

A MODEL OF PROGRESSIVE IMMIGRATION TO REDUCE INBREEDING IN CAPTIVE POPULATIONS OF *MACACA SYLVANUS*.

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To reduce the inbreeding level within a captive colony of 13 *Macaca sylvanus* individuals at the Parco Natura Viva in Verona, two confiscated juvenile males were progressively introduced into the colony. We carried out 177 hours of observation between November 1995 and August 1996, gathering nearly 12,000 scan sessions at 60 second intervals. The two juveniles were initially introduced with the protection of double wire cage, permitting full visual interaction with the colony and limited physical contact with the external environment. In the last phase of the study, the cage was opened and the intruders were allowed to physically interact with resident macaque population. The procedure aimed to identify the most xenophobic individuals and individuate a replicable method for the progressive, safe introduction of macaques into captive colonies. During the period in which the wire cage separated the intruders, resident adults displayed greater aggressive behavior than resident subadults and infants. This aggressivity significantly reduced in time, giving way to neutral and even affiliative behavior, except in case of the dominant male. In effect, the frequency of the aggressive behavior by the dominant male remained virtually unmitigated, constantly above the troop median and above all female behaviors. Our results suggest the hypothesis of “sexual competition” among males might better explain the xenophobia expressed toward intruders, rather than the hypothesis of the “competition for resources”. Furthermore, we found that the dominant male induced other individuals to behave more aggressively toward the intruders. Based on this result, we decided to remove the dominant male prior to releasing the juveniles into the compound. Without the dominant male, aggressive behavior by the remaining individuals did not significantly increase and the introduction of the two juvenile males was successful. We explored a method of progressive exposure to induce foreigners to a non-human primate colony, which resulted as a plausible and efficient means of confronting issues such as inbreeding in closed groups of social primates.