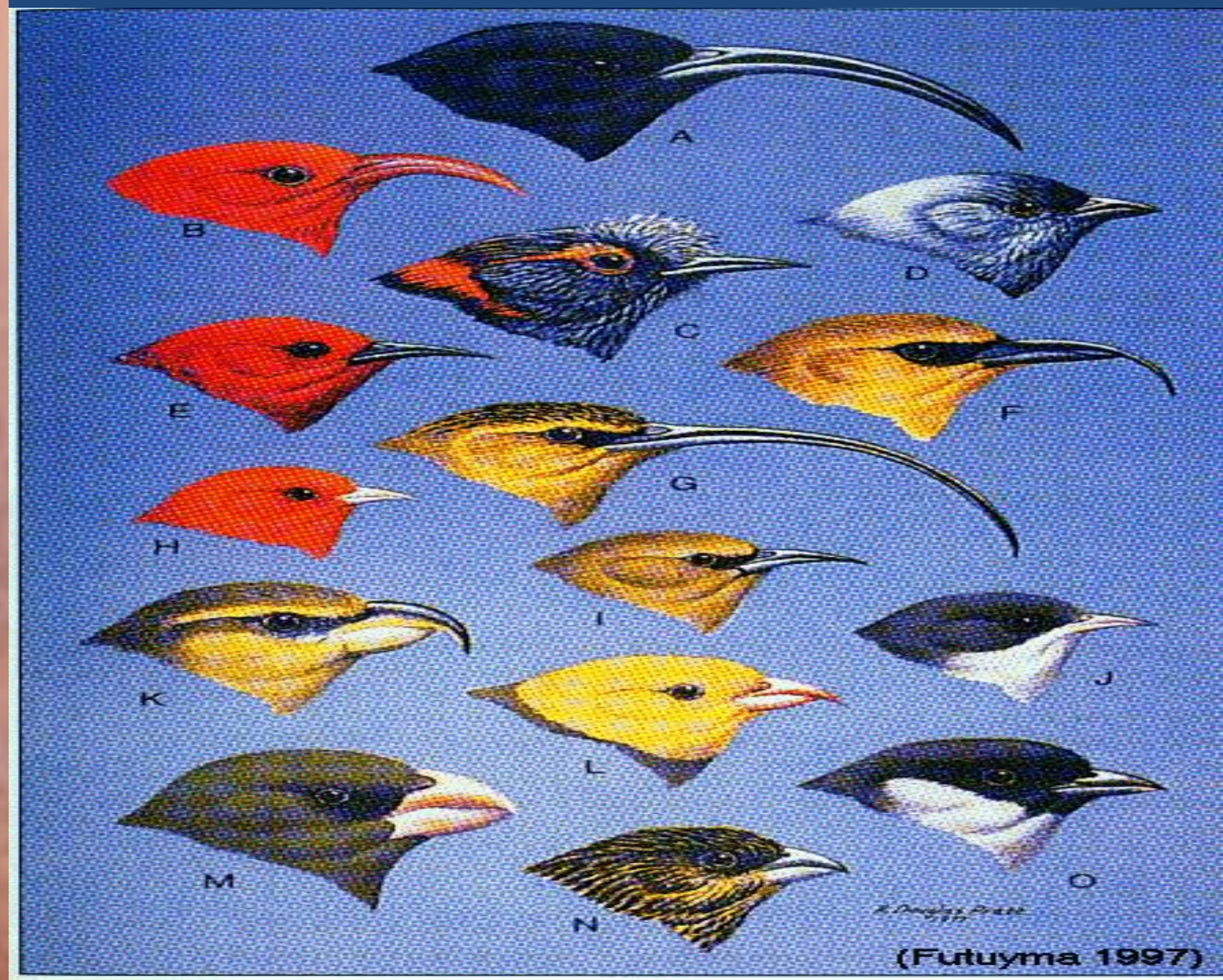
1731 - 1802

Variazioni degli animali col variare dell' AMBIENTE

23 a. 1832

Fringuelli delle Galàpagos

sforzapalagiano.fr



(Futuyma 1997)

avmagazine.it

"But with regard to the material world, we can at least go so far as this—we can perceive that events are brought about not by insulated interpositions of Divine power, exerted in each particular case, but by the establishment of general laws."

W. Whewell: *Bridgewater Treatise.*

"To conclude, therefore, let no man out of a weak conceit of sobriety, or an ill-applied moderation, think or maintain, that a man can search too far or be too well studied in the book of God's word, or in the book of God's works; divinity or philosophy; but rather let men endeavour an endless progress or proficience in both."

Bacon: *Advancement of Learning.*

Down, Bromley, Kent,
October 1st, 1859.

1837

ON

THE ORIGIN OF SPECIES

BY MEANS OF NATURAL SELECTION,

OR THE

PRESERVATION OF FAVOURED RACES IN THE STRUGGLE FOR LIFE.

By CHARLES DARWIN, M.A.,

FELLOW OF THE ROYAL, GEOLOGICAL, LINNÆAN, ETC., SOCIETIES;
AUTHOR OF 'JOURNAL OF RESEARCHES DURING H. M. S. BEAGLE'S VOYAGE ROUND THE WORLD.'

LONDON:
JOHN MURRAY, ALBEMARLE STREET.
1859.

The right of Translation is reserved.

1859

EVOLUZIONE

=

ADATTAMENTO

ALL’ AMBIENTE

Esempio + attuale di

“ evoluzione “:

La resistenza microbica

agli antibiotici

Creazionisti

bastabugie.it

CREAZIONE DIVINA

EVOLUZIONE UMANA

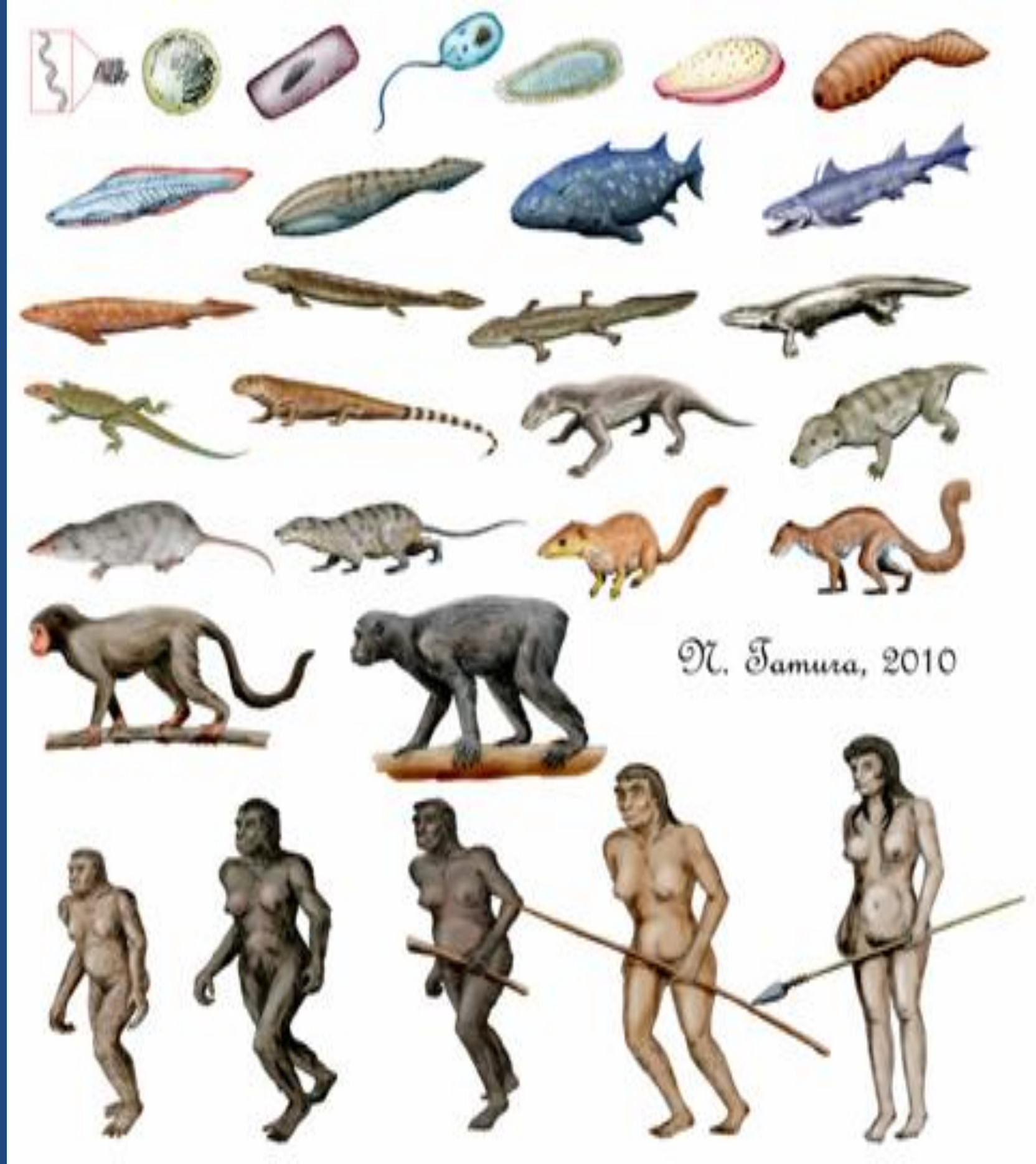
4000 a. C. n.

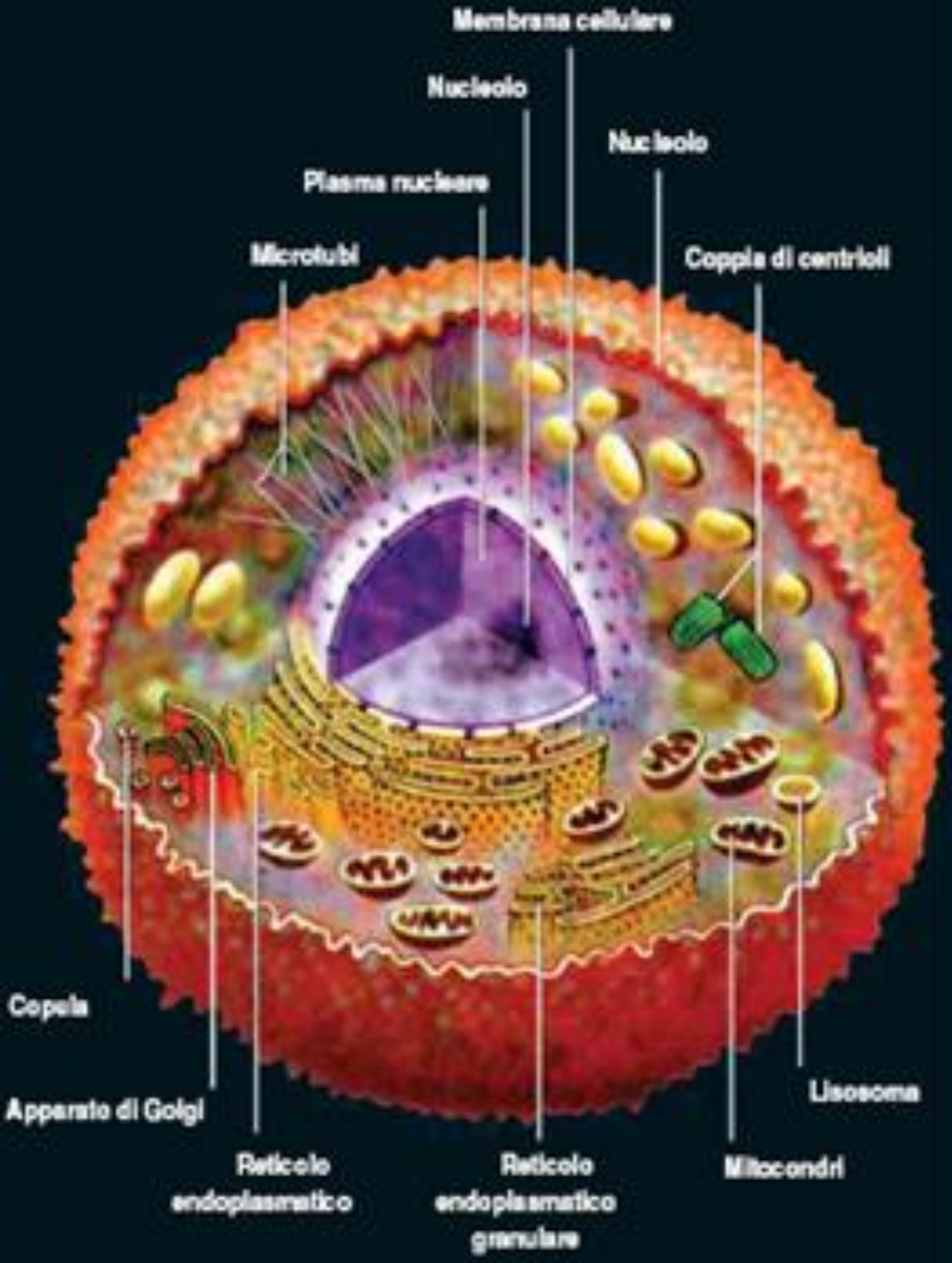
MILIONI di ANNI

VITA:
4Mld a. fa

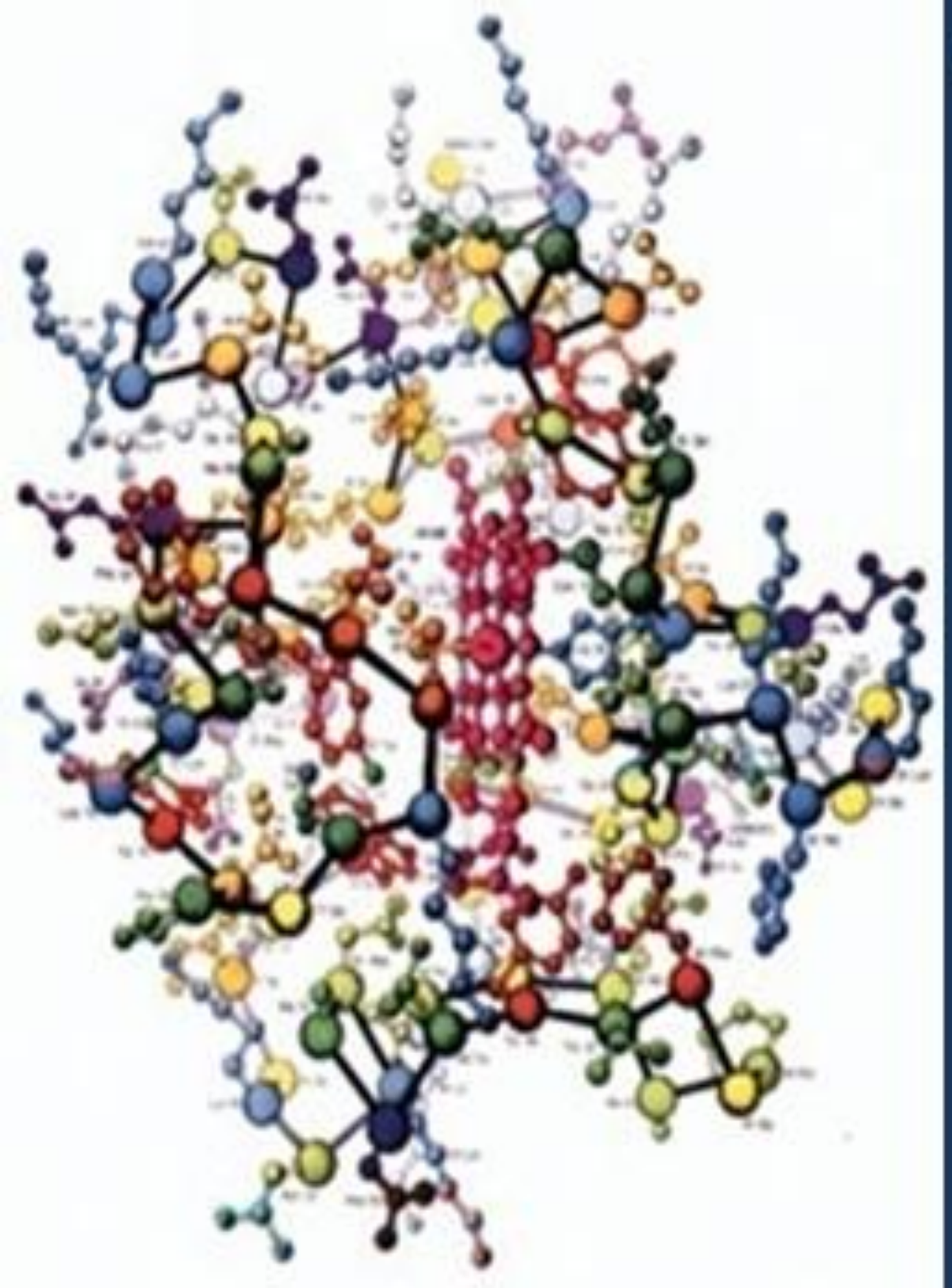
-Procarioti anucleari

-Eucarioti nucleari





Il più elementare tipo di cellula costituisce un meccanismo incredibilmente più complesso di qualsiasi macchina che sia stata pensata, per non dire costruita, dall'uomo.



- Le possibilità della formazione casuale di una singola sequenza di " citocromo-C " ha una improbabilità di
  - 10 elevato a -950

harumyahya.it

$10^{-950}=$

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harumyaya

La teoria
dell'Evoluzione
va contro
il Dogma
della
" Creazione Divina " !

LEONE XIII

1810-1903

1893

“ PROVIDENTISSIMUS DEUS “

“ Le tesi

sull’evoluzionismo

sono accettabili e non

sono in contrasto con la

Sacra Scrittura “

GIOVANNI PAOLO II

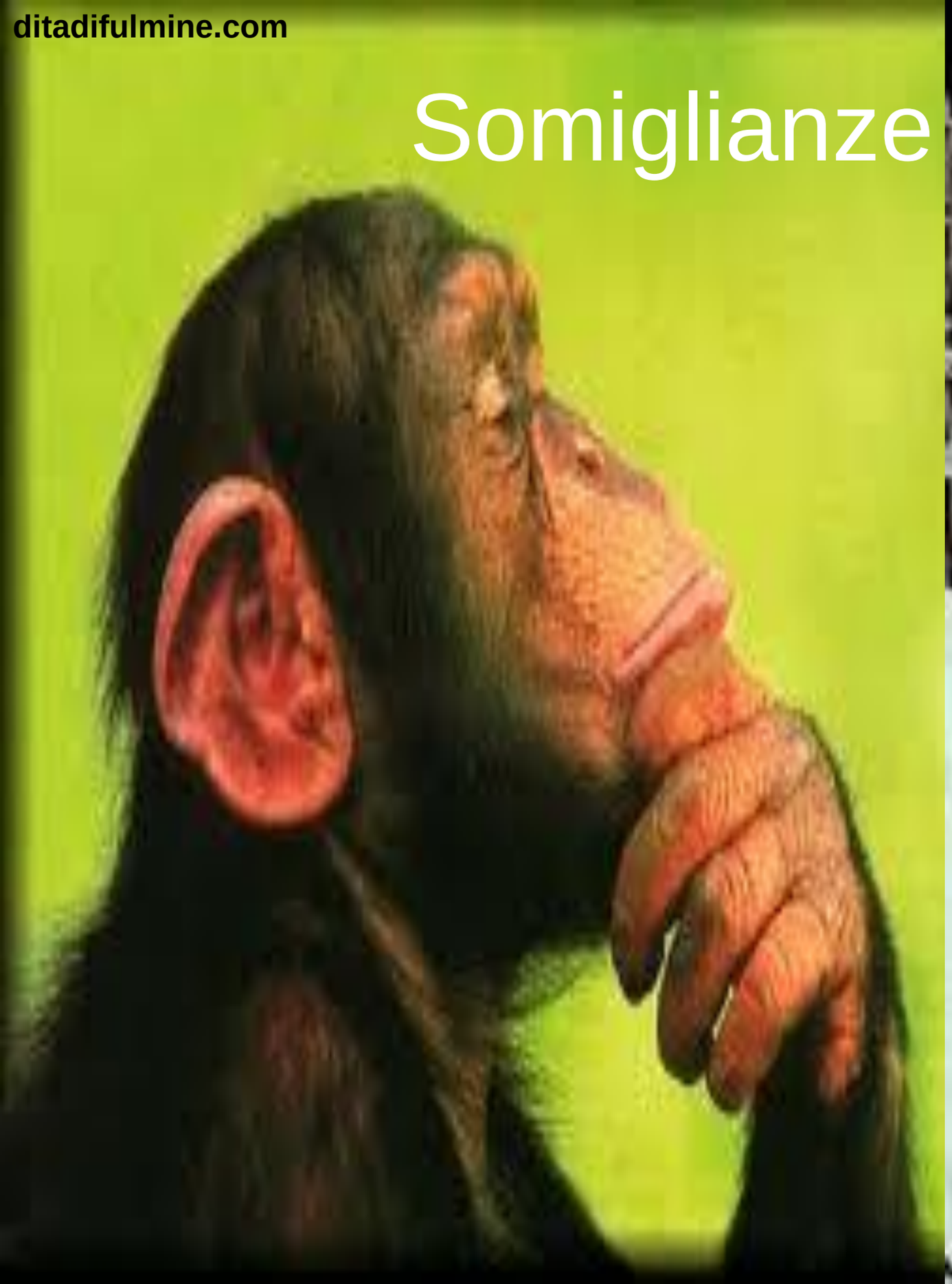
1920 - 2005

“ Oggi si può parlare di teoria evolutiva perché coerente con le conoscenze acquisite in vari campi della Scienza moderna “

ditadifulmine.com

celebrific.blogspot.com

Somiglianze inquietanti



bagnonemia.com

ilcofanettomagico.it

HOMO NEANDERTHAL di

Secolo XX°

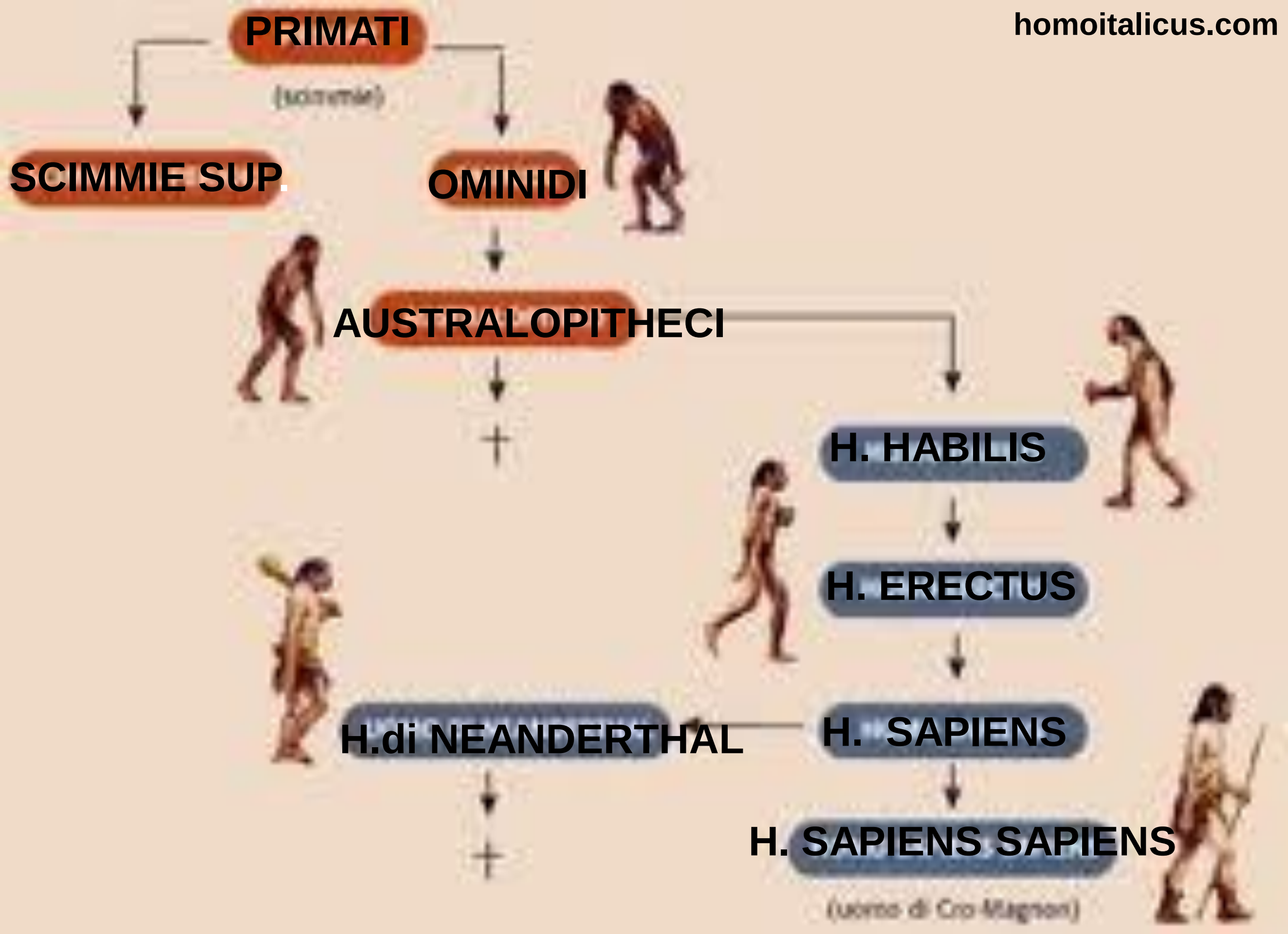
Paleontologia + Antropologia

palaiòs = antico

lògos = scienza

ànthropos = uomo

PALEO - ANTROPOLOGIA

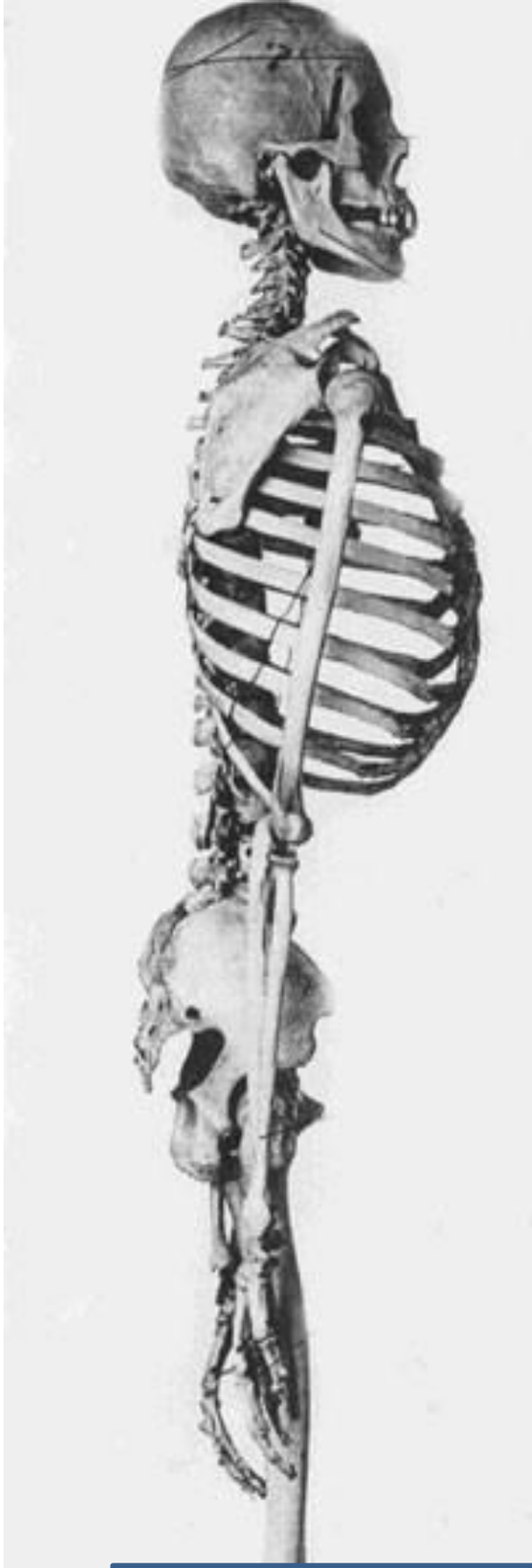

PRIMATI
(scimmie)
SCIMMIE SUP.
OMINIDI
AUSTRALOPITHECI
H. HABILIS
H. ERECTUS
H.di NEANDERTHAL
H. SAPIENS
H. SAPIENS SAPIENS
(uomo di Cro-Magnon)

L'ANELLO MANCANTE

Archaeopteryx Lithographica

anello mancante tra rettili ed uccelli

LA [redacted]
POSTURA
DELLA SCIMMIA



LA [redacted]
POSTURA
DELL'UOMO

5 fratelli su 13 di una famiglia turca hanno una malformazione genetica che li costringe a camminare appoggiandosi con le mani a terra , pur riuscendo, per poco tempo, a stare ritti su due gambe.

forumtime.it

Possiamo considerarli l'anello mancante ?

NO !

forumtime.it

L’ANELLO MANCANTE

NON ESISTE, MA PIACE

TANTO AI GIORNALISTI

E ALLA GENTE !

Nella ricerca dei fossili, ogni osso è una miniera di informazioni su evoluzione, meccanica ed ecologia di un animale estinto.

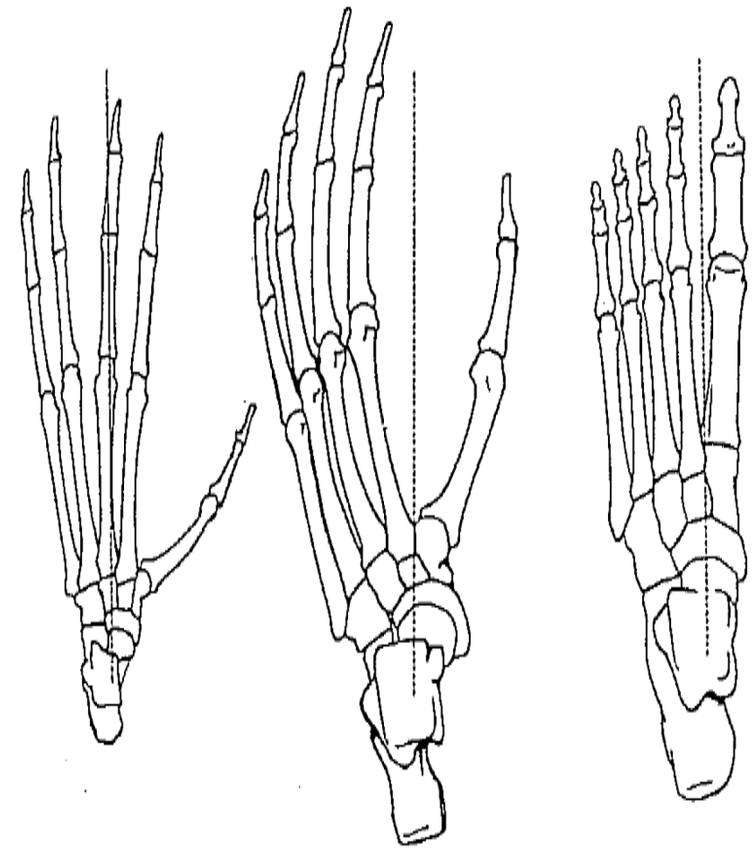
Forma, dimensione, numero ed estensione delle ossa ed articolazioni sono la chiave per analizzare le date evoluzionistiche.

Ma cosa cercare ?

Chimpanzee

A. afarensis

H. sapiens



Possibilità di conservazione dei fossili

Fango

Acqua

Resine
Ambra

Ceneri
vulcaniche

La datazione dei fossili

Datazione geologica

it.123rf.com

Datazione Radiometrica:

decadimento isotopi radioattivi

- Uranio → Piombo

- Potassio → Argon

DOVE

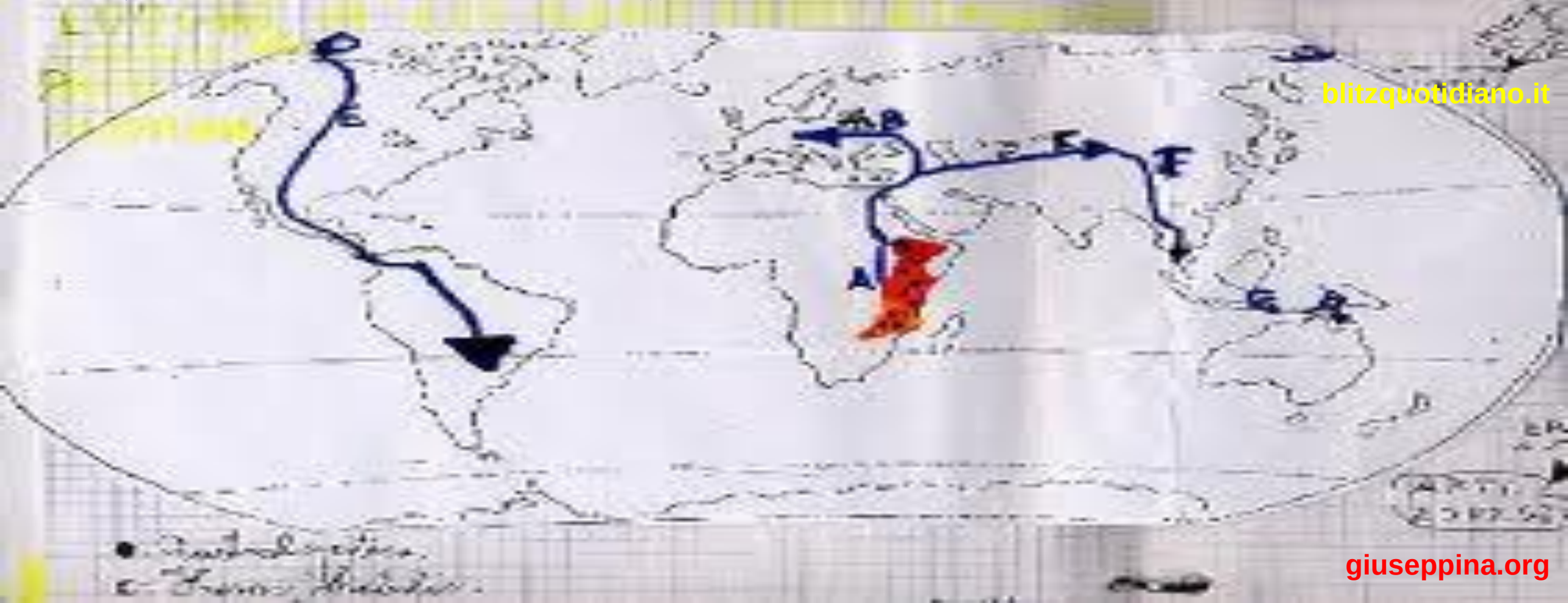
CERCARE

?

Tripolitania
SAHARA
Transvaal

Aumento eccessivo dei predatori

Mutazioni climatiche: glaciazioni



Charles Dawson

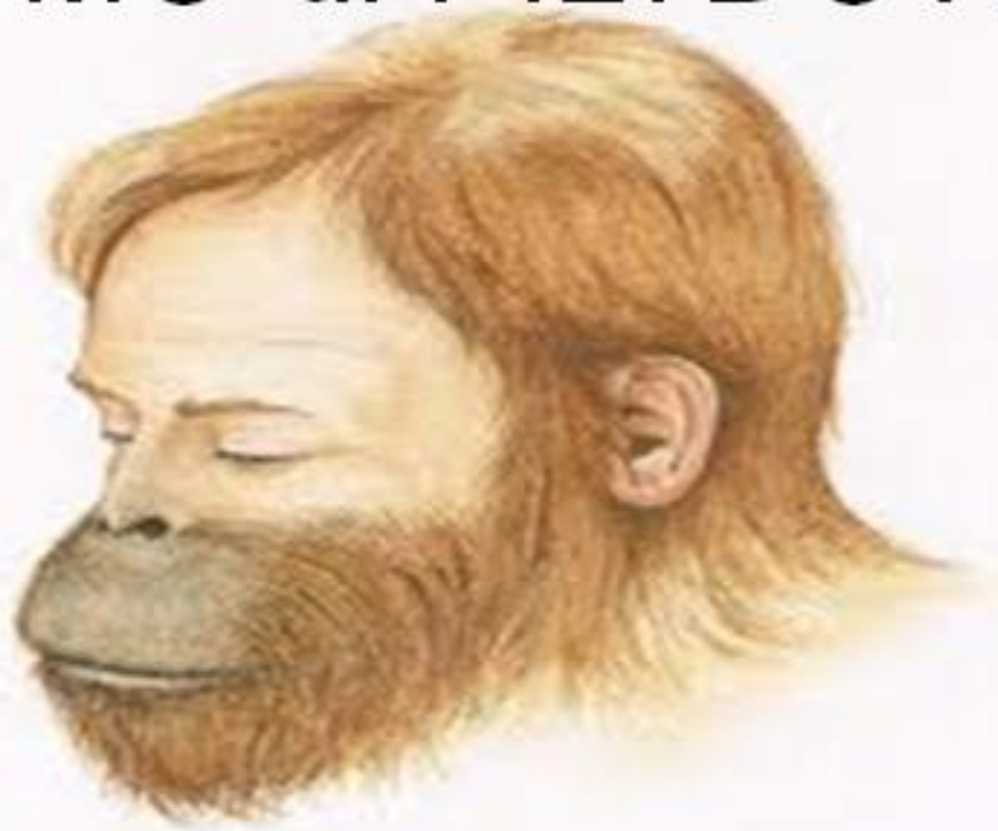
1864 - 1916

1912

UOMO di PILTDOWN

H

S



FALSO → TRUFFA

luciadelchiaro.blog.kataweb.it

AU

talkorigins.org

RAYMOND DART

1893 – 1988

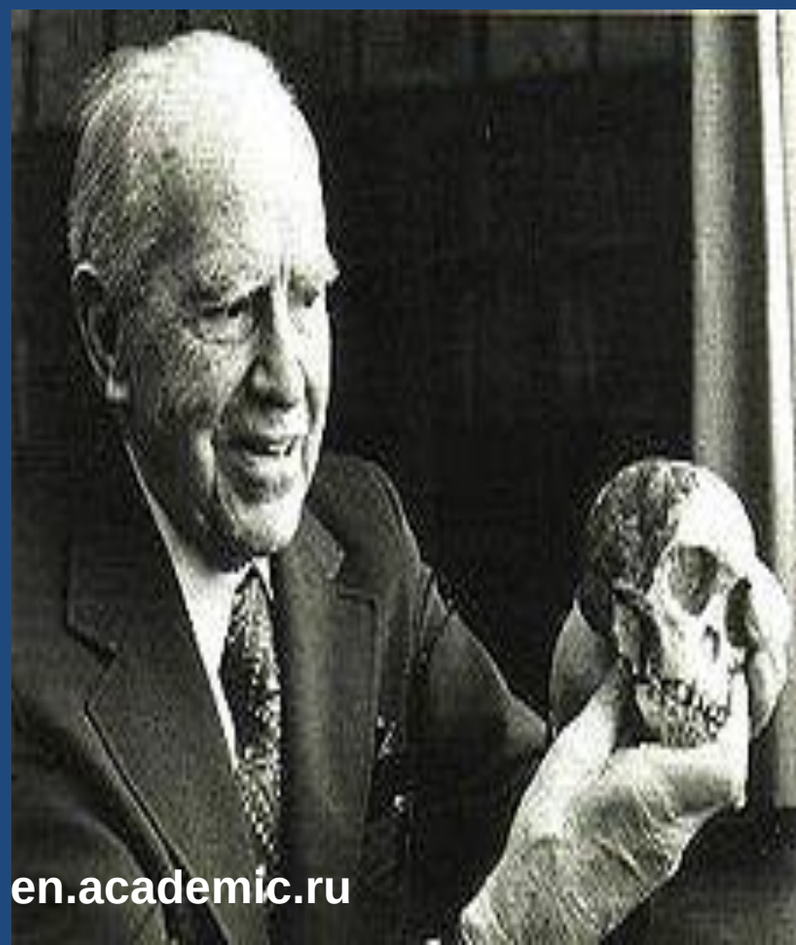
“Bambino di Taung “

“ Australopithecus Africanus “

1925

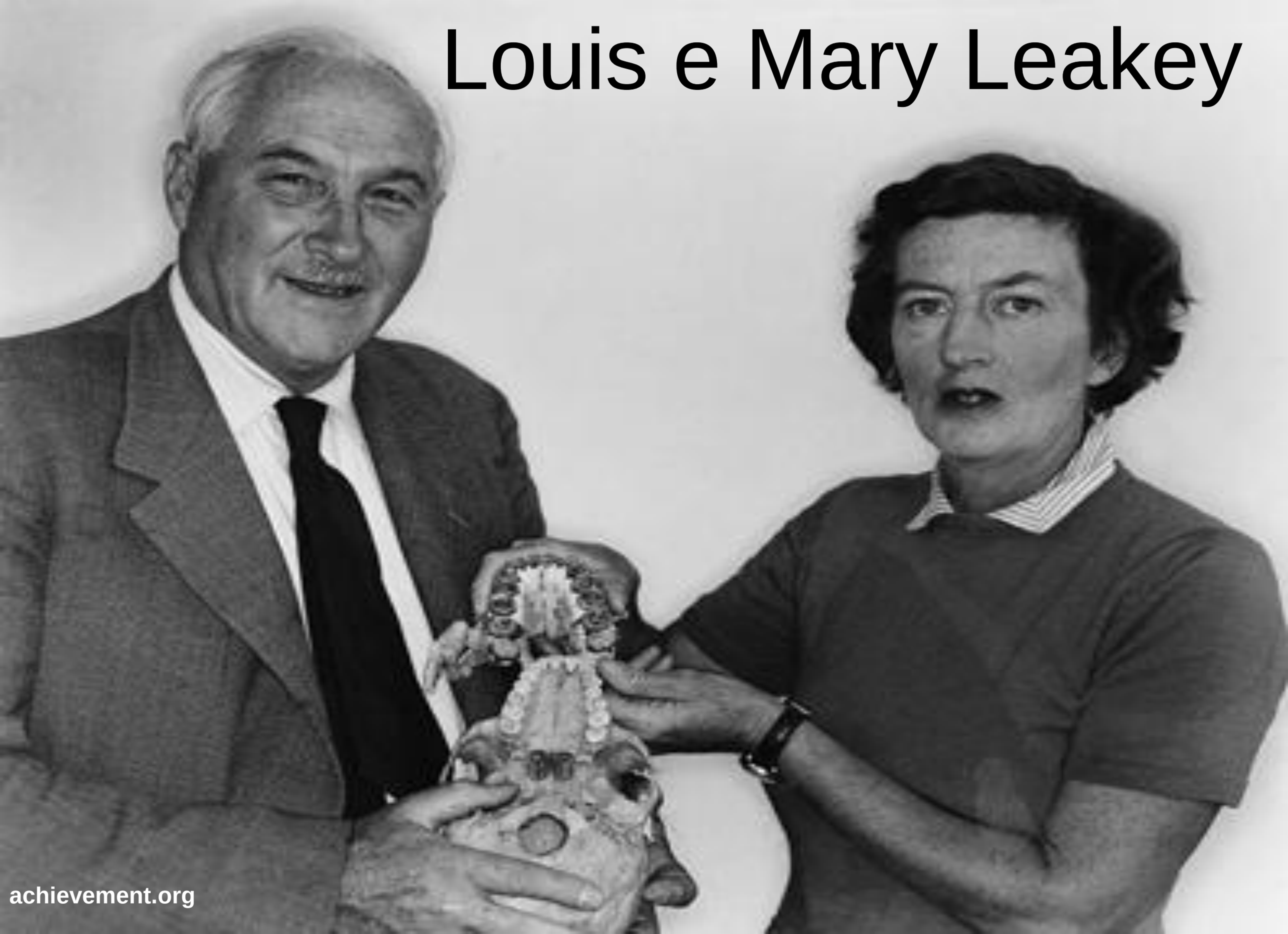
2,3 milioni a. fa

540 cc.



en.academic.ru

Louis e Mary Leakey



achievement.org

Mary Leakey

1913 – teschio di Proconsul Primate

1959 A. boisei= Ziny,
Zinyanthropus boisei

1964 H.abilis, 650 cc.

1978

Orme di Laetoli

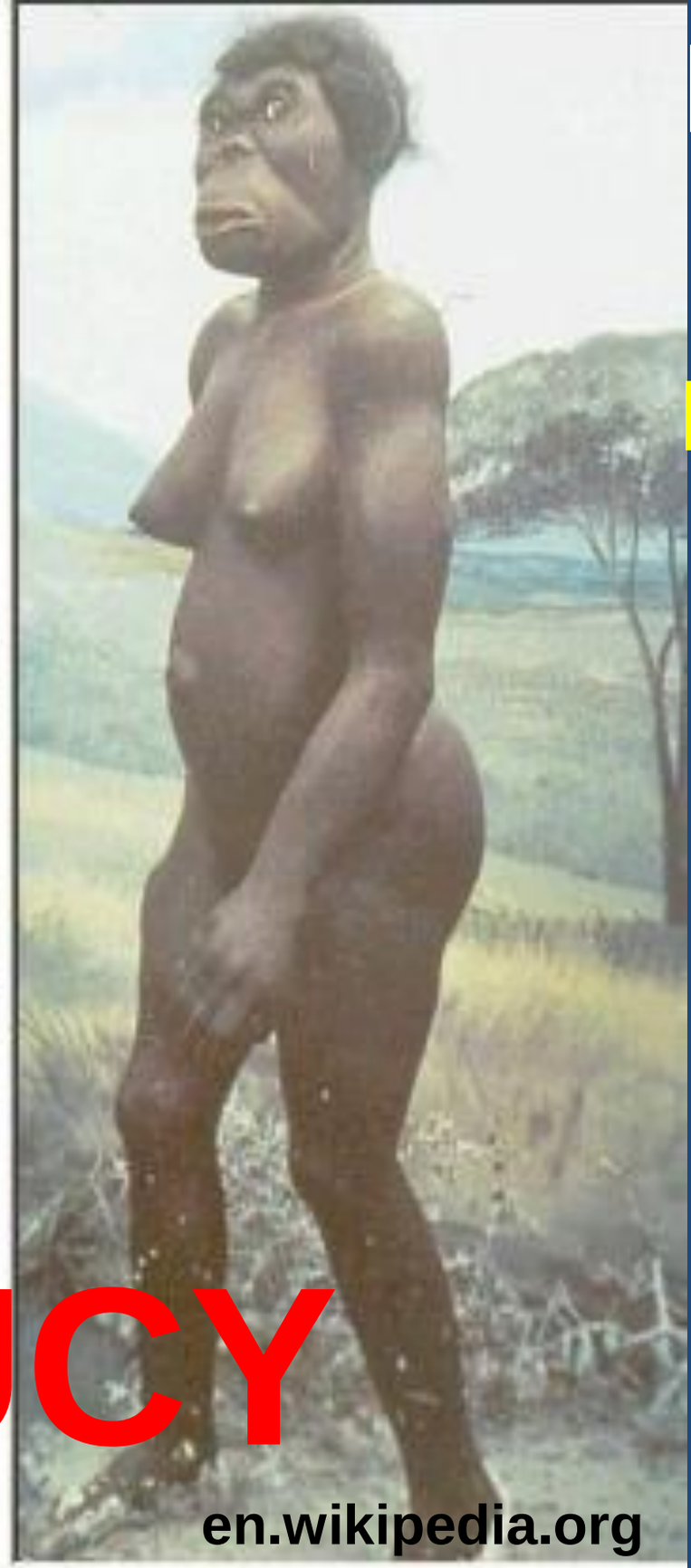
Orme di Laetoli

Richard Leakey

Maeve Leakey

Homo Rudolfensis

Telesanterno.com



en.wikipedia.org

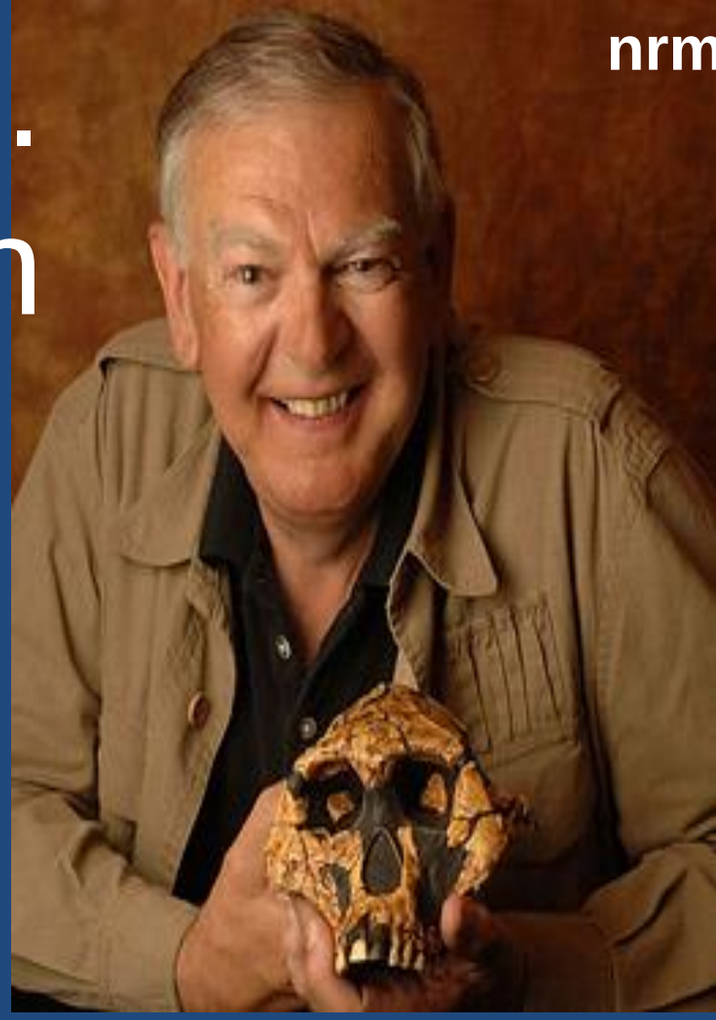
A Reconstruction of Lucy

LUCY

Donald C. Johanson

Denkenesh sei magnifica

1973



nrm

lefigaro.fr

Yves Coppens

Lee R. e Mathew Berger
e cane Tau

abovetopsecret.com

2008
A. Sediba
2milioni a.fa

ebmeierjochen.wordpress.com

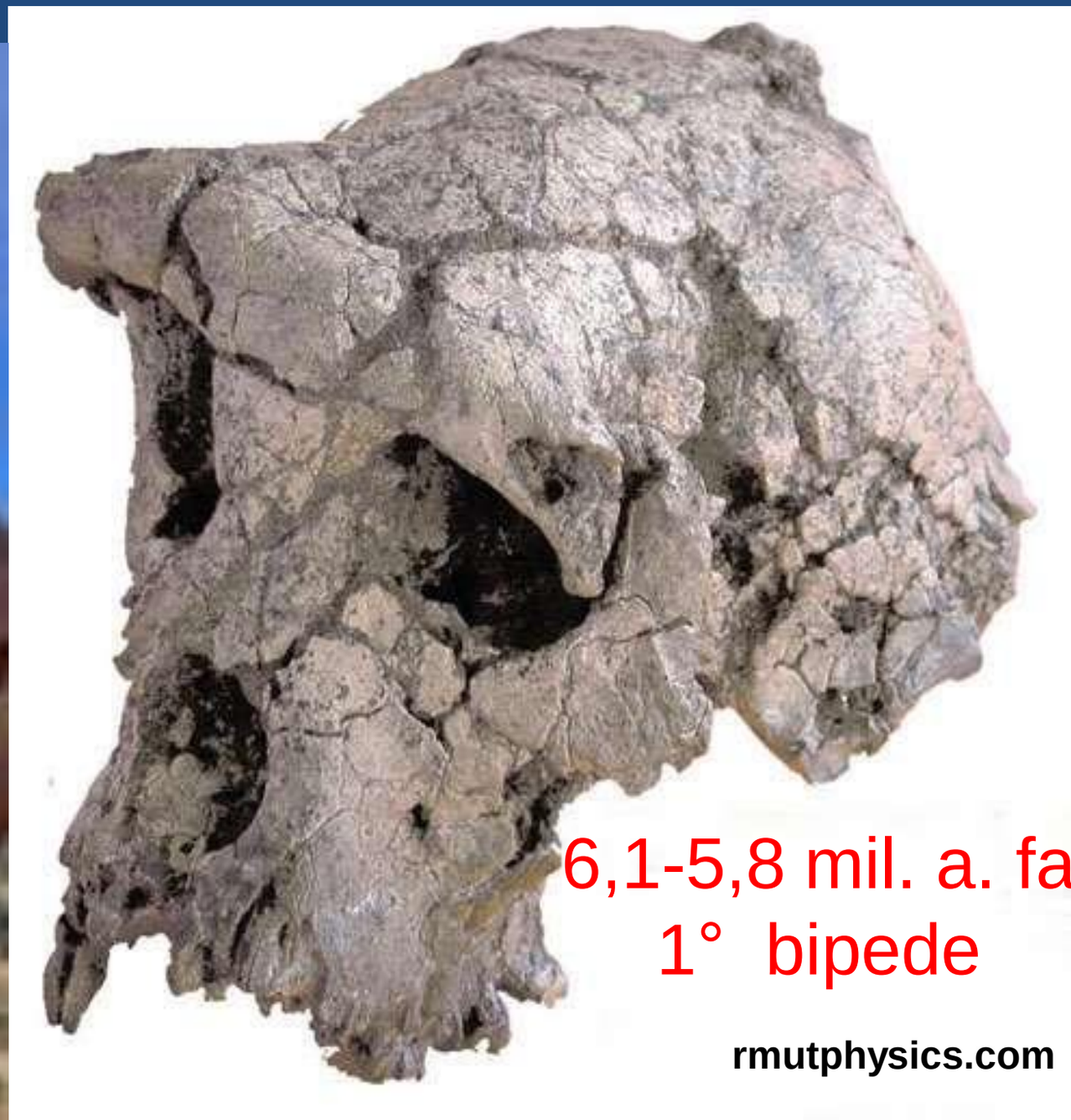
Brigitte Senut

Martin Pickford

2000

“Orrorin Tugenensis“

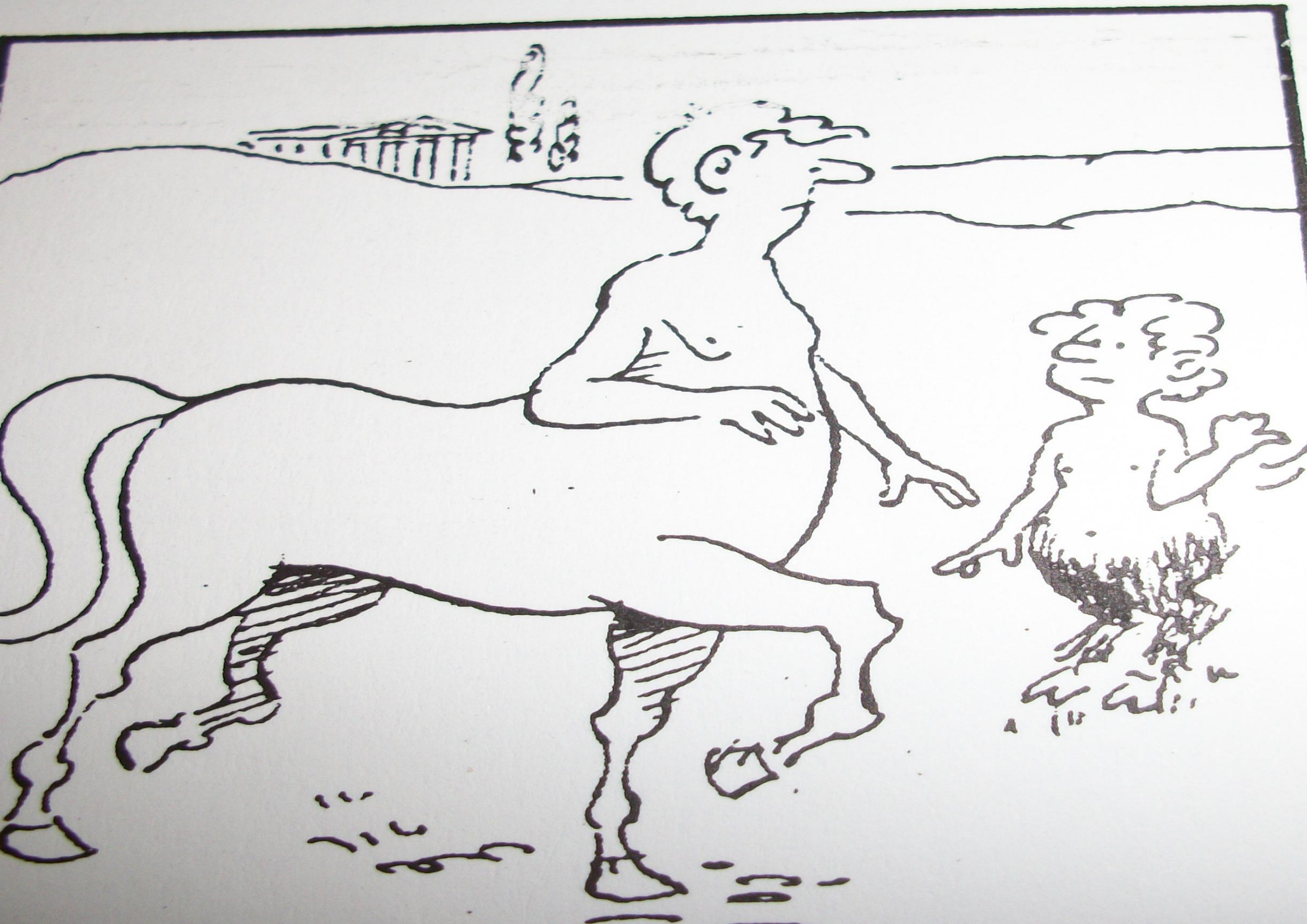
“ MILLENNIUM “



MICHEL BRUNET

1940 Sahelanthropus Tchadensis, TOUMAI

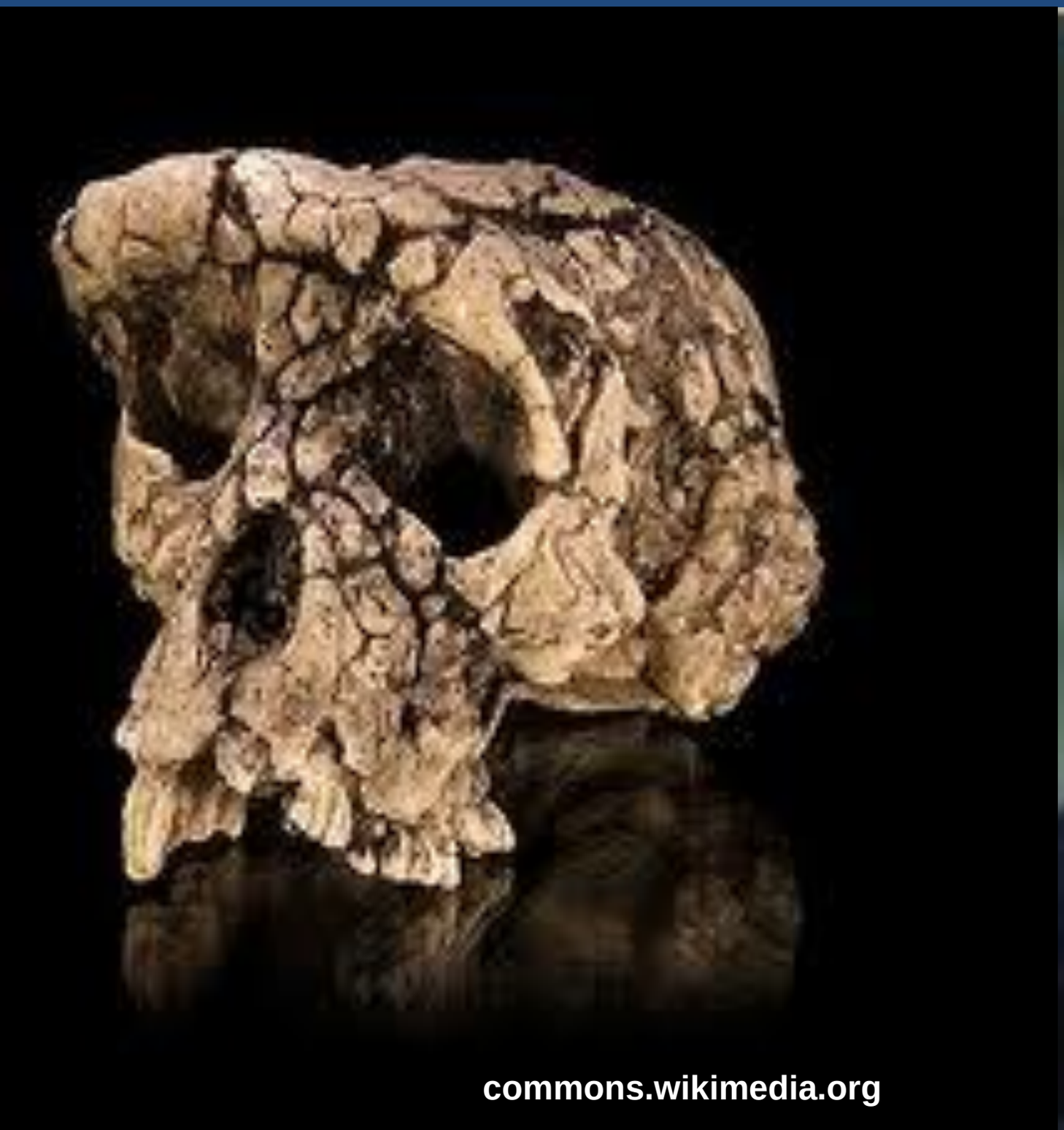
6 – 7 Milioni a. fa **2001**



Come sono cambiati
i volti
in questa evoluzione
di
milioni di anni.

SAHELANTHROPUS TCHADENSIS

7.000.000 – 6.000.000 a. fa



commons.wikimedia.org

amnh.org

ORRORIN TUGENIENSIS

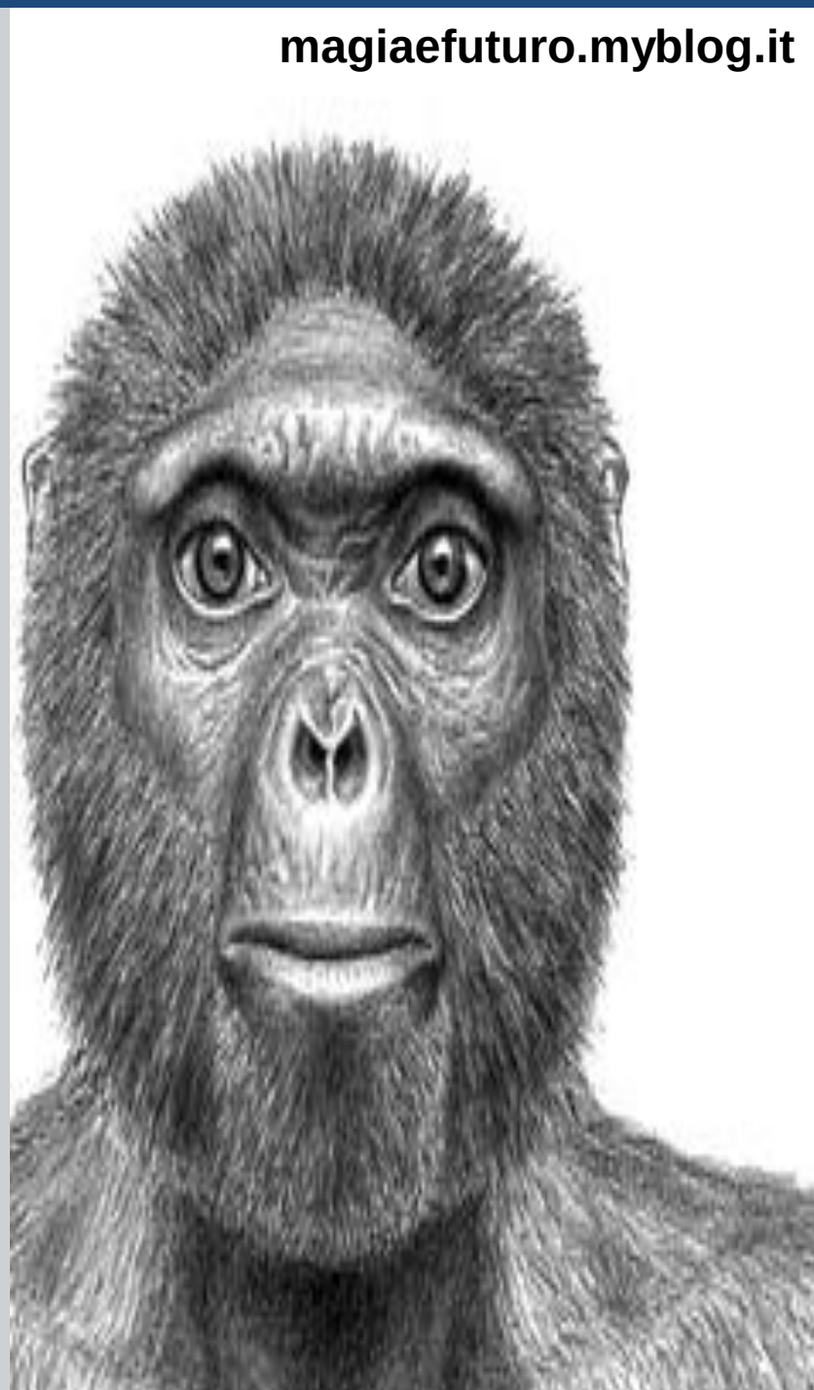
6.100.000 – 5.800.000 a. fa

ARDIPITHECUS

4.400.000 a. fa

enciclopedia.com.pt

magiaefuturo.myblog.it

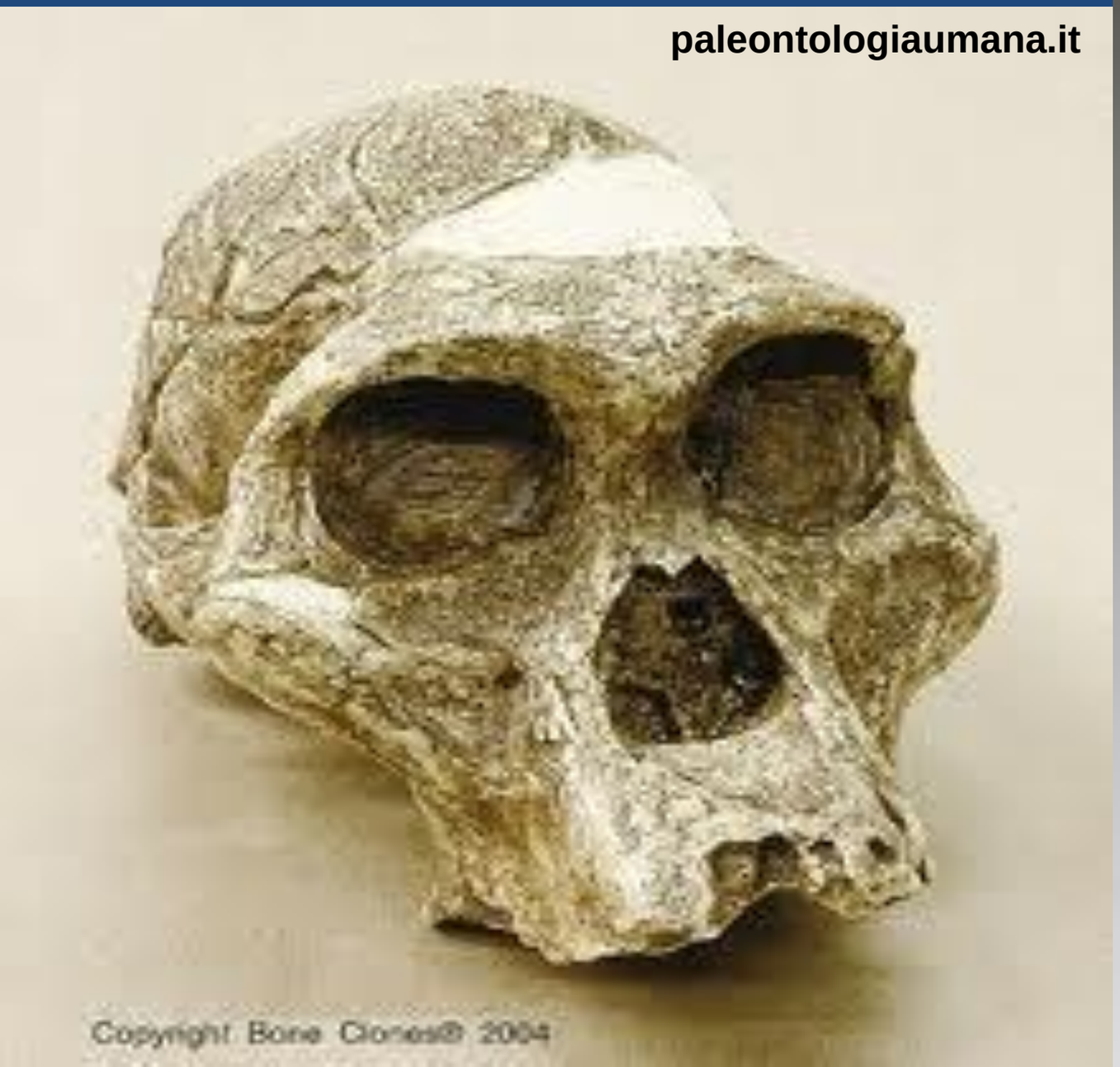


AUSTRALOPITHECUS ANAMENSIS

4.000.000 a. fa

Platyops Kenyanthropus

3.500.000 – 2.000.000 a.fa

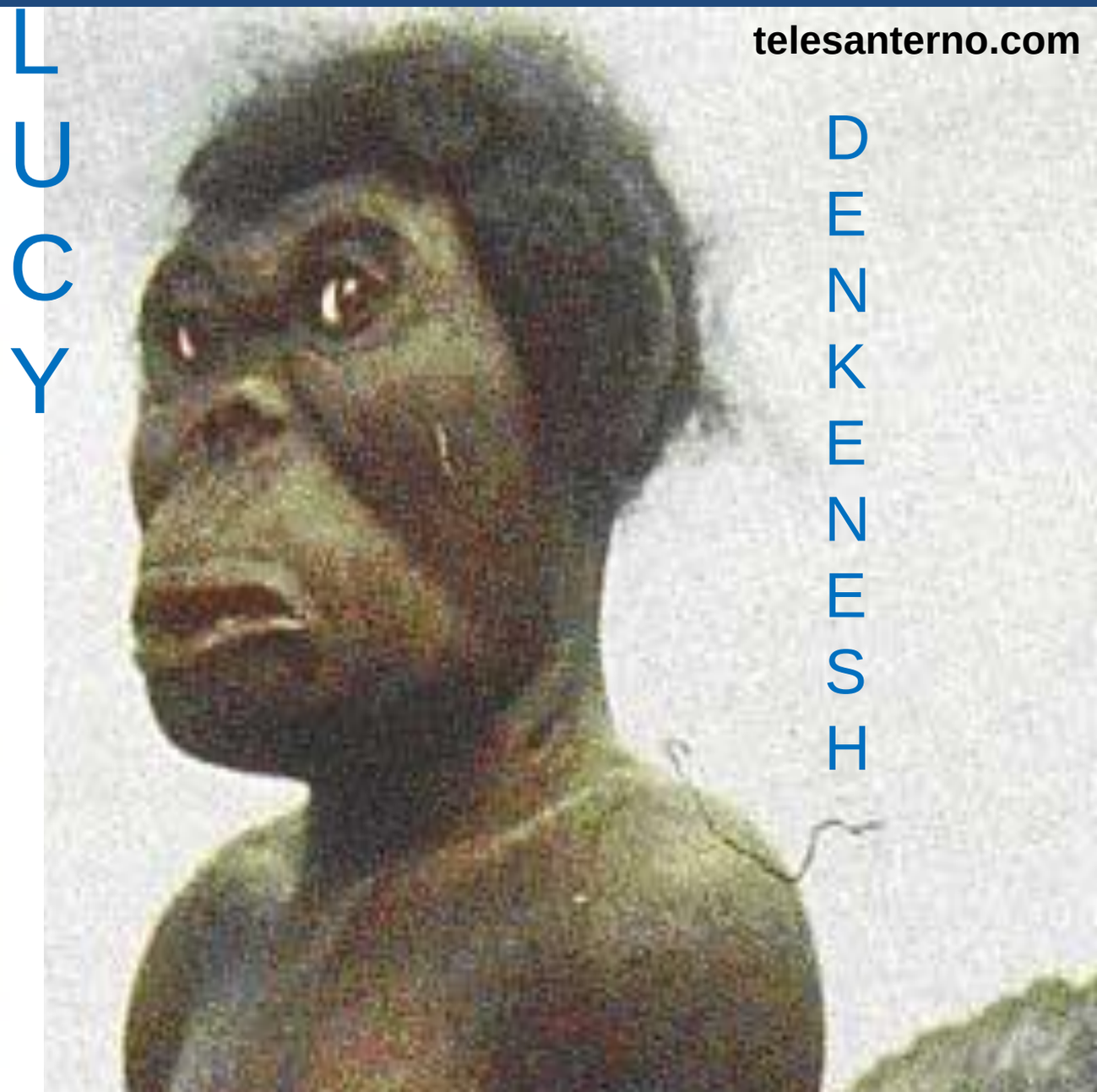


A. BAHREIGHAZALI

3.500.000 – 300.000 a. fa

A. AFARENSIS

3.200.000 a. fa

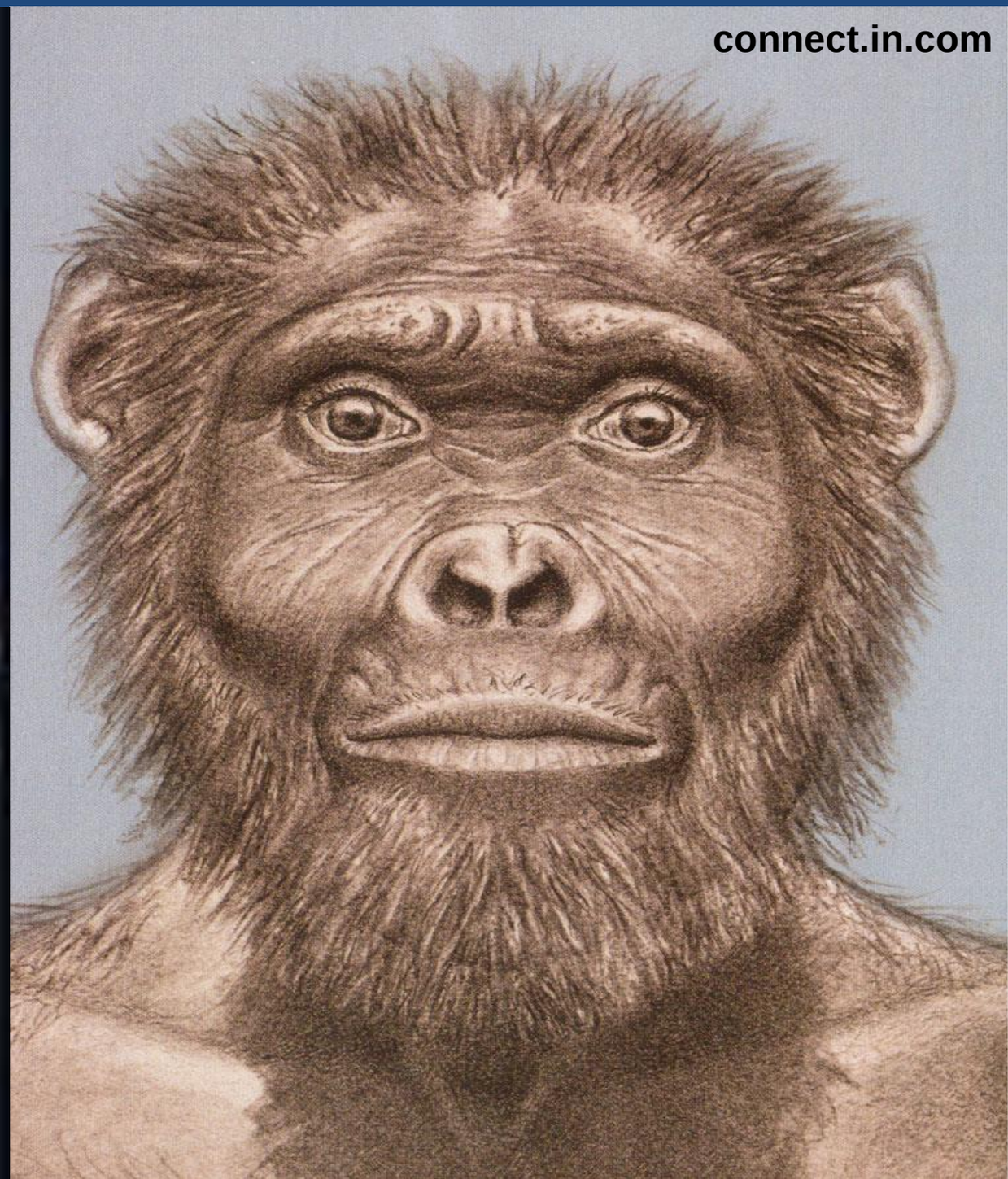


A. AFRICANUS

3.000.000 – 2.000.000 a. fa

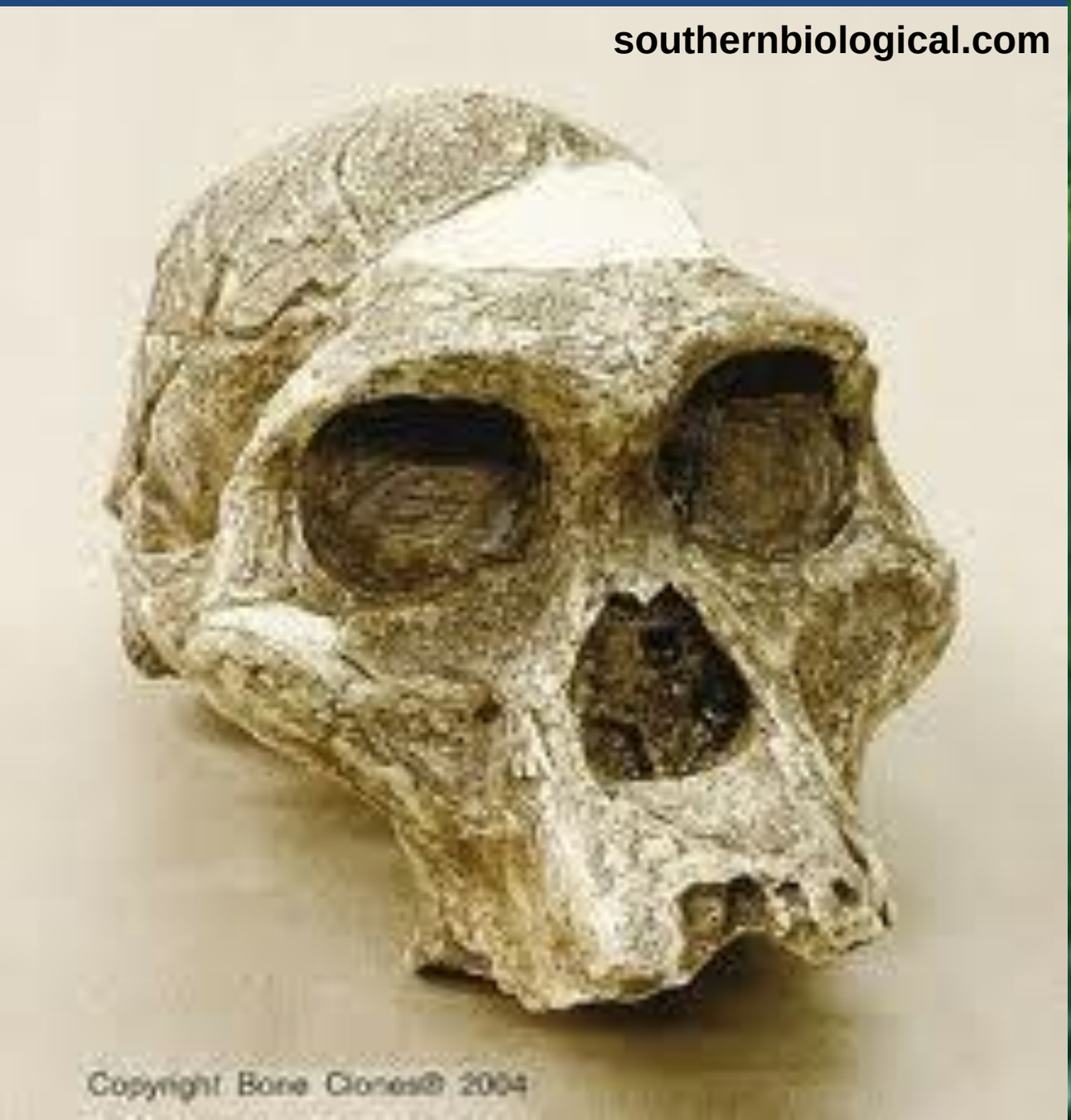
A. GARHI

2.500.000 a. fa



A. AETHIOPICUS

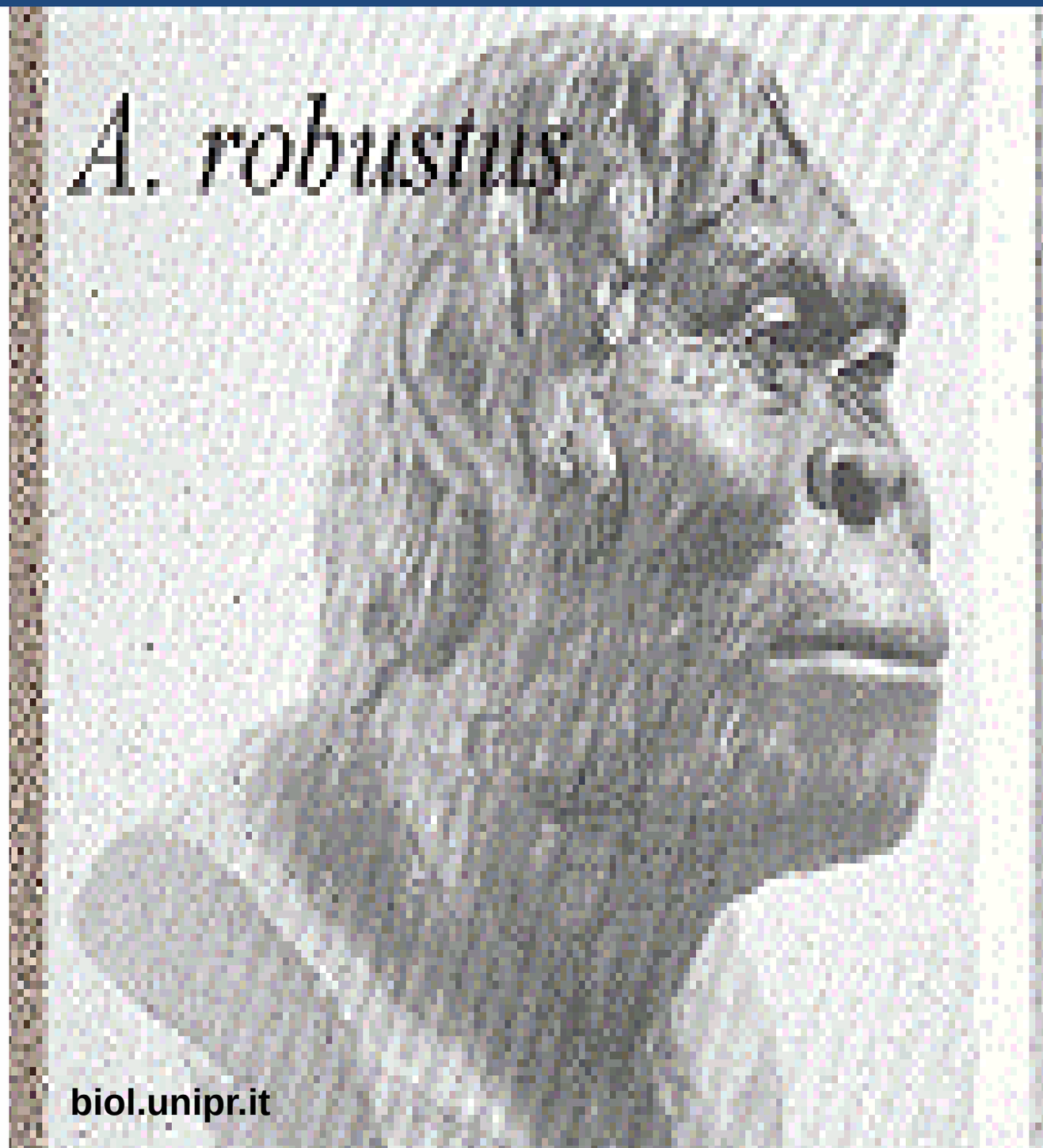
2.500.000 a. fa



A. ROBUSTUS

2.300.000 – 1.200.000 a. fa

web.me.com



biol.unipr.it

HOMO ABILIS

2 – 1.600.000 a. fa

australianmuseum.net,au

tripod.com

HOMO RUDOLFENSIS

2.000.000 a. fa

simple.wikipedia.org

focus-multimedia.de

HOMO ERGASTER

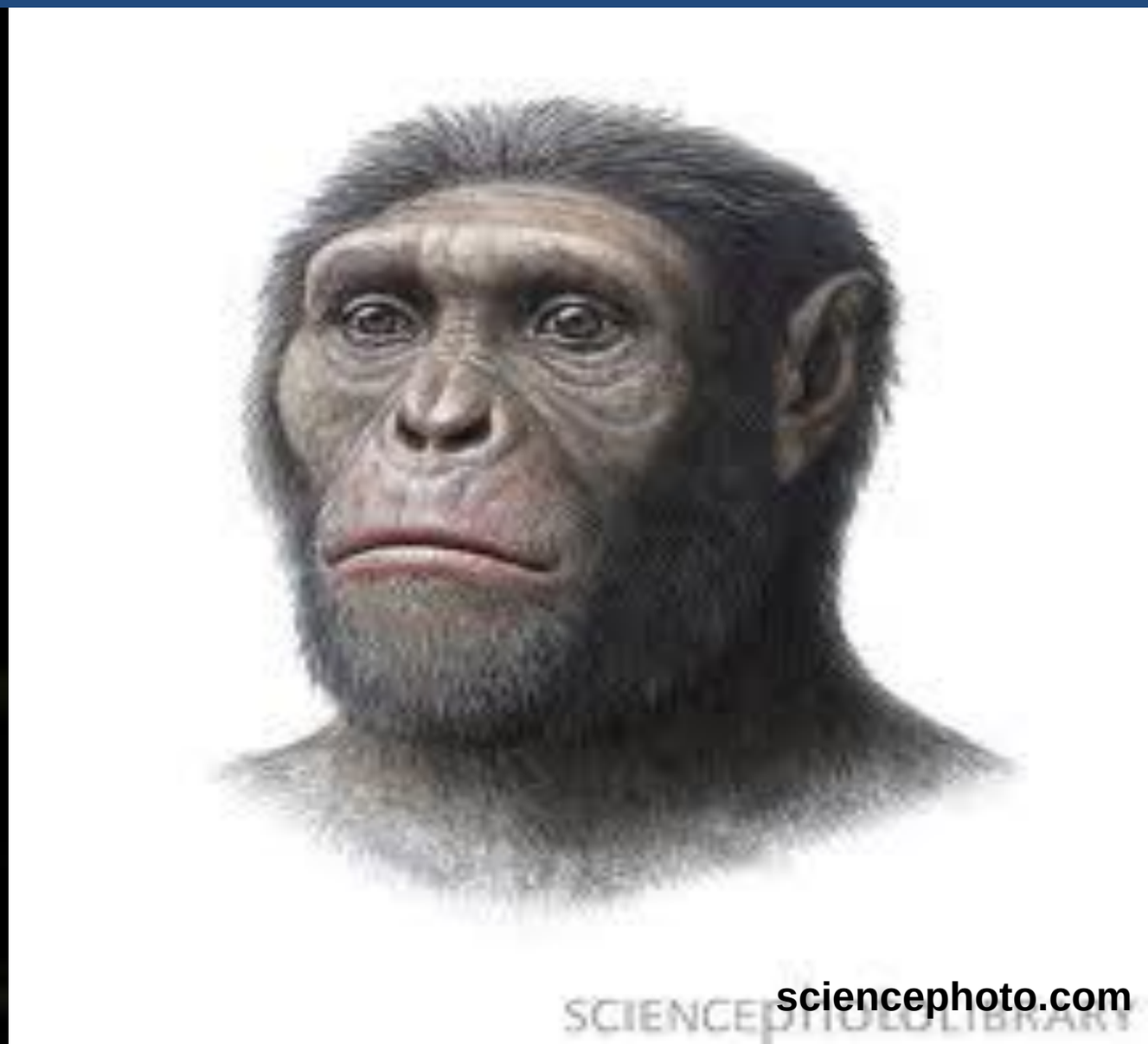
2.000.000 – 1.000.000 a. fa

somso.de

flickr.com

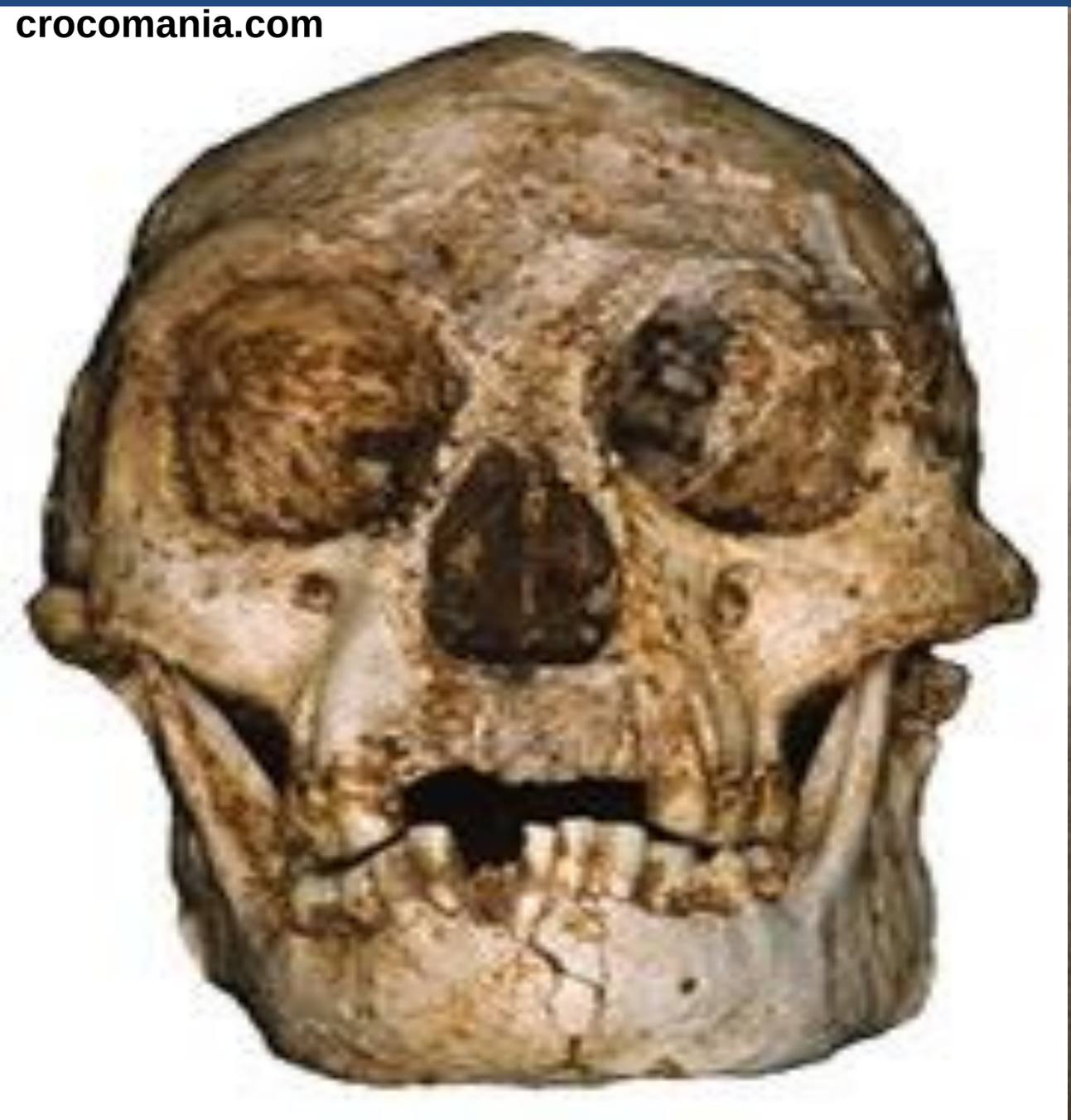
A. SEDIBA

1.900.000 – 1.700.000 a. fa



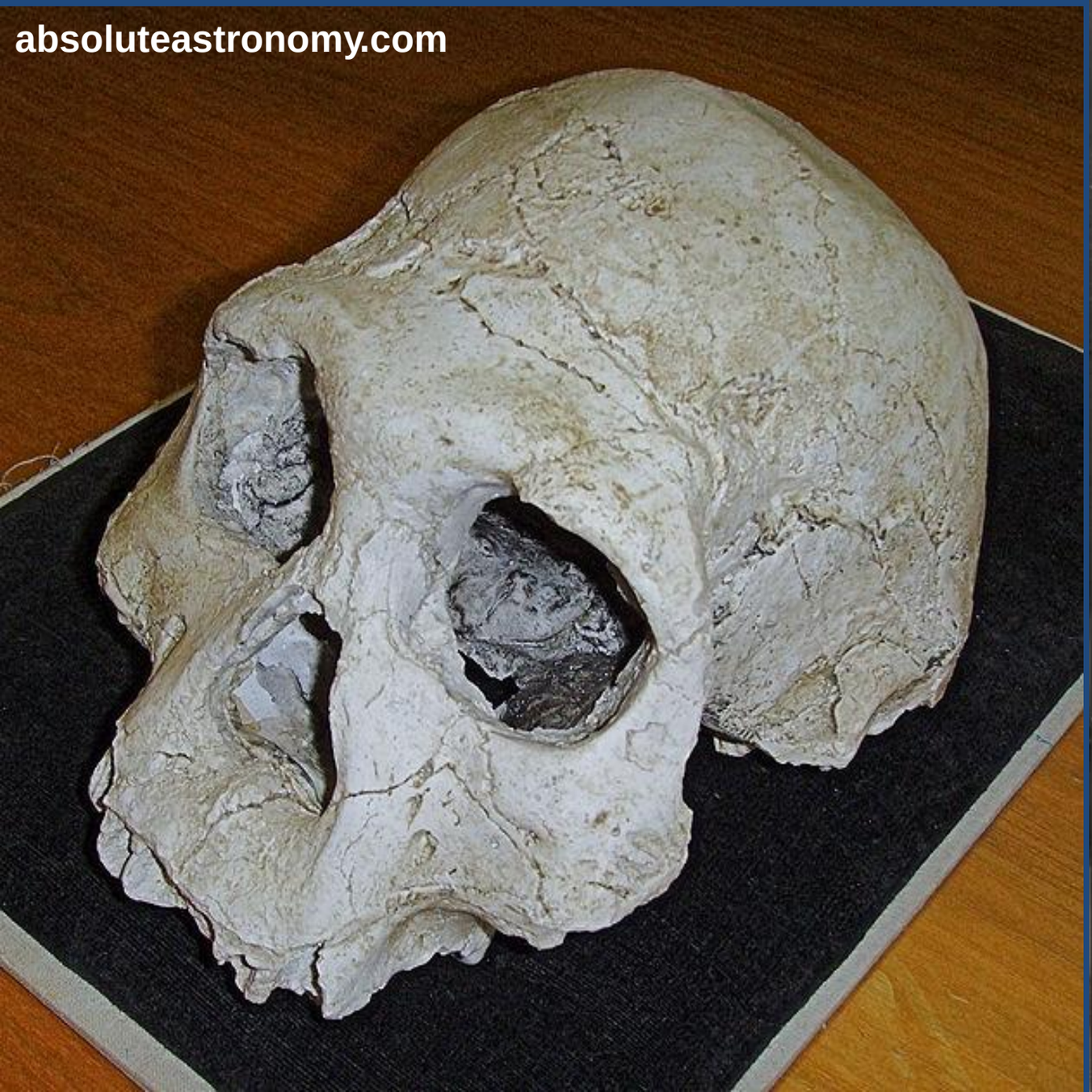
HOMO FLORESIENSIS

1.900.000 – 1.300.000 a. fa



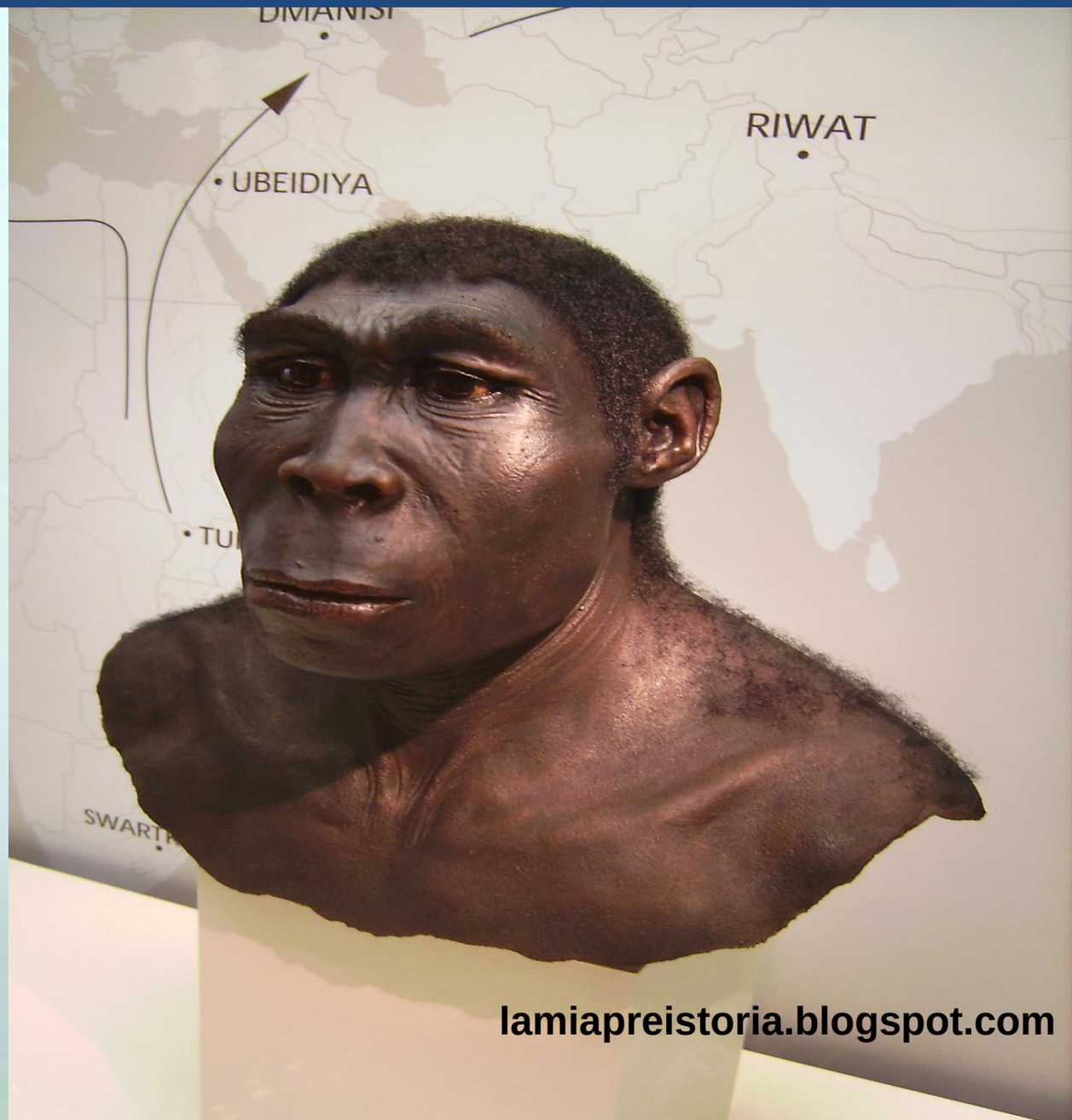
HOMO GEORGICUS

1.800.000 a. fa



HOMO ERECTUS

. 1.800.000 – 300.000



HOMO ANTECESSOR

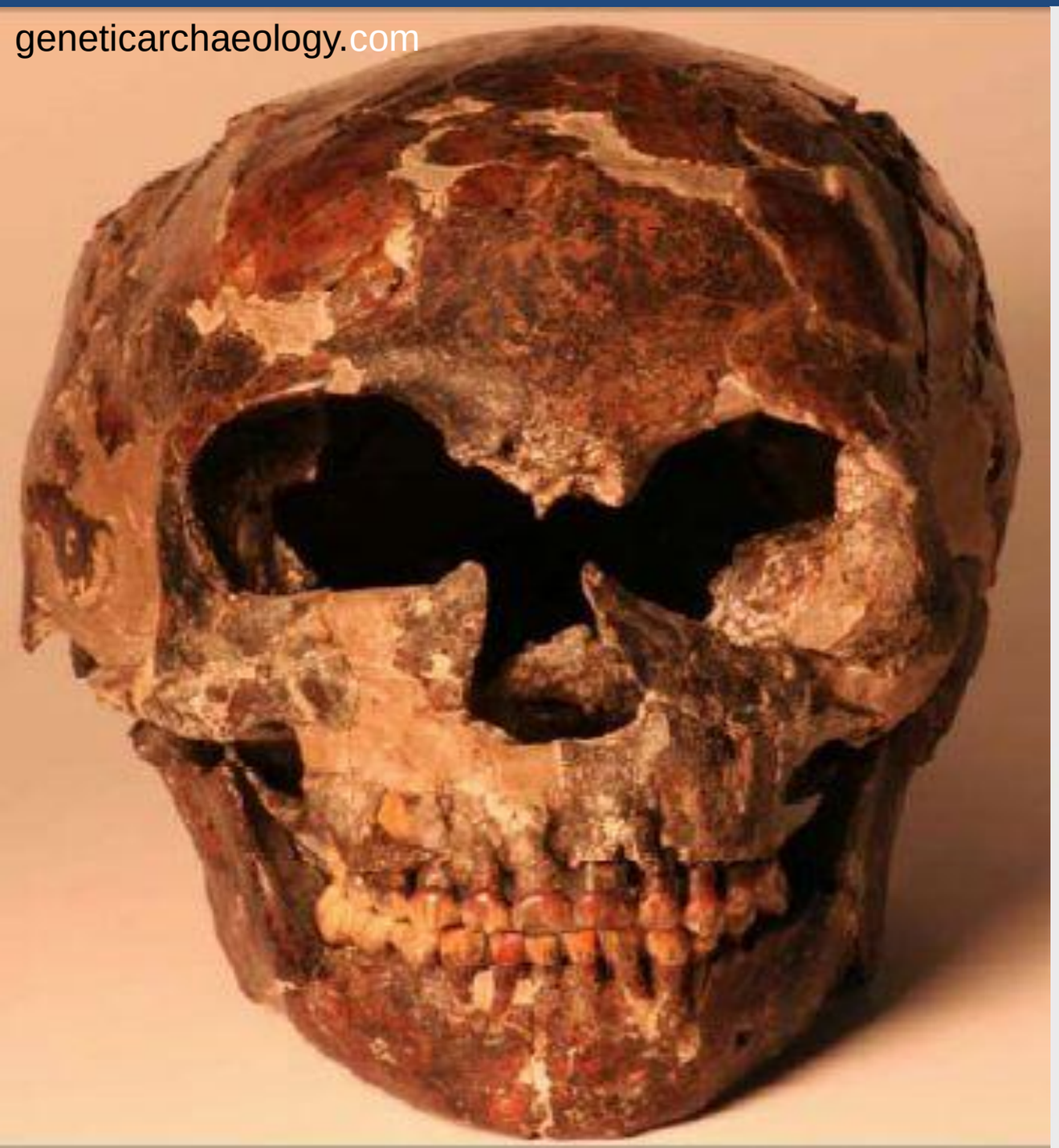
1.200.000 – 800.000 a. fa

Homo Heidelbergensis

500.000 a. fa

HOMO SAPIENS ARCAICO

500.000 a. fa

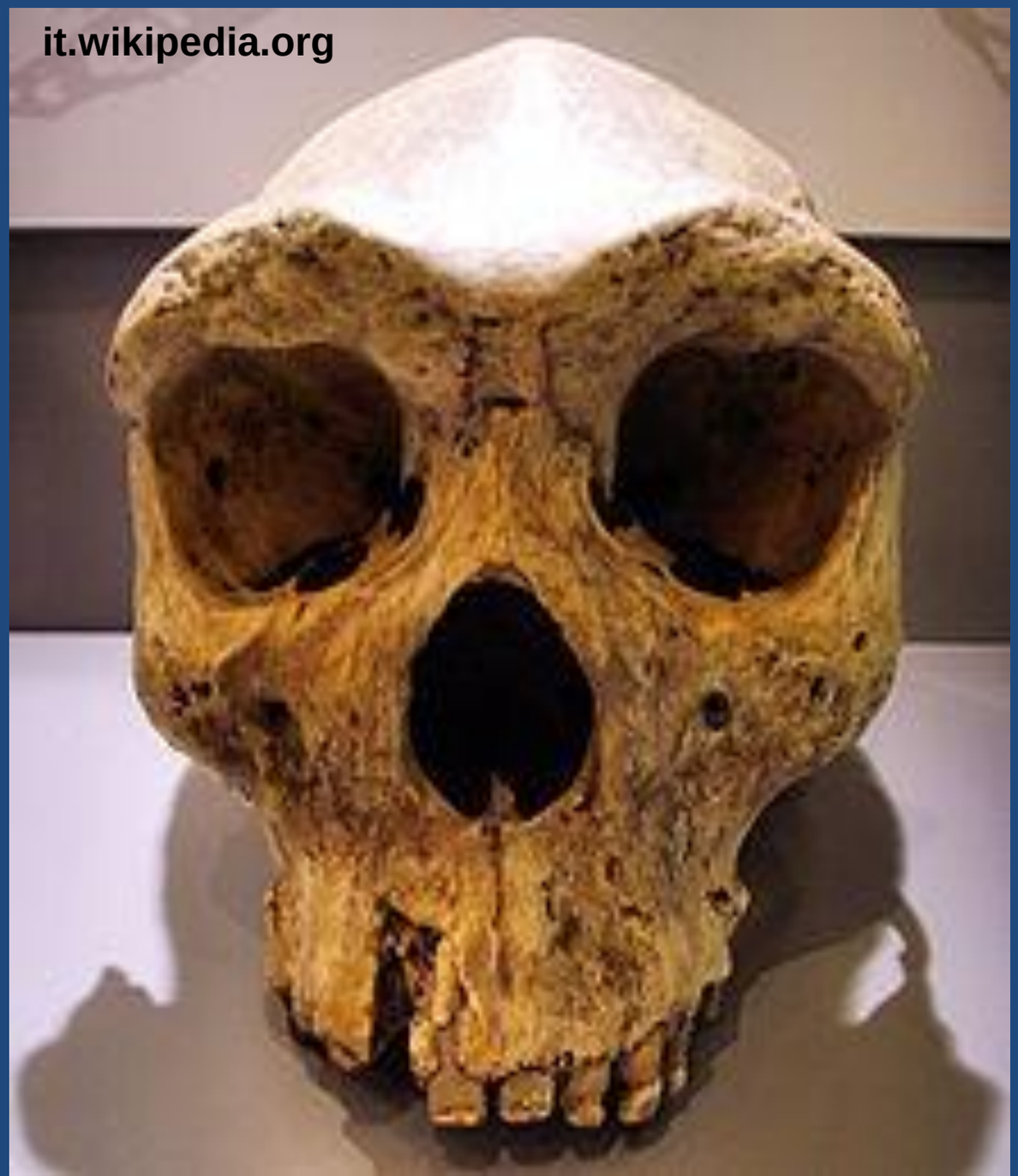


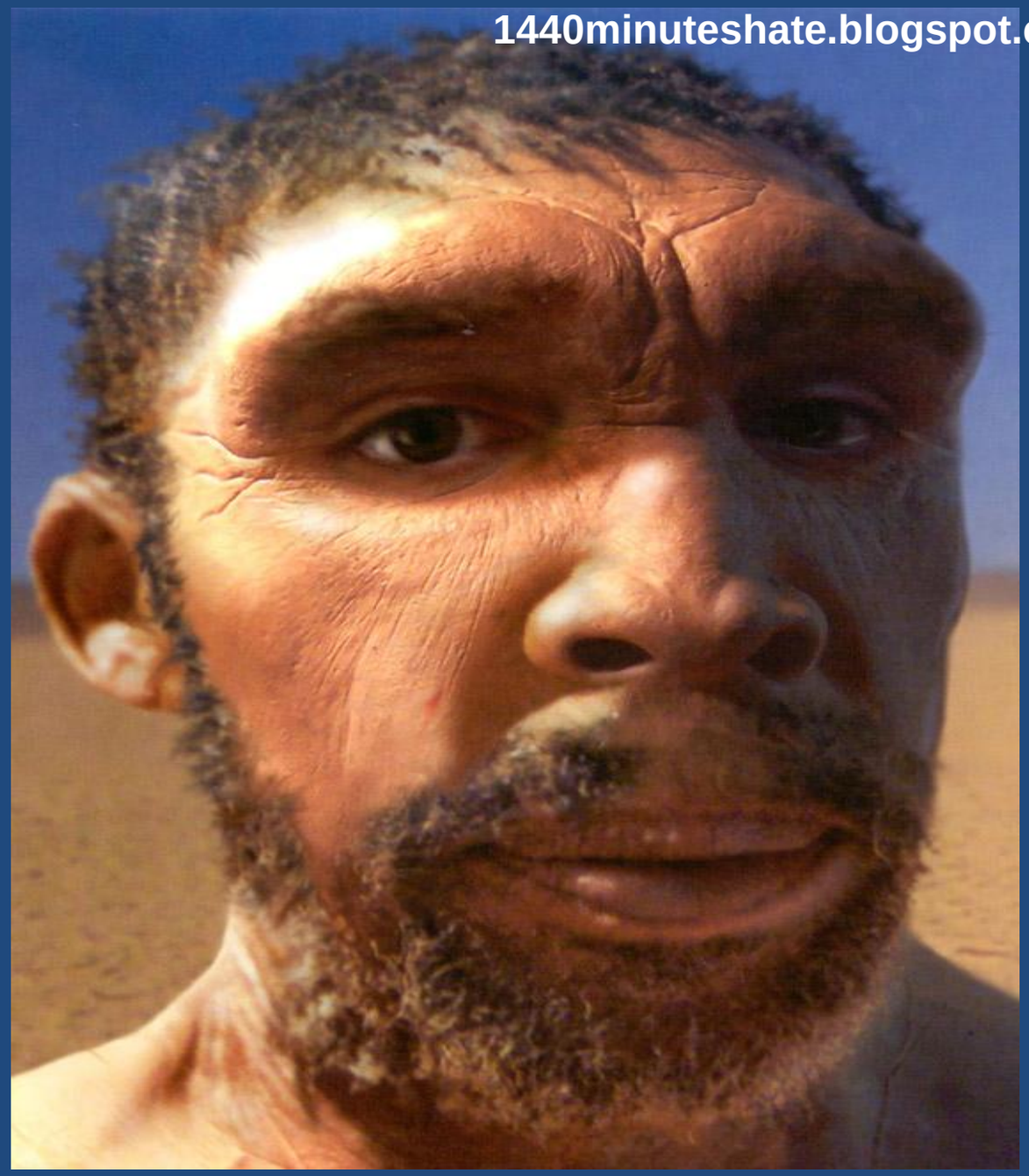
HOMO PEKINENSIS

400.000 – 200.000 a. fa

HOMO RHODESIENSIS

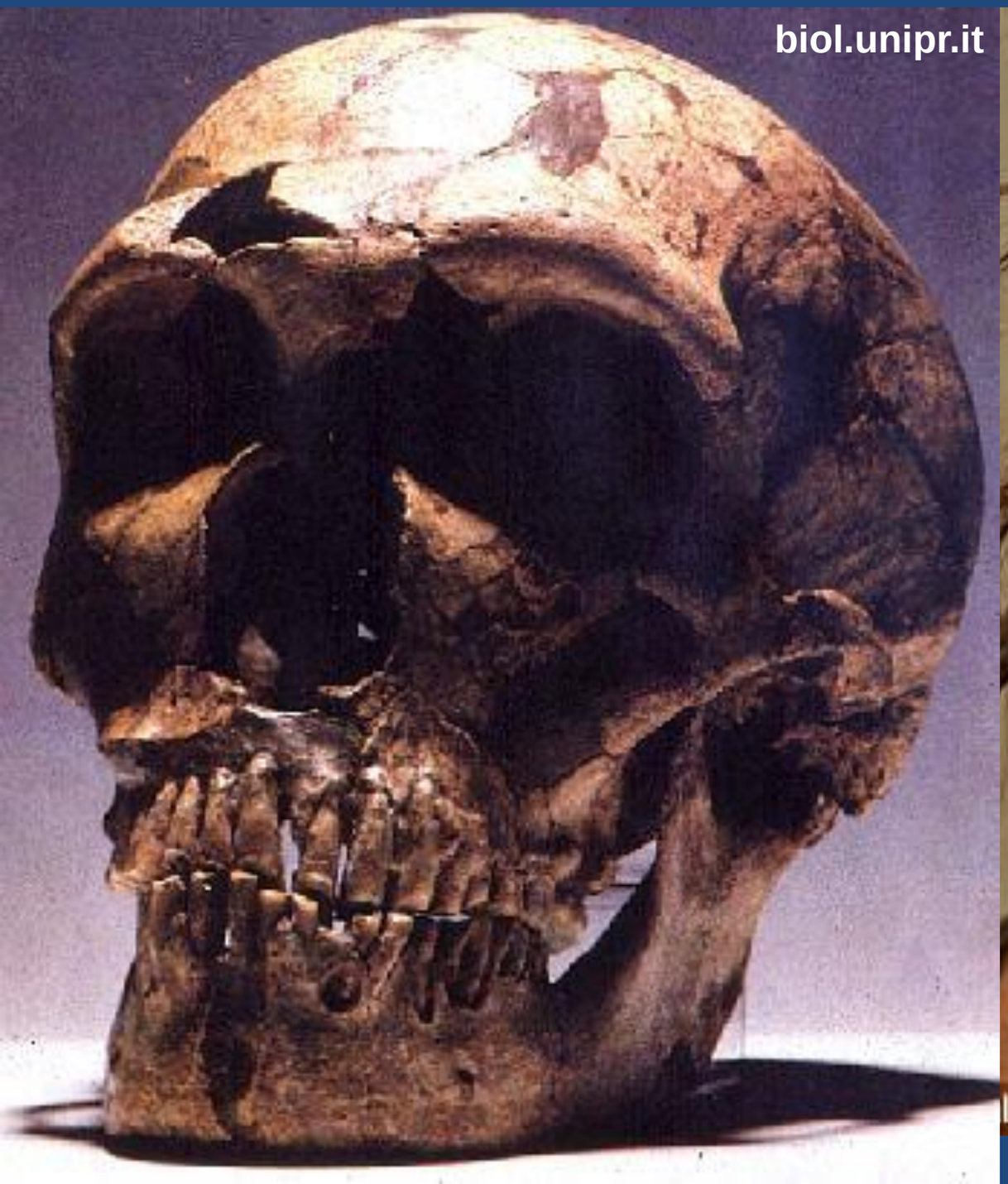
300.000 – 125.000 a. fa





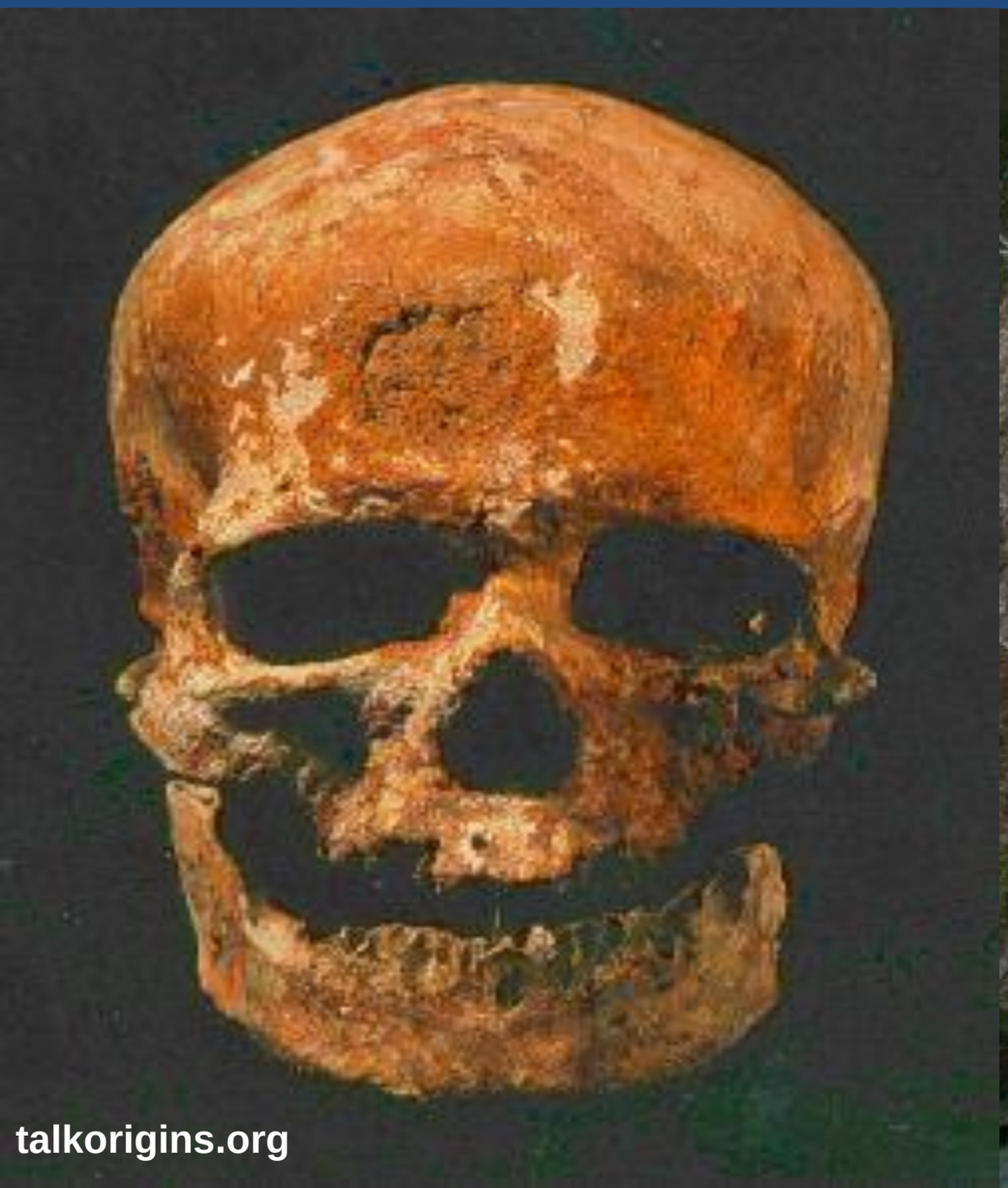
HOMO NEANDERTHALENSIS

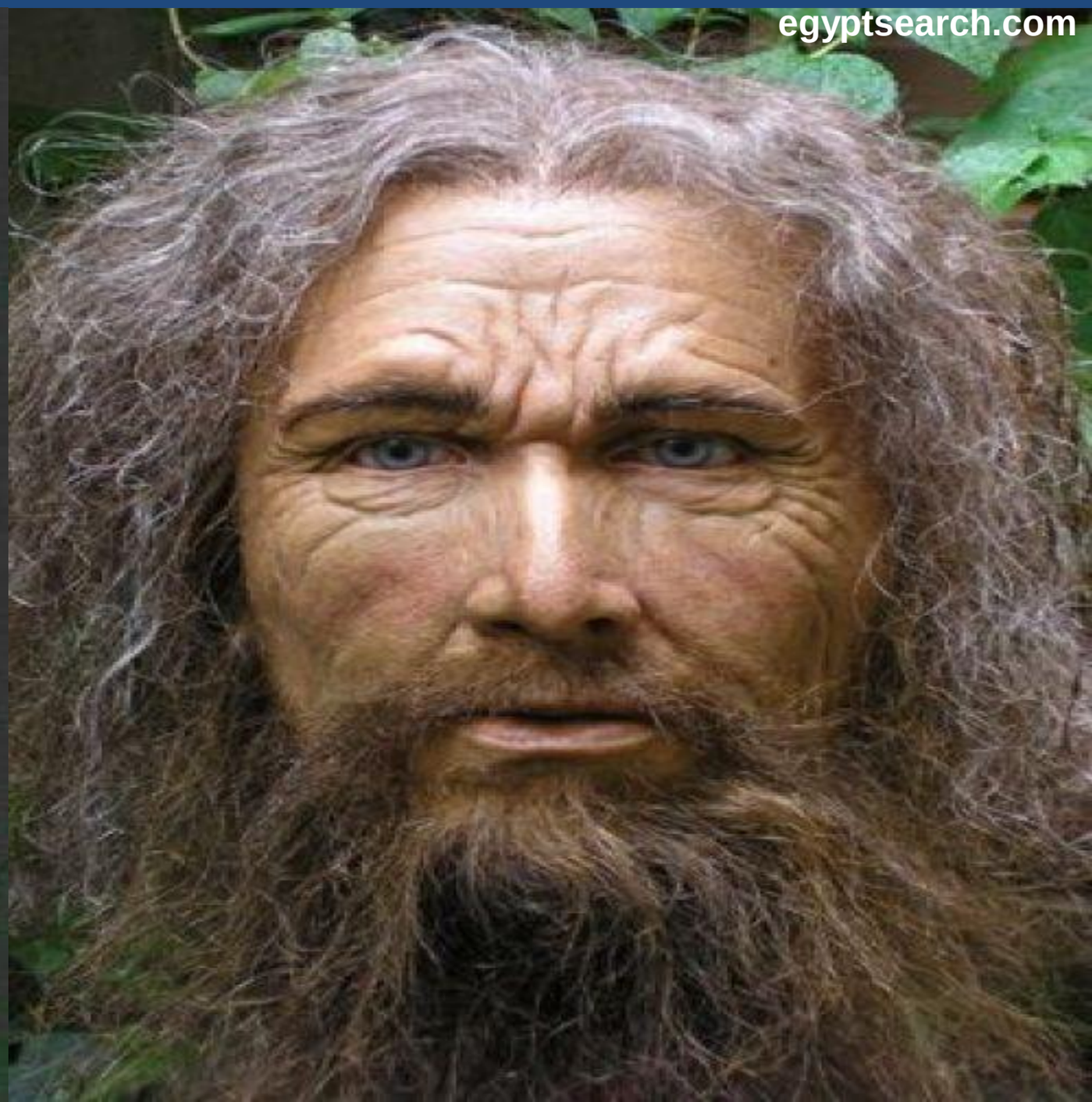
200.000 – 40.000 a. fa



CRO – MAGNON

80.000 – 30.000 H. SAPIENS





HOMO DENISOVIANO

40.000 a. fa

SAPIENS

HOMO SAPIENS SAPIENS
130.000 a. fa

HOMO SAPIENS SAPIENS

Perché la bipedia

?

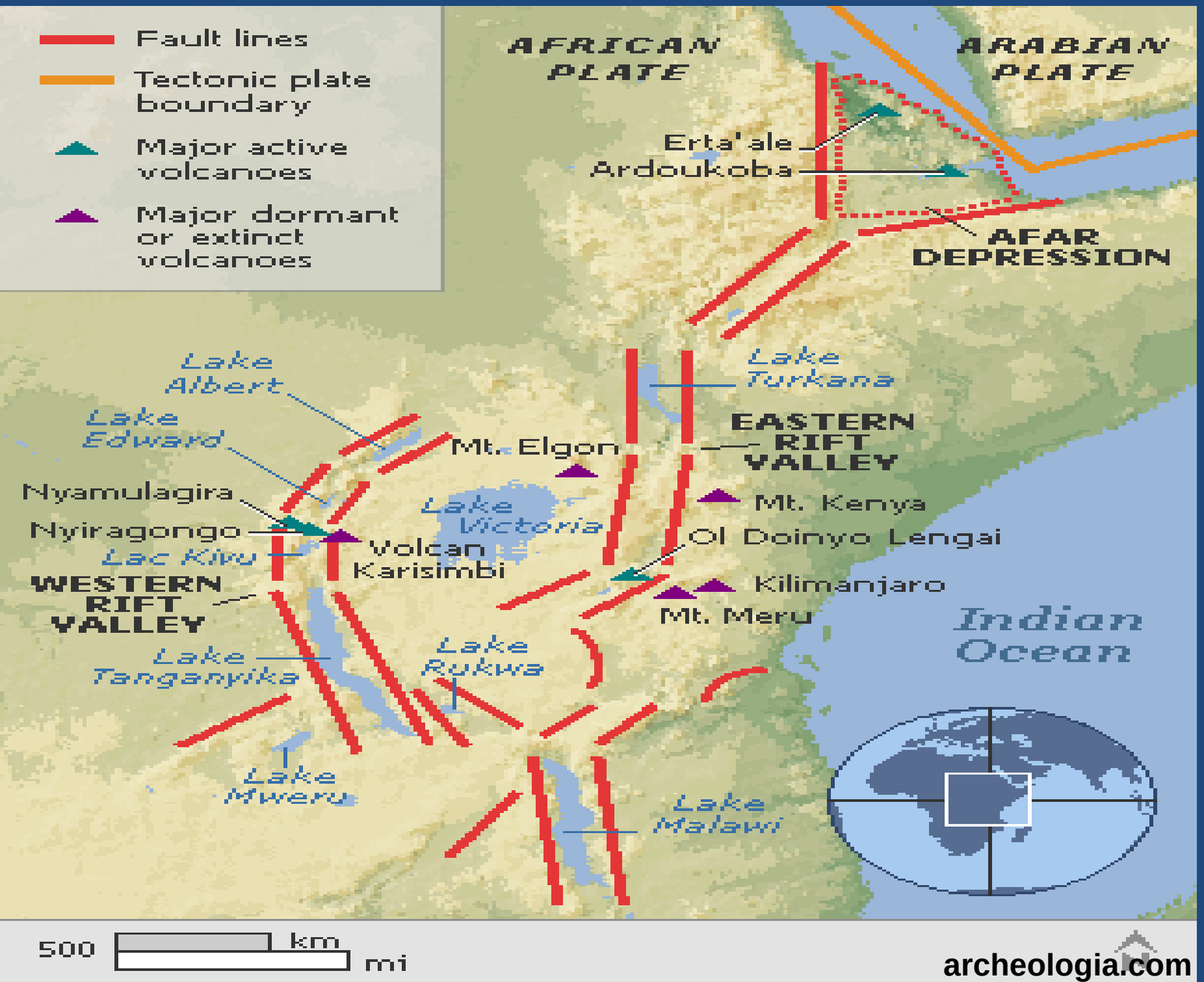
wikideep.it

GREAT RIFT VALLEY

35.000.000 a. fa

lu.7000 Km

la. 100 Km



GIORDANIA

ETIOPIA

KENYA

TANZANIA

WEST

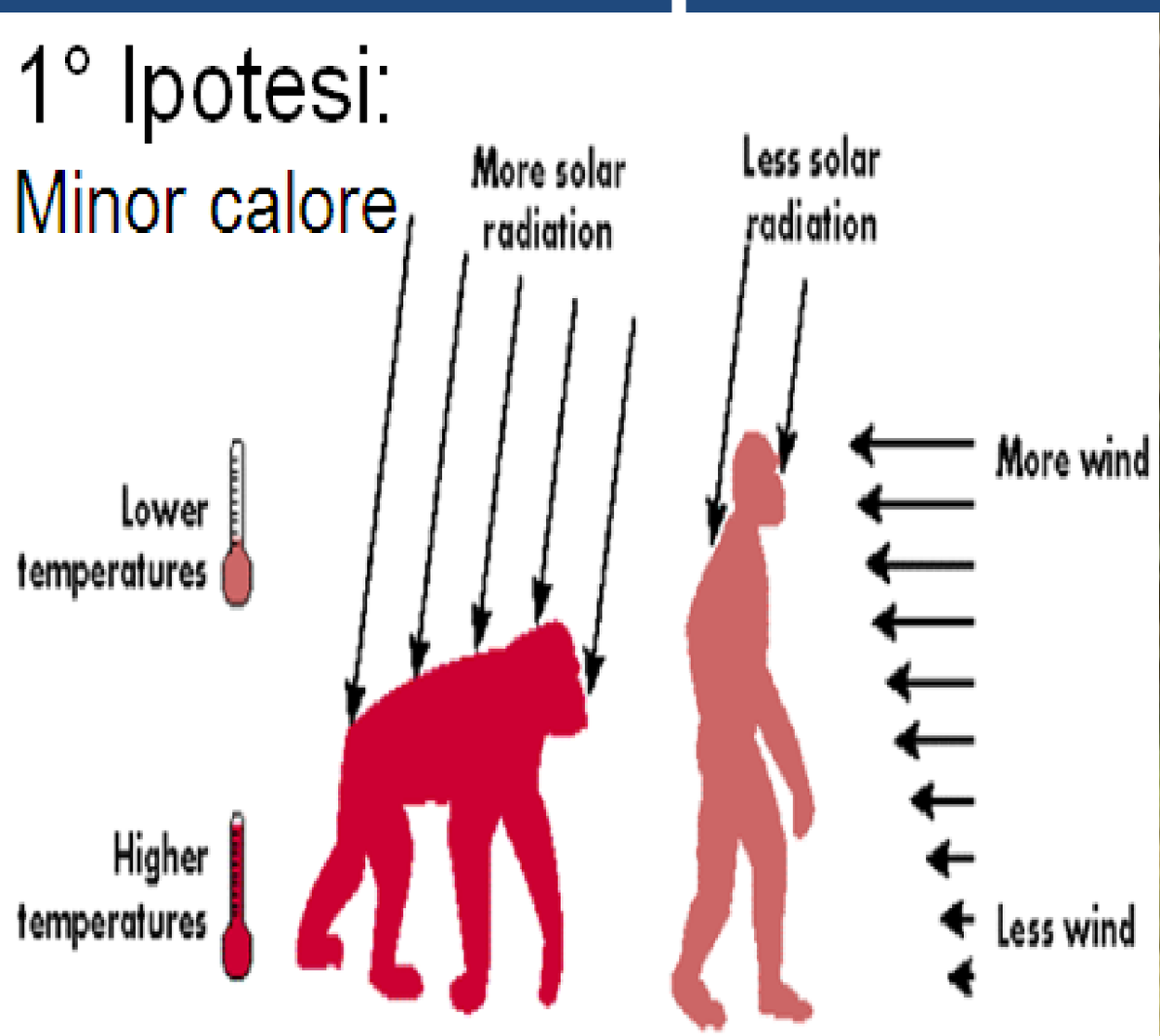
alphabeto.it

EAST SIDE STORY

☻ < esposizione alle radiazioni solari

☻ > esposizione al vento

1° Ipotesi:
Minor calore



2° Ipotesi: cibo in alto

3° Ipotesi: Utensili

elementari.net

4° IPOTESI

LA SCIMMIA MANGIA IN PIEDI

5° Ipotesi: > Cure parentali

- Migliore presa e trasporto

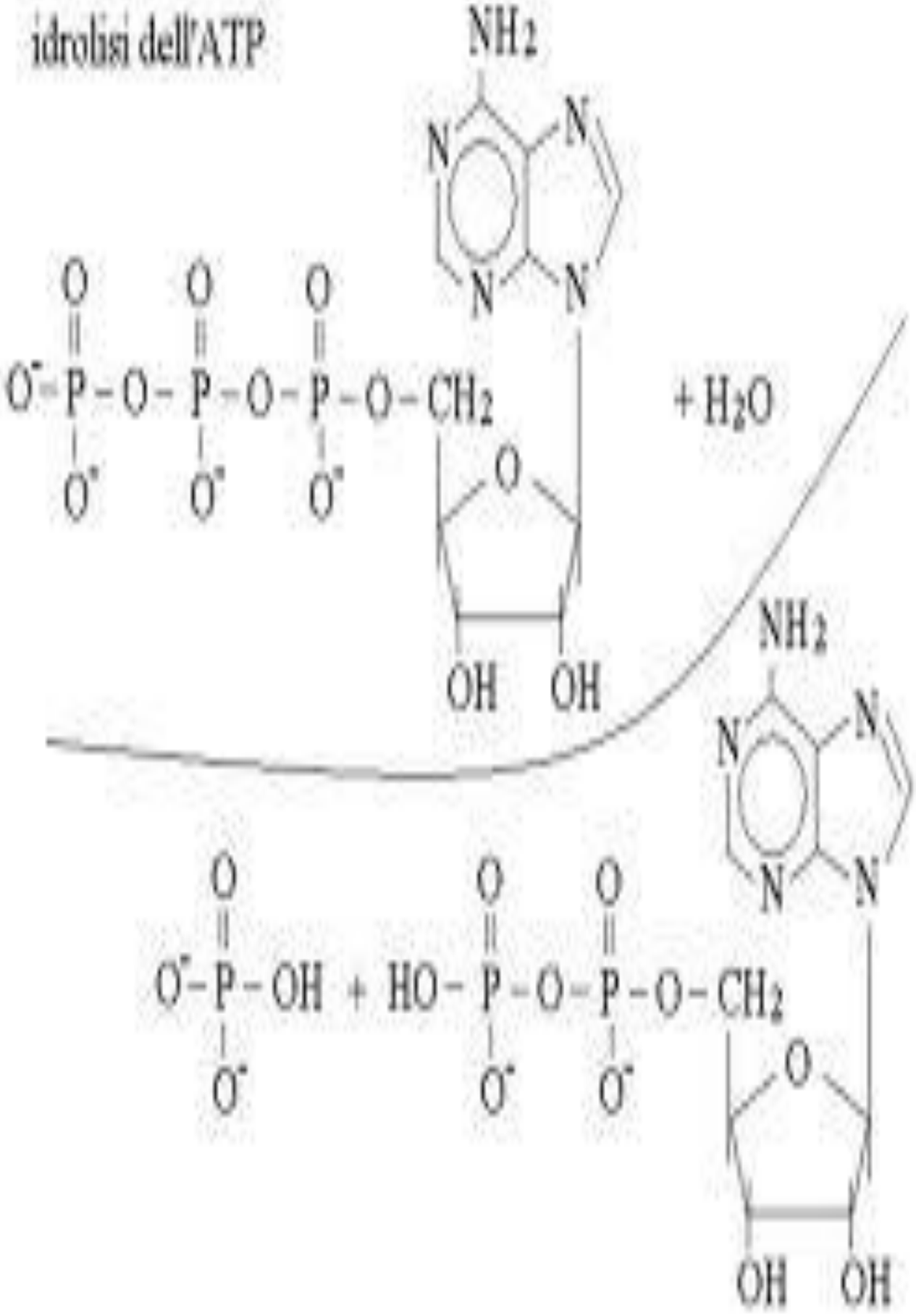
di prole e cose

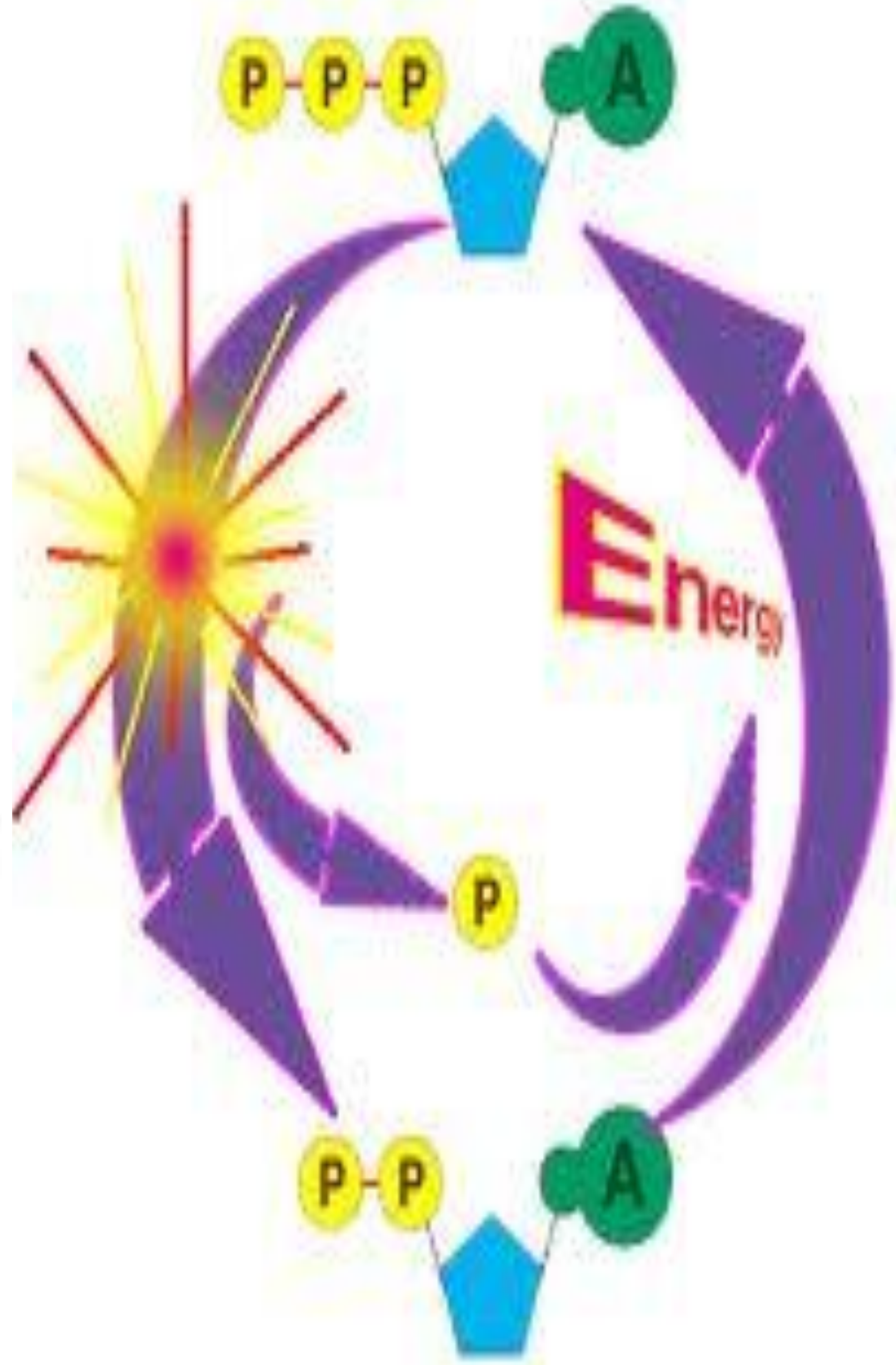
clickalps.com

panoramio.com

4° Ipotesi: Caccia e cibo

idrolisi dell'ATP





Cibo cotto:

- + buono
- + conservabile
- + digeribile
- - microbi

Chi si muove nella savana, deve essere sicuro di

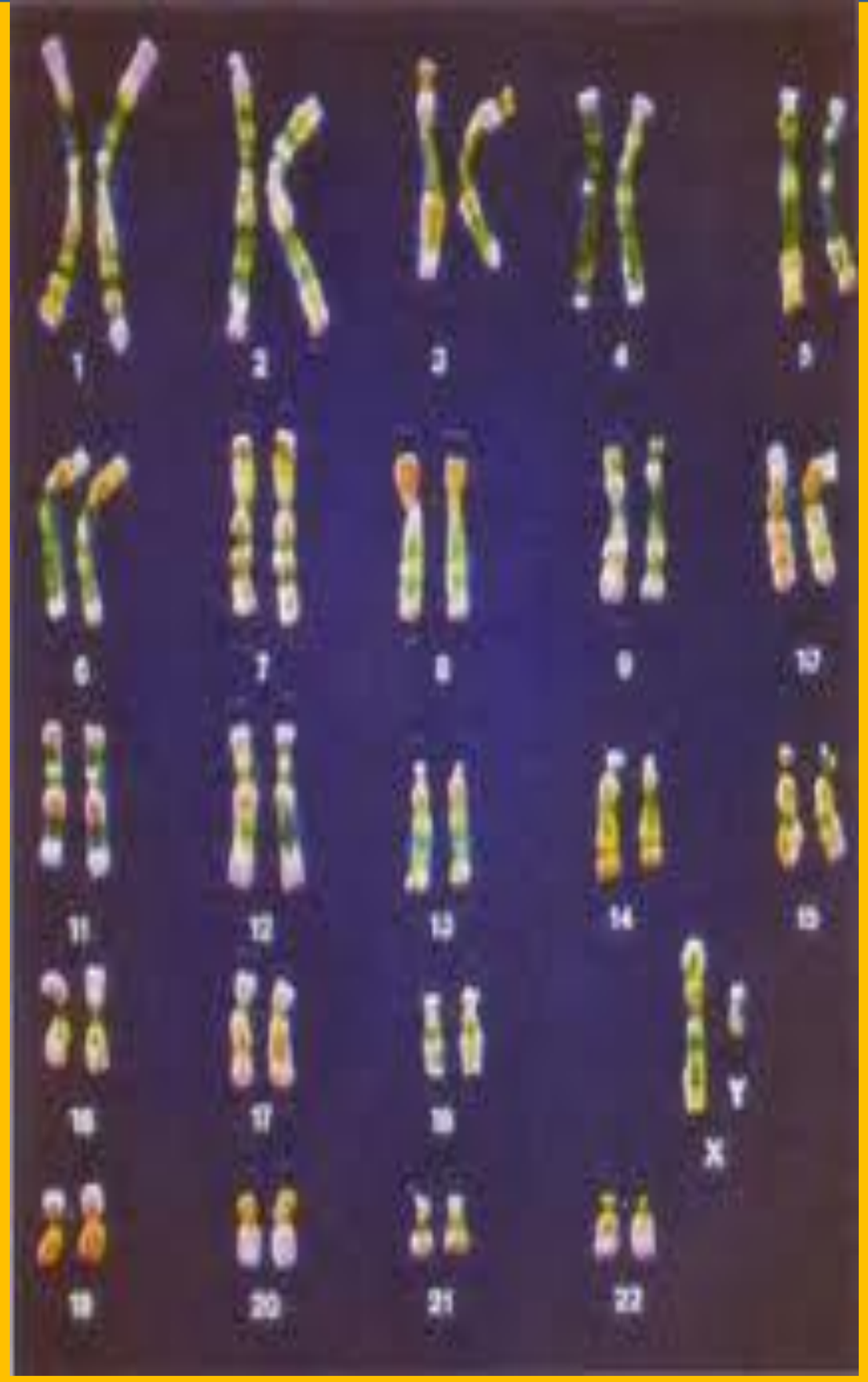
sé, deambulare e correre con disinvoltura, meglio se in posizione bipedica,

per riuscire ad avvistare

le prede ed evitare i predatori.

Quali le
trasformazioni
fisiche
da quadrupede
a
bipede
?

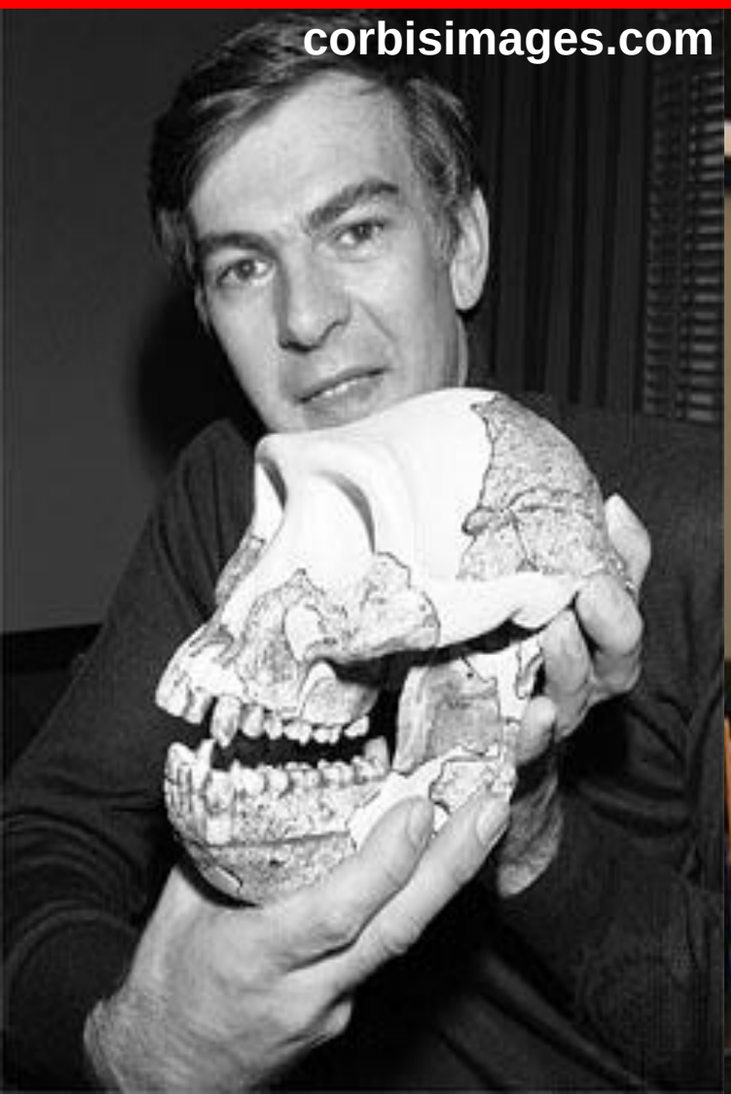
manichinistore.it



voceditalia.it

Owen Claude Lovejoy

Selezione sessuale



Strategia “ r “:

500.000 – 1.000.000 di uova

Strategia “ k “

1 ogni 5 anni

ismea.it

bio.davidson.edu

Cambiamenti

fisici

mondoanimaleshop.it

wapedia.mobi

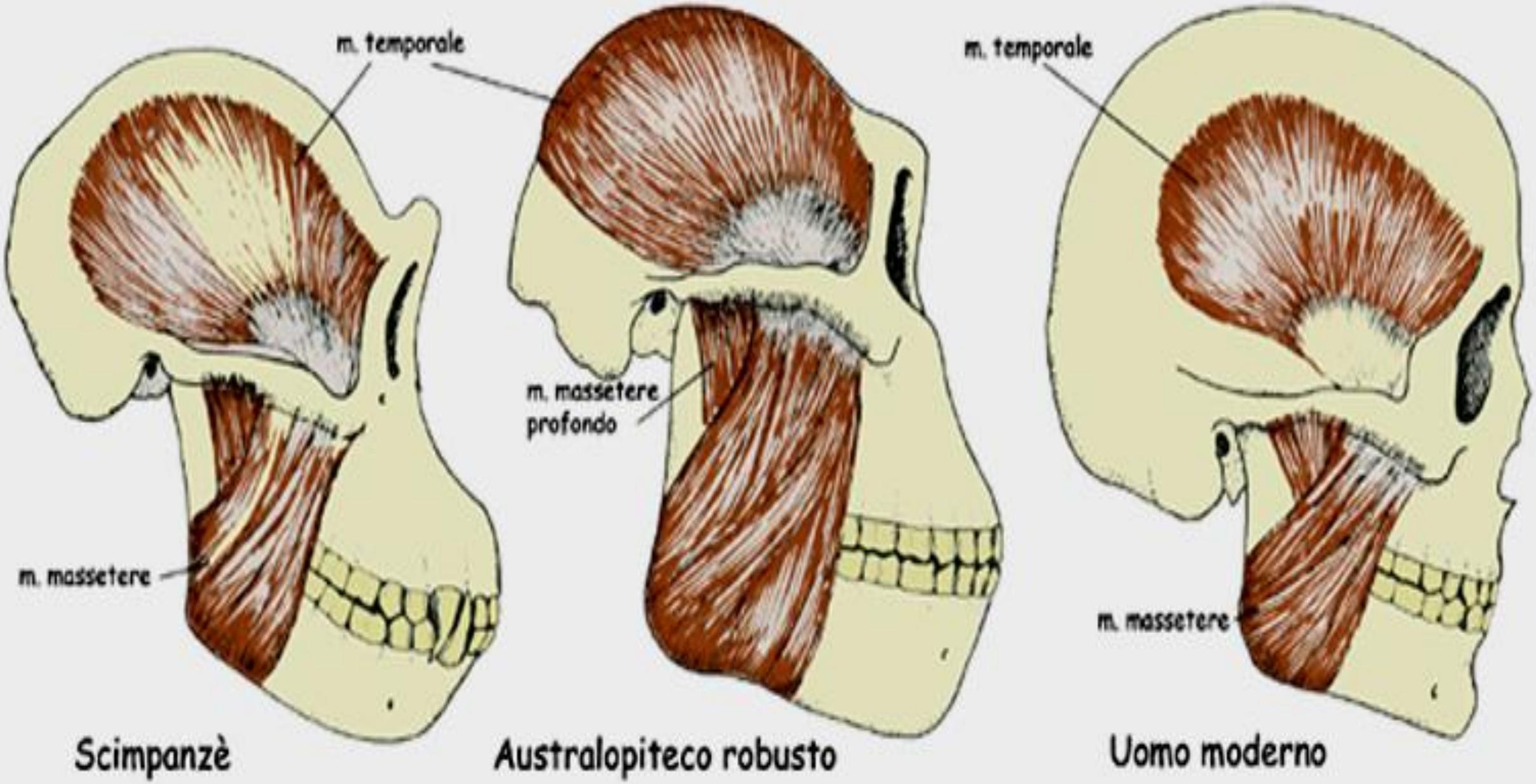
canetstockphoto.it

exibart.com

Lucian Freud – Girl in a Dark Jacket – 1947 – olio su legno

Muscoli masticatori

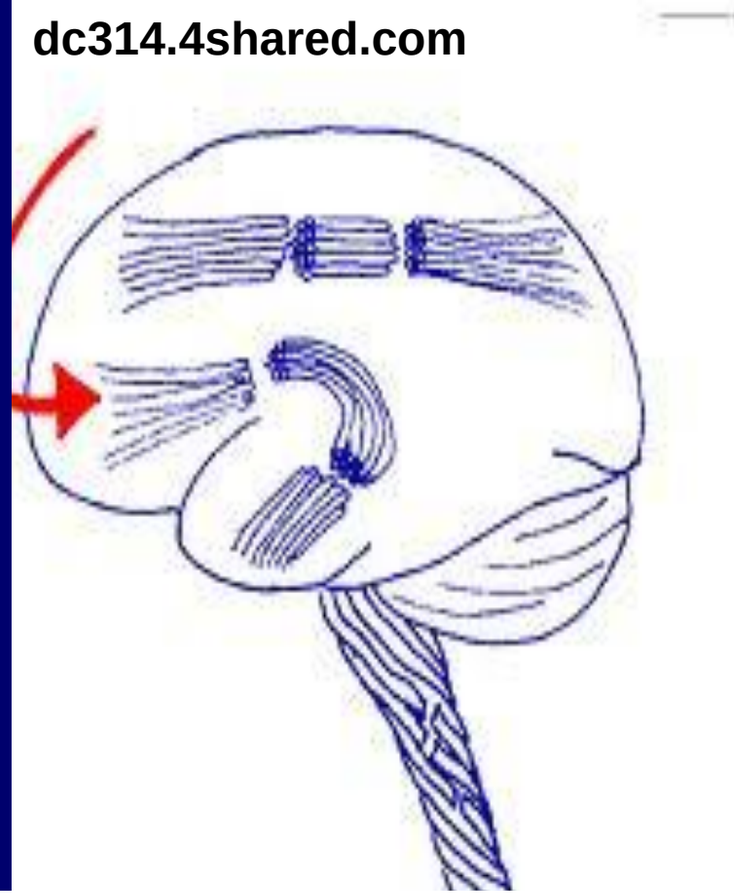
omodeo.anisn.it

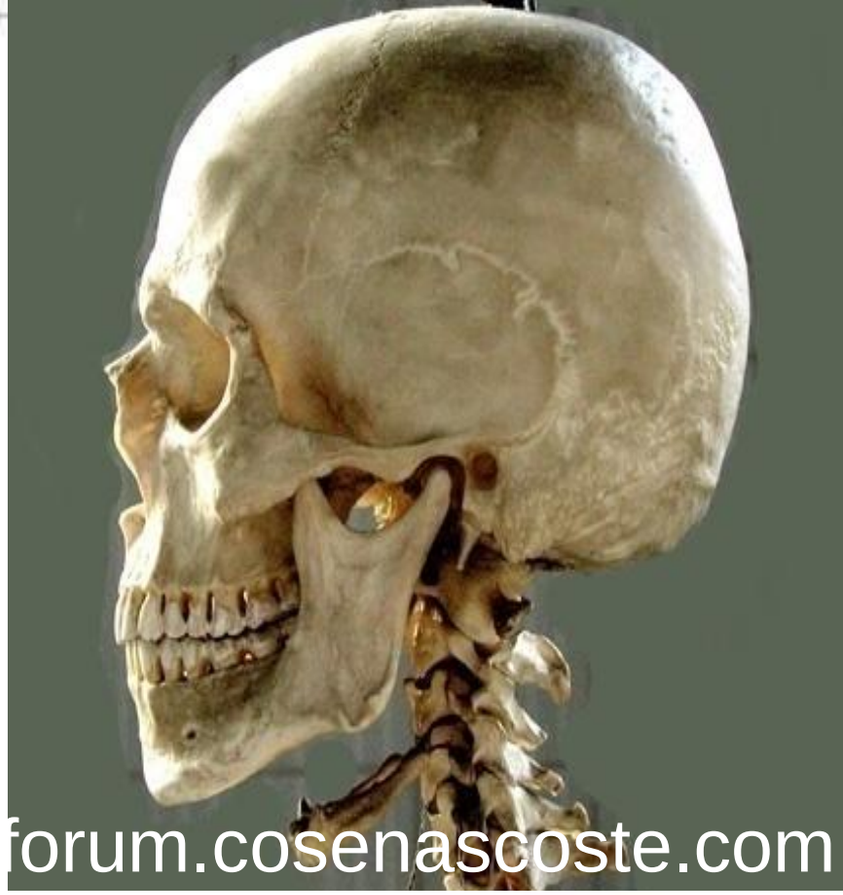


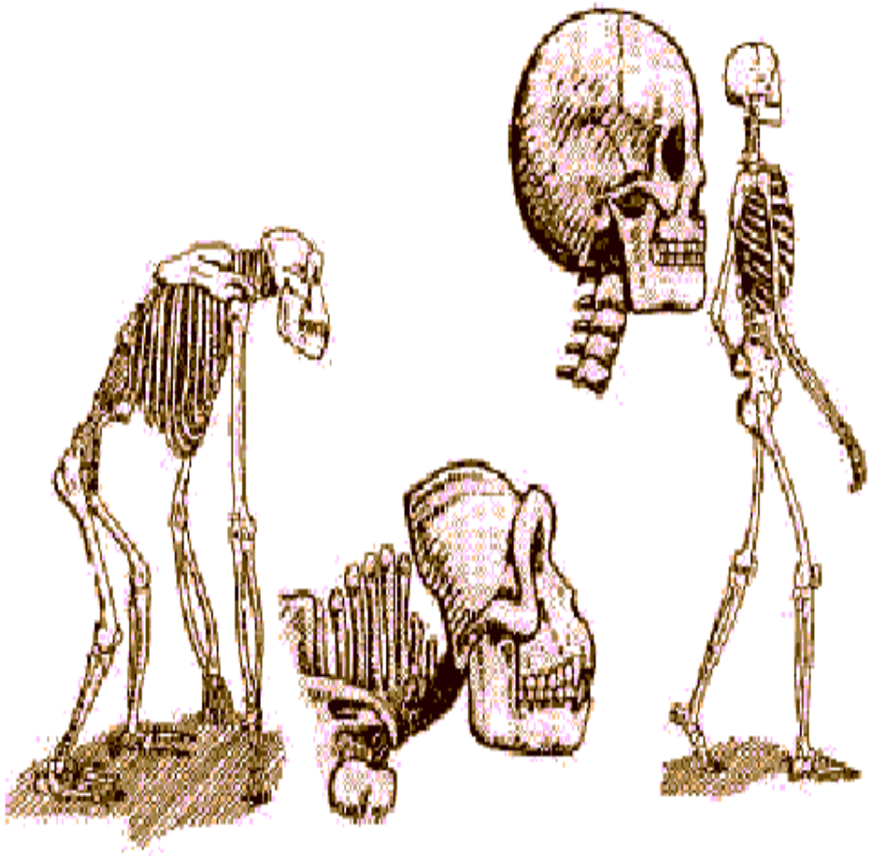
Confronto dei muscoli masticatori di tre primati superiori

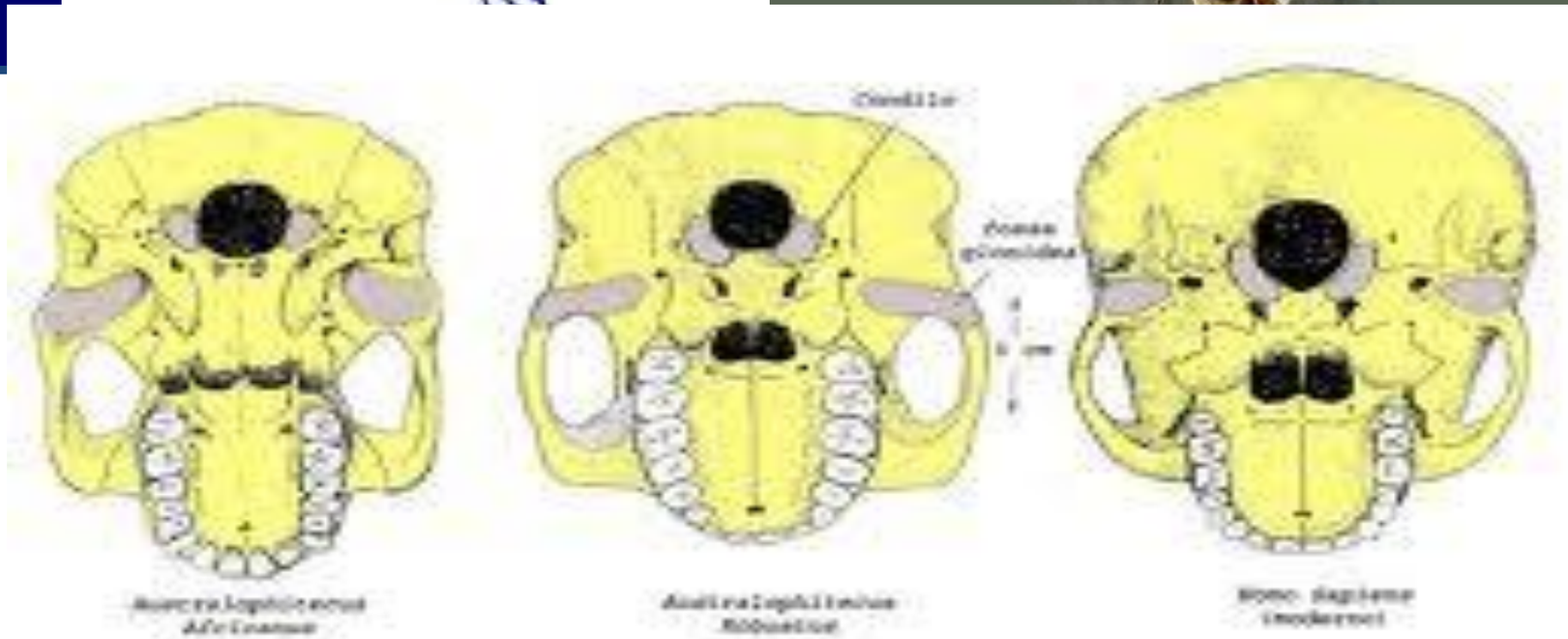
pienteesalute.com

saltafossi.it

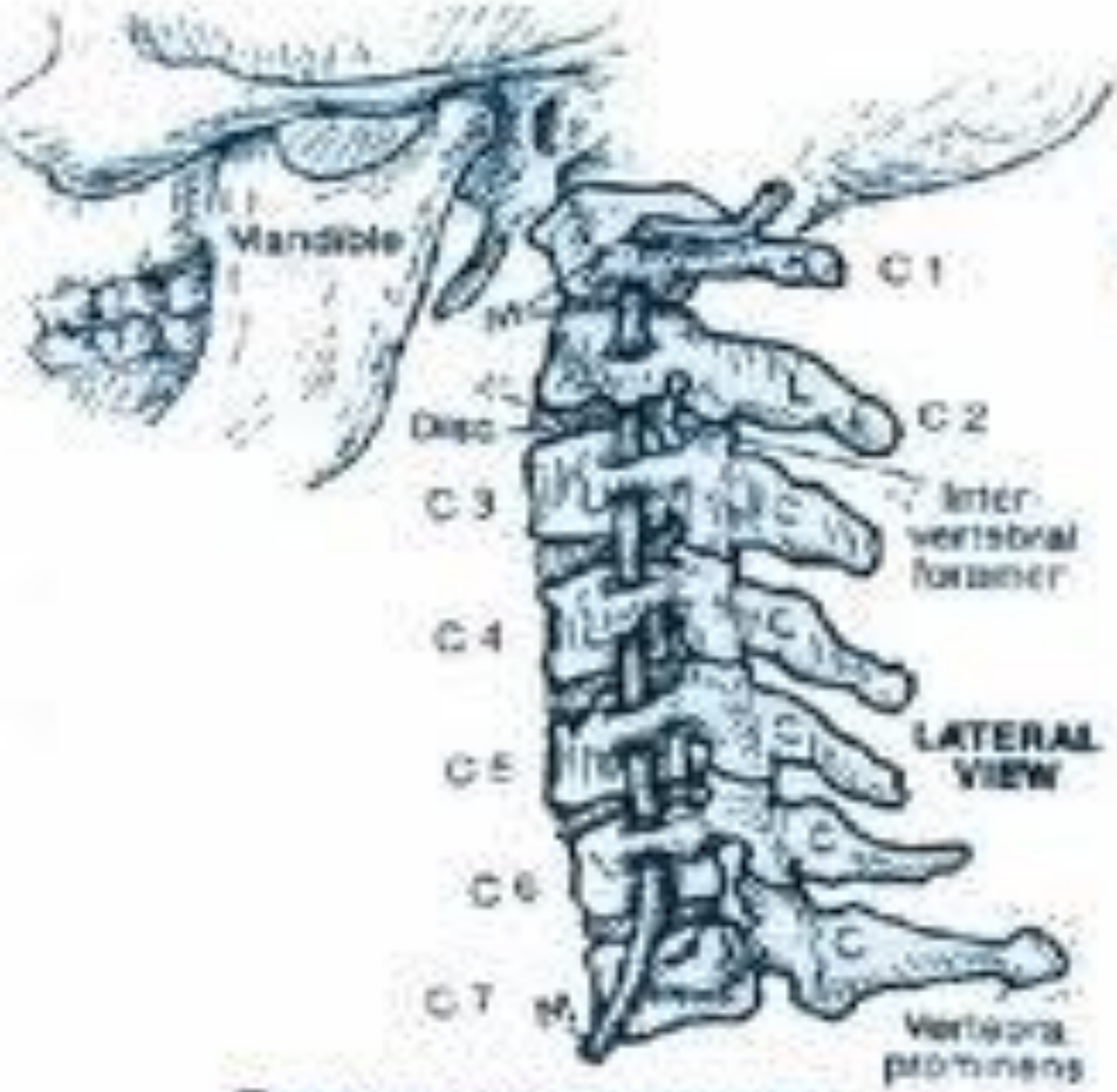




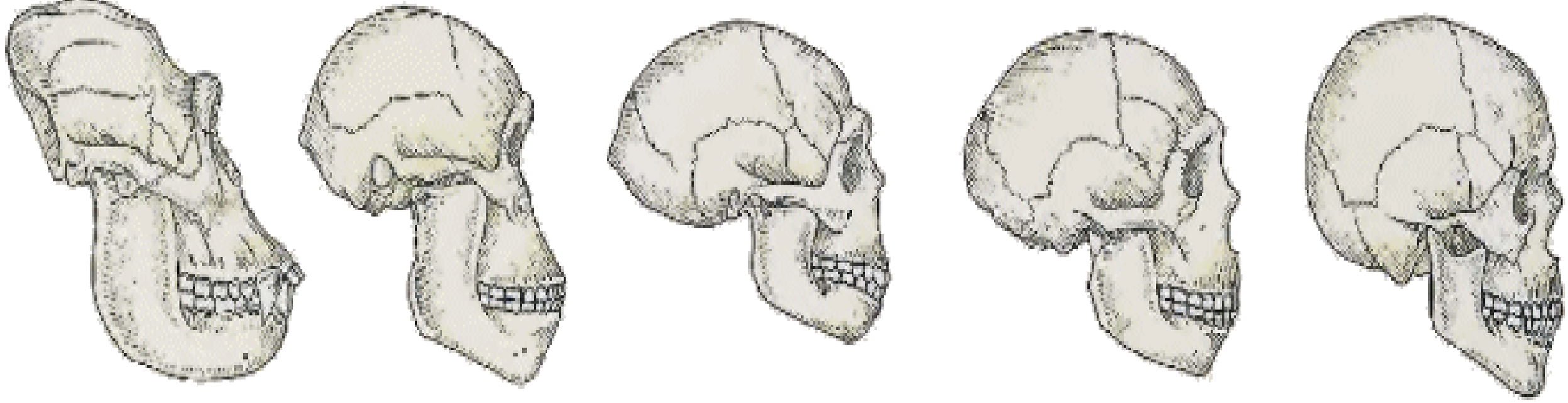




Base cranica di Australopitecus a confronto con quella di Homo. Notare la grandezza della dentatura degli australopiteci e la posizione arretrata del forame ovale. Notare anche l'ampiezza delle fosse glenoidee.



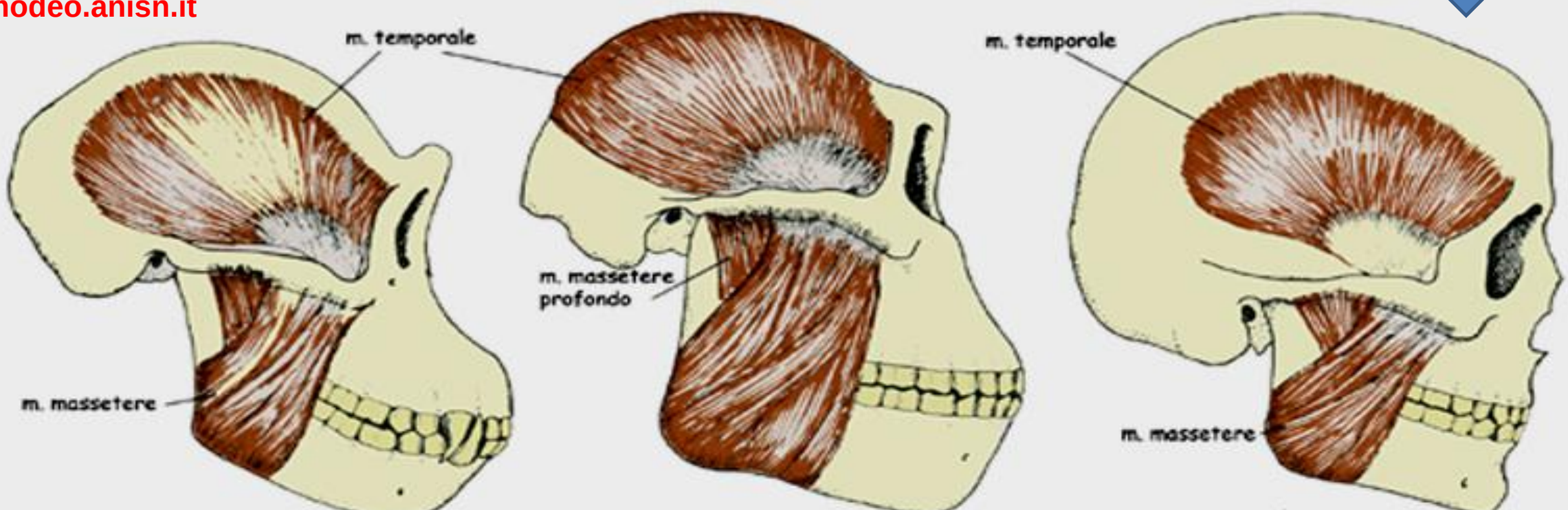
CERVICAL VERTEBRAE

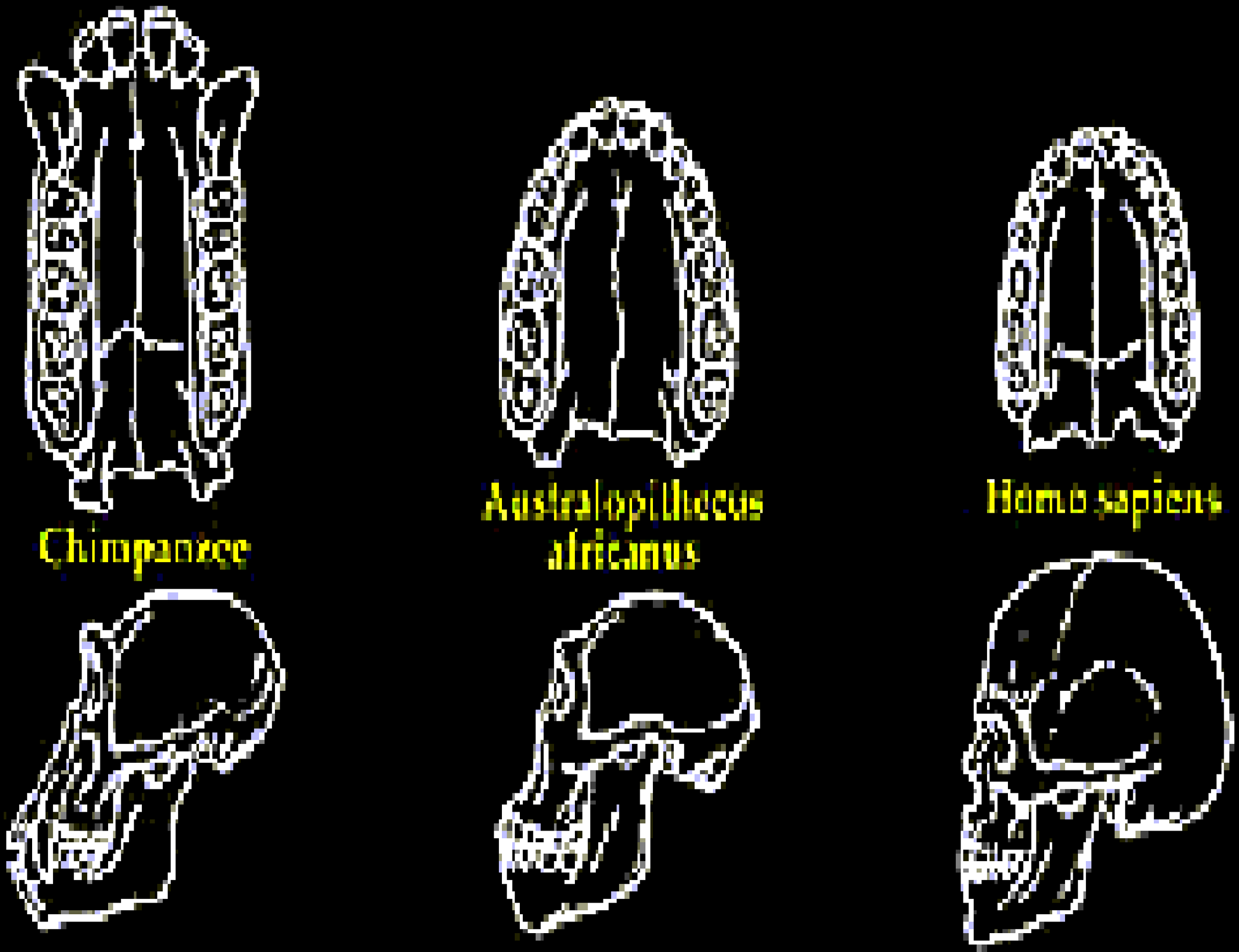


futurology.it

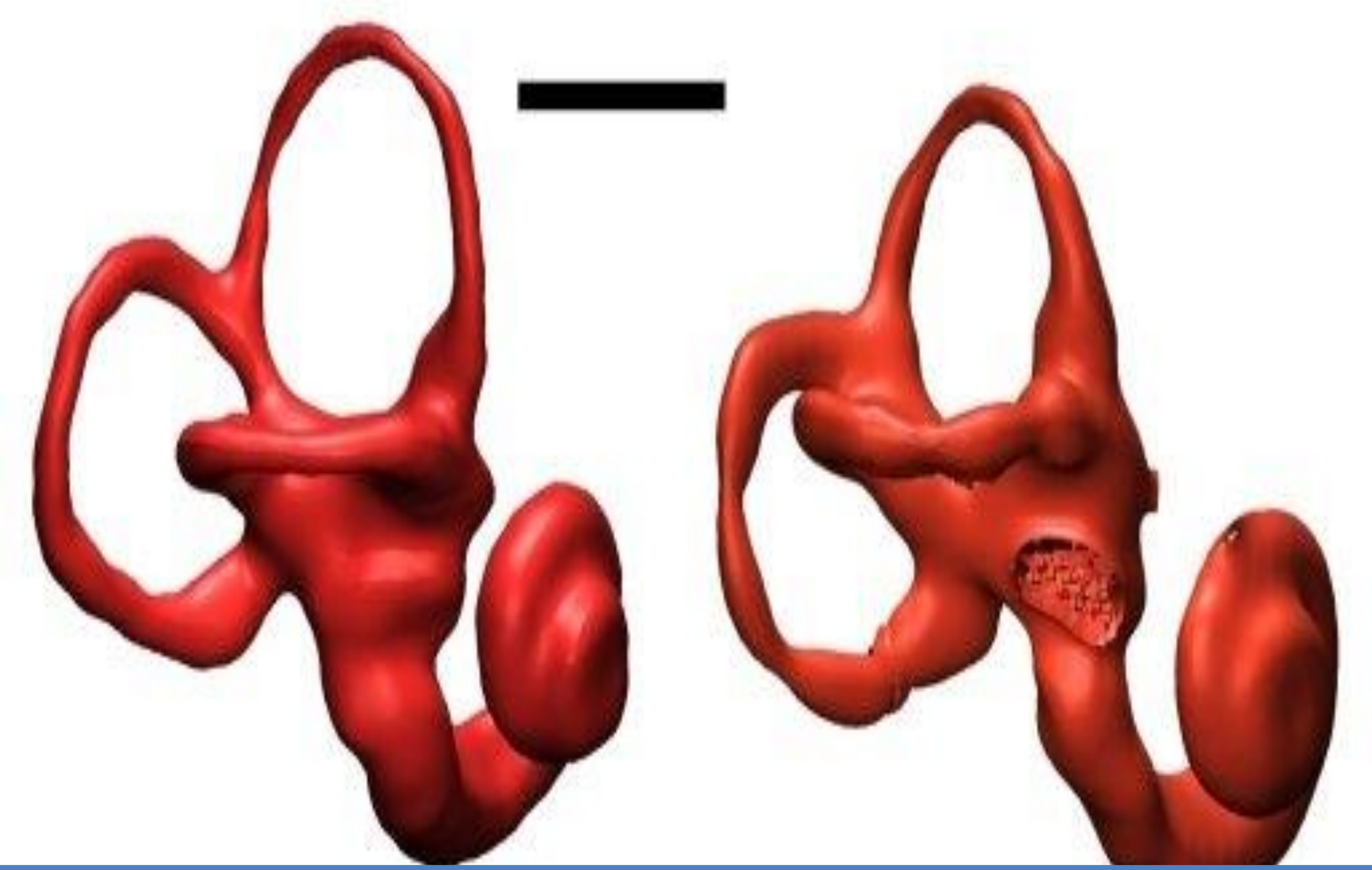
Prognatismo Cervello Olfatto

omodeo.anisn.it



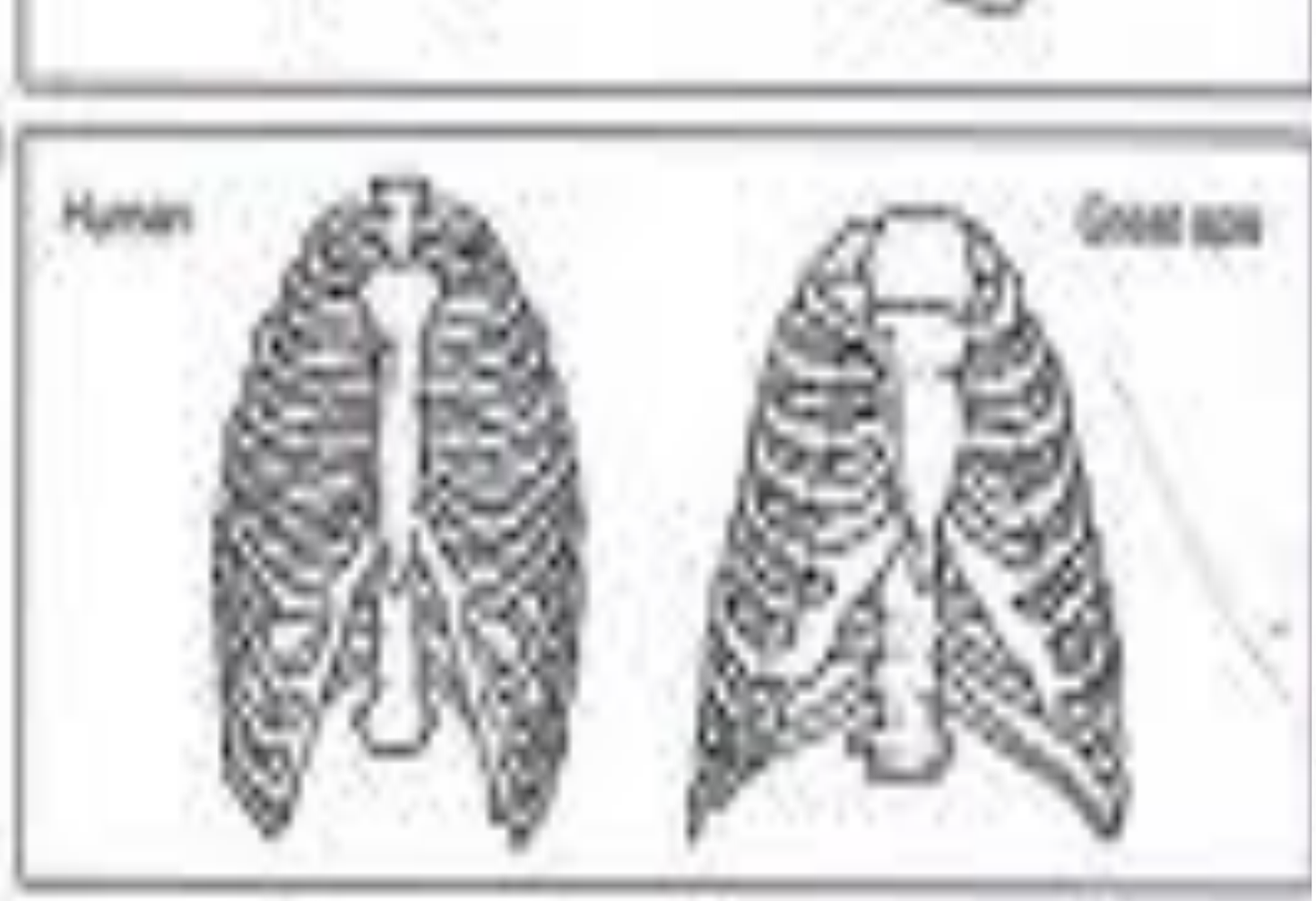

Chimpanzee
Australopithecus africanus
Homo sapiens

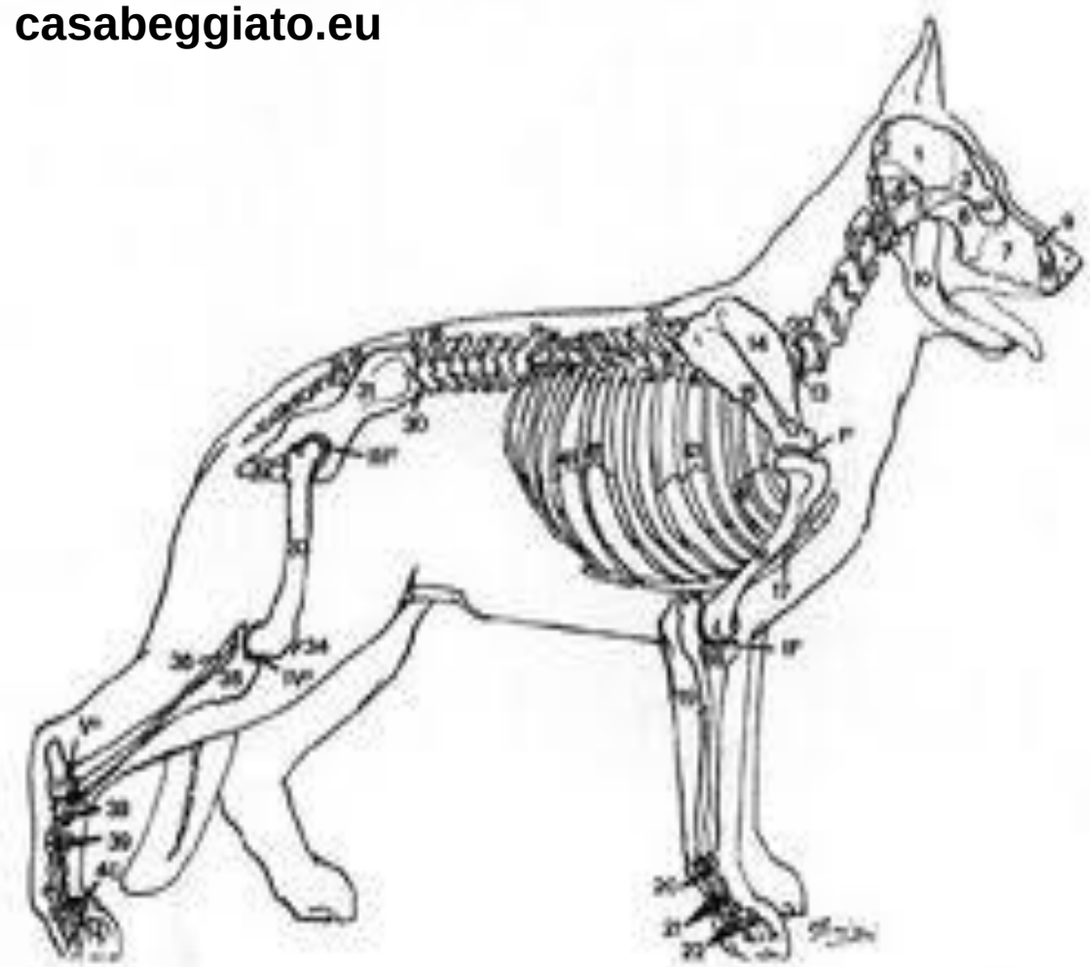
DIASTEMA



- Sono nei mammiferi + agili ed acrobatici
- > la loro sensibilità meccanica
- I cambiamenti influenzano la forma della base del cranio e del cervello attorno

casabeggiato.eu



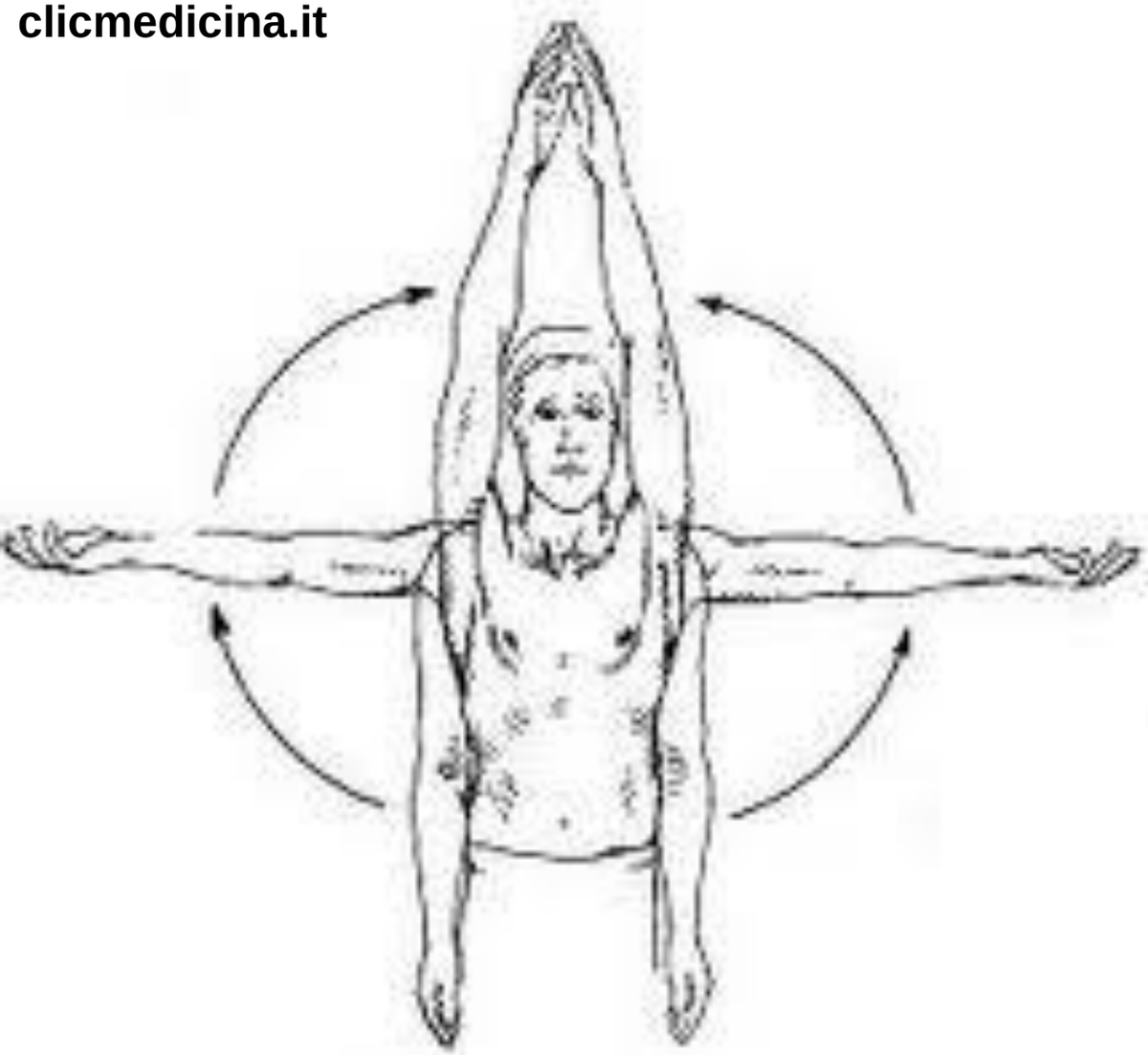


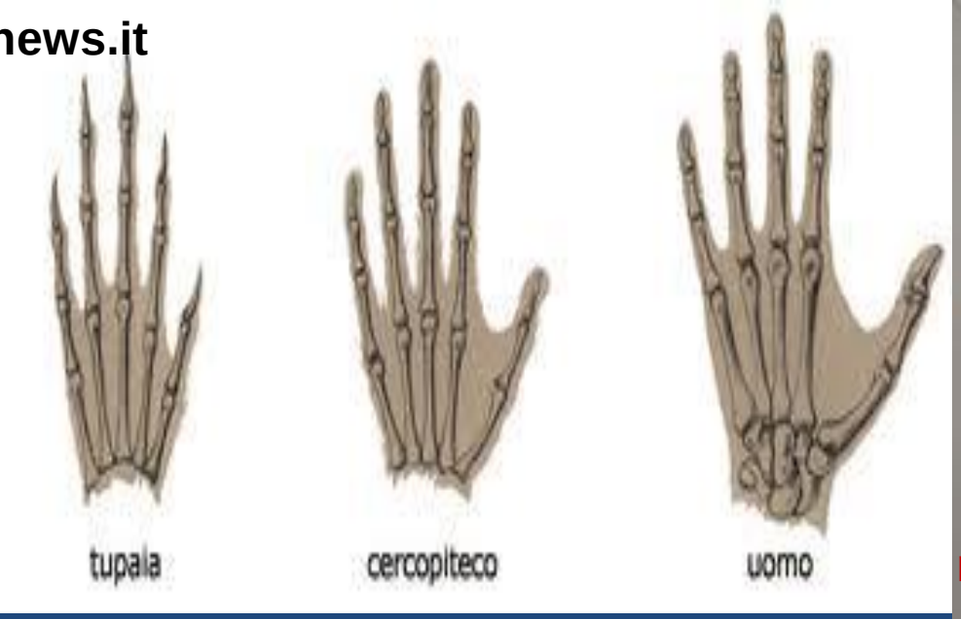
a botte a imbuto

fisioterapiarubiera.com

Mobilità arto superiore

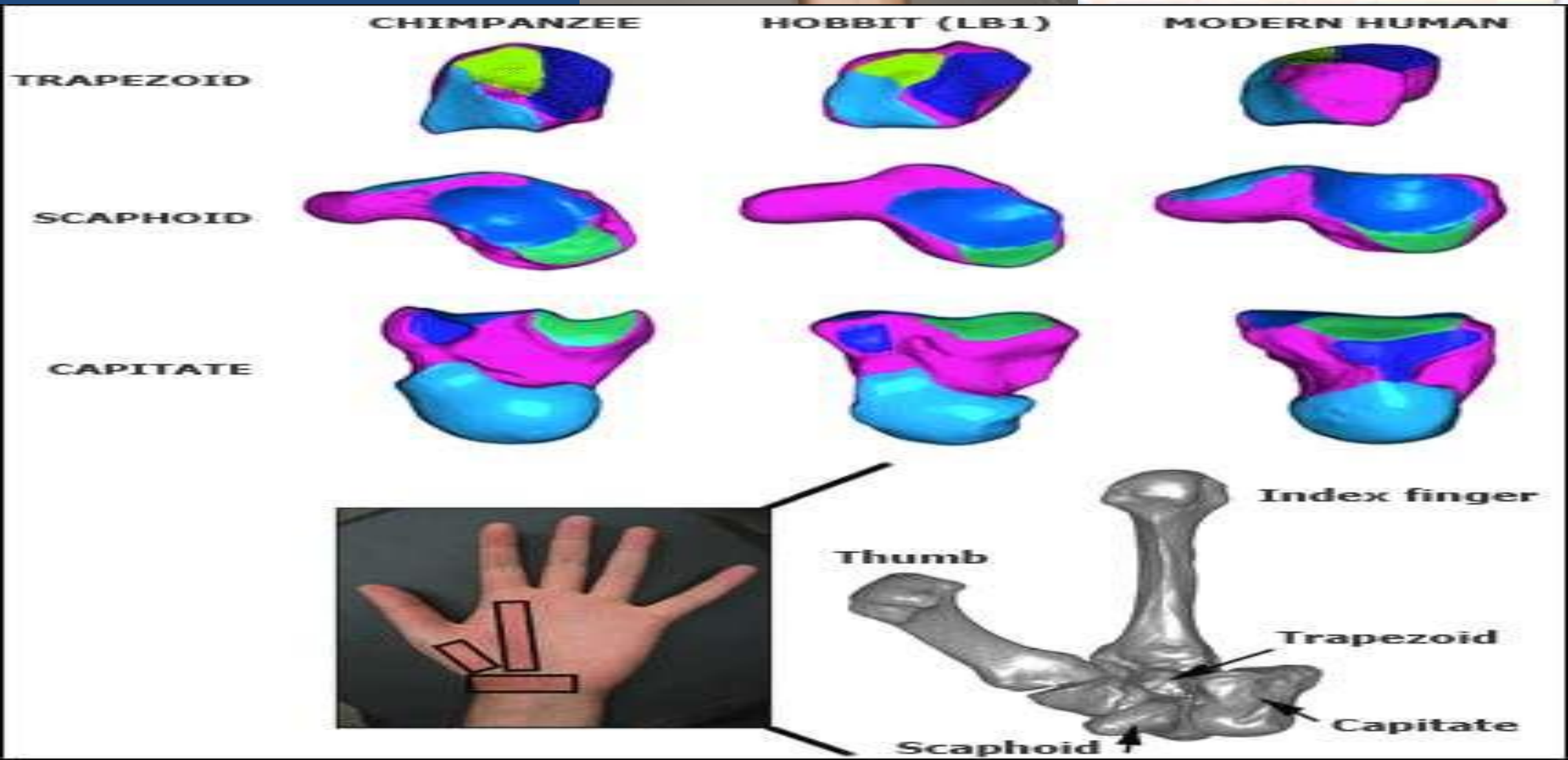
clicmedicina.it




news.it
tupaia
cercopiteco
uomo

marcodm.wordpress.com

yogajournal.it


CHIMPANZEE
HOBBIT (LB1)
MODERN HUMAN
TRAPEZOID
SCAPHOID
CAPITATE
Index finger
Thumb
Trapezoid
Capitate
Scaphoid

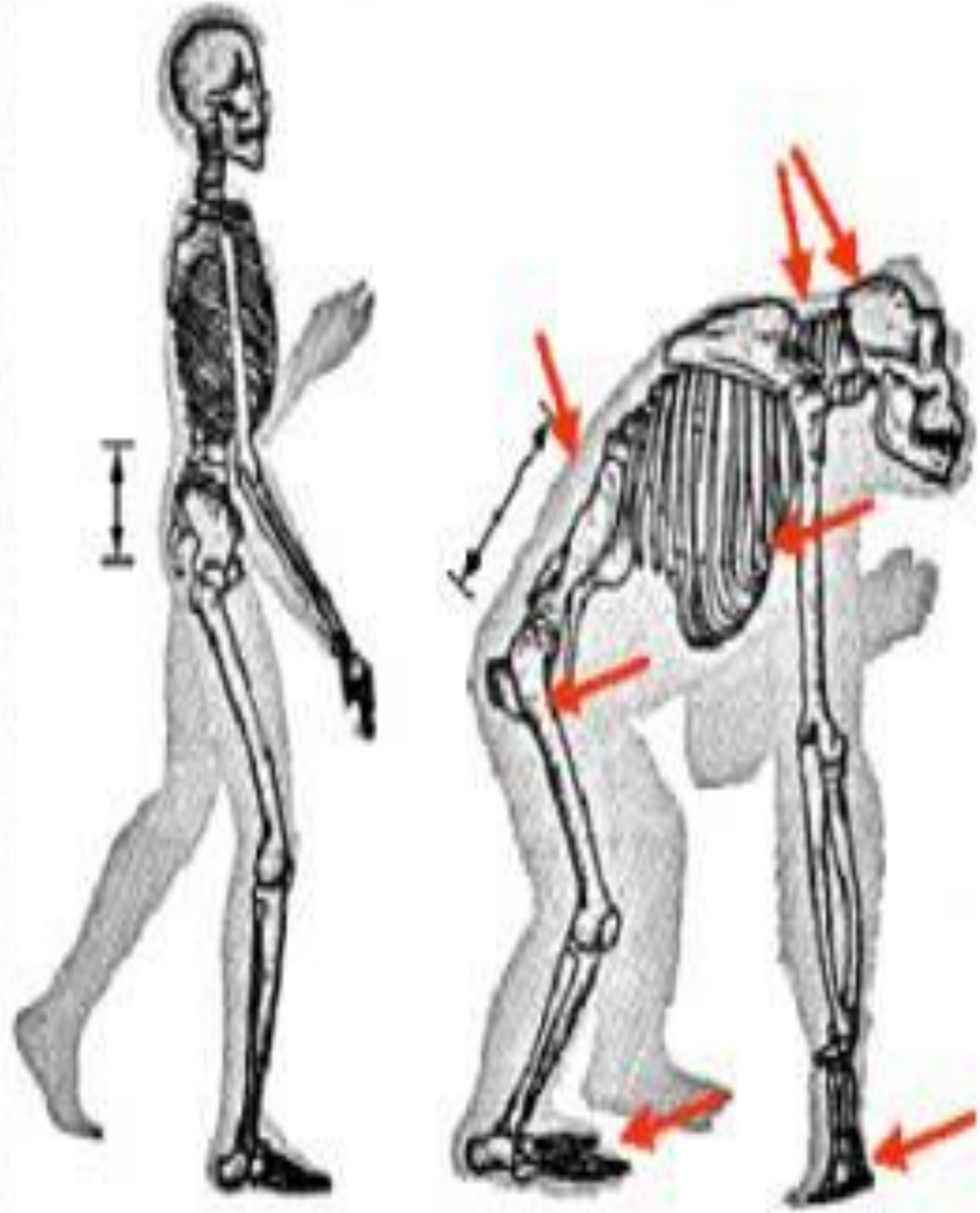
6 metri !!!!!!!!!!!!!!

LA

COLONNA

VERTEBRALE

Knuckle - Walking

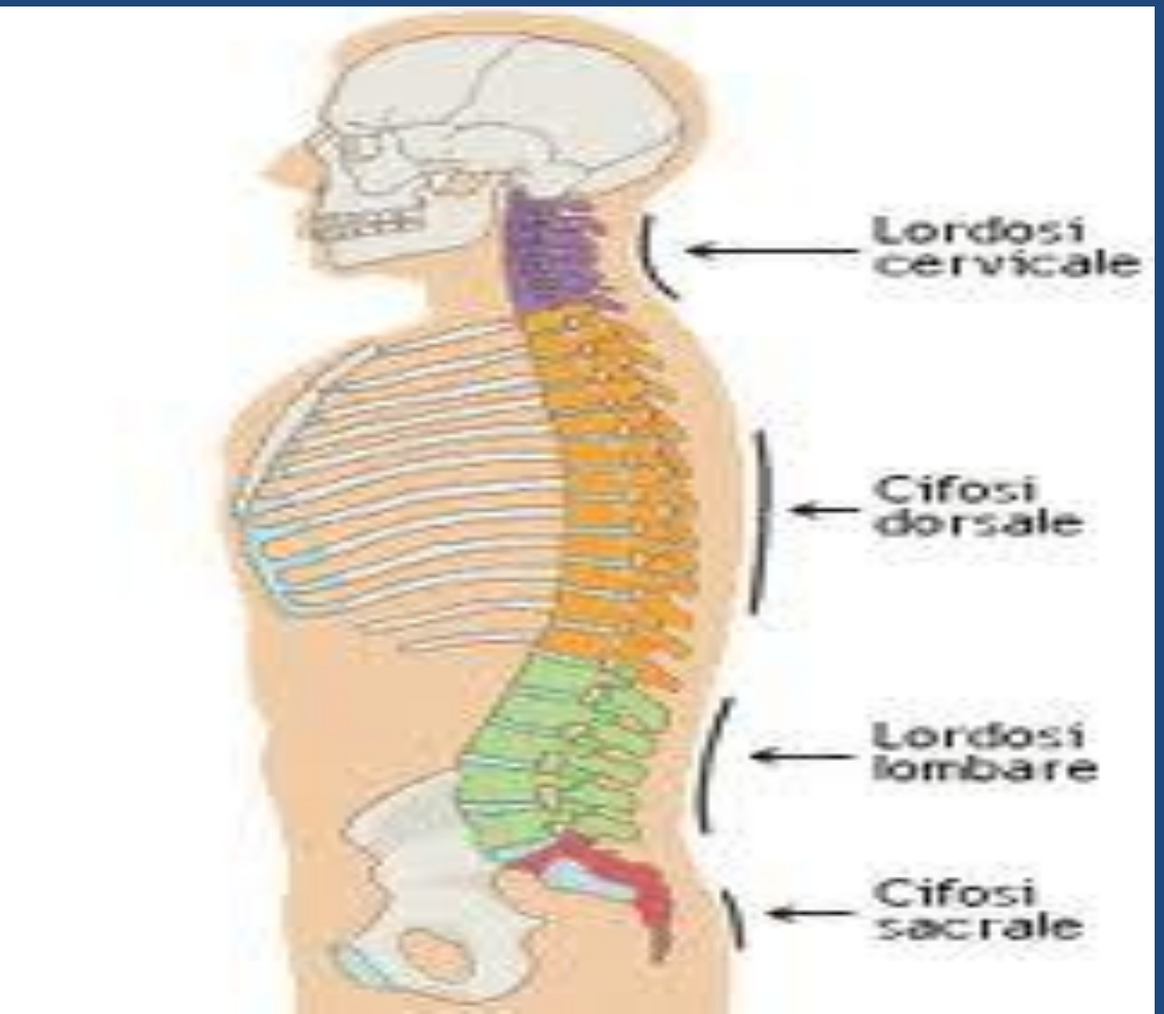


Leva di 1° sfavorevole

- > dimensioni dei corpi vertebrali
- > dimensioni dei dischi
- > stabizzazione mio - legamentosa ai cingoli toracico e pelvico ed i leg. long. Ant. e Post.
- comparsa di curve rachidee fisiologiche

3 curve sopra il Sacro

> Resistenza e Dinamicità



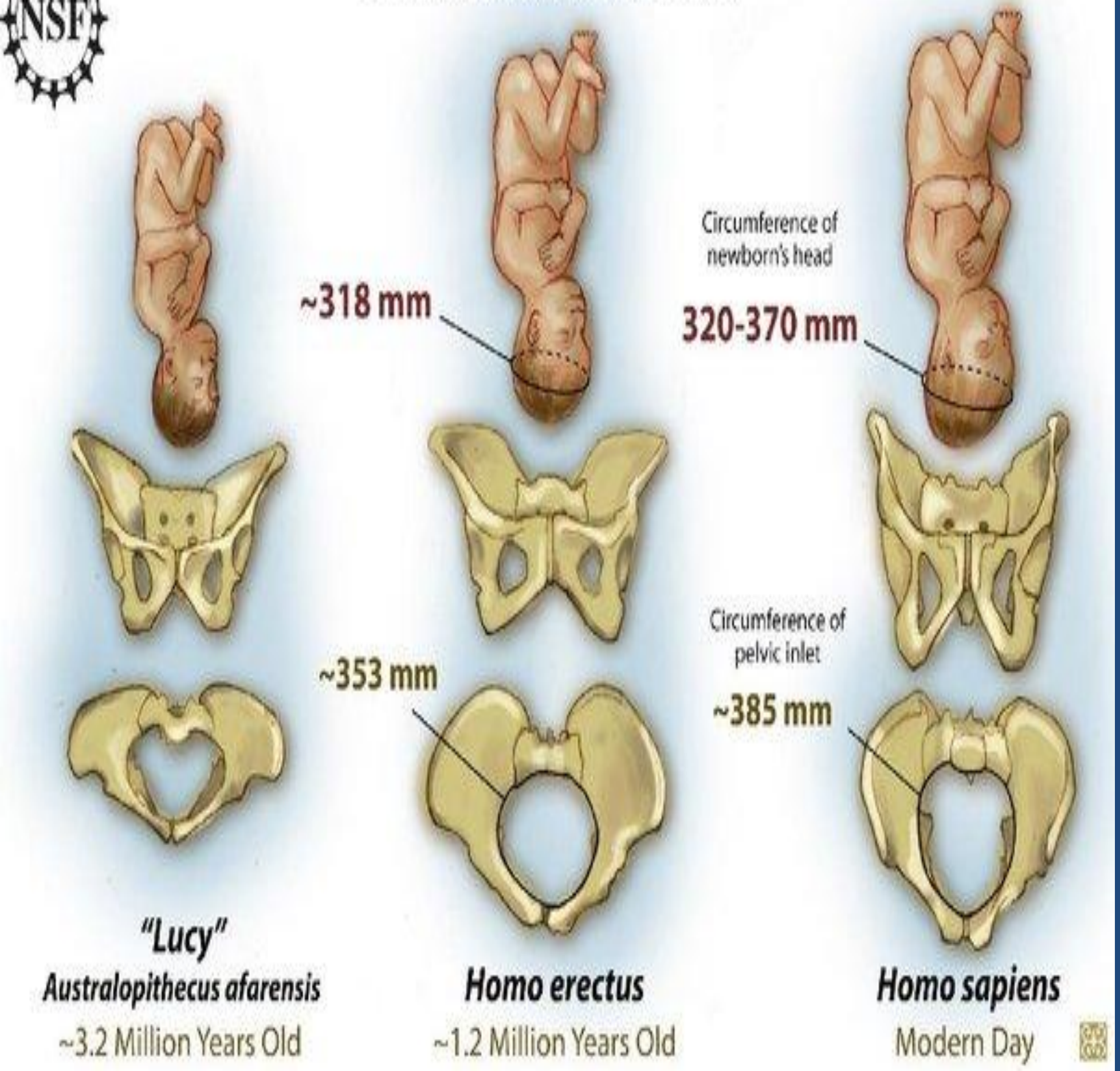
“ $R = n^2+1$ “

$R = 0^2 + 1 = 1$

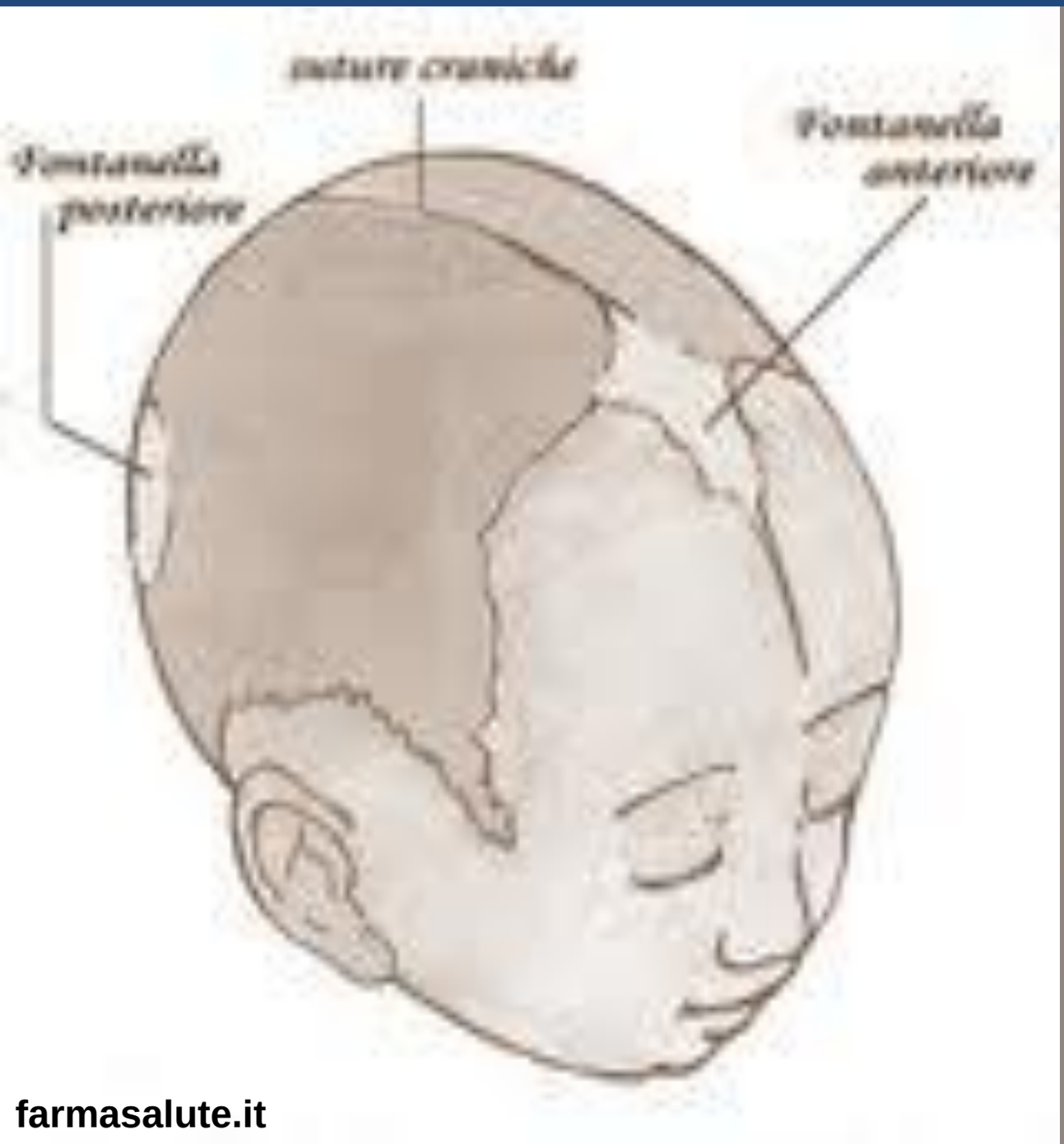
$R = 1^2 + 1 = 2$

$R = 2^2 + 1 = 5$

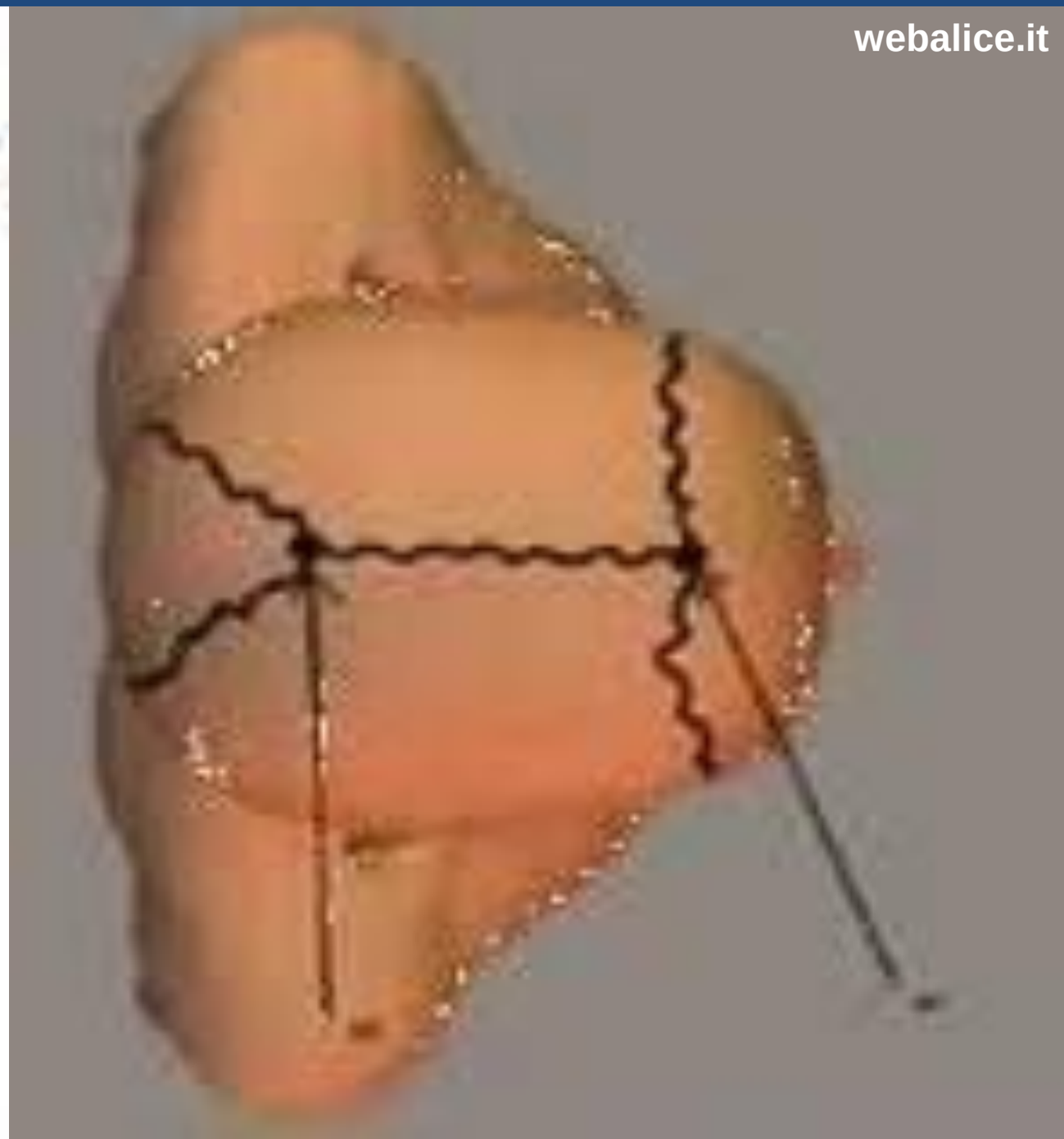
$R = 3^2 + 1 = 10$


Circumference of newborn's head
~318 mm
320-370 mm
Circumference of pelvic inlet
~353 mm
~385 mm
"Lucy"
Australopithecus afarensis
~3.2 Million Years Old
Homo erectus
~1.2 Million Years Old
Homo sapiens
Modern Day

Fontanelle craniche



farmasalute.it

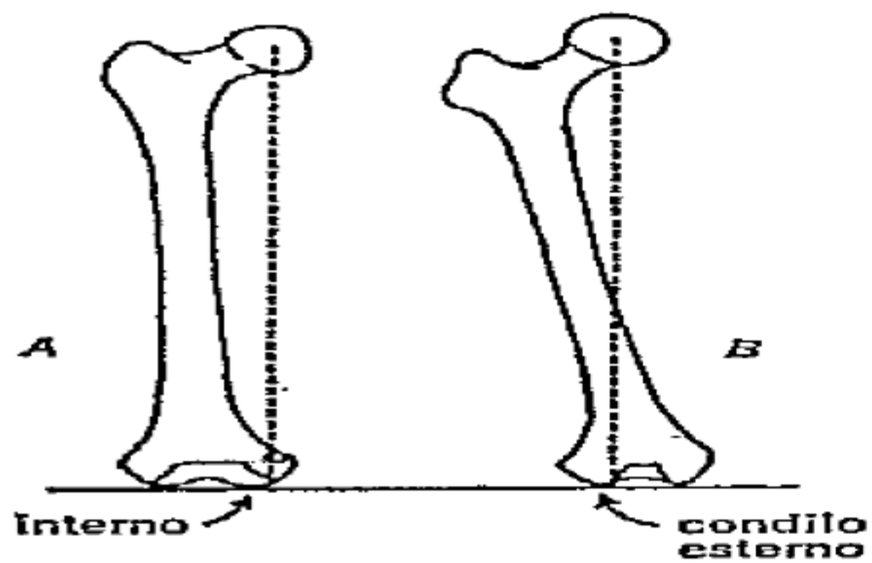


webalice.it

Chimpanzee

A. afarensis

H. sapiens

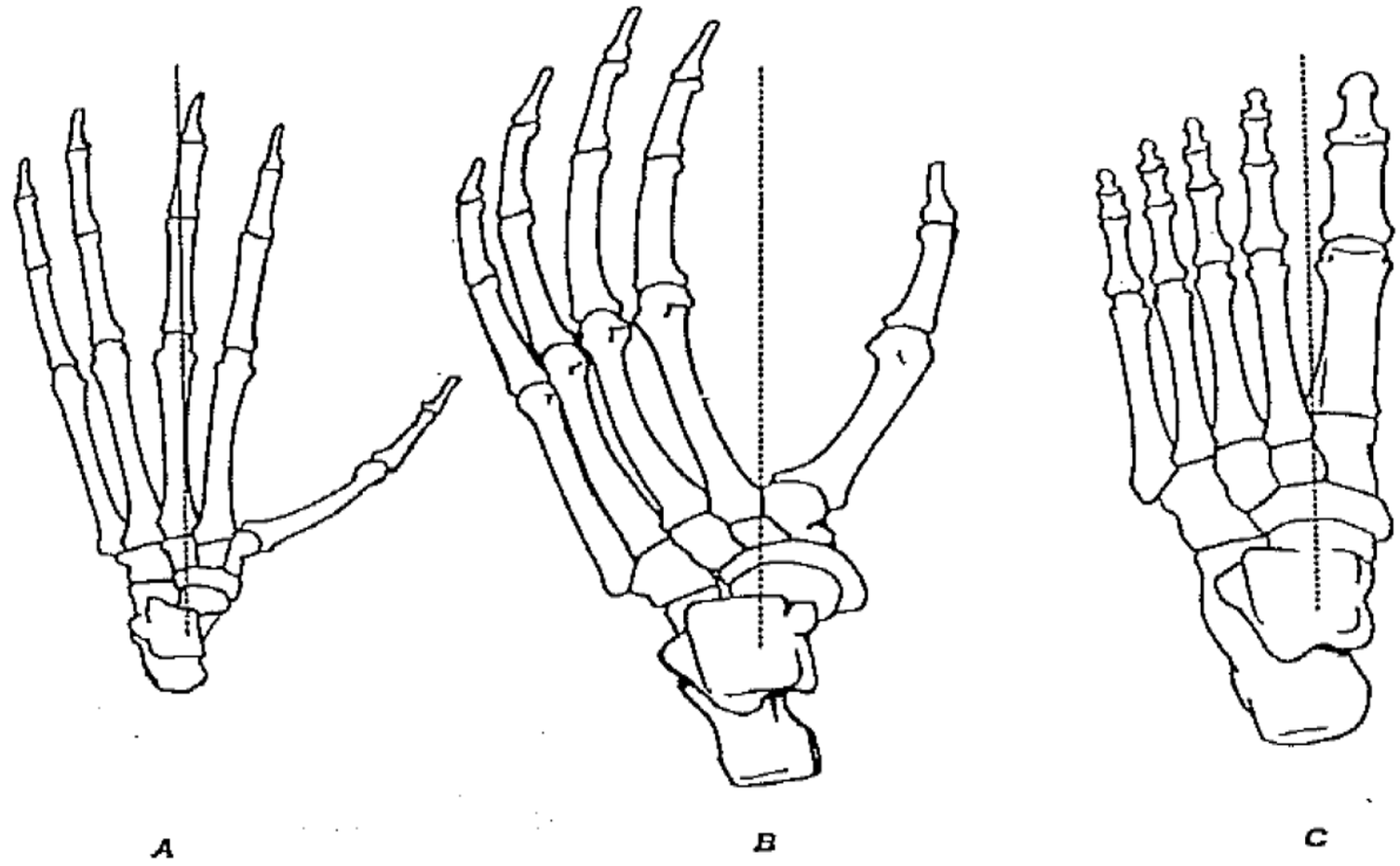

A
B
interno
condilo
esterno

cani-web.com

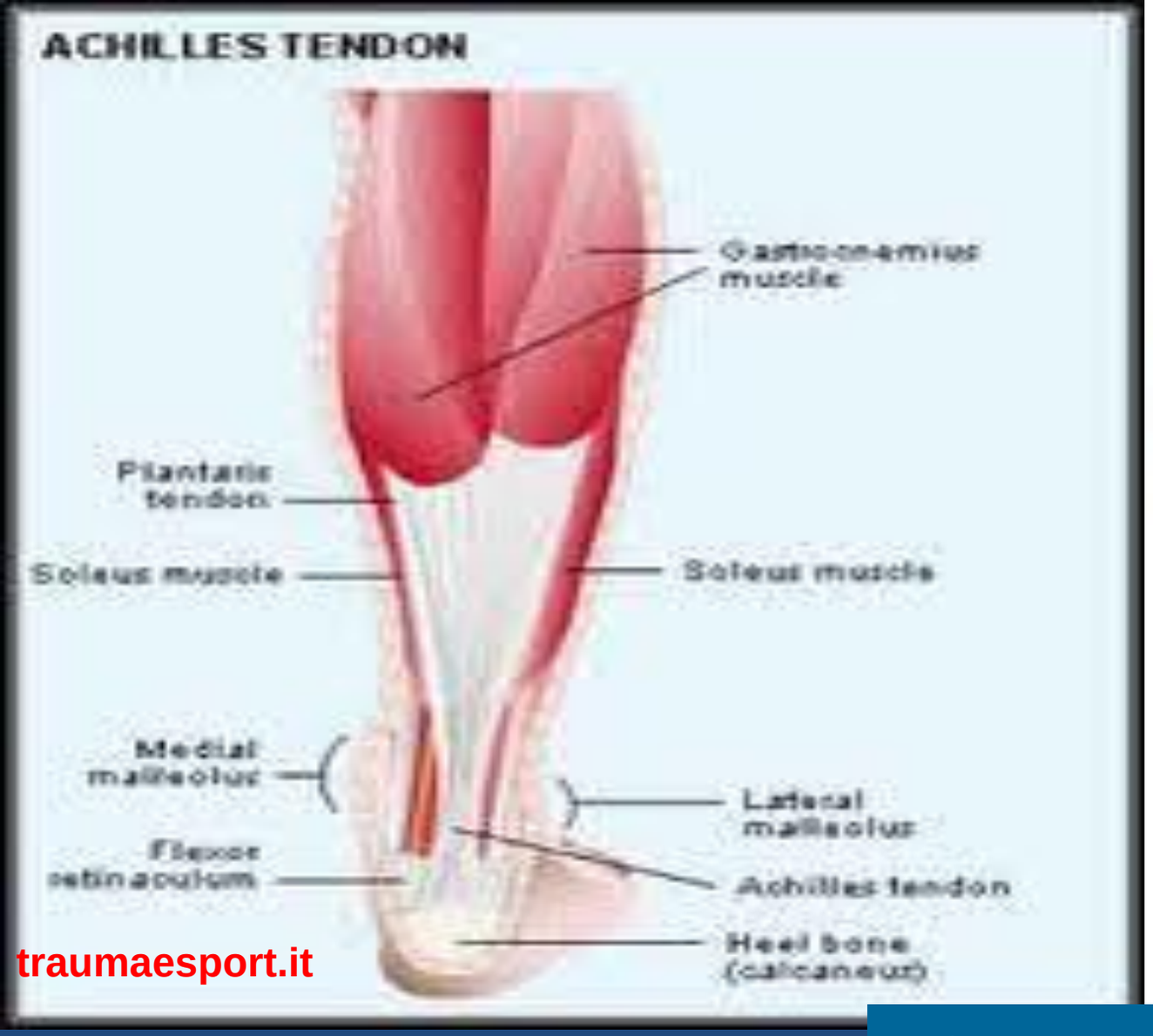
Express-news.it

repubblica.it

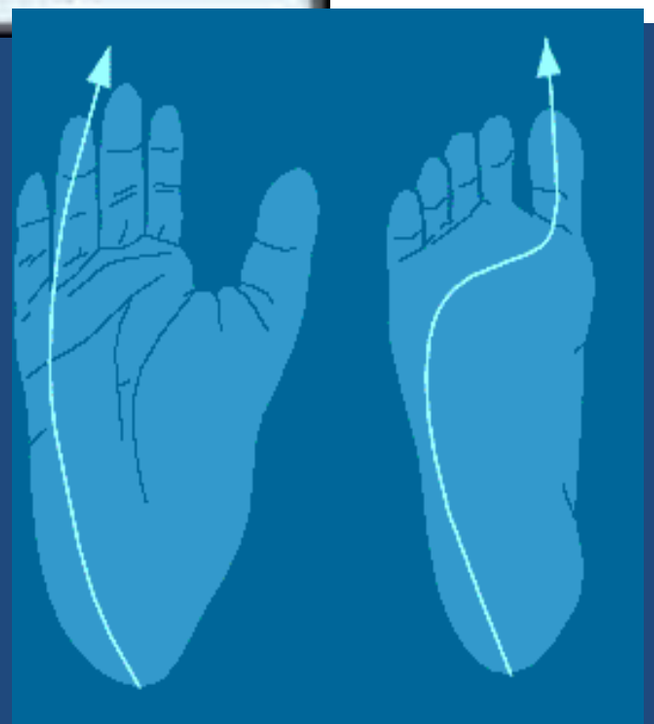
PIEDE



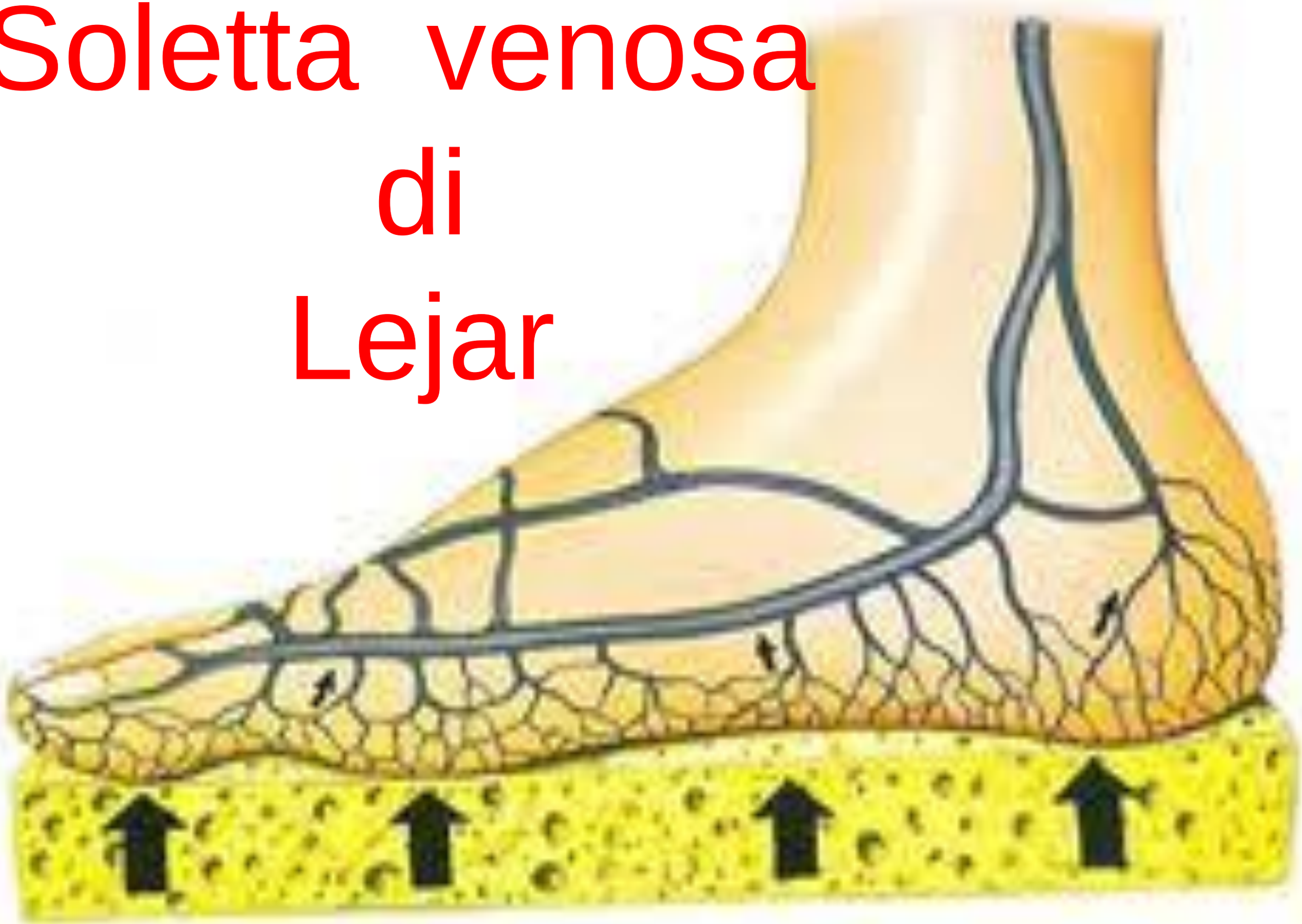
linguaggio-macchina.blospot.com



Fascia plantare



Soletta venosa di Lejar

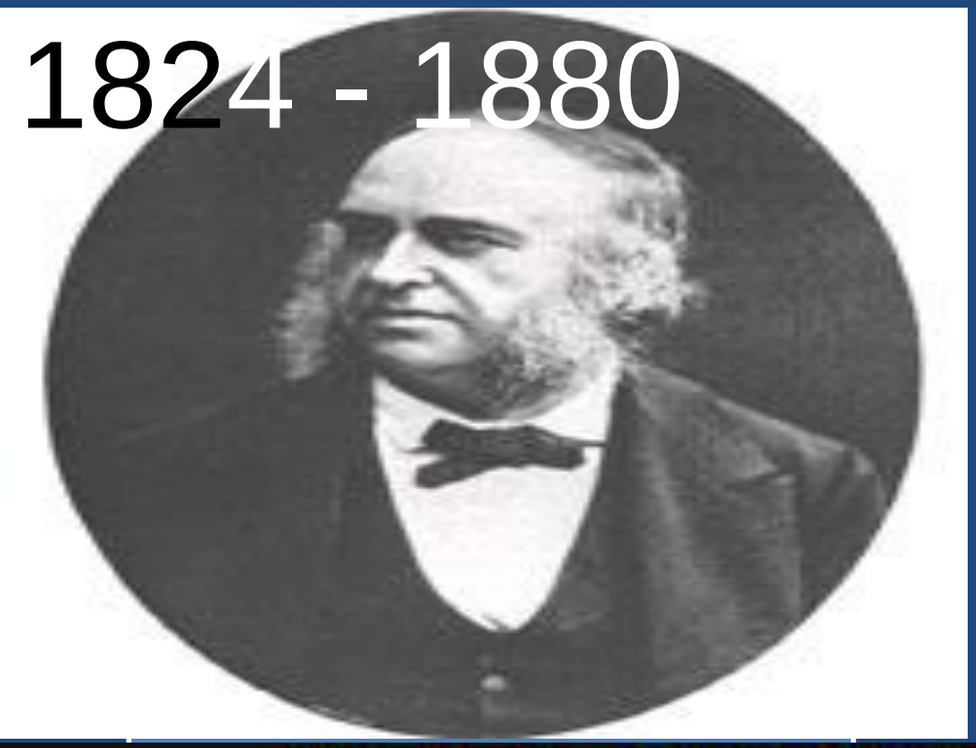


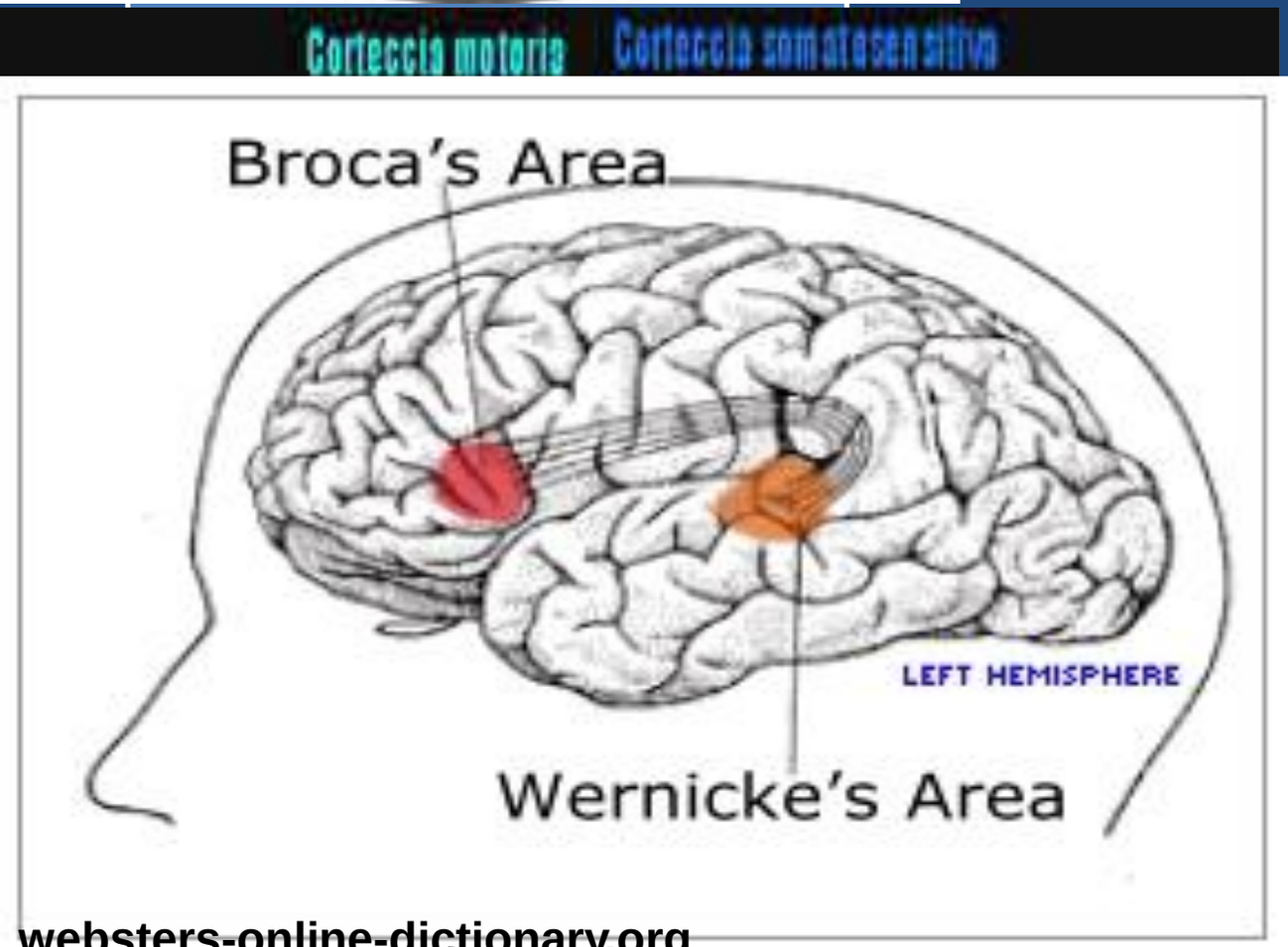
IL

LINGUAGGIO

P. P. BROCA

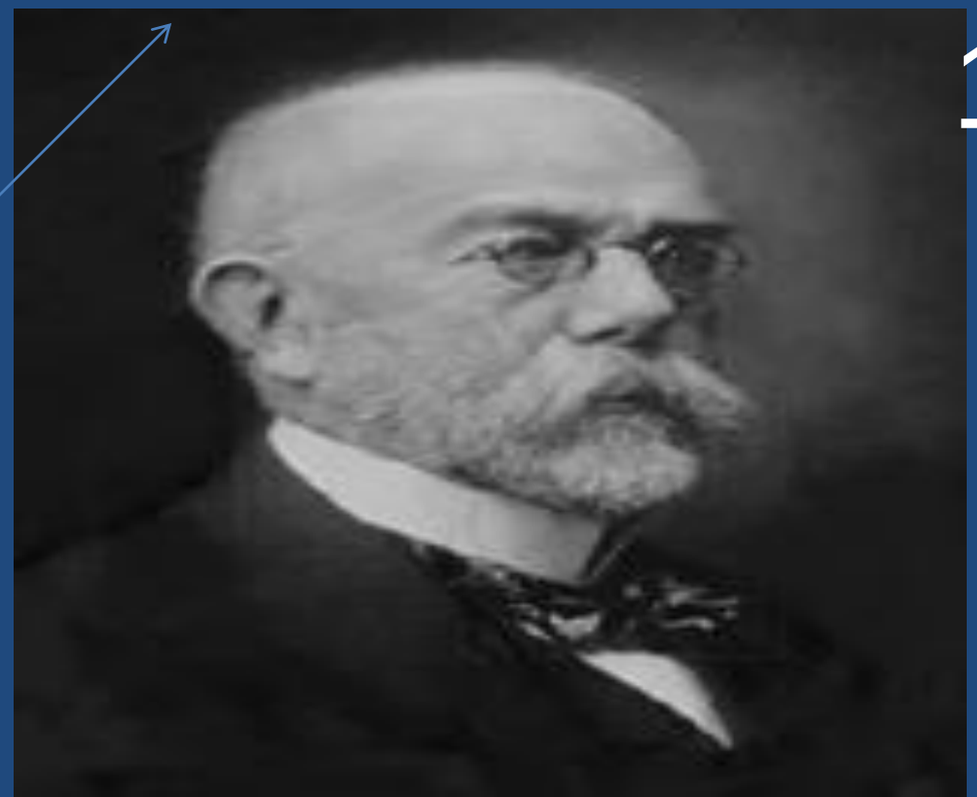
1824 - 1880



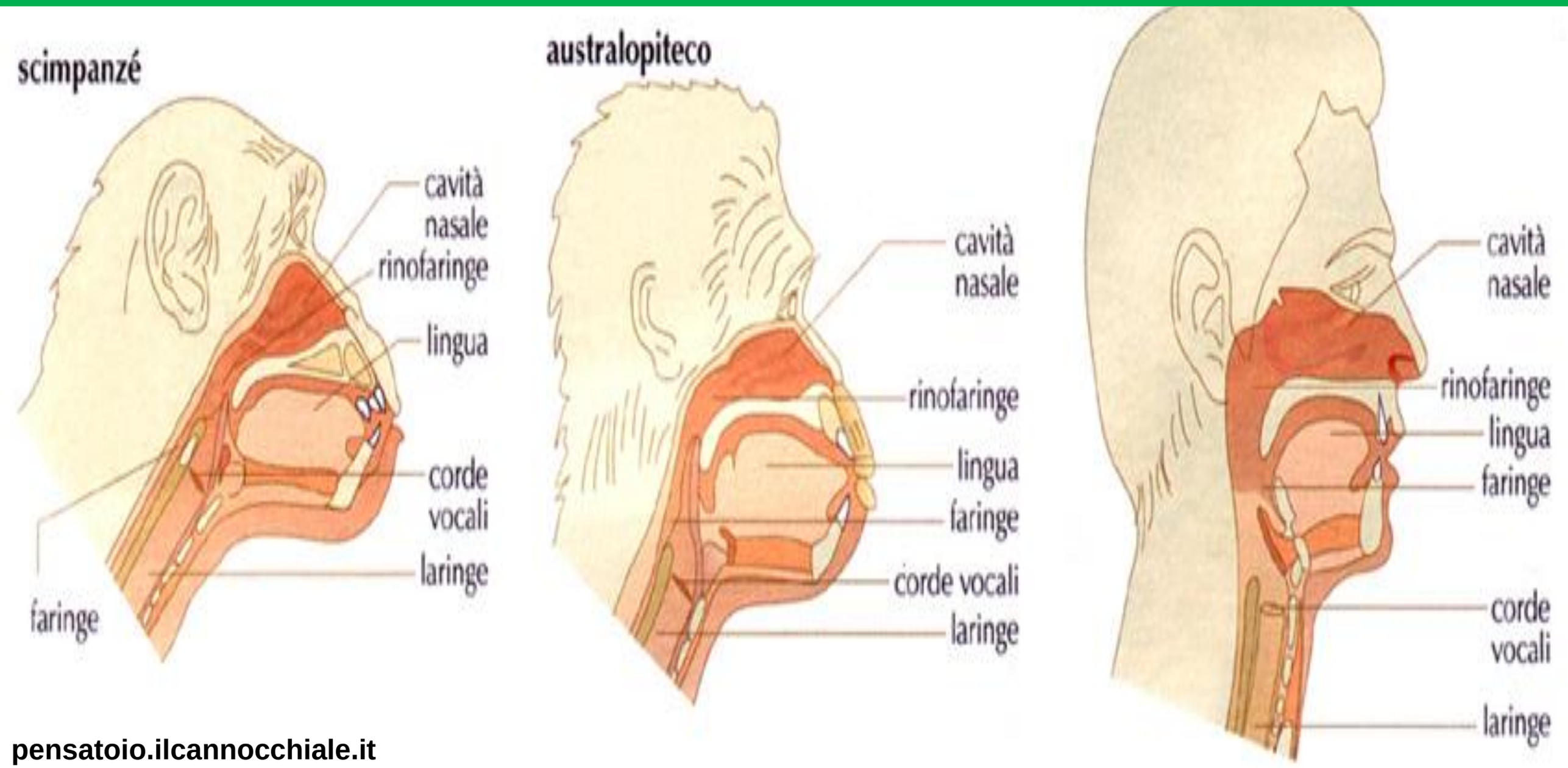


websters-online-dictionary.org

C. Wernicke 1848 1905



Posizione della Laringe



pensatoio.ilcannocchiale.it

USA

DENNIS BRAMBLE

DANIEL LIEBERMAN

2004

18 November 2004

International weekly journal of science

nature

$10.00

www.nature.com/nature

Born to run

How evolution got us up to speed

Science and Islam
Agenda for revival

Terahertz radiation
New wires for a new wave

Carbon trading
Global warming goes to market

barefootthundrgod.com

Nati per correre

La struttura scheletrica, le modalità di consumo energetico e le capacità di smaltire il calore prodotto sono quelle di un efficientissimo corridore di lunga durata:

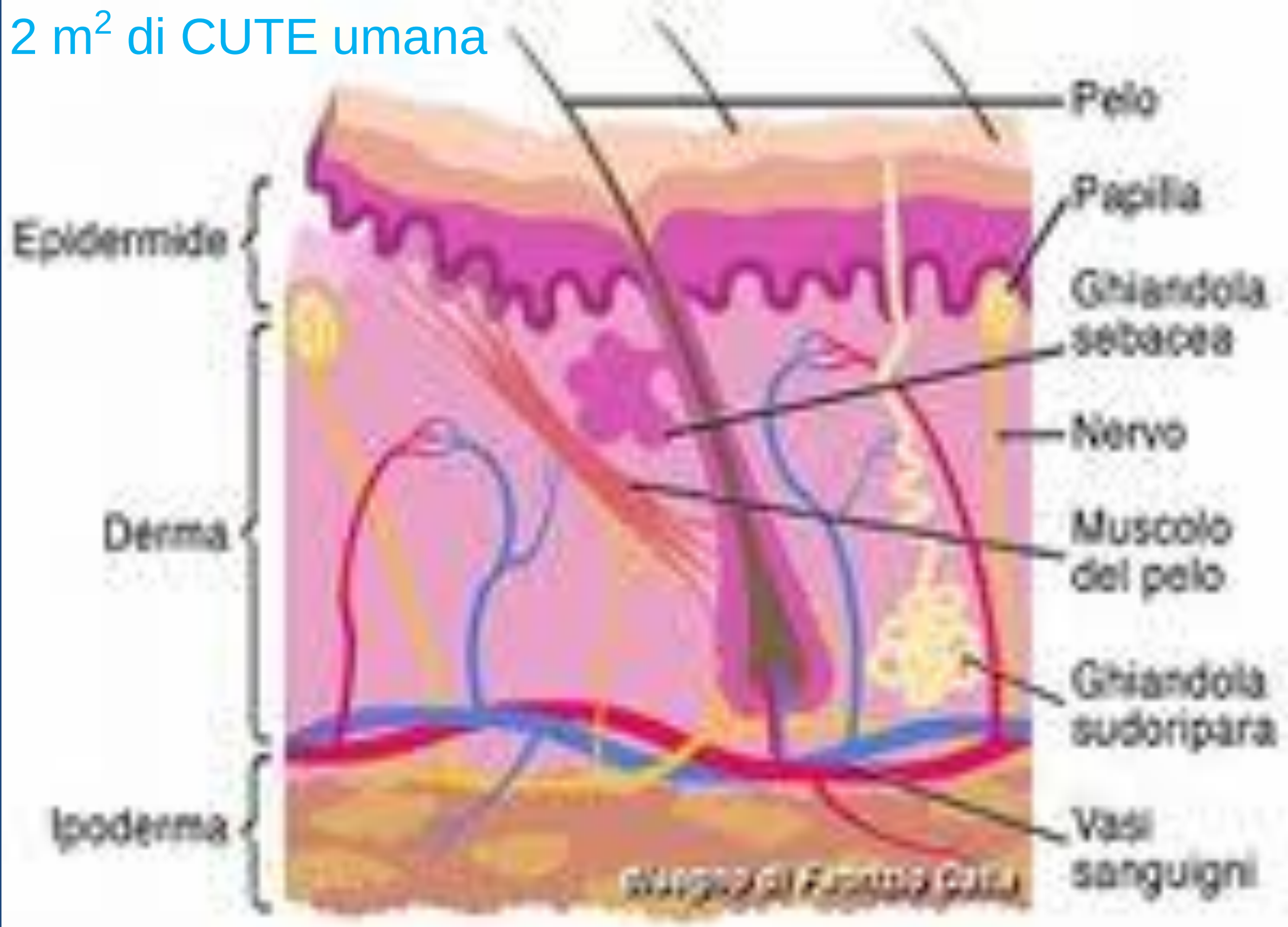
- Meccanismi energetici
- Forze
- Bilanciamento in corsa
- termoregolazione

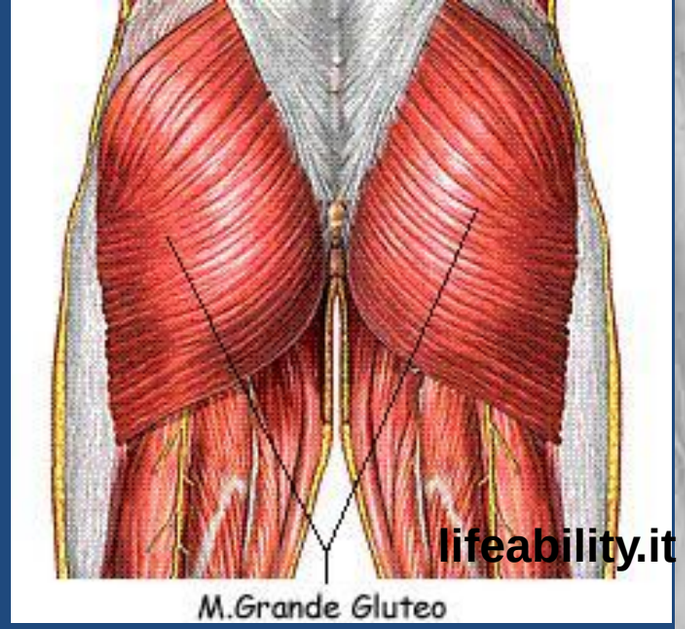
--

Solo la capacità di correre a lungo ci ha permesso di distaccarci dal “ resto del gruppo “, cambiando, a poco a poco, tutto il resto:

- cervello
- apparato digerente
- corde vocali

2 m^2 di CUTE umana

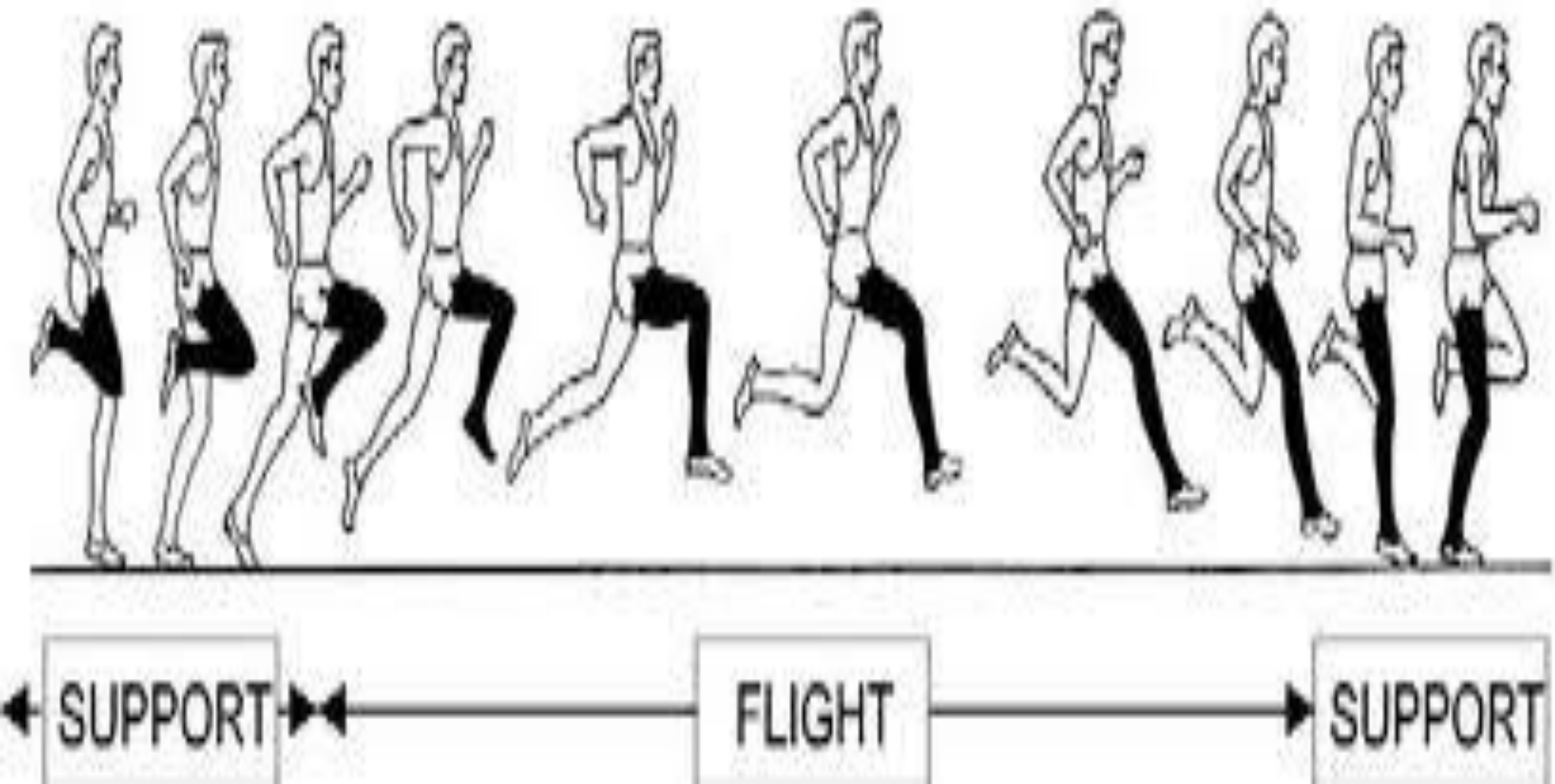




Muscoli
Arti inferiori

FALCATA

usascona.ch



windoweb.it

loschermo.it

nital.it

Nei mammiferi le mammelle sono indissolubilmente legate solo all’allattamento.

Allora,perché la donna ha il seno sempre turgido?

Il grasso, che nella donna è in quantità maggiore che nel maschio, converte un precursore secreto dai *surreni,* l'*Androstenedione,* in estrogene, che agisce costantemente, mantenendo perennemente il turgore del seno.

Nella donna
in
ortostatismo
i genitali
appaiono
poco o nulla

Per cui

glutei e seno

divengono

costante

richiamo sessuale

teledicoio.globosfere.it

Accoppiamento

flickr.com

fotoptchile.com

rozhlas.cz

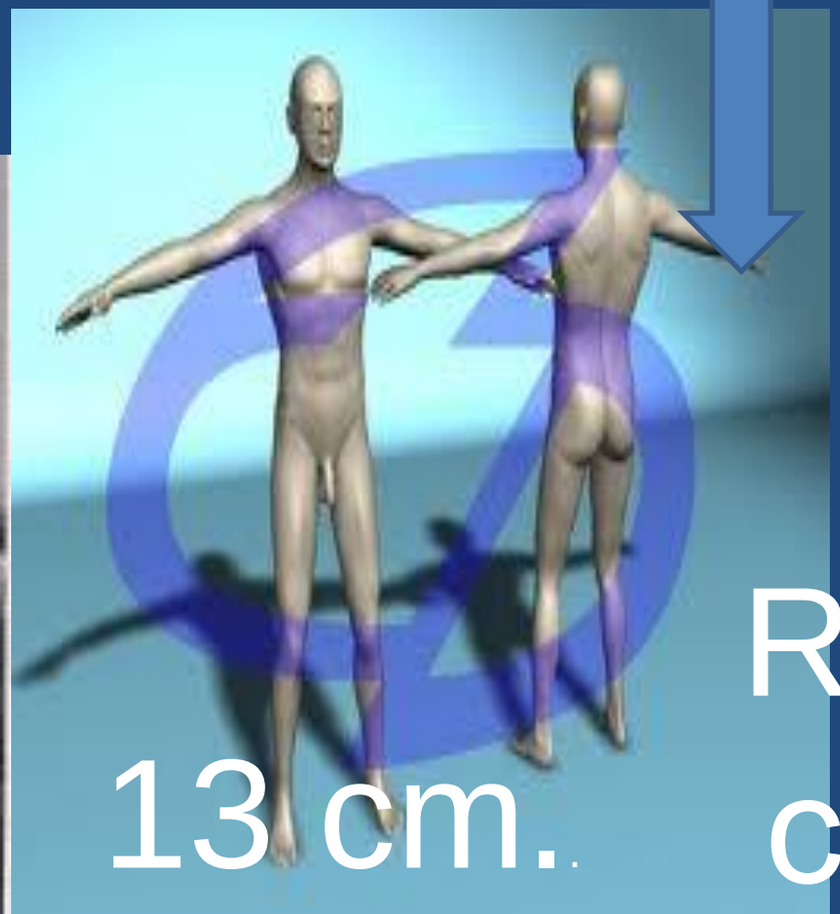
sesstopotere.blogspot.com

Lunghezza del pene

3,2 cm.

3,8 cm.

7,5 cm.



13 cm.

Rocco Siffredi cm.

BACULUM
=
BASTONE

VIGNETTE

La

CREAZIONE

lifeinthefastlane.com

liquida.it

Fred Flinstone

gaberiele.wordpress.com

La creazione del
“ Trota “

FINE

ULTIMO

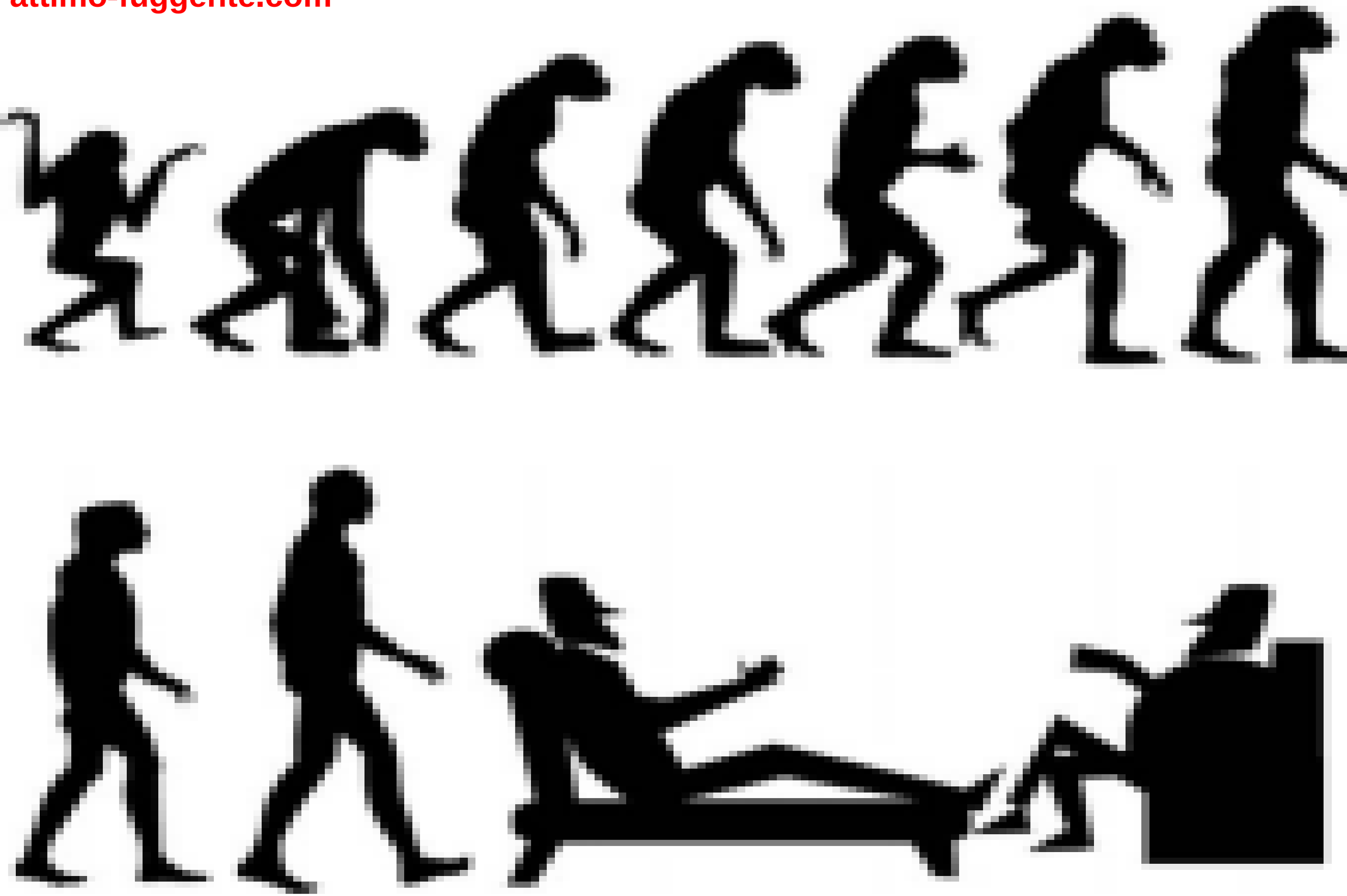
?

gardatrainer.it

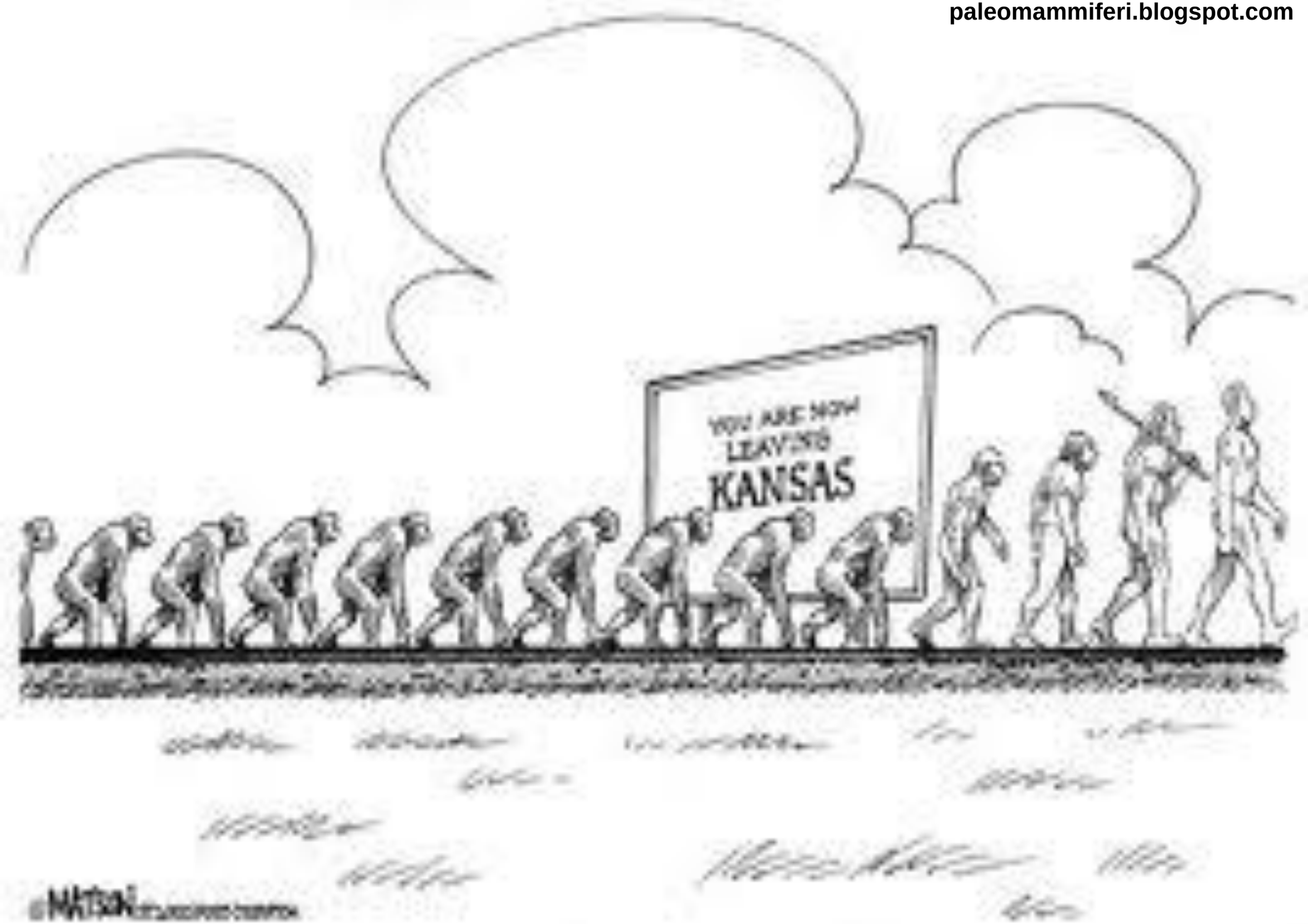
facebook.com

Computer

attimo-fuggente.com



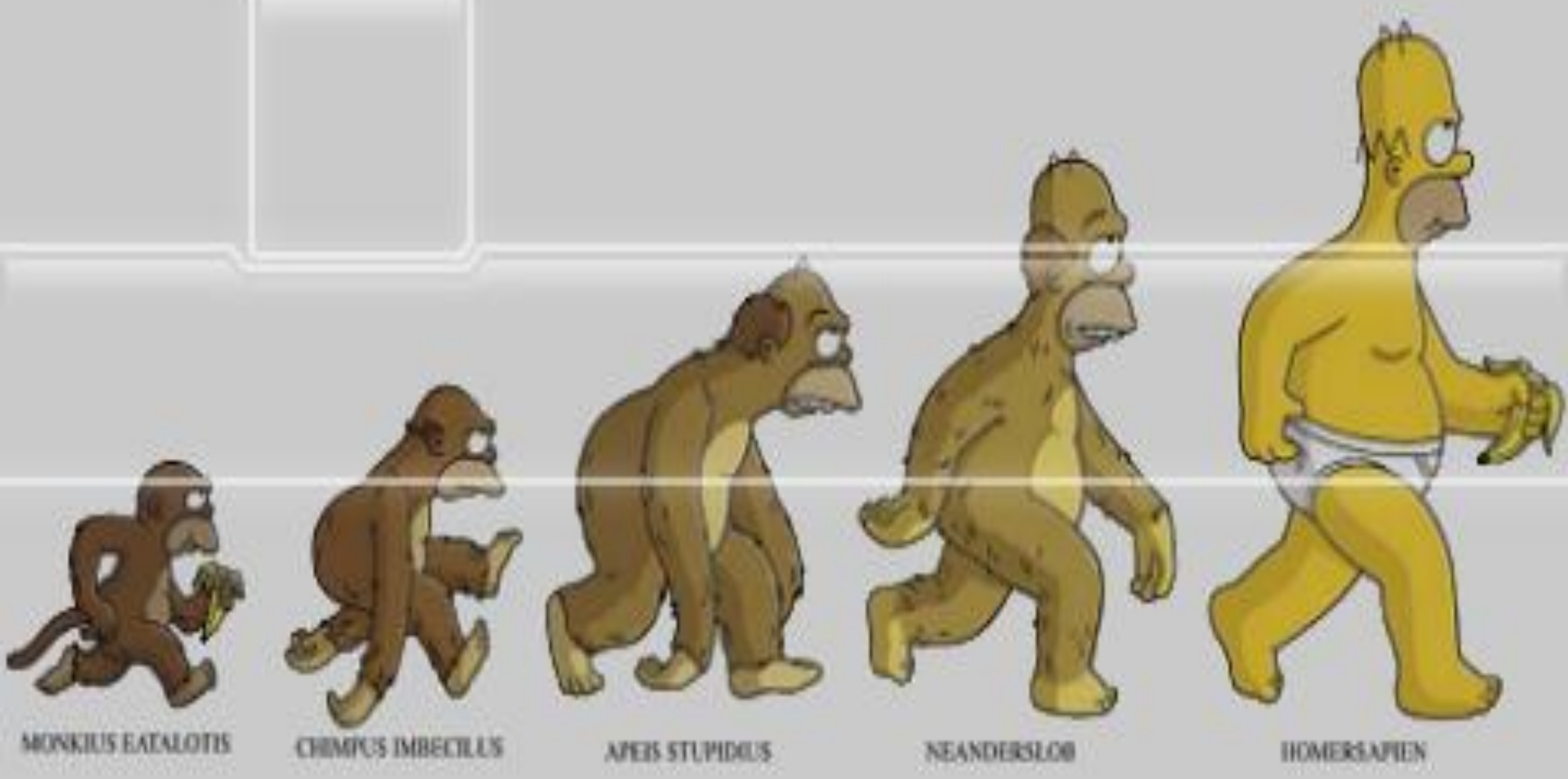
paleomammiferi.blogspot.com



EVOLUZIONE

MASCHILISTA

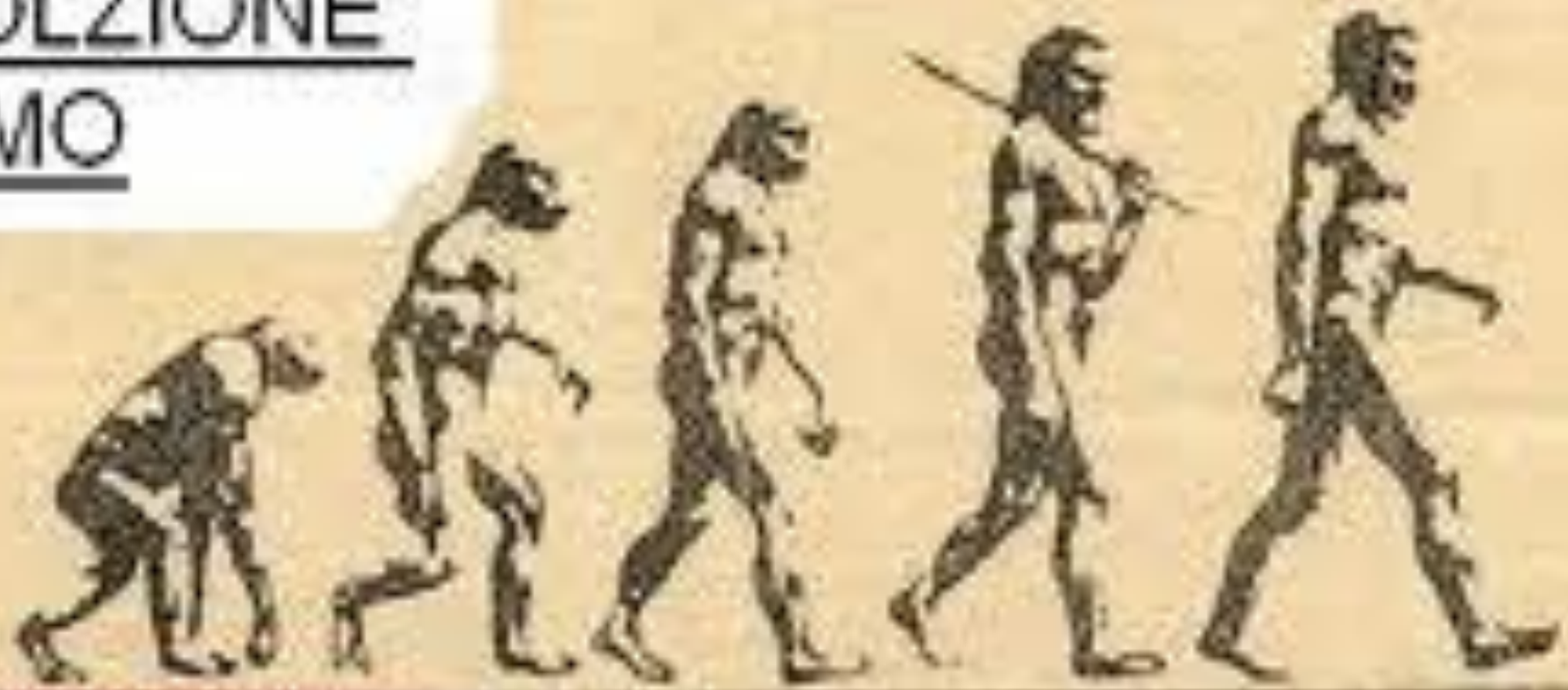
HOMERSAPIEN



blog.libero.it

www.cappittomihai.com

EVOLZIONE
UOMO



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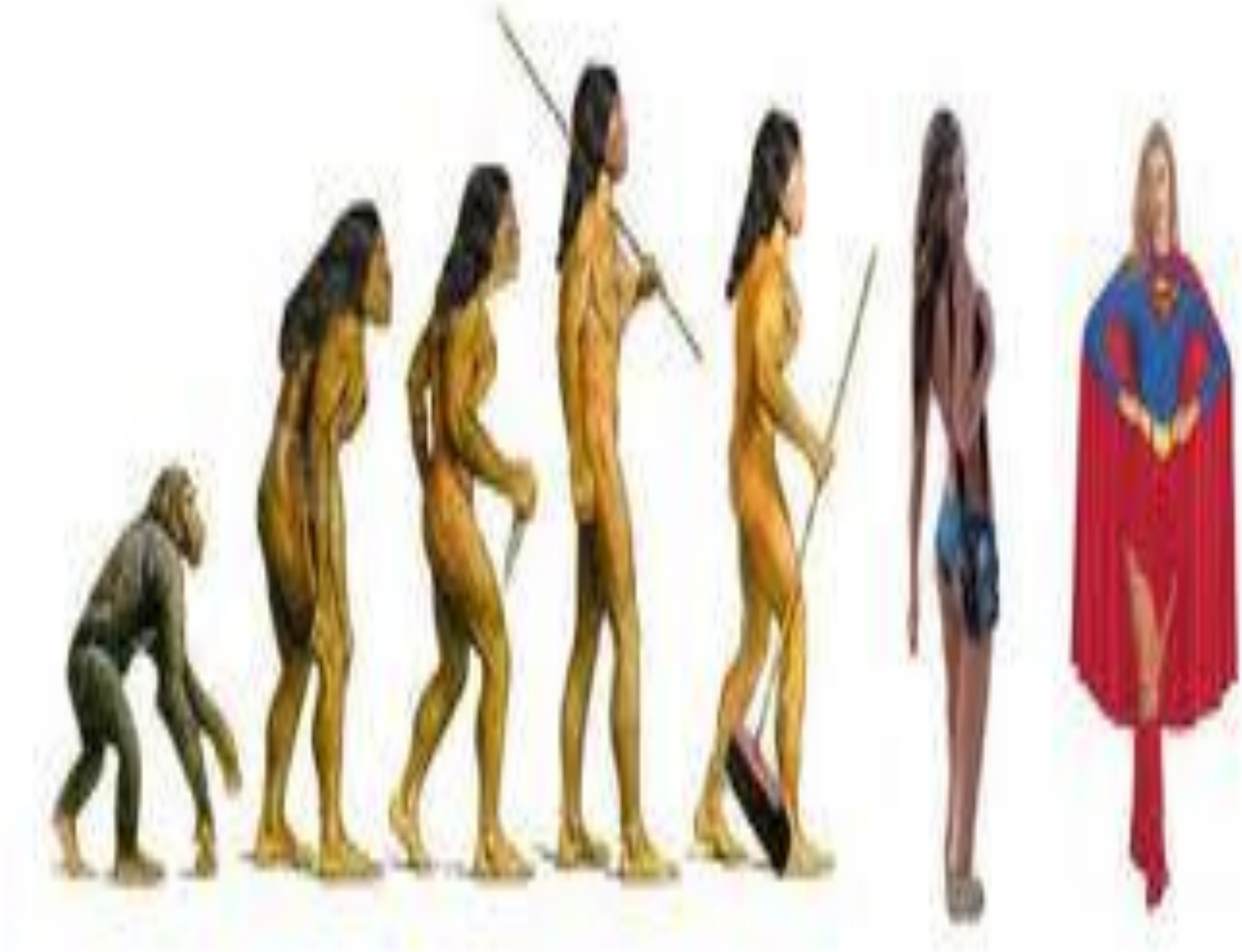

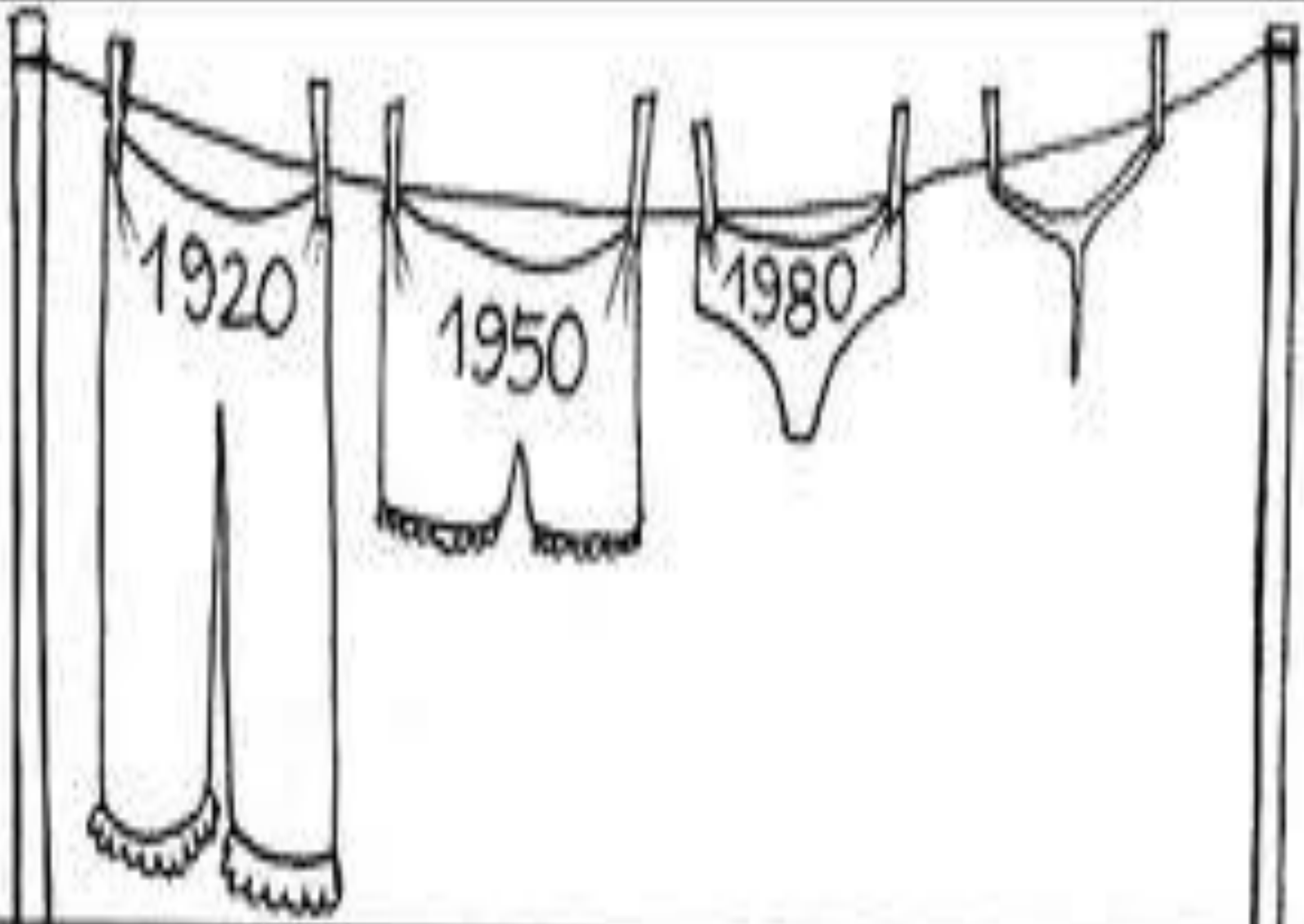

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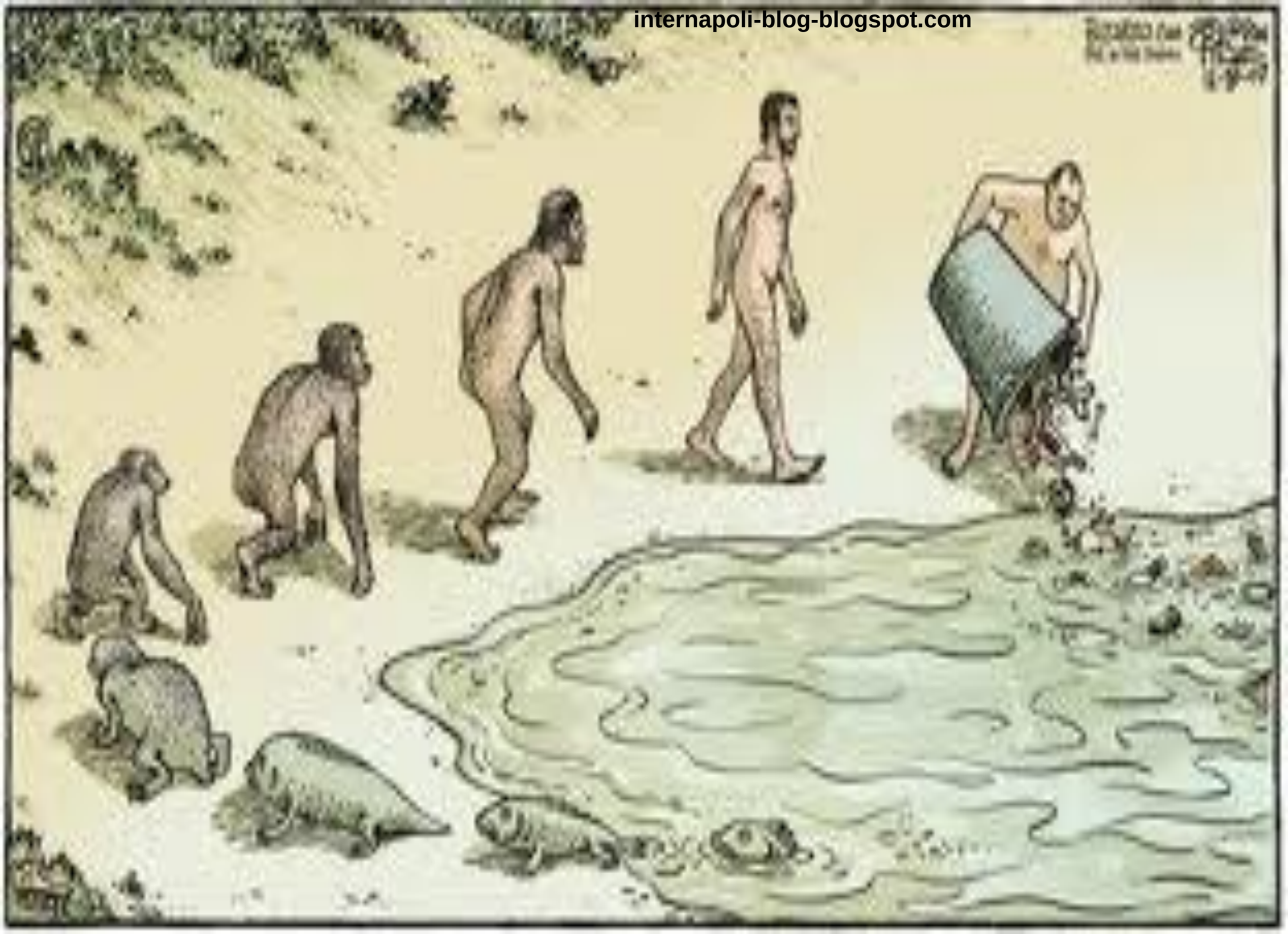

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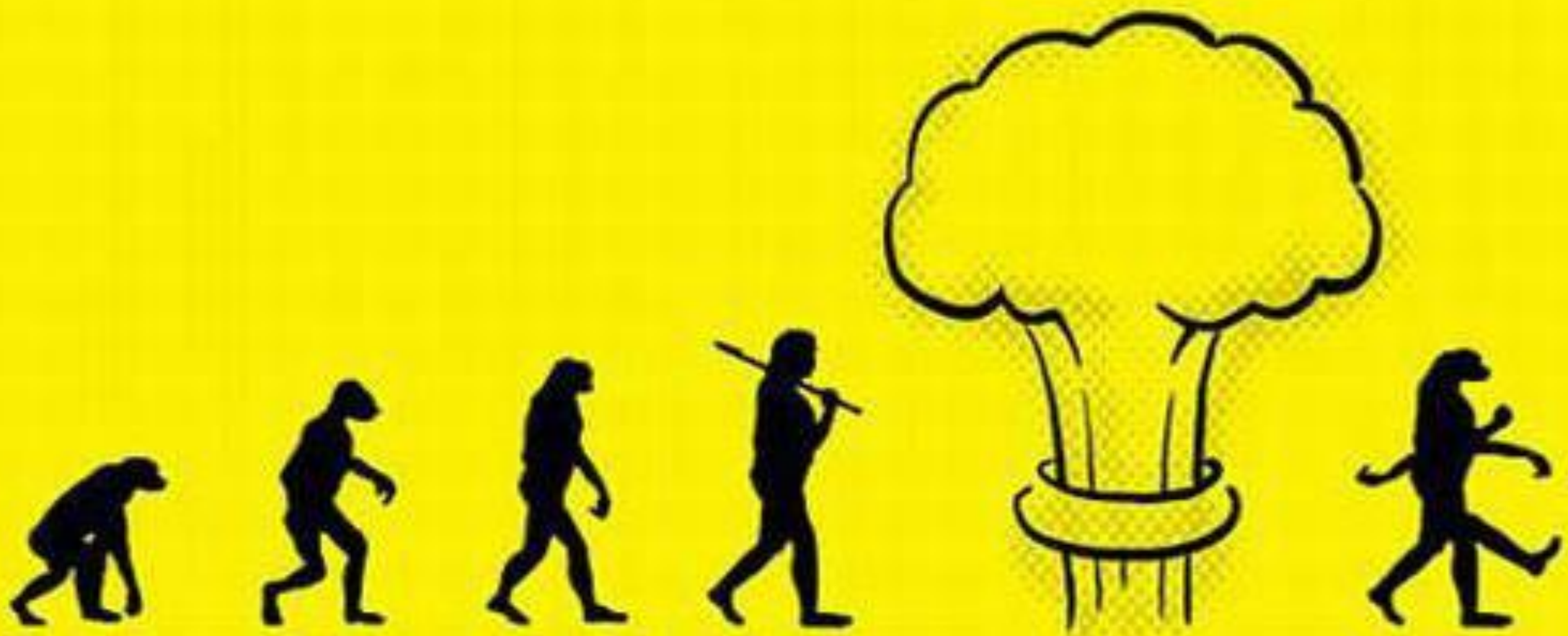

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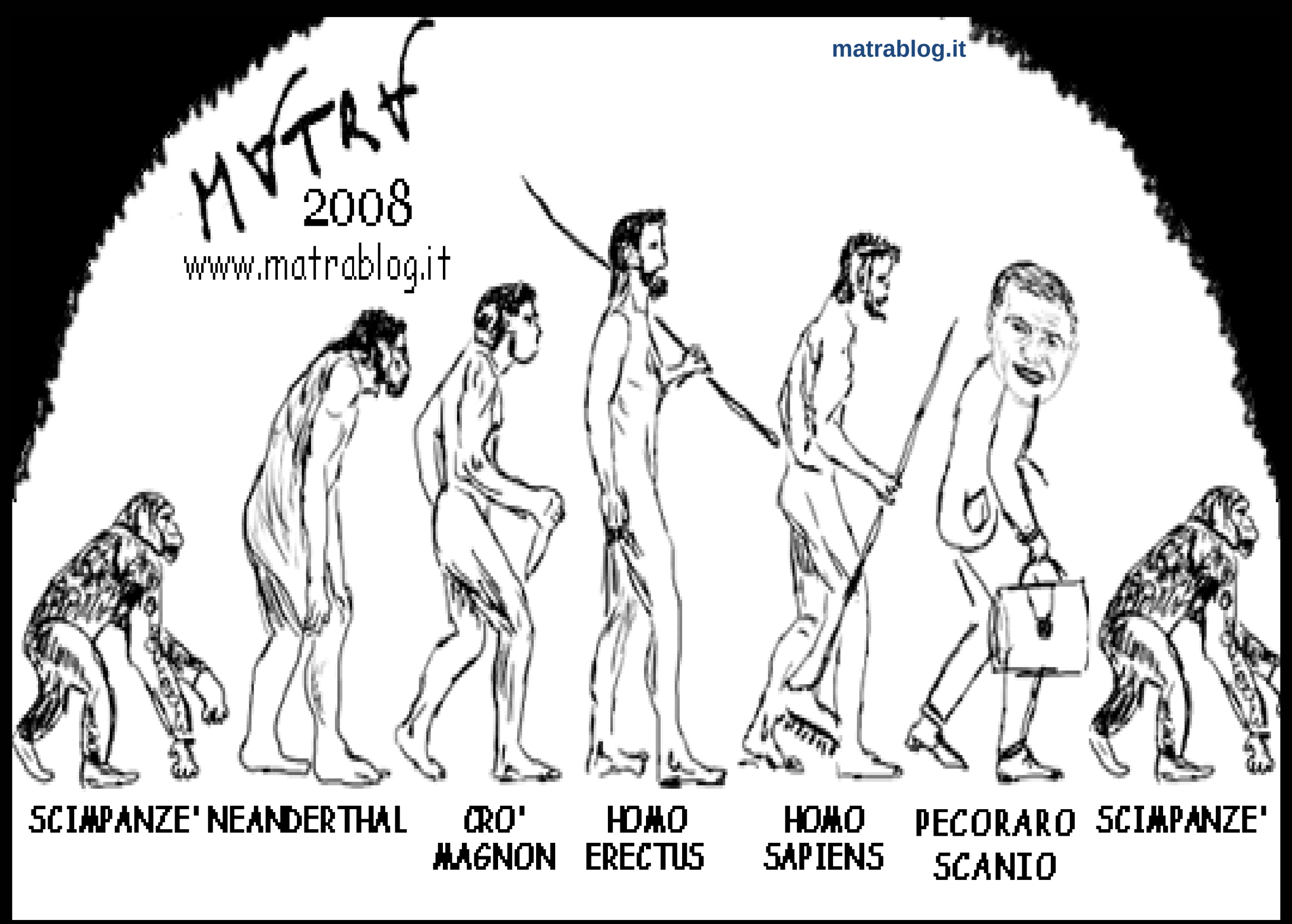
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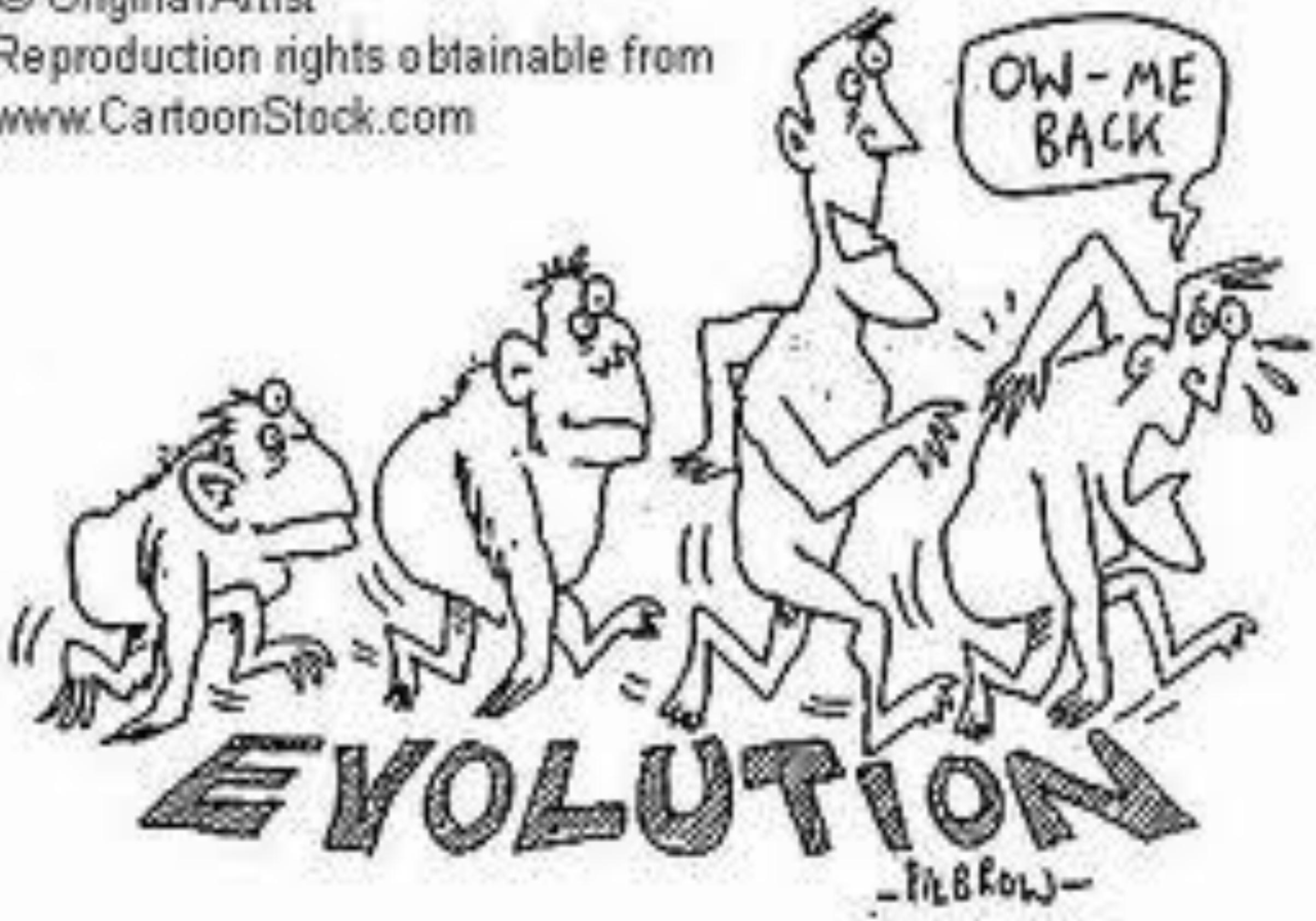

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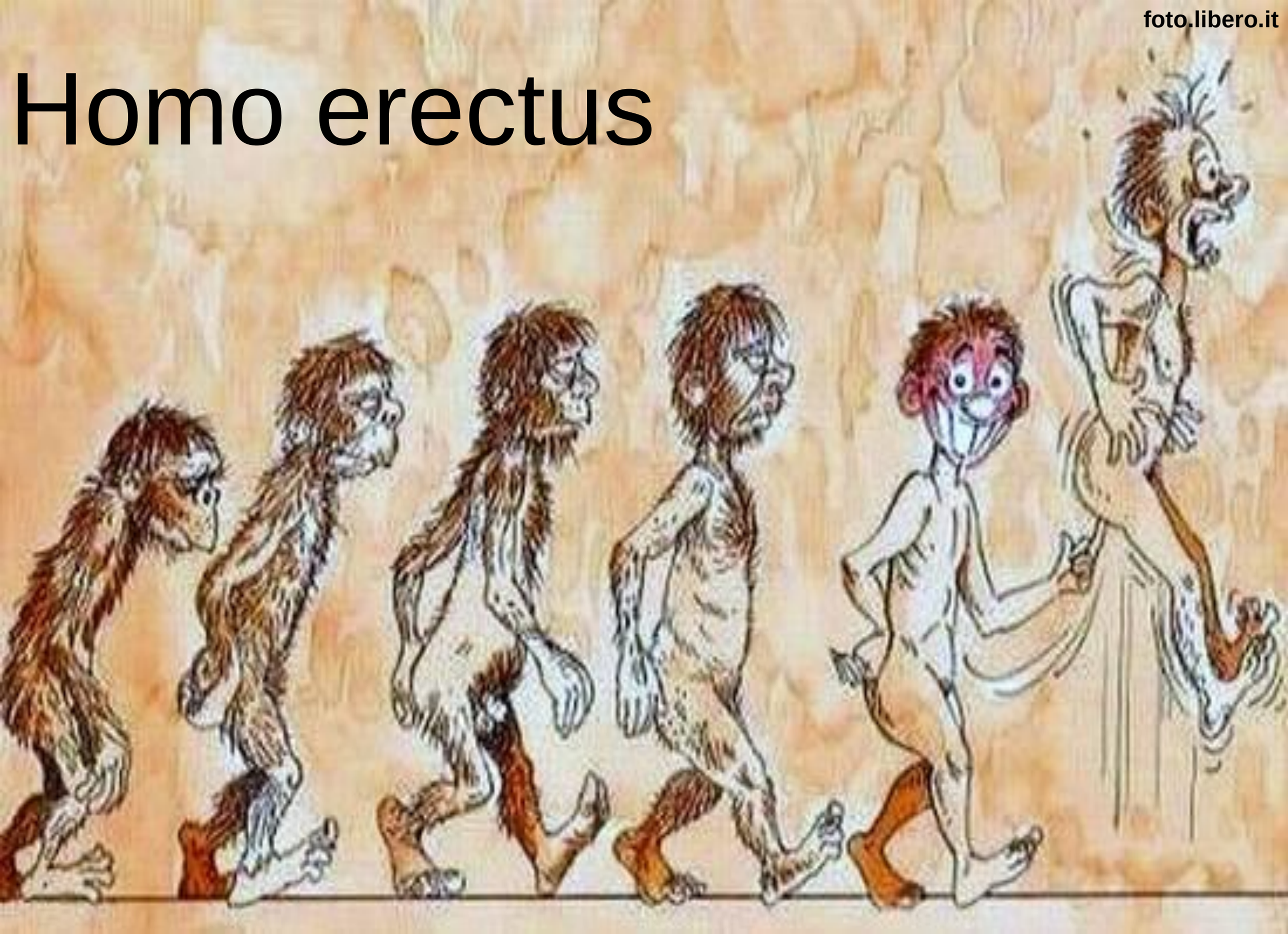

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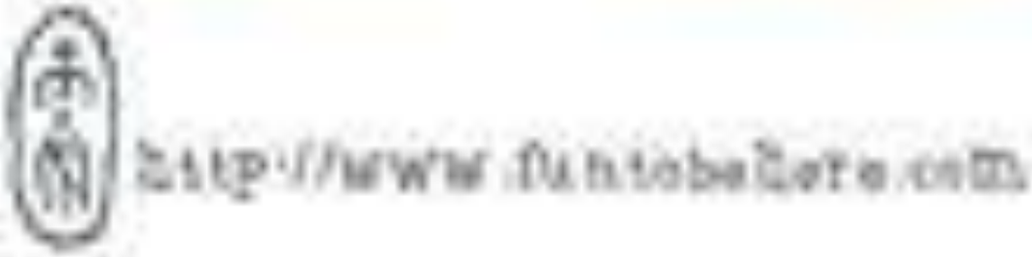

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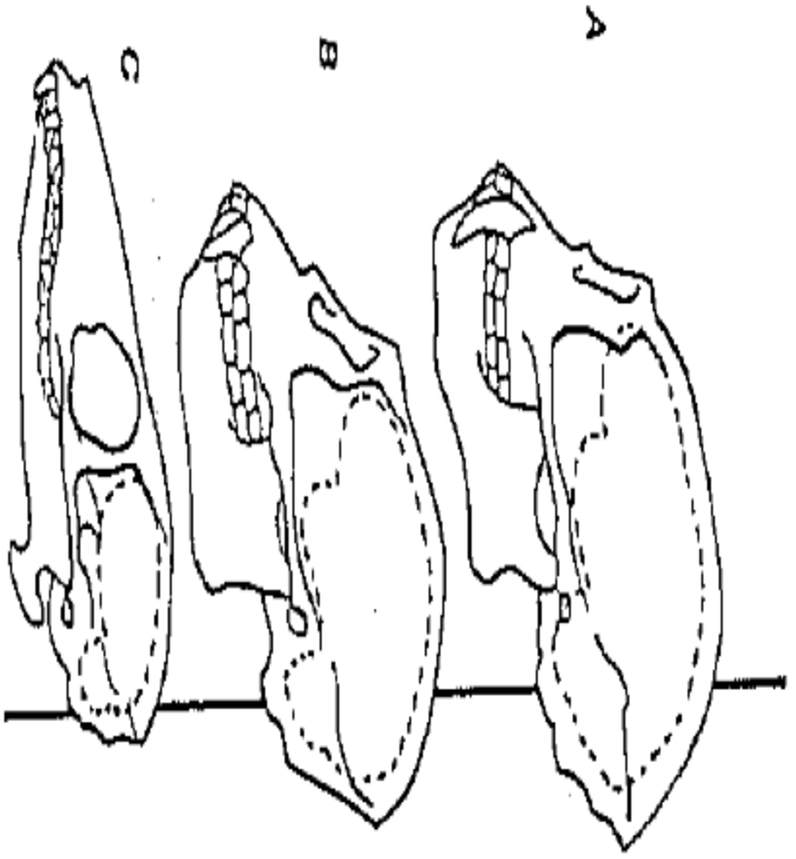
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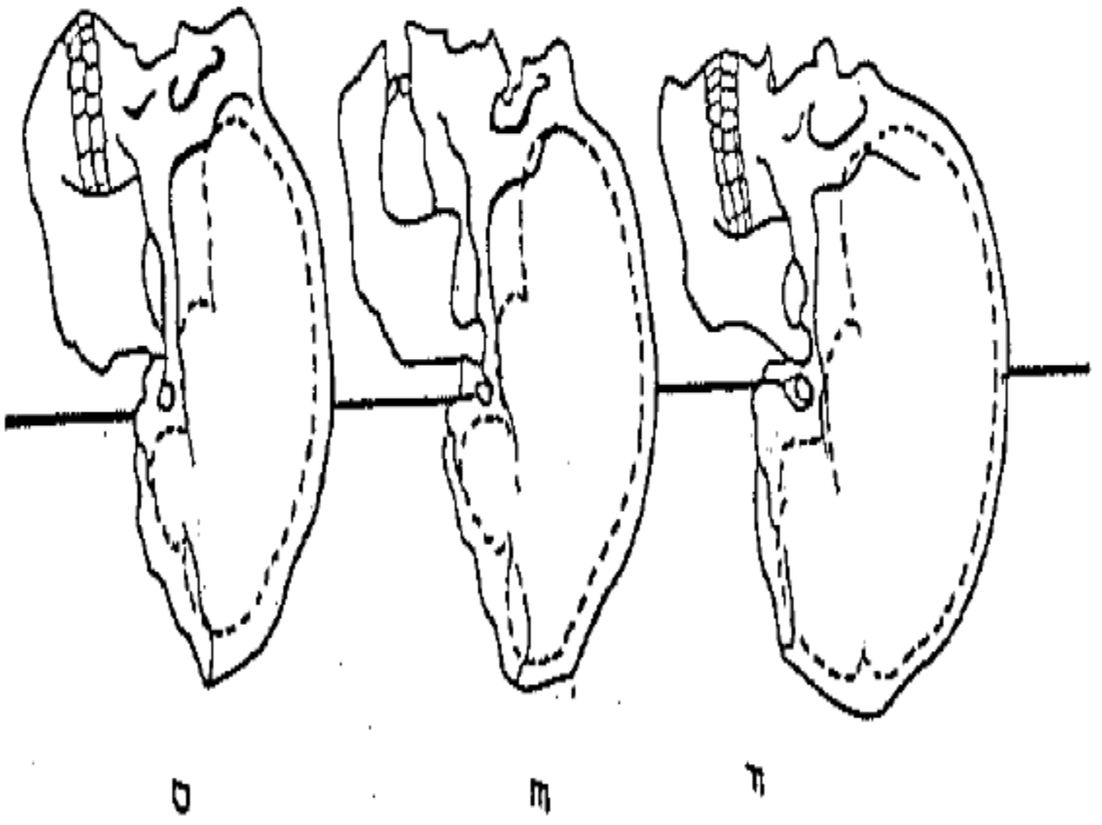
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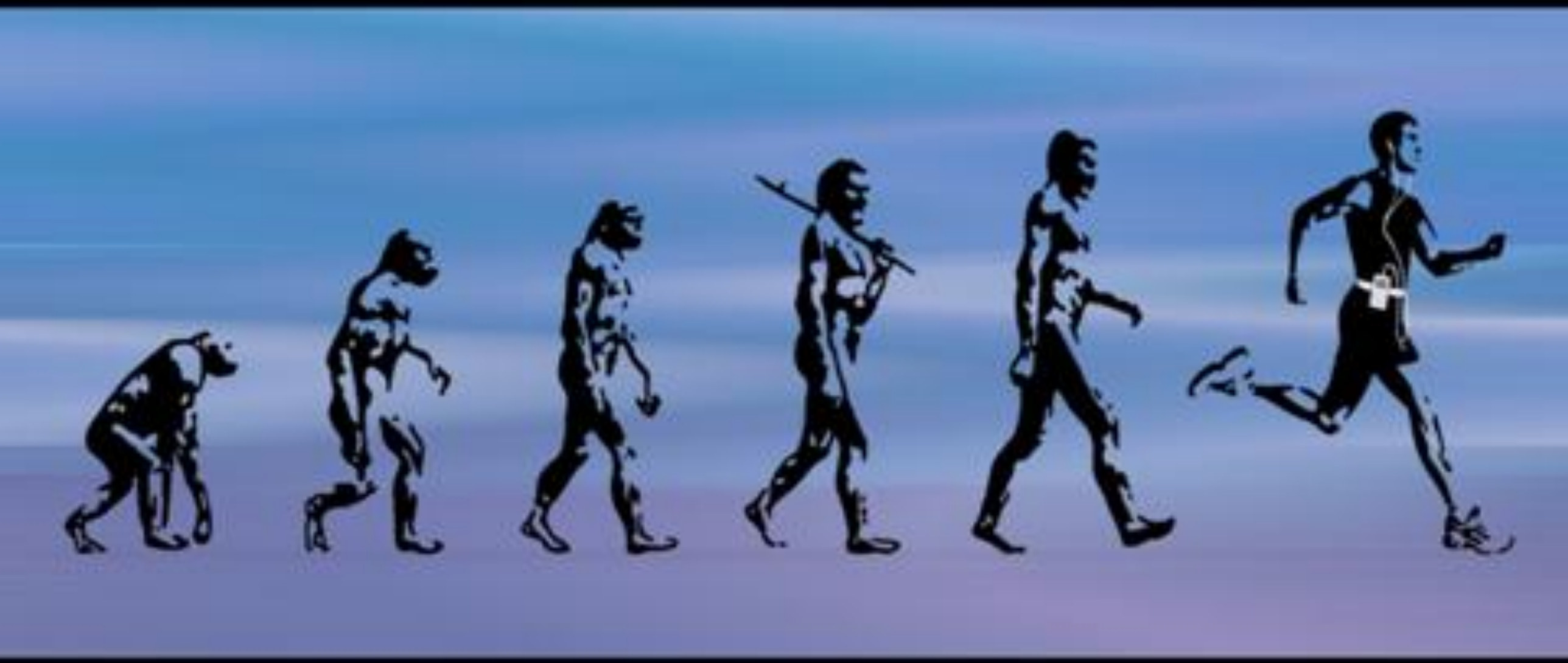

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