Monitoring orangutan reintroduction: Results of activity budgets, diets, vertical use and associations during the first year post-release in Kehje Sewen Forest, East Kalimantan, Indonesia

FITRIAH BASALAMAH1,2,5,*, SRI SUCI UTAMI ATMOKO2, DYAH PERWITASARI-FARAJALLAH1,3, IBNUL QAYIM1, JAMARTIN SIHITE4, MARIA VAN NOORDWIJK5, ERIK WILLEMS5, CAREL P. VAN SCHAIK5

1Department of Biology, Faculty of Mathematics and Natural Sciences, Institut Pertanian Bogor. Jl. Pajajaran, Kampus IPB Baranangsiang, Bogor 16151. Tel/Fax.: +62-251-8622833, *email: fitriahbasalamah@gmail.com
2Faculty of Biology and Primate Research Center, Universitas Nasional, Jakarta 12520, Indonesia
3Primates Research Center, Bogor Agricultural, Institut Pertanian Bogor. Bogor 16151, West Java, Indonesia
4Borneo Orangutan Survival Foundations (BOSF), Restoration Habitat of Orangutan Indonesia (RHOI). Bogor 16151, West Java, Indonesia
5Anthropologisches Institut und Museum, Universitat Zurich. 8006 Zurich, Switzerland


Abstract. Basalamah F, Utami-Atmoko SSU, Perwitasari-Farajallah D, Qayim I, Sihite J, Van Noordwijk M, Willems E, Van Schaik CP. 2018. Monitoring orangutan reintroduction: Results of activity budgets, diets, vertical use and associations during the first year post-release in Kehje Sewen Forest, East Kalimantan, Indonesia. Biodiversitas 19: 609-620. Pongo pygmaeus morio, a subspecies of orangutan founded east Kalimantan is steadily declining and classified as endangered. A reintroduction program was recently established. We monitored the reintroduced individuals during their first year post-release at Kehje Sewen Forest in East Kalimantan to document the adjustment to their new habitat. Here, we present a report on the activity patterns, food choice, travel height, nest-building abilities and associations of six individuals ranging between eight and thirteen years old. Our results show that all individuals survived their first year. They spent most of their time feeding and had a largely frugivorous diet, similar to wild orangutans. However, although they were able to build nests, they reused or rebuilt old nests more often than expected. They also spent 16% of their total activity time on the ground, more than expected. This information will contribute to attempts to evaluate factors affecting the adjustment process, and thus optimizing future reintroduction procedures.

Keywords: Adjustment, daily activity, Pongo pygmaeus morio, reintroduction

INTRODUCTION

Wild orangutans live in female-philopatric societies (Arora et al. 2012), in which infants grow up and learn many of the vital ecological skills through social learning (i.e., under the influence of conspecifics, ranging from simply following models around to copying actions or outcomes) from their mothers, maternal relatives and associating males (Jaeggi et al. 2008, 2010). Immature may also learn from associates when they range independently after weaning. These suggest that an immature individual strongly relies on the presence of a tolerant and knowledgeable set of adults or older immature to acquire the full set of its survival skills. The development of these skills takes years, and is only completed around age 10 (Russon 2006; Schuppli et al., in prep.). Components are, in order of reaching adult values: locomotion skill, nest-building skills, diet selection, foraging techniques, ranging skills, and social skills (van Noordwijk et al. 2009).

Animals previously held in captivity (so-called rehabilitants) released into natural habitats (reintroduction) may thus need time to acquire these skills (Russon 2006). Many of these learned skills are geographically universal, and may therefore be acquired by maturing individuals even in the absence of models, but some foraging techniques (van Schaik et al. 2003) and elements of diet selection (Bastian et al. 2010) are site-specific. If these are cognitively difficult and thus may take time to become established, it is possible that populations of reintroduced individuals require time to accumulate the culturally based adaptations, very much like human populations would, or in the worst case even fail to establish themselves. Indeed, Russon (2002) showed that released ex-captives gradually expand their diet, but may remain stuck at lower diet breadth than their wild counterparts because they persistently work on existing techniques rather than try out new ones, and add fewer of the non-obvious fallback foods that are invisible and must be extracted (various kinds of pith, termites; see also Russon et al. 2009). However, Russon (2003) could also show that the presence of local experts that can serve as models makes a big difference.

Reintroduction of rehabilitant orangutans is the official government policy in Indonesia. Given the prominent role of learning there is some doubt that released rehabilitants or translocated wild individuals (moved directly from one habitat into a different one) will be successful. Unfortunately, there is surprisingly little information on the fate of released animals (Russon 2009) although the situation has recently been improving (see Riedler et al. 2010). This is understandable with rehabilitants since they