

ANTHROPOLOGY-ZOOLOGY

Monkeys Get Bald Like Men

Patterns in Which Hair Falls Out and Becomes Gray Found to Be Common to All Members of Primate Group

By JANE STAFFORD

IT IS no longer fair to blame your barber or beautician for that bald spot; nor can you lay your gray hairs onto worry over your children's naughtiness or your broker's shortsightedness.

Getting bald or going gray are just primate traits, like walking on two legs instead of four, according to the latest pronouncement of science. They are merely one more set of characteristics that set you off from the four-legged animals and from the birds, fish and other non-primates.

You share these traits with the other members of the primate group, the monkeys, apes and lemurs. These animals get bald spots on their heads, and their hair and beards turn gray, although no monkey ever read a strip of ticker tape, visited a barber shop or wore a tight hat.

For years parents have been taking children to the zoos especially to see the monkeys, but apparently no one has noticed that some of the monkeys got gray or bald in the same way as did some of the people on the other side of the cages. It remained for an eminent zoologist, Gerrit S. Miller, Jr., curator of the division of mammals at the U. S. National Museum, to look closely at the monkeys, to see the similarity of their hair patterning to that of humans, and from his studies to set at naught all the old theories about graying and thinning locks. He has just announced the results of his studies on this subject in a publication of the Smithsonian Institution at Washington.

Curious Notions

Not only do monkeys, lemurs and apes get gray and bald, but the very shapes of their bald spots and the places where the first thin spots or gray patches show are the same as in men and women, he found.

You probably have your own notions about why hair grows as it does—why men have beards and women do not, or why hair grows on some parts of the body and not others, or what causes baldness or grayness. Mr. Miller

discussed in his report some of the popular theories on this subject. Most of them, he found, have one quality in common. They are all based on the assumption that the peculiarities of human hair are due to man's special constitution or its reaction to its environment and to the developments of civilization.

"It has, for instance, been urged that the general bareness of the human skin comes from the widely prevalent habit of wearing clothes," he said; "that baldness comes from barbers and tight-fitting hats; that women have less baldness than men because women have for centuries taken better care of their scalps than men have; that graying hair is the result of a lessening bodily energy supposed to go with increasing civilization or domestication; that eyebrows exist for the purpose of keeping sweat from running down into the eyes; that men are bearded to protect their throats from cold weather; that women are beardless because they look better that way. All of which gives evidence of ingenuity if of nothing else.

"But not one of the explanations that I have been able to find in print," he continued, "has taken into consideration the zoological possibility that many features of the human hair system may be generalized primate traits instead of specifically human developments. By this I mean the possibility that they may be characteristics that are forced on man because they are common property of the Primates, the animal group to which man pertains. Their explanation, in that event, would have to be made less in terms of human activities and requirements than in terms of the great heritage of characteristics that man shares with all his primate relatives."

So it all boils down to the fact that your getting gray or bald or both is the result of your belonging to the primate group, and not of any one specific factor in your life or any one thing you do. The actual mechanism of the body processes involved in baldness and grayness, however, has not yet been completely disclosed by scientific research. The endocrine glands may be involved.

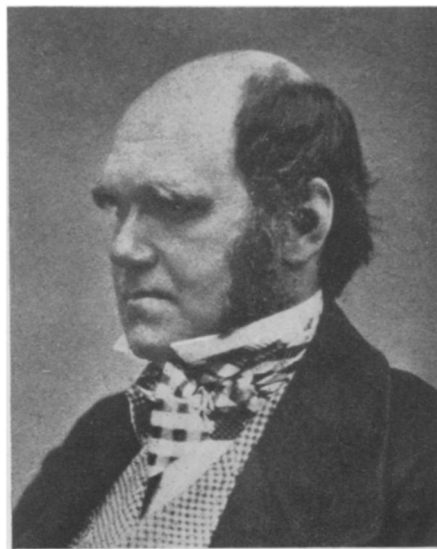
Working on this theory, an investiga-

tor at the University of Illinois School of Medicine, Dr. Bengt Norman Bengtson, has developed a glandular extract with which he has had spectacular success in growing hair on bald heads. Dr. Bengtson knew that scanty hair was one symptom of disorder of the pituitary gland. When patients suffering from this condition were given pituitary extract, their hair became thicker and more luxuriant at the same time that other symptoms disappeared.

Dr. Bengtson first started working with bald people whom he suspected had some disturbance of the pituitary gland, although their symptoms were slight, perhaps because the glandular disturbance was slight. He gave these patients small doses of pituitary gland extract. To his and their delight, new hair grew on the bald heads, of both better quality and darker color than the scanty locks that had been there before.

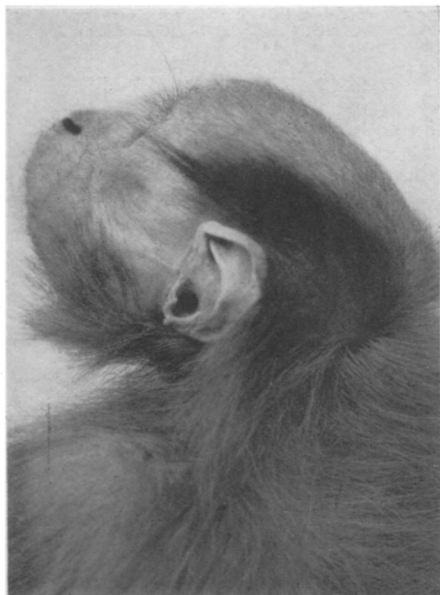
More Than One Extract

In some cases Dr. Bengtson used a preparation of more than one glandular extract, according to the indications of glandular disturbance that he found on examining the patients. His method is apparently successful with the class of people suffering from glandular disturbance to which their baldness may be attributed. Whether it will be equally



EVIDENCE HIMSELF

Charles Darwin, the evolutionist, would have been glad to learn that a duplicate of his own bald pate could be found on the monkeys which he declared share with man a common ancestry.



BROTHERS UNDER THE HAT

This South American monkey has the bald area on top with a fringe of hair around the sides, a condition known to many human heads, Darwin's included.

successful on all cases of baldness is not yet known and depends on whether the underlying process by which this primate characteristic is set in operation is influenced by the glands of internal secretion.

Dr. Bengtson himself warns that one should not be too optimistic about the new baldness "cure." He has also been obliged to issue a general warning against preparations reputed to be the same as his but given out by others. He has no associates, and he does not give any treatments or extract except at the University of Illinois School of Medicine in Chicago, he recently stated.

No Cure Revealed

Mr. Miller's studies do not reveal a cause of baldness or gray hair on which a "cure" can be based. Obviously, there is nothing you can do to change this tendency which is a fundamental zoological trait, any more than you can develop forelegs instead of arms and go about on all fours, as do some of the non-primate mammals. If you are sufficiently philosophical, however, you may find consolation for your baldness or grayness in Mr. Miller's findings.

For example, the young woman who sees in her fast-graying hair nothing but the unwelcome sign of advancing age, may pride herself instead on the fact that she may really be several steps farther ahead on the evolutionary scale than her dark-haired sisters. In future generations of the race of man white

may be the normal color of the hair at all ages.

"The strong tendency present in the 'white race' of man for the hair to lose its color at an early age may be part of a racial process of depigmentation that has already almost whitened the skin and that may be destined, in the future, to bring about permanent whitening of the hair as well," said Mr. Miller.

The prospect of a white-haired race is not so unpleasing or strange as you may first think. Consider the vogue, in Colonial days, for white-powdered wigs for men and women of all ages, and the present popularity of the platinum blonde.

Complete Whiteness

The process of graying often but not always ends in a stage of complete whiteness, Mr. Miller pointed out.

"But even when a human being has turned gray over the entire body or even has lost all hair color he has done nothing that is essentially new or peculiar for a primate. Light gray or nearly white species of primates have arisen in both Asia and South America."

These animals, he goes on to explain, are not albinos, nor in any way abnormal individuals. Their near relatives living in the same regions are richly colored. Nor is there anything to indicate that either light or dark has any advantage over the other.

"General graying and whitening in man seems likely to be nothing more than another example of human submission to a rule that some other primates have followed," he concluded.

You have undoubtedly noticed how baldness and grayness follow definite patterns. Some men lose their hair in spots above the temples, where, as the hair recedes, the forehead extends higher in two blunt wedges. Or the hair line may gradually get higher and higher all across the forehead. Other men, and women too, develop round bald spots right on the top of the head.

The same is true of graying. Some persons develop gray patches above the temples, which, according to the novelists, give an air of distinction to a man. Others have one streak of gray hair in a dark head. This has been popularly believed to be caused by a sudden fright, although there is no scientific basis for such a theory. In fact, men go gray according to more than eight definitely marked patterns, Mr. Miller has found. Counterparts of these grayness and baldness patterns may be seen in

various of man's kindred of the trees.

The uniform raising of the forehead line can be found as in the bald chimpanzee, said Mr. Miller. It is exactly paralleled by the pattern of short and long hairs on the head of one South American monkey, and by the color pattern of another.

The development of the two blunt wedges above the temples results in a pattern much like the one present in a black ape from the island of Celebes. The bald spot on the top of the crown is occasionally seen in the species of monkey known as the toque macaque. A completely bald head as seen in man finds its counterpart in a South American monkey. This animal has long dark hair at the sides and back, just as the entirely bald man generally has a fringe of hair around the sides and back. The monkey has on the top of his head an area of light hair which is so short and sparse that it does not cover the scalp and corresponds closely to the bald area on the human head.

The graying about the temples is a common feature of primate coloring pattern, Mr. Miller found. It is particularly well developed in the gelada baboon. White locks on or near the forehead may be seen in both men and monkeys.

Beards on men usually turn gray before the hair on the scalp. This same pattern may be seen in many species of monkeys, such as the individual shown on the front cover of this week's SCIENCE NEWS LETTER. Another pattern that is surprisingly common in both monkeys and man is a dark line at the cheek-margin of a gray beard.

Eyebrows Human

One hair pattern which is distinctly characteristic of humans is the eyebrow.

"Nothing like the human eyebrows is known in other primates," said Mr. Miller, "but the brow region is one where patterns are made in great profusion."

Another rather characteristically human hair pattern is the development of the moustache. A bare or nearly bare condition of the mouth area is usual among non-human primates, though it is not universal. Beards like those of the human male occur in at least three species of non-human primates, but moustaches are not common. One South American monkey, however, goes far to make up for this deficiency and has a long curling moustache that would have done credit to an Hungarian hussar.