

Human evolution

Patterns of evolution

The evolution of primates

Apes

Learning about the past

Emergence

Sociality

Outline

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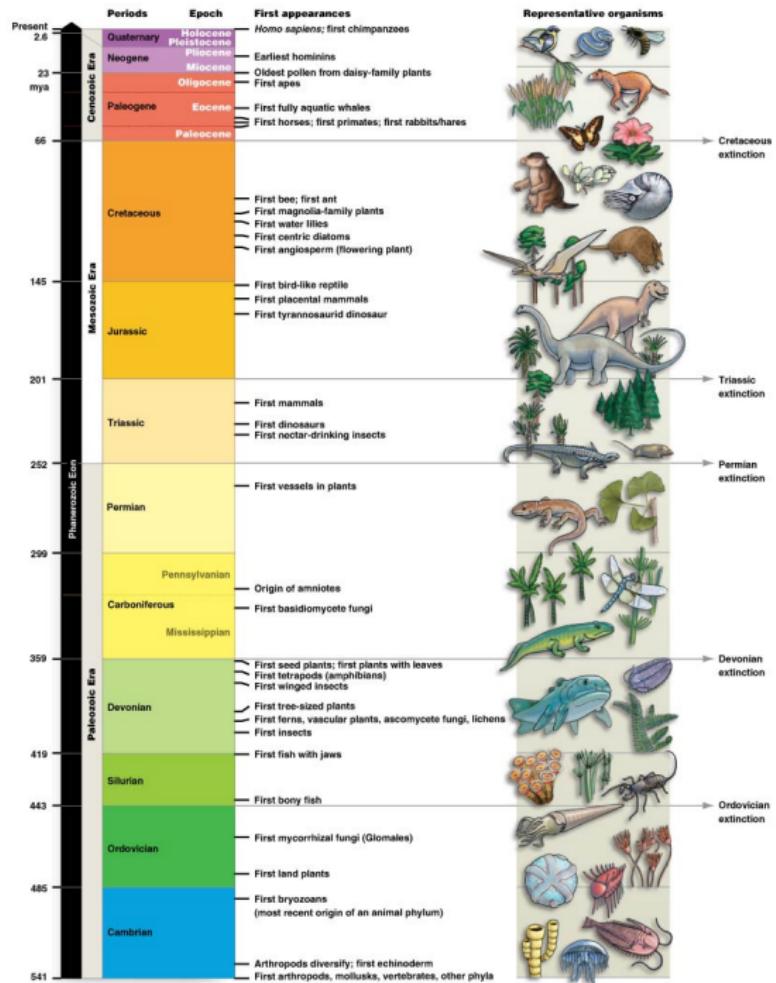
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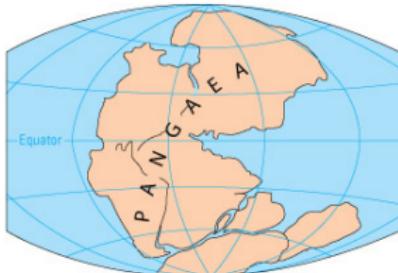
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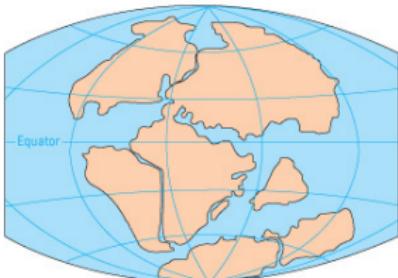
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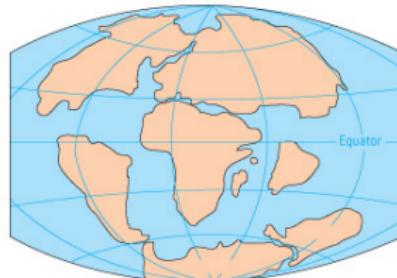
PERMIAN
225 million years ago



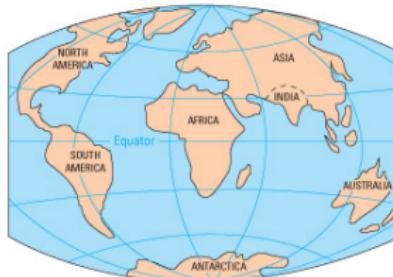
TRIASSIC
200 million years ago



JURASSIC
150 million years ago



CRETACEOUS
65 million years ago



PRESENT DAY

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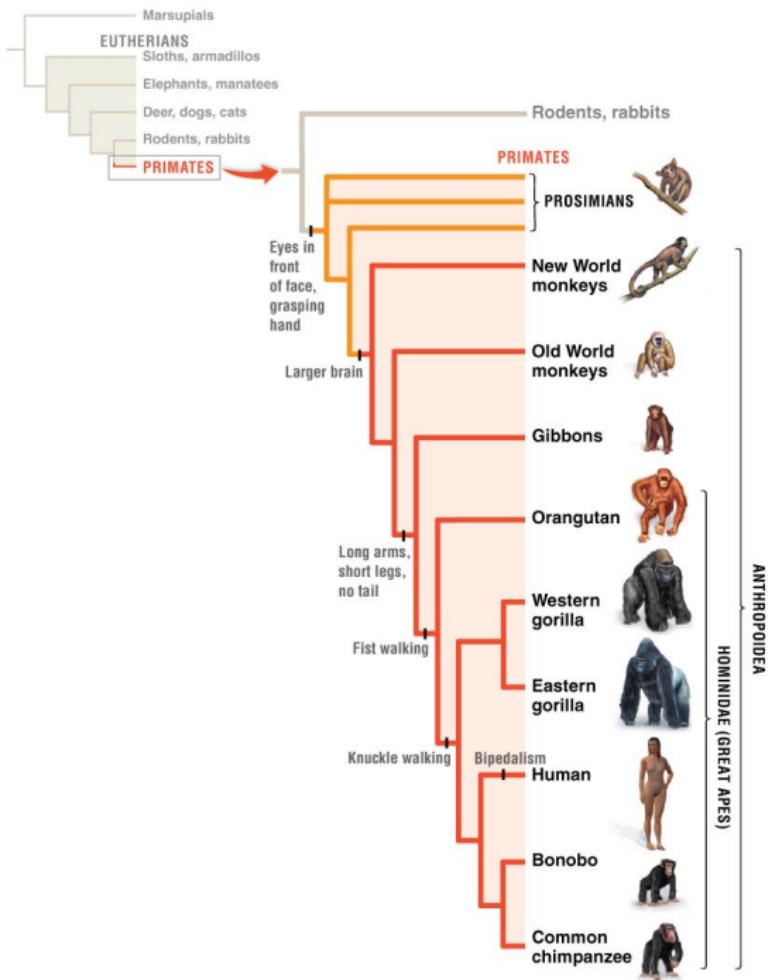
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 - ▶ * It takes many traits to make an accurate phylogeny

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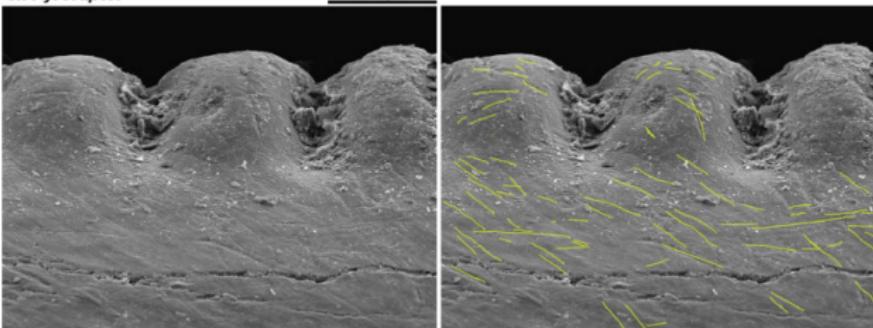
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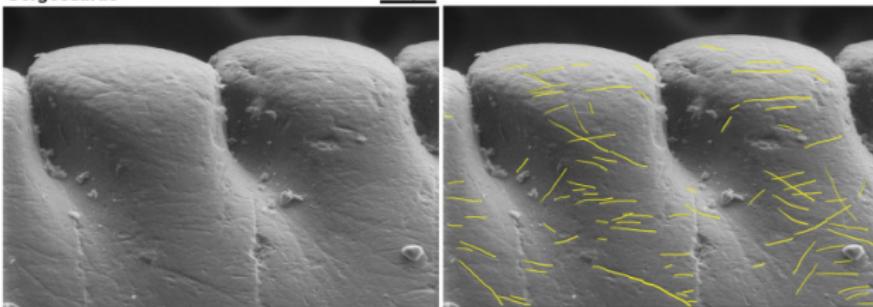


cf. Pyroraptor



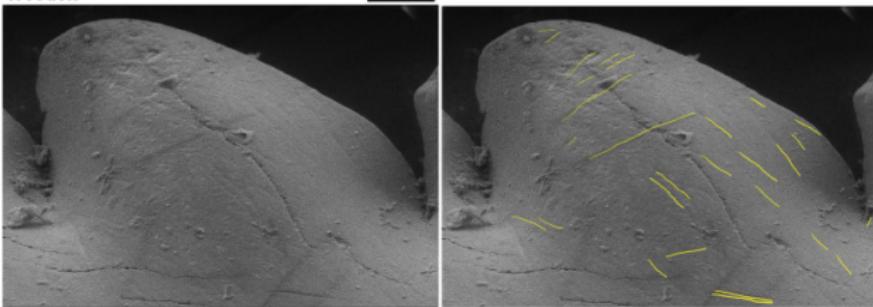
100 µm

Gorgosaurus



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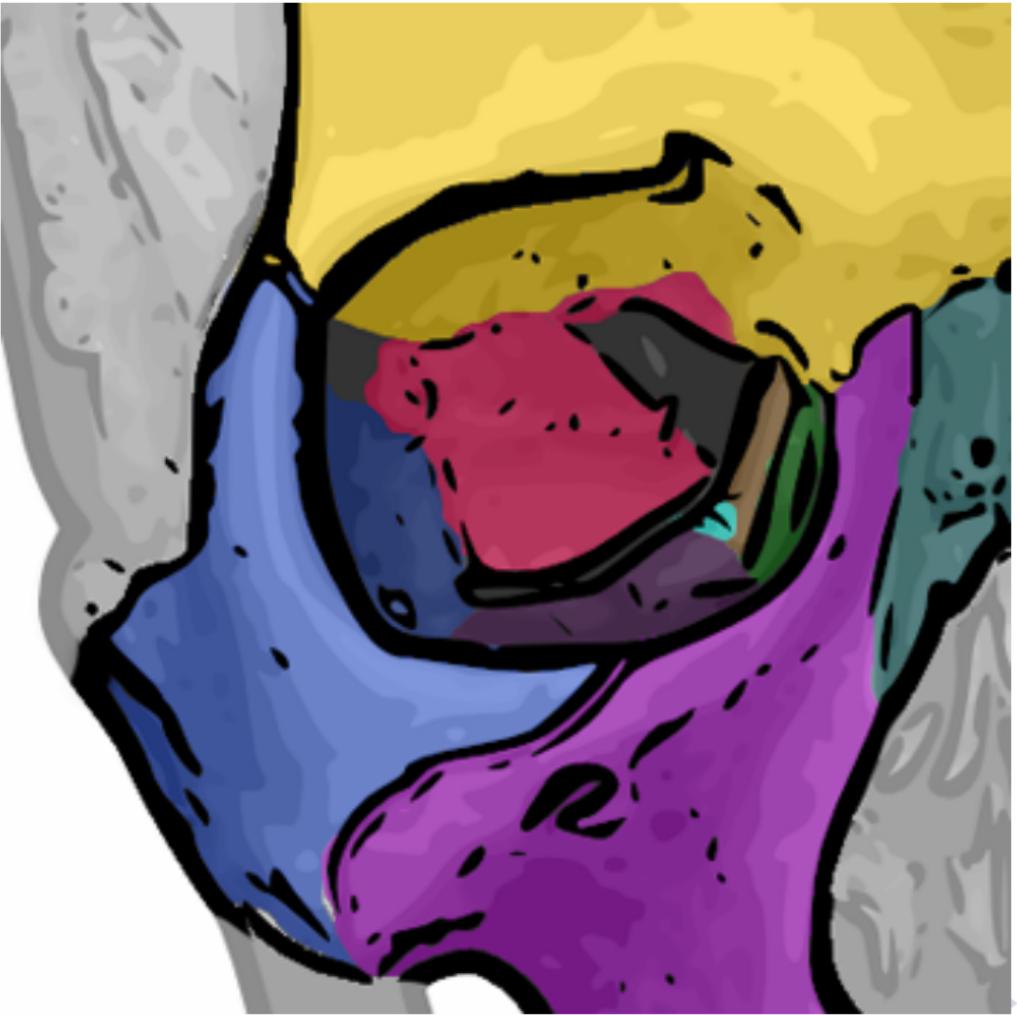
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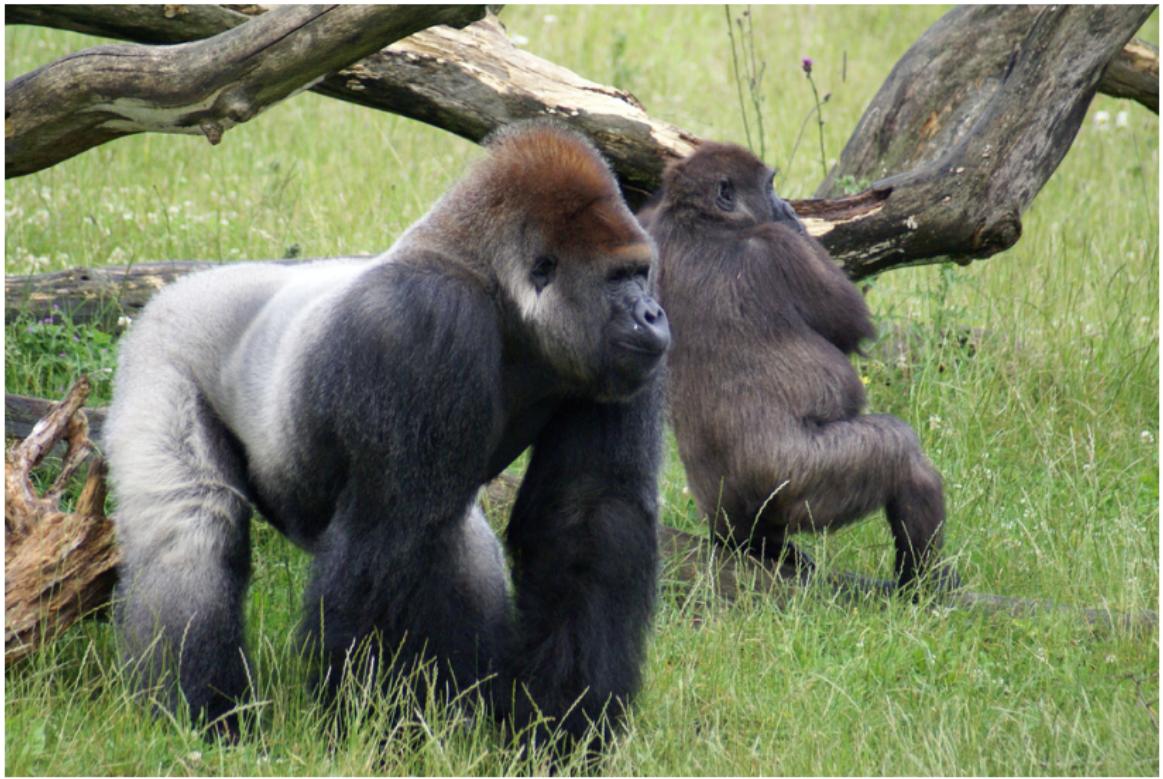
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Dimorphism and sexual strategies

- ▶ Gorillas live in male-centered groups (one adult male, several adult females)
- ▶ Chimpanzees live in large, well-mixed groups with lots of interactions between males and females
- ▶ Which species should have more sexual dimorphism overall?
 - ▶ * Gorillas. Males are huge and strong and compete for females by displaying and fighting. A dominant male has exclusive access to a group of females
- ▶ Which species should have larger male genitals?
 - ▶ * Chimpanzees have much larger genitals.
 - ▶ * Gorillas don't use genitals as part of sexual competition
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Outline

Patterns of evolution

Context for evolution

The evolution of primates

Apes

Learning about the past

Emergence

Sociality

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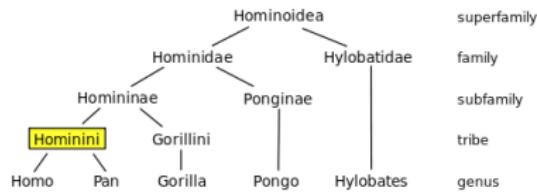
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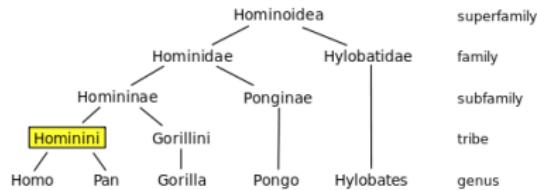
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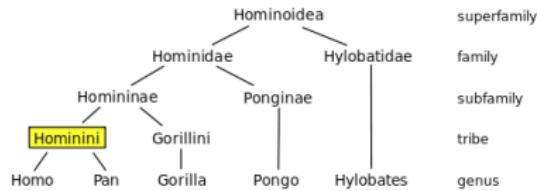


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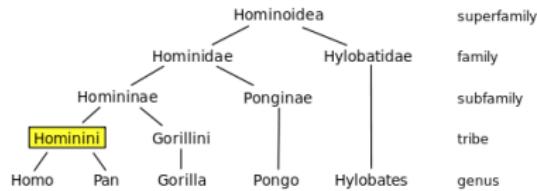
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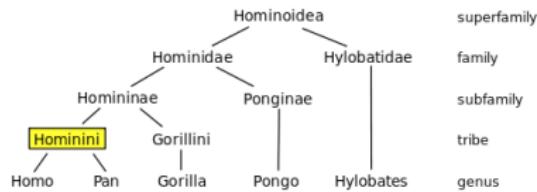


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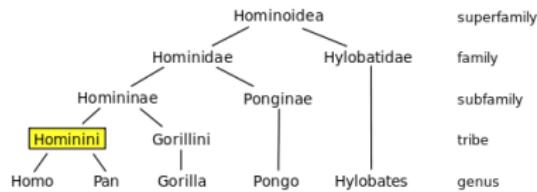
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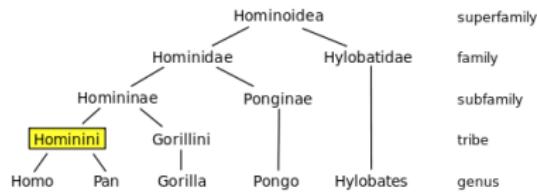


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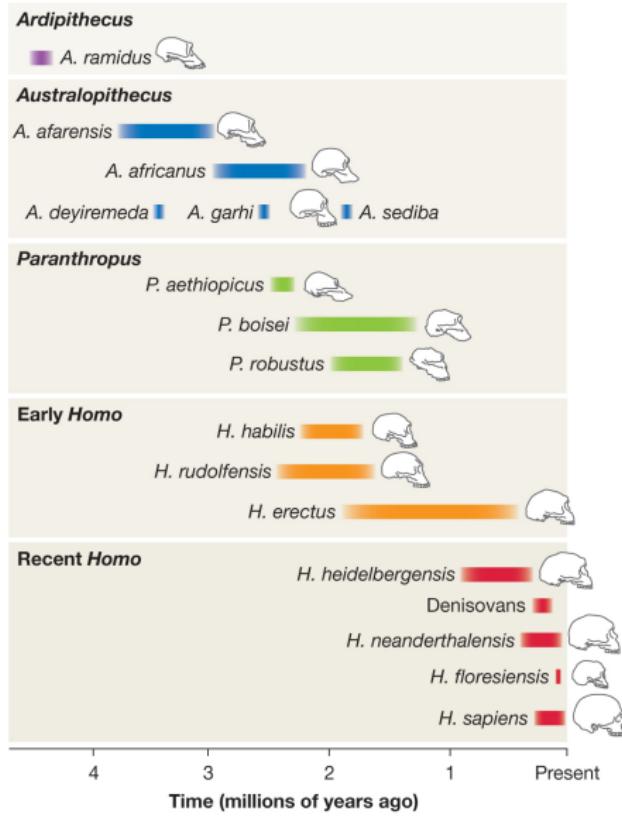
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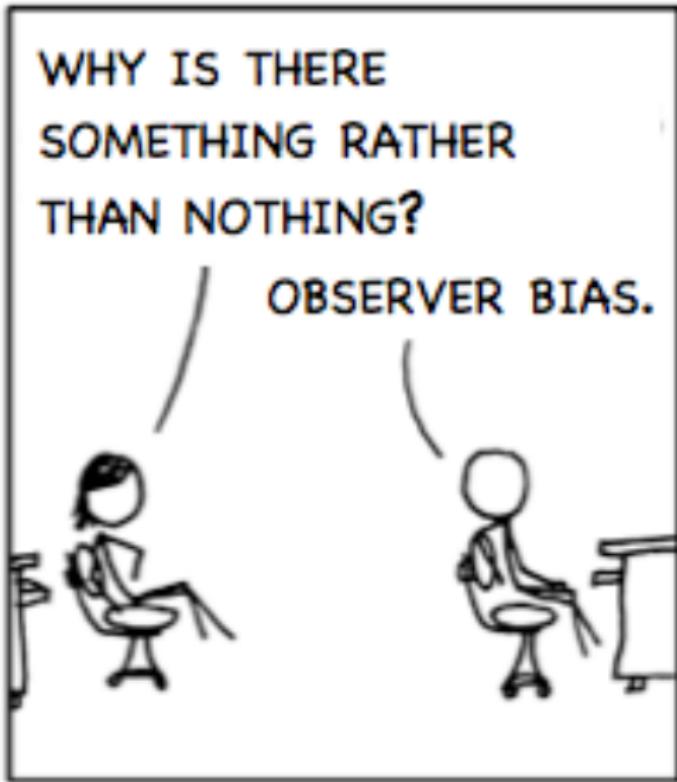
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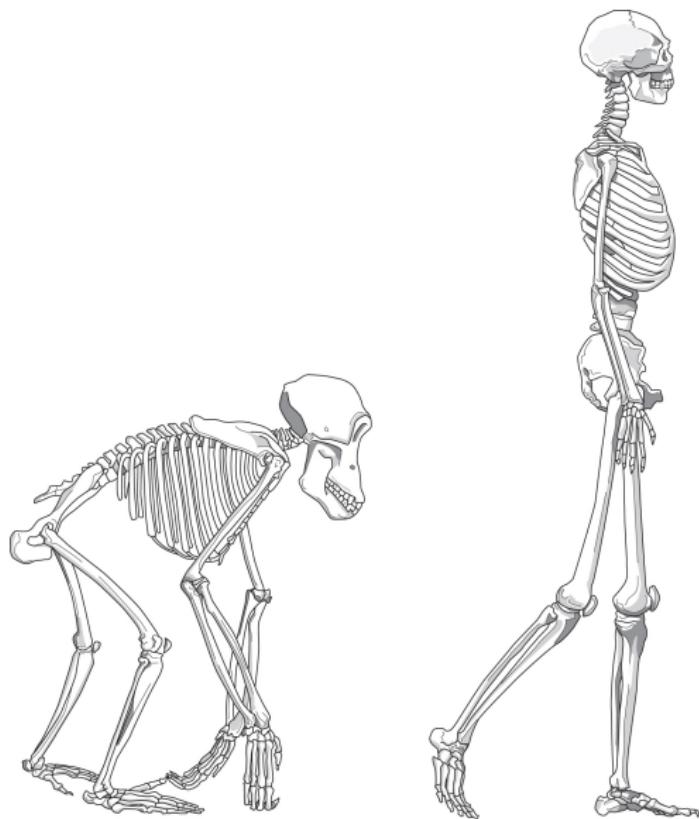
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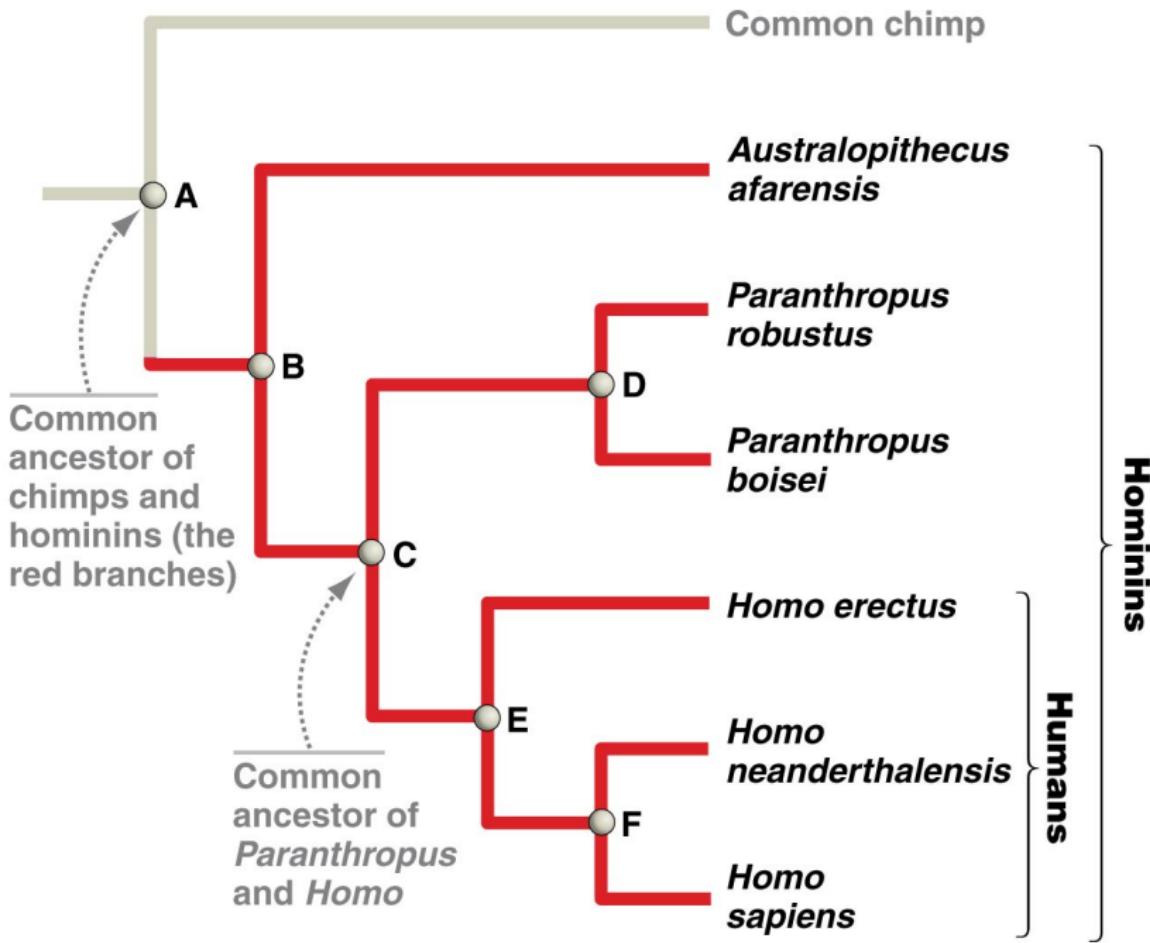
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Outline

Patterns of evolution

Context for evolution

The evolution of primates

Apes

Learning about the past

Emergence

Sociality

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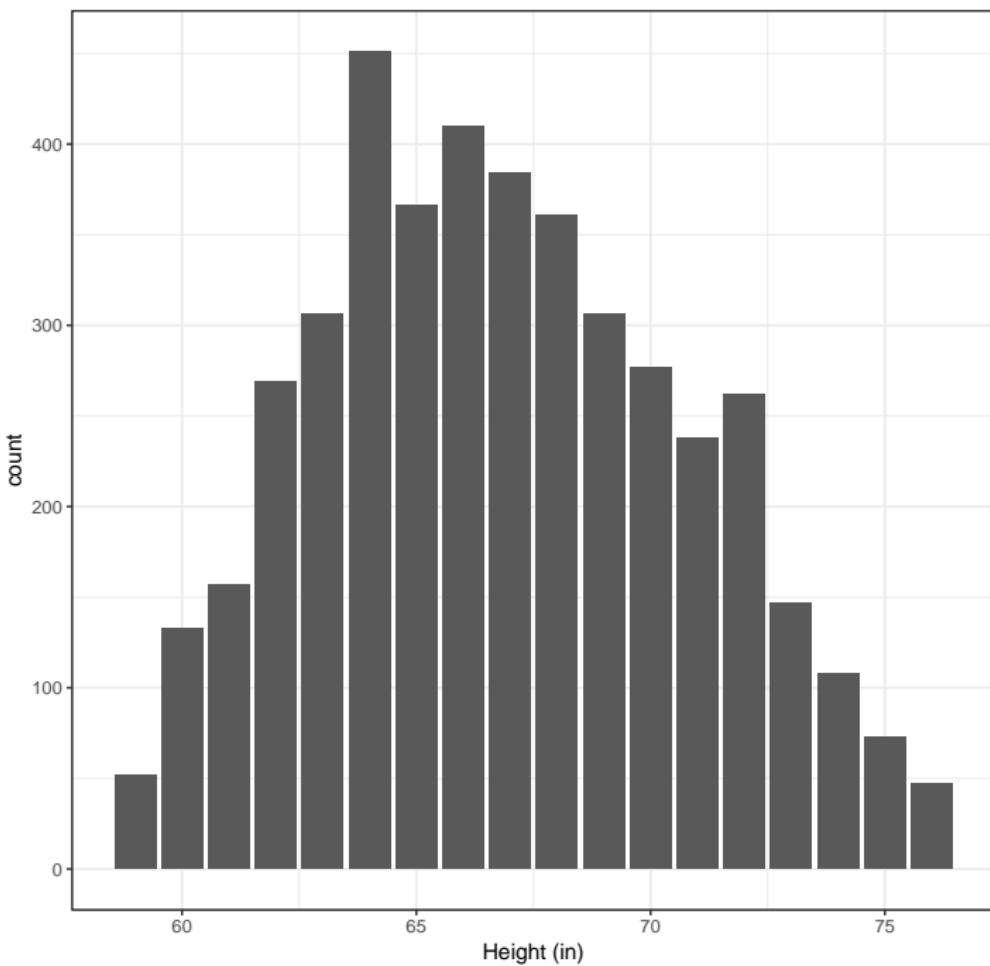
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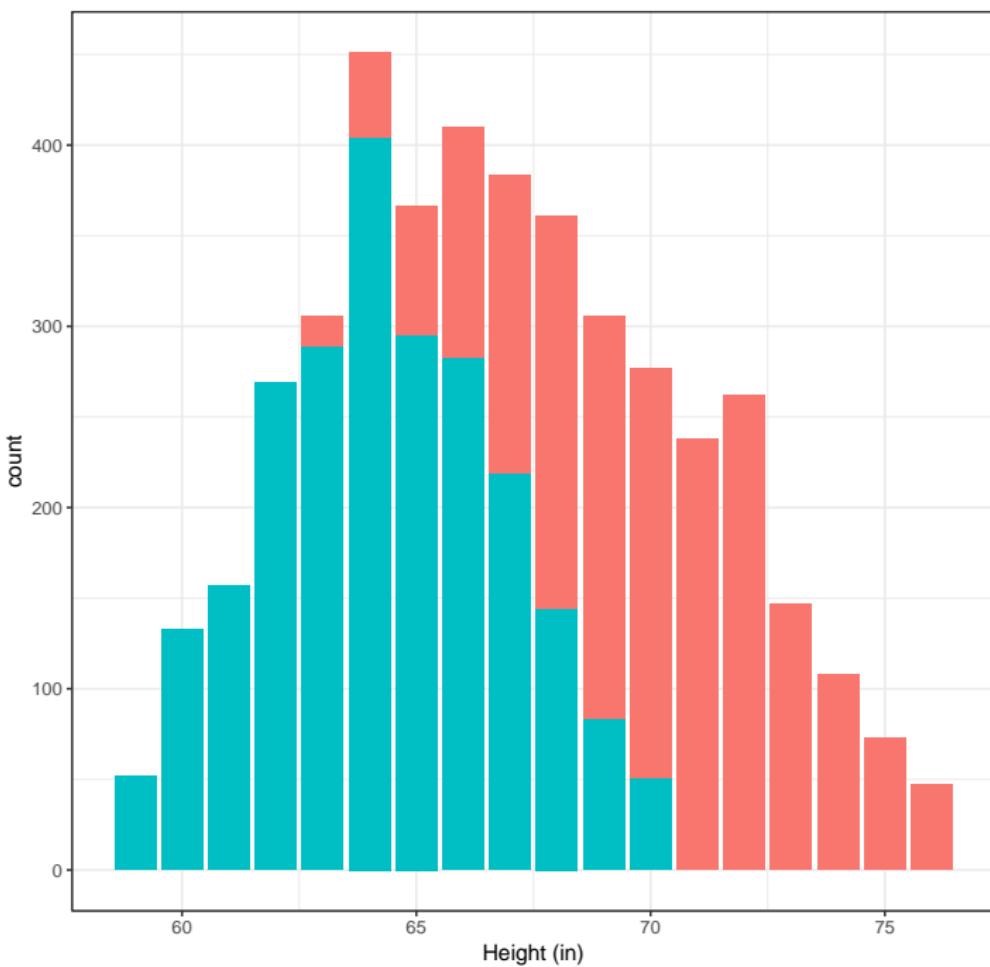
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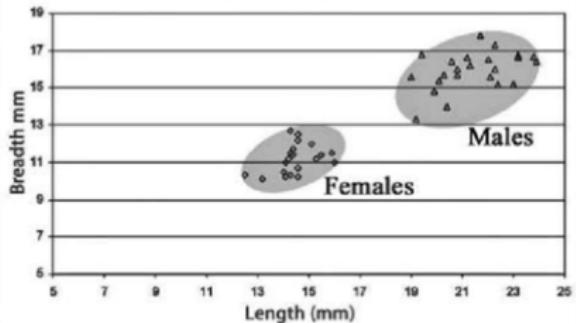
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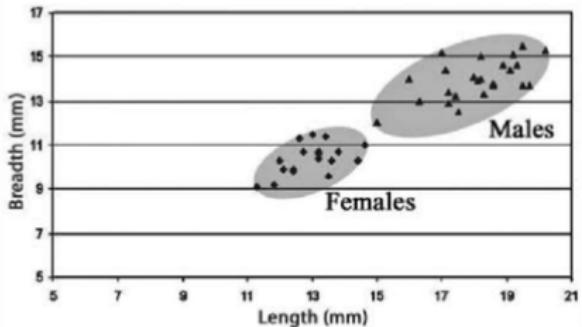
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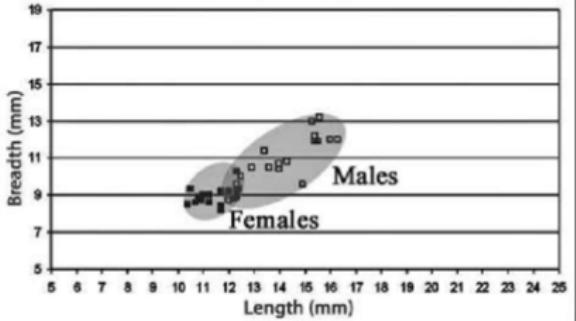
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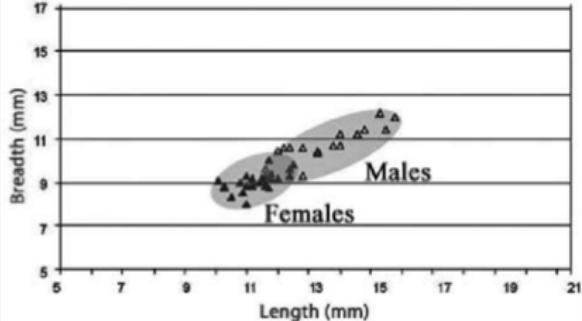
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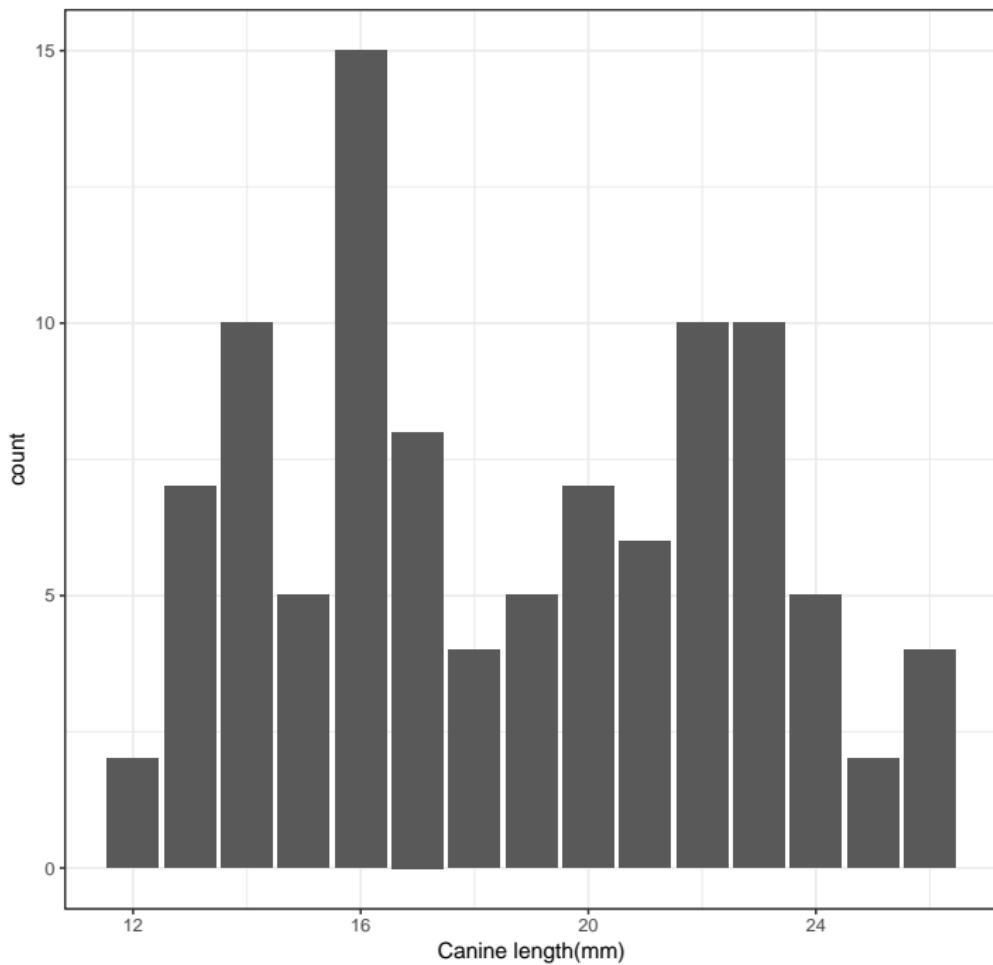
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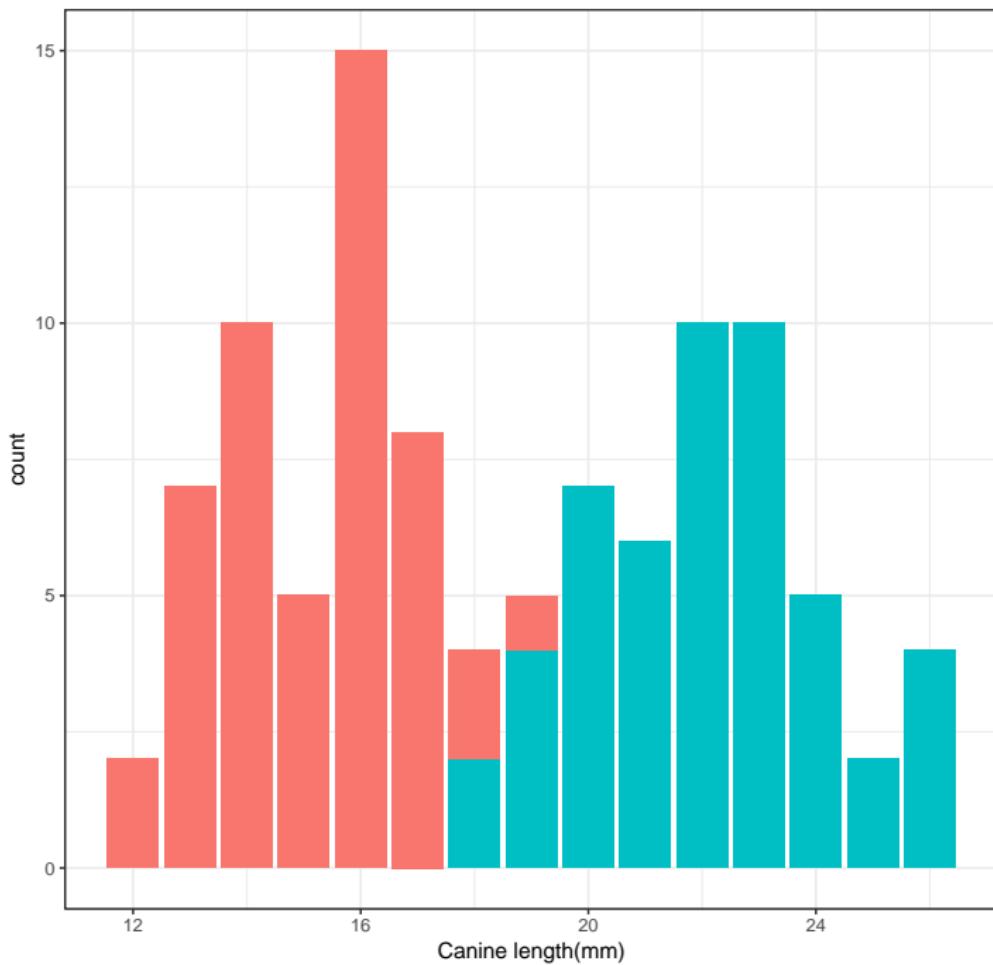
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 - ▶ * We are affected by all of the same basic processes as other organisms
- ▶ And also a lot that we can't learn
 - ▶ * We are also strongly affected by our complex brains (and complex cultures)