

A BRIEF BIOGRAPHIC AND HISTORICAL REVIEW OF PALEOANTHROPOLOGY PART I

Charles J. Vella
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Thanks to Erik Trinkaus, Pat Shipman, Ian Tattersall & Wikipedia, Steve Jones et al.,
Don Johanson

Many Photos: David Brill

This project

- ▣ I have done lots of reading in last four years
- ▣ This is my personal compendium
- ▣ I learn by creating powerpoints
- ▣ Please forgive my pronunciations; have not pronounced most of these names out loud
- ▣ Please note any factual errors for me

- ▣ PDFs at charlesjvellaphd.com

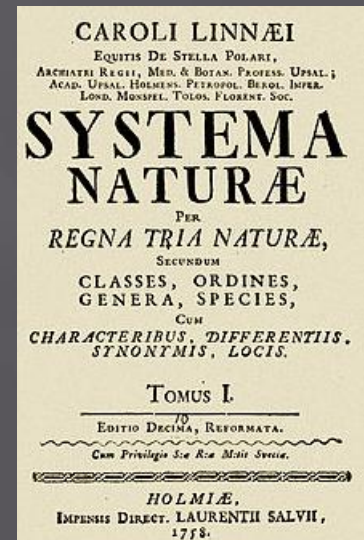
Nicholas Steno (1638–1686): Lower layers are older

- ❑ Danish Catholic bishop and scientist and a pioneer in both anatomy and geology.
- ❑ One of the founders of modern stratigraphy and modern geology.
- ❑ Influenced the development of James Hutton's theory of infinitely repeating cycles of seabed deposition, uplifting, erosion, and submersion



Carolus Linneaus (1707–1778): *H. sapiens* is a primate

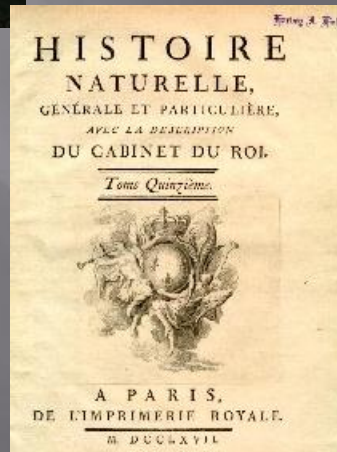
- ▣ Swedish biologist
- ▣ Founder of taxonomy
- ▣ 1758: placed humans in *Homo sapiens* in the order *Primates*
- ▣ Non-evolutionist; species as fixed & divinely created; but there were evolutionary implications in his taxonomy
- ▣ *Systema Naturae* (1735-1766)
- ▣ Binomial system in which each species has generic and specific name (e.g. *Homo sapiens*)



George Louis Leclerc, Comte de Buffon (1707–1788): Humans originate in Asia

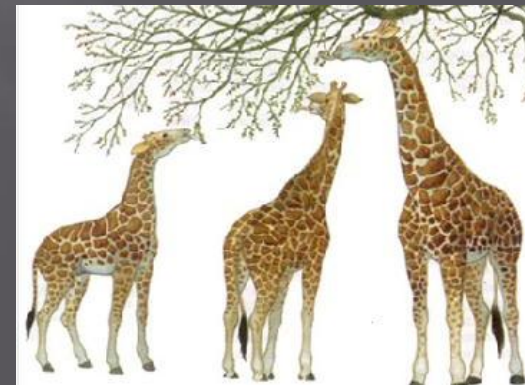


- ❑ French naturalist
- ❑ Greatest naturalist of 18th century
- ❑ Influenced Jean-Baptiste Lamarck and Georges Cuvier
- ❑ *Histoire naturelle, générale et particulière* (1749–1788): in 36 volumes.
- ❑ An advocate of the Asia hypothesis
- ❑ Opposed Linnaeus
 - No unit higher than species
 - Dismissed evolutionary implications of Linnaean ideas



Jean-Baptiste Lamarck (1744-1829: Evolution thru inherited acquired characteristics

- ▣ French botanist & professor of invertebrate zoology, Museum Nationale d'Histoire Naturelle
- ▣ One of founders of evolutionary biology
- ▣ French school of Transformationism: Idea that an organism can pass on characteristics that it acquired during its lifetime to its offspring; known as heritability of acquired characteristics
- ▣ Giraffes who reach for leaves develop longer necks) (Early epigenetics?)
- ▣ Correct on evolution, wrong method



Georges Cuvier (1769–1832): Catastrophist/punctuated equilibrium

- ▣ Comparative anatomist, zoologist
- ▣ Premiere mammalian paleontologist at Museum d'Histoire Naturelle in Paris;
- ▣ Father of vertebrate paleontology
- ▣ Foremost proponent of catastrophism: catastrophic events caused Mass extinctions, repopulation gives appearance of change.
- ▣ Anti-evolutionist and Lamarck.
- ▣ Believed that forms abruptly appeared in the fossil record, and persisted unchanged to the time of its extinction (first "punctuated equilibrium" idea).



John Frere (1740 - 1807): English Paleolithic handaxes

- ❑ English antiquary
- ❑ 1797: A pioneering discoverer of Old Stone Age or Palaeolithic tools in association with large extinct animals at brickyard in Hoxne, Suffolk
- ❑ First to recognize and publish on stone tools from England
- ❑ Described juxtaposition of artifacts, animal remains and stratigraphic evidence.



Jacques Boucher de Perthes(1788–1868): French prehistoric hand axes

- ❑ Playwright, French customs official & amateur prehistorian
- ❑ Described early flint tools from Abbeville, France; proved existence of flaked stone tools
- ❑ Discovered early handaxes near bones of extinct elephant bones in valley of Somme
- ❑ Considered the founder of prehistory in France
- ❑ Hoax: Fooled by modern human remains planted in association with genuine stone tools at Moulin Quignon



Jacques Boucher de Perthes
(Coll. Macqueron. BM Abbeville)

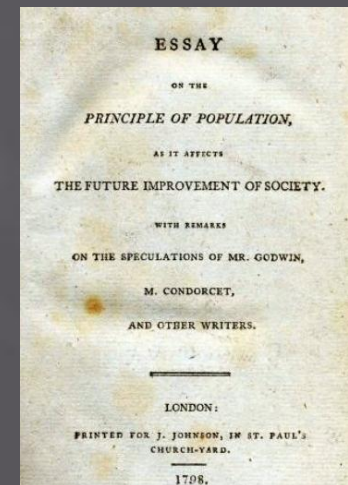
Palaeolithic Hand Axes, Acheulian, ca. 500,000 BC



From: Abbeville, Northern France. Excavated by Jacques Boucher de Perthes, 1830-40s

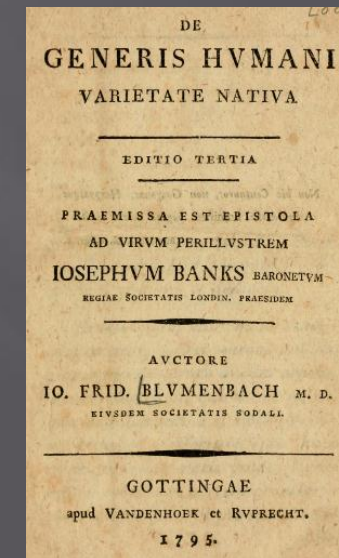
Thomas Malthus (1766–1834): Population outruns resources

- English clergyman & economist
- 1798: *Essay on the Principles of Population* : Potential to produce offspring exceeds growth of resources needed to support them
- Helped Darwin come to theory of natural selection (inherited differences in chances of surviving in struggle between population & resources).



Johann Fredreich Blumenbach (1752–1840): Cranio-metric analysis of human races

- ❑ German physician, naturalist, physiologist, and anthropologist
- ❑ Professor of Medicine in the University of Gottingen
- ❑ Founder of anthropology
- ❑ 1775: *De generis humani varietate nativa* (*On the Natural Variety of Mankind*)
- ❑ 1779: Named *Pan troglodytes* as a species
- ❑ First definition of Homo and human variation
- ❑ Divided the human species into five races in 1779, later founded on craniometry (physical morphology / description of human skulls), and called them: Caucasian, Mongolian, Malayan/brown, Ethiopian, American/red
- ❑ Not a racist
- ❑ Man began in Asia



James Hutton (1726–1797): Geological Uniformitarian



- ▣ Scottish geologist
- ▣ 1785: Developed principle of uniformitarianism
 - Same geologic processes (erosion, continental drift) operate today as in the past
 - Earth has long history
 - Supernatural theories not required to explain history
 - Earth's geology shaped by processes observable today
 - ▣ e.g. Deep soils formed by the weathering of bedrock over 1000s of years

Rev. William Buckland (1784 - 1856): First *Homo sapiens* discovery

- ▣ Oxford professor of geology
- ▣ Theory of global catastrophes
- ▣ First hominid fossil discovery
- ▣ 1823: First found fossils of *Homo sapiens* (Red Lady of Paviland) the bones of a young man, 29K, in Goat's Hole Cave, Paviland, on the Gower Peninsula in Wales, which remains the oldest anatomically modern human found in the United Kingdom.
- ▣ Trained Charles Lyell
- ▣ (OXA-1815), Buckland, *Reliquiae Diluvianae*, 1823



1823: Red Lady of Paviland

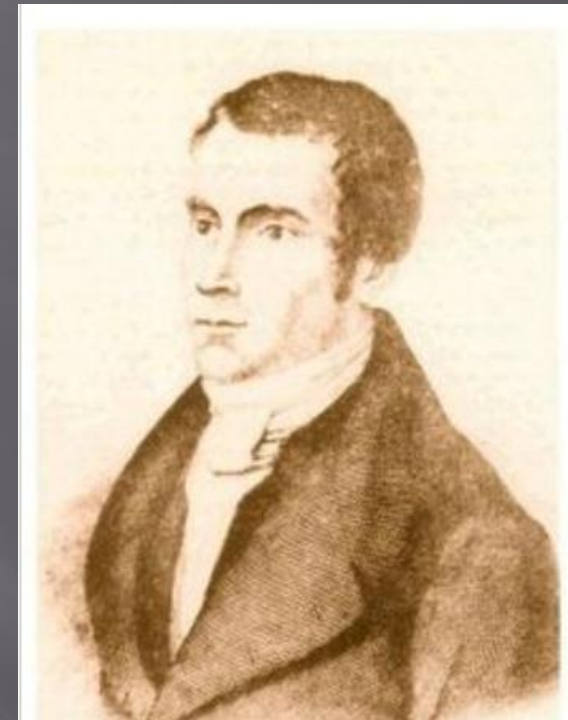


First *Homo sapiens*
fossil discovery

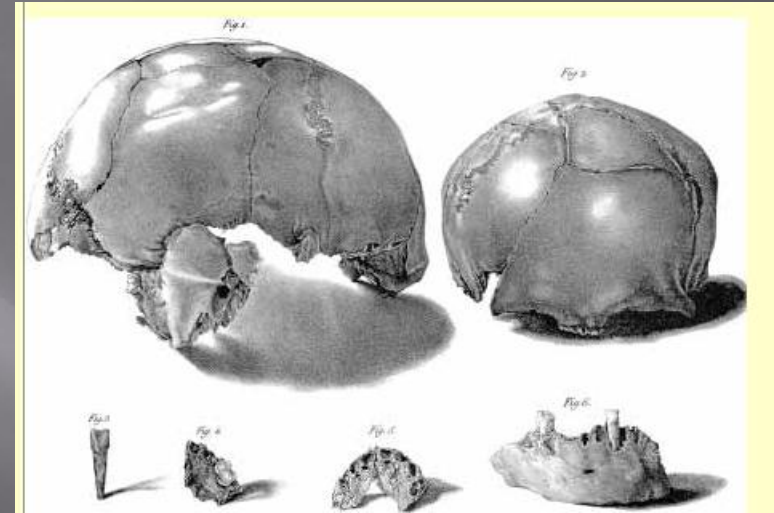


Philippe-Charles Schmerling (1791-1836): First Neandertal discovery, Engis, Belgium

- ▣ Belgian physician, prehistorian, pioneer in paleontology, paleoanthropology, paleopathology and geologist.
- ▣ Some consider him the founder of paleontology
- ▣ 1829: he found part of a cranium at Awir Cave II near Engis in Belgium and belonged to an infant; published in 1833.
- ▣ It was not recognized as a Neandertal until 1936, when Charles Fraipont authored a monograph on this child fossil.



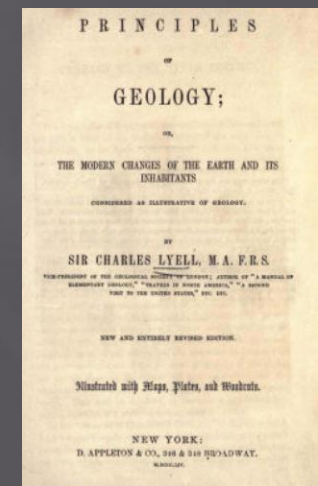
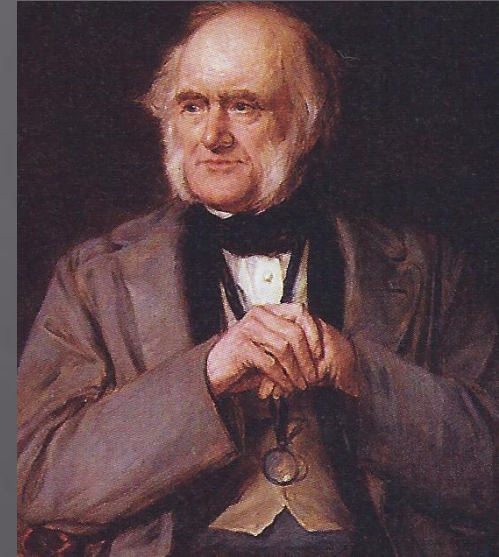
1829: Engis (Belgium) juvenile Neanderthal cranium



1st Neandertal found;
2nd discovered fossil
hominid

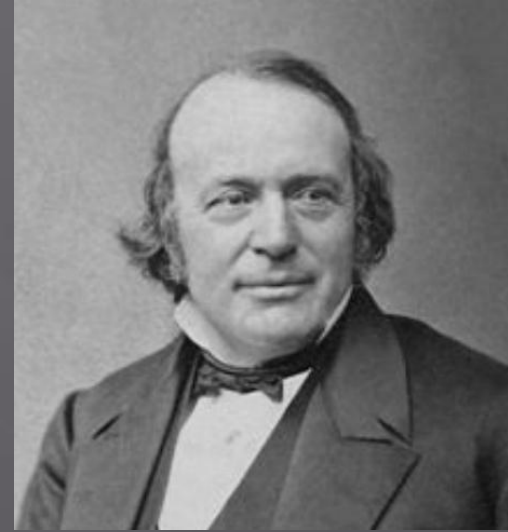
Sir Charles Lyell (1797–1875): Modern Geology

- ▣ Scottish geologist; friend and mentor of Charles Darwin (“I see through his eyes”)
- ▣ Founder of modern geology
- ▣ 1830: *Principles of Geology* (1830-1833), 3 volumes
- ▣ Promoted and extended principle of uniformitarianism
- ▣ His concept of gradualism lead Darwin to idea of natural selection; Darwin – “I always feel as if my books came half out of Lyell’s brain.”
- ▣ Studied tools in Somme Valley: “The Geological Evidence for the Antiquity of Man”



Louis Agassiz (1807–1873): Ice Ages

- ❑ Swiss geologist & naturalist
- ❑ Founded Museum of Comparative Zoology at Harvard
- ❑ 1837: Agassiz was the first to scientifically propose that the Earth had been subject to past ice ages
- ❑ Strongly anti-evolution; belief in “ideal” for each species; repeated creation events after catastrophic extinctions caused by ice ages
- ❑ Stanford Univ., 1906: 'Agassiz was great in the abstract but not in the concrete'



Concept of Ice Ages



Rocks polished and striated by a glacier, from Louis Agassiz, *Études sur les glaciers*, 1840.



Hugi's hut on a medial moraine of the lower Aar glacier, from Louis Agassiz, *Études sur les glaciers*, 1840.



Partie Moyenne



Flanc de l'extremite inferieure

Peter Wilhelm Lund (1801–1899): Second *H. sapiens* discovery

- ❑ Danish paleontologist, zoologist, archeologist
- ❑ 1842/1843: Excavations at Sumidouro Cave in Lagoa Santa, Brazil discovering fossil *Homo sapiens*
- ❑ Not well publicized
- ❑ The first professional archaeological excavations in Lagoa Santa were carried out by Wesley Hurt and Oldemar Blasi in 1956
- ❑ **Cranial morphology of early Americans from Lagoa Santa, Brazil: Implications for the settlement of the New World by Walter A. Neves and Mark Hubbe, 2005**



1843: *Homo sapiens*, Sumidouro Cave in Lagoa Santa, Brazil

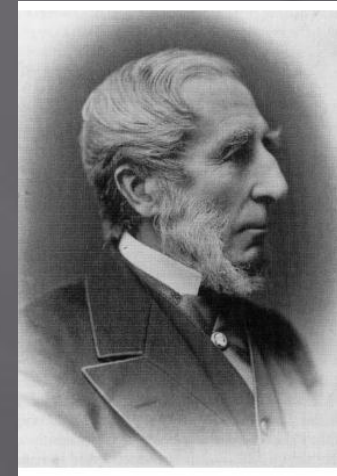


Two radiocarbon dates: (9,720 ± 128 and 9,028 ± 120)

- ▣ Acervo Museu Arqueológico da Lapinha

Captain Edmund Flint: Second H. Neanderthal discovery

- ❑ 1848: Gibraltar 1 is the specimen name of a Neanderthal skull found at Forbes' Quarry in Gibraltar, by Captain Edmund Flint, a British officer with the Royal Navy.
- ❑ First known adult Neanderthal skull, and only the second Neanderthal fossil ever to be found (but not identified as Neanderthal until 1907).
- ❑ 1907: William Sollas analyzed Gibraltar skull; recognized it as Neanderthal.
- ❑ British paleontologist Hugh Falconer (1808-1865) & George Busk (1807-1886) named Gibraltar Neanderthal 1 as *Homo calpicus* (Busk, 1865)



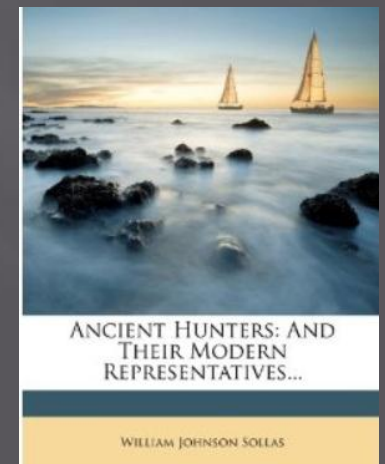
G. Busk



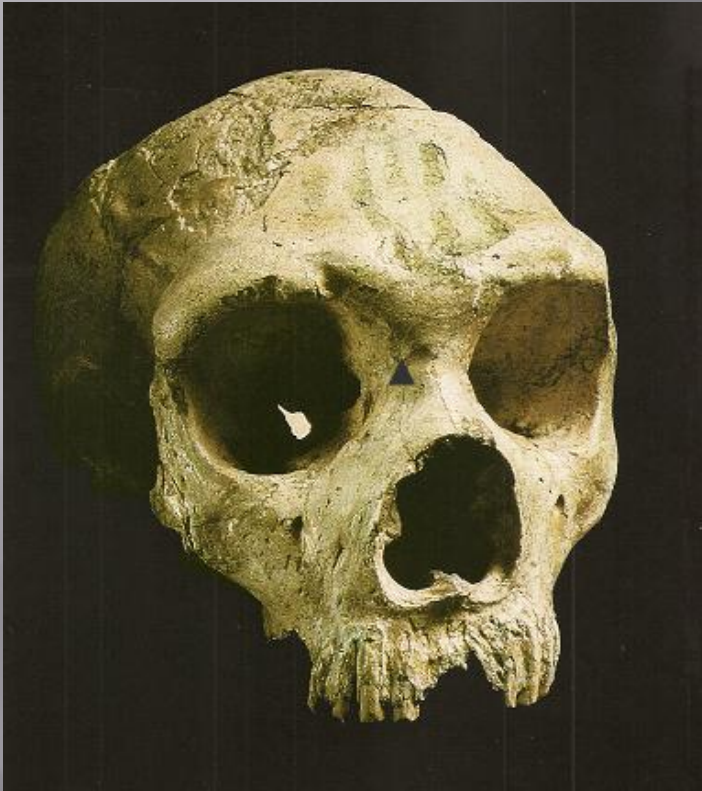
H. Falconer

William Johnson Sollas (1849–1936): Identifies Gibraltar I as Neandertal

- ▣ British geologist and anthropologist. Professor of Geology at the University of Oxford
- ▣ 1907: William Sollas analyzed Gibraltar skull; recognized it as Neanderthal.
- ▣ A shift towards a branching model of human evolution, rather than a straight line.
- ▣ Supported Raymond Dart; Hated Arthur Keith



1848: Gibraltar I, 2nd Neandertal discovery, 1st complete adult skull



Homo neanderthalensis
(Gibraltar 1)

Discoverer: Captain Edmund Flint
Locality: Forbes' Quarry, Gibraltar
Age: unknown; Date: 1848

Johann Karl Fuhlrott (1803–1877): Discovery of “1st” Neandertal from Feldhofer

- ▣ Schoolteacher from Elberfeld, Germany
- ▣ 1856: Given the original Neandertal 1 bones.
- ▣ Recognized them as belonging to ancient humans
- ▣ First recognized early human fossil: A 40,000-year-old type specimen "Neandertal 1", including a skullcap and various bones, discovered at the Kleine Feldhofer Grotte in the Neander Valley near Düsseldorf, Germany.
- ▣ J. C. Fuhlrott, *Verh. naturhist. Ver. preuss. Rheinl.* 14, Corr. Bl., 50. (1857)



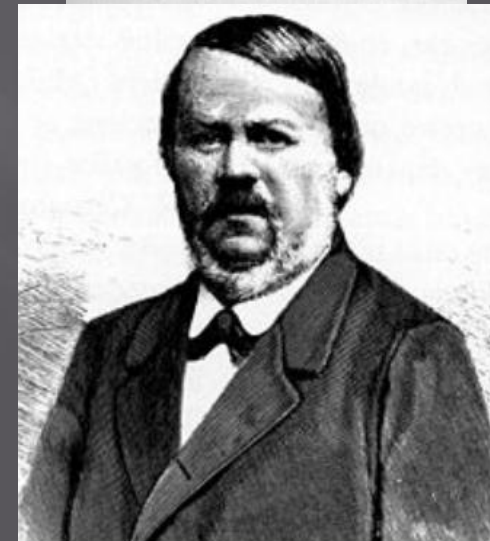
1856: Neandertal 1



Homo neanderthalensis
(Neandertal 1, type)
Discoverer: Local workers
Locality: Feldhofer grotto,
Neander Valley, Germany
Age: 40K
Date: 1856

Hermann Schaaffhausen (1816–1893): First published description of Neandertal I

- ▣ Professor of anatomy at the University of Bonn
- ▣ With Johann Fuhlrott, described the original Feldhofer Neanderthal in 1857
- ▣ H. Schaaffhausen, *Verh. naturhist. Ver. preuss. Rheinl.* 14, Corr. Bl., 50–52. (1857)
- ▣ Schaaffhausen, H. On the crania of the most ancient races of man. *Müllers Archiv* 1858:453.



William King (1809–1866): Names first fossil hominin

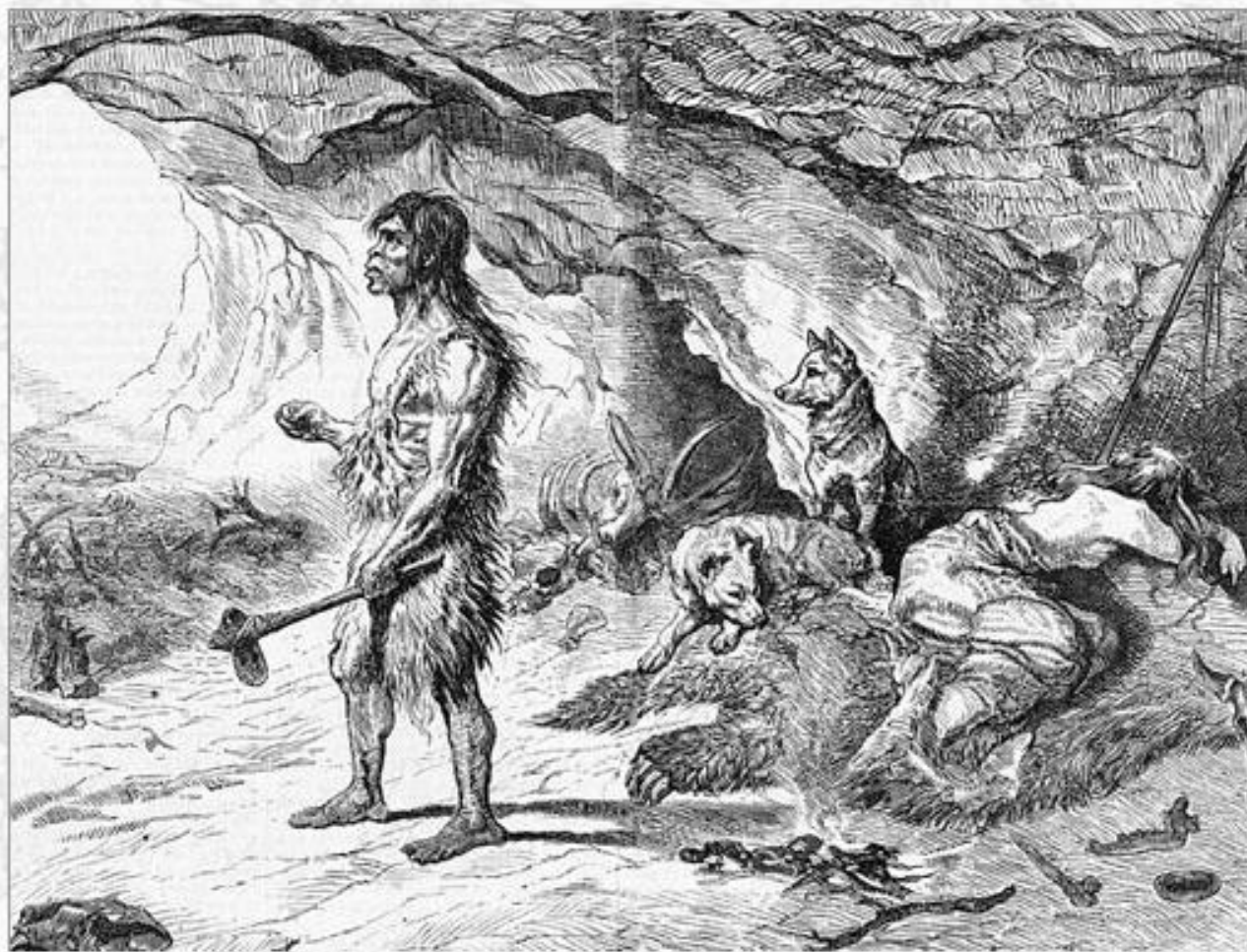
- ▣ Professor of geology at Queen's College, Ireland
- ▣ 1864: *Homo neanderthalensis* becomes the first fossil hominin species to be named.
- ▣ Idea that Neandertal is a completely separate species from *Homo sapiens sapiens*.
- ▣ W. King, *Quarterly Review of Science* 1, 88 (1864).



Neandertal 1 skeleton

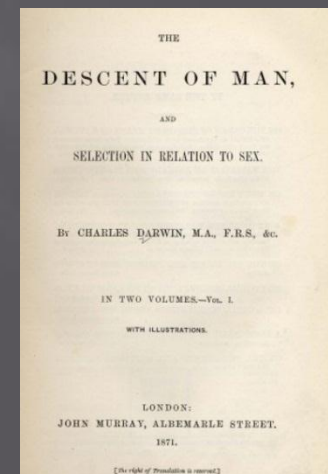
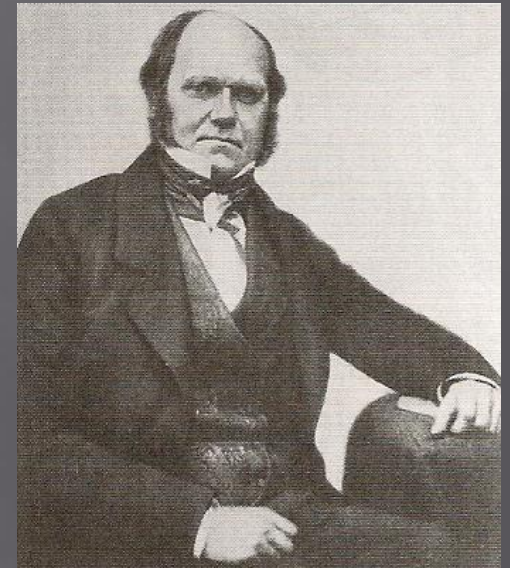


Neandertal hits the press: Harper's Weekly, 1873



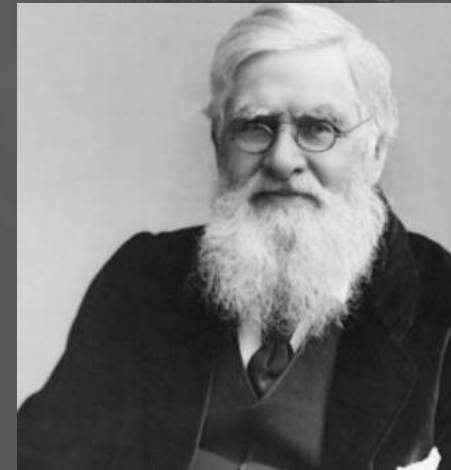
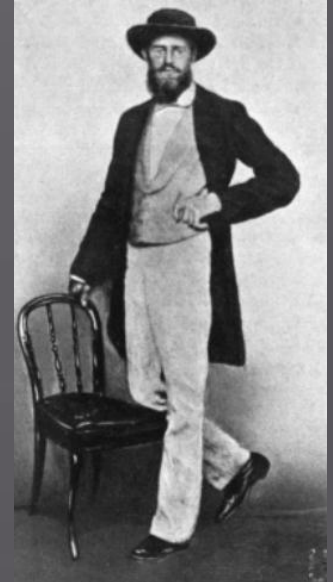
Charles Darwin (1809–1882): Evolution by natural selection

- ▣ Founder of modern evolutionary biology
- ▣ HMA *Beagle*, 1831-1836
- ▣ 1859: Author of *Origin of Species by Means of Natural Selection*
- ▣ 1871: Author of *The Descent of Man*



Alfred Russel Wallace (1823–1913): Co-discovery of theory of Evolution

- ❑ Welsh naturalist and traveler
- ❑ Co-discoverer of idea of evolution by natural selection
- ❑ Noted distribution of species and noticed discontinuity in Malay archipelago (Wallace's line) which separated fauna of Asia from that of Australia.
- ❑ Came up with idea of natural selection after reading Thomas Malthus's essay on population.
- ❑ 1858: Wrote to Darwin & joint paper published in *Proceedings of the Linnean Society of London* in 1858.
- ❑ Darwinist, socialist, spiritualist



Darwin and Wallace

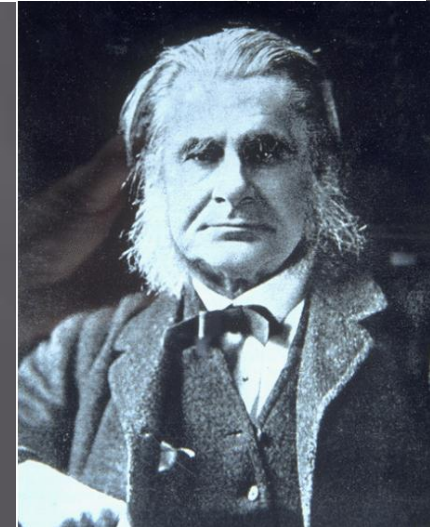
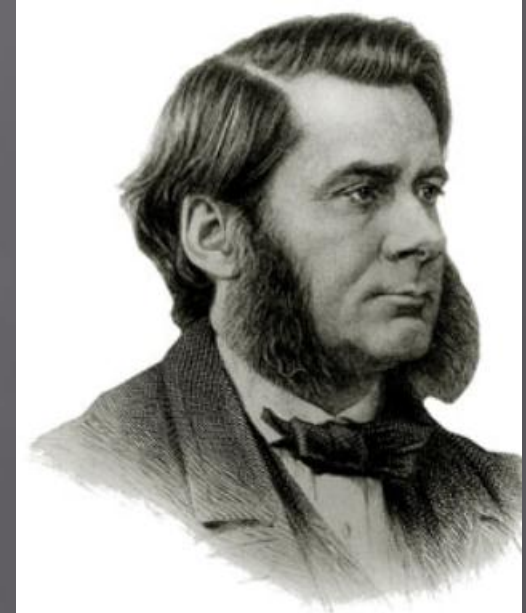
- ▣ 1837: Darwin outlined theory of natural selection in 1837
- ▣ 1857: 2 years later, young Wallace developed same theory
- ▣ 1858: Darwin and Wallace co-presented at Linnaean Society of London
- ▣ 1859: Darwin published *On the Origin of Species* a year later



Alfred Wallace
1823-1913

Thomas Henry Huxley (1825–1895): Darwin's Bulldog

- ❑ English physician and comparative anatomist
- ❑ Darwin's Bulldog: major public supporter of theory of evolution
- ❑ 1860: Famous debate with Bishop Samuel Wilberforce
- ❑ Latter asked Huxley whether it was through his grandfather or his grandmother that he claimed his descent from a monkey, and got as answer that "he would not be ashamed to have a monkey for his ancestor, but he would be ashamed to be connected with a man who used his great gifts to obscure the truth."



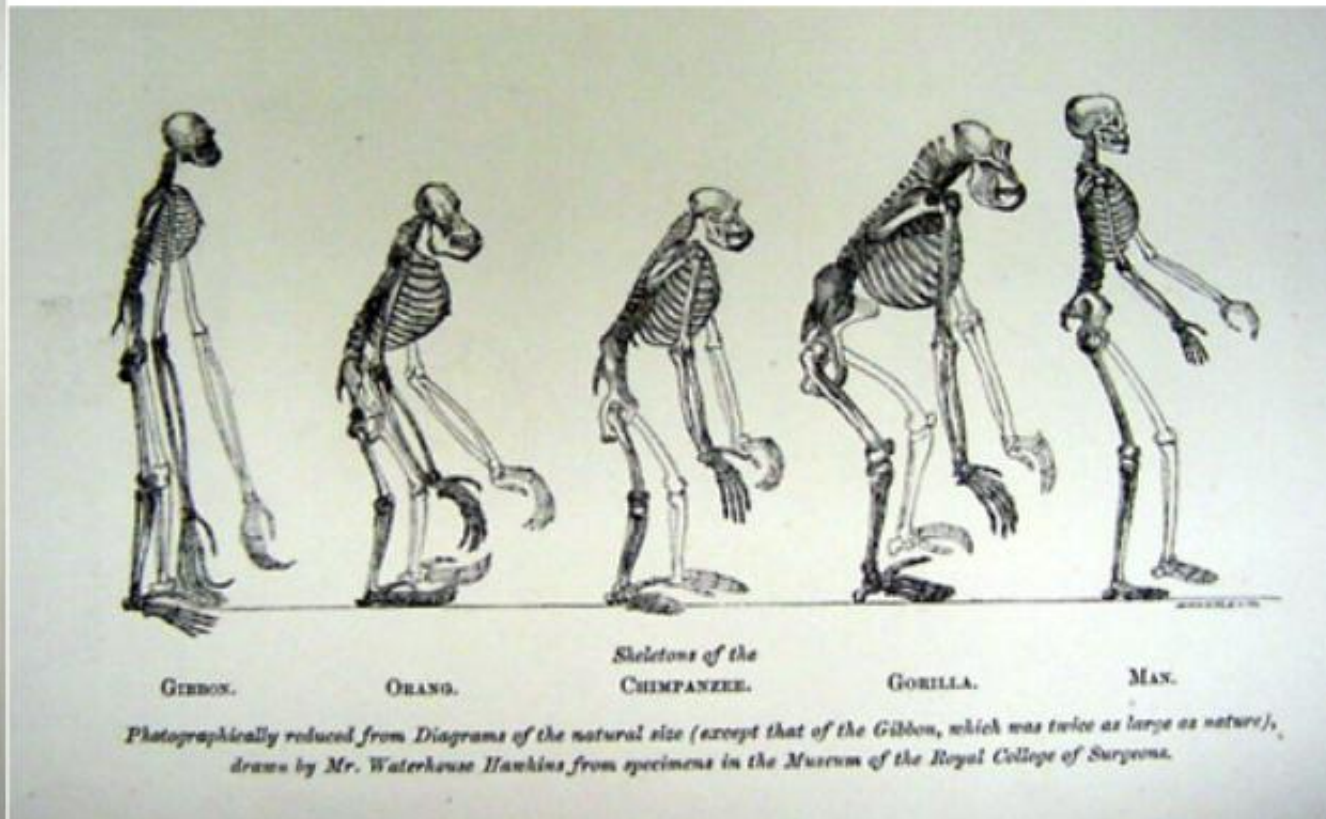
1863: Huxley's *Evidence as to Man's Place in Nature*

EVIDENCE
AS TO
MAN'S PLACE IN NATURE.

BY
THOMAS HENRY HUXLEY,
FELLOW OF THE ROYAL SOCIETY.

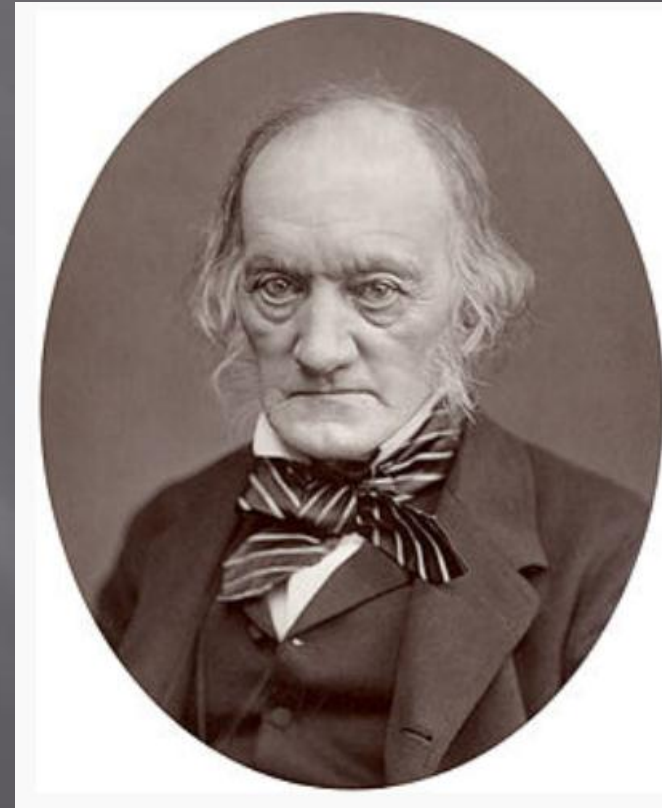


WILLIAMS AND NORGATE,
14, HENRIETTA STREET, COVENT GARDEN, LONDON,
AND
20, SOUTH FREDERICK STREET, EDINBURGH.
1863.



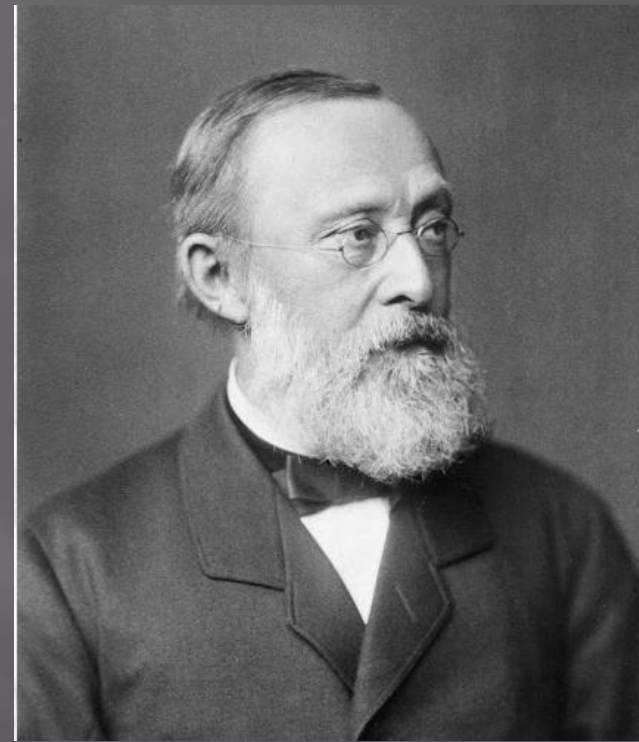
Richard Owen (1804–1892): No Evolution!

- ▣ Prominent 19th century biologist
- ▣ Outspoken opposition to Charles Darwin's theory of evolution and archenemy of Thomas Huxley
- ▣ Coined the word *Dinosauria*
- ▣ Helped to found the British Museum



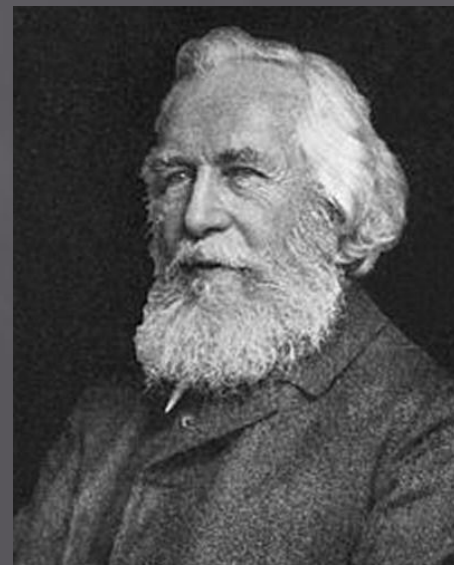
Rudolf Virchow (1821–1909): Neandertal 1 is a Idiot or a Cassock!

- ▣ German physician
- ▣ Father of modern pathology
- ▣ Foremost German physical anthropologist in last half of 19th century
- ▣ Deeply opposed idea of human evolution
- ▣ Insisted Neanderthal was modern man with disease induced deformities of a pathological (microcephalic) idiot or Russian soldier
- ▣ Rejected Aryan race theories

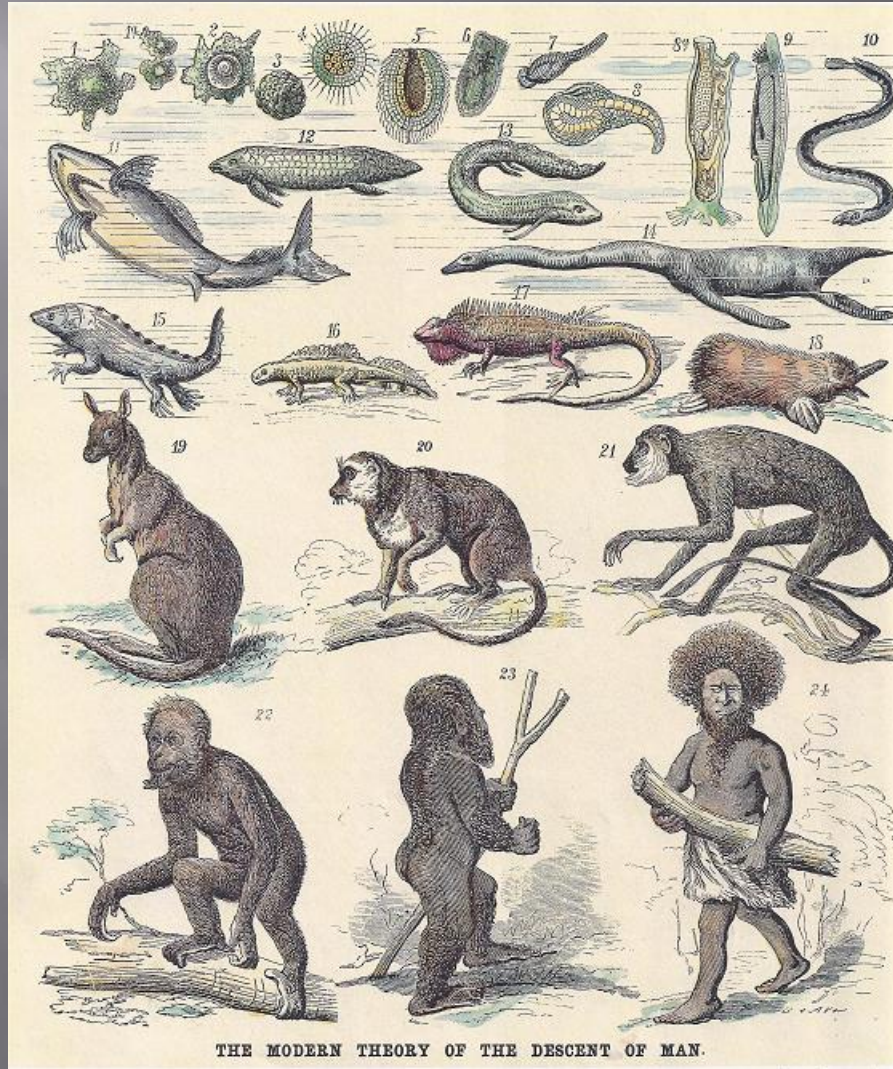


Ernst Haeckel (1834–1919): Darwin is right & Look to Asia

- ▣ German anatomist & zoologist
- ▣ Adversary of former professor Rudolf Virchow
- ▣ Founded German evolutionary biology
- ▣ Coined terms ecology, ontogeny & phylogeny
- ▣ “Ontogeny recapitulates phylogeny”:
development of the embryo of every species (ontogeny) fully repeats the evolutionary development of that species (phylogeny)
- ▣ Major Darwin defender
- ▣ Proposed a human evolutionary sequence. His evolutionary tree shows a single lineage from apes to a hypothetical ancestor, *Pithecanthropus alalus* (“apeman without speech”) in Asia (which influenced Eugene Dubois)
- ▣ His survival of fittest ideas influenced later Nazi thought



Ernest Haeckel's Ancestry of Man, 1867



Natürlichen Schöpfungsgeschichte, 1868

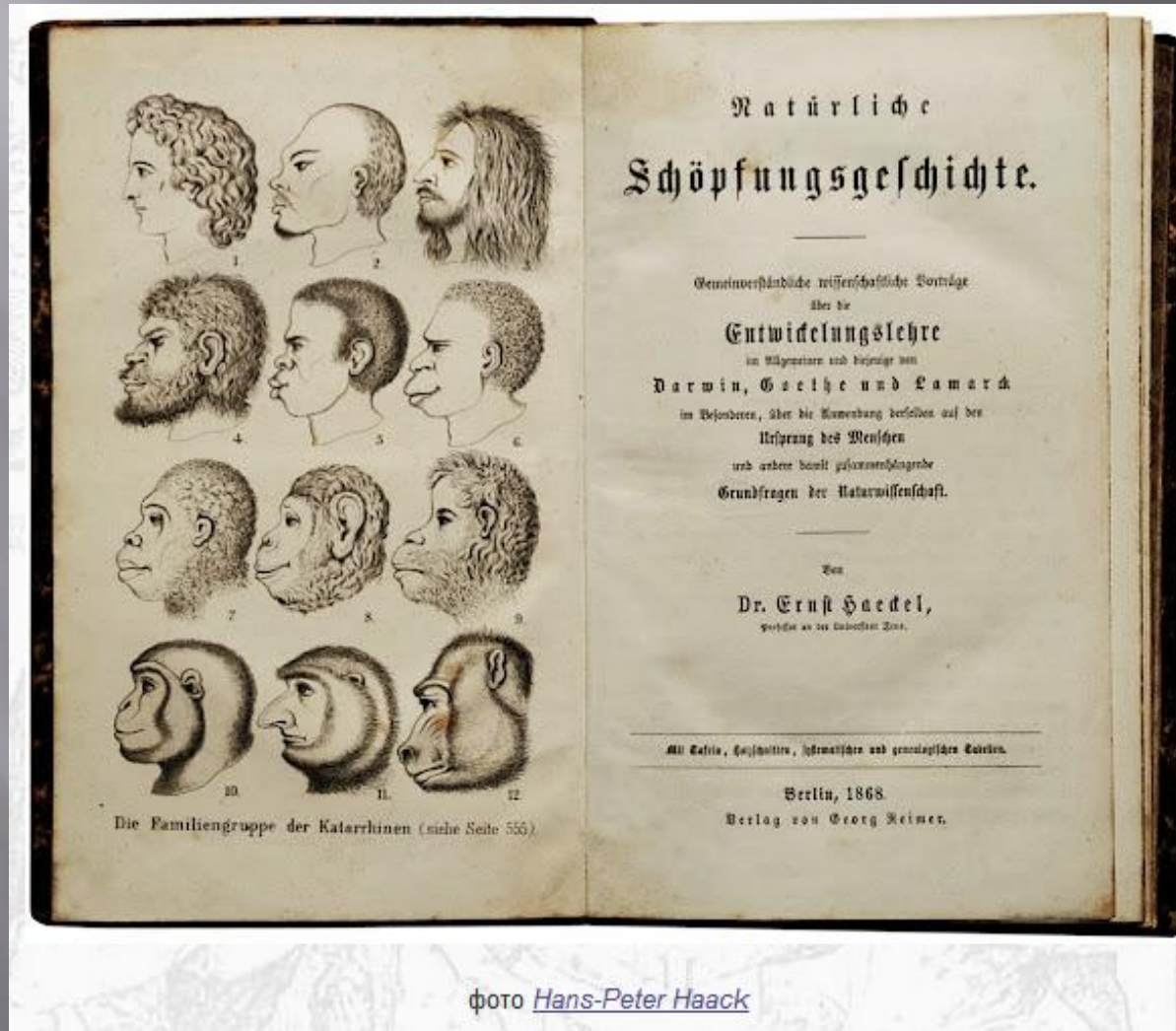
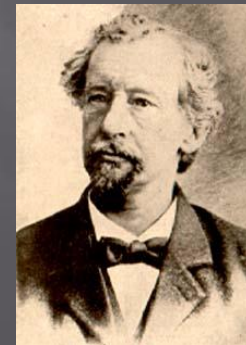


фото [Hans-Peter Haack](#)

The History of Creation, 1868

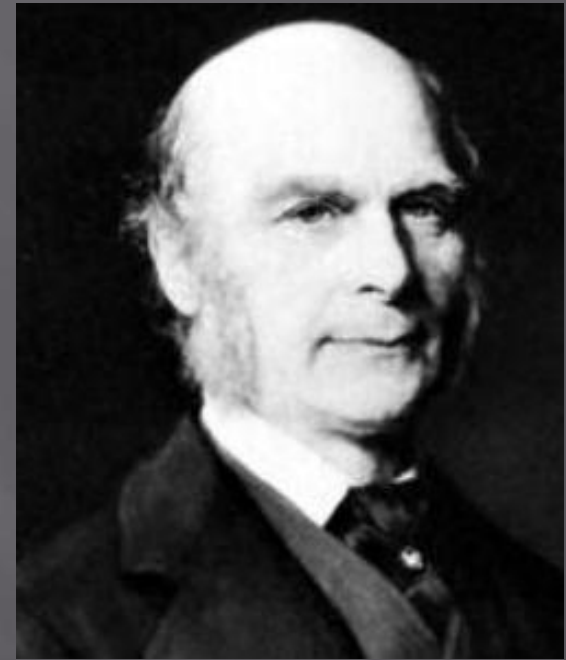
Gregor Mendel (1822–1884): A method for evolution

- ❑ Czech Augustinian monk; failed his science exams
- ❑ Founder of genetics
- ❑ Experiments with breeding garden peas, 1856-1863
- ❑ 1865: Mendel delivered two long lectures that were published in 1866 as "Experiments in Plant Hybridization." This paper established what eventually became formalized as the Mendelian laws of inheritance
- ❑ Fell into obscurity until rediscovered in 1900 by Hugo de Vries & Carl Correns



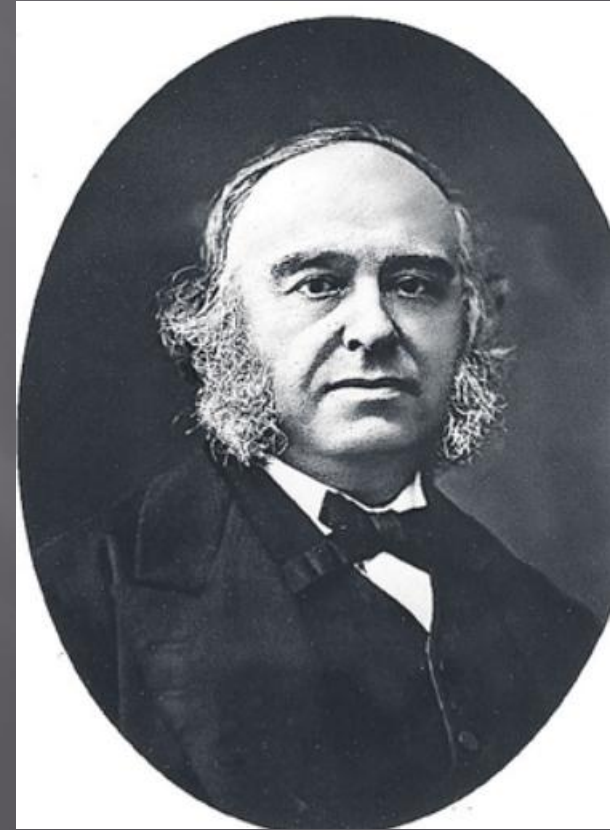
Francis Galton (1822–1911): Human genetics

- ▣ Darwin's cousin
- ▣ Mathematician, racist, founder of study of human inheritance
- ▣ 1869: *Hereditary Genius* in 1869
- ▣ Founder of eugenics movement, fingerprinting, statistical regression, first weather maps
- ▣ Founded 1st genetics department (Univ. College London)



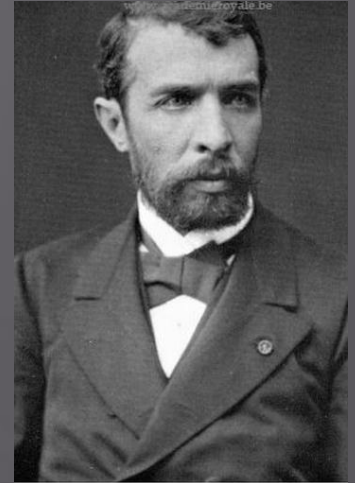
Paul Broca (1824–1880): Craniometry: skull morphology

- ▣ 19th century French surgeon & founder of physical anthropology in France
- ▣ Founder of Ecole d'Anthropologie
- ▣ Pioneered study of cranial capacity
- ▣ 1861: Discovered left frontal area of the brain for expressive language, now “Broca’s” area
- ▣ 2000 pages on craniometric measurement



Edouard Dupont (1841–1911): Neanderthal really is ancient

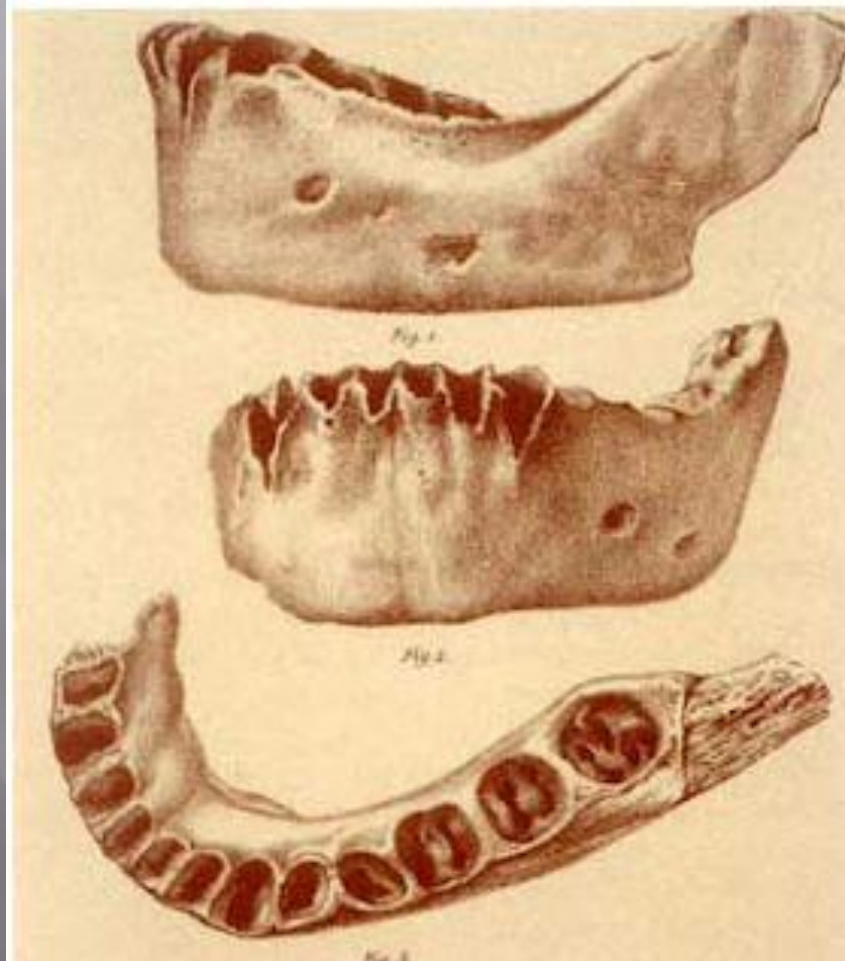
- ▣ Belgian geologist
- ▣ Director of the state *Musée d'Histoire Naturelle*, in Brussels.
- ▣ 1865: in Trou de la Naulette, Belgium, discovered Neanderthal mandible (lower jaw), ulna (one of two forearm bones) and metacarpal (hand-bone) in association with bones of extinct animals
- ▣ First Neanderthal remains to be generally accepted as of great antiquity and different anatomy than modern humans.



E. Dupont

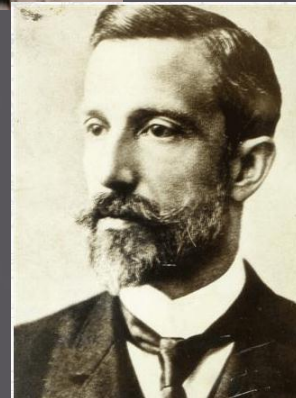


1865: Neandertal, Trou de la Naulette

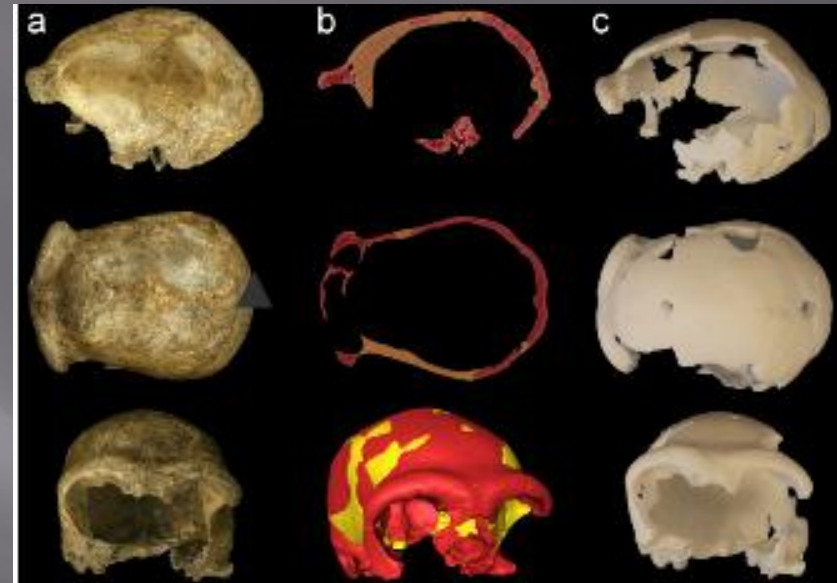
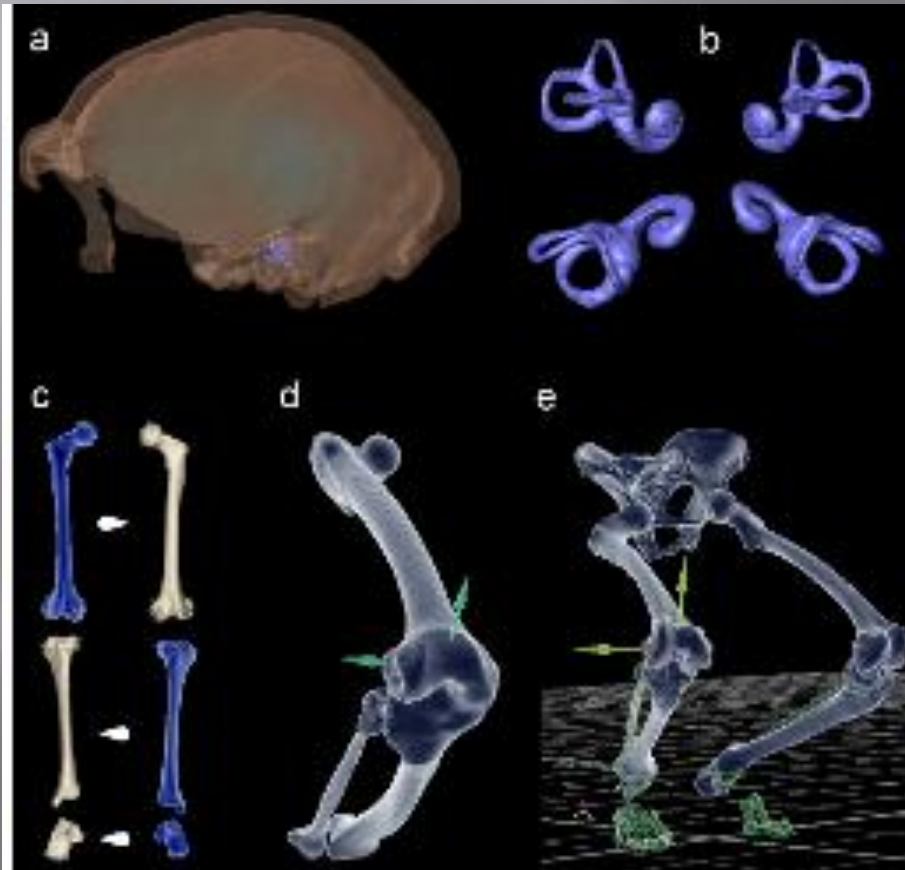


Marcel de Puydt, Max Lohest, & Julien Fraipont: Spy Neandertal & Mousterian Tools

- ❑ Belgian lawyer & amateur archeologist; and a geologist
- ❑ 1886: Discoverers of 2 nearly complete Neandertal skeletons (male & female) at Spy d'Orneau, Belgium, found with Mousterian tools
- ❑ 1888: Julien Fraipont, anatomist at Univ. of Liege, co-wrote monograph on it
- ❑ They were instrumental in an updated view of the Neandertal, with the exception they concluded he walked in a crouch rather than fully erect.



1886: Neandertal, Spy Belgium



Edouard Lartet (1801–1871): Hunt for Paleolithic sites

- ▣ French solicitor and prehistorian
- ▣ Considered a founder of paleontology
- ▣ Discovered many important Upper Paleolithic sites (Le Moustier, La Madeleine)
- ▣ 1837: Discovery of jaw of first fossil monkey (*Pliopithecus*) at Sansan, France
- ▣ Classification system for sequence of hominid ages based on associated animals (i.e. Magdalenian)
- ▣ *The Antiquity of Man in Western Europe* (1860)

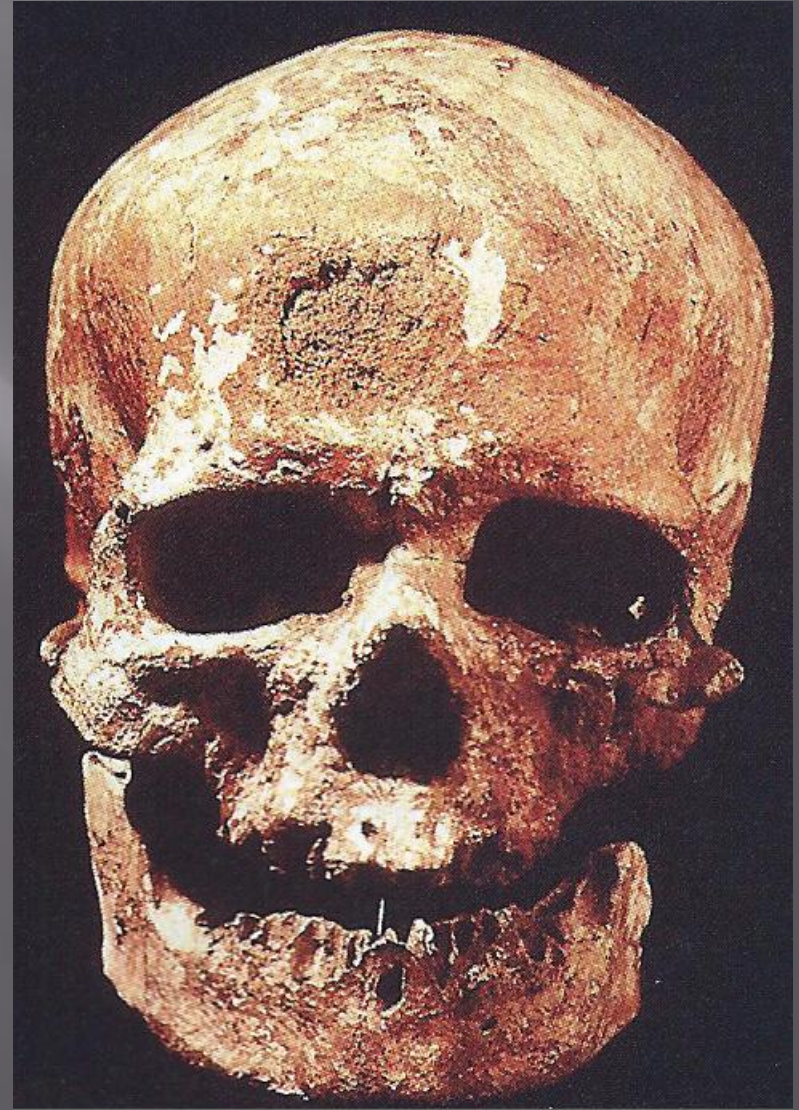


Louis Lartet (1840–1899): Discovery of *H. sapiens* in Europe

- ▣ Edouard Lartet's son
- ▣ French geologist and paleontologist.
- ▣ 1868: During railroad construction, discovered Cro-Magnon 1 in the Cro-Magnon rock shelter at Les Eyzies, Dordogne, France : the partial skeletons of four fossil modern adults and one infant along with perforated shells, ivory, and worked reindeer antler.
- ▣ Cro-Magnon 1 was made the type specimen of a new species *Homo spelaeus* by Lapouge in 1899
- ▣ Arthur Keith in 1912 placed it in *Homo sapiens*.



1868, *Homo sapiens*, Cro-Magnon 1



Homo sapiens

(Cro-Magnon I)

Discoverer: Louis Lartet & Henry Christy

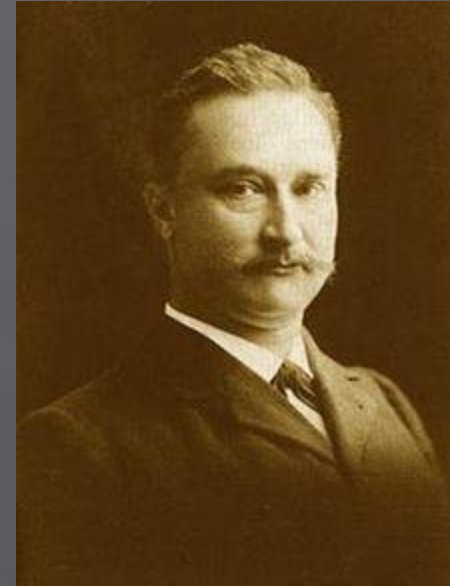
Locality: Abri Cro-Magnon, Les Eyzies,
France

Date 1868

Age: 30-32 K

Eugene Dubois (1858–1940): “Missing Link”: *Pithecanthropus erectus* in Java

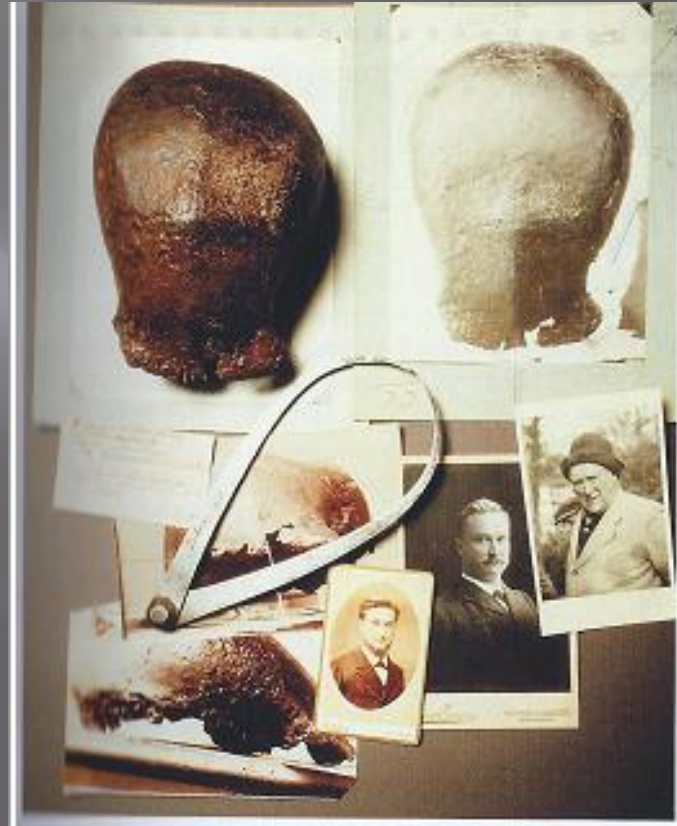
- Dutch anatomist & paleontologist
- Joined Medical Corps of Royal Dutch East Indies Army to get to Java
- 1891: First discovery of *Pithecanthropus erectus*, or Java Man at Trinil, Java – “a species in between humans and apes;” a tooth & skull cap in 1891 & femur in 1892
- Arthur Keith thinks its hominid; angers Dubois
- Reclassified as *Homo erectus*.
- Pioneered study of brain-to-body-size ratios
- Returned to Netherlands in 1895, buried fossils under his floorboards and did not show for 30 years; became withdrawn; died embittered man



1891: *Pithecanthropus erectus*, Java Man at Trinil, Java

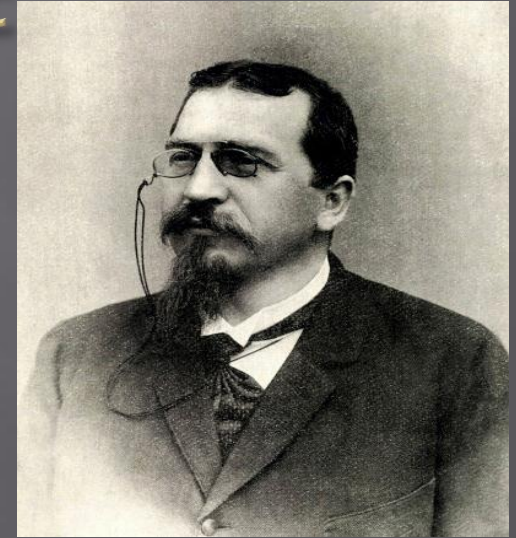


Homo erectus
(Trinil 2, type)
Discoverer: Eugene Dubois
Locality: Trinil, Java, Indonesia
Date 1891
Age: 1.0 M



First hominid fossil outside of
Europe; first fossil *Homo erectus*

Karel Jaroslav Maska: *Homo Neanderthalensis & Sapiens* in Czech Republic



- ▣ Schoolteacher turned prehistorian
- ▣ 1880: Discovered Neandertal mandible of a 9-10 yo child at Sipka, (Moravia) Czech Republic
- ▣ Also Mousterian tools and traces of hearths
- ▣ 1894: modern human materials from Predmostı, Moravia
- ▣ Large Upper paleolithic mammoth-hunter encampment
- ▣ One of founding fathers of central European Paleolithic archeology



1894: *Homo sapiens*, Predmosti



Dragutin Gorjanović-Kramberger (1856–1936): Largest fossil find of all + cannibalism in Neandertals

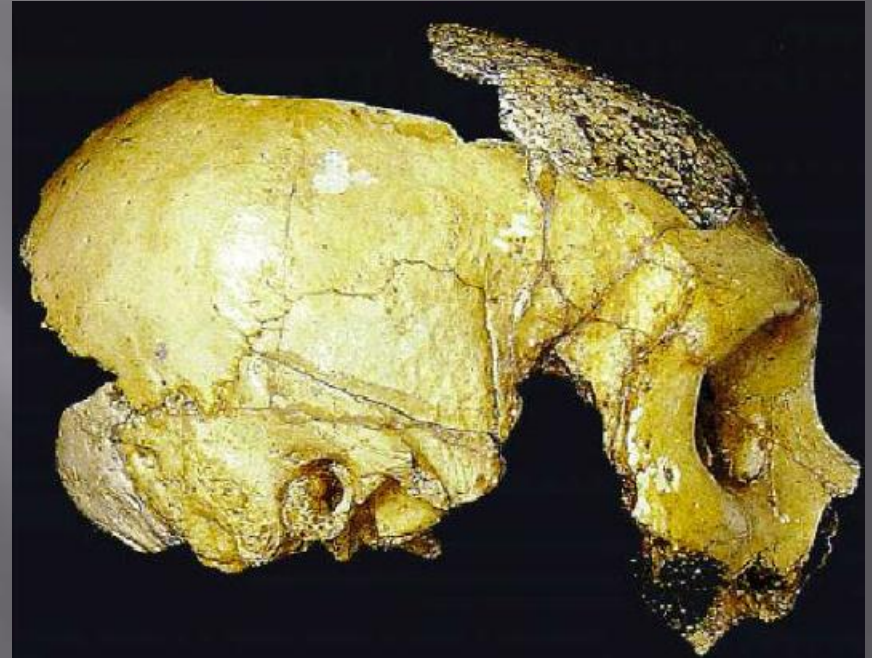
- ❑ Croatian paleontologist
- ❑ 1899: discovered the Neandertal fossils at Krapina, Croatia
- ❑ “On the diluvial man of Krapina” published in 1906.
- ❑ Gorjanović-Kramberger's research helped prove the theory of evolution of human species, concluding that Neandertals were not modern humans; first demonstrated evidence of cannibalism in Mousterian times
- ❑ The material from this site is the largest population sample of Neanderthals ever found, and is one of the largest fossil hominid samples ever found.
- ❑ There are more than 1000 fossils, 80 individuals, ages of 16-24 years, dated to 130 kyr; over period of 50K



1899: Neanderthal, Krapina



Possible cannibalization



Homo neanderthalensis
(Karpina C)

Discoverer: Karl Gorjanovic-Kramberger

Locality: Krapina cave, Croatia

Date: 1899

Age: 130K

Otto Schoetensack (1815–1912): Discovery of *Homo heidelbergensis* at Mauer

- ▣ German industrialist and later professor of anthropology.
- ▣ 1907: at Mauer, near Heidelberg, Germany, a site he directed, the worker Daniel Hartmann at quarry owned by Joseph Rosch, found the lower jaw of a hominid.
- ▣ Schoetensack later named it the type specimen of *Homo heidelbergensis*
- ▣ “*The lower jaw of the Homo heidelbergensis out of the sands of Mauer near Heidelberg*”, 1908



1907: *Homo heidelbergensis*,
Mauer mandible; one of oldest European fossils

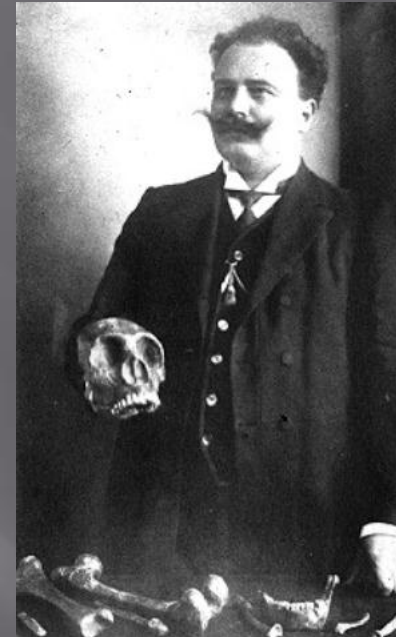


Homo heidelbergensis
(Mauer 1, type)
Discoverer: Daniel Hartman,
workman for Joseph Rosch
Date: 1907
Locality: Mauer sand pits,
Germany
Age 400-500 K



Otto Hauser (1874–1932): Discoveries by despised dealer

- ▣ Swiss-German antiquities dealer
- ▣ Detested by the French for his discoveries
- ▣ 1908: Le Moustier rockshelter, southwest France: discovers a complete Neanderthal skeleton within a “burial” site (all but the skull later lost in World War II); type site for Mousterian culture.
- ▣ 1909: discovery of Cro-Magnon skeleton at Combe, Capelle; associated Chatelperronian industry



1908: Le Moustier, Neanderthal cranium



1911: Hauser postcard ad

FOUILLES DE O. HAUSER
LES EYZIES
DORDOGNE (FRANCE)



Plan grotte d'Effort, Aurignacien



Visu Moustérien, Hauser



LAUGERIE HAUTE (Les Eyzies)

LAUGERIE HAUTE (LES EYZIES)
BUREAU DER AUSGRABUNGSLEITUNG
Ausstellung prähistorischer Funde
· PLÄNE · PHOTOGRAPHIEN ·
Wagen, Gute Zimmer, Angenehmer Aufenthalt,
DUNKELKAMMER

Bureau de la Direction des Fouilles préhistoriques.
ACHEULLÉEN, MOUSTERIEN AURIGNACIEN,
SOLUTRÉEN, MAGDALENIEN.
Exposition des objets préhistoriques, Plans, Photographies
VOITURES, CHAMBRES, SEJOUR AGREABLE
CHAMBRE NOIRE

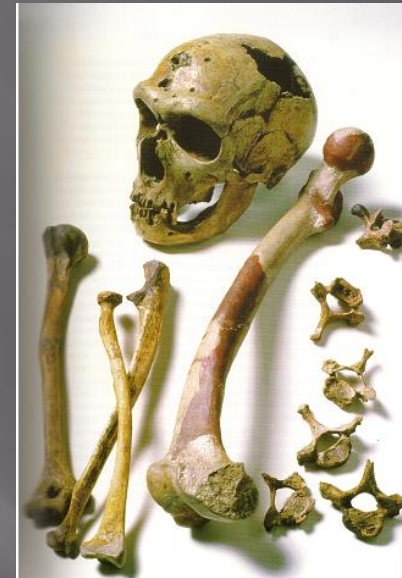
LAUGERIE HAUTE (LES EYZIES)
Prehistoric excavations Manager's office.
· EXHIBITION OF PREHISTORIC OBJECTS ·
· PLANS · PHOTOS ·
Carriages Rooms to let. Agreeable sejour.
· DARK ROOM ·

Abbes Jean and Amedee Bouyssonie: French Priests get into the act

- ▣ French brothers and priests
- ▣ 1908: Excavated, with Bouffia Bonneval, the Neandertal skeleton, the 'Old Man', at La Chapelle-aux-Saints
- ▣ Turned it over to Marcellin Boule for analysis



1908: Neandertal, La Chapelle-Aux-Saints, “Old Man”

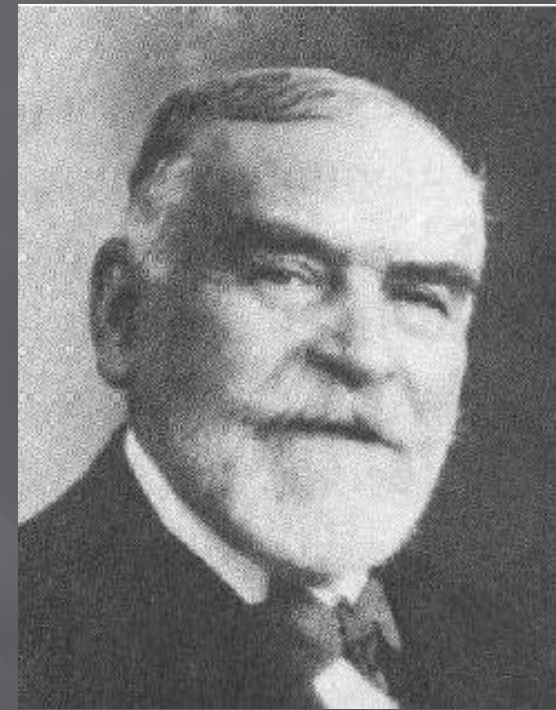


Aged, pathological skeleton
formed basis of pervasive negative
view of Neandertal

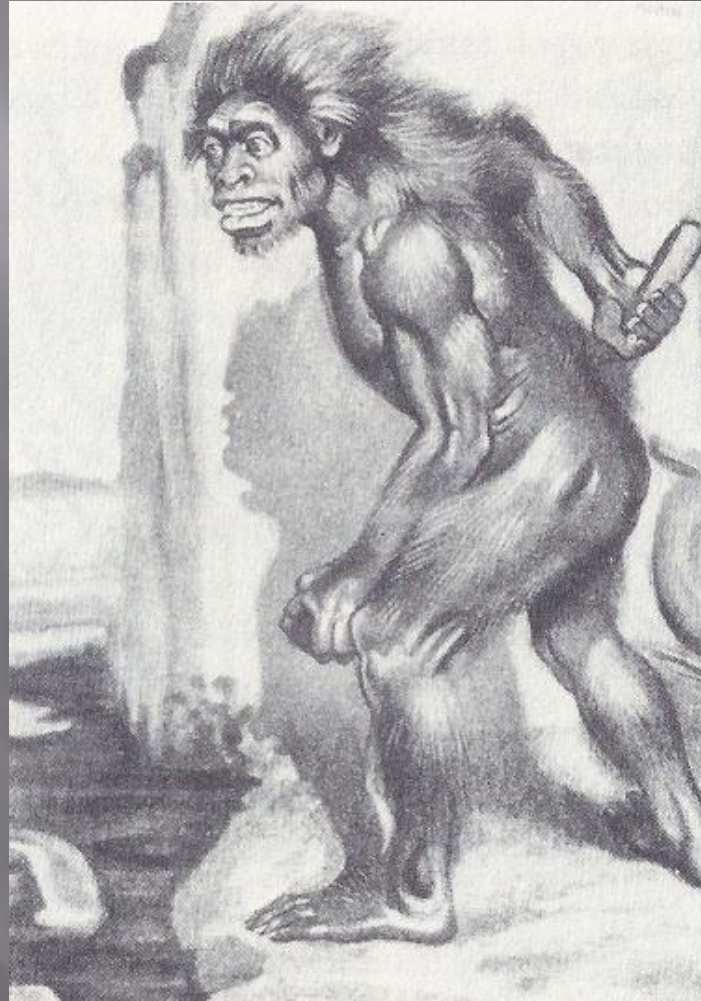
Homo neanderthalensis
(La Chapelle-Aux-Saints)
Discoverer: Fathers Bouyssonie & Josef
Bonneval
Locality: Bouffia Bonneval, La Chapelle-
Aux-Saints, France
Age: 350K
Date: 1908

Pierre Marcellin Boule (1861–1942): Neandertal as apish brute

- Predominant French paleontologist of early 20th century
- One of founders of Paris's Institut de Paleontologie humaine
- 1908: Monograph of first complete Neandertal skeleton, from La Chapelle-aux-Saints (Correze, France)
- His view of "Old Man" (& of Neanderthals) led to erroneous view that he was a stooped, arthritic, apish, brutish, & shuffling; more ape-like than human with "rudimentary intellectual abilities".
- 1911-1913: Marcellin Boule's article in *Annales de Paléontologie* establishes paleoanthropology as a discipline.
- 1921: Rejected Piltdown fossil as chimp jaw & human skull



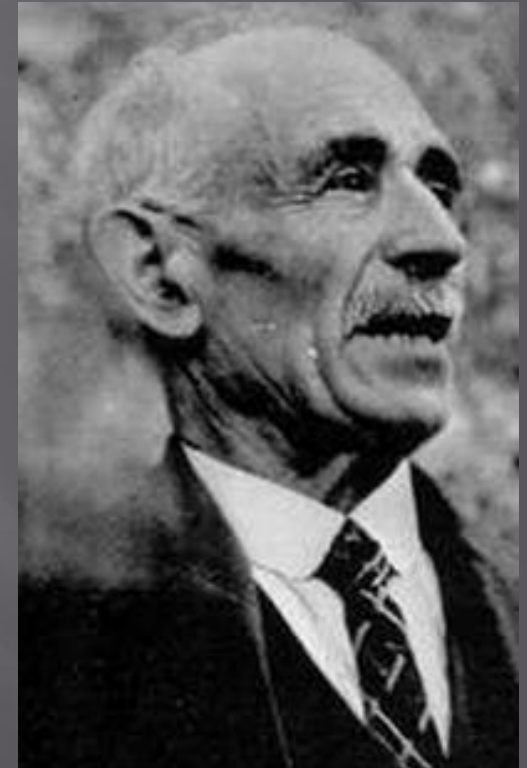
1909: Neandertal as Brute



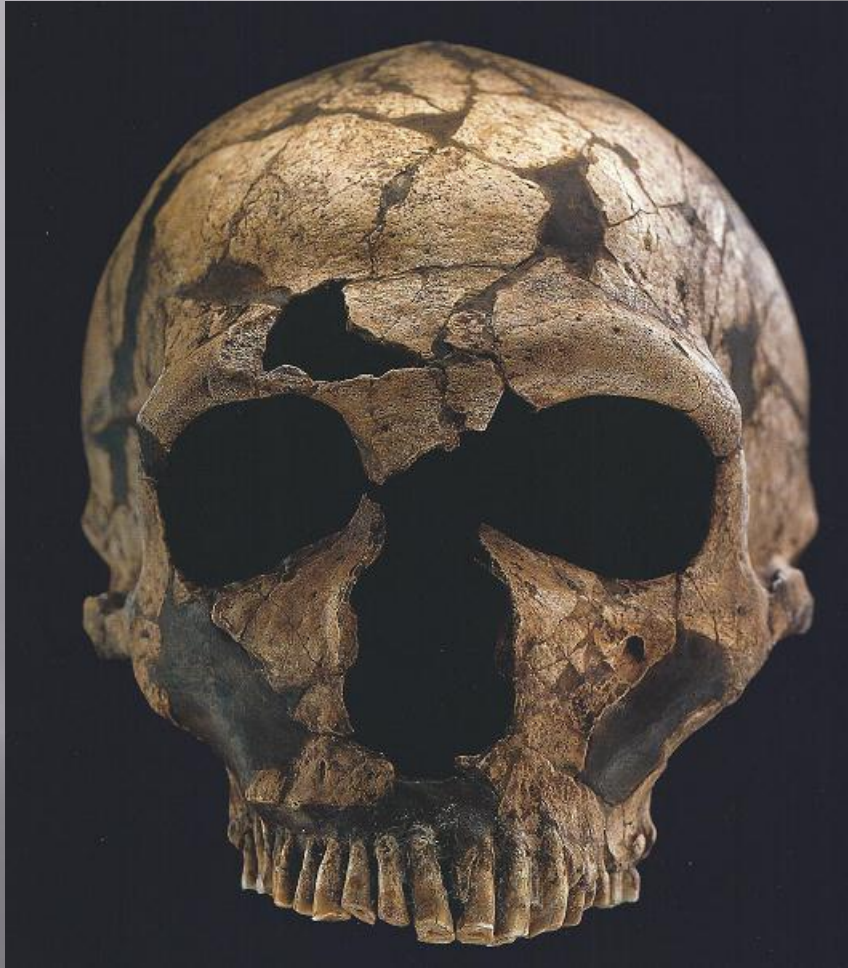
Frantisek Kupka, 1909 bestial reconstruction, per Boule

Denis Peyrony (1869–1954): Discovery of most complete Neandertal skull at La Ferrassie

- ❑ School teacher and prehistorian
- ❑ 1909: With L. Capitan, discovered the largest and most complete Neandertal skull discovered, along with several other Neandertal fossils, in the rock shelter of La Ferrassie in southwestern France.
- ❑ Adult male and female Neanderthal skeletons, followed in later years by isolated bones of five children; first “family” burial
- ❑ Described by Jean-Louise Heim



1909, Classical Neandertal, La Ferrassie



Homo neanderthalensis

(La Ferrassie 1)

Discoverer: Denis Peyrony & Louis
Capitan

Locality: La Ferrassie, France

Age: 50K

Date: 1909

Henri Martin:

Neandertal at different times at same site

- ▣ French archaeologist
- ▣ 1910: Discovered two Neandertal skeletons with Mousterian scrapers and other tools at La Quina Shelter, France
- ▣ 1905-1935: Excavated systematically by Dr. Henri Martin; first confirmed occurrence of Neandertal remains in multiple levels of an occupation site
- ▣ *Astragale humain du Moustérien moyen de La Quina. Ses affinités, Henri Martin, 1910*



1910: Neandertal, La Quina

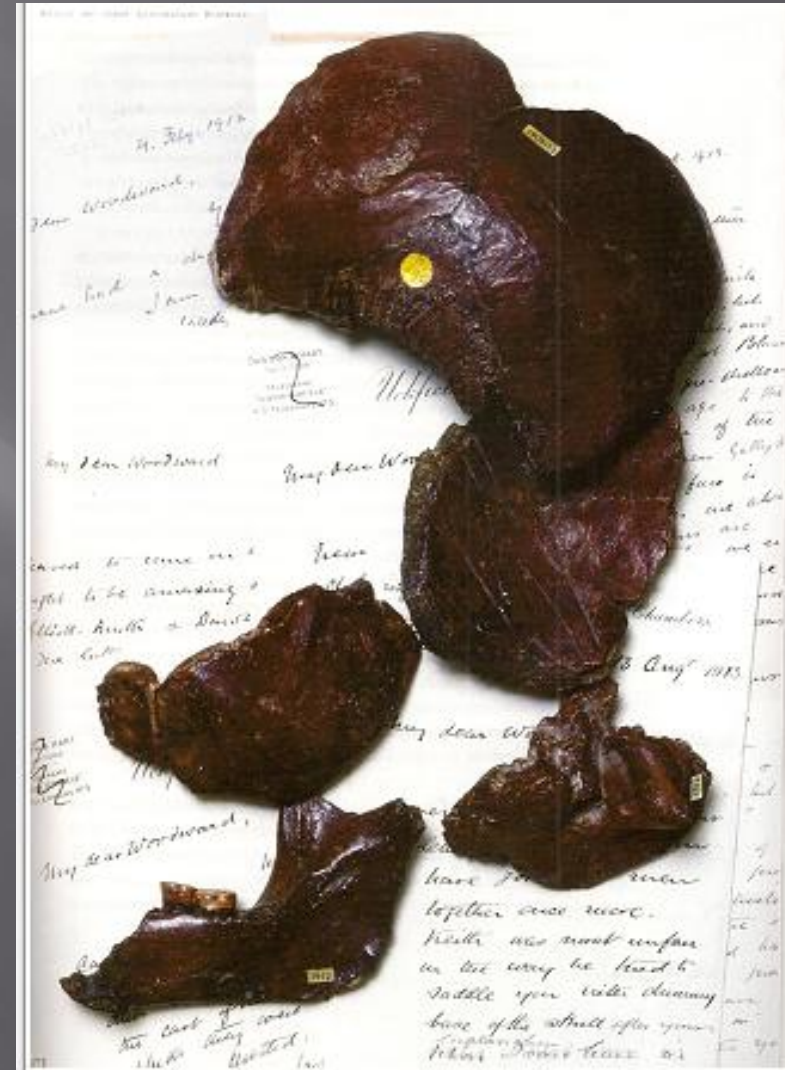


Charles Dawson (1864–1916): Piltdown Man Hoax

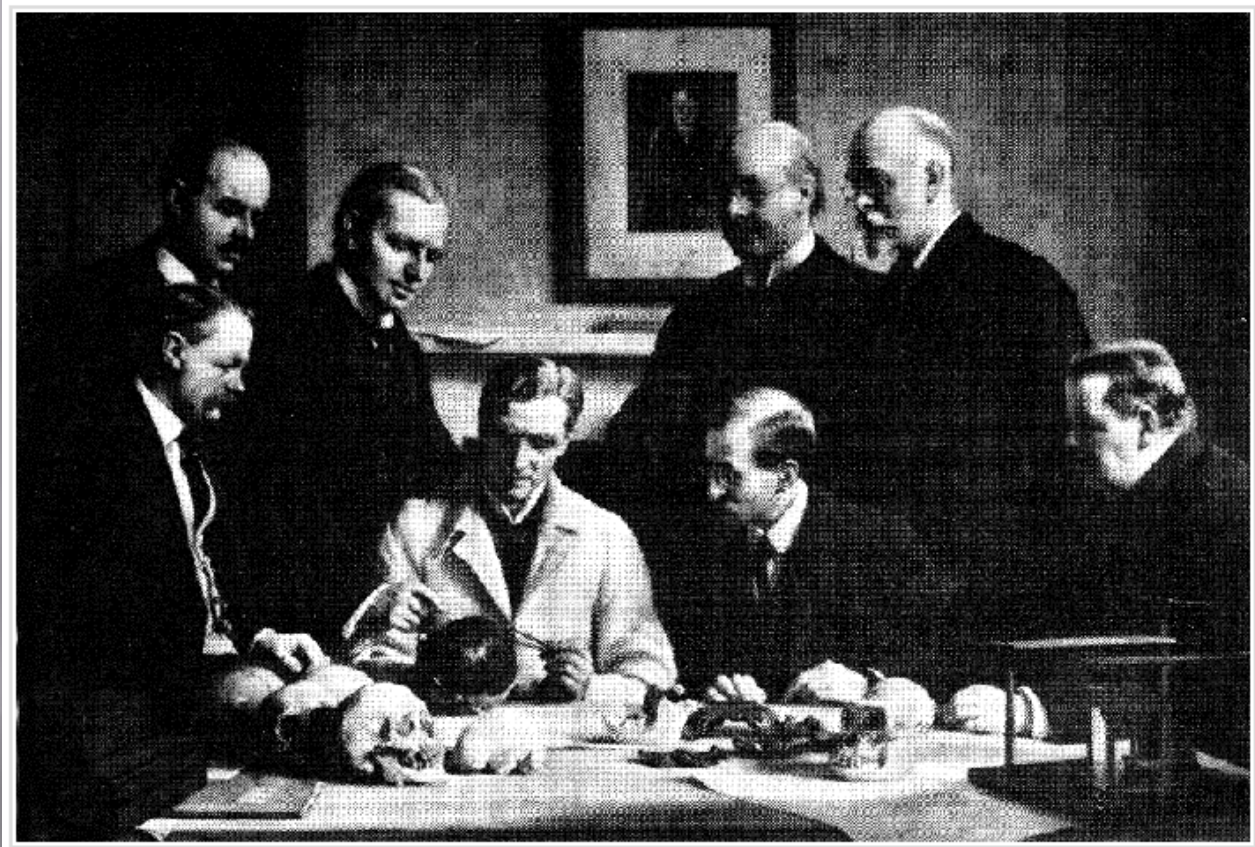
- ❑ English solicitor and antiquarian
- ❑ Victim (or perpetrator?) of Piltdown Man hoax
- ❑ 1912: Skull fragments & lower jaw found at Piltdown in Sussex by Dawson & Arthur Smith Woodward
- ❑ The pairing of a modern human cranium and a stained, broken orangutan jaw confirmed expectations of a human ancestor with a large, rounded braincase. The forgery confused paleoanthropology for many years and pushed Neanderthals to a side branch of human evolution. Affected paleontology for 40 years.



1912: Piltdown Hoax: *Eoanthropus dawsoni* ("Dawson's dawn-man")



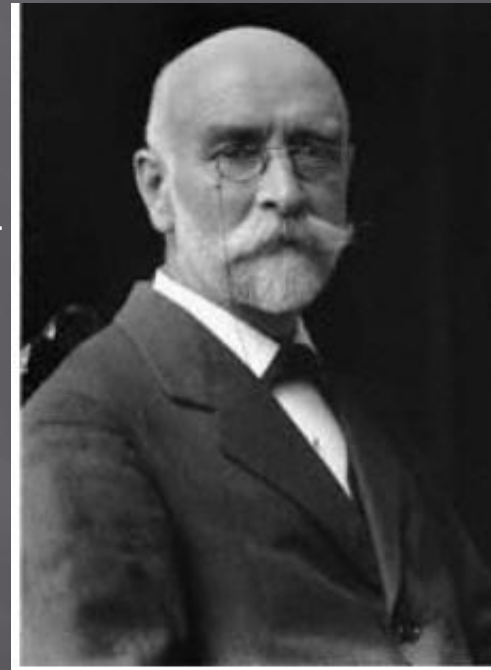
Pitldown Committee



The painting “The Pitldown Committee”: Back Row: F. O. Barlow, cast maker; Grafton Elliot Smith, anatomist; Charles Dawson, and Arthur Smith Woodward, zoologist. Front Row. Dr A. S. Underwood, teeth expert; Arthur Keith, anatomist; W. P. Pycraft, zoologist; & Sir Ray Lankester, zoologist. Fr. Pierre Teilhard de Chardin is absent.

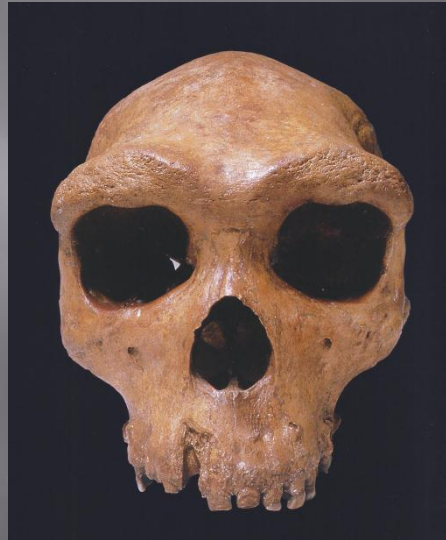
Sir Arthur Smith Woodward (1864–1944): *Eoanthropus dawsoni* & *Homo rhodesiensis*

- ❑ British paleontologist and leading fossil ichthyologist
- ❑ Keeper of geology at British Museum (Natural History)
- ❑ 1912: Charles Dawson gave Piltdown skullcap to him and helped find the jaw.
- ❑ Named Piltdown skull as *Eoanthropus dawsoni* (Dawson's Dawn man); wrote *The Earliest Englishman*
- ❑ 1921: Swiss miner Tom Zwiglaar's skull discovery at Broken Hill (now Kabwe, Zambia) sent to Woodward; called it *Homo rhodesiensis* (now *Homo heidelbergensis*)



1921: Homo heidelbergensis, Broken Hill, Kabwe, Zambia

- ▣ The first
hominid fossil
discovered
outside Europe



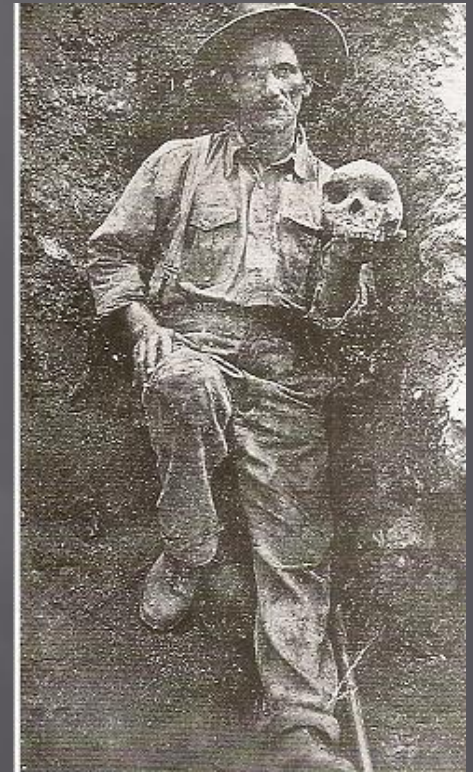
Homo heidelbergensis
(Broken Hill 1)

Discoverer: Tom Zwigelaar

Locality: Kabwe, Zambia

Date 1921

Age: 300K



Tom Zwigelaar

10 cavities, left ear wound

Sir Grafton Elliot Smith (1871–1937): Larger brain came first hypothesis

- ❑ Australian neuroanatomist and anthropologist, Univ. of Manchester
- ❑ The authority on primate brain during his life
- ❑ Believed larger brain came first in human evolution
- ❑ Supported Piltdown
- ❑ Found lunate sulcus in human brain
- ❑ Supported M. Boule's contention that Neanderthal were unrelated to humans
- ❑ Teacher of Raymond Dart & Davidson Black
- ❑ Eventually supported out of Africa theory



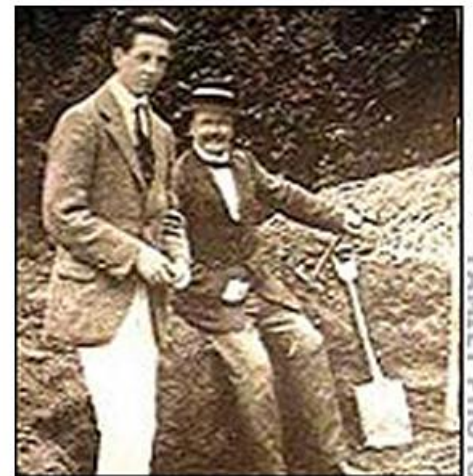
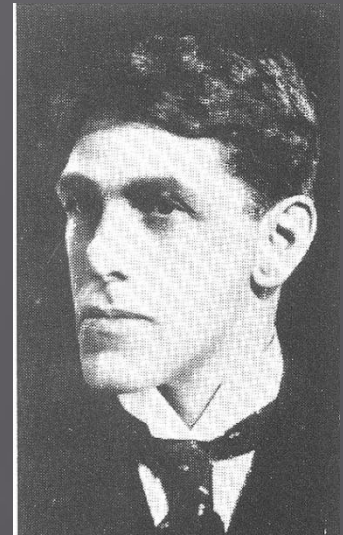
Sir Arthur Keith (1866–1955): Piltdown & Taung Child is an ape

- ▣ Scottish anatomist & physical anthropologist
- ▣ One of foremost authorities on fossil humans in early 20th century Britain
- ▣ Believed in European origin of mankind
- ▣ “Authenticated” Piltdown man
- ▣ 1924: criticized Raymond Dart’s interpretation of Taung Child
- ▣ 1947: conceded “Professor Dart was right, and I was wrong.”; called it Dartian, not hominid
- ▣ Pre-sapiens theory: *H. neanderthalensis* & *H. erectus* played little or no role in the evolution of modern humans.
- ▣ Involved in Galley Hills skeleton; identified Gibraltar 1 as neanderthal



Martin Alistair Campbell Hinton (1883 -1961)

- ❑ Volunteer then staff; Curator of Zoology at British Museum
- ❑ Often cited as a suspect in Piltdown forgery
- ❑ 1970: A trunk belonging to Hinton left in storage at the Natural History Museum and contained animal bones and teeth carved and stained in a manner similar to the Piltdown finds, and raising questions about Hinton's involvement in the deception.
- ❑ Disliked Woodward & was jokester



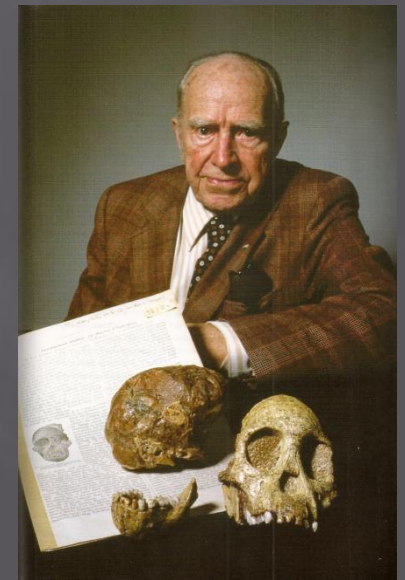
Hinton (left) & Dawson in ditch

FAMILY PHOTO

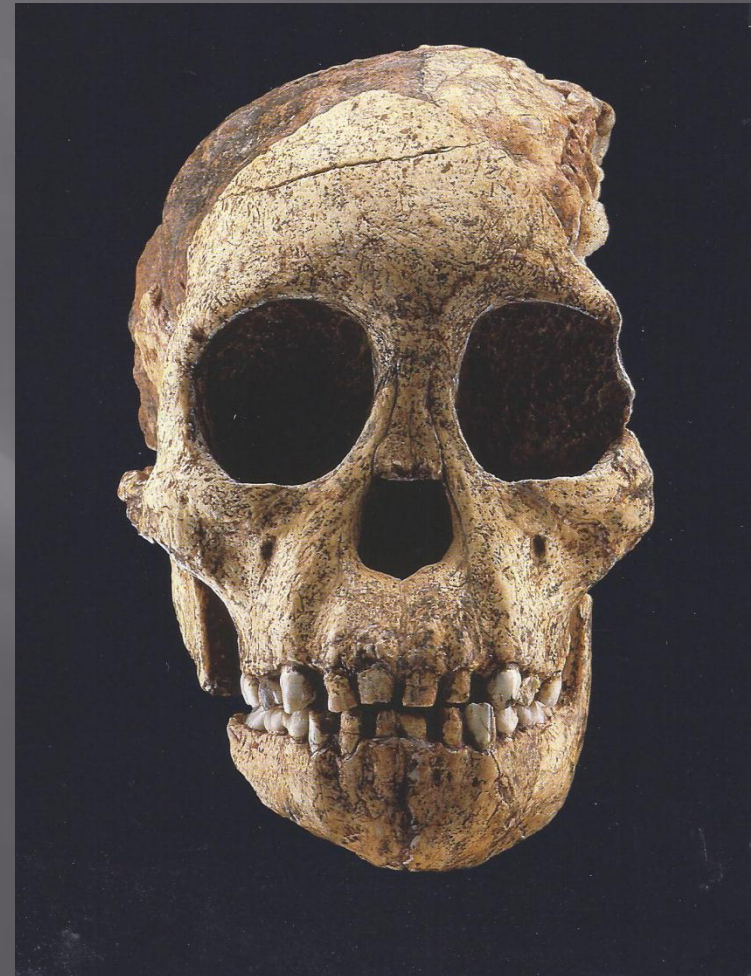
Raymond Dart (1893–1988):

Taung Child: Bipedalism, not large brain, came first

- ❑ Australian South African anatomist
- ❑ Professor of anatomy at Univ. of Witwatersrand
- ❑ 1924: Changed course of human paleontology with discovery of the first *Australopithecus africanus*, the Taung child
- ❑ Interpretation of fossil as human ancestor largely rejected by the scholarly community for decades, esp. by Arthur Keith & Arthur Smith Woodward; but defended by Robert Broom
- ❑ Excavated in Makapansgat & interpreted Australopithecine tools & weapons (osteodontokeratic); A. as bloodthirsty hunters
- ❑ 1959: autobiography *Adventures with the Missing Link*



1924: *Australopithecus africanus*, Taung Child



Australopithecus africanus (Taung Child; type)

Discoverer: M. de Bruyn

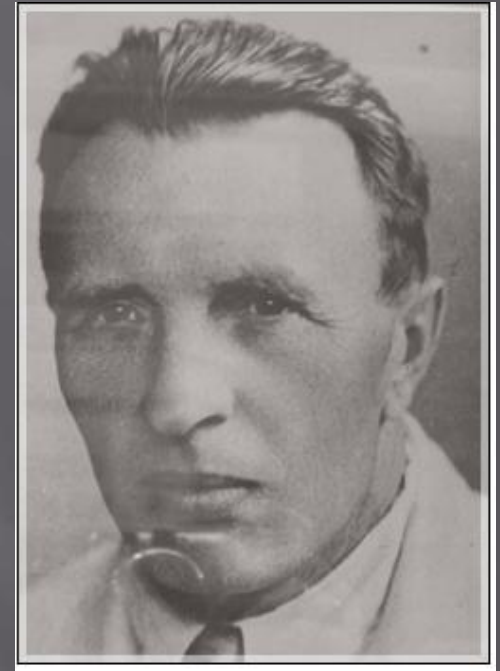
Date: 1924

Locality: Taung, S. Africa

Age 2.3 M

Gleb Anatol'evich Bonch-Osmolovskii (1890-1943): Neandertals in Russia

- ▣ Soviet anthropologist and archaeologist.
- ▣ 1924: in the Kiik-Koba cave (Crimea), Bonch-Osmolovskii discovered the first Neanderthal fossil in the USSR.
- ▣ Two skeletons, a child and an adult
- ▣ Imprisoned in the Gulag for involvement in "nationalist fascist organization."

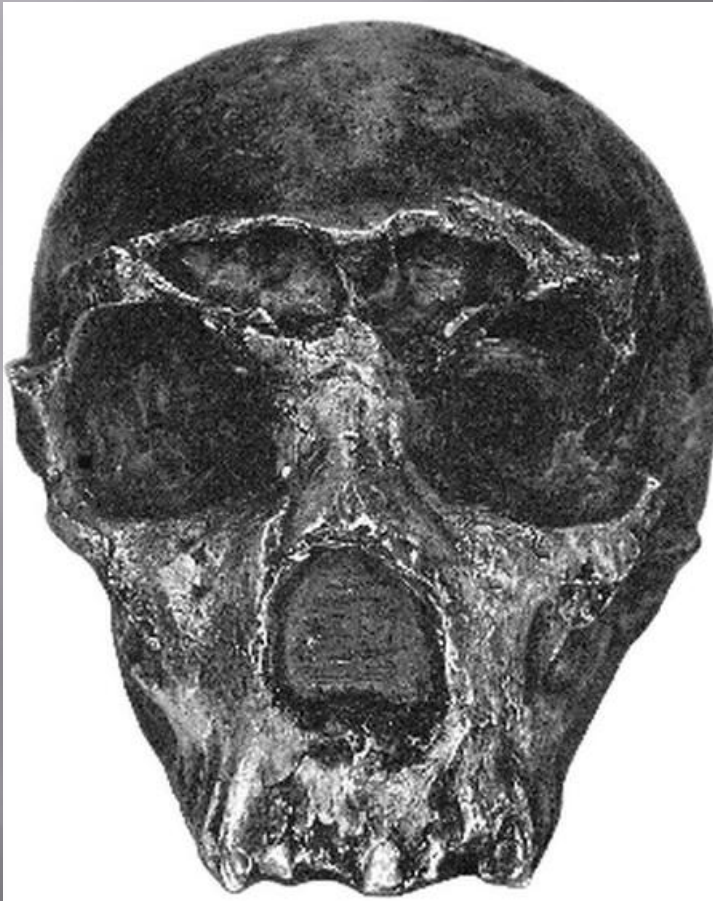


Dorothy Garrod (1892–1968): First Neandertal outside Europe, Tabun I

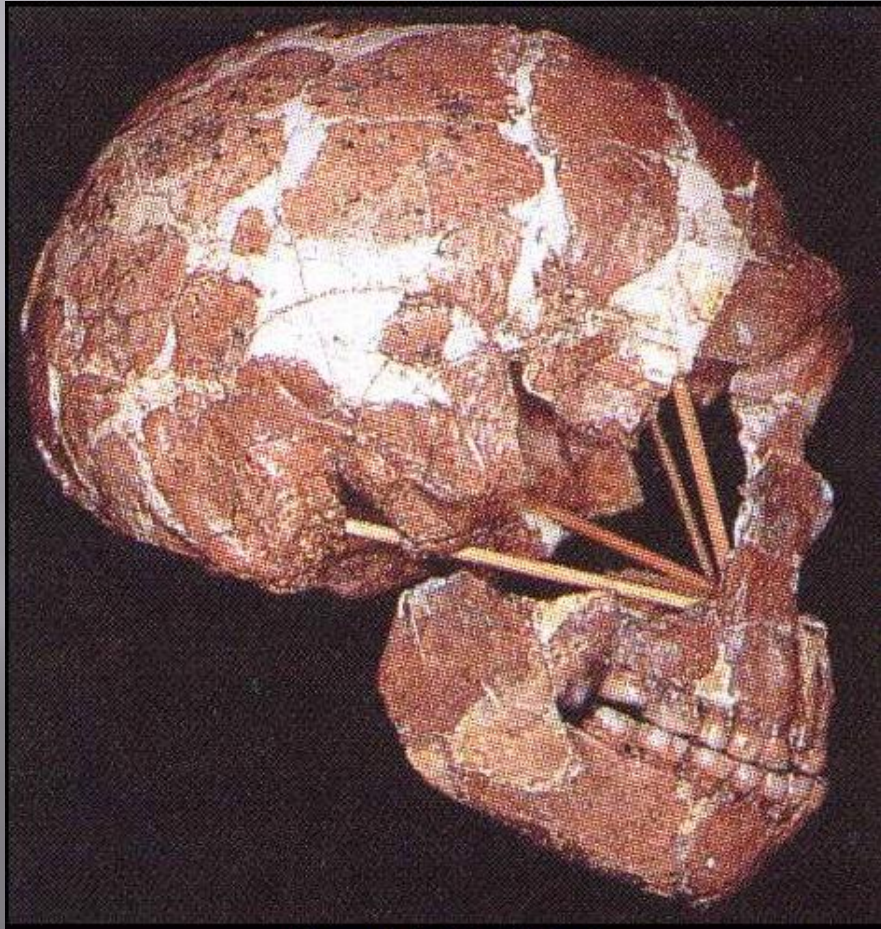
- British archaeologist; Fellow at Newham College; first woman professor at Cambridge
- 1925: excavated a Neandertal child's skull at Devil's Tower Cave, Gibraltar.
- 1928-1934: Leader of British School of Archaeology's excavations at Mt. Carmel caves, Israel, in the caves of Tabun, El Wad, Es Skhul, Shuqba and Kebara; Tabun was first Neanderthal burial found in Middle East.
- 1932: Skeleton of female Neandertal, Tabun I, excavated at Tabun Cave, Palestine, the first confirmed discovery of Neandertals outside Europe.
- 'Mount Carmel Man' in 1930



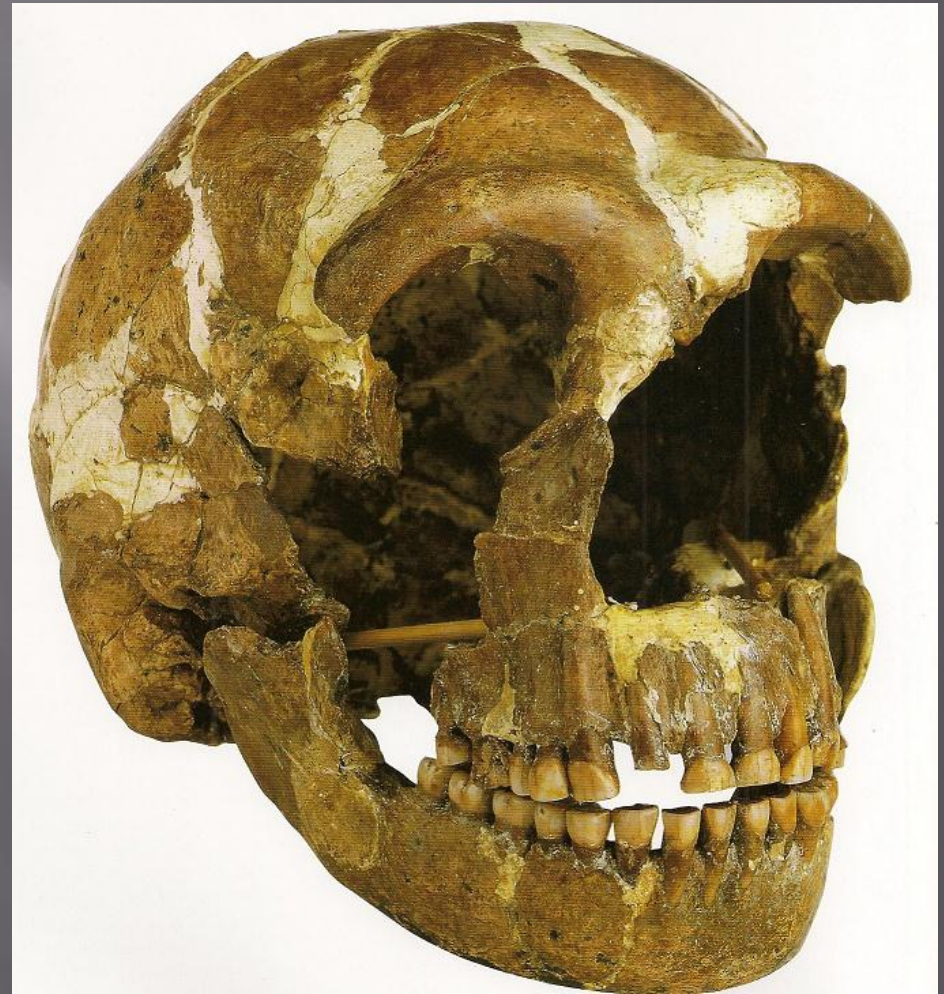
1925: Neandertal child, Devil's Tower, Gibraltar



1932: Neandertal, Tabun I, Mount Carmel, Palestine

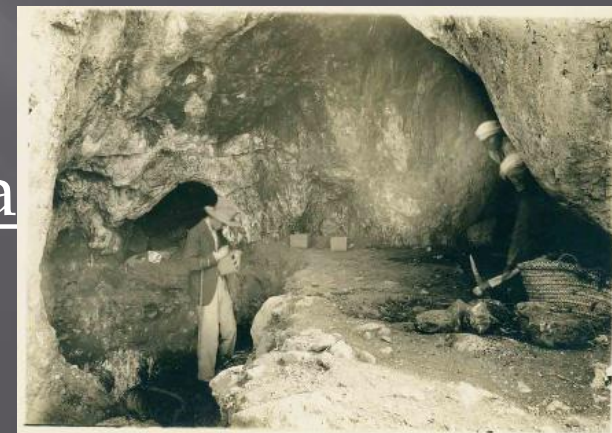


Photograph by Milford Wolpoff.



Francis Turville-Petre (1901 - 1941): Neanderthal in Palestine: Galilee Man

- Openly gay English anthropologist
- 1925: discovered in the Zuttiyeh Cave near Sea of Galilee, the partial frontal cranial remains of a Neanderthal individual, named the 'Galilee Skull' or 'Galilee Man'; first ancient fossilized hominid found in Western Asia.
- He later worked with Dorothy Garrod in her excavations at Kebara Cave on Mount Carmel.
- Was a close friend of Christopher Isherwood and W. H. Auden



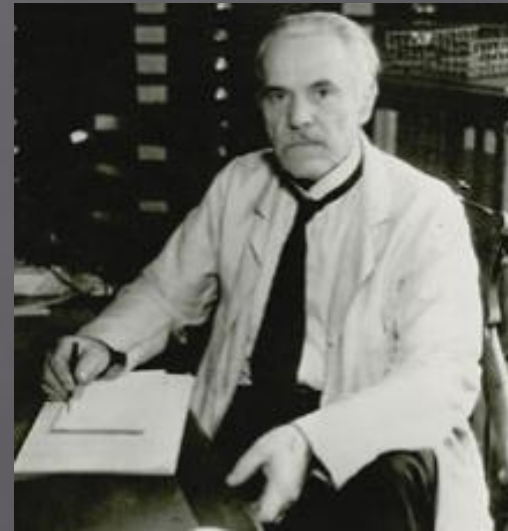
Francis Turville-Petre in Zuttiyeh Cave, Wadi al Amud.

1925: Neandertal, Galilee Man



Ales Hrdlicka (1869–1943): American anthropology

- ❑ Bohemian born American physician and physical anthropologist, Smithsonian/NMNH
- ❑ Conducted massive anthropometric studies
- ❑ Research & theory of movement into the New World via land bridge from Siberia; challenged evidence for early fossil humans in the Americas
- ❑ Questioned Piltdown skull & Taung child (ape) & Ramapithecus as hominid
- ❑ 1927: Believed Neandertals were ancestors of modern humans and that Europe was origin place of humanity



W.F.F. Oppenoorth: *Homo (Javanthropus) soloensis* in Ngandong, Java

- ▣ Dutch paleontologist
- ▣ 1931-1933: Geological Survey of the Netherlands Indies unearthed 14 *Homo erectus* fossils from a single excavation site on Java (Excavation I Ngandong).
- ▣ 1931: Solo River terrace, Ngandong, Java: discovers several skulls interpreted as “tropical Neanderthals”, naming them *Homo (Javanthropus) soloensis*; now assigned to *H. erectus*
- ▣ GHR von Koenigswald worked under him.

1931: *Homo (Javanthropus) soloensis*;
(now *Homo erectus*)



Ngandong 11



Ngandong 11



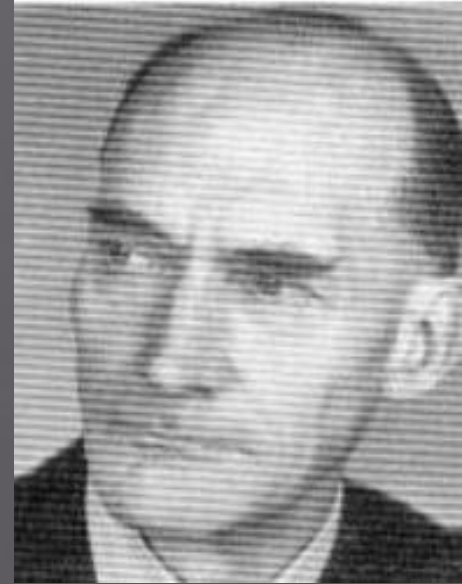
Ngandong 9



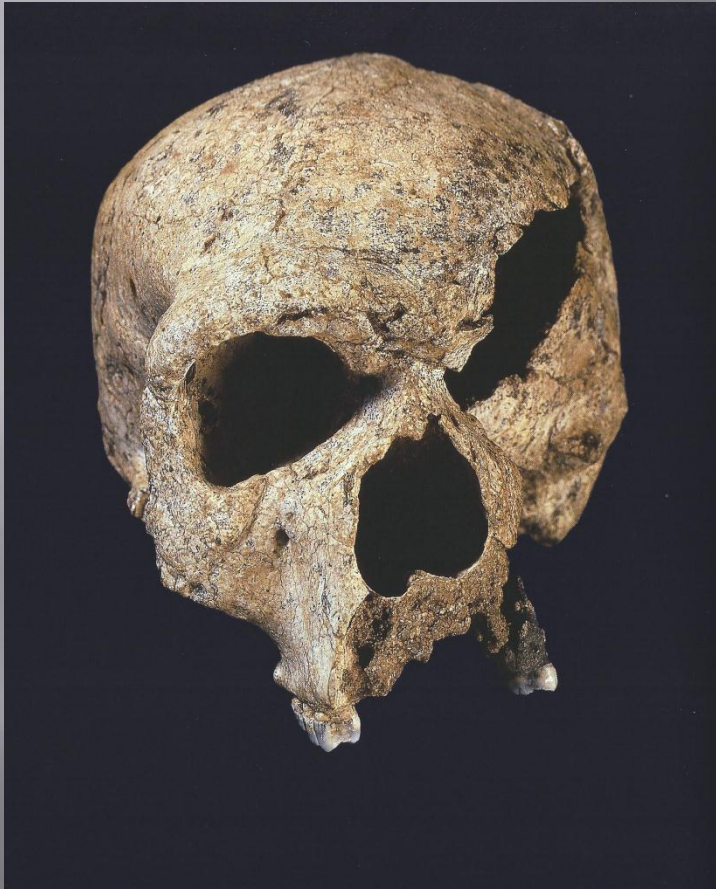
Ngandong 6

Fritz Berckhemer (1890–?): *Homo heidelbergensis*, Steinheim skull, Neanderthal evolved in Europe

- 1933: Steinheim skull discovered by Karl Sgrist, Jr., owner of gravel pit near Steinheim an der Murr, Germany. Given to Fritz Berckhemer, a paleontologist.
- 1933: The Steinheim skull is a fossilized skull of an archaic *Homo sapiens* or *Homo heidelbergensis*. No archaeology from site; 250-350K
- This skull is considered to be an example of European *Homo heidelbergensis* fossils that were showing early Neanderthal-like features by about 300,000 years ago, suggesting that Neanderthals evolved in Europe from this species.



1933: *Homo heidelbergensis*, Steinheim skull



Homo heidelbergensis
(Steinheim)

Discoverer: Karl Sgrist, Jr.

Date: 1933

Locality: Sgrist gravel pit, Steinheim Germany

Age: 250 K

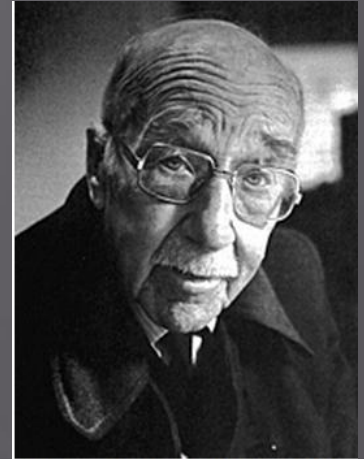
Johan Gunnar Andersson (1874–1960)

- ▣ Swedish Geologist
- ▣ Associated with the beginnings of Chinese archaeology between 1914-1926
- ▣ Confirmed fossil bones near Zhoukoudian in 1918
- ▣ Helped create excavation at Dragon Bone Hill at Longgushan, China



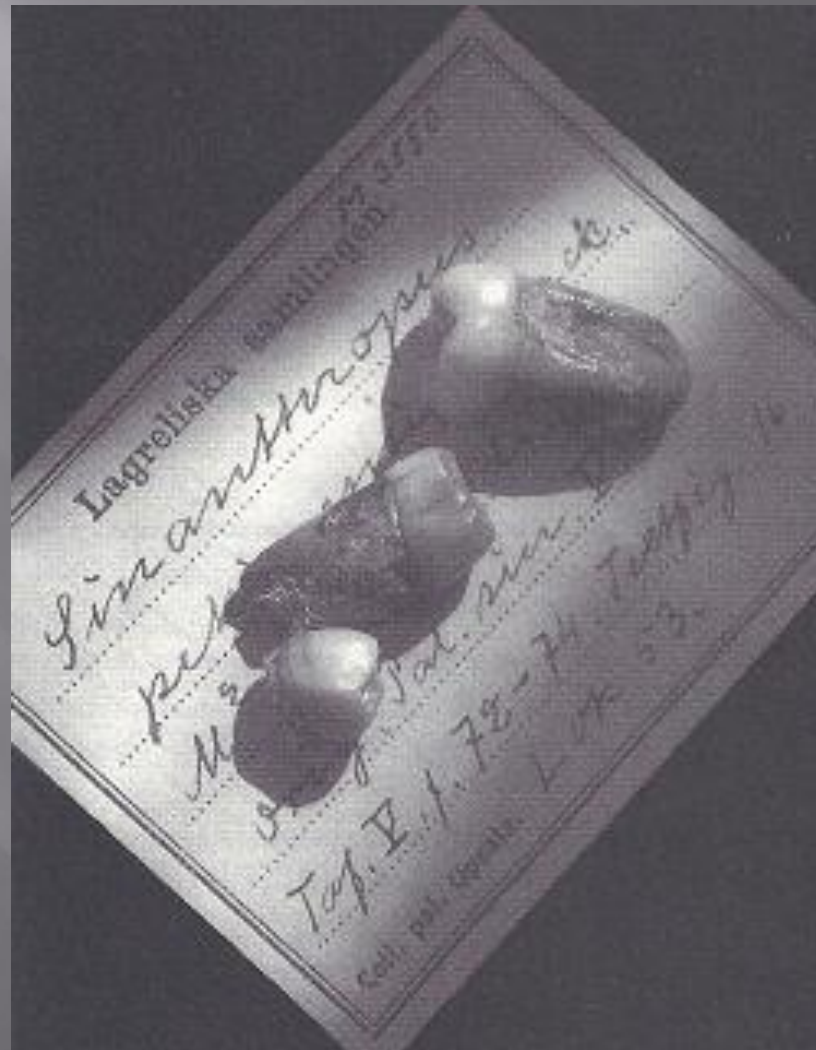
Otto A. Zdansky (1894 – 1988): Discovery of Peking Man

- ▣ Austrian paleontologist
- ▣ Worked in China, where he, as an assistant to Johan Gunnar Andersson
- ▣ 1921: Discovered two fossil teeth of the Peking Man, *Homo sinanthropus*, at the Dragon Bone Hill at Zhoukoudian, although he did not disclose it until 1926 when he published it in *Nature* after an analysis by Davidson Black.



Professor Otto Zdansky. Foto Clas Thor 1984. Reproducerad med tillstånd.

1921: 1st 2 molars, *Homo erectus*, Peking Man, Dragon Bone Hill at Zhoukoudian, China



Davidson Black (1884–1934): *Sinanthropus pekinensis*

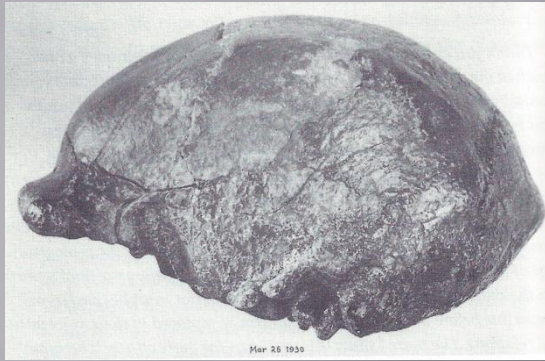
- ▣ Canadian physician and anatomist
- ▣ 1927: discovered a molar, and later a skull, and named *Sinanthropus pekinensis* (now *Homo erectus pekinensis*) or the “Peking Man” at Choukoutien (Zhoukoudian) Cave; 300K (molar found by Dr. Birger Bohlin; skull by Wenzhong Pei)
- ▣ Founder & 1st director of Cenozoic Research Laboratory (Geological Survey of China) at Peking Union Medical College
- ▣ Black's theory of an Asian origination wrong, Black's work greatly advanced our knowledge of the development of human beings in Asia.



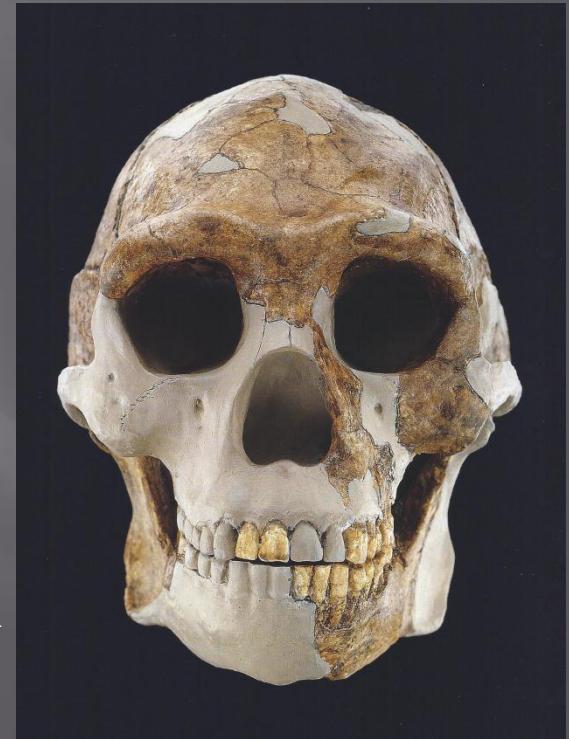
Davidson Black



1928: *Sinanthropus pekinensis* (now *Homo erectus pekinensis*)



Homo erectus,
original cast of Peking Man



Homo erectus, reconstruction

Homo erectus
(Peking Man)

Discoverer: W. C. Pei

Date: 1928-1937

Locality: Zhoukoudian Cave, China

Age 300-600 K

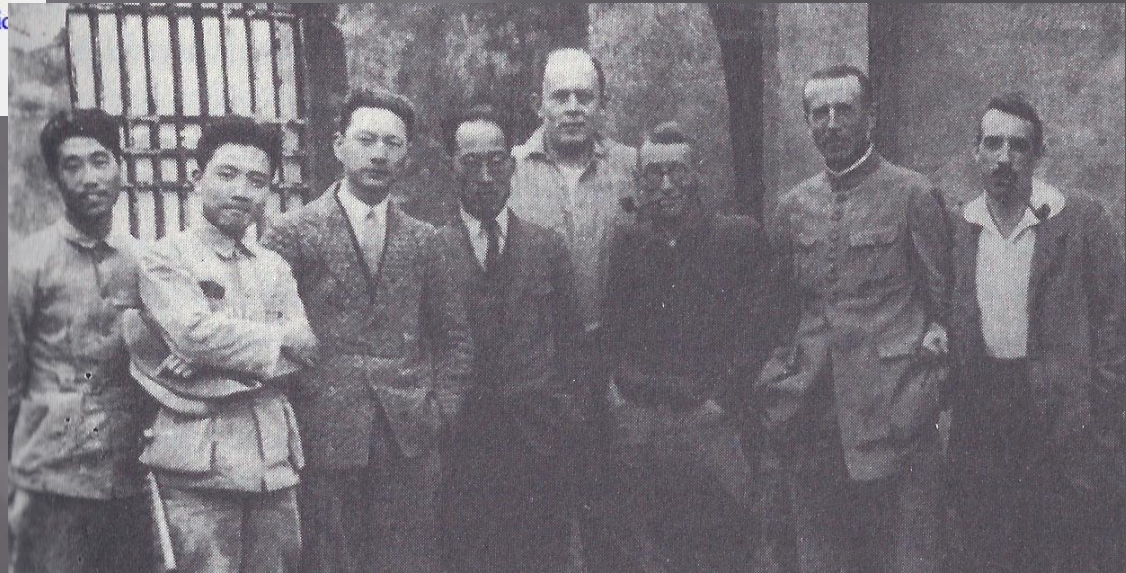
Zhoukoudian 1929: Chinese *H. erectus* gang (founders of Chinese paleontology)



Together with scientific colleagues in Chou-Kou-Tien (Zhoukoudian)
On the left side, Pei and Young, in center, two students, on the right side
Black and Barbour - (1929)

Wenzhong Pei, x, x, Zhongjian Yang,
Birger Bohlin, Davidson Black, Teilhard
de Chardin, George Barbour

Zhoukoudian: 5 skulls,
15 partial skull pieces,
14 lower jaws, 152 teeth



Wenzhong Pei (1904–1982): Chinese paleoanthropology

- ▣ Chinese paleoanthropologist
- ▣ A founding figure of Chinese anthropology.
- ▣ Director of Cenozoic Research Laboratory
- ▣ Field director of excavations at Zhoukoudian
- ▣ 1929: Pei found the first skull of *Sinanthropus pekinensis* (now *Homo erectus*)



Yang Zhongjian (1897–1979): Zhoukoudian excavation leader

- ▣ Also known as C.C. (Chung Chien) Young
- ▣ One of China's foremost paleontologists.
Founded China's Institute of Vertebrate Paleontology and Paleoanthropology in Beijing
- ▣ He has been called the 'Father of Chinese vertebrate paleontology'.
- ▣ 1928: worked for the Cenozoic Research Laboratory of the Geological Survey of China and took charge of the excavation at Zhoukoudian



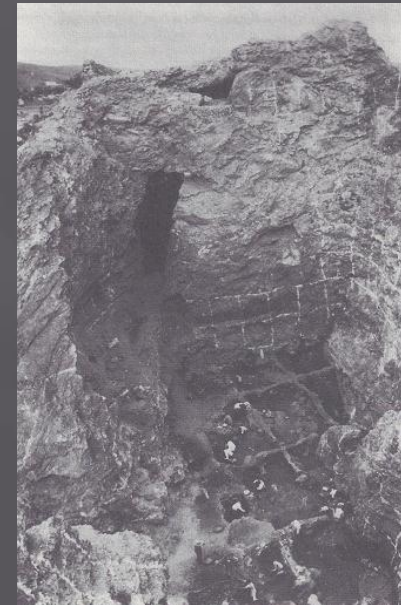
Lanpo Jia (1908–2001):

Discoverer of *Homo erectus* skulls at Zhoukoudian

- ▣ Chinese paleoanthropologist
- ▣ One of the founders of Chinese anthropology
- ▣ 1931: joined the excavations at Zhoukoudian; he worked with many of the most renowned figures in paleoanthropology of his era, including Pierre Teilhard de Chardin, Henri Breuil, Davidson Black, Franz Weidenreich and Pei Wenzhong whom he replaced as the field director of the Zhoukoudian excavations in 1935
- ▣ 1936: Discoverer of *Homo erectus* Skulls X, XI, XII at Zhoukoudian
- ▣ Saved Zhoukoudian excavation data during WWII



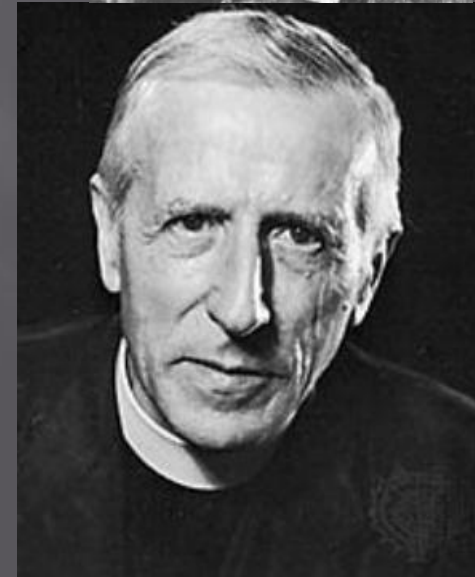
1936: Homo erectus, Skull XII, Zhoukoudian Chief excavator Lanpo Jia



Excavating Homo erectus skull XII at Dragon Bone Hill

Pierre Teilhard de Chardin (1881–1955): Piltdown, Gobi, Zhoukoudian, Orthogenesis

- ❑ French Jesuit priest, paleontologist, theologian
- ❑ Studied paleontology with Marcellin Boule
- ❑ 1913: found Piltdown canine tooth while a seminarian
- ❑ Advisor to Geological Survey of China (1st geological map of China), Paleontological expeditions in Gobi (with Roy Chapman) and at Zhoukoudian (Choukoutien), China;
- ❑ Worked with Davidson Black on H. erectus. Directed excavations after Black's death, until Franz Weidenreich arrived.
- ❑ Wrote *Divine Milieu & The Phenomenon of Man*
- ❑ A leading proponent of orthogenesis, the idea that evolution occurs in a directional, goal driven way



Downloads

- ▣ Charlie's website: charlesjvellaphd.com