



**FIGURE 5.1.** Vertical inheritance as represented in the only figure in *On the Origin of Species*. The evolution of species over time is represented by the branching of the tree with a single species giving rise to one or more descendent species. The descendent species inherit traits from the parental species in the form of “vertical” inheritance. Modern species are represented by  $a^{10}$ ,  $f^{10}$ , and  $m^{10}$  with all other lineages having become extinct.  $a^{10}$  and  $f^{10}$  can trace their ancestry to a common ancestral species  $a^5$ . In turn,  $a^{10}$  and  $f^{10}$  can jointly trace their common ancestry with  $m^{10}$  to the species at the bottom of the figure.

5.1, reprinted from Darwin C., *On the Origin of Species*