

Canopy Article Harry Hilser
Selamatkan Yaki – Save the Sulawesi Macaques

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The tropical forests of the Indonesian archipelago are home to an incredible diversity of plant and animal species. However, with a growing population of over 200 million, pressures on the environment are increasing with heavy demands for forest resources including food and timber. Indonesia is now losing its precious forests faster than any other country worldwide, threatening many of its incredible primate species with extinction.

Sulawesi, the largest island in the Wallacea biodiversity hotspot, has the greatest endemism in Indonesia and it is estimated that 25% of its bird species and 62% of its mammal species, are unique to the island. If we exclude bats, it's a massive 98% of mammals (Holmes & Phillips 1996). Amongst this wealth of biological diversity resides a rather special monkey species. The charismatic Sulawesi crested black macaque (*Macaca nigra*) is one of 7 macaque species found only on Sulawesi, endemic to the Eastern tip of Sulawesi's Northern peninsula. Restricted to small forest fragments in the province of Minahasa they live in large, philopatric multi-male multi-female groups, with an alpha male at the top of the hierarchy (Kinnaird & O'Brien 2000). Characterised by their distinctive crest of hair, entirely black face and body colouration and bright pink, heart shaped bottom (ischial callosities) these monkeys are a striking and iconic species.

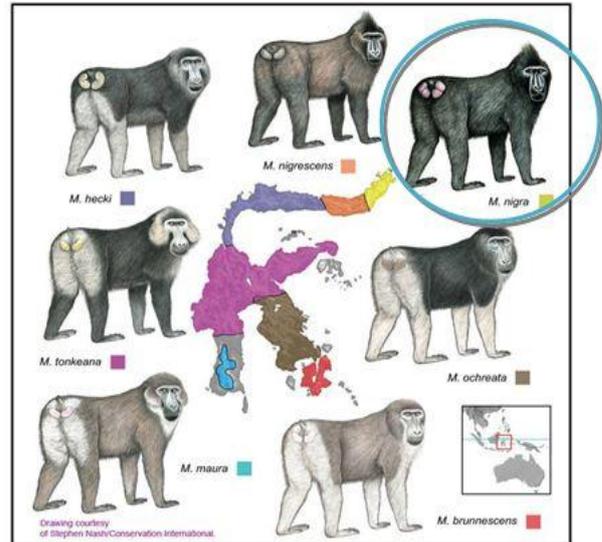


Figure 1. Of the seven endemic macaque species found in Sulawesi, *M. nigra* are the most highly endangered.

Unfortunately, the populations of these macaques have experienced severe declines in recent years, with estimates as high as 90% in the last 20 years (Melfi 2010). Extensive population surveys carried out in the 1970s recorded high densities of around 300 individuals/km² (Mackinnon & Mackinnon 1980). However, over the following years, repeat surveys revealed dramatic drops in densities, to 76 individuals/km² (Sugardjito et al. 1989); a further 10 years later population estimates were as low as 23.5 animals/km² (Rosenbaum et al. 1998).



Figure 2. The iconic and charismatic Sulawesi crested black macaques enjoy a grooming session in Tangkoko nature reserve, thought to be the stronghold for the last remaining populations of the species.

Following these population trends, this species is now classified as Critically Endangered by the IUCN Redlist and faces a high risk of extinction (Supriatna & Andayani 2008).

So what has caused such dramatic and rapid decline in numbers? Aside from extensive habitat loss within which, due to their radiation, is an already restricted range, *M. nigra* face a more unusual yet devastating threat to the survival of the species. The consumption of macaques in Minahasa, is a long held tradition which has grown in parallel to human population expansion, and has thus been identified as the primary threat to the species' survival (Lee 2000). The predominantly Christian population in Minahasa lack religious constraints over wildlife consumption as in other regions of Indonesia, and monkey is considered a delicacy with a majority of hunting meeting demands as ceremonial food rather than for subsistence (Lee 2000). Hunting rates have been demonstrated to be highly unsustainable (O'Brien & Kinnaird 2000; Lee 2000), which has led to local extirpation of other species throughout Minahasa (Burton et al. 2005; Clayton & Milner-Gulland 2000) highlighting the strong requirement for immediate conservation action.

Despite Sulawesi's incredible biodiversity and the extinction risks of numerous species, it receives relatively little conservation attention, with efforts and resources often centralised in regions containing megafauna with greater recognition and popularity (Wilson et al. 2005). However, a group of researchers have established strong connections within the Minahasan region and developed a conservation programme which may bring hope for the species and their habitat. Selamatkan Yaki ("Save the Macaques") is an integrated conservation programme focussed on protecting the last remaining populations of macaques and mitigating the threats they face. Working partnerships both *in-situ* and *ex-situ* have combined to identify the anthropogenic threats posed to the current population of *M. nigra* within their native range, culminating in the production of a Conservation Action Plan for the species. A multitude of approaches addressing the conservation objectives comprise research, education, the improvement of ecotourism infrastructure and sustainable development. Long-term cooperative efforts will invest resources into improving agriculture techniques and sustainability and developing alternative livelihood strategies. Collaborating with national and international stakeholders, raising awareness forms the central motivation of the project, disseminating information to local communities, government bodies and universities in the form of presentations and the distribution of education materials. It is hoped that the species can be recognised with pride as a valuable flagship, highlighting the wealth and diversity of the flora and fauna in North Sulawesi.

These activities, if implemented successfully with continued support from all stakeholders, will not only ensure the future survival of this fascinating primate, but also the habitat for some of the richest and most unique species in the world.

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Figure 2. Facing accelerating threats from human impacts, conservation of the remaining habitat and changes to hunting practise must be made a priority if these species are to live in their forests for years to come.



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