Mating Systems in Mammals vs Sexual Dimorphism

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| Sexual Dimorphism and Mating System  Sexual dimorphism in body size (as well as canine size) is related to mating system. Mate competition is more intense in polygynous mating systems than monogamous systems. Size, generally, is critical in mate competition in polygynous systems.   |  |  |  | | --- | --- | --- | | Species | Mating System | Body size dimorphism | | Humans | Variety of mating systems | Low (male 1.1x of female) | | Gorillas | Polygynous one male | High (male 1.5x female) | | Orangs | Polygynous, solitary | High (male 2x female) | | Gibbons | Monogamous | Slight 1.02 | | Chimps | Polygynous multi male | Moderate 1.3 | | Bonobos | Polygynous multi male | Moderate 1.2 |   (Low sexual dimorphism in humans suggest that body size might not have been important in mate competition in humans but we will discuss this further when we cover human evolution.)  Factors related to sexual dimorphism  (1) Intrasexual competition associated with mating system (see above table.) Could include mating system, age of maturity, parental care by males,  (2) Arboreality v. terrestriality. Generally, terrestrial polygynous species (e.g., baboons) are more sexually dimorphic than arboreal polygynous species (e.g., black and white colobus). Why? Large body size probably does not help arboreal males when they fight in trees.  (3) Diet. Frugivores, for reasons that are not clear, are slightly more sexually dimorphic than folivores. Energy may be less of a constraint. Females may be more clumped.  (4) Species body size. Bigger primates are more sexually dimorphic than smaller species. One researcher suggested that as certain primate species became bigger during their evolutionary history, males evolved to be bigger *faster* than females. This idea has not received much support, however. | Gorilla  onobo |  |
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