EUROPEAN UNION OF AQUARIUM CURATORS

REPORTING FORM

FOR CONSERVATION PROJECTS FUNDED IN

2023

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1 TITLE OF PROJECT:
Surveying for endemic cichlid species (*Lethrinops Chilingali* and *Rhamphochromis* sp. 'Chilingali') around Lake Chilingali which are thought to be extinct in the wild

2 NAME OF APPLICANT:
Hannah Thomas
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DATE OF REPORT: 20.3.25

PLEASE SEND YOUR REPORT TO ISABEL KOCH, SECRETARY-GENERAL OF EUAC
(ISABEL.KOCH@WILHELMA.DE)
AND COPY TO
Lauren Florisson (lauren.florisson@eaza.net; Brian Zimmerman: bzimmerman@bzsociety.org.uk

3 LOCATION OF PROJECT (REGION & COUNTRY)

Lake Chilingali, Malawi

4 PROJECT START AND END DATES: 27.8.24 – 10.9.24

5 PROJECT CO-ORDINATOR, ADDRESS AND INSTITUTIONAL AFFILIATION
(IF DIFFERENT FROM APPLICANT)

Professor George F. Turner
Bangor University: School of Natural Sciences
Bangor, Gwynedd, North Wales, UK

Professor Turner is an expert with fish species in this area and will be leading the trip with Chester Zoo staff assisting.

6 PROJECT TYPE
(TICK ANY COMPONENTS THAT APPLY)

☐ BIOLOGICAL/ECOLOGICAL RESEARCH
☐ VETERINARY/CONSERVATION MEDICINE
☐ ANIMAL WELFARE
☐ CAPTIVE BREEDING
☐ RE-INTRODUCTION/RE-STOCKING/TRANSLOCATION
☐ HUMAN-WILDLIFE CONFLICT
☐ EDUCATION/PUBLIC AWARENESS
☐ TRAINING/WORKSHOPS
☐ COMMUNITY-BASED/SOCIAL POLICY
☐ ECOTOURISM/SUSTAINABLE DEVELOPMENT
☐ SUSTAINABLE USE
☐ WARDENING/LAW ENFORCEMENT
☐ PROTECTED AREAS MANAGEMENT
☐ EX SITU PROJECT ONLY
☐ OTHER: _____

7 FOCAL SPECIES (COMMON AND SCIENTIFIC NAME)

Chilingali Sandeater (*Lethrinops chilingali*)
Chilingali Torpedo Cichlid (*Rhamphochromis sp*. 'Chilingali')

8 IUCN RED LIST STATUS (OR OTHER THREAT LISTING) OF FOCAL SPECIES

Not Evaluated- both identified in Turner *et al*., (2023) as being potentially Extinct in the Wild

CITES YES NO
APPENDIX

9 PROJECT BACKGROUND

Lake Chilingali is a satellite lake of Lake Malawi and was previously home to at least two endemic cichlid species, *Lethrinops chilingali* and a still-undescribed *Rhamphochromis* sp. 'Chilingali', which apparently diverged from their sister lineages after the receding waters of the main lake isolated them in the Chilingali catchment during the Pleistocene. Following massive anthropogenic pressures caused by pollution, sudden water level fluctutations due to the collapse and reconstruction of a man-made dam, and introduced species, both of these endemics are suspected to have disappeared from Lake Chilingali. There are several smaller lakes and rivers near to Lake Chilingali which could hypothetically hold remnant populations of these cichlids, and which have not yet been surveyed for their presence. Both species are maintained in aquaria in Europe, providing an insurance against total extinction and a source of animals from which future reintroductions could in theory be carried out.

Professor Turner has carried out extensive surveying work around Lake Chilingali and has good relationships with staff at the Department of Fisheries. There is an appetite within government bodies to investigate the feasibility of a reintroduction process if deemed necessary. It is critical that we act now as there is momentum behind the project.

10 WAS THE OVERALL PROJECT PURPOSE FULFILLED?

Yes, we surveyed 6 small lakes and the lower reaches of the Kaombe River in Nkhotakota District of Malawi. We report that *Lethrinops chilingali* was now abundant in the northern part of Lake Chilingali, but it is also present elsewhere in the Kaombe catchment, including the main river channel, as well as in a further river system to the south which includes Lake Nadzenje. *Rhamphochromis sp. 'chilingali'* was not found and thus may be considered extinct in the wild. A total of 23 fish species were recorded, although the fishing methods used means that it is likely to be biased towards day-active species and may under-represent catfishes and mormyrids.

11 WHAT OBJECTIVES WERE MET?

This project set out to establish presence or absence of the target species in Lake Chilingali and satellite lakes. This was completed with a range extension described for Lethrinops chilingali documented, with a possible sub-species identified. Rhamphochromis sp. 'Chilingali' wasn't found and is presumed extinct in the wild.

This project also set out to engage stakeholders and plan for next steps depeninding on the survey outcomes. This was acheived as we had meetings and conversations with people local to the lake, staff from the Univerisity of Lilongwe and Lilongwe University of Agriculture and Natural Resources, as well as staff from the Department of Fisheries. This resulted in an additional surveying trip which took place from 27th February to 3rd March 2025. This was as a result of mixed messages from local fishers that *Rhamphochromis* could be found in the lake during the rainy season. This expedition was run and funded solely by in-country partners without external assitance which we took to indicate confidence in their identification skills they had gained from George Turner during the trip, confidence in the methodologies we had used as well as enthusiasm for conserving this species and it's habitat.

WHAT OBJECTIVES WERE NOT MET?

N/A

12 WHAT PROJECT ACTIVITIES WERE UNDERTAKEN?

The project team met with University staff in Lilongwe. The aims of the project were discussed, and groundwork laid for potential future collaboration to import both target species from European collections for reintroduction.

The team departed for fieldwork around Lake Chilingali, travelling to the small lakes within the catchment, Kaombe River & Bua River. We interviewed local fishers and paid to see their catches, to determine if either Lethrinops chilingali or Rhamphochromis sp. 'Chilingali' were present. Locals were asked if they were familiar with either of the species, and if they are still caught, any changes in numbers caught they may have noticed, and any seasonal variation. This was to build up a clearer picture of both species' presence or absence and to gain some insight into the species' ecology and population trends. Photos of various species were shown to local fishers including the target species as well as species that have never been documented in the area to add confidence to the responses. Fishers recognised both of the target species, with the Lethrinops being caught frequently at most sites but the Rhamphochromis was reported as missing for some time and there was one report of this species being seen in Lake Chilingali during the rainy season. All species found in the catches were documented, with the Depertment of Fisheries staff taking morphometric data for future use. No specimens were taken out of the country.

13 WHAT OUTCOMES WERE ACHIEVED DURING THE COURSE OF THE PROJECT? IF THIS WAS AN EX SITU PROJECT ONLY, WHAT WERE THE BENEFITS TO THE SPECIES EX SITU AND IN SITU?

The absence of the Rhamphochromis was the key outcome, but the report from one fisher that they could be found during the rainy season persuaded the in-country partners to conduct an additional survey at that time of year to increase confidence in our findings that the species is extinct in the wild. The range extension for the Lethrinops was another outcome.

ARE ANY ONGOING?

We are currently planning a workshop to establish an action plan for getting the Rhamphochromis back to Malawi, where it can be bred in country, before being released back in to the wild. The workshop would aim to cover: goals for any genetic analysis for hybridisation or genetic bottle-necking and comparing the genetics of extant individuals in captivity with type specimens, disease risk assessments prior to transportation to Malawi, breeding strategies and target numbers in country, facility requirements in country, disease risk assessment plans prior to release, habitat suitability analysis, transport plans, local interventions and strategies for engaging local communities. This will follow the IUCN introduction guidelines.

DID ANY EXPECTED OUTCOMES FAIL?

No

14 DID LOCAL PEOPLE/COMMUNITIES PARTICIPATE IN THE PROJECT? IF SO, WHO WERE THEY, HOW MANY PARTICIPATED AND WILL CONTINUED CONTACT BE MADE?

Yes, Salim M'balaka led the Department of Fisheries staff. Anthony Nkhoma and Albert Matonyola, both Technical Assistants joined, as well as Mexford Mulumpwa, a researcher from the Department of Fisheries. Daud Kassam, from Lilongwe University of Agriculture and Natural Resources and Bosco Rusuwa from the University of Lilongwe joined the team as well as Symon Ngwira, the District Fisheries Officer for Nkhotakota joined too. Local people and children especially showed great interest in the project and were engaged with whenever possible! Chiefs of local villages were consulted when arrived and granted permission for us to access the lakes or rivers.

IF THERE WAS COLLABORATION WITH ANOTHER EUAC MEMBER OR AQUARIUM PLEASE PROVIDE DETAILS ONTHE COLLABORATION.

N/A

15 DID THE GOVERNMENT OF THE HOST COUNTRY RECEIVE INFORMATION ON THE PROJECT'S RESULTS?

Yes, the staff from the Department of Fisheries wrote official reports.

16 HOW DID THE RELATIONSHIP WITH OTHER NGOS WORK? WERE THERE ANY ISSUES?

There weren't any issues as far as we were aware.

There was one issue in that there was a festival called 'The Festival of Stars' that was happening in Nkhotakota the weekend after we were surveying which dramatically increased the costs of the hotels. It hadn't been hosted there before so we weren't aware of it.

The only other thing that we'd change for future is bringing a drone so we could see what water bodies were like without trying to get there by car as some roads were challenging to drive on.

17 TOTAL PROJECT BUDGET AND EXPENDITURE (IN EUROS)

	GBP	Euros
Per diem fees for in country staff	1811.68	2155.90
Reimbursement for local fishers	122.14	145.35
Hotels	1450.55	1726.15
Flights	3070.2	3653.54
Hire car and fuel	807.36	960.76
Salaries for visiting staff	5229	6222.51
Medications and vaccinations	434.11	516.59
Totals	12925.04	15380.80

18 AMOUNT OF MATCHING FUNDS SPENT:
€10,743.80

19 AMOUNT SPENT FROM EUAC FUNDS:
€4637

20 EXPENDITURE BREAKDOWN (IN EUROS)

TRAVEL	3653.54 (flights) + 960.76 (hire car)
SALARIES	622.51 (visiting) + 2155.90 (in country)
ACCOMMODATION	1726.15
EQUIPMENT	N/A
COMMUNICATION	N/A
MISCELLANEOUS (PLEASE DETAIL)	Medications and vaccinations – 516.69 Reimbursement for fishers – 145.35
TOTAL	15,380.90

21 PUBLICATIONS PRODUCED AS A RESULT OF THE PROJECT

IUCN assessment for *Rhamphochromis sp. Chilingali* is in progress
Field report has been written, and will be uploaded to EcoEvoRxiv