



Global Re-introduction Perspectives: 2013

Further case-studies from around the globe
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IUCN/SSC Re-introduction Specialist Group (RSG)





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Release of the western subspecies of chimpanzee in Guinea, West Africa

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Introduction

Throughout their range across Africa, chimpanzees (*Pan troglodytes*) are threatened with extinction due to habitat destruction, disease and unsustainable levels of hunting and capture (IUCN 2008), in spite of being protected by national and international laws. All four known subspecies of chimpanzee (Eastern: *P. t. schweinfurthii*; Central: *P. t. troglodytes*; Nigeria-Cameroon: *P. t. ellioti*; Western: *P. t. verus*) are classified as Endangered (IUCN 2008) and listed on Appendix I of CITES. Although current total population estimates are imprecise, the second most threatened subspecies after *P. t. ellioti* is the Western subspecies (*P. t. verus*) with 21,300 - 55,600 individuals and c.50% found in Guinea (Kormos *et al.*, 2003). Unfortunately, the majority of chimpanzees in Guinea are found outside protected areas. The bushmeat and pet trade, as well as the exacerbation of human-chimpanzee conflict situations, have resulted in recent years in a significant increase in the number of orphan chimpanzees. The Chimpanzee Conservation Center (CCC), located in the north-western edge of the Mafou core



Released chimpanzees © CCC

area of the High Niger National Park (HNNP), is the only Pan African Sanctuary Alliance (PASA)-accredited sanctuary caring for chimpanzee orphans in Guinea. The CCC has been rehabilitating confiscated chimpanzees since 1997 and releasing selected suitable candidates since 2008.

Goals

- Goal 1: Successfully release a group of

rehabilitated chimpanzees and reinforce the numbers and genetic diversity of the wild chimpanzee population within the HNNP.

- **Goal 2:** Contribute to the long-term conservation of the HNNP by strengthening law enforcement activities and efforts led by government agencies and authorities locally and fostering government commitment to protecting the national park-one of two in the entire country.
- **Goal 3:** Increase environmental and conservation education efforts locally and nationally to influence both public-opinion and attitudes and policy-makers at the local and national level.
- **Goal 4:** Enhance our understanding of the release-potential of chimpanzees, the relationship between rehabilitation procedures and release success, and generally contribute to improving best practise guidelines for the rehabilitation and release or re-introduction of chimpanzees.

Success Indicators

- **Indicator 1:** Self-sufficient and healthy released individuals exhibiting species-specific ranging and association patterns either forming a fission-fusion social grouping of their own (eventually accommodating wild immigrant females) or having successfully integrated a wild chimpanzee community.
- **Indicator 2:** Successful reproduction of released individuals and infant survival rate comparable to wild conspecifics living under similar environmental and climatic conditions.
- **Indicator 3:** Decrease in the anthropogenic pressures and threats to the habitat and wildlife within the HNNP compared to baseline assessments pre-release.
- **Indicator 4:** Increase in wildlife populations within the HNNP compared to pre-release data.
- **Indicator 5:** Increase in environmental awareness at the local and national level contributing to the eventual demise of the pet trade and to positive changes in people's attitudes and behaviour towards chimpanzees.
- **Indicator 6:** Number of scientific publications, thesis, dissertations and other academic documents or media outputs based on project activities, results and findings.

Project Summary

Feasibility: Finding a suitable release site was a key step in the feasibility stage and a challenging affair since no single site in Guinea can fully comply with the IUCN Re-introduction Guidelines for Great Apes (Beck *et al.*, 2007). After careful consideration of the 1998 National Chimpanzee Survey Report by R. Ham and nationwide maps of vegetation distribution and protected areas network, four areas were selected for survey as potential release sites (Raballand, 2004). Four major selection criteria served to compare each site (Humble *et al.*, 2010). The first criterion was *habitat suitability*. The habitat had to provide i) sufficient food in quality and distribution across seasons, ii) suitable nesting sites and tree species appropriate for nesting, and iii) access to natural sources of water should water be a limiting factor. The second was *distance from human habitation and settlement*; distance to villages and settlements had to exceed 20 km, unless access was hindered by a geophysical barrier, e.g. a river. The third criterion was the *protection status of the area and current and future anthropic pressures on*



High Niger National Park survey

the local fauna, chimpanzees (if present) and the habitat. Areas where it is culturally and/or religiously taboo to kill chimpanzees and consume their meat and that already benefitted from a legal protection status were favoured over others. In areas where human activity is strictly prohibited, protection levels could be reinforced readily if necessary in collaboration with the support of national, regional and/or local

governmental agencies. Therefore governmental support was secured early on. The fourth criterion was *the distribution and status of wild conspecifics*. Since clear risks are associated with releasing chimpanzees in an area harbouring wild conspecifics (e.g. attacks, potential resource competition, disease transmission), it was decided that the future release site was not to overlap extensively with the core area of a wild community, while being able to sustain the group of released individuals. Finally the selected site was an area in the northern part of the Mafou core area (554 km²) in the High Niger National Park, 32 km by road from the CCC facility (Raballand, 2004). This site was distant from human settlement and presented two river networks (the Niger and the Mafou rivers) potentially restricting ranging of the released individuals into the buffer zone of the park. The environment is dominated by savanna interspersed with dry and riverine forest patches. The release site revealed a low wild chimpanzee density and peripheral usage of the release zone (30 km²) by wild conspecifics.

Implementation: Selection of suitable release candidates was based on their long-term rehabilitation at the CCC as a social group (7 - 11 years) and individuals' ability to demonstrate species-specific social and ecological skills necessary for their survival in an environment similar to the release site. Prior to release, release candidates were screened for diseases to ensure their wellbeing upon release and to prevent disease transmission to wild conspecifics. Released candidates were also genetically screened to confirm that they belonged to the Western subspecies. A first socialized group of 6 males (1 adolescent and 5 adults) and females (1 adolescent and 5 adults) was released in June 2008 and a second group of 5 individuals (2 adults males and females with one infant-one of the males was one of the original released individuals) supplemented the first core release group in August 2011. All adults were wild-born.

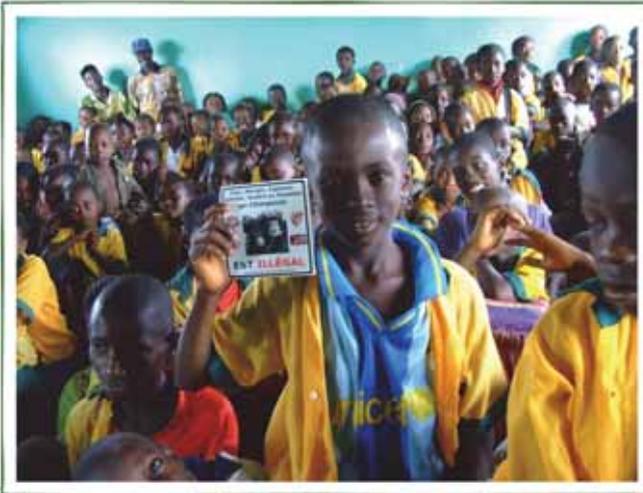
For post-releasing monitoring purposes, the to-be-released chimpanzees were first equipped with mock collars 5 to 12 months prior to release (Humble *et al.*,

2010). All fully adult sized males were then equipped with VHF/GPS store-on-board/ARGOS radio collars and most of the females were fitted with simpler VHF/GPS store-on-board collars. Two adolescent chimpanzees and one adult male and female were not fitted with functional collars. A large cage and enclosure was built at the release site to facilitate release procedure. Transport was done by road in individual transport cages; released individuals were mildly to fully anaesthetized to minimise stress during transport and to cloud their sense of direction with respect to the location of the CCC facility.

Post-release monitoring: The CCC decided to implement a minimal *in situ* post-release monitoring strategy. The reasons for this were four-fold: i) promote weaning from human contact; ii) minimize potential risk of aggressive behaviour by males towards monitoring teams; iii) minimize potential risk of disease transmission from humans to chimpanzees, especially as all released individuals had been medically screened prior to release; iv) facilitate integration of released females into wild communities and promote their natural behaviour and survival skills. *In situ* monitoring thus involved i) daily location of their whereabouts either via VHF transmitters every 30 min. between 6:30 am and 7:30 pm or the remote Argos system, ii) periodic visual sightings (once every 2 - 3 months) aimed at evaluating their health condition.

Major difficulties faced

- Initial soft release protocol involving a period of acclimatization at release site in *in situ* built cage and enclosure could not be adhered to for two main reasons: i) a bushfire during months preceding the release burnt down the enclosure, and ii) not all release candidates could be moved to release cage as it was not designed to hold 12 individuals day in day out. Five males were therefore initially transported to the release cage 4 to 12 weeks prior to the release and the other seven individuals were subsequently transported to the release site the day of the release.
- Scattering of individual males and some females during the initial stages of release (within the first and second days) possibly caused by lack of complete group acclimatization at release site prior to release: this compelled retrieval missions, aimed at reuniting dispersed individuals and at returning them to the release site; during one of the missions, one adult male failed to recover from his anaesthesia due to human error. The scattering also led to losing track of three non-collared individuals. However, they were sighted a year later in a zone with wild chimpanzees; they were healthy and are presumed to be still alive.
- Ability of some released chimpanzees to cross the Niger River during the dry season: this large river was predicted to act as an impassable boundary demarcating the northern limit of the release zone. This situation inevitably raised concerns about the potential increased risk of encounter between released chimpanzees and humans in the park's buffer zone thus compelling management to confine core release group members in the release cage for several weeks annually at the end of the dry season. The chimpanzees are then released once water levels swell back to impassable levels.



Education in schools

- Challenge in securing necessary funding for long-term post-release monitoring beyond the first year, especially linked to the expense of the sophisticated tracking collar systems used for distance monitoring. We expect post-release monitoring to continue for another three years although this will depend on future performance on release success indicators.

- Death of two new-borns among three post-release

births (the first was recorded 16 months post-release): presumably by baboons widely ranging across the northern area of the Mafou core area; this group of baboons comprises more than 200 individuals; the nature of wounds on the mother (the infants' corpses were never retrieved) indicated the high probability of a baboon attack. However to date the survival rate of new-borns is 33% which is within range of wild counterparts.

Major lessons learned

- Value in i) soft group release of individuals well acquainted with one another and rehabilitated together: in spite of initial split, most released individuals now form a cohesive unit group behaving comparably to a small wild chimpanzee community and ii) releasing candidates during period of high fruit availability to maximize their initial survival and minimize food stress upon release, decreasing necessity for provisioning.
- Importance of ecological and social competence of release candidates: it is vital that release candidates are equipped with the necessary social and ecological skills to survive in release environment (familiarity with range of food items, including fallback foods during periods of fruit scarcity, locating water sources, dangers including predators such as lions and leopards and potentially wild conspecifics) - two males were brought back to the CCC; these two males exhibited poorer ecological and social skills respectively compared with the other 14 candidates.
- Importance of conducting pre-release assessment of future release site and behavioural evaluations of release candidates during preparation phase. The CCC has an on-going behavioural assessment program which aims to identify suitable release candidates, to improve future assessments of rehabilitation and release success, and to help inform future release projects.
- Value of GPS store-on-board and Argos system: males ranged initially further than the females and were relocated thanks to the Argos collar system, although average transmission rate was on average only 13.2% in a relatively

open and topographically uniform environment. The downloaded GPS data contributed to our understanding of the released chimpanzees' habitat preferences, social dynamics and ranging patterns without having to observe individuals at a close distance (Humle *et al.*, 2010) - the downside to this system is the requirement to replace collars approximately every 12 months for continued post-release monitoring purposes.

- Although it is possible to release adult male chimpanzees, the release success of young adult female chimpanzees is greater than for males since young adult females are more likely to integrate wild communities (Humle *et al.*, 2010), and are less likely to incur fatal injuries from wild conspecifics should any be present (none were recorded during this project) and to take risks, e.g. in crossing challenging boundaries such as rivers.

Success of project

| Highly Successful | Successful | Partially Successful | Failure |
|-------------------|------------|----------------------|---------|
| | | √ | |

Reason(s) for success/failure:

- Self-sufficiency and adaptation of core-release group (now consisting of 8 individuals) to release zone: the core release group has settled in a defined home range within original surveyed release zone; group members demonstrate fission-fusion social dynamics and a reproductive rate comparable to wild chimpanzees.
- Released chimpanzees have adapted well to the presence of wild counterparts: Only one minor attack by wild chimpanzees on monitored release individuals was ever reported since the project began and at least one young adult female has integrated a wild chimpanzee community.
- Increased protection of the Mafou core area at least in its northern area: due to presence of monitoring staff in buffer zone and around passable river-crossing areas, in addition to increased deployment of park and local military authorities' patrols in and around core-area, and of road blocks and law enforcement initiatives, e.g. moratorium on commercial fishing along the Niger river in areas bordering the core area of the Mafou.
- Increased mobilization and awareness of the local and national authorities and local communities to the value and importance of the Niger River and the park, a site of high priority for the conservation the Western subspecies of chimpanzee (Kormos *et al.*, 2003).
- 'Insurmountable barriers' are not what they seem: annual issue with river crossing during dry season months has hampered the project's success; released chimpanzees' incursions into the buffer zone could pose a risk to humans which management is unwilling to take. The implications are severe in relation to the project's success unless the reason(s) why some of the chimpanzees (esp. males) cross the river can be identified with confidence and addressed. Bushfire management may be a possible solution, since all crossing events coincided with the presence of bushfires in release zone. Sustained education efforts specifically focused on how to behave when encountering a chimpanzee can also help alleviate these concerns; however,

these can never quite fully eliminate a risk which could jeopardise the release project.

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References

Beck, B., Walkup, K., Rodrigues, M., Unwin, S., Travis, D., & Stoinski, T. (2007). Best Practice Guidelines for the Re-introduction of Great Apes Gland, Switzerland: SSC Primate Specialist Group of the World Conservation Union.

Humle, T., Colin, C., Laurans, M. & Raballand, E. (2011) Group Release of Sanctuary Chimpanzees (*Pan troglodytes*) in the Haut Niger National Park, Guinea, West Africa: Ranging Patterns and Lessons So Far. International Journal of Primatology 32: 456-473.

IUCN. (2008) IUCN Red List of Threatened Species In IUCN (Ed.). Switzerland: Gland.

Kormos, R., Humle, T., Brugière, D., Fleury-Brugière, M.-C., Matsuzawa, T., Sugiyama, Y., *et al.* (2003). Status surveys and recommendations: country reports: The Republic of Guinea. . In R. Kormos, C. Boesch, B. M.I. & T. M. Butynski (Eds.), Status Survey and Conservation Action Plan: West African Chimpanzees (pp. 63-76). Gland, Switzerland and Cambridge, UK: IUCN/SSC Primate Specialist Group.

Raballand, E. (2004) Proposal for the Release of chimpanzees into the Parc National du Haut Niger, Guinea Chimpanzee Conservation Center.