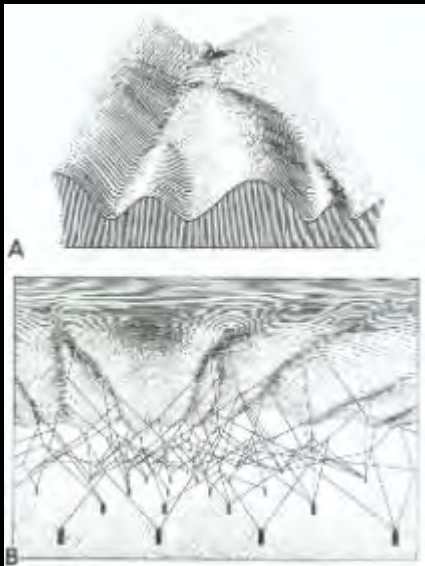


Edith Sitwell's hand holding a helical shell. (From 1958 Christmas card of Eve and Lance Whyte.)



Conrad Waddington, Epigenetic Landscape, 1957

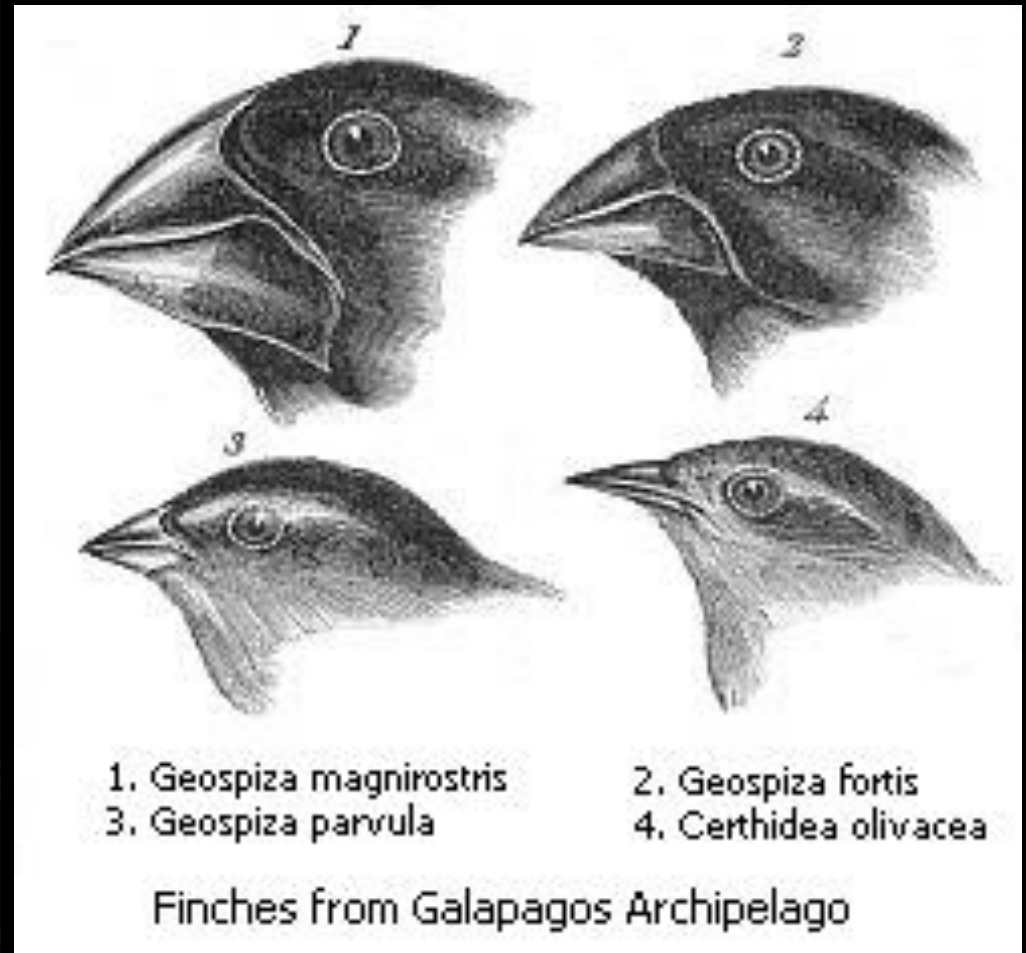
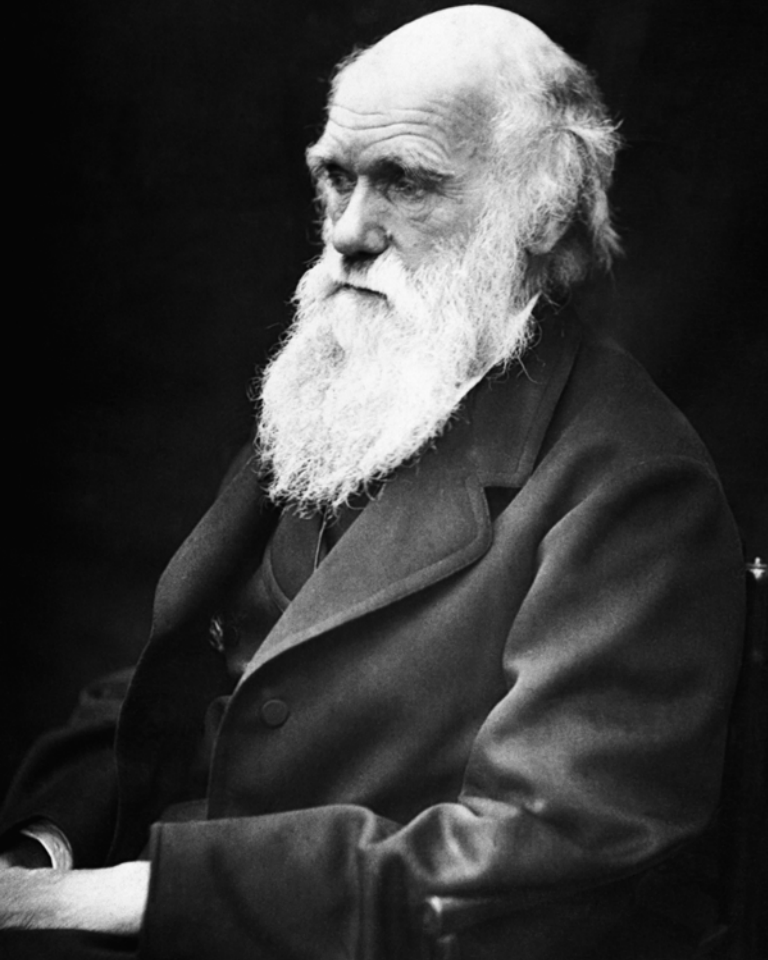
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**BIOS: Art, Architecture, Design, and Biology
Dr. Charissa N. Terranova
University of Texas at Dallas
Spring 2014
Monday 4:00-6:45
JO 3.532**

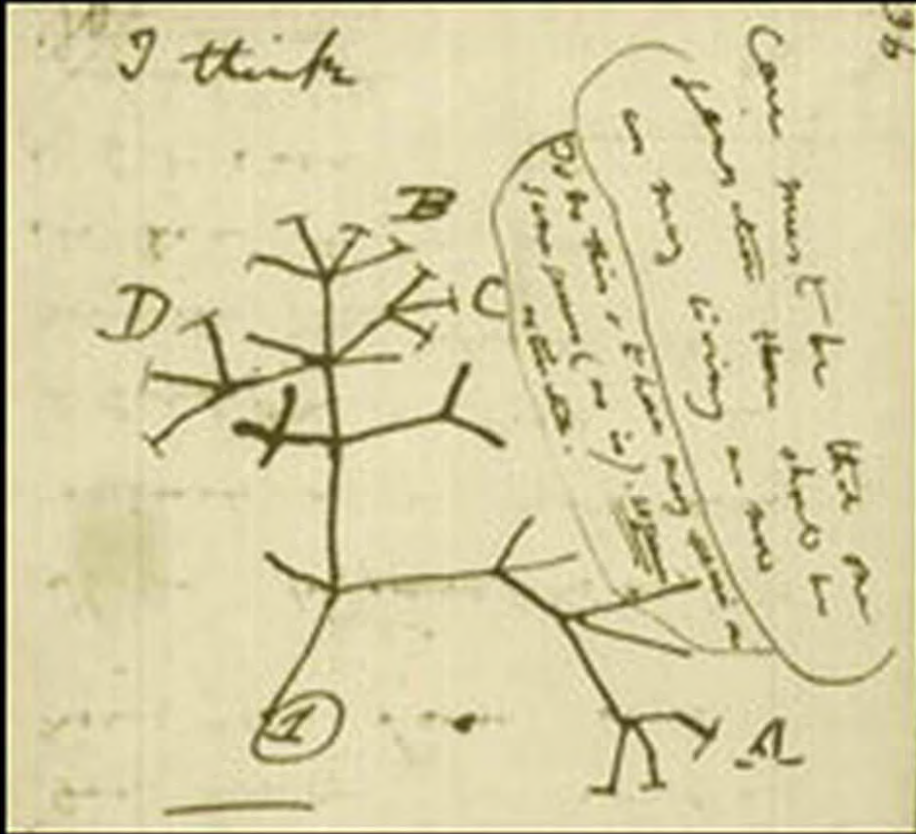
**Office Hours: Monday 1:00-4:00
Office Location: JO 3.920
Contact: terranova@utdallas.edu**

**01/26/2014
DARWIN, EVOLUTION, FORM**

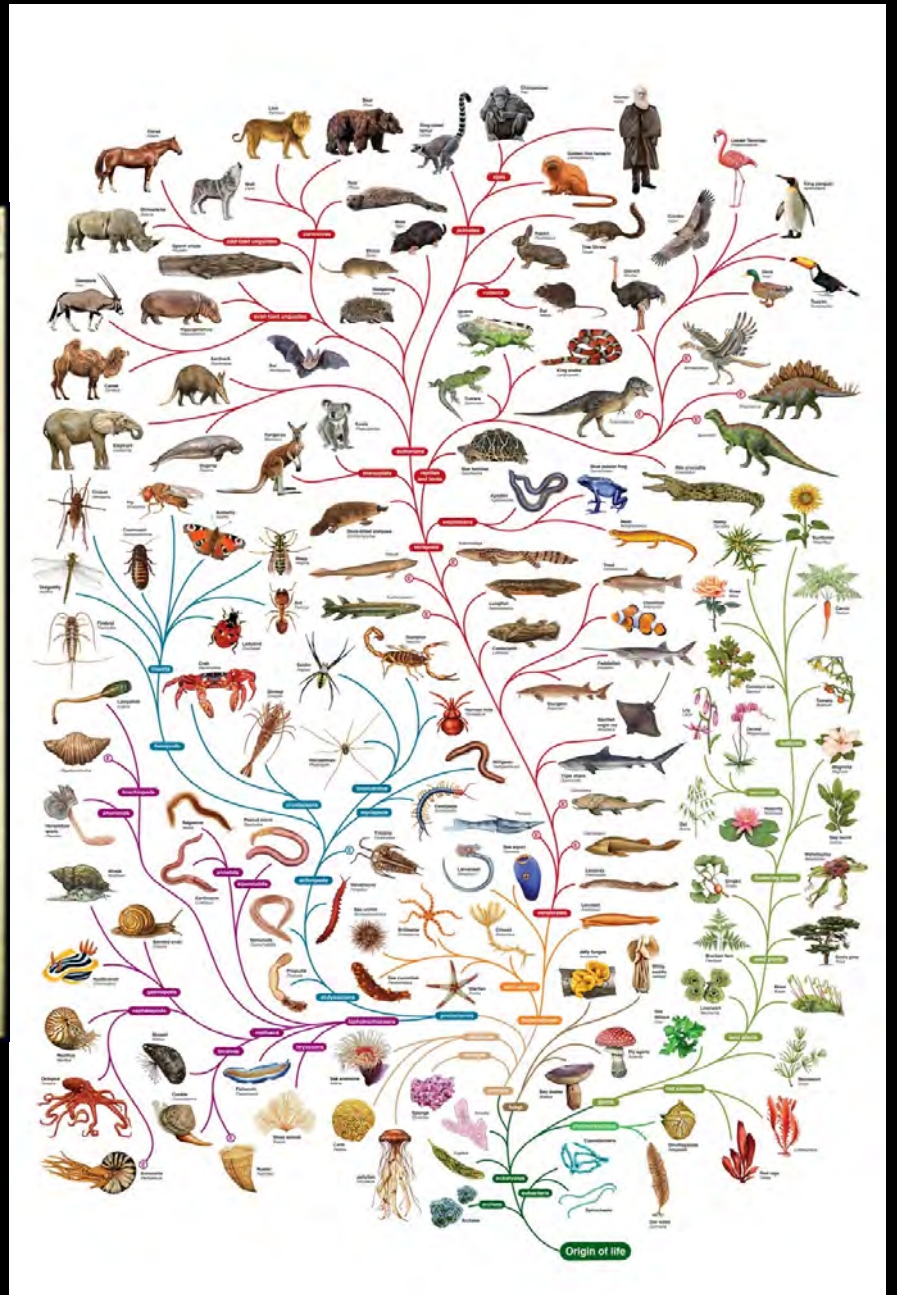
Charles Darwin [1809-1882]

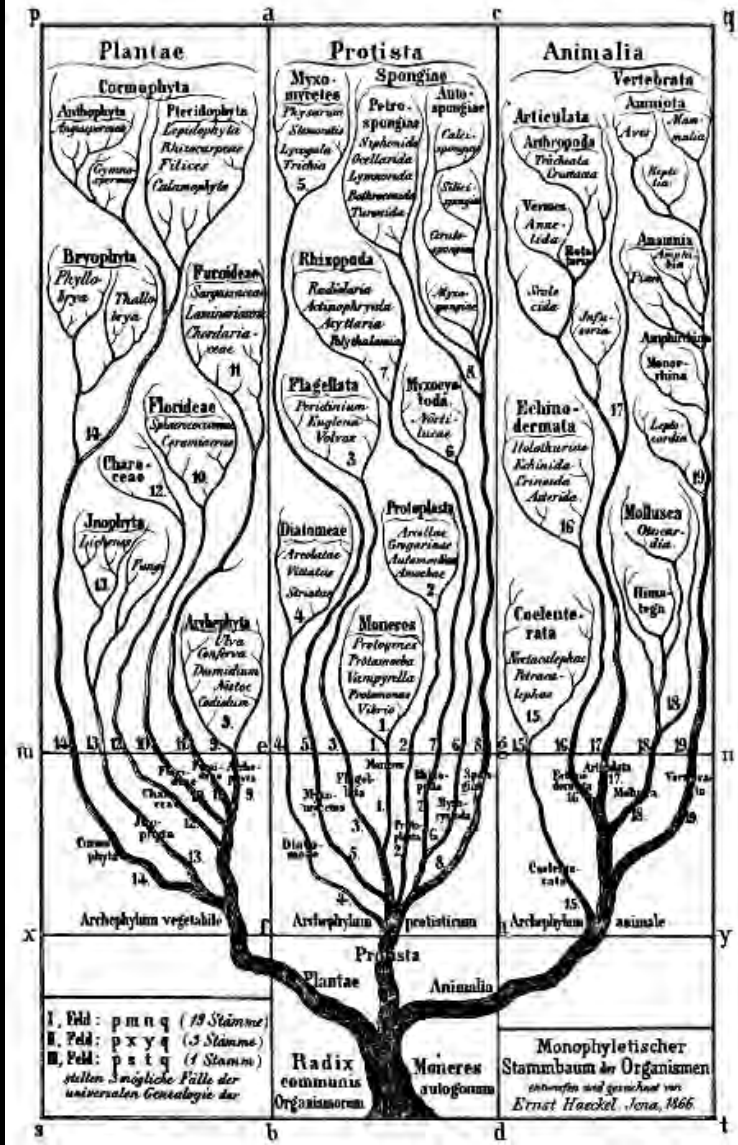


- Born 02/12/1809 in Shrewsbury, Shropshire, England into wealthy family
- Planned to pursue career in medicine but switched to divinity
- 1831 joined a 5-year survey aboard the HMS Beagle
- On the voyage, Darwin read Lyell's 'Principles of Geology' which suggested that the fossils found in rocks were actually evidence of animals that had lived many thousands or millions of years ago.
- Lyell's argument was reinforced in Darwin's own mind by the rich variety of animal life and the geological features he saw during his voyage.
- The breakthrough in his ideas came in the Galapagos Islands, 500 miles west of South America. Darwin noticed that each island supported its own form of finch which were closely related but differed in important ways.
- On his return to England in 1836, Darwin tried to solve the riddles of these observations and the puzzle of how species evolve. Influenced by the ideas of Malthus, he proposed a theory of evolution occurring by the process of natural selection. The animals (or plants) best suited to their environment are more likely to survive and reproduce, passing on the characteristics which helped them survive to their offspring. Gradually, the species changes over time.
- Georg Wilhelm Friedrich Hegel [1770-1831]
- Queen Victoria in England reigns 1837-1901
- Great Exhibition London, Joseph Paxton's Crystal Palace 1851
- Karl Marx [1818-1883]
- Sigmund Freud [1856-1939]
- American Civil War 1861-1865
- Darwin worked on his theory for 20 years. After learning that another naturalist, Alfred Russel Wallace, had developed similar ideas, the two made a joint announcement of their discovery in 1858. In 1859 Darwin published 'On the Origin of Species by Means of Natural Selection'.
- The book was extremely controversial, because the logical extension of Darwin's theory was that *homo sapiens* was simply another form of animal. It made it seem possible that even people might just have evolved - quite possibly from apes - and destroyed the prevailing orthodoxy on how the world was created. Darwin was vehemently attacked, particularly by the Church. However, his ideas soon gained currency and have become the new orthodoxy.

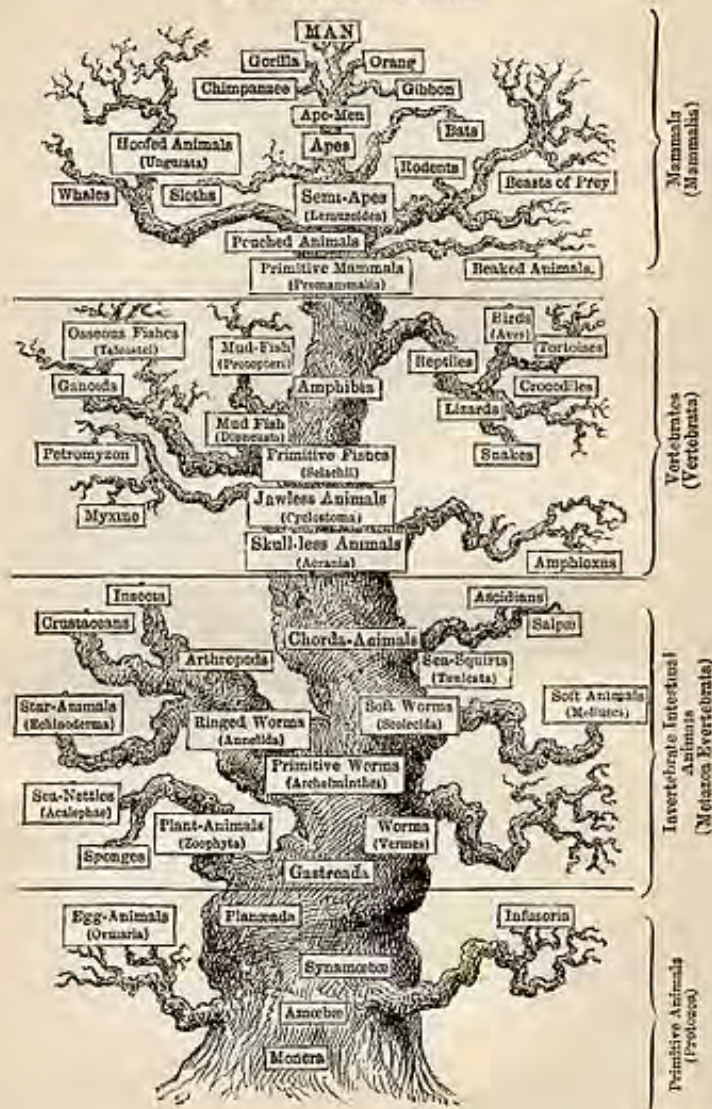


Charles Darwin, Tree of Life, 1837





PEDIGREE OF MAN.



Ernst Haeckel's *Monophyletic tree of organisms*, 1866. Biologists at the time identified three major groups of species: animals, plants and *protista*; primitive, mostly unicellular, organisms. Modern biologists also classify all life into three groups, but now animals and plants are considered to belong to the same group, with two different types of bacteria making up the other two groups.

Tree of Life by Ernst Haeckel in *The Evolution of Man* (1879) illustrates the 19th-century view that evolution was a progressive process leading towards man.

MONKEYANA.



AM I satyr or man?
Pray tell me who can,
And settle my place in the scale.
A man in ape's shape,
An anthropoid ape,
Or monkey deprived of his tail?

The *Vestiges* taught,
That all came from naught
By "development," so called, "progressive;"
That insects and worms
Assume higher forms
By modification excessive.

Then DARWIN set forth.
In a book of much worth,
The importance of "Nature's selection;"
How the struggle for life
Is a laudable strife,
And results in "specific distinction."

Let pigeons and doves
Select their own loves,
And grant them a million of ages,
Then doubtless you'll find
They've altered their kind,
And changed into prophets and sages.

LEONARD HORNER relates,
That Biblical dates
The age of the world cannot trace;
That Bible tradition,
By Nile's deposition,
Is put to the right about face.

Then there's PENGELLY
Who next will tell ye
That he and his colleagues of late
Find celts and shaped stones
Mixed up with cave bones
Of contemporaneous date.

Then PRESTWICH, he pelts
With hammers and celts
All who do not believe his relation,
That the tools he exhumes
From gravelly tombs
Date before the Mosaic creation.

Then HUXLEY and OWEN,
With rivalry glowing,
With pen and ink rush to the scratch;
'Tis Brain *versus* Brain,
Till one of them's slain;
By Jove! it will be a good match!

Says OWEN, you can see
The brain of Chimpanzee
Is always exceedingly small,
With the hindmost "horn"
Of extremity shorn,
And no "Hippocampus" at all.

The Professor then tells 'em
That man's "cerebellum,"
From a vertical point you can't see;
That each "convolution"
Contains a solution,
Of "Archencephalic" degree.

Then apes have no nose,
And thumbs for great toes,
And a pelvis both narrow and slight;
They can't stand upright,
Unless to show fight,
With "DU CHAILLU," that chivalrous knight!

Next HUXLEY replies,
That OWEN he lies,
And garbles his Latin quotation;
That his facts are not new,
His mistakes not a few,
Detrimental to his reputation.

"To twice slay the slain,"
By dint of the Brain,
(Thus HUXLEY concludes his review)
Is but labour in vain,
Unproductive of gain,
And so I shall bid you "Adieu!"

Zoological Gardens, May, 1861.

GORILLA.

PUNCH'S ESSENCE OF PARLIAMENT.

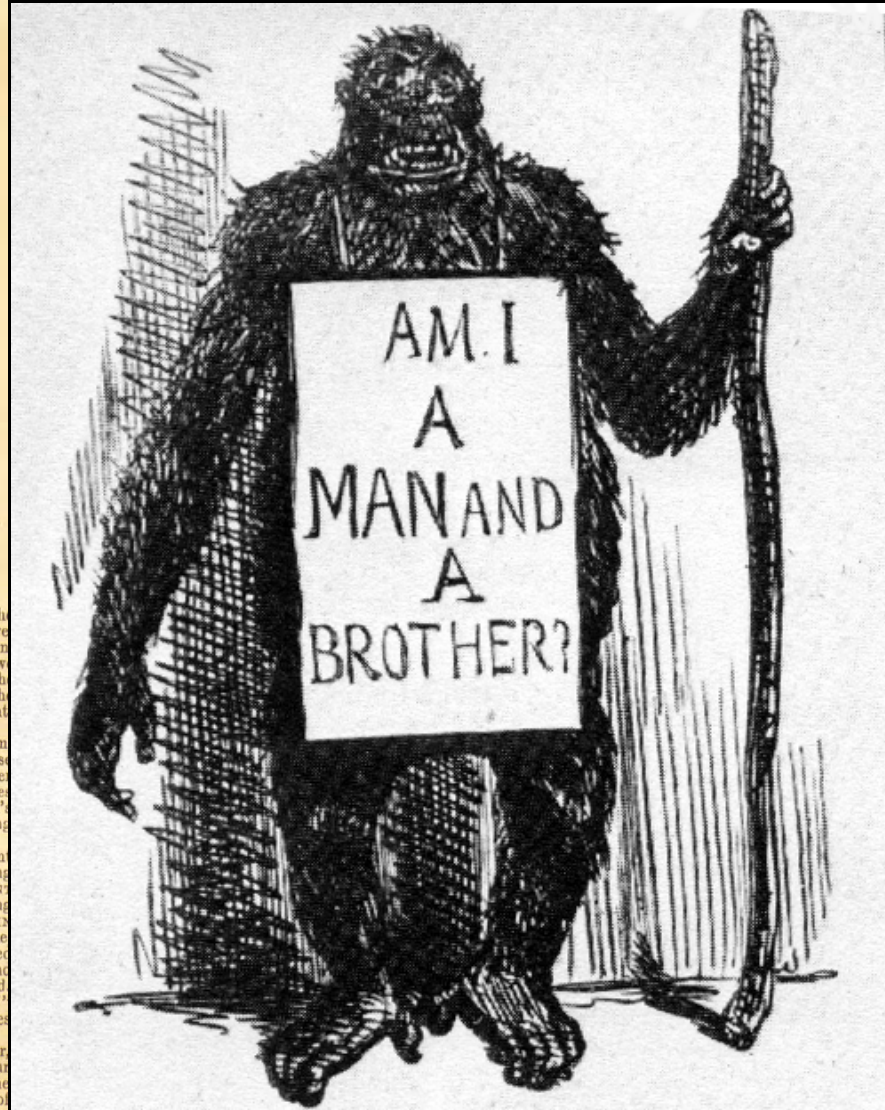
MONDAY, May 6. The Lords had a discussion about the Canal of the Future, that is to say, the impossible trench which M. LESSERS pretends to think he can cut through the Isthmus of Suez. The Government opinion upon the subject is, that if the Canal could be made, wrought not, for political reasons, to allow it, but that inasmuch as the Canal cannot be cut, the subject may, and the wise course is to let the speculators ruin themselves and diddle the Pacha. This seems straight forward and benevolent enough.

MR. SPEAKER DENISON, who had had a relapse into indisposition re-appeared, and made his apologies for having been ill. The House cheered him so loudly that he began to think he had done a clever thing, rather than not, in catching the rheumatism. *Mr. Punch* hopes to behold the brave Speaker "astir in his saddle" (as MR. DISRAELI's song goes) in due season, and to see him, like a true Whig, following Fox and avoiding pit.

LORD JOHN RUSSELL made an important reply to an important question from MR. GREGORY. The American Difficulty is beginning to create English difficulties. The North is calling on PRESIDENT LINCOLN to blockade the ports of the South, and the South is sending out Privateers to intercept the commerce of the North. LORD JOHN announced that England can recognise no blockade except a real one and that she is prepared to regard the South as sufficiently consolidated to entitle her to be treated as a Belligerent, not as a mere rebel, and therefore her right to issue letters of marque must be acknowledged. This is a very prosaic paragraph, but *Mr. Punch* "reserves to himself" the right to be grave, gay, lively, and severe exactly when it pleases him.

Our Daughter ALICE is to have £30,000 down, and £6,000 a year. LORD PALMERSTON remarking, very properly, that she is not our Eldest Daughter, and may not require the same allowance as the future QUEEN OF PRUSSIA, but that it is not for the honour of England that her Princesses should go out as paupers. Quite the reverse, and what is more, *Mr. Punch* insists that all the money be settled on his amiable young friend ALICE, so that she may draw her own cheques, and not have to ask her husband for money every time she wants to buy pins or postage stamps, or a little present to send over to her dear *Mr. Punch*.

Then was the Paper Resolution moved by MR. GLADSTONE. LORD ROBERT CECIL opposed it, and hoped the Lords would reject the Bill to be based on it; MR. LEVESON GOWER approved it, and paraded the



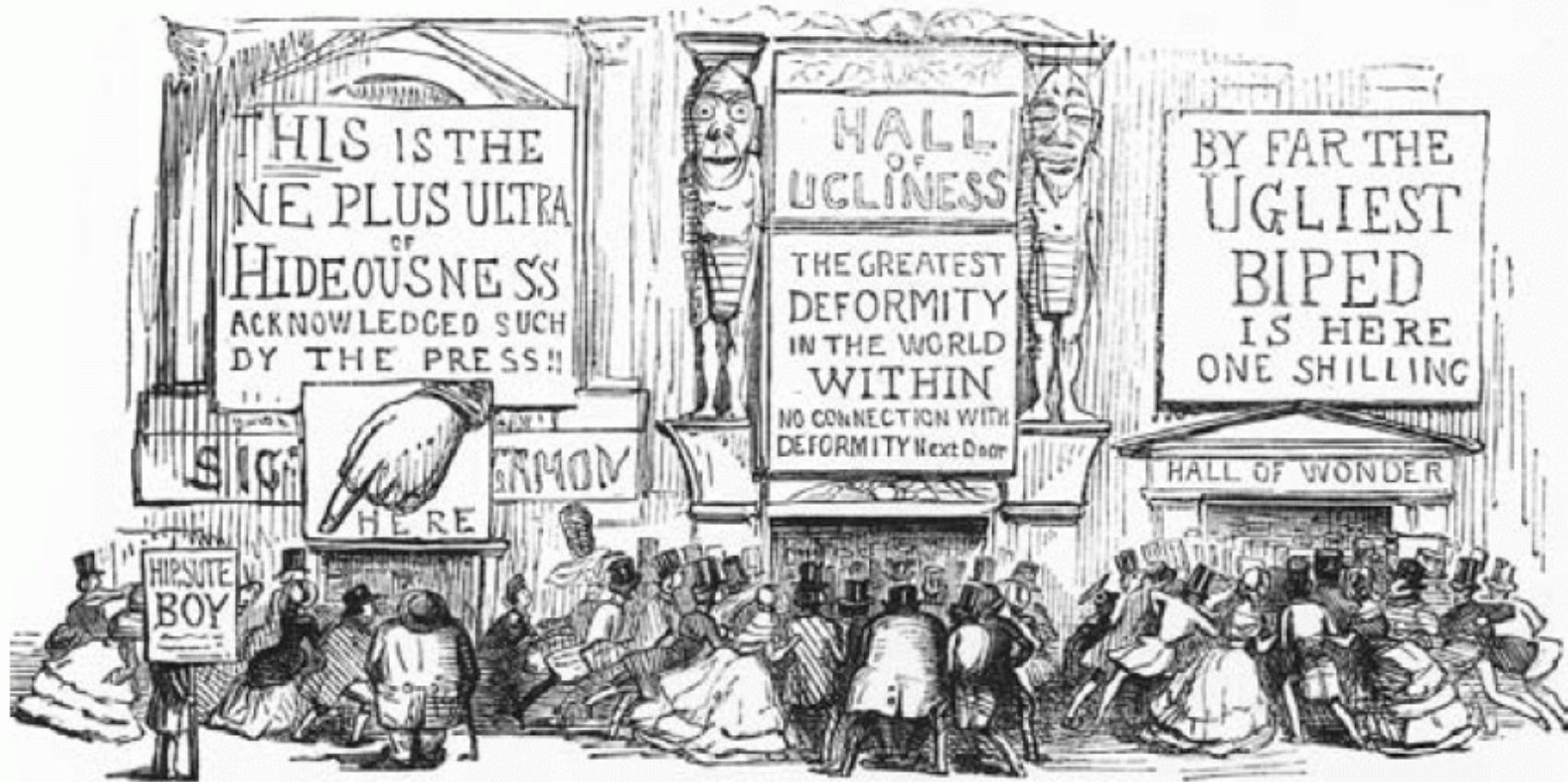


CHARLES ROBERT DARWIN, LL.D., F.R.S.

IN HIS *DESCENT OF MAN* HE BROUGHT HIS OWN SPECIES DOWN AS LOW AS POSSIBLE—I.E., TO "A HAIRY QUADRUPED FURNISHED WITH A TAIL AND POINTED EARS, AND PROBABLY ARBOREAL IN ITS HABITS"—WHICH IS A REASON FOR THE VERY GENERAL INTEREST IN A "FAMILY TREE." HE HAS LATELY BEEN TURNING HIS ATTENTION TO THE "POLITIC WORM."



THE DEFORMITO-MANIA.



THE FEEBLE-MINDED

OR THE

HUB TO OUR WHEEL OF VICE, CRIME
AND PAUPERISM



Cincinnati's Problem

Social Darwinism



William Dyce, Pegwell Bay: A Recollection of October 5, 1858



Gustave Courbet, *Roche de Bayard*, 1855



Barend Cornelis Koekkoek, Roche de Bayard, 1835



In 1872, some thirteen years after *The Origin of Species*, **Charles Darwin** published *The Expression of the Emotions in Man and Animals*, one of the first scientific texts to use photographic illustrations.



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18

*A page of photographs by
Oscar Rejlander from the
Darwin Archive, 1871-1872.
Albumen prints.*



Infants: Suffering and Weeping. Heliotype print.



PHILLIP PRODGER

DARWIN'S CAMERA

ART AND PHOTOGRAPHY IN THE THEORY OF EVOLUTION





Edgar Degas, Criminal Physiognomies, 1881



Emmanuel Frémiet, Gorilla Carrying off a Native Woman, 1859



Emmanuel Frémiet, Pan and Bears, 1876



1^{er} volume. — N° 126.

1862.

Un vol. 1 6 fr.

LES HOMMES D'AUJOURD'HUI

DESSINÉS DE DEHAENE

PARIS. — 40, RUE ROYALE-DES-FRANÇOIS. 1862.

CLÉMENCE ROYER



DE L'ORIGINE DES ESPÈCES

OU

DES LOIS DU PROGRÈS CHEZ LES ÊTRES ORGANISÉS

PAR

CH. DARWIN

Traduit en français sur la troisième Édition avec l'autorisation de l'Auteur

PAR

M^{lle} CLÉMENCE-AUGUSTE ROYER

AVEC UNE PRÉFACE ET DES NOTES DU TRADUCTEUR

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PLACE DE L'ÉCOLE DE MÉDECINE

1862

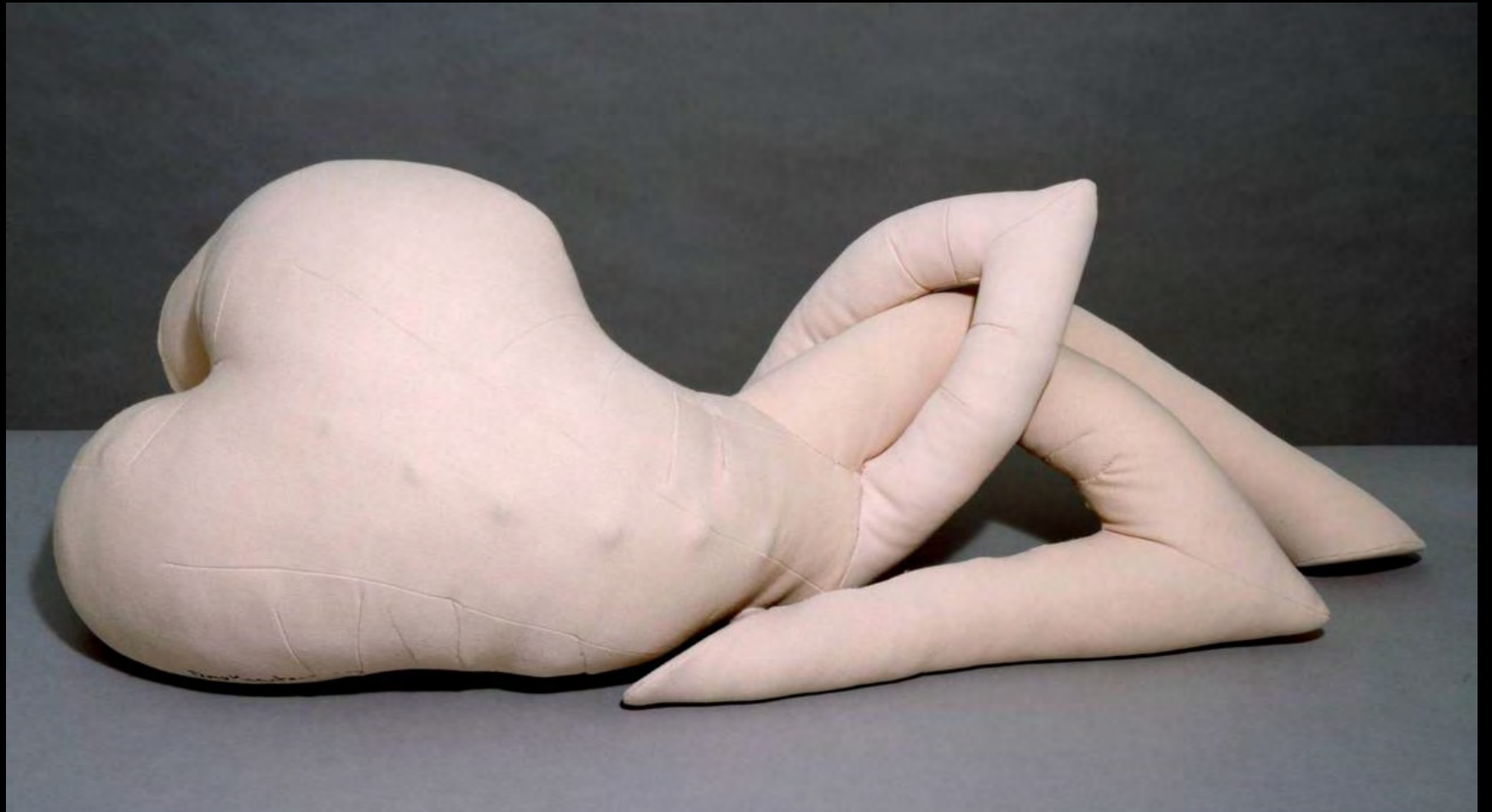
Clémence Royer translated Darwin's *Origin of Species* into French, respected theorist of evolution and women's rights. Renan said she was "almost a man of genius."



Dorothea Tanning, *Message 11*
1989



Dorothea Tanning [1910-2012], *The Hotel de Pavot* 202, 1972







Dorothea Tanning, Birthday, 1942



Dorothea Tanning, *Message 11*
1989