

| | Apes | | Man |
|----|---|----|--|
| 1. | Cranium expanded; maximum brain size 600 cc | 1. | Cranium greatly expanded; maximum brain size 1600 cc |
| 2. | Occipital condyles posterior | 2. | Occipital condyles anterior |
| 3. | Strong nuchal crest | 3. | Low nuchal Crest |
| 4. | Palate long | 4. | Palate reduced |
| 5. | incisor and canine teeth large | 5. | Incisor and canine teeth reduced |
| 6. | Anterior premolar in lower Jaw strong and pointed | 6. | Anterior premolar in lower Jaw small and bicuspid |
| 7. | Pelvis narrow and elongated | 7. | Pelvis broad and flattened |
| 8. | Limited use and no manufacture of tools | 8. | Extensive use and manufacture of tools |

"Correlated with the expanded cranium and large brain size of man are his ability to reason, his fine memory, and his use of language, all of limited significance among the apes. The features of condyle location, nuchal crest development, and pelvic structure are associated with bipedal locomotion. The first two are related to the position of the head and its muscular supports in an upright stance; the last with support of the body and muscular attachments for the hind limbs in bipedal locomotion. Apes occasionally are bipedal, but normally walk on all fours when on the ground. The structural differences between apes and men in palatal and dental characteristics appear to show correlation with food habits. Man is more thoroughly omnivorous than the apes and is unable to kill animal prey with his inadequate teeth and Jaws. Tool manipulation and construction in man are attributes made possible by his upright stance that frees the fore limbs for uses other than locomotion and by the large brain centers devoted to manual control. These broad correlations between brain size, bipedalism, tool manipulation, and associated features suggest that the characteristics evolved more or less in conjunction with one another over a brief period of time. Strong positive selection for all the characteristics essential to man's dominance of his environment probably explains the rapid shift from ape to man during the last one million years.

"Although the similarities in many features and the obvious relationship between apes and modern man supported the theory of common ancestry, the differences between the two groups in the essentials discussed above had still to be explained. Among biologists in the early part of the present century, these differences provided some basis for doubt as to the evolution of man from higher apes. Then a series of extremely important finds gradually filled in the gap between the two groups."

-- Jay N. Savage, *Evolution* (New York: Rinehart and Winston, Inc., 1963), pp. 110-115.

"We have followed the stages in the progressive evolution of the Primates which culminated in the appearance of human beings. We have seen that it is possible to illustrate, by reference to comparative