Progress Report

Project Title: Promoting the Conservation of Critically Endangered Kanga Warty Frog (*Callulina kanga*) Through Conservation Education to Communities around Kanga Forest Reserve, Tanzania
Grant ID: 45301-1
Project Leader: Enoka Munduka John

Activity 2: Assessing Communities' Knowledge, Perception and Attitude toward Amphibian Conservation

We successfully conducted household surveys and focus group discussions in the villages surrounding Kanga Forest Reserve to assess the community's knowledge, perceptions, and attitudes toward amphibian conservation, with particular focus on *Callulina kanga*. A total of 112 respondents were interviewed. 79.3% of respondents reported that amphibians have no importance to them, indicating a critical gap in awareness of their ecological roles. 83% highlighted that they had never received any conservation education related to amphibians. However, 60% of respondents were aware that deforestation is a major threat to amphibians, suggesting some understanding of habitat-related challenges. These findings underscore the urgent need for targeted conservation education and awareness programs to alter perceptions and promote stewardship of *C. kanga* and its habitat.

A deeper qualitative analysis of the focus group discussions revealed that negative perceptions were often rooted in cultural myths and a fear of amphibians being poisonous. Interestingly, a small minority (approximately 15%) from older generations held traditional, positive beliefs, associating frogs with rain and agricultural fertility, which could provide a potential cultural entry point for our education campaigns. The survey also identified farmers and fuelwood collectors as the key stakeholder groups whose activities most directly interface with the frog's habitat, allowing us to tailor subsequent interventions more effectively.

Figure 1: Project leader assessing the communities' knowledge, perception and attitude toward amphibian conservation around Nguru Mountains

Activity 3: Development of a Species Action Plan

Following the knowledge assessment, we initiated the groundwork for the development of a Species Action Plan (SAP) for *Callulina kanga*. This process is ongoing and involves Stakeholder engagement. We have begun engaging local leaders, Tanzania Forest Services (TFS), conservation officers, herpetologists, NGOs, and community representatives. Preliminary threat mapping includes agricultural encroachment, deforestation for timber and fuelwood, and a lack of conservation awareness. Identification of Key Biodiversity Areas (KBAs). The threat mapping exercise is being used to identify and geo-reference specific, critical microhabitats within the reserve that are crucial for *C. kanga*'s survival (e.g., specific breeding sites, moist forest floors). This will allow for targeted protection efforts. A core component of the SAP is to outline a clear strategy for integrating the plan's recommendations into local government policies and the existing management plan for the Kanga Forest Reserve, ensuring institutional buy-in and longevity beyond the project's timeline. The draft framework explicitly explores potential sustainable livelihood alternatives (e.g., beekeeping, native tree nurseries) to reduce community dependence on forest resources, acknowledging that conservation cannot be successful without addressing economic needs. The draft action plan focuses on habitat protection and restoration, community-based conservation initiatives, conservation education and outreach, and long-term monitoring of *C. kanga* populations. The

SAP will serve as a guiding document for authorities and communities to implement practical and sustainable conservation measures.

Activity 4: Training Sessions and Awareness Campaigns

To address the gaps revealed during the surveys, we conducted training workshops and awareness sessions for communities around Kanga Forest Reserve. Sessions targeted local leaders, farmers, women groups, and youth. The training emphasized the ecological importance of amphibians, their role as bioindicators, and the critical status of *C. kanga*. Leaflets and brochures were designed and distributed, highlighting the threats facing amphibians and practical ways communities can contribute to conservation. School visits and public meetings were carried out to reach a wider audience. Initial feedback suggests an increasing appreciation of amphibians' ecological value. These interventions have started to bridge the knowledge gap and create a foundation for community-driven conservation of *C. kanga* and other amphibians in the Nguru Mountains.

To ensure the messages were culturally resonant, we employed local facilitators and used participatory methods, including storytelling, to demystify amphibians and dispel myths. A highlight was a "Bio-Blitz" event where community members, guided by herpetologists, explored the forest edge at night to safely observe amphibians, transforming fear into fascination. We also established Community Conservation Committees in two villages, comprising respected local leaders and enthusiastic volunteers. These committees will act as permanent liaisons, monitor human activities in the forest periphery, and help sustain the momentum of the awareness campaign long after the formal project concludes. Furthermore, educational materials were translated into Kiswahili and the local Kikaguru language to maximize accessibility and impact.

Figure 2: Team member providing training sessions and awareness campaigns in Difinga village around Kanga Forest Reserve

Figure: Project team conducting a Focus Group Discussion with farmer groups.

Challenges and Mitigation

The project implementation encountered two main challenges. First, the initial reluctance of some community members, primarily due to scepticism about the focus on a "small frog" amidst other pressing needs. This was mitigated through patient dialogue, emphasizing the interconnectedness of a healthy forest (and its amphibians) with clean water and sustainable resources. Second, the rainy season made some roads impassable, delaying some survey work. We adapted by rescheduling activities and utilizing motorcycles for access, ensuring all target villages were reached with minimal impact on the overall timeline.

Conclusion

The project has made significant progress in assessing community perceptions, initiating an action plan, and raising awareness on amphibian conservation. Early results show a strong need for continued education and stakeholder engagement, but also encouraging signs of willingness to learn and participate in conservation initiatives. The support of the Rufford Foundation has been crucial in enabling these achievements, and we look forward to consolidating this progress into long-term, sustainable conservation outcomes for the critically endangered *Callulina kanga*.

The next phase of the project will focus on finalizing and formally adopting the Species Action Plan, expanding the training of the Community Conservation Committees, and initiating a pilot habitat restoration project in a degraded area on the forest edge. We are also exploring the

development of a citizen science monitoring program to involve community members in data collection, further strengthening their connection to and ownership of the conservation outcomes. The foundational work supported by this grant has successfully ignited local interest; our goal is now to channel this interest into concrete, measurable actions that ensure a future for *C. kanga*.