

## Supplementary Table 1

Sample list.

Species	SampleID	Origin	Photo	Voucher
<b>Ingroup</b>				
<i>Greenwoodochromis bellcrossi</i>	13429	Aquarium trade		
<i>Greenwoodochromis christyi</i>	13430	Aquarium trade		
	13367	Mpulungu fishmarket		
	13390	Mpulungu fishmarket		voucher in Graz (T03 3/B8)
	13399	Mpulungu fishmarket		
<i>Limnochromis staneri</i>	12951	Mpulungu fishmarket		voucher in Graz (T03 5/J10)

	13365	Mpulungu fishmarket		
	13366	Mpulungu fishmarket		
<i>Limnochromis abeelei</i>	12943	Mpulungu fishmarket		
	13369	Mpulungu fishmarket		
<i>Gnathochromis permaxillaris</i>	13483	Mpulungu fishmarket		
	13364	Mpulungu fishmarket		
<i>Limnochromis auritus</i>	13467	Aquarium trade		voucher in Graz (T01 7/H9)
	12953	Mbita (west)		voucher in Mpulungu (T03 6/A3)

	13373	Mpulungu fishmarket		
<i>Baileychromis centropomoides</i>	13473	Chituta Bay		
	12961	Mpulungu fishmarket		
	12962	Mpulungu fishmarket		
	13417	Mpulungu fishmarket		
	13418	Mpulungu fishmarket		
	13419	Mpulungu fishmarket		
<i>Reganochromis calliurus</i>	13420	Mpulungu fishmarket		voucher in Graz (T06 10/A2)
	13362	Aquarium trade		
	13484	Aquarium trade		voucher in Graz (T10 10/A6)
<i>Triglachromis otostigma</i>	13485	Aquarium trade		
	13359	Aquarium trade		voucher in Graz (T09 20/H6)
	13360	Aquarium trade		voucher in Graz (T09 20/H7)
	13371	Mpulungu fishmarket		

	13372	Mpulungu fishmarket		
	13434	Aquarium trade		voucher in Graz (KS4 H6)
	13435	Aquarium trade		
<b>Outgroup</b>				
<i>Xenotilapia ochrogenys</i>	13052	Aquarium trade		
	13051	Aquarium trade		
<i>Cyprichromis leptosoma</i>	12981	Kasenga Rocks		
<i>Cyprichromis microlepidotus</i>	12988	Aquarium trade		
<i>Paracyprichromis nigripinnis</i>	13091	Aquarium trade		
<i>Benthochromis tricoti</i>	13358	Kalambo Lodge		
<i>Benthochromis melanoides</i>	13357	Sumbu (north)		
<i>Perissodus microlepis</i>	13356	Kalambo Lodge		
	T0631F5	Mbita (east)		
<i>Haplotaxodon microlepis</i>	13438	Lufubu estuary		
<i>Ctenochromis benthicola</i>	13437	Aquarium trade		
	13436	Aquarium trade		
<i>Cyphotilapia frontosa</i>	13439	Lufubu estuary		
	13440	Lufubu estuary		
<i>Tropheus smoorii</i>	KS4F10	Murago		
	KS4C1	Murago		
<i>Tropheus duboisi</i>	13361	Aquarium trade		

Coordinates: Chituta Bay, 8°45' S, 31°10' E; Kalambo Lodge, 8°37' S, 31°37' E; Kasenga Rocks, 8°44' S, 31°09' E; Lufubu estuary, 8°32' S, 30°44' E; Mbita (east), 8°45' S, 31°06' E; Mbita (west), 8°45' S, 31°05' E; Murago, 7°05' S, 29°50' E; Sumbu (north), 8°31' S, 30°28' E.

Note that fish obtained at the fishmarket in Mpulungu might have been caught anywhere in southern Lake Tanganyika.