

A LARGE-SCALE APPROACH TO AFRICAN APE POPULATION RESEARCH AND CONSERVATION MONITORING

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Systematic compilation of several hundred field survey data sets by the A.P.E.S. database project (<http://apes.eva.mpg.de>) has revealed large “information gaps” in the status of ape populations. Similarly, our knowledge of wild African ape behaviour, demography, and ecology is largely derived from a few long-term study sites, and characteristics of most populations remain unknown. Whereas field survey data can be used to a certain extent to model large-scale distribution patterns, this approach is restricted for behavioural, demographic, and ecological questions by the sample sizes from existing long-term field sites. Providing large-scale cross-sectional data of adequate sample size to complement longitudinal research at field sites, and filling “information gaps” for systematic monitoring of ape populations is the objective of our “Pan African ape sampling project”. To this end, we are collecting population, demographic and behavioural-ecological data using a range of techniques, such as camera traps, acoustic devices and organic sampling for a wide spectrum of laboratory analyses across several countries. The first results of this large-scale perspective have provided Africa-wide ape occurrence probability estimates and rates of population change over recent decades, derived from relatively simple statistical models. These models can be further used to evaluate different threat scenarios related to human impact, habitat loss, climate change and so on. As additional data become available, the use of more complex dynamic models will provide opportunities to test a wide spectrum of hypotheses with regard to ape population demography, genetic history, local genetic adaptations, or association patterns.

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