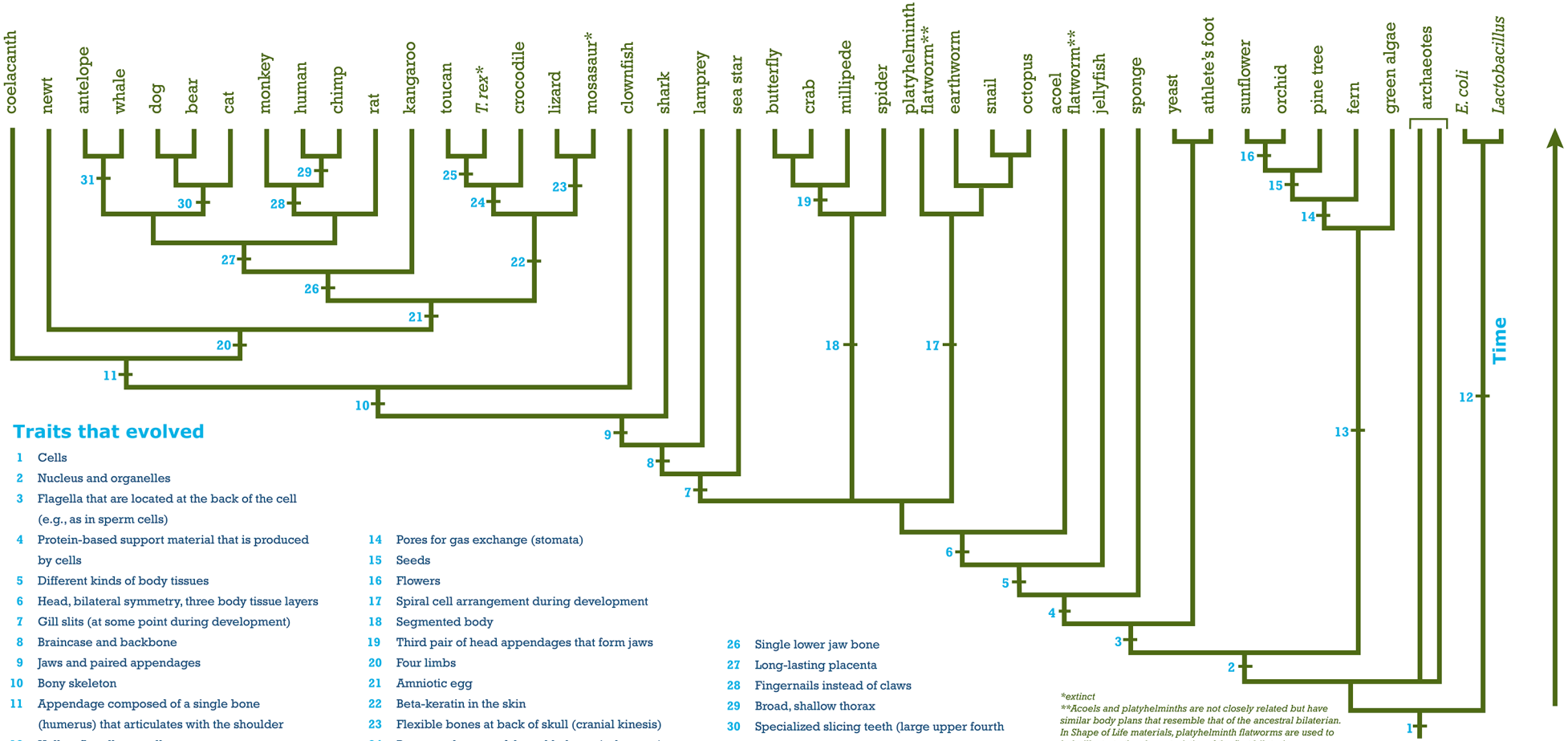
The Tree of Life

Find your favorite organisms and follow the tree to find their common ancestor.

This project was made possible in part by the Institute of Museum and Library Services [LG-26-12-0578-12]

Visit **The Tree Room** at **www.treeroom.org** to learn more about evolutionary trees.



Traits that evolved

1. Cells
2. Nucleus and organelles
3. Flagella that are located at the back of the cell (e.g., as in sperm cells)
4. Protein-based support material that is produced by cells
5. Different kinds of body tissues
6. Head, bilateral symmetry, three body tissue layers
7. Gill slits (at some point during development)
8. Braincase and backbone
9. Jaws and paired appendages
10. Bony skeleton
11. Appendage composed of a single bone (humerus) that articulates with the shoulder
12. Hollow flagella on cells
13. Cell wall made of cellulose
14. Pores for gas exchange (stomata)
15. Seeds
16. Flowers
17. Spiral cell arrangement during development
18. Segmented body
19. Third pair of head appendages that form jaws
20. Four limbs
21. Amniotic egg
22. Beta-keratin in the skin
23. Flexible bones at back of skull (cranial kinesis)
24. Bump on the rear of the ankle bone (calcaneus)
25. Wishbone or furcula (fused clavicle bones)
26. Single lower jaw bone
27. Long-lasting placenta
28. Fingernails instead of claws
29. Broad, shallow thorax
30. Specialized slicing teeth (large upper fourth premolar and lower first molar)
31. Double pulley ankle bone (astragalus)

*extinct
**Acoels and platyhelminths are not closely related but have similar body plans that resemble that of the ancestral bilaterian. In Shape of Life materials, platyhelminth flatworms are used to help illustrate the characteristics of the first bilaterians.

Modified from The Wellcome Tree of Life
http://www.wellcometreeoflife.org/interactive