



# HELMINTHS

CHINSINSI CHA MOYO WA NYONGOLOTSI ZOYAMBISA MATENDA



wellcome  
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parasitology



CHINSINSI CHA MOYO WA NYOGOLOTSI ZOYAMBITSA MATENDA NDI BUKU LA NTHABWALA LOMWE LINASINDIKIZIDWA NDI WELLCOME CENTRE FOR INTEGRATIVE PARASITOLOGY, A JAMIE HALL NDI A EDWARD ROSS MUCHAKA CHA 2020.

BUKULI LINALEMEDWA NDI A JAMIE HALL NDI A EDWARD ROSS. LINANTHAUZIRIDWA MUZINTHUNZI NDI A EDWARD ROSS. DR. POPPY LAMBERTON NDI DR. RICK MAIZELS ANATHANDIZA NDI ULANGIZI WA SAYANSI.

ULAMULIRO WONSE WA BUKU LI NDI WA WELLCOME CENTRE FOR INTEGRATIVE PARASITOLOGY NDI OLEMBA. SIKOLOLEDWA KUTI GAWO LILILONSE LA BUKULI LITSINDIKIZIDWE KAPENA KUKOPEDWA MWANJIRA ILIYONSE POPANDA CHILOLEZO CHA OTSINDIKIZA NDI OLEMBA.

BUKULI LINASINDIKIZIDWA NDI A WELLCOME CENTRE FOR INTEGRATIVE PARASITOLOGY, SIR GRAEME DAVIES BUILDING, UNIVERSITY OF GLASGOW, 120 UNIVERSITY PLACE, GLASGOW, G12 8TA.

ILI NDI TANTHAUZIRIDWE LA BUKULI MU CHICHEWA.

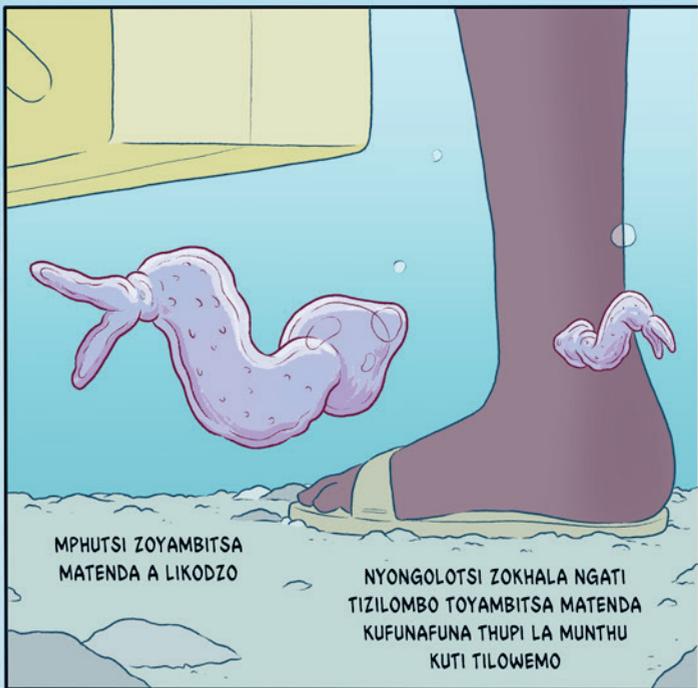
BUKULI LINA SINDIKIZIDWA PA MAPEPALA OBWEZEREDWANSO

TSIKU LINANSO LABWINO M'MBALI  
MWA NYANJA YA VICTORIA





ZIKUONEKA NGATI CHINACHAKE  
CHABISALA M'MADZIMU



MPHUTSI ZOYAMBITSA  
MATENDA A LIKODZO

NYONGOLOTSI ZOKHALA NGATI  
TIZILOMBO TOYAMBITSA MATENDA  
KUFUNAFUNA THUPI LA MUNTHU  
KUTI TILOWEMO



MONGA MWA  
CHONCHO

WATITENGA  
TIZILOMBO



MWALANDILIDWA KU UGANDA! NDAKONDWERA  
MWAKWANITSA KUBWERA KUDZAONA  
ZOMWE IFE TIKUCHITA.

NDAKONDWE  
RA KUKUONA  
MOSES!

NDIKUYEMBEKEZERA NDI CHIDWI KUTI  
NDIKAONE TIZILOMBO TOMWE NDAKHALA  
NDIKUPANGA KAFUKUFUKU WAKE PA KANTHAWI.  
TIZILOMBO TOPHWATHALALA NGATI TEPI,  
MMALO AKE ACHILENGEDWE!

NDE KWERANITU,  
TIZIPITA!



TAFIKA MU NTHAWI YAKE! LERO TIKHALA  
TIKUPEREKA MANKHWALA A MATENDA A  
LIKODZO KWA MUDZI ONSE

KOMA NDE MALO  
OONEKA BWINO!



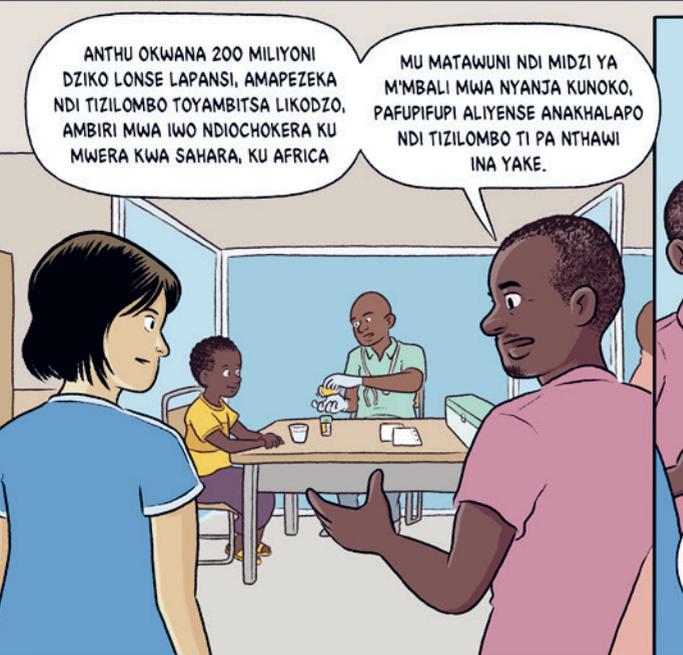
KUNO NDIKWABWINO  
KWAMBIRI KOMA VUTO  
LALIKULU TILI NALO NDI  
MATENDA WA.

MATENDA WA AMAYAMBITSIDWA NDI  
TIZILOMBO TA MTUNDU WA NYONGOLOTSI TOMWE  
TIMAKHALA MU NKHONO ZA M'MADZI  
TISANAPHULIKE NDIKULOWA M'THUPI LA MUNTHU



KU SCOTLAND,  
TIMANGOGANIZIRAKO ZA NKHONO  
ZIKAKHALA KUTI ZIKUONONGA  
MASAMBA M'DIMBA.

MULI NDI MWAYI, NKHONO  
KWATHU KUNO ZIMAFALITSA MATENDA  
KOMANSO ZIMADWALITSA ANTHU.



ANTHU OKWANA 200 MILIYONI  
DZIKO LONSE LAPANSI, AMAPEZEKA  
NDI TIZILOMBO TOYAMBITSA LIKODZO,  
AMBIRI MWA IWO NDIKHOCHOKERA KU  
MWERA KWA SAHARA, KU AFRICA

MU MATAWUNI NDI MIDZI YA  
M'MBALI MWA NYANJA KUNOKO,  
PAFUFUPI ALIYENSE ANAKHALAPO  
NDI TIZILOMBO TI PA NTHAWI  
INA YAKE.



UYU NDI NAMAZZI, NTHAWI  
ZONSE NDIAMULANGIZA ZA  
KUIPA KOSAMBIRA M'NYANJA  
KOMA SAMAMVA.

KOMATU MWANA ALIYENSE KUNO  
AMASAMBIRA M'NYANJA. NDE  
MUKUONA NGATI NDIZIKAZIZIRITSA  
KUTIKO NDIKATENTHEDWA?

NDASANGALALA KUKUMANA  
NAWE NAMAZZI. NDACHOKERA KU  
SCOTLAND, NDABWERA KUDZAMUONA  
MOSES KUTI NNDIZIWE ZAMBIRI ZA  
NTCHITO IMENE AKUGWIRA.

PANO UKUPEZA  
BWANJI NAMAZZI?

PANG'ONO, NDAKHALA  
NDISAKUPITA KU SUKULU  
CHIFUKWA CHODWALA.

TIMAMUTCHA  
BAMBO WA NKHONO

KWA ANA NGATI NAMAZZI, LIKODZO  
LIMAYAMBITSA KUTSEGULA NDI KUPWETEKWA  
M'MIMBA. IZI, ZIMAPANGITSA ANA KUJOMBA  
KU SUKULU KOMANSO ANA WA AMAKHALA  
OTOPA KOMANSO ODWALA

KWA NTHAWI YAITALI, MAZIRA  
A NYONGOLOSI ZOYAMBITSA  
MATENDAWA, AMAMANGANA  
M'THUPI ZOMWE ZIMAKHALA  
ZOOPSA KWAMBIRI

KOMA IZIZI  
SIZINGAKUCHITIKILE IWEYO  
NAMAZZI CHIFUKWA  
UPATSIDWA THANDIZO  
KOMANSO UKHALA KUTALI  
NDI MADZI, SICHONCHO?

IZI  
NDIZOONA  
MOSES.

TIMALANDILA MAPIRITSI AWULERE OCHOKELA  
KU BUNGWE LA WORLD HEALTH ORGANISATION, NDIPO  
NDIKOSAVUTA KUWAPATSA ANTHU CHITHANDIZO  
KUSIYANA NDIKUWAYEZA KAYE NGATI ALI  
NDILIKODZO KAPENA AYI

CHAKA CHATHA,  
TINAKWANITSA  
KUTHANDIZA  
ANTHU PAFUPIFUPI  
MAZANAMAZANA  
AWIRI.

KOMA PALI VUTO LOMWE TIKUKUMANA  
NALO, CHIWERENGERO CHA ANTHU ODWALA  
LIKODZO CHIKUMAKHALA CHOKWERA NTHAWI  
ZONSE TIKABWERANSO. IZI ZIKUSONYEZA  
KUTI ANTHU AKUMATENGABE LIKODZO

NAMAZZI, UYU NDI POPPY. AKUTSOGOLERA GULU LOCHOKERA KU WELCOME CENTRE FOR INTEGRATIVE PARASITOLOGY AMENE ALI PAKAFUKUFUKU WOPEZA NJIRA YOTHETSERA KUFALA KWA LIKODZO

HI!

NDASANGALALA TAKUMANA

EKO! TASONKHANITSA ZIYEZO ZA CHIMBUDZI KUTI ZI YEZEDWE!

KOMA ABALE!

ZIYEZO ZA CHIMBUDZI?

MAZILA OYAMBITSA MATENDAWA AMATULUKA M'THUPI KUZERA M'CHIMBUDZI. UMU NDI MMENE TIZILOMBO TI TIMAPEZEKA TABWELELA M'MADZI NDI NKHONO

POYANG'ANA MAZILA A TIZILOMBO TI MU CHIMBUDZI, TIMATHA KUDZIWA AMENE ALI NDI MATENDA WA KOMANSO TIMATHA KUUNIKA MAJINI A TIZILOMBO TOBISIKATI.

NDAZILEMBETSERA NTCHITO YANJI KODI?

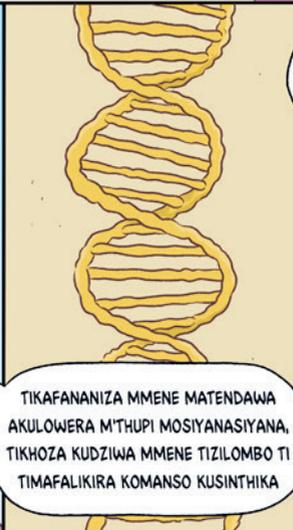
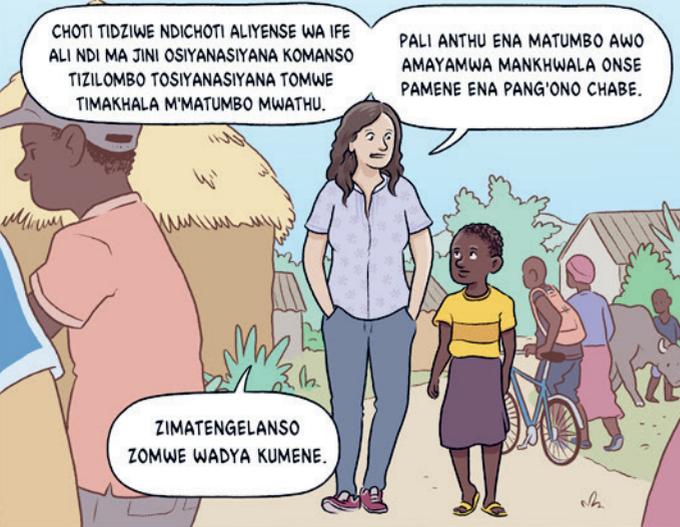
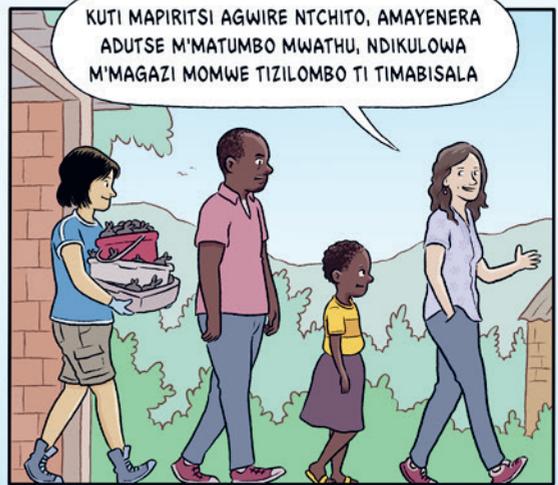
TIYENI TIYAMBEPO KUSEFA.

NDI CHITHUNZITHUNZI CHAMA JINI, TIMATHA KUDZIWA MMENE TIZILOMBO TI TIMAGWILIRA NTCHITO KOMANSO MMENE TIMAFANANIRANA. CHIFUKWA CHA IZI, TIKHOZA KUPHUNZIRA ZAMBIRI

NDIKUONANSO CHONCHOTU.

TIZILOMBO TOYAMBITSA LIKODZO







NGAKHALE TITAPEZA MWAYI  
WOPEZA NDI KUTHANA NDI MATENDA  
WA MWA ANTHU, NYANJA ZATHU  
ZIKANALI ZODZADZA NDI NKHONO  
ZOMWE ZILI NDI TIZILIMBO TAMBIRI  
TOYAMBITSA LIKODZO



ANTHU AMBIRI AMAKHALA MAOLA  
AMBIRI ALI M'MADZI AKUCHAPA ZOVALA  
NDI KUWEDZA NSOMBA, KUMENE  
KUMAONJEZERETSA MWAYI WOPEZKA  
NAWO MATENDA WA

NDIPO NTHAWI ZINA, ZOIPA  
ZOKHOKERA KUCHIMBUDZI,  
ZIMATHANSO KULOWA M'NYANJA.  
UMU NDI MMENE TIZILIMBO TI  
TIMAPEZEKA TACHOKA M'THUPI LA  
MUNTHU NKUBWERELANSO  
NDIKUKALOWA MU NKHONO,  
NKUYAMBILANSO NDONDOMEKO  
YONSE MMENE MATENDAWA  
AMAYAMBIRA.



NDIYE, TIKUNGOYENERA KUKHALA A LUSO.  
SITIMANGOLEMBA AKATSIWIRI AZA SAYANSI  
OKHA AYI, KOMANSO TIMALEMBA AKATSIWIRI  
OONA ZA CHUMA NDI AKATSIWIRI  
AZACHIKHALIDWE KOMANSO AZISUDZO

AZISUDZO?



TAPEZA AZISUDZO OMWE AZITHANDIZIRA KUFALITSA  
UTHENGA WA KAPEWEDWE KA MATENDAWA

INDEI,  
OSACHITA  
CHIMBUDZI  
M'NYAJA

TIKUYESETSA KUWAFIKILA ANTHU AMENE AMAKANA CHITHANDIZO  
POWAONETSA MMENE KACHILOMBOKA KAMAFALITSIKIRA



AKATSIWIRI AZACHIKHALIDWE AMATITHANDIZA KUMVETSA  
ZISANKHO ZOMWE ANTHU AMAPANGA. MWA CHITSANZO, ANTHU  
AMADALIRA MADZI OMWEWO PA MOYO WAWO WA TSIKU NDI TSIKU



PANO, TIMAWALETSA ANTHU KUCHAPA ZOVALA ZAWO  
ALI CHIYIMIRIRE MMADZI. TSPANO, AMACHAPIRA PA  
MTUNDA, ZOMWE ZIMATHANDIZA KUCHEPETA  
KUTENGA TIZILIMBO TOYAMBITSA LIKODZO TU



ZOONA ZAKE NDIZAKUTI, UMPHAWI UMATENGA GAWO LALIKULU PA MATENDA WA. MADERA AMENE ALI OSAUKA AMAKUMANA NDI MAVUTO OCHULUKA OKHUDZA UKHONDO AMENE AMAPANGITSA MATENDA KUCHULUKA. PAMENEPA NDIPAMENE AZACHUMA AKU GLASGOW AMABWERAPO.

AMAGWIRA NTCHITO NDI ANTHU AMU MIDZI KUTI APEZE NJIRA ZODALILIKA, ZODZIWIKA KOMANSO ZOSABOOLA NTHUMBA KUTI ABWELETSE ZIMBUDZI KOMANSO MADZI AUKHONDO MU MADELA MWAWO.



POPEZA NJIRA ZOKHAZIKIKA ZOPITITSA PATSOGOLO UKHONDO, TITHA KUKWANITSA KUPEWA CHIMBUDZI KAPENA MIKODZO KULOWA M'NYANJA KOMANSO KULIMBANA NDI NJIRA ZOMWE MATENDAWA AMAYAMBIRA NDI KUFALIKIRA.



KOMA NDE ZABWINOTU KWA ANTHU OSAMBILAFE

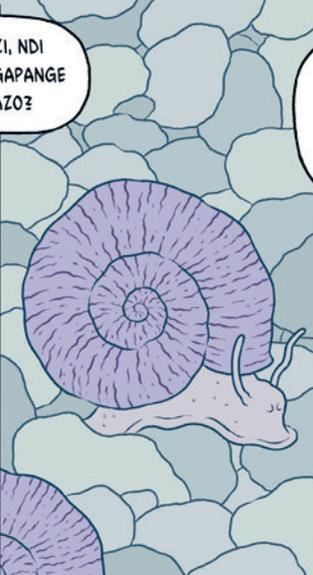


UM, OSAMBILA AKALE



NANGA NKHONO ZI, NDI CHANI CHOMWE TINGAPANGE KUTI TITHANE NAZO?

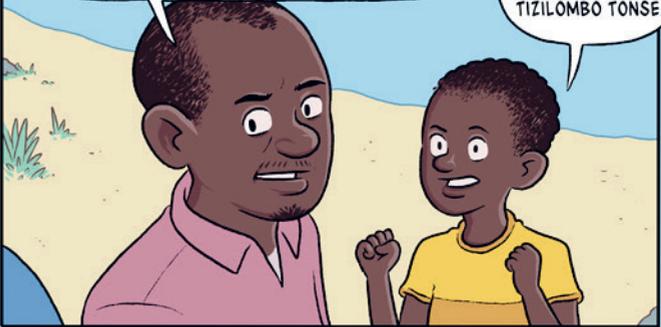
NDIKUONA NGATI KUZIPONYA MU DIMBA LA NEBA SIZINGAKHALE BWINO?



NTHAWI ZINA, TIMAGWIRITSA NTCHITO MANKHWALA POFUNA KUPHA NKHONOZI, KOMA SITINGAKWANITSE KUZIPHA ZONSE KOMANSO ZILI NDI KUFUNIKIRA KU CHILENGEDWE



INETU NDINKAGANIZA KUTI TITHANE NDI MATENDA WA, TIKUYENERA KUKHALA NDI MANKWALA OYENELERA, KOMA NDAONA KUTI NDI ZOVUTIRAPO.



NGATI TIKUFUNA KUSINTHA MIYOYO YA ANTHU, TIKUYENERA TIPHATIKIZE NJIRA ZODALILIKA ZONSE, KUSINTHA CHIKHALIDWE CHATHU NDI KUKHALA A UKHONDO

KOMANSO KUTHANA NATO NDI TIZILOMBO TI POKUPHA TIZILOMBO TONSE.



KUTIPHA TONSE? OSAKHALA NDI PHUMA



NAMAZZI, UYU NDI RICK, KATAKWE PA NKHANI ZA NYONGOLOTSI!

NDIZOONA, TIZILOMBO TOONEKA NGATI NYONGOLOTSI TI NDITOOPSA. TIZILOMBO TI, TAKHALA TILI PAKATI PATHU CHILENGELENI DZIKO LAPANSI.

KUYAMBILA NTHAWI IMENYO, TAKHALA TIKUSINTHA MODABWITSA POFUNA KUKHALABE NDI MOYO M'MATUPI ATHU



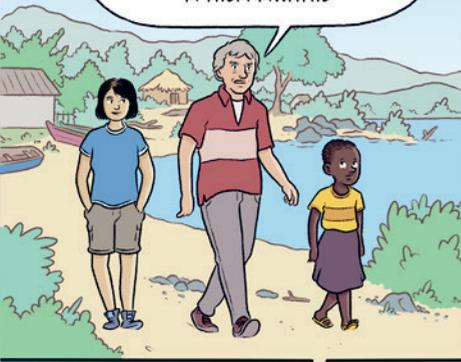
PALI TIZILOMBO TAMBIRI TOONEKA NGATI NYONGOLOSI. TINA MWA TIZILOMBO TI TILI NDIKUTHEKERA KOSOKONEZA CHITETEZO CHATHU CHA M'THUPI, CHIMENE CHIMATHANDIZIRA KULIMBANA NDI TIZILOMBO TOSAFUNIKA M'THUPI!



NDIYE?

NDE MWINATU TIZILOMBO TI TIKHOZA KUTIPHUNZITSA ZINTHU ZINGAPO

MATENDA AMBIRI MONGA MPHUMO, ZIWENGO NDI MITUNDU INA YA NYAMAKAZI ZIMAYAMBA PAMENE CHITETEZO CHATHU CHA M'THUPI CHASOKONEKERA POLIMBANA NDI ZINTHU ZOMWE ZILIBE VUTO M'THUPI MWATHU



KUKHALA NDI TIZILOMBO TOONEKA NGATI NYONGOLITSI TI KULI NDI KUTHEKERA KOTHETSA ENA MWA MATENDA A CHITETEZO CHA M'THUPI WA. NDIPO, KAFUKUFUKU ALI MKATI PAKALI PANO MOTI ENA MWA ODWALA MATENDAWA AKUMABAYIDWA NYONGOLITSI KUTI ACHIRE

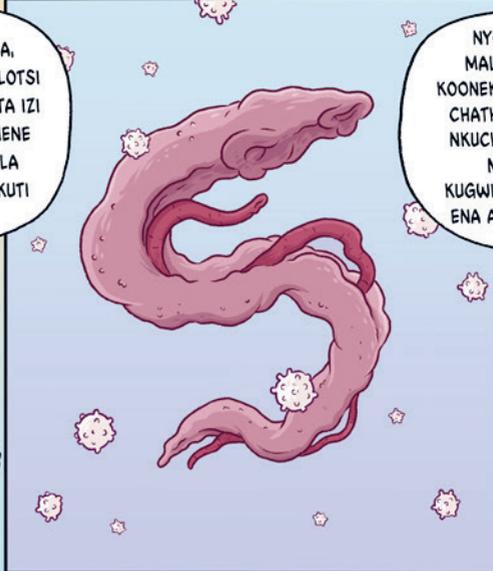
EW.



EYETU, NGAKHALE ZIKUTHANDIZA, KUDWALA CHIFUKWA CHA NYONGOLITSI ZI SIKWABWINO. NDIYE TIKUMACHITA IZI NDI CHOLINGA CHOTI TIDZIWE MMENE NYONGOLITSIZI ZIMASOKONEZELA CHITETEZO CHATHU CHA M'THUPI KUTI ZIKHALE NDI MOYO



NYONGOLITSI ZINA ZIMALAVULA MALOVU OMWE ALI NDIKUTHEKERA KOONEKA NGATI MBALI INA YA CHITETEZO CHATHU CHA M'THUPI, PAMAPETO PAKE NKUCHEPETA CHITETEZO AKHOZA. KAPENA MWINA MALOVU WA AKHOZA KUGWIRITSIDWA POCHEPETA MATENDA ENA A ZA CHITETEZO MONGA MPHUMO



ZIMAKOPELA CHITETEZO CHATHU CHA M'THUPI, TSOPANO NANU MUFUNA MUZIKOPELE?



UMM, NDALIMBIKITSIDWA. KULIMBIKITSIDWA NDI NYONGOLITSI ZIKUMVEKA NGATI NTHABWALA



NDENDENDE!



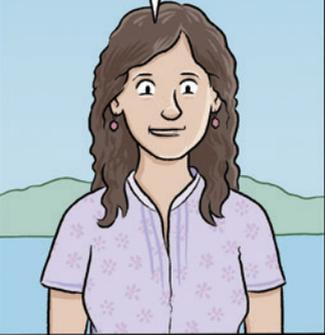
KUSINTHA KWA NYONGOLITSI KUTI ZI ZIKHALA BWINO NDI ANTHUFE KUNGATHENSO KUPEKA MWAYI OZIGONJETERA KAPENA KUGONJETA MATENDA ENA. MMENE NDIANENERA MU, ZIDA ZINA ZIMENE TINGAGWIRITSE NTCHITO ZIMACHOKERA M'MALO ODABWITSA NDITHU.



SINDIMADZIWA KUTI ANTHU ALI KALIKILIKI KUGWIRA NTCHITO MOLIMBIKA KUTI INE NDI ANZANGA TIZIKHALA BWINO, TISAMADWALEDWALE.



TIZILOMBO TOKHALA NGATI NYONGOLOTSI TI TIMAPANGITSA ANTHU KUTI AZIVUTIKA, AMAPEZEKA SAKUPITA KUNTCHITO KOMANSO KU SUKULU NDIPONSO TIMAYAMBITSA MAVUTO AMGONAMGONA PA MOYO WAWO.



TILI NDI CHIKHULUPIIRO KUTI TSIKU LINA MATENDAWA TIDZAKWANITSA KUWAGONJETSA



MWINA MKATI MWA NDIMEMU, TIKHOZA KUPINDULA POPEZA NDIKUGWIRITSA NTCHITO ZINSINSI ZINA ZA TIZILOMBO TI



MWINA INE NKHUKHALA OTETEZEKA POKASAMBILA KOMANSO A BAMBO ANGA POKAWEDZA NSOMBA



TSIKU LINA. PANOPA UZDIKUMBUKILA KUTI ULI NDI ANTHU NGATI MOSES, POPPY NDI RICK OCHOKELA KU KAMPALA MPAKA KU GLASGOW OMWE ALI PAKALIKILIKI KUGWIRA NTCHITO MOLIMBIKA KUTI ATHANE NAWO MATENDAWA



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parasitology



WELLCOME CENTER FOR INTEGRATIVE PARASITOLOGY IMAPEZEKELA KU  
SUKULU YA UKACHENJEDWE YA GLASGOW. NTCHITO YATHU YAIKULU NDI  
KUFUFUZA ZA MMENE TIZILOMBO TOYAMBITSA MATENDA  
OSIYANASIYANA TIMAGWILRA NTCHITO M'THUPI MWA MUNTHU KUTI  
TIPEZE MANKHWALA NDI NJIRA ZOTIGONJETSERA

KUTI MUDZIWE ZAMBIRI ZA NTCHITO YATHU, ONANI TSAMBA LA INTANETI  
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KAPENA CHEZANI NAFE PA TSAMBA LA MCHEZO LA TWITTER  
[@WCIPGLASGOW](https://twitter.com/WCIPGLASGOW)

TIKUTHOKOZA DR POPPY, DR RICK. DR VICKIE NDI ONSE AMENE ANATENGAPO GAWO  
POWELENGA BUKULI KUTI LIMVEKE BWINO

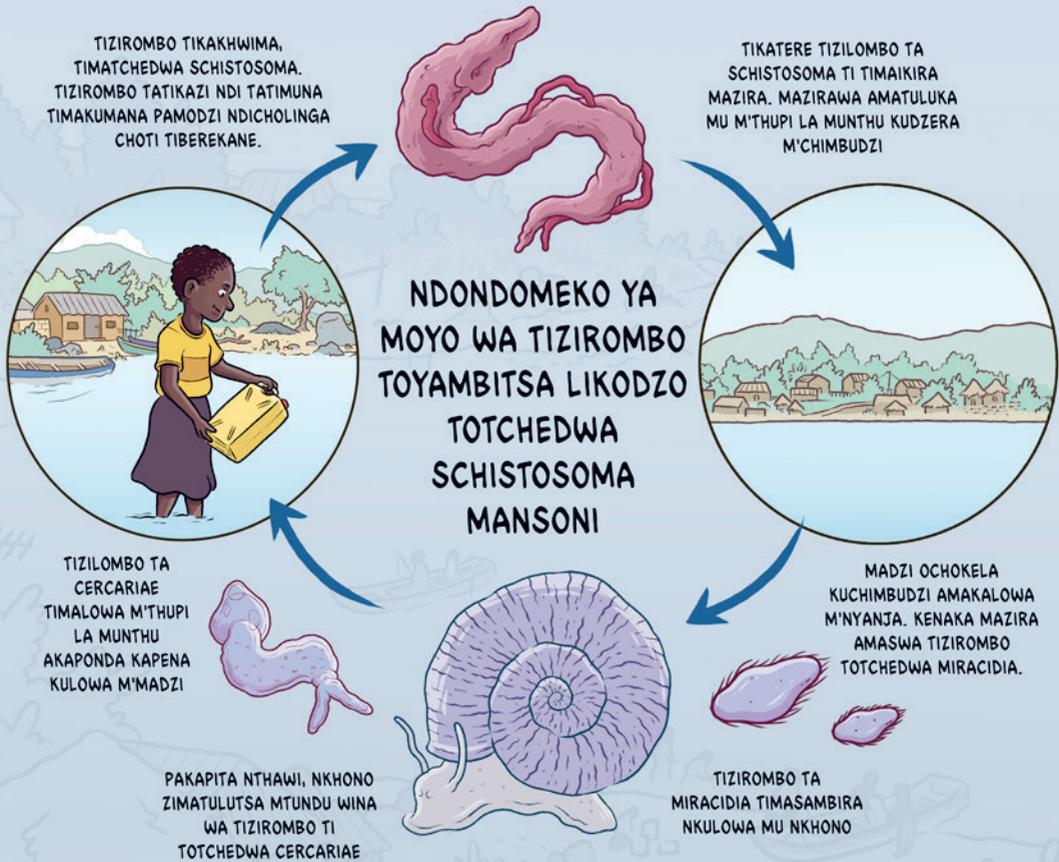
ZAMBIRI ZA OLEMBA BUKU LA NTHABWALI MUZNGAZIPEZE PA

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[WWW.JPJHALL.NET](http://WWW.JPJHALL.NET)

KHALANI NAWONI A KATSWIRI AZASAYANSI OCHOKERA KU GLASGOW  
 PAMENE ALI PA ULENDU WOPITA KU UGANDA KUKAFUFUZA ZA CHINSINSI  
 CHA NYONGOLOTSI ZOYAMBITSA MATENDA NDI KUDWALADWALA KWA  
 ANTHU PADZIKO LONSE LAPANSI

MBALI IMODZI YA NKHANI ZA TIZIROMBO IMENE INAWINA MPHOTO



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