

Public Abstract

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Being able to give birth successfully is important for natural selection. In mammals, females give birth through the bony birth canal (the negative space of the pelvis), and many primates give birth to neonates that are large compared to the maternal pelvis. My dissertation finds that most primates - regardless of neonate size - have sexual dimorphism, or differences between males and females, in the pelvis. Females have larger, wider pelves and birth canals compared to males. These differences between sexes are most dramatic in species that give birth to relatively large neonates. Females also have higher integration, or correlation between different parts of the pelvis, compared to males. This makes sense, because females, not males, are subject to natural selection for successful birth. The results of my dissertation are useful for being able to assign sex to fossil pelves and being able to ascertain how difficult birth might have been in our ancestors.