Creating the Nation's first BioPark

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Letter from the Desk of David Challinor
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A common reaction of humans observing animals is to attribute to them feelings and behavior akin to ours. Nonhuman mammals undoubtedly experience joy and sorrow, as any perceptive pet owner will agree, but I think such "emotional" manifestations are incidental to the animals' primary goal of survival as a species. Since we cannot know what animals think, the only way to understand their behavior is to try to correlate their actions with their survival strategies. The great apes (gorillas, chimpanzees and orangutans), although more closely related to humans genetically than other mammals are to us, they are neither human nor do they behave as such. This letter considers strategies used by chimpanzees to survive and reproduce successfully.

Child rearing among the great apes seems at ethical odds with what humans consider appropriate behavior. For example, in chimpanzee troops, novice mothers have an abysmally low rate of successfully raising their first born. Such mothers often fail to nurse their infants properly, mishandle them, and otherwise so mistreat them as to cause their death. The human managers in zoos and research laboratories, therefore, with understandable compassion, used to remove these first-born infants and raise them by hand. Until recently, the result of this action was to imprint the young ape so strongly on humans that they could not integrate successfully back into the troop. Such animals would sit by themselves and gaze at people, ignoring their fellow apes. Since the goal of managed chimpanzee troops is to increase the population of these endangered apes, the maintenance of nonbreeders soon becomes an unaffordable luxury.

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The director of a chimpanzee breeding facility in the Netherlands not long ago made a traumatic decision to insure the long-term survival of the troop. He purposely did not pull infants from novice mothers, even though these babies were probably doomed to an early death. Once this difficult decision was made, the survival rate of second- and third-born infants shot up as the young mothers matured and gained experience in handling their progeny. Sadly, most of the first-born did die. This troop and others whose managers followed the same strategy now produce many more chimpanzees than are lost by disease or death from old age.

The United States is prohibited by international law from importing wild-caught great apes, and thus the significance of a successful breeding program becomes readily apparent. Chimpanzees are crucial to the study and solution of human health problems because they are the most closely linked genetically to humans of all the great apes. They are the only animals that can be infected with hepatitis B virus, and thus are crucial in testing the safety and effectiveness of vaccines for this disease. They are also the only animal susceptible to the Human Immunodeficiency Virus (HIV) which leads to AIDS in humans. Interestingly, none of the chimpanzees infected with HIV has yet developed the clinical illness characteristic of human AIDS.

Our improved understanding of great ape behavior has led to expanding the numbers of these interesting mammals in North American zoos. Zoo curators have recently even successfully introduced hand-reared gorillas up to 18 months old back into troops. This is an important breakthrough that might be applied to chimpanzees as well, but all behaviorists agree that primate-raised young are socially more competent than those fostered by humans.

Success in managing actively breeding troops should not dampen our efforts to maintain free ranging wild populations, even against the overwhelming loss of appropriate habitat. The cooperation of the zoo, research and conservation communities is the reasonable way to insure the success of the overriding goal; self-sustaining populations of the great apes in the wild as well as in zoos and other breeding facilities.