

At last, a book that will allow you to identify most of the amphibians found in the world famous biodiversity hotspots of the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya. This guide allows both the English and the Swahili reader to identify and obtain natural history and conservation information for the 122 species of amphibians found in the hotspots. In addition, the book provides important background information on habitat types and presents a historical perspective for those not familiar with the area and its fauna.

I strongly recommend this book to anyone interested in the conservation of amphibians, as well as those with a specific focus on the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya. Its publication in both English and Swahili will for the first time make such information accessible and widely available in the East African region.

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Field Guide to the Amphibians of the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya
Amfibia wa Milima ya Tao la Mashariki na Misitū ya Pwani ya Tanzania na Kenya



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Elizabeth B. Harper, G. John Measey,
David A. Patrick, Michele Menegon and
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Preface

This guide was begun in 2002 as a field guide to the amphibians of the East Usambara Mountains in Tanzania, with a focus on the species found at Amani Nature Reserve. Corodius Sawe, then head conservator of the reserve suggested the idea to James Vonesh who was at Amani conducting research on the ecology of *Hyperolius spinigularis*. At the time, I was in Tanzania working on a project supported by the Watson Foundation to observe and photograph frogs. I was very fortunate to stumble upon Amani Nature Reserve. There I met David Patrick, who was familiar with the amphibian fauna of Amani through his M.Sc. research and he gave me a quick introduction to the species at Amani Pond. Dave and I were married four years later and continue to collaborate on amphibian research. James has been a wonderful mentor to us both and was instrumental in getting this project off the ground. With support from Mr. Sawe, James and I worked on the initial draft of the guide for six weeks at Amani. It remained in the form of a 'preliminary draft' available on the web in pdf form for several years. When CEPF, the Critical Ecosystem Partnership Fund, began investing heavily in efforts aimed at conserving the biodiversity of the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya, we received funding to publish the guide. CEPF requested that we expand the area covered by the guide and incorporate the results of amphibian research supported by CEPF throughout the Eastern Arc and Coastal Forests. Since these efforts were begun in 2004, an overwhelming number of new amphibian species have been discovered, many of which have yet to be named. Fortunately, Michele Menegon and John Measey, who have spent countless hours in the field over the past few years, were willing to collaborate with us as we expanded the guide far beyond its original scope. We are also appreciative of the enthusiastic encouragement and helpful advice from many other herpetologists working in East Africa. It has been a pleasure to work among such a generous and collegial group of people.

Elizabeth Harper

Utangulizi

Kazi ya kuandika kitabu hiki ilianza mwaka 2001 kama kitabu juu ya amfibia wa Milima ya Usambara Mashariki nchini Tanzania, kilichokuwa kinalenga spishi zinazopatikana kwenye Hifadhi ya Amani. Corodius Sawe, aliyekuwa Mhifadhi Mkuu wa Hifadhi ya Amani alimshauri kuandika kitabu James Vonesh ambaye alikuwa Amani akifanya utafiti juu ya ikolojia ya *Hyperolius spinigularis*. Wakati huu, mimi nilikuwa nchini Tanzania kwenye mradi uliogharimiwa na Watson Foundation, nikifanya utafiti wa vyura na kuwapiga picha. Nilipata bahati kubwa ya kufika Hifadhi ya Amani. Nikiwa Amani, nilikutana na David Patrick, aliyekuwa anawafahamu vizuri amfibia wa Amani kutokana na utafiti wake wa shahada ya uzamili ya sayansi na alinipatia maelezo juu ya spishi za Bwawa la Amani. Dave na mimi tulifunga ndoa miaka minne baadaye na tunaendelea kushirikiana kwenye utafiti wa amfibia. James ameendelea kuwa mwalimu wetu mzuri na alikuwa mtu muhimu sana katika kuanzisha mradi huu wa sasa wa kuandika kitabu. James na mimi, tukisaidiwa na Sawe, tulitayarisha rasimu ya kwanza ya kitabu katika kipindi cha majuma sita tukiwa Amani. Maandiko hayo yalibaki "rasimu ya awali" ya pdf kwenye tovuti kwa miaka kadhaa. The Critical Ecosystem Partnership Fund (CEPF), ilipoanza kufadhili kwa kiasi kikubwa uhifadhi wa Milima ya Tao la Mashariki na Misitu ya Pwani (MTMMP) nchini Kenya na Tanzania, ilitupa fedha kwa ajili ya kuchapisha kitabu. CEPF ilitushauri tupanue eneo linaloshughulikiwa kwenye kitabu na kujumuisha matokeo ya utafiti unaogharimiwa na CEPF kwenye eneo lote la Tao la Mashariki na Misitu ya Pwani. Tangu kazi ilipoanza mwaka 2004, spishi nyingi zimegunduliwa na nyingi bado hazijapewa majina. Bahati nzuri, Michele Menegon na John Measey, ambao wametumia muda mwingi wakifanya utafiti kwa miaka kadhaa, walikuwa tayari kushirikiana nasi tulipokipanua kitabu hiki zaidi ya tulivyokusudia mwanzoni. Aidha tunashukuru sana wataalam wengine wa amfibia na nyoka kwenye eneo la Afrika Mashariki kwa kututia moyo na kutupa ushauri. Tumefurahia sana kuweza kufanya kazi na kundi hili la wataalam ambao wako tayari kushirikiana nasi na kubadilishana nasi uzoefu wao.

Elizabeth Harper

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Shukrani

Gharama za uchapishaji wa kitabu hiki zimelipwa na Critical Ecosystem Partnership Fund (CEPF). Aidha, utayarishaji wa toleo la awali la kitabu hiki ulifadhiliwa na Watson Foundation (EBH) pamoja na NSF DDIG na EPA STAR Fellowship (JRV). Hifadhi ya Amani na Idara ya Misitu na Nyuki ya Tanzania zilitoa msaada wa fedha na usafiri wakati wa kufanya utafiti. Waandishi wanamshukuru sana Bwana Corodius Sawe kwa msaada wake. Tunawashukuru pia Vanessa Smilansky, John Vanek, Kevin Deitz na Kelly Goodall, wanafunzi kutoka Idara ya Sayansi za Mazingira na Misitu ya Chuo Kikuu cha New York waliosaidia kufanya utafiti kwenye maktaba. Aidha, tunatoa shukrani kwa Imani Swilla wa Chuo Kikuu cha Dar es Salaam kwa kufanya tafsiri ya Kiswahili. Watu wengi walitupatia picha, wakiwemo Dave Blackburn, Alan Channing, Bob Drewes, Luke Mahler, Arne Schiøtz, na Martin Vestergaard. Shukrani za pekee ziwafikie wataalamu wenzetu, hususan Dave Blackburn, Kim Howell na Arne Schiøtz ambao walitoa ushauri muhimu wakati wa kufanya marekebisho ya maandiko ya awali.

The Eastern Arc Mountains and Coastal Forests - Biodiversity

The Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya (EACF) is a small area with remarkably high biodiversity. In less than 5000 km² of remaining natural habitat, it contains one of the highest densities of unique vertebrate and plant species found anywhere in the world (Fig. 1). These endemic species include more than 100 vertebrates and 800 plant species. Of the over 100 amphibians that occur in the EACF, over half are endemic or near-endemic. The EACF ecosystem is also one of the most endangered hotspots, with high rates of forest loss and degradation that threaten the future of these unique species. Updated information on the biodiversity hotspots can be found at: <http://www.biodiversityhotspots.org>.

Milima ya Tao la Mashariki na Misitu ya Pwani (MTMMP) - Bioanuai

Milima ya Tao la Mashariki na Misitu ya Pwani (MTMMP) ya Tanzania na Kenya ni eneo dogo kuliko yote duniani lenye spishi nyingi ambazo hazipatikani mahali pengine popote. Eneo hili lenye ukubwa chini ya kilomita 5000 za mraba lina msongamano mkubwa wa spishi za wanyama wengi wenye uti wa mgongo na za mimea kuliko eneo lingine lolote duniani (Mchoro 1). Spishi hizi ambazo zinapatikana kwenye eneo hilo tu ni zaidi ya 100 za wanyama wenye uti wa mgongo na zaidi ya spishi 800 za mimea. Kati ya vyura zaidi ya 100 wanaopatikana MTMMP, zaidi ya nusu yake hawapatikani mahali pengine popote au wanapatikana kwa nadra kwenye maeneo mengine. Aidha, eneo hilo la MTMMP ni mojawapo la maeneo ya spishi nyingi yanayotishiwa kutoweka; kasi ya kutoweka kwa misitu na uharibifu wa misitu vinatishia mustakabali wa spishi hizi zinazopatikana kwa nadra. Taarifa za karibuni juu ya maeneo yenye spishi nadra zinapatikana kwenye tovuti hii: <http://www.biodiversityhotspots.org>.



Figure 1 - The EACF hotspot contains over 50 reptile species found nowhere else in the world, including the West Usambara two-horned chameleon, *Kinyongia multituberculata*.

Mchoro 1 - Eneo la Tao la Mashariki na Misitua ya Pwani (MTMMP) lina zaidi ya spishi 50 za reptilia ambazo hazipatikani mahali popote pengine duniani, ikiwa ni pamoja na kinyonga mwenye pembe mbili, *Kinyongia multituberculata*, wa Usambara Magharibi.

The Eastern Arc Mountains

The Eastern Arc is made up of 13 separate mountain blocks running in a broken line from north to south, including the Taita Hills, North Pare, South Pare, West Usambara, East Usambara, Nguu, Nguru, Ukaguru, Uluguru, Rubeho, Malundwe, Udzungwa and Mahenge Mountains (Fig. 2). Forests in these mountains extend from 300 m at the base to over 2000 m. These mountains are ancient in origin having been formed by movement in the earth's crust 290-180 million years ago (mya), resulting in the creation of flat-topped mountains. However, the archipelago of Eastern Arc Mountains with which we are familiar today resulted from the most recent faulting some 7 mya at the same time as the formation of the Great Rift Valley. The age of the Eastern Arc can be compared with the much younger Mt. Kilimanjaro and Mt. Meru which were formed from volcanic eruptions within the past 1 million years. This history directly relates to the incredible biodiversity found in the Eastern Arc Mountains. The climate in these mountains is likely to have been relatively stable throughout their history, whereas the climate in the lowland areas between the mountains has fluctuated over time. The constant conditions in the Eastern Arc Mountains allowed them to serve as refugia for forest dependent species during periods when the lowlands became dry savanna rather than wet forest. These mountain top forest refugia have allowed many unique species to evolve and persist in the Eastern Arc.

Milima ya Tao la Mashariki

Tao la Mashariki lina makundi tofauti 13 ya milima ambayo haijaungana, inayotoka kaskazini hadi kusini. Milima hii ni pamoja na ile ya Taita, Pare Kaskazini, Pare Kusini, Usambara Magharibi, Usambara Mashariki, Nguu, Nguru, Ukaguru, Uluguru, Rubeho, Malundwe, Udzungwa na Mahenge (Mchoro 2). Misitu ya milima hii inaanzia kwenye mita 300 na kufikia zaidi ya mita 2000 kutoka usawa wa bahari. Milima ni ya kale sana na ilitokana na kusogea kwa tabaka la juu la dunia zaidi ya miaka milioni 290 hadi 180 iliyopita; matokeo yake ilikuwa ni milima yenye vilele vilivyo bapa (Tao la Mashariki). Lakini kundi la Milima ya Tao la Mashariki tunalolifahamu leo hii lilitokana na mpasuko wa chini ya ardhi takribani miaka milioni saba iliyopita, wakati Bonde la Ufa linatengenezwa. Umri wa Tao la Mashariki unaweza kulinganishwa na ule wa Milima Kilimanjaro na Meru, yenye umri mdogo zaidi ambayo ilizaliwa na milipuko ya volkano miaka milioni moja iliyopita. Historia hii ina uhusiano wa moja kwa moja na bioanuai nyingi sana iliyopo kwenye Milima ya Tao la Mashariki. Inaelekea kwamba tabia ya milima hii haijabadilika katika historia yao yote, wakati maeneo mengi sana duniani yalikuumbwa na mabadiliko makubwa ya tabia, ikiwa ni pamoja na kujitokeza kwa mito ya barafu (Lovett 1993). Kutokuwepo mabadiliko makubwa ya tabia kwenye Tao la Mashariki kuliwezesha spishi nyingi kubadilika taratibu na kutofautiana kwenye kila mlima na hivyo kuzalisha idadi kubwa sana ya spishi za pekee.

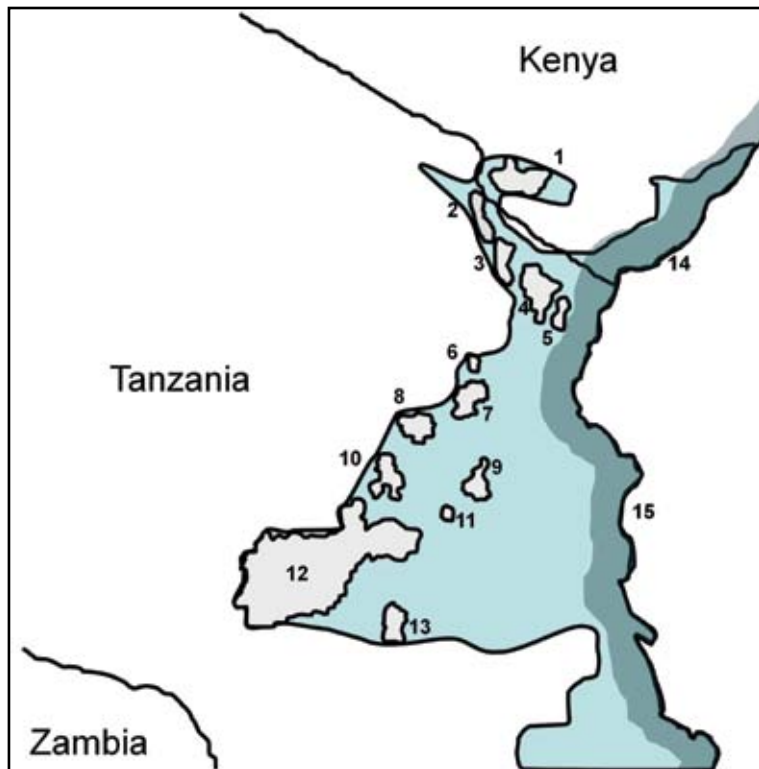


Figure - 2 Map of the Eastern Arc and Coastal Forests in Kenya and Tanzania. Ramani ya TMMP nchini Kenya na Tanzania. 1) Taita Hills; 2) North Pare Mountains; 3) South Pare Mountains; 4) West Usambara Mountains; 5) East Usambara Mountains; 6) Nguu Mountains; 7) Nguru Mountains; 8) Ukaguru Mountains; 9) Uluguru Mountains; 10) Rubeho Mountains; 11) Malundwe Mountains; 12) Udzungwa Mountains; 13) Mahenge Mountains; 14) Kenyan Coastal Forest; 15) Tanzanian Coastal Forest.

Mchoro - 2 Ramani ya MTMMP nchini Kenya na Tanzania. 1) Vilima vya Taita; 2) Milima ya Pare Kaskazini; 3) Milima ya Pare Kusini; 4) Milima ya Usambara Magharibi; 5) Milima ya Usambara Mashariki; 6) Milima ya Nguu; 7) Milima ya Nguru; 8) Milima ya Ukaguru; 9) Milima ya Uluguru; 10) Milima ya Rubeho; 11) Milima ya Malundwe; 12) Milima ya Udzungwa; 13) Milima ya Mahenge; 14) Milima ya Pwani ya Kenya; 15) Milima ya Pwani ya Tanzania.

The Coastal Forests

The Coastal Forest portion of the EACF consists of a mosaic of forest blocks and the drier savannah and woodland habitat that occur along the coast from the Kenyan border with Somalia to the Tanzanian border with Mozambique. The largest Coastal Forest patches both occur in Kenya, in the Shimba Hills (63 km²) and Arabuko-Sokoke (370 km²). Most coastal forests occur below 500 m elevation, but a few in Tanzania extend as high as 1,040 m. The geologic history of the Coastal Forests consists of frequent tectonic activity and shoreline shifts; however the proximity of the Indian Ocean provides a consistently warm and wet climate.

Misitu ya Pwani

Eneo la Misitu ya Pwani iliyopo katika MTMMP ni mchanganyiko wa vipande vya misitu, savana na miombo ambazo zipo pwani kuanzia kwenye mpaka kati ya Kenya na Somalia hadi mpakani mwa Tanzania na Msumbiji. Misitu ya pwani mikubwa kuliko yote inapatikana Kenya, katika Milima ya Shimba (63 km²) na Arabuko-Sokoke (370 km²). Idadi kubwa ya misitu inapatikana chini ya mita 500 kutoka usawa wa bahari, lakini misitu michache nchini Tanzania inapatikana hadi kwenye mita 1,040 kutoka usawa wa bahari. Historia ya jiojio ya misitu ya pwani inaonyesha kwamba misitu hii ilitokana na kusogea kwa tabaka la dunia mara kwa mara na mabadiliko ya fukwe; hata hivyo, unyevu na joto la Bahari ya Hindi ulitengeneza mazingira mazuri kwa maendeleo ya spishi nyingi.

Climate

The climate of the EACF is extremely moist because the mountains collect water coming from the Indian Ocean. Annual rainfall can be as high as 3000 mm on the eastern mountain slopes and typically ranges from 900 – 1400 mm in the Coastal Forests. This rain falls principally in two rainy seasons in the northern Eastern Arc with the long rains occurring from March to May and the short rains from October to December. In the south there is a single rainy season from December to April. The temperature can range widely from 10 – 31°C depending on the season and altitude. The hottest month is January and the coldest month is July. Frosts are not uncommon at high altitudes (>1800 m) in the dry season.

Tabia ya Nchi

Maeneo ya MTMMP yana hewa yenye unyevunyevu wa kiwango cha juu sana kutokana na milima kukusanya maji ya Bahari ya Hindi. Kiasi cha mvua kwa mwaka kinafikia 3000 mm kwenye miteremko ya milima ya mashariki na kati ya 900 mm hadi 1400 mm kwenye milima ya pwani. Kuna misimu miwili ya mvua kwenye eneo la kaskazini la Tao la Mashariki, ambapo mvua za masika zinanyesha kati ya Machi na Mei na mvua za vuli kati ya Oktoba na Desemba. Eneo la kusini la Tao la Mashariki lina msimu mmoja wa mvua, kuanzia Desemba hadi Aprili. Hali ya joto inatofautiana kati ya 10°C na 31°C, kufuatana na mwinuko kutoka usawa wa bahari; mara nyingi kuna jalidi kwenye maeneo ya juu kutoka usawa wa bahari (zaidi ya 1800 m) wakati wa kiangazi.

Amphibian Habitat Types

The Eastern Arc Mountains and Coastal Forests encompass a wide range of habitat types that are defined largely by elevation and rainfall patterns which in turn influence vegetation (Table 1; Fig. 3). Each amphibian species in the EACF is found in only a subset of these habitats. Schiøtz (1999), for example, divided the African treefrogs into three categories based on their habitat associations: the savanna fauna, forest fauna, and bushland or farmbush fauna. Amphibian breeding habitats also tend to be species specific (Fig. 4). Some species lay eggs directly in the leaf litter of the forest floor (e.g. *Arthroleptis* species), and other species give birth to live young (e.g. *Nectophrynoides* species) but most of the amphibians in the EACF lay eggs in or near water. These water bodies can include roadside ditches and puddles, streams, flooded grasslands, swamps and permanent ponds.

Aina za Mazingira wanapopatikana Vyura

Milima ya Tao la Mashariki na Misitu ya Pwani ni maeneo ambayo yana aina mbalimbali za mazingira yenye miinuko na mifumo ya mvua, hali ambayo inaathiri uoto pia (Jedwali 1; Mchoro 3). Kila spishi ya vyura kwenye MTMMP inapatikana kwenye kundi moja tu la mazingira na siyo mengine. Kwa mfano, Schiøtz (1999) aligawanya vyura miti wa Afrika katika makundi matatu kutokana na mazingira yao: vyura miti wa savana, vyura miti wa misituni, vyura miti wa vichakani na vyura miti wa mashambani. Aidha, tabia ya kuzaliana ya vyura ni tofauti kwa kila spishi (Mchoro 4). Baadhi ya spishi zinataga mayai moja kwa moja kwenye majani ya chini ya msituni (kwa mfano spishi ya *Nectophrynoides*), wengine wanazaa watoto (kwa mfano *Nectophrynoides*) lakini idadi kubwa ya vyura wa MTMMP wanataga mayai majini au karibu na maji. Maji hayo ni pamoja na ya mifereji, kandokando ya barabara, vijito, nyika, mabwawa na madimbwi.

| Habitat Type Aina ya mazingira | Elevation (m) Urefu kutoka usawa wa bahari (m) | Rainfall (mm/yr) Kiwango cha mvua (mm kwa mwaka) | Vegetation Uoto |
|---|---|---|--|
| Upper montane forest Misitu ya juu, zaidi ya 1200 m kutoka usawa wa bahari | > 1800 | > 1200 | Trees 10 – 20 m high Miti, urefu wa 10 - 20 m |
| Montane grassland Nyasi, zaidi ya 1200 m kutoka usawa wa bahari, | > 1800 | > 1200 | Grasses and sedges Nyasi na mafunjo |
| Montane forest Misitu, zaidi ya 1200 m kutoka usawa wa bahari, | 1200 – 1800 | > 1200 | Trees 25 – 40 m Miti, urefu wa 25 - 40 m |
| Dry montane forest Misitu kame, zaidi ya 1200 m kutoka usawa wa bahari, | > 1500 | 100-1200 | Trees 10 – 20 m Miti, urefu 10-20 m |
| Submontane forest Misitu, takribani 1200 m | 800-1400 | > 1500 | Trees 25 – 40 m Miti, urefu 25-40 m |
| Lowland forest Misitu ya maeneo tambarare | < 800 | > 1500 | Trees 25 – 40 m Miti, urefu 25-40 m |
| Miombo woodland* Miombo* | 200 – 900 | 800 – 1200 | Trees 8 – 18 m Miti, urefu 8-18 m |
| Lowland grassland* Nyasi, maeneo tambarare* | 800 | 500-1000 | Grasses and sedges Nyasi na mafunjo |
| Bushland* Maeneo ya vichaka* | < 800 | 500-1000 | Shrubs < 6 m Vichaka, < 6 m |

Table 1 General habitat types found in the Eastern Arc Mountains and Coastal Forests.

Jedwali 1 Aina za Mazingira ya Tao la Mashariki na Misitu ya Pwani.

*These habitats are often included in the more general term 'savanna'

* Mara nyingi, mazingira haya yanajumuishwa chini ya neno 'savanna'



a)



b)



c)

Figure - 3 Some of the common habitat types found in the EACF: a) Montane forest in the West Usambara Mountains; b) Bushland habitat between the West and East Usambara Mountains; c) Montane grassland.

Mchoro - 3 Baadhi ya aina ya mazingira ya MTMMP ni: (a) Misitu iliyopo zaidi ya mita 1200 kutoka usawa wa bahari kwenye Milima ya Usambara Magharibi; b) Eneo la vichaka kati ya Milima ya Usambara Magharibi na Usambara Mashariki; (c) nyika zilizopo zaidi ya mita 1200 kutoka usawa wa bahari.



a)



b)



c)

Figure - 4 Habitats used for breeding by some EACF amphibians: a) a montane forest stream, breeding habitat for *Phrynobatrachus krefftii*; b) *Ptychadena anchietae* in amplexus in a roadside puddle; c) a foam nest of *Chiromantis petersii*.

Mchoro - 4 Mazingira yanayotumiwa na vyura wa MTMMP wakati wa kuzaliana: (a) vijito vilivyopo zaidi ya mita 1200 kutoka usawa wa bahari kwa ajili ya *Phrynobatrachus krefftii*; (b) dimbwi la barabarani ambapo dume la *Ptychadena anchietae* linampanda jike; (c) nyavu za povu za *Chiromantis petersii* juu ya dimbwi la muda kwenye savanna.

A Historical Perspective

The history of European involvement in Tanzania and Kenya is reflected in the taxonomic history of the amphibians of the Eastern Arc and Coastal Forests (Fig. 5). European naturalists showed little interest in the forests of the Eastern Arc Mountains until the second half of the 19th century. Several of the amphibian species that occur in the region were described as early as 1841, however, these were widespread species described primarily from South Africa, Mozambique and Senegal. The German naturalist and explorer Wilhelm Peters described 6 EACF species collected during his travels from Mozambique to Angola in 1842 – 1848. Later, in 1878, he described three additional EACF species from the Taita Hills in Kenya.

The earliest amphibian specimens from the EACF were collected and described in the mid to late 19th century when missionaries and explorers sent specimens to Europe where they were catalogued, described and named by museum zoologists. *Leptopelis flavomaculatus* was the first species described from a specimen collected in the EACF, at Rovuma Bay on the coast of Tanzania. The specimen was brought to the British Museum in London and described by Albrecht Günther in 1864. It is unclear who collected the specimen, but David Livingstone and other members of the Royal Geographic Society of London are known to have explored the Rovuma River around this time.

In the late 1800's the 'Scramble for Africa' began and European interests in the interior of Africa increased. Great Britain and Germany seized strategic ports in Kenya and Tanzania from Omani Arab control. By the late 1880's Kenya was a British colony and mainland Tanzania, then known as Tanganyika, was part of German East Africa. Over the next 20 years the number of amphibian species described in the EACF doubled. In 1880 Albrecht Günther invited George Boulenger to the British Museum in London. Boulenger described 555 amphibian species in his lifetime, seven of which occur in the EACF. The type localities for several of these early specimens are vague, such as "the interior of Africa" and "the vicinity of Lake Tanganyika," reflecting the unfamiliarity of the region to Europeans at the time.

In the early 1900's the Germans established extensive botanical gardens in the Amani area of the East Usambara Mountains in Tanzania. Amani became a center for agricultural and botanical research and is the type locality for 10 EACF amphibians. Some of these specimens were sent to Boulenger in London, others were among seven EACF species described by the German naturalist Fritz Nieden in 1911. Research continues to be carried out at Amani today, and the amphibian fauna of this area is perhaps better studied than that of any other location in the Eastern Arc Mountains.

Arthur Loveridge, often considered the greatest contributor to East African amphibian studies, also described species from Amani, including *Hyperolius mariae*, which he named for his wife Mary. Loveridge was hired at the museum in Nairobi, Kenya in 1914, but due to the outbreak of World War I he joined the British East African Mounted Rifles shortly after. He collected specimens during his three years in the military, but did not describe any EACF species until moving to Harvard's Museum of Comparative Zoology in the United States in 1924. In 1925 he described *Mertensophryne micranotis* and in 1928 he described 9 EACF species in collaboration with museum curator Thomas Barbour. Loveridge led expeditions in Kenya and Tanzania from 1929 – 1939 and continued describing new species until the 1950's. His contribution to the knowledge of the caecilian fauna is particularly noteworthy as his efforts more than doubled the number of known species in the EACF.

A lull in EACF amphibian research began during World War II (1939 – 1945) and did not come to an end until the 1970's. In 1971 and 1972 Jean-Luc Perrett described two *Nectophrynoides* species from the Uluguru Mountains. Alice Grandison conducted research in the EACF in the 1970's and 80's, describing two new EACF species and reporting on the natural history of several EACF toads. Arne Schiøtz wrote "The Treefrogs of Eastern Africa" in 1975. This comprehensive guide described several new species and included the innovation of sound spectrograms of frog vocalizations. Schiøtz continued to describe new EACF species into the 1980's and 1990's and published an important volume, "Treefrogs of Africa" in 1999.

The use of sound spectrograms in the 1970's accompanied a new wave of amphibian research in the region. Advances in research techniques including cladistic analysis in the 1980's and genetic sequencing in the 1990's allowed an increased understanding of species relationships and geographic distributions. Massive taxonomic revisions informed by these techniques began in the 1980s and continue to this day. The early work in these areas included Robert Drewes' cladistic analyses of the treefrogs of Arabuko-Sokoke in Kenya as well as John Poynton's work focusing on the biogeography of sub-Saharan amphibians. Some of the most recent taxonomic revisions are summarized in Frost et al. 2006, "The Amphibian Tree of Life."

In the past 10 years over 20 new species have been described in the EACF and at least that many are still awaiting description. Many of these discoveries were made by volunteers and researchers working on biodiversity surveys for Frontier Tanzania, a collaboration between the University of Dar es Salaam and Britain's Society for Environmental Exploration. Increased research funding from the Critical Ecosystems Partnership Fund (CEPF) has also spurred a wave of new species discoveries in the region. Recent work by Michele Menegon, Simon

Loader, John Measey, Alan Channing, David Moyer and Martin Pickersgill, among others, has rapidly increased the number of species described in the EACF. Kim Howell's forest surveys and database of species distributions have also augmented our understanding of the amphibians in the region.

Although historically there were few local herpetologists in East Africa, an increasing number of Kenyans and Tanzanians are becoming involved in amphibian studies in the EACF. Charles Msuya received a Ph.D. from the University of Dar es Salaam in 2001 for his work on Coastal Forest amphibians. Wilirk Ngalason received an M.Sc. from the University of Dar es Salaam for his research on the Reproductive biology and ecology of anurans on the Lukwangu Plateau, Tanzania. Most recently, Patrick Malonza received a Ph.D. from the University of Mainz (Germany) for his studies of Taita Hills amphibians. He and his colleagues from the National Museums of Kenya, Nairobi, have studied many amphibians in the Kenyan areas of the EACF. Their well curated collection of over 300 000 specimens of reptiles and amphibians is a crown jewel for researchers visiting the region.

In many ways the history of EACF amphibian studies is just beginning. It will likely be decades before new species descriptions become a rarity in the region and even longer before we have a complete understanding of the basic natural history of these species. Unfortunately, the next few decades also have the potential to witness extinctions, especially for those species dependent on small patches of forest that are rapidly being degraded. For all of these reasons, the EACF offers tremendous opportunities for anyone interested in amphibians: locals and visitors, researchers, students and amateur naturalists.

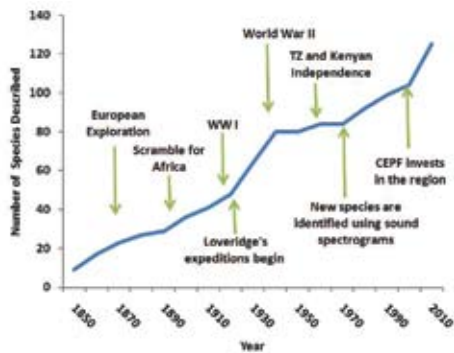


Figure - 5 Species accumulation curve for amphibians in the Eastern Arc and Coastal Forests, including dates of historically significant events.

Mchoro - 5 Idadi ya spishi zinazokamatwa katika muda maalum kwenye MTMMP, pamoja na tarehe za matukio makubwa kihistoria.

Mtazamo wa Kihistoria

Historia ya uainishaji wa vyura kwenye Tao la Mashariki na Misitu ya Pwani (MTMMP) inaaki kwa sehemu kubwa historia ya Wazungu nchini Tanzania na Kenya (Mchoro 5). Wazungu ambao walikuwa siyo wanasayansi lakini walivutiwa na elimu ya wanyama na mimea, hawakuwa na raghba na misitu ya Milima ya Tao la Mashariki mpaka kwenye nusu ya pili ya karne ya 19, ingawa spishi kadhaa za vyura katika eneo hilo zilifanyiwa utafiti mnamo 1841. Spishi hizo zilikuwa zinapatikana mahali pengi na zilizofanyiwa uainishaji zilitoka Afrika ya Kusini, Msumbiji na Senegal. Kwa mfano Mjerumani aliyependa wanyama na mimea na mvumbuzi, Wilhelm Peters alitayarisha maelezo ya spishi sita za MTMMP alizokamata wakati wa safari zake kutoka Msumbiji hadi Angola kati ya mwaka 1842 na 1848. Baadaye, mwaka 1878, alitoa maelezo ya spishi zingine tatu za MTMMP kutoka Milima ya Taita, nchini Kenya.

Vielelezo vya kwanza kabisa kutoka MTMMP vilikamatwa na kuainishwa katikati hadi mwishoni mwa karne ya 19 wakati wamisionari na wavumbuzi walipotuma vielelezo Ulaya, ambapo viliainishwa na kupewa majina na wataalam wa wanyama kwenye majumba ya kumbukumbu. *Leptopelis flavomaculatus* ilikuwa spishi ya kwanza kutolewa maelezo, kutokana na kielelezo kilichokamatwa MTMMP, kwenye ghuba ya Rovuma iliyopo pwani ya Tanzania. Kielelezo kilipelekwa Jumba la Kumbukumbu la Uingereza mjini London na kuelezewa na kupewa jina na Albrecht Gunther mwaka 1864. Haijulikani nani alikamata kielelezo hicho lakini David Livingstone na watu wengine wa Royal Geographical Society ya London walifanya uchunguzi wa Mto Ruvuma katika kipindi hicho.

Mwishoni miaka ya 1880, kugawanywa kwa bara la Afrika kulianza na Wazungu wakavutiwa na Afrika. Nchi za Uingereza na Ujerumani zilitwaa bandari muhimu Kenya na Tanzania kutoka utawala wa Waarabu wa Omani. Ilipofika mwishoni mwa miaka ya 1880, Kenya ilikuwa koloni la Uingereza, Tanzania Bara, iliyokuwa inaitwa Tanganyika wakati huo, ikawa sehemu ya nchi za Afrika Mashariki chini ya Ujerumani. Katika kipindi cha miaka 20 iliyofuata, idadi ya spishi za vyura zilizotolewa maelezo na kupewa majina kwenye MTMMP ziliongezeka maradufu. Mwaka 1880, Albrecht Günther alimwalika George Boulenger kwenye Jumba la Kumbukumbu la Uingereza mjini London. Boulenger alizielezea na kupata majina spishi za amfibia zaidi ya 555 katika uhai wake, saba zikitoka MTMMP. Taarifa hazionyeshi mahali vilikotoka vielelezo hivyo vya mwanzo, kwa mfano zinasema “ndani kabisa ya bara la Afrika” na “karibu na Ziwa Tanganyika”; taarifa hizi zinaaki namna ambavyo Wazungu walikuwa hawalifahamu eneo hilo.

Mapema miaka ya 1900, Wajerumani walianzisha bustani za mimea kubwa sana katika eneo la Amani, katika Milima ya Usambara Mashariki ya Tanzania.

Amani iligeuzwa kitovu cha utafiti wa kilimo na mimea na ni eneo wanapopatikana vyura kumi wa MTMMP. Baadhi ya vielelezo hivi vilipelekwa kwa Boulenger mjini London, vingine vilikuwa miongoni mwa vielelezo saba vilivyotolewa maelezo mwaka 1911 na Mjerumani aliyelitwa Fritz Nieden, ambaye alikuwa anavutiwa na elimu ya wanyama na mimea. Bado utafiti unaendelea kufanywa Amani hadi leo; huenda vyura wa eneo hili wamefanyiwa utafiti zaidi kuliko vyura wa eneo lingine lolote katika Milima ya Tao la Mashariki.

Arthur Loveridge, anayejulikana kama mtu aliyetoa mchango mkubwa kuliko mtu yeyote kwenye utafiti wa amfibia wa Afrika Mashariki, alizieleza na kuzipa majina pia spishi kutoka Amani, pamoja na *Hyperolius mariae*, spishi aliyopita jina la mke wake Mary. Loveridge aliajiriwa kwenye Jumba la Makumbusho la Nairobi, nchini Kenya mwaka 1914, lakini muda mfupi baada ya hapo, alijiunga na British East African Mounted Rifles, Vita ya Kwanza ya Dunia ilipoanza. Aliendelea kukamata vielelezo katika miaka mitatu aliyokuwa jeshini lakini hakufanya utafiti wa spishi yoyote ya MTMMP hadi alipohamia Harvard's Museum of Comparative Zoology nchini Marekani mwaka 1924. Mwaka 1925, alitoa maelezo ya *Mertensophryne micranotis* na 1928, alielezea spishi tisa za MTMMP akishirikiana na Thomas Barbour, aliyekuwa mtunzaji wa vielelezo kwenye jumba la makumbusho. Loveridge aliongoza misafara nchini Kenya na Tanzania tangu 1929 hadi 1939 na kuendelea kutafiti spishi mpya hadi miaka ya 1950. Mchango wake kwa ufahamu wa wanyama caecilian ni muhimu sana, hasa kwa sababu juhudi zake ziliongeza maradufu idadi ya spishi za MTMMP zilizoainishwa.

Utafiti wa vyura kwenye eneo la MTMMP ulisimama wakati wa Vita ya Pili ya Dunia (1939-1945) na haukuanza tena hadi mwishoni mwa miaka ya 1970. Miaka 1971 na 1972, Jean-Luc Perritt alitoa maelezo ya spishi mbili za *Nectophrynoides* kutoka Milima ya Uluguru. Alice Grandison alifanya utafiti MTMMP miaka ya 1970 na 1980 na kutayarisha maelezo ya spishi mbili mpya za MTMMP na kuelezea historia asilia (natural history) ya vyura kadhaa wa MTMMP. Mwaka 1975, Arne aliandika kitabu kinachoitwa "The treefrogs of eastern Africa", yaani vyura miti wa Afrika Mashariki. Kitabu hiki kinatoa maelezo juu ya spishi mpya kadhaa na kinatumia njia mpya ya kuchanganua miito ya vyura kwa kutumia "spectrograms". Schioz aliendelea kutayarisha maelezo ya spishi mpya za MTMMP hadi miaka ya 1980 na 1990 na mwaka 1999 alichapisha kitabu maarufu cha "Treefrogs of Africa", yaani vyura miti wa Afrika.

Matumizi ya "spectrograms" katika miaka ya 1970 yaliambatana na mvuvumko mpya wa utafiti wa vyura katika eneo hili. Maendeleo ya mbinu za utafiti ikiwa ni pamoja na uchambuzi unaonyesha mahusiano kati ya makundi wa miaka ya 1980 na mchanganuo unaonyesha mpangilio wa sehemu za vinasaba wa miaka ya 1990 yaliboresha uelewa wa mahusiano baina ya spishi mbalimbali na maeneo zinapoishi. Katika miaka ya 1980, marekebisho makubwa ya uainishaji wa

spishi ulianza, ukisaidiwa na mbinu hizi mpya na unaendelea hadi sasa. Tafiti za awali katika maeneo haya ni pamoja na uchambuzi wa Bob Drewes unaonyesha mahusiano kati ya makundi ya vyura miti wa Arabuko-Sokoke nchini Kenya na wa John Poyton anayelenga biolojiografia ya vyura wa Afrika Kusini mwa Sahara. Baadhi ya marekebisho ya uainishaji wa spishi ya hivi karibuni yanapatikana katika kitabu cha Frost et al (2006), "The Amphibian Tree of Life."

Katika miaka kumi iliyopita, zaidi ya spishi 20 mpya za MTMMP zimeainishwa na angalau 20 zingine zinasubiri zifanyiwe maelezo. Spishi nyingi kati ya hizi mpya zilikamatwa na watu wa kujitolea na watafiti wa bioanuai chini ya Frontier Tanzania, ambao ni ushirikiano kati ya Chuo Kikuu cha Dar es Salaam na Society for Environmental Exploration ya Uingereza. Fedha zaidi kwa ajili ya utafiti kutoka Critical Ecosystems Partnership Fund (CEPF) zimechochea uvumbuzi wa spishi zingine mpya katika eneo hili. Utafiti wa hivi karibuni uliofanywa na baadhi ya watafiti kama Michele Menegon, Simon Loader, John Measey, Alan Channing, David Moyer na Martin Pickersgill umeongeza haraka idadi ya spishi ambazo zimeainishwa katika eneo la MTMMP. Utafiti wa misitu wa Kim Howell na kuanzishwa kwa "database" ya spishi katika Idara ya Zuolojia na Uhifadhi wa Wanyamapori ya Chuo Kikuu cha Dar es Salaam ni vitu ambavyo vimetupatia ufahamu zaidi wa amfibia katika eneo hili.

Ingawa kihistoria wataalam wa nyoka wa Afrika Mashariki walikuwa wachache, idadi ya Wakenya na Watanzania wanaofanya utafiti juu ya vyura MTMMP inaongezeka. Mwaka 2001, Charles Msuya alipata shahada ya falsafa kutoka Chuo Kikuu cha Dar es Salaam kutokana na utafiti juu ya vyura wa msituni. Wilirk Ngalason alipata shahada ya uzamili kutoka Chuo Kikuu cha Dar es Salaam kutokana na utafiti wake juu ya biolojia ya uzazi na ikolojia ya vyura wa Uwanda wa Lukwangule nchini Tanzania. Hivi karibuni, Patrick Malonza alipata shahada ya falsafa kutoka Chuo Kikuu cha Mainz, Ujerumani kutokana na utafiti wake juu ya vyura wa Milima ya Taita. Yeye na wenzake kutoka National Museums of Kenya, Nairobi, wamefanya utafiti mwingi juu ya vyura wa eneo la MTMMP la Kenya. Vielelezo zaidi ya 300 vya nyoka na vyura vinavyotunzwa vizuri ni kito kikubwa kwa watafiti wanaokuja kwenye eneo hili.

Kwa sehemu kubwa, historia ya utafiti wa vyura wa MTMMP ndiyo kwanza unianza. Huenda ikachukua miongo mingi kabla ya kumaliza uainishaji wa spishi mpya na itachukua muda mrefu zaidi kabla hatujapata ufahamu kamili wa historia asilia ya spishi hizi. Kwa bahati mbaya, miongo michache ijayo huenda ikashuhudia pia kutoweka kwa baadhi ya spishi, hasa zile ambazo zinategemea misitu midogo ambayo inaharibiwa kwa kasi kubwa. Kutokana na sababu zote hizi, MTMMP inatoa fursa kubwa kwa mtu yeyote anayevutiwa na vyura, wageni na wenyeji, watafiti, wanafunzi na wasiokuwa wataalam wa wanyama na mimea, kuweza kufanya utafiti katika eneo hili.

Amphibian Conservation in the Eastern Arc

Conservation efforts in the EACF are extremely important because of the incredibly high biodiversity in the region and the fact that so many of these species are found nowhere else in the world. Many of these endemics are dependent on closed-canopy forests which are rapidly being lost and degraded. Only a very small proportion of the original forest of the EACF remains. Over 80% of the forest cover in the Taitas, Ukagurus and Mahenge has been lost. This loss has also resulted in the fragmentation of large forest blocks into small patches of lower quality habitat. Protecting the remaining habitat in the EACF is essential to the continued survival of many amphibian species.

The forests of the EACF are currently protected in Kenya through a national system that includes national parks, national reserves, forest reserves, nature reserves and national monuments. Tanzanian protected areas include national parks (Fig. 6), game reserves, catchment forests, game controlled areas, forest reserves and nature reserves. The level of protection, and resources for protection, vary among these different systems. For example, national reserves patrolled by armed rangers of the Kenya Wildlife Service are well protected,



Figure - 6 The boundaries of the well-protected Udzungwa National Park are clearly visible in contrast to the surrounding areas.

Mchoro - 6 Mipaka inayolindwa vizuri ya Hifadhi ya Udzungwa inaonekana vizuri, kinyume ya maeneo yanayopakana nayo.

whereas other 'protected' forests have been cleared for agriculture. Much of the Eastern Arc forests in Tanzania are protected as catchment forest reserves, also with variable levels of enforcement.

Within the remaining EACF habitat there are over 120 amphibian species, approximately one third of which are endemic or near-endemic. Of these species, nearly half are either threatened or lack sufficient data for their conservation status to be evaluated (Fig. 7). The greatest threat to these species is habitat loss, due largely to agricultural expansion including tea and coffee plantations. Development projects have also resulted in habitat loss and degradation, including the Kihansi hydropower project which drastically altered the habitat of the Kihansi spray toad, *Nectophrynoides asperginis*. The spray toad is now thought to be extinct in the wild, persisting only in captive zoo populations. The future of this species and many of the other endemic EACF amphibians is uncertain.

Conservation of amphibians in the EACF is reliant on the preservation of their habitat, which also protects a large number of other endemic species (known and unknown to science). There is growing understanding in the EACF that the indigenous forests provide much more than remarkable biodiversity of interest to scientists. Indigenous forests also provide "ecosystem services" such as providing a constant supply of water for communities living downstream, or medicinal plants and fruits. This appreciation of the use of the forests by those who manage and live around them are their only hope for future survival.

In the most deforested of the Eastern Arc Mountains, the Taita Hills, there is a new and exciting prospect for the future of indigenous forests and their biodiverse amphibians. Local peoples have long since known of the negative impacts of pine plantations which senesce and cause huge fires which engulf whole villages. Eucalyptus plantations have changed the face of the area by lowering the water table and stopping the flow of streams that provided water for people, crops and livestock. Now there is an opportunity to turn these plantations back into indigenous forests and no one is more enthusiastic than the people who have to live right next to them. Forest Participatory Management plans are being drawn up, nurseries have thousands of growing indigenous seedlings and there is genuine excitement that one day plantations will be restored to indigenous forests.

For the amphibians, restored forests will be not only a habitat in which to live, but a means of moving from one area to the next without the risk of desiccation or predation. Restoring and maintaining the indigenous forests of the EACF is the key to the conservation of their frogs and caecilians. This will require a long term commitment on the part of governments, local authorities and most of all, the local people who live and work in one of the most beautiful and biodiverse places on earth.

Uhifadhi wa Vyura kwenye Tao la Mashariki na Misitu ya Pwani (TMMP)

Jitihada za uhifadhi za MTMMP ni muhimu sana kwa sababu ya bioanuai ya hali ya juu iliyopo kwenye eneo hilo na kwa sababu spishi nyingi zilizopo hazipatikani mahali pengine popote duniani. Spishi nyingi zinazopatikana eneo hilo tu zinaishi kwenye misitu yenye matawi na majani yaliyofunika juu mithili ya mwamvuli, ambayo inatoweka haraka sana au kuharibiwa. Kwa sasa, sehemu ya misitu asilia ya MTMMP iliyosalia ni ndogo sana. Zaidi ya asilimia 80 ya misitu ya Taita, Ukaguru na Mahenge imetoweka. Kutokana na hali hii, maeneo makubwa ya misitu yamegawanyika katika vipande vidogo vyenye mazingira ambayo yana kiwango cha chini cha ubora. Ni muhimu kuhifadhi mazingira yaliyobaki kwenye MTMMP ili kuhifadhi uhai wa spishi za vyura.

Kwa sasa, misitu ya Tao la Mashariki na Misitu ya Pwani inahifadhiwa nchini Kenya kutokana na mfumo wa kitaifa unaohusisha hifadhi za taifa, hifadhi za misitu, hifadhi za maeneo asilia na maeneo ya kitaifa ya kumbukukumbu. Maeneo ya hifadhi nchini Tanzania yanajumuisha hifadhi za taifa (Mchoro 6), mapori ya wanyama, misitu yenye vyanzo vya maji, maeneo tengefu ya wanyama, hifadhi za misitu na hifadhi za maeneo asilia. Viwango vya uhifadhi na rasilimali

zinazotengwa kwa ajili ya uhifadi zinatofautiana kati ya mifumo mbalimbali. Kwa mfano, hifadhi za taifa zinazolindwa na askari wa maliasili wa Kenya Wildlife Service zinalindwa vizuri wakati ambapo maeneo mengine ya hifadhi za misitu yamesafishwa kwa ajili ya kilimo. Sehemu kubwa ya misitu ya Tao la Mashariki nchini Tanzania inalindwa kama vyanzo vya maji lakini usimamizi unatofautiana pia.

Katika mazingira ya MTMMP yaliyobaki, kuna spishi za vyura zaidi ya 120 na takribani theluthi moja ya hizo zinapatikana eneo hilo tu au maeneo mengine machache sana. Kati ya spishi hizo, nusu yake zinatishiwa kutoweka au hakuna taarifa za kutosha kuweza kutathmini hali ya uhifadhi wao (Mchoro 7). Tishio kubwa kabisa kwa spishi hizi ni kutoweka kwa mazingira yao kutokana na upanuzi wa mashamba ya chai na kahawa. Aidha, miradi ya maendeleo imechangia kwenye upotevu na uharibifu wa mazingira, kwa mfano mradi wa umeme wa Kihansi ambao umebadilisha sana mazingira ya chura wa Kihansi ajulikanaye kama *Nectophrynoidea asperginis*. Inadhaniwa kwamba chura huyo wa Kihansi ametoweka katika mazingira yake asilia na amebakia tu kwenye bustani za wanyama. Mustakabali wa spishi hii na nyingine zinazopatikana kwenye MTMMP haujulikani.

Uhifadhi wa vyura kwenye MTMMP unategemea uhifadhi wa mazingira yao, kama ilivyo kwa idadi kubwa ya spishi zinazopatikana eneo hilo tu (spishi ambazo wanasayansi wanazijua au hapana). Uelewa kwenye eneo la MTMMP unazidi kukua, kwamba misitu asilia inawavutia wana sayansi si kwa ajili ya bioanuai tu bali vitu vingine. Misitu asilia inatoa pia huduma za mifumo ya ikolojia kwa mfano maji kwa ajili ya jamii zinazoishi maeneo yaliyopo chini ya mito au mimea ya tiba na matunda. Tumaini la amfibia kuendelea kuwepo ni pale ambapo wasimamizi wa misitu na jamii zinazoizunguka zitakapotambua matumizi muhimu ya misitu hiyo.

Kwenye Milima ya Taita, eneo la Milima ya Tao la Mashariki ambalo limepoteza sana misitu, kuna matumaini mapya na ya kufurahisha kuhusu mustakabali wa misitu asilia na bioanuai ya vyura wake. Wakazi wa maeneo hayo wanajua kwa muda mrefu juu ya athari mbaya za mashamba ya misindano au misonobari ambayo inasababisha mioto mikubwa inayovamia vijiji vizima. Mashamba ya mkaratusi yamebadilisha sura ya maeneo husika kwa kuteremsha tabaka la maji na kuzuia mtiririko wa vijito vilivyokuwa vinawapatia maji watu lakini pia mazao na mifugo. Sasa kuna fursa ya kuyageuza mashamba haya na kuyarejesha kuwa misitu asilia; watu wanaoishi katika maeneo haya wana shauku kubwa ya kuona hilo likifanyika. Mipango ya Uendeshaji Shirikishi ya Misitu inaandaliwa, bustani za mimea zina maelfu ya mimea ya miti asilia na kuna matumaini makubwa kwamba siku moja misitu asilia itarudi tena.

Misitu asilia ikifufuliwa tena, itawapatia vyura mazingira ya kuishi lakini pia itawezesha vyura kutoka eneo moja hadi linalofuata bila ngozi zao kukauka au

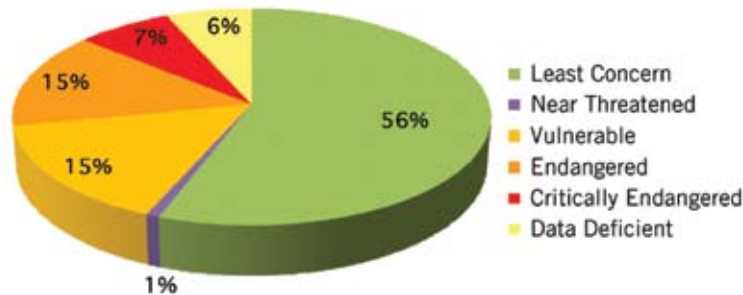


Figure - 7 Conservation status of amphibians in the Eastern Arc and Coastal Forests hotspot based on IUCN Red List assessments.

Mchoro - 7 Hali ya uhifadhi wa vyura kwenye Tao la Mashariki na Misitu ya Pwani kufuatana na Orodha ya tathmini ya IUCN ya spishi zilizo hatari kutoweka.

bila kuliwa na wanyama wengine. Kufufua na kuhifadhi misitu asilia kwenye MTMMP ni muhimu katika kuhifadhi vyura na amfibia minyoo (caecilians). Kazi hii inahitaji wito kwa upande wa serikali, mamlaka za maeneo husika na watu wanaoishi au kufanya kazi katika mojawapo ya maeneo yenye kuvutia na yenye bioanuai nyingi ulimwenguni.

Using This Book

This guide includes descriptions and photographs of over one hundred amphibian species that occur in the Eastern Arc and Coastal Forests. There are, however, many species that are currently awaiting description and many more that have yet to be discovered. Likewise, the taxonomy of many of these species is in a process of continual revision as more data become available. These are some of the reasons that studying amphibians in the Eastern Arc is so exciting; but they also make writing a field guide for the region incredibly challenging. We have done our best to include a comprehensive list of the species currently described, as well as the most up to date taxonomy, but there will inevitably be some omissions. The most current taxonomy can be found online at the Amphibian Species of the World Electronic Database accessible at: <http://research.amnh.org/herpetology/amphibia/index.php>

Further information can be found at tanzaniaherps website www.tanzaniaherps.org, a long-term project of the Museo Tridentino di Scienze Naturali, Trento, Italy (MTSN), the Wildlife Conservation Society, New York, US (WCS), the University of Dar es Salaam, Tanzania (UDSM), with the collaboration of the Institute of Biogeography of the University of Basel, Switzerland.

In each species account we include the currently accepted scientific name (according to Frost 2007 with a few exceptions based on more recent publications). We also include the author who first described the species and the year that the description was published. We include some of the common names for each species. These names can be interesting because they often provide a physical description, geographic location, or describe a behavioral characteristic of the species. However, because there may be ten or more different common names for each species, and because some of the names can be misleading, we include only a subset of common names and recommend using only the scientific names. Even these names can be difficult to keep track of given the extent of the taxonomic revisions that are currently underway.

We include estimates of the snout to vent length (SVL; Fig. 8) for each species. Females of most species are typically larger than males. We use the symbol ♂ to denote male and ♀ to denote female. All SVL measurements are given in millimeters. It is important to recognize that the range given for the SVL

is based on a limited number of adult specimens and that it may be possible to encounter much smaller juveniles or somewhat larger adults.

We did not include dichotomous keys in the guide because of the number of undescribed species. However, we have tried to include sufficiently detailed descriptions to allow distinctions to be made among all of the species covered in the guide. We also include a description of similar species and tips on how to tell them apart. Descriptions of the habitat where each species can be found are also included and can be helpful in the identification of specimens in the field. For each species we also include a set of symbols that provides basic natural history information at a glance (Table 2).

The vocalizations of male frogs can be very helpful in identifying species and some audio clips are available on the internet. Unfortunately it is difficult to describe frog calls in print. Sonograms offer a visual way of 'printing' frog calls, but are not easily read by non-experts. We have attempted to describe the calls in words and to quote from previously published descriptions. Some calls are so distinct that they are easily recognized from a description, others are more difficult.

We include notes on the distribution and elevational range of each species within the Eastern Arc and Coastal Forests, although many species occur outside of this area as well. For several species there is debate over the extent of their geographic range and new records will likely extend the known ranges of species in the future. We also provide a range map for each species showing which of the 13 mountain blocks and areas of coastal forest they have been reported from.

The type locality is included for each species. These are historically interesting, and can also provide useful information about the likelihood of future taxonomic revisions. For example, a photo of *Callulina kreffti* taken at Amani, the type locality, is less likely to need re-labeling in the future than a photo of what appears to be the same species from the Udzungwa Mountains.

Matumizi ya Kitabu Hiki

Kitabu hiki ni mwongozo unaojumuisha maelezo na picha za spishi za vyura zaidi ya mia moja zinazopatikana kwenye Tao la Mashariki na Milima ya Pwani. Lakini kuna spishi nyingi ambazo bado maelezo yake hayajakamilika na nyingi ambazo bado hazijagunduliwa. Aidha, uainishaji wa spishi nyingi unaendelea kurekebisha kadri taarifa mpya zinapopatikana. Ndiyo maana utafiti wa vyura katika Tao la Mashariki ni wa kusisimua, lakini hali hii inaleta changamoto kubwa katika utayarishaji wa kitabu juu ya eneo hili. Tumejitahidi kuandaa orodha kamili za spishi ambazo tayari zimefanyiwa utafiti na kutolewa maelezo na pia uainishaji wao mpya, lakini inawezekana baadhi ya spishi zimeachwa. Uainishaji wa hivi karibuni unapatikana kwenye tovuti ya Amphibian Species of the World Electronic Database: <http://research.amnh.org/herpetology/amphibia/index.php>

Taarifa zaidi zinaweza kupatikana kwenye tovuti www.tanzaniaherps.org, mradi wa muda mrefu wa Museo Tridentino di Scienze Naturali, Trento, Italia (MTSN), Wildlife Conservation Society, New York, Marekani (WCS), Chuo Kikuu cha Dar es Salaam, Tanzania (UDSM), kwa kushirikiana na Institute of Biogeography ya Chuo Kikuu cha Basel, Uswisi.

Katika maelezo ya kila spishi, tumeonyesha jina la kisayansi linalokubalika kwa sasa (kufuatana na Frost 2007), isipokuwa kwa spishi chache ambazo zimechapishwa hivi karibuni. Aidha, tumetaja jina la mwandishi aliyeelezea na kuipa jina spishi kwa mara ya kwanza na mwaka ambapo spishi ilichapishwa. Vilevile, tumeorodhesha majina ya kawaida ya kila spishi. Majina haya ni muhimu kwa sababu mara nyingi yanaelezea maumbile ya spishi, mahali inapopatikana au yanaelezea tabia yake. Hata hivyo, kwa vile inawezekana spishi moja ikawa na majina kumi au zaidi na kwa sababu baadhi ya majina yanaweza kupotosha, tumeonyesha baadhi tu ya majina ya kawaida na tunapendekeza kutumia majina ya kisayansi tu. Ni vigumu hata kuyakumbuka majina ya kisayansi haya kutokana na marekebisho ya uainishaji yanayoendelea sasa.

Aidha, tunaonyesha makadirio ya urefu wa kutoka pua hadi tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi (SVL; Mchoro 8) wa kila spishi. Kwa kawaida, majike ni makubwa kuliko madume katika idadi kubwa za spishi. Tunatumia alama ♂ kwa ajili ya madume na ♀ kwa ajili ya majike. Vipimo vyote vya SVL viko kwenye sentimita. Ikumbukwe kwamba tofauti kubwa za SVL zinatokana na idadi ndogo ya vielelezo vya wanyama wazima na huenda wapo wanyama wadogo zaidi au wanyama wazima ambao ni wakubwa zaidi kimaumbile.

Katika kitabu hiki, hatukuonyesha mwainisho unaolazimu kuchagua kitu kimoja kati ya viwili kwa sababu ya idadi kubwa ya spishi ambazo hazina maelezo bado. Lakini, tumejitahidi kutoa maelezo kamili kwa kila spishi ili kuweza kuona tofauti kati ya spishi zilizomo kwenye kitabu hiki. Aidha, tunatoa maelezo ya spishi

zinazofanana na kuonyesha namna ya kuzitofautisha. Kitabu kina maelezo ya mazingira ambapo kila spishi inapatikana, maelezo ambayo yanasaidia kuainisha vielelezo wakati wa kufanya utafiti. Kwa kila spishi, tunaonyesha pia alama zinazotoa taarifa za msingi za historia asilia mara moja (Jedwali 2).

Miito ya madume inasaidia sana kuainisha spishi na baadhi ya miito inapatikana kwenye tovuti. Bahati mbaya, ni vigumu kueleza miito ya vyura kwa maandishi. Mfumo wa “sonogram” unawezesha kuona kwa macho namna ya “kuchapisha” miito ya vyura, lakini ni vigumu kwa watu ambao siyo wataalam kuisoma. Tumejitahidi kueleza miito kwa kutumia maneno na kunukuu maelezo yaliyomo kwenye machapisho ya awali. Baadhi ya miito ni ya pekee kiasi na kwa hiyo rahisi kuitambua kutokana na maelezo, wakati mingine ni migumu zaidi.

Aidha, tumeweka taarifa juu ya mahali zinapopatikana spishi na pia kutoka usawa gani wa bahari kwenye eneo la Tao la Mashariki na Misitu ya Pwani, ingawa spishi nyingi kati ya hizi zinapatikana nje ya eneo hili pia. Bado kuna utata kuhusu maeneo zinapopatikana baadhi ya spishi na tunatarajia kwamba taarifa mpya zitabainisha maeneo mengine katika siku za mbele. Aidha, kuna ramani inayoonyesha maeneo ya kila spishi na kwenye milima ipi kati ya 13 na maeneo ya misitu ya pwani ambapo spishi imepatikana.

Kitabu hiki kinaonyesha eneo ambapo kielelezo cha kwanza kupewa jina kilikamatwa. Kihistoria, maeneo haya yanavutia na yanaweza kutupa taarifa muhimu zinazoweza kutusaidia kufanya marekebisho ya uainishaji wa spishi. Kwa mfano, kuna uwezekano mdogo kwa picha ya *Callulina kreffti* iliyochukuliwa Amani kuhitaji marekebisho baadaye kuliko picha ya spishi inayofanana nayo ambayo inaweza kukamatwa kwenye Milima ya Udzungwa.

Symbol - Alama Use - Matumizi



Found only at high elevations
Inapatikana maeneo ya juu tu



Found only at low elevations
Inapatikana maeneo ya chini tu



Typically seen only during the rainy season
Anaonekana msimu wa mvua tu.



Often found in villages and smallholdings
Anapatikana vijijini na mashamba madogo tu.



Fossorial – lives underground
Anaishi chini ya ardhi.



Typically found on reeds or other vegetation at the edge of water
Anapatikana kwenye matete na uoto mwingine kando kando ya maji



Fully aquatic
Anaishi majini tu



Arboreal – found on trees and shrubs
Anaishi mtini na vichakani



Riparian – found on the banks of rivers and streams
Anaishi kando ya mito na vijito



Found in the leaf litter of the forest floor
Anaishi msituni kwenye majani chini ya miti



Found in grasslands and/or savannah
Anaishi kwenye nyika na /au savana



Forest dependent
Inapatikana kwenye misitu



Male
Madume



Female
Majike

Table - 2 Habitat symbols
used in species accounts.

Jedwali - 2 Alama za
mazingira zilizotumika kwenye
maelezo ya spishi.

Conservation Status

Conservation status is based on the current (at the time of printing) IUCN criteria. Updated red-lists can be found on the internet at www.red-list.org. The conservation status categories are defined by the IUCN as follows:

Hali ya uhifadhi imetokana na vigezo vya IUCN vilivyokuwa vinatumika wakati tunachapisha kitabu hiki. Orodha nyekundu za sasa zinapatikana kwenye tovuti: www.red-list.org. Makundi ya hali ya uhifadhi yaliyoainishwa na IUCN ni kama yafuatavyo:

CRITICALLY ENDANGERED

A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V), and it is therefore considered to be facing an extremely high risk of extinction in the wild.

SPISHI IKO HATARINI SANA

Spishi iko hatarini sana iwapo kuna ushahidi wa juu kabisa kwamba imetimiza kigezo chochote kati ya A na E cha kuwa Hatarini Sana (angalia Kifungu V), na kwa hiyo inatishiwa kabisa kutoweka porini.

ENDANGERED

A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.

SPISHI IKO HATARINI

Spishi iko hatarini iwapo imetimiza kigezo chochote kati ya A na E cha kuwa Hatarini na kwa hiyo inatishiwa sana kutoweka porini.

VULNERABLE

A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Section V), and it is therefore considered to be facing a high risk of extinction in the wild.

SPISHI INAZEWA KUATHIRIWA

Spishi Inaweza Kuathiriwa iwapo kuna ushahidi wa juu kabisa kwamba imetimiza kigezo chochote kati ya A na E cha kuweza kuathiriwa (angalia Kifungu V), na kwa hiyo inatishiwa kutoweka porini.

NEAR THREATENED

A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.

SPISHI INAKARIBIA KUWA HATARINI

Spishi Inakaribia kuwa Hatarini iwapo imefanyiwa tathmini kwa kufuata vigezo lakini haiko hatarini kabisa, hatarini au kuweza kuathiriwa wakati huo, lakini inakaribia kuwa hatarini au inaweza kuwa hatarini siku zijazo.

LEAST CONCERN

A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.

SPISHI HAIKO HATARINI

Spishi Haiko Hatarini iwapo imefanyiwa tathmini kwa kufuata vigezo lakini haiko hatarini kabisa, hatarini au kuweza kuathiriwa au karibu maathiriwa. Spishi nyingi ziko katika kundi hili.

DATA DEFICIENT

A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a taxon is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified.

HAKUNA TAARIFA ZA KUTOSHA

Spishi Haina Taarifa za Kutosha iwapo hakuna taarifa za kutosha kuweza kufanya tathmini ya moja kwa moja au isiyo moja kwa moja kuhusu kuwa hatarini kutoweka, kutokana na maeneo inapokatikana au ukubwa wa idadi yake. Inawezekana kwamba spishi katika kundi limefanyiwa utafiti mwingi na biolojia yake inajulikana vizuri, lakini hakuna taarifa nyingi juu ya maeneo inapokatikana au ukubwa wa idadi yake. Kwa hiyo kundi hili halimo hatarini. Kuorodheshwa kwa spishi katika kundi hili kuna maana kwamba taarifa zaidi zinahitajika na kukiri kwamba utafiti wa baadaye unaweza kuonyesha kwamba iko hatarini. NI muhimu kutumia vizuri taarifa zozote zilizopo. Mara nyingi, ni lazima kuwa mwangalifu katika kuamua kama spishi haina taarifa za kutosha au iko hatarini. Iwapo eneo spishi inapokatikana ni dogo na kumepita muda mrefu tangu ilipoonekana mara ya mwisho, inawezekana iko hatarini.

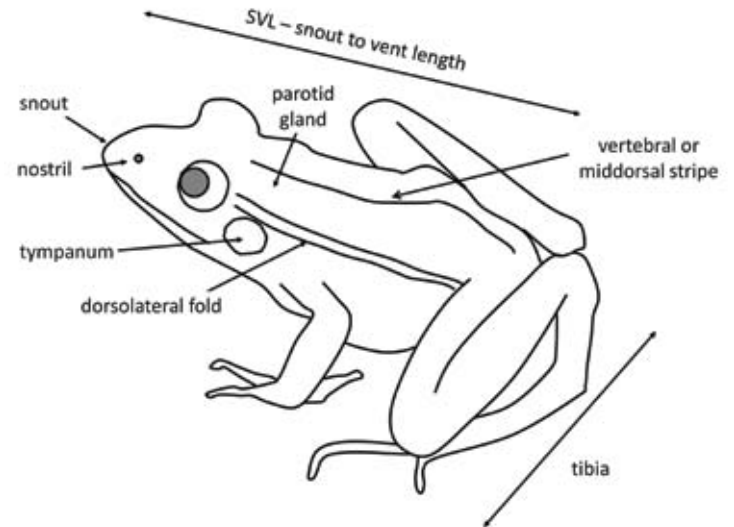


Figure - 8 External diagnostic features of frogs and toads.

Mchoro - 8 Maumbile ya vyura.

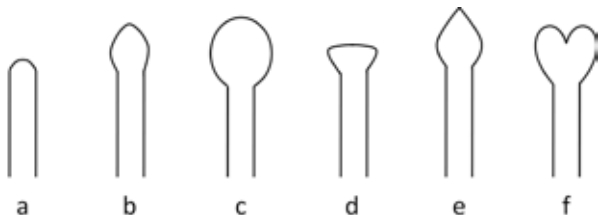


Figure - 9 Toe tip morphologies typical of Eastern Arc and Coastal Forest amphibians: a) not expanded; b) slightly expanded but without distinct disks; c) expanded with distinct disks; d) truncate e) papillate; f) bifurcate or heart-shaped.

Mchoro - 9 Maumbile ya ncha za kucha za vyura wa MTMMP: a) siyo pana; b) pana kidogo lakini siyo mviringo; c) pana na mviringo; d) butu; e) zimechochongoka f) zinagawanyika au zina umbo la moyo.

Translator's Note

The English version of the species accounts includes a section on “Calls” of the amphibians. We did not translate these into Kiswahili because even in English, descriptions of animal vocalizations largely depend on the experience of the reader to interpret. For example, can a reader understand a call represented as a “burrrr” or is it a “churrrr”? A loud call to one reader may not be to another. Therefore, the description of a call as a loud “burr” by one person may sound entirely different to another. Similarly, we did not translate common names of species into Kiswahili, except where translations such as “chura miti” for “tree frogs” exist.

I am grateful to Elizabeth Harper for inviting me to translate the book and her cooperation.

Imani Swilla

Ujumbe wa Mfasiri

Sehemu ya Kiingereza ya kitabu hiki ina kipengele kinachoelezea miito ya kila spishi ya amfibia. Hatukutafsiri sehemu hii katika Kiswahili kwa sababu hata kwenye Kiingereza, maelezo ya miito ya wanyama inategemea sana uzoefu wa msomaji. Kwa mfano, je msomaji ataelewa nini anaposoma kuwa mwito ni “burrrr”? Mwito huo unaweza kuwa ni “churrrr”? Kwa hiyo mwito huo huo wa “burr” kwa msomaji mmoja huenda usiwe hivyo kwa mwingine. Aidha, hatukutafsiri majina ya kawaida (common names) ya spishi katika Kiswahili, isipokuwa pale tu ambapo tayari kuna tafsiri inayotumika, kwa mfano “chura miti” badala ya “tree frogs”.

Napenda kumshukuru Elizabeth Harper kwa kunipa fursa ya kutafsiri kitabu hiki na kwa ushirikiano wake.

Imani Swilla

Identification and Terminology

This guide is designed to be used for the identification of live amphibians in the field. The size, external physical features, geographic location, habitat type, vocalization and behavior of each amphibian encountered can all contribute toward species identification. It is important to remember that looks can be deceiving. Individual amphibians of the same species can vary in color pattern and therefore do not always match in appearance with the photograph in the guide. In some species, males and females or adults and juveniles have different color patterns from one another. In other species there may be multiple distinct color morphs, as in many of the *Hyperolius* species, or there may be a range of dorsal patterns that are common across a genus, as in many of the *Arthroleptis* species. Traits that are usually constant within a species and easy to see in the field include the shape of the toe and finger tips (Fig. 9), the amount of webbing on the toes, the presence or absence of a visible tympanum, and the presence or absence of dorsolateral folds (Fig. 8). The location where an individual is found can also be useful in species identification. By noting both the geographic location and the habitat type it is possible to rule out unlikely species. Observations of reproductive behavior, including male calls and the location of egg deposition, can also help to rule out many species.

Uainishaji na Istilahi

Kitabu hiki kimeandaliwa ili kitumike katika kuainisha vyura walio hai kwenye maeneo ya utafiti. Ukubwa, maumbile, mahali wanapoishi, aina ya mazingira, sauti na tabia ya kila chura ni vitu ambavyo vinaweza kusaidia uainishaji wa spishi. Lakini ni muhimu pia kuzingatia kwamba taswira inaweza ikadanganya. Vyura wa spishi moja wanaweza wakatofautiana katika mpangilio wa rangi na kwa hiyo hawafanani siku zote na picha iliyoko kitabuni. Katika baadhi ya spishi, madume na majike au vyura wazima na watoto wana mpangilio tofauti wa rangi. Katika spishi zingine, inawezekana kuwepo rangi nyingi tofauti, kama ilivyo katika spishi nyingi za *Hyperolius* au inawezekana pakawa na mipangilio mingi ya sehemu ya juu ambayo ipo kwenye vyura wa jenasi moja, kama ilivyo kwa spishi za *Arthroleptis*. Vitu ambavyo vinapatikana kwenye spishi zote na rahisi kuona kwenye maeneo ya utafiti ni pamoja na umbile la ncha za vidole vya miguuni na mikononi (Mchoro 9), uwingi wa utando kwenye vidole vya mguuni, kuwepo au kutokuwepo kwa kiwambo cha sikio kinachoonekana, na kuwepo au kutokuwepo kwa mikunjo ya ngozi pembeni na sehemu ya juu (Mchoro 8). Eneo analoishi chura ni muhimu pia katika kuainisha spishi. Ukizingatia eneo na mazingira anapoishi chura, inakuwa rahisi kutambua kuwa spishi fulani hazipatikani eneo fulani. Tabia ya kuzaliana pamoja na miito ya madume na mahali mayai yanapotagwa ni vitu ambavyo vinaweza kusaidia pia kutambua kuwa spishi fulani hazipatikani eneo fulani.

Arthroleptidae

The family Arthroleptidae is confined to sub-Saharan Africa. Two genera are found in the Eastern Arc Mountains: *Arthroleptis* and *Leptopelis*. There is a great deal of taxonomic confusion within the genus *Arthroleptis*. *Arthroleptis* species are small to medium-sized brown frogs that live and breed in the leaf litter of the forest floor. Their eggs are laid in moist soil or leaves and develop directly into small frogs without passing through a free-swimming tadpole stage. Males in breeding condition typically have a distinctly elongated third finger. The genus *Leptopelis* includes species that are morphologically and ecologically quite different from the *Arthroleptis* species. *Leptopelis* species are medium to large-sized tree frogs with vertical pupils. Until recently they were included in the family Hyperoliidae. Females of some *Leptopelis* species are known to lay their eggs in mud cavities and the tadpoles move into water after hatching.

Familia ya Arthroleptidae inapatikana tu kanda ya Afrika kusini mwa jangwa la Sahara. Jenasi mbili za *Arthroleptis* na *Leptopelis* zinapatikana kwenye Milima ya Tao la Mashariki. Kuna utata mkubwa juu ya uainishaji kwenye jenasi ya *Arthroleptis*. Spishi za *Arthroleptis* ina vyura wenye rangi ya kahawia ambao ni wadogo au wana ukubwa wa kati; wanaishi na kuzaliana msituni, kwenye majani yaliyoanguka chini. Vyura hawa hutaga mayai kwenye udongo au majani yenye unyevunyevu na hugeuka kuwa vyura bila kupitia hatua ya viluwilwi wanaoogelea. Kidole cha tatu kinarefuka sana kwenye madume yanapokuwa kwenye msimu wa kupandana. Jenasi ya *Leptopelis* ina spishi ambazo ni tofauti sana na za *Arthroleptis*, kimaumbile na kiikolojia. Spishi ya *Leptopelis* inajumuisha spishi za vyuramiti ambao ni wakubwa kiasi hadi wakubwa kabisa na wana mboni za wima. Spishi hizi zilikuwa zimewekwa kwenye familia ya Hyperoliidae hadi hivi karibuni. Majike yanataga mayai kwenye mashimo na viluwilwi vinaingia kwenye maji baada ya kutotolewa.



Leptopelis parkeri

Arthroleptis affinis (Ahl, 1939)

Amani Screeching Frog, Ahl's Squeaker

Chura filimbi wa Amani,



E. Harper

SVL: ♀ 35 – 40 mm; ♂ 33 – 45 mm
DESCRIPTION: A small frog with a broad head and long legs. The dorsum is light brown, and typically lacks the hourglass pattern common in many other *Arthroleptis* species. A dark black mark curves from the eye to the arm over the tympanum and may appear like a mask in some individuals. The lower lip is barred and the undersides of the feet are dark black. The belly is yellowish near the groin and the undersides of the legs are reddish orange. The tips of the toes are

slightly expanded and have a groove along the edge. There is some variation in morphology among individuals from the northern to the southern part of the range.

SIMILAR SPECIES: The legs of *A. affinis* are long (tibia greater than $\frac{1}{2}$ SVL) in contrast to many other *Arthroleptis* species. Adult female *A. affinis* are smaller than *A. nikeae*, which reach 54 – 56 mm SVL.

HABITAT: *A. affinis* is a very common species that can be found in the leaf-litter of montane and submontane forests as well as grasslands and a range of degraded habitat types.

NATURAL HISTORY: Eggs are laid in moist soil or leaves and develop directly into small frogs without passing through a free-swimming tadpole stage. Males in breeding condition have serrations on the second and third fingers.

CALL: Unknown

DISTRIBUTION IN THE EACF: North Pare, South Pare, West Usambara, East Usambara, Nguu, Nguru, Rubeho, Uluguru, Udzungwa, Mount Rungwe

TYPE LOCALITY: Amani, East Usambaras

ELEVATIONAL RANGE: 850 – 2050 m

CONSERVATION STATUS: Least Concern

UREFU WA MWILI: ♀ 35 – 40 mm; ♂ 33 – 45 mm

MAELEZO: Chura huyu ni mdogo na ana kichwa kipana na miguu mirefu. Sehemu ya chini ni kahawia iliyofifia na haina umbo la “V” mbili zinazogusana moja ikiwa chini juu, umbo ambalo kwa kawaida lipo kwenye spishi nyingi za *Arthroleptis*. Kuna alama nyeusi ambayo inatoka kwenye jicho mpaka kwenye mkono, juu ya kiwambo cha sikio na inaonekana kama barakoa kwenye vyura hao. Kuna mistari kwenye mdomo wa chini na sehemu ya chini ya miguu ni nyeusi sana. Sehemu ya tumbo karibu na kinena ni njano na sehemu ya chini ya miguu ni njano nyekundu. Ncha za vidole vya miguuni ni pana kidogo na zina mfuo pembeni. Umbo la vyura hao linatofautiana kiasi kutoka kaskazini hadi kusini mwa eneo husika.

SPISHI INAZOFANANA NAZO: Miguu ya *A. affinis* ni mirefu (muundi goko ni zaidi ya $\frac{1}{2}$ ya SVL), tofauti na spishi nyingi za *Arthroleptis*. Majike mazima ya *A. affinis* ni madogo kuliko ya *A. nikeae*, ambayo yanafikia 54 - 56 mm SVL.

MAZINGIRA: *A. affinis* ni spishi inayopatikana katika mazingira mengi: kwenye majani yaliyoanguka ya misitu iliyopo karibu au zaidi ya mita 1200m kutoka usawa wa bahari, nyika na aina mbalimbali za mazingira yaliyoharibiwa.

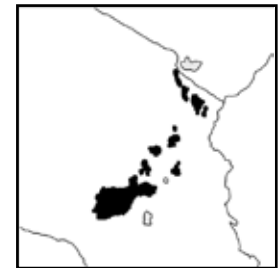
HISTORIA ASILIA: Mayai yanatagwa kwenye udongo au majani yenye unyenyevu na hugeuka kuwa vyura bila kupitia hatua ya viluwiluwu viwanavyoogelea. Vidole vya mkononi vya pili na vya tatu vya madume vinakuwa na mistari yanapokuwa kwenye msimu wa kupandana.

ENEO SPISHI INAPOPATIKANA KWENYE MILIMA YA TAO LA MASHARIKI NA MISITU YA PWANI (MTMMP): Milima ya Pare Kaskazini, Pare Kusini, Usambara Magharibi, Usambara Mashariki, Nguu, Nguru, Rubeho, Uluguru, Udzungwa na Rungwe.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Amani, Usambara Mashariki

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 850 – 2050 m

HALI YA UHIFADHI: Haiko hatarini.



Arthroleptis fichika (Blackburn, 2009)

Hidden squeaker frog

Chura filimbi anayejificha



L. Mahler

SVL: ♀ 15 mm

DESCRIPTION: A very small *Arthroleptis* with a broad head. The tympanum is round and distinctly visible, less than $\frac{1}{2}$ the diameter of the eye, and lacks a fold of skin over the top. There is a distinct dark brown spot in the groin and on the front of each thigh. The undersurface of the thighs is dark with lighter gray spots. The throat is orange-red and not mottled. The ventral surface is yellow and the underside of the thighs is red. The finger tips are not expanded. Toe tips are slightly expanded and faintly pointed. Toes lack webbing.

SIMILAR SPECIES: *A. fichika* and *A. kidogo* are very similar. Both are very small (< 15mm), have a dark spot in the groin and are darkly colored on the undersurfaces of the thighs. *A. fichika* has a dark band that runs from the snout, through the eye, over the tympanum and stops at the base of the arm. In *A. kidogo* this band continues beyond the base of the arm.

HABITAT: Leaf litter in forest

NATURAL HISTORY: Very little is known about the natural history of this species.

CALL: Unknown

DISTRIBUTION IN THE EACF: Currently known only from the West Usambara Mountains

TYPE LOCALITY: Mazumbai Forest Reserve, West Usambara Mountains

ELEVATIONAL RANGE: 1383 - 1900 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♀ 15 mm

MAELEZO: Chura huyu ni mdogo sana lakini ana kichwa kipana. Kiwambo cha sikio lake ni mvingo na kinaonekana vizuri, ni chini ya $\frac{1}{2}$ ya kipenyo cha jicho na hakina mkunjo kwenye ngozi ya juu. Kuna doa lenye rangi ya kahawia iliyokolea kwenye kinena na sehemu ya mbele ya kila paja. Sehemu ya chini ya mapaja ni nyeusi na ina madoa kijivu yaliyoffia. Koo lina rangi ya njano nyekundu na halina madoa. Sehemu ya chini ni njano na sehemu ya chini ya mapaja ni nyekundu. Ncha za vidole vya mkononi siyo pana. Ncha za vidole vya miguuni ni pana kidogo na zimechongoka kidogo sana. Aidha, vidole vya miguuni havina utando.

SPISHI INAZOFANANA NAZO: *A. fichika* na *A. kidogo* wanafanana sana. Vyura wa spishi hizi ni wadogo sana (< 15mm), wana doa jeusi kwenye kinena na wana rangi nyeusi kwenye sehemu ya chini ya mapaja. *A. fichika* ana mstari mweusi unaotoka kwenye pua, unapita kwenye jicho, juu ya kiwambo cha sikio hadi sehemu ya chini ya mkono. Mstari huu unavuka sehemu ya chini ya mkono kwenye *A. kidogo*.

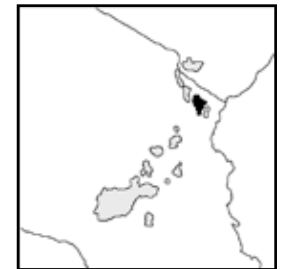
MAZINGIRA: Msituni kwenye majani yaliyoanguka.

HISTORIA ASILIA: Taarifa juu ya historia asilia ya spishi hii ni chache mno.

ENEO SPISHI INAPOPATIKANA KWENYE (MTMMP): Milima ya Usambara Magharibi

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Mazumbai, Milima ya Usambara Magharibi. ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1383 - 1900 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Arthroleptis kidogo (Blackburn, 2009)

Tiny Squeaker Frog

Chura filimbi mdogo sana



SVL: ♀ ≤ 15 mm

DESCRIPTION: A very small *Arthroleptis* with a broad head. The undersurfaces of the thighs are dark with light gray spots. The tympanum is visible and less than ½ the diameter of the eye. A dark mark runs above the tympanum and past the arm. There is a very dark brown spot in the groin. The throat and ventral surface are mottled with light and dark gray markings. Toe tips are expanded and pointed. Finger tips are pointed, but not expanded.

SIMILAR SPECIES: *A. kidogo* is one of the smallest *Arthroleptis* species with SVL < 15 mm. It is very similar to *A. fichika*, but has a strongly reticulated dark and light pattern on the throat.

HABITAT: Leaf litter in forest

NATURAL HISTORY: Unknown, presumed to be similar to other species in the genus.

CALL: Unknown

DISTRIBUTION IN THE EACF: Known only from the Nguru Mountains

TYPE LOCALITY: Nguru South Forest Reserve, Nguru Mountains

ELEVATIONAL RANGE: Type locality is at 830 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♀ ≤ 15 mm

MAELEZO: Chura huyu ni *Arthroleptis* mdogo sana ila ana kichwa kipana. Sehemu ya chini ya mapaja ni nyeusi na ina madoa ya kijivu iliyofifia. Kiwambo cha sikio kinaonekana na ni chini ya ½ ya kipenyo cha jicho. Kuna alama nyeusi kutoka juu ya kiwambo cha sikio hadi baada ya mkono. Kuna doa jeusi sana kwenye kinena. Koo na sehemu ya chini zina madoamadoa yenye rangi ya kijivu iliyofifia na iliyokolea. Vidole vya mguu na ncha ni vipana na vimechongoka. Ncha za vidole vya mikono zimechongoka lakini siyo pana.

SPISHI INAZOFANANA NAZO: *A. kidogo* ni mojawapo ya spishi ndogo sana za *Arthroleptis* na ana < 15mm SVL. Inafanana sana na *A. fichika* ila ana mpangilio tofauti wa rangi, mchanganyiko wa rangi nyeusi na iliyofifia kwenye koo.

MAZINGIRA: Msituni kwenye majani yaliyoanguka.

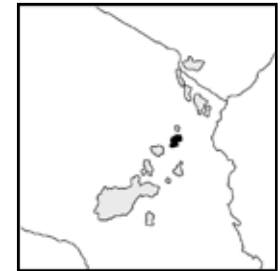
HISTORIA ASILIA: Haijulikani, inaweza kuwa sawa na ya spishi zingine za jenasi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Nguru

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Nguru Kusini, Milima ya Nguru.

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 830 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Arthroleptis nguruensis (Poyton, Menegon, & Loader, 2008)
Nguru Squeaker



Chura filimbi wa Nguru



M. Menegon

SVL: ♂ ≤ 52 mm; ♀ ≤ 58 mm

DESCRIPTION: A large *Arthroleptis* with a broad head and long legs (tibia greater than $\frac{1}{2}$ SVL). The tympanum is visible and typically has a dark mark above it running from the snout to the arm. This dark band is edged by a thin light stripe above. The lower jaw is white without markings. The throat and chest are dark. Fingertips are slightly expanded, but lack disks. Toe tips are expanded and pointed. Toes lack webbing. Arms and legs have dark bands. Some individuals have light spots on the sides.

SIMILAR SPECIES: The continuously white lower jaw of *A. nguruensis* distinguishes this species from other *Arthroleptis* species in the Nguru Mountains.

HABITAT: Montane forest, including bamboo and areas near agriculture

NATURAL HISTORY: The natural history of this species is not well known.

CALL: Described by Poynton et al. 2008 as “a series of whistling notes that are repeated at regular intervals”

DISTRIBUTION IN THE EACF: Known only from the Nguru Mountains

TYPE LOCALITY: Nguru South Forest Reserve, Tanzania

ELEVATIONAL RANGE: 1790 – 2100 m

CONSERVATION STATUS: Critically endangered

UREFU WA MWILI: ♂ ≤ 52 mm; ♀ ≤ 58 mm

MAELEZO: Chura huyu mkubwa ni *Arthroleptis* mwenye kichwa kipana na miguu mirefu (muundi goko ni zaidi ya $\frac{1}{2}$ ya SVL). Kiwambo cha sikio kinaonekana na kina mstari mweusi juu yake, toka puani hadi mkononi. Kuna mstari mwembamba wenye rangi iliyofifia juu ya kiwambo cha sikio. Taya ya chini ni nyeupe bila alama yoyote. Koo na kifua vina rangi nyeusi. Ncha za vidole vya mkononi ni pana kidogo lakini siyo mviringo. Ncha za vidole vya miguuni ni pana na zimechongoka. Vidole vya miguuni havina utando. Mikono na miguu ina mistari mieusi. Baadhi ya vyura wana madoa yaliyofifia kila upande.

SPISHI INAZOFANANA NAZO: Taya ya chini nyeupe inaitofautisha spishi hii na spishi zingine za *Arthroleptis* kwenye Milima ya Nguru

MAZINGIRA: Misitu iliyopo karibu au zaidi ya mita 1200 m kutoka usawa wa bahari mianzi na maeneo karibu na kilimo

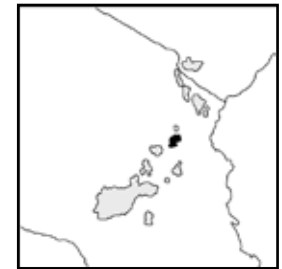
HISTORIA ASILIA: Haijulikani vizuri

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Nguru tu.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Nguru Kusini, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1790 – 2100 m

HALI YA UHIFADHI: Spishi iko hatarini sana



Arthroleptis nikeae (Poynton, 2003)

Nike's Squeaker

Chura filimbi wa Nike



M. Menegon

SVL: ♀ 54-56 mm

DESCRIPTION: A large *Arthroleptis* with a broad head and long legs. The tibia is longer than $\frac{1}{2}$ SVL. The dorsum is brown with darker brown chevrons pointing toward the head. There is a light triangle on the snout between the eyes. The legs are barred. A dark mark runs from behind the eye to the arm. The tympanum is visible. Finger tips are at most very faintly expanded. Toe tips are expanded, but lack distinct disks.

SIMILAR SPECIES: The large size, long legs and broad head of *A.*

nikeae distinguish this species from other *Arthroleptis* species in the Rubeho Mountains.

HABITAT: Montane forest

NATURAL HISTORY: Assumed to lay eggs terrestrially that hatch directly into small frogs.

CALL: Unknown

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: Mafwemiro Catchment Forest Reserve, Rubeho Mountains

ELEVATIONAL RANGE: 1900 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♀ 54-56 mm

MAELEZO: Chura huyu mkubwa ni *Arthroleptis* mwenye kichwa kipana na miguu mirefu. Urefu wa miguu ni zaidi ya $\frac{1}{2}$ ya SVL. Sehemu ya juu ni kahawia na ina alama zenye umbo la "V" zenye rangi ya kahawia iliyokolea zaidi na zinaelekea kichwa. Kuna pembetatu yenye rangi iliyofifia kwenye pua kati ya macho. Miguu ina mistari. Alama nyeusi inatoka nyuma ya jicho hadi mkononi. Kiwambo cha sikio kinaonekana. Ncha za vidole vya mkononi ni pana kidogo sana. Ncha za vidole vya miguuni ni pana lakini siyo mviringo.

SPISHI INAZOFANANA NAZO: Tofauti ya spishi hii na spishi zingine za *Arthroleptis* zinazopatikana Milima ya Rubeho ni kwamba vyura wake ni wakubwa, wana miguu mirefu na vichwa vipana.

MAZINGIRA: Misitu iliyopo karibu au zaidi ya mita 1200m kutoka usawa wa bahari

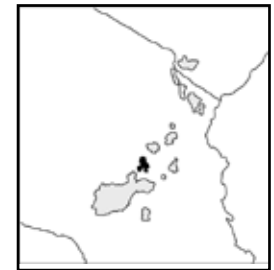
HISTORIA ASILIA: Inadhaniwa inataga mayai chini ya ardhi ambayo yanatolewa kuwa vyura wachanga moja kwa moja.

Eneo SPISHI INAPOPATIKANA KWENYE MTMMP NA MISITU YA PWANI: Mafwemiro tu.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Mafwemiro, Milima ya Rubeho.

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1900 m

HALI YA UHIFADHI: Spishi iko hatarini



Arthroleptis reichei (Nieden, 1911)

Poroto Screeching Frog, Reiche's Squeaker, Large-toed Squeaker

Chura filimbi wa Uporoto,
Mwenye vidole vya UREFU
mguuni vikubwa



M. Menegon

SVL: ♂ 21 – 27mm; ♀ 21 – 31mm

DESCRIPTION: A small frog with a narrow head and long legs. The dorsal pattern is brown, usually with a darker hour glass pattern and a pale line or triangle between the eyes. The toes are long and end in small but distinct disks. The tympanum is small and is oval rather than round.

SIMILAR SPECIES: The long toes with distinct disks distinguish this species from other *Arthroleptis* species of similar size within its range.

HABITAT: Leaf-litter of moist evergreen montane forests

NATURAL HISTORY: Assumed to breed by direct development

CALL: Unknown

DISTRIBUTION IN THE EACF: Poroto Mountains, Mount Rungwe, Udzungwa, and Uluguru Mountains

TYPE LOCALITY: Kratersee des Ngosi Vulcans, Poroto Mountains, Tanzania

ELEVATIONAL RANGE: 1500 – 2000 m

CONSERVATION STATUS: Near Threatened

UREFU WA MWILI: ♂ 21 – 27mm; ♀ 21 – 31mm

MAELEZO: Chura huyu ni mdogo, ana kichwa chembamba na miguu mirefu. Sehemu ya juu ni kahawia, na kawaida ina umbo la “V” mbili zinazogusana moja ikiwa chini juu na mstari ulioifia au pemetatu kati ya macho. Ncha za vidole vya miguuni ni ndogo na mviringo. Kiwambo cha sikio ni kidogo na siyo mviringo ila kina umbo la tufe.

SPISHI INAZOFANANA NAZO: Spishi hii inatofautiana na zingine za *Arthroleptis* kwa kuwa na vidole vya mguuni virefu vyenye ncha mviringo zinazoonekana.

MAZINGIRA: Majani yaliyoanguka kwenye misitu iliyopo karibu au zaidi ya mita 1200 m kutoka usawa wa bahari na iliyo kijani wakati wote

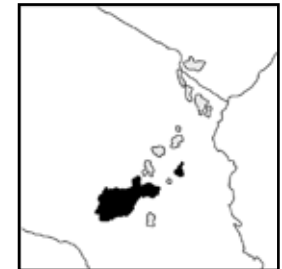
HISTORIA ASILIA: Inadhaniwa mayai yanatagwa na yanatolewa moja kwa moja na kugeuka vyura bila kupitita hatua ya viluwiluwi

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Uporoto, Rungwe, Udzungwa, na Uluguru

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kratersee des Ngosi Vulcans, Milima ya Uporoto, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1500 – 2000 m

HALI YA UHIFADHI: Inakaribia kuwa hatarini.



Arthroleptis stenodactylus (Pfeffer, 1893)
Shovel-footed Squeaker, Common Squeaker

Chura filimbi mwenye mguu
kama koleo



E. Harper

SVL: ♂ 28 – 35mm; ♀ 28 – 40mm

DESCRIPTION: A stocky litter frog with a large broad head and short legs (tibia less than $\frac{1}{2}$ SVL). The dorsum is brown, usually with a darker three-lobed figure, and occasionally with a light middorsal stripe. Most individuals have two distinct dark sacral spots. The tympanum is oval and distinct. A dark mark curves from the eye to the arm over the tympanum. The ventral surface is light, often with gray mottling in the pectoral region of females, and on the throat of males. Males can be distinguished from females by the elongated third finger. In both males and females the inner metatarsal tubercle is at least as large as the first toe. Toes do not end in disks.

SIMILAR SPECIES: *A. stenodactylus* has a large flat inner metatarsal tubercle that is absent in the other *Arthroleptis* species currently recognized in the Eastern Arc.

HABITAT: One of the most common species found in leaf litter in a wide range of habitat types including forest, savannas and degraded habitat including suburban areas.

NATURAL HISTORY: Unpigmented eggs are deposited directly in the leaf litter where they develop into small frogs without passing through a free-swimming tadpole phase. Clutches consist of 33 – 80 eggs 2 mm in diameter. Emerging frogs are 20 – 28 mm in length.

CALL: Males call from leaf litter during the day and at night. The call is a quick high-pitched whistle repeated at a rate of two per second.

DISTRIBUTION IN THE EACF: Coastal Kenya, eastern and southern Tanzania including Zanzibar

TYPE LOCALITY: Kihengo, Tanzania

ELEVATIONAL RANGE: < 1500 m

CONSERVATION STATUS: Least Concern

UREFU WA MWILI: ♂ 28 – 35 mm; ♀ 28 – 40 mm

MAELEZO: Chura huyu mnene anayeishi msituni kwenye majani yaliyoanguka ana kichwa kikubwa na kipana na miguu mifupi (chini ya $\frac{1}{2}$ ya SVL). Sehemu ya juu ni kahawia, na ina umbo jeusi lenye ndewe tatu na wakati mwingine ana mstari uliofifia katikati ya sehemu ya chini. Idadi kubwa ya vyura hawa wana madoa mawili yanayoonekana sehemu ya chini ya mgongo. Kiwambo cha sikio kina umbo la tufe na kinaonekana. Kuna alama nyeusi inayopinda kutoka jichoni hadi mkononi juu ya kiwambo cha sikio. Sehemu ya chini ina rangi iliyofifia. Kuna madoa ya kijivu kwenye kifua cha majike na koo la madume. Tofauti kati ya madume na majike ni kwamba kidole cha tatu cha mkononi cha madume ni kirefu zaidi kuliko cha majike. Aidha, madume na majike yote yana sehemu ya ngozi ngumu iliyoinuka kwenye sehemu ya ndani ya mguu. Vidole vya miguuni havina ncha mviringo.

SPISHI INAZOFANANA NAZO: *A. stenodactylus* ana ngozi ngumu, kubwa na pana na iliyoinuka nyuma ya mguu, ambayo haiyo kwenye spishi zingine za *Arthroleptis* ambazo zinafahamika kwenye Tao la Mashariki.

MAZINGIRA: Spishi hii ni mojawapo ya zile zizonapatikana sana kwenye majani yaliyoanguka chini katika mazingira mbalimbali, pamoja na misitu, savana, na mazingira yaliyoharibiwa, pamoja na pembezoni mwa miji.

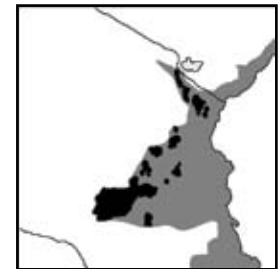
HISTORIA ASILIA: Mayai yasiyokuwa na rangi yanatagwa moja kwa moja kwenye majani yaliyoanguka ambapo yanageuka kuwa vyura bila kupitia hatua ya viluwilwi vinavyoogelea. Makundi ya mayai yanaweza kuwa na mayai 33-80 yenye kipenyo cha 2mm. Vyura wanaototolewa wanakuwa na urefu wa mita 20 - 28.

ENEO SPISHI INAPOPATIKANA KWENYE MTMP:
Pwani ya Kenya, kusini na mashariki mwa Tanzania na Zanzibar

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kihengo, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:
< 1500 m

HALI YA UHIFADHI: Haiko hatarini



Arthroleptis stridens (Pickersgill, 2007)
Pickersgill's Squeaker

Chura filimbi wa Pickersgill



SVL: 18 – 19 mm

DESCRIPTION: Very small brown frog with variable markings. Usually with a light triangle on the snout and darker diamonds on the dorsum. The tympanum is visible and approximately $\frac{1}{2}$ the diameter of the eye in adults. The diameter of the eye is roughly the same as the distance from the eye to the tip of the snout. The nostrils are closer to the tip of the snout than to the eyes. Toes and fingers are distinctly swollen, with round disks on the fingers and on the 3rd, 4th and 5th toes. Toe disks are slightly oval rather than round. The toes lack webbing. In males the 3rd finger can be as much as 3.5 times the length of the 4th finger.

SIMILAR SPECIES: Similar to *A. xenodactylus* and *A. xenodactyloides*, but in *A. stridens* the head is not distinctly wedge-shaped as in *A. xenodactylus*. *A. stridens* lacks the papillate toe tips seen in *A. xenodactyloides*.

HABITAT: Found in vegetation in forest clearings.

NATURAL HISTORY: Unknown, likely similar to *A. xenodactylus* and *A. xenodactyloides*.

CALL: Pickersgill (2007) describes the call as “musical, high-pitched and insect-like” in comparison to the more rasping call of *A. xenodactyloides*.

DISTRIBUTION IN THE EACF: Recorded in the Longuza and Kambai Forest Reserves in the East Usambara Mountains, but likely more widespread

TYPE LOCALITY: Kambai Forest Reserve, Tanzania

ELEVATIONAL RANGE: 300 m

CONSERVATION STATUS: Data deficient

UREFU WA MWILI: 18 – 19 mm

MAELEZO: Chura huyu ni mdogo sana. Aidha, ana alama zinazotofautiana; kwa kawaida, ana pembetatu iliyofifia kwenye pua na alama nyeusi zenye umbo la almasi kwenye sehemu ya chini. Kiwambo cha sikio kinaonekana na ni takribani $\frac{1}{2}$ ya kipenyo cha jicho kwenye vyura wazima. Kipenyo cha jicho ni takribani sawa na umbali kati ya jicho hadi kwenye ncha ya pua. Matundu ya pua ni karibu zaidi na ncha ya pua kuliko macho. Vidole vya miguuni na mikononi vimevimba. Aidha kuna ncha za mviringo kwenye vidole vya mkononi na vidole vya mguuni vya tatu, nne na tano. Ncha za vidole vya miguuni zina umbo linalofanana kidogo na tufe na siyo mviringo. Vidole vya miguuni havina utando. Kwenye madume, kidole cha mkononi cha tatu kinaweza kufikia urefu ambao ni mara tatu na nusu zaidi ya urefu wa kidole cha nne.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana na *A. xenodactylus* na *A. xenodactyloides*, lakini kichwa cha *A. stridens* hakina umbo la kabari kama *A. xenodactylus*. Aidha, *A. stridens* hana ncha za vidole vya mguuni kama vya *A. xenodactyloides*.

MAZINGIRA: Uoto wa misitu iliyokatwa

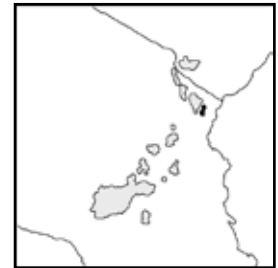
HISTORIA ASILIA: Haijulikani lakini huenda inafanana na ya *A. xenodactylus* na *A. xenodactyloides*,

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Hifadhi za Misitu za Longuza na Kambai za Milima ya Usambara Mashariki, lakini huenda inapatikana maeneo mengine zaidi.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Kambai, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 300 m

HALI YA UHIFADHI: Hakuna taarifa za kutosha



Arthroleptis tanneri (Grandison, 1983)

Tanner's Squeaker

Chura fillimbi wa Tanner



E. Harper

SVL: ♂ 42 mm; ♀ 37 – 55 mm

DESCRIPTION: This is one of the larger of the *Arthroleptis* species. It has a broad head and relatively long legs (tibia roughly ½ SVL or greater). The dorsum is gray-brown, often without distinct darker markings. A fold of skin runs from the eye over the tympanum ending at the arm. Raised dorsolateral skin folds are faintly visible. The tympanum is round and distinct, less than ½ the diameter of the eye. The eyes are gold on top and dark beneath. The finger tips are faintly expanded and the toe tips are distinctly expanded, though

both lack distinct disks. A groove runs along the base of the toe tips. There is a small amount of webbing on the toes. The first finger is distinctly longer than the second.

SIMILAR SPECIES: This is the only large *Arthroleptis* species known to occur in the West Usambaras. The large size, long legs and broad head distinguish it from other *Arthroleptis* species in the West Usambaras.

HABITAT: Leaf litter in montane forest

NATURAL HISTORY: Assumed to lay eggs in the leaf litter of the forest floor that hatch directly into small frogs.

CALL: Unknown

DISTRIBUTION IN THE EACF: West Usambaras (there is some disagreement as to the extent of the range)

TYPE LOCALITY: Mazumbai Natural Forest, West Usambara Mountains, Tanzania

ELEVATIONAL RANGE: Type specimen was collected at 1530 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ 42 mm; ♀ 37 – 55 mm

MAELEZO: Chura huyu ni mmoja wa vyura wakubwa katika spishi za *Arthroleptis*. Ana kichwa kipana na miguu mirefu (muundi goko ni takribani ½ ya SVL au zaidi). Sehemu ya chini ni kijivu kahawia na kwa kawaida haina alama nyeusi zinazoonekana. Kuna mkunjo wa ngozi ambao unatoka jichoni, juu ya kiwambo cha sikio hadi mkononi. Kuna mikunjo ya ngozi sehemu ya mgongoni na pembeni inayoonekana kwa mbali. Kiwambo cha sikio ni mvingo, kinaonekana na ni chini ya ½ ya kipenyo cha jicho. Sehemu ya juu ya macho ni njano na sehemu ya chini ni nyeusi. Ncha za vidole vya mikononi ni pana kidogo sana, ncha za vidole vya miguuni ni pana; aidha vidole vya mkononi na miguuni havina ncha za mvingo. Kuna mfuo kwenye sehemu ya chini ya ncha za vidole vya miguuni. Aidha, kuna utando kidogo kwenye vidole vya miguuni. Kidole cha pili cha mkononi ni kirefu sana kuliko cha pili.

SPISHI INAZOFANANA NAZO: Hii ndiyo spishi kubwa peke yake ambayo imepatikana Usambara Magharibi. Saizi yake kubwa, miguu mirefu na kichwa kipana ni vitu vinavyoitofautisha na spishi zingine za Usambara Magharibi.

MAZINGIRA: Majani yaliyoanguka chini kwenye misitu iliyopo karibu au zaidi ya mita 1200 m kutoka usawa wa bahari

HISTORIA ASILIA: Inadhaniwa chura anataga mayai kwenye majani yaliyoanguka ya msituni na kutotoa vyura moja kwa moja.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Usambara Magharibi (kuna utata juu ya maeneo ambapo spishi hii hupatikana)

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Msitu asilia wa Mazumbai, Milima ya Usambara Magharibi, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1530 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Arthroleptis xenodactyloides (Hewitt, 1933)

Dwarf Squeaker, Hewitt's Bush Squeaker, Chirinda Screeching Frog, Nyika Squeaker



E. Harper

SVL: ♂ 16 – 20 mm; ♀ 19 – 23 mm

DESCRIPTION: A small leaf litter frog with short legs and a narrow head. The dorsum is orange-brown usually with brighter orange tinges around the groin. Faint light dorsolateral stripes are present in some individuals while others have a darker hourglass figure on the dorsum. The snout is pointed. The small tympanum is distinctly visible. Toe and finger tips are expanded into small rounded disks. As in other members of this family, the male has an elongated third finger. Females often have bright red-orange on the groin and thigh area.

SIMILAR SPECIES: *A. xenodactyloides* may be confused with *A. xenodactylus* and *A. stridens*, however *A. xenodactylus* never has dorsolateral stripes, and has papillate rather than rounded finger tips as in *A. xenodactyloides*. The wedge shaped profile of the snout in *A. xenodactyloides* distinguishes it from *A. stridens*.

HABITAT: Lowland and montane forests, swamps, woodland and wet grasslands.

NATURAL HISTORY: Clutches of around 20 unpigmented eggs are deposited beneath moist leaf litter. Eggs undergo direct development, and tiny frogs emerge without passing through a free-swimming tadpole stage. Adults can be found in discrete patches in forest habitat. This species is known to travel large distances through unsuitable habitat to neighboring mountains in the Taita Hills.

CALL: Males call from leaf litter or perched on low vegetation during the day and at night. The call consists of three short high-pitched clicks.

DISTRIBUTION IN THE EACF: Southeastern and northeastern Tanzania and the Taita Hills in Kenya.

TYPE LOCALITY: Chirinda Forest, Zimbabwe

ELEVATIONAL RANGE: Sea level to 2100 m

CONSERVATION STATUS: Least Concern

Chura filimbi kibushuti wa Hewitt, wa Chirinda, na wa Nyika



UREFU WA MWILI: ♂ 16 – 20 mm; ♀ 19 – 23 mm

MAELEZO: Chura huyu mdogo anayepatikana chini kwenye majani ya msituni ana urefu chini ya 22 mm, miguu mifupi na kichwa chembamba. Sehemu ya juu ni njano kahawia na ina madoa madogo sana ya njano iliyokolea kwenye eneo la kinena. Baadhi ya vyura wana mistari iliyofia mgongoni na pembeni wakati wengine wana umbo la “V” mbili zinazogusana, moja ikiwa chini juu, kwenye sehemu ya juu. Pua imechongoka. Kiwambo cha sikio ni kidogo na kinaonekana. Vidole vya miguuni na mikononi ni vipana na vina ncha mviringo. Kama ilivyo kwa vyura wengine wa familia hii, kidole cha mkononi cha tatu cha madume ni kirefu kuliko vingine. Mara nyingi, majike yana rangi nyekundu inayong’aa kwenye kinena na kwenye paja.

SPISHI INAZOFANANA NAZO: Inawezekana kumchanganya *A. xenodactyloides* na *A. xenodactylus* na *A. stridens*, lakini *A. xenodactylus* kamwe hana mistari katikati ya sehemu ya juu na hana ncha mviringo kwenye vidole vya mikononi kama *A. xenodactyloides*. Pua yenye umbo la kabari ya *A. xenodactyloides* inatofautisha spishi hii na ile ya *A. stridens*.

MAZINGIRA: Maeneo tambarare na misitu iliyopo karibu au zaidi ya mita 1200 m kutoka usawa wa bahari, mabwawa, maeneo yenye miti na nyika zenye unyevu.

HISTORIA ASILIA: Makundi ya mayai 20 yasiyokuwa na rangi yanatagwa chini ya majani yaliyoanguka na yenye unyevunyevu. Mayai yanatolewa chura wachanga na wadogo sana bila kupitia hatua ya viluwiluwi vinavyoogelea. Chura wazima wanapatikana kwenye sehemu zilizojificha za msituni. Spishi hii inaweza kusafiri umbali mkubwa kwenye mazingira yasiyofaa hadi kwenye milima jirani ya Taita.

ENEO SPISHI INAPOPATIKANA KWENYE

MTMMP: Tanzania Kusini na Kaskazini na Milima ya Taita, Kenya.

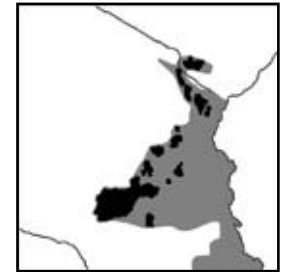
MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA

YA KWANZA: Misitu ya Chirinda, Zimbabwe

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:

0 - 2100 m

HALI YA UHIFADHI: Haiko hatarini



Arthroleptis xenodactylus (Boulenger, 1909)
Amani Screeching Frog, Eastern Squeaker

Chura filimbi wa Amani, wa Mashariki



E. Harper

SVL: ♂ 13 – 17 mm

DESCRIPTION: A very small leaf litter frog with a narrow wedge-shaped head and short legs. Dorsal pattern is variable among individuals, but often consists of a darker hourglass figure on a brown background, sometimes with dark sacral spots as well. In most individuals a dark band begins at the tip of the snout and passes under the eye to the tympanum. A small dark patch is usually present around the vent. The ventral surface is dark and evenly speckled with light mottling from the throat to the undersides of the legs. Digit tips are

slightly expanded, with a distinct pointed papillate projection. The third finger of males is elongated and edged with small spines which presumably aid in grasping the female during mating.

SIMILAR SPECIES: *A. xenodactylus* may be confused with *A. xenodactyloides* and *A. stridens*, but can be distinguished by its distinctly papillate digit tips.

HABITAT: Leaf litter of lowland and montane forest. Often found under logs and in banana leaves.

NATURAL HISTORY: Eggs are laid in moist soil or leaves and develop directly into frogs without passing through a free-swimming tadpole stage. Emerging frogs can be as small as 5 mm.

CALL: Males call from exposed sites among leaf litter. The call is a high-pitched chirp.

DISTRIBUTION IN THE EACF: East Usambara and Nguru Mountains

TYPE LOCALITY: Amani, East Usambaras, Tanzania

ELEVATIONAL RANGE: Sea level to 2000 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ 13 – 17 mm

MAELEZO: Chura huyu mdogo anayepatikana chini kwenye majani ya msituni ana kichwa chenye umbo la kabari na miguu mifupi. Mpangilio wa sehemu ya juu unatofautiana kati ya vyura lakini mara nyingi kuna umbo la “V” mbili zinazogusana, moja ikiwa chini juu kwenye usuli wa kahawia na wakati mwingine kuna madoa sehemu ya chini ya mgongo. Idadi kubwa ya vyura hawa wana mstari mweusi unaoanzia kwenye ncha ya pua, unapita chini ya jicho na kuishia kwenye kiwambo cha sikio. Kawaida, kuna eneo dogo jeusi linalozunguka tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Sehemu ya chini ni nyeusi na ina madoa kutoka kooni hadi sehemu ya nyuma ya miguu. Ncha za vidole ni pana kidogo na zina eneo lilichochongoka na linaloonekana. Kidole cha mkononi cha tatu cha dume ni kirefu kuliko vingine na pembeni kuna miiba midogo ambayo huenda inatumika kumkamata jike wakati wa kupandana.

SPISHI INAZOFANANA NAZO: *A. xenodactylus* anafanana na *A. xenodactyloides* na *A. stridens* lakini tofauti yake ni kuwa ana ncha za vidole zilizovimba na kujitokeza

MAZINGIRA: Majani yaliyoanguka kwenye eneo tambarare au misitu iliyo karibu au zaidi ya 1200 m. Mara nyingi chura wanapatikana chini ya magogo au kwenye majani ya ndizi.

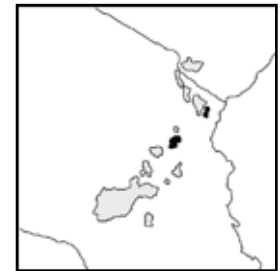
HISTORIA ASILIA: Mayai yanatagwa kwenye udongo wenye unyevunyevu au majani na vyura wanatolewa moja kwa moja bila kupitia hatua ya viluwiwi wanaoogelea. Vyura wanaotolewa wanaweza kuwa na urefu wa 5 mm.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Usambara Mashariki na Milima ya Nguru

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Amani, Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 0 - 2000 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Leptopelis argenteus (Pfeffer, 1893)

Bagomoyo Forest Treefrog, Silvery Tree Frog, Triad Tree Frog, Broadley's Tree Frog



E. Harper

SVL: ♂ 45mm; ♀ 52 mm

DESCRIPTION: A light brown *Leptopelis*, typically with four broad darker brown stripes on the dorsum, although some individuals lack any markings. The snout is short and rounded and there is usually a dark triangle between the eyes. The tympanum is visible and less than half the diameter of the eye. The legs are short (tibia less than 1/2 SVL). The pupils are vertical. Males lack pectoral glands. The fingers end in small disks. Toes have a small amount of webbing.

SIMILAR SPECIES: *Leptopelis argenteus* and *Leptopelis concolor* differ in their dorsal markings and distribution, but have identical advertisement calls and should possibly be considered subspecies rather than separate species.

HABITAT: Coastal savanna woodlands. Tolerates some degree of habitat degradation

NATURAL HISTORY: Males call while perched on trees or grass, often away from water. Eggs are buried in mud and larvae enter water after hatching.

CALL: A combination of whistles and clacks

DISTRIBUTION IN THE EACF: Eastern Tanzania, inland to the Kilombero Valley

TYPE LOCALITY: Marsh south of Bagamoyo, Tanzania

ELEVATIONAL RANGE: < 800 m

CONSERVATION STATUS: Least Concern

Chura miti wa Bagamoyo



UREFU WA MWILI: ♂ 45 mm; ♀ 52 mm

MAELEZO: Chura huyu ni *Leptopelis* mwenye rangi ya kahawia iliyoifitia, ana mistari minne kahawia iliyokolea na mipana sehemu ya chini, lakini baadhi ya vyura hawana alama zozote. Pua yake ni fupi na mviringo na kawaida, ana pembetatu nyeusi kati ya macho yake. Kiwambo kinaonekana na ni chini ya nusu ya kipenyo cha jicho. Miguu ni mifupi – chini ya 1/2 ya SVL. Mboni zake ni za wima. Madume hayana tezi kifuani. Vidole vya mikononi vina ncha mviringo. Vidole vya mguuni vina utando kidogo sana.

SPISHI INAZOFANANA NAZO: Spishi za *Leptopelis argenteus* na *Leptopelis concolor* zinatofautiana kwenye alama za sehemu ya juu na maeneo zinapatikana lakini miito yao ni sawa na huenda ni vizuri zikachukuliwa kama spishi ndogo za spishi moja kubwa na siyo spishi tofauti

MAZINGIRA: Savana ya pwani yenye miti. Inavumilia kiasi kwenye mazingira yaliyoharibiwa kiasi.

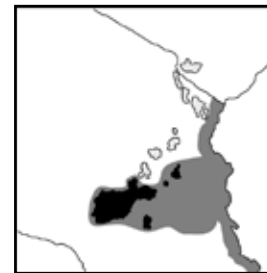
HISTORIA ASILIA: Madume yanaita yanapokuwa juu ya miti au kwenye majani, mara nyingi yanapokuwa mbali na maji. Mayai yanafukiwa kwenye tope na viluwiluwi vinaingia majini baada ya kutotolewa.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Tanzania Mashariki na bara hadi Bonde la Kilombero.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Maeneo ya matope kusini mwa Bagamoyo, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 800 m

HALI YA UHIFADHI: Haiko hatarini



Leptopelis barbouri (Ahl, 1929)
Barbour's Forest Treefrog

Churamiti wa Msituni wa Barbouri



E. Harper

SVL: ♂ 32 – 39 mm; ♀ 38 – 58 mm

DESCRIPTION: A slender frog with a translucent green dorsum, often with yellow flecking. The eyes are white with red-orange variegations and are edged with black. The tympanum is small and barely visible. The snout is sharply pointed. In males the throat is bluish green. Toes end in large disks and are roughly half webbed. Males have pectoral glands.

SIMILAR SPECIES: *Leptopelis parkeri* has similar eyes, but differs substantially from *L. barbouri* in dorsal coloration.

HABITAT: Montane rainforest, especially along streams

NATURAL HISTORY: Eggs are laid in burrows, sometimes as far as 10 m from a stream. Tadpoles move to water upon hatching.

CALL: Males call from vegetation overhanging streams. Schiøtz (1999) describes the call as “a brief buzzing”

DISTRIBUTION IN THE EACF: East Usambara and Udzungwa Mountains and Mount Rungwe

TYPE LOCALITY: Mount Lutindi, Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 700 – 2100 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ 32 – 39 mm; ♀ 38 – 58 mm

MAELEZO: Chura huyu ni mwembamba na sehemu ya chini ni kijani, angavu na yenye madoa njano madogo sana. Macho ni meupe na yana rangi mbalimbali, nyekundu, njano na nyeusi pembeni. Kiwambo cha sikio ni kidogo na kinaonekana kwa shida. Pua imechongoka sana. Koo la dume ni kijani bluu. Vidole vya miguuni vinaishia kwenye ncha za vidole mvingo na vina utando kwenye nusu ya sehemu. Madume yana tezi kifuani.

SPISHI INAZOFANANA NAZO: Macho yake yanafanana na ya *Leptopelis parkeri* lakini rangi ya sehemu ya juu ya spishi hizi mbili ni tofauti sana.

MAZINGIRA: Misitu iliyo karibu au zaidi ya 1200 m kutoka usawa wa bahari, hususan pembeni mwa mito.

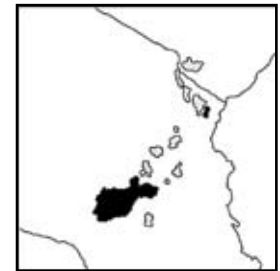
HISTORIA ASILIA: Mayai yanatagwa kwenye mashimo, wakati mwingine umbali wa 10 m kutoka mtoni. Viluwilwi vikitolewa vinaingia majini.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Mashariki, Udzungwa na Rungwe

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima ya Lutindi, Usambara, nchini Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 700 – 2100 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Leptopelis concolor (Ahl, 1929)
Triad Tree Frog, Witu Forest Treefrog

Vyura miti wa Triad, Vyura
miti wa Msitu wa Witu



E. Harper

SVL: ♂ 31 – 38 mm

DESCRIPTION: A relatively small, light brown *Leptopelis* with a broad head and short snout. The dorsum can be green or cream colored in juveniles. There is a darker brown triangle between the eyes and an inverted 'V' or 'Y' on the dorsum. The legs are short – tibia slightly less than $\frac{1}{2}$ SVL. Pupils are vertical. Toes have only a very small amount of webbing. Males lack pectoral glands.

SIMILAR SPECIES: *Leptopelis argenteus* and *Leptopelis concolor* differ in their dorsal markings and

distribution, but have identical advertisement calls and should possibly be considered subspecies rather than separate species.

HABITAT: Savanna woodland and grassland in coastal lowlands. Tolerates some degree of habitat degradation, but requires vegetation.

NATURAL HISTORY: Breeding starts at the beginning of each rainy season. Males call while perched 1 – 2 m above the ground several meters distance from each other on vegetation, often far from water. Eggs are laid in cavities in the mud. Larvae hatch into the water when the nest is inundated with water.

CALL: Schiøtz (1999) describes the call as “an un-melodious clack followed by two or three shrill screams, or sometimes the screams followed by the clack, or clacks or screams alone”

DISTRIBUTION IN THE EACF: Taita Hills and coastal areas of southern Kenya and northeastern Tanzania

TYPE LOCALITY: Witu, Kenya

ELEVATIONAL RANGE: < 1700 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 31 – 38 mm

MAELEZO: Chura huyu ni *Leptopelis* mdogo kiasi mwenye rangi ya kahawia, kichwa kipana na pua fupi. Sehemu ya chini ya vyura wadogo inaweza kuwa kijani au rangi ya malai. Sehemu ya chini, kuna pembetatu kahawia iliyokolea kati ya macho na 'V' au 'Y' zilizogeuzwa chini juu. Miguu ni mifupi, chini ya $\frac{1}{2}$ ya SVL. Mboni ni za wima. Vidole vya miguuni vina utando kidogo sana. Madume yana tezi kifuani.

SPISHI INAZOFANANA NAZO: Spishi za *Leptopelis argenteus* na *Leptopelis concolor* zinatofautiana kwenye alama za sehemu ya juu na maeneo zinapatikana lakini miito yao ni sawa na huenda ni vizuri zikachukuliwa kama spishi ndogo za spishi moja kubwa na siyo spishi tofauti

MAZINGIRA: Maeneo ya savana yenye miti na nyika za maeneo tambarare ya pwani. Inavumilia kiasi kwenye mazingira yaliyoharibiwa lakini inahitaji uoto.

HISTORIA ASILIA: Msimu wa kuzaliana unaanza mwanzo wa kila kipindi cha mvua. Madume yanaita yakiwa kwenye uoto, mita 1-2 juu ya ardhi na mita kadhaa kutoka madume mengine na mara nyingi mbali na maji. Mayai yanatagwa kwenye mashimo yaliyo kwenye matope. Viluwiluwi vinatolewa majini kiota kinapokuwa kimejaa maji.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Taita na maeneo ya pwani ya Kenya Kusini na Tanzania Kaskazini

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Witu, Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1700 m

HALI YA UHIFADHI: Haiko hatarini



Leptopelis flavomaculatus (Günther, 1864)

Brown-backed Tree Frog, Yellow-spotted Tree Frog, Brown Forest Treefrog, Johnston's Treefrog



E. Harper

SVL: ♂ 44 – 50 mm; ♀ 60 – 70 mm

DESCRIPTION: Two color phases exist. Juveniles and some adult males are bright green with yellow flecks. Adult females and some adult males are gray-brown with a darker brown triangle pointing forward on the dorsum and a dark band running below the eye and covering the tympanum. Bright white patches are distinctly visible on the heels and elbows of individuals in the green phase, but are less distinct in the gray-brown phase. Adult males have pectoral glands. The snout is short and

rounded. The tympanum is large and distinct, greater than ½ the diameter of the eye.

SIMILAR SPECIES: *L. flavomaculatus* adults in the gray-brown phase may easily be confused with adult *L. vermiculatus* which have a nearly identical adult color phase. The most reliable means of differentiating between the two species is to compare the toe webbing which is more extensive in *L. vermiculatus*, with the inner web reaching the disks of the first three digits.

HABITAT: *L. flavomaculatus* is primarily found in semideciduous forest in coastal areas, but also occurs in lowland and montane forest. It tolerates some degree of habitat degradation.

NATURAL HISTORY: Very little is known about the breeding habits of *L. flavomaculatus*. Males call from vegetation approximately 3-4 m above ground and from burrows on the ground. It is assumed to lay eggs in burrows near water and larvae are thought to hatch and develop in water. Emerging metamorphs are commonly seen on vegetation at Amani Pond in the East Usambaras and are around 15 mm.

CALL: Males call from dense vegetation as high as four meters above the ground, or from the mouth of burrows in the ground. Schiøtz (1999) describes the call as “a clack with a peculiar tonal quality”

Vura miti wenye mgongo kahawia, Vyura miti wenye madoa njano, Vyura miti kahawia wa msituni, Vyura miti wa Johnson

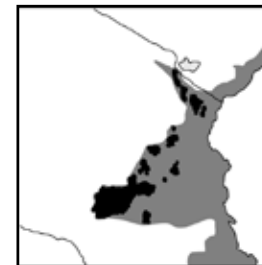


DISTRIBUTION IN THE EACF: Eastern Tanzania including the island of Zanzibar, Shimba Hills and coastal Kenya including Arabuko-Sokoke Forest

TYPE LOCALITY: Rovuma Bay, Tanzania

ELEVATIONAL RANGE: < 1600 m

CONSERVATION STATUS: Least concern



Leptopelis flavomaculatus (Continued)



Juvenile *L. flavomaculatus*
J. Vonesh

UREFU WA MWILI: ♂ 44 – 50 mm; ♀ 60 – 70 mm

MAELEZO: Chura huyu ana mifumo miwili ya rangi. Vyura wadogo na baadhi ya madume mazima wana rangi ya kijani inayong'aa na madoa ya njano. Majike mazima na baadhi ya madume mazima yana rangi ya kijivu kahawia na pembetatu kahawia iliyokolea, inayoelekea mbele kwenye sehemu ya juu na mstari mweusi unaotoka chini ya jicho na kufunika kiwambo cha sikio. Aidha, kuna madoa meupe yanayoonekana wazi na yanayong'aa kwenye kisigino na kiwiko cha vyura wanapokuwa na rangi ya kijani lakini hayaonekani vizuri wanapokuwa na rangi ya kijivu kahawia. Madume mazima yana tezi kifuani. Pua ni fupi na mviringo. Kiwambo cha sikio ni kikubwa, kinaonekana na kinazidi ½ ya kipenyo cha jicho.

SPISHI INAZOFANANA NAZO: Ni rahisi kuwachanganya vyura wazima wa *Leptopelis flavomaculatus* wakiwa kwenye hatua ya rangi ya kijivu kahawia na vyura wazima wa *L. vermiculatus* ambao wana rangi karibu sawa. Njia nzuri ya kutofautisha spishi hizi mbili ni kulinganisha utando kwenye vidole vya mguuni ambao umeenea zaidi kwenye *L. vermiculatus* ambapo utando wa ndani unafika kwenye ncha mviringo za vidole vya kwanza vitatu.

MAZINGIRA: *L. flavomaculatus* anapatikana zaidi kwenye misitu ya pwani ambayo baadhi ya miti yake huangusha majani yote kila, lakini pia kwenye misitu ya maeneo tambarare na iliyo karibu au mita 1200 kutoka usawa wa bahari. Inavumilia kiasi mazingira yaliyoharibiwa.

HISTORIA ASILIA: Kuna taarifa chache sana juu ya kuzaliana kwa spishi hii. Madume yanaita kutoka kwenye uoto ulio mita 3-4 juu ya ardhi na kutoka mashimoni. Inadhaniwa mayai yanatagwa mashimoni na viluwiluwi wanatotolewa na kukua majini. Vyura wachanga hawa wanaotoka kupata umbile la chura mzima wanaonekana mara nyingi kwenye uoto wa Bwawa la Amani, Usambara Mashariki na wana urefu wa takribani 15 mm.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Tanzania Mashariki pamoja na kisiwa cha Zanzibar, Milima ya Shimba na pwani ya Kenya ikijumuisha Msitu wa Arabuko-Sokoke.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Ghuba ya Ruvuma, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1600 m

HALI YA UHIFADHI: Haiko hatarini

Leptopelis parkeri (Barbour & Loveridge, 1928)
Parker's Forest Treefrog, Parker's Tree Frog



J. Vonesh

SVL: ♂ 34 – 43; ♀ 56 mm.

DESCRIPTION: A slender *Leptopelis* with bright red eyes. Males are typically dark gray or brown with an irregular pattern of yellow bars, while females are uniform olive- brown or gray. In both sexes the ventral surface is light in color and the toes and undersides of the limbs are yellow. The throat is white in males and orange in females. The tympanum is visible, but small and indistinct. Pupils are vertical. Toes are half webbed.

SIMILAR SPECIES: *L. barbouri* has similar eyes, but differs substantially from *L. parkeri* in dorsal coloration.

HABITAT: Montane forest. Does not tolerate severely modified habitat.

NATURAL HISTORY: Eggs are laid in mud cavities near slowly flowing streams

CALL: Schiøtz (1999) describes the call as "a quiet buzzing."

DISTRIBUTION IN THE EACF: East and West Usambara, Udzungwa, Uluguru and South Pare Mountains

TYPE LOCALITY: Vituru, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 200 – 2000 m

CONSERVATION STATUS: Vulnerable

Vyura miti wa mstuni wa Parker,
Vyura miti wa Parker



UREFU WA MWILI: ♂ 34 – 43; ♀ 56 mm.

MAELEZO: Chura Huyu ni *Leptopelis* mwembamba mwenye macho mekundu yanayong'aa. Madume wana rangi ya kijivu iliyokolea au kahawia na wana mistari ya njano inayotofautiana, wakati majike yana rangi ya mzeituni kahawia au kijivu. Sehemu ya chini ya madume na majike ina rangi iliyofifia wakati vidole vya miguuni, sehemu ya chini ya miguu na mikono ni njano. Koo la madume ni jeupe na la majike ni njano. Kiwambo cha sikio ni kidogo na kinaonekana kwa shida. Mboni ni za wima na vidole vya miguuni vina utando kiasi (½).

SPISHI INAZOFANANA NAZO: *L. barbouri* ana macho yanayofanana na spishi hii lakini rangi yake ya sehemu ya juu ni tofauti sana na ya *L. parkeri*

MAZINGIRA: Misitu iliyopo zaidi ya 1200 m kutoka usawa wa bahari. Haivumilii mazingira yaliyobadilishwa sana.

HISTORIA ASILIA: Mayai yanatagwa kwenye mashimo ya matope karibu na vijito vinavyokwenda polepole.

SPISHI INAZOFANANA NAZO: Spishi hii ina macho yanayofanana na ya *L. barbouri* lakini anatoftautiana naye sana kwenye rangi ya sehemu ya juu.

MAZINGIRA: Misitu iliyo karibu au zaidi ya 1200 m. Haivumilii mazingira yaliyoharibiwa sana.

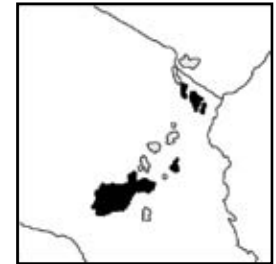
HISTORIA ASILIA: Mayai yanatagwa kwenye mashimo matopeni karibu na mito inayokwenda polepole.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Magharibi, Usambara Mashariki, Udzungwa, Uluguru na Pare Kusini

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Vituru, Milima ya Uluguru nchini Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 200 – 2000 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Leptopelis uluguruensis (Barbour & Loveridge, 1928)
Uluguru Forest Treefrog, Uluguru Tree Frog

Vyura miti wa Msitu ya Uluguru, Vyura
miti wa Uluguru



E. Harper



J. Vonesh

SVL: ♂ 28 – 38 mm; ♀ 46 – 48 mm

DESCRIPTION: A small *Leptopelis* with an indistinct tympanum. The dorsum is blue-green in some individuals and yellow-brown in others, often with light spots or rings. In males the throat is translucent blue. Pupils are vertical. The iris may be brown or silver. Toes are only about ½ webbed. Pectoral glands are not present in males.

SIMILAR SPECIES: Individuals with the blue-green dorsal color are never the same bright green color of *L. flavomaculatus* or *L. vermiculatus*. The eyes of *L. uluguruensis* are never red or orange as in *L. barbouri*.

HABITAT: Submontane rainforest. Tolerates slightly disturbed habitat including banana patches near mature forest.

NATURAL HISTORY: Mode of reproduction is unknown, but it is assumed that eggs are laid in mud cavities near water.

CALL: Schiøtz (1999) describes the call as “a brief, rather unremarkable clack.”

DISTRIBUTION IN THE EACF: East

Usambara, Nguu, Nguru, Udzungwa and Uluguru Mountains

TYPE LOCALITY: Nyange, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 900 – 1650 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ 28 – 38 mm; ♀ 46 – 48 mm

MAELEZO: Chura huyu ni *Leptopelis mdogo* mwenye kiwambo cha sikio kisichoonekana. Baadhi ya vyura wana rangi ya bluu kijani na wengine njano kahawia kwenye sehemu ya chini na mara nyingi wana madoa au michoro ya miviringo iliyo na rangi iliyofifia. Koo la madume ni bluu angavu. Mboni ni za wima na airisi ni kahawia au rangi ya fedha. Vidole vya miguuni vina utando kiasi (½). Madume hayana tezi kifuani.

SPISHI INAZOFANANA NAZO: Vyura wenye rangi ya bluu kijani sehemu ya juu hawana rangi ya kijani inayong’aa kama ya *L. flavomaculatus* au *L. vermiculatus*. Macho ya *L. uluguruensis* kamwe hayawi mekundu au rangi ya machungwa kama ya *L. barbouri*.

MAZINGIRA: Misitu yenye mvua nyingi iliyo karibu au zaidi ya 1200 m kutoka usawa wa bahari. Inavumilia mazingira yaliyoharibiwa kidogo, ikiwa ni pamoja mashamba madogo ya ndizi karibu na misitupatikana tu kwenye misitu ambayo haijaguswa.

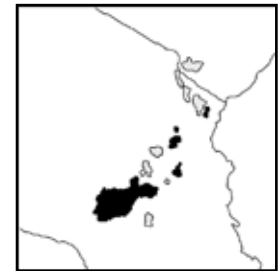
HISTORIA ASILIA: Hakuna taarifa juu ya namna ya kuzaliana lakini inadhaniwa mayai yanatagwa mashimoni kwenye matope karibu na maji.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Mashariki, Nguu, Nguru, Udzungwa na Uluguru

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Nyange, Milima ya Uluguru, nchini Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 900 – 1650 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Leptopelis vermiculatus (Boulenger, 1909)
Amani Forest Treefrog, Vermiculated Tree Frog

Vyura miti wa msituni Amani



J. Vonesh

SVL: ♂ 39 – 50 mm; ♀ 61 – 85 mm

DESCRIPTION: A large *Leptopelis* with two color phases. Juveniles and some adult males are bright green with black vermiculations. Adult females and some adult males are gray-brown with a darker triangle pointing forward on the dorsum and a dark area below the eye extending to the tympanum. In both phases bright white patches appear on the heels and elbows, and the sides are marbled black and white. Pectoral glands are present in males.

SIMILAR SPECIES: *L. vermiculatus* adults in the gray-brown phase may easily be confused with adult *L. flavomaculatus* which have a nearly identical adult color phase. The toe webbing on *L. vermiculatus* is extensive, but never reaches the disks of the first three digits as it does in *L. flavomaculatus*.

HABITAT: Submontane and montane forest. Found only in undisturbed forest.

NATURAL HISTORY: Unknown, but assumed to lay eggs in mud nests on land near water.

Males call near streams and pools. Metamorphosing larvae have been observed emerging from Amani pond in the East Usambaras.

CALL: Schiøtz (1999) describes the call as “a single clack with a peculiar tonal quality.”

DISTRIBUTION IN THE EACF: Eastern Arc endemic, including the Usambara, Nguu, Udzungwa and Rungwe Mountains of Tanzania.

TYPE LOCALITY: Amani, East Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 900 – 1800 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ 39 – 50 mm; ♀ 61 – 85 mm

MAELEZO: Chura huyu ni *Leptopelis* mkubwa na ana mifumo miwili ya rangi tofauti. Vyura wadogo na baadhi ya madume mazima yana rangi ya kijani inayong’aa na mistari iliyopindapinda. Majike mazima na baadhi ya madume mazima ni kijivu kahawia na yana pembetatu nyeusi inayoelekea mbele kwenye sehemu ya juu na yana sehemu nyeusi inayotoka chini ya jicho hadi kiwambo cha sikio. Kwenye mifumo yote miwili ya rangi, kuna madoa meupe yanayong’aa, kwenye visigino na viwiko na vyura wana mchanganyiko wa rangi nyeusi na nyeupe pembeni. Madume yana tezi kifuani.

SPISHI INAZOFANANA NAZO: Ni rahisi kuwachanganya vyura wazima wa *L. vermiculatus* wakiwa kwenye hatua ya rangi ya kijivu kahawia na wale wa *L. flavomaculatus* ambao wana rangi karibu sawa. Lakini utando kwenye vidole vya mguuni vya *L. vermiculatus* umeenea zaidi ila kamwe haufiki kwenye vidole vitatu vya mwanzo kama ilivyo kwa *L. flavomaculatus*

MAZINGIRA: Mimitu iliyo karibu au zaidi ya 1200 kutoka usawa wa bahari. Inapatikana tu kwenye misitu ambayo haijaguswa.

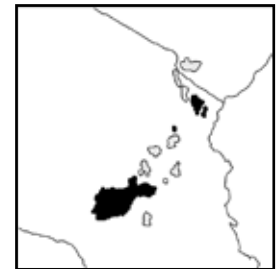
HISTORIA ASILIA: Haijulikani, lakini inadhaniwa kwamba vyura wanataga mayai kwenye viota matopeni kwenye ardhi karibu na maji. Madume yanaita karibu na mito na madimbwi. Viluwilwi vimeonekana vikitoka kwenye bwawa la Amani, Usambara Mashariki.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara, Nguu, Udzungwa na Rungwe, nchini Tanzania.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Amani, Milima ya Usambara Mashariki, nchini Tanzania.

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 900 – 1800 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Brevicipitidae

The family Brevicipitidae occurs only in eastern and southern sub-Saharan Africa. They were previously considered to be in the family Microhylidae, but recent genetic analysis suggests that they share a common ancestor and are more closely related to Hyperoliidae, Hemisotidae and Arthroleptidae. Four genera are found in the Eastern Arc, including *Breviceps*, *Probreviceps*, *Callulina*, and *Spelaeophryne*. The latter two are endemic to the Eastern Arc. All have small narrow heads and short hind limbs. Males are typically much smaller than females and some species rely on a sticky substance produced by skin glands to glue themselves to females during mating. Females lay eggs in underground cavities and the eggs hatch directly into small frogs without a free-swimming tadpole phase.

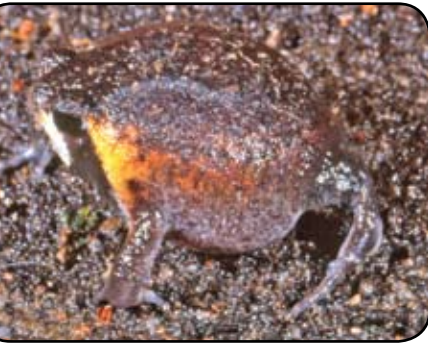
Familia ya Brevicipitidae inapatikana tu mashariki na kusini mwa Afrika, kusini mwa Sahara. Awali, ilidhaniwa kwamba vyura hawa walikuwa kwenye familia ya Microhylidae, lakini utafiti wa kijenetiki wa hivi karibuni unaonyesha kwamba wanatokana na mhenga mmoja na wana uhusiano wa karibu na Hyperoliidae, Hemisotidae na Arthroleptidae. Kuna jenasi nne zinazopatikana Tao la Mashariki ambazo ni *Breviceps*, *Callulina*, *Probreviceps* na *Spelaeophryne*. Aidha, *Callulina* na *Spelaeophryne* zinapatikana tu kwenye Tao la Mashariki. Madume ni madogo kuliko majike na baadhi ya spishi zinatimia kitu kinachotoka kwenye tezi na kinachonata ili kuweza kujishikilia kwa majike wakati wa kupandana. Majike yanataga mayai kwenye mashimo chini ya ardhi na vyura wadogo wanatotolewa bila kupitia hatua ya viluwiluwi wanaoogelea.



Breviceps mossambicus
V. Mercurio

Breviceps fichus (Channing and Minter, 2004)
Highland Rain Frog

Vyura Waitamvua wa
Milimani



A. Channing

SVL: ♂ 35 mm; ♀ 43 mm

DESCRIPTION: A rotund frog with a very small head and short limbs. The dorsum is dark brown and the ventral surface is lightly colored. A distinct black mark runs from the eye to the base of each arm. The throat is brown in females and dark black in breeding males. Toes lack webbing.

SIMILAR SPECIES: Very similar in appearance to *B. mossambicus*, but the calls are distinctly different. It is thought that the two species do not overlap in range.

HABITAT: Grasslands at high elevations

NATURAL HISTORY: Males call during the day from burrows in dense grass. The breeding period is short, lasting only a few weeks at the start of the rainy season. Because they are underground most of the year, very little is known about their natural history. They are assumed to lay eggs terrestrially that hatch directly into small frogs without passing through a free-swimming larval stage. Juveniles have been observed in March.

CALL: Channing and Howell (2006) describe the call as “a pulsed whistle” with “12 pulses in a typical call.”

DISTRIBUTION IN THE EACF: Iringa region including the Udzungwa Mountains

TYPE LOCALITY: Kigwembimbi, Iringa District, Tanzania

ELEVATIONAL RANGE: Above 1500 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 35 mm; ♀ 43 mm

MAELEZO: Chura huyu ni mviringo, ana kichwa kidogo sana na miguu mifupi. Sehemu ya juu ni kahawia iliyokolea na sehemu ya chini ina rangi iliyofifia. Kuna alama nyeusi inayotoka jichoni hadi mwanzo wa kila mkono. Koo la majike ni kahawia na ni jeusi sana kwenye madume yaliyofikia hali ya kuzaliana. Vidole miguuni havina utando.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana sana kimaumbile na *B. mossambicus* lakini miito yao ni tofauti sana. Inadhaniwa kwamba spishi hizi mbili zinapatikana kwenye maeneo tofauti.

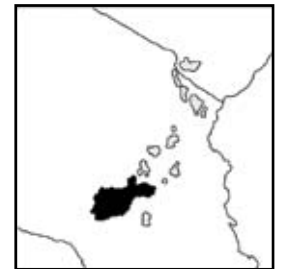
MAZINGIRA: Nyika zilizoko sehemu za miinuko mirefu.

HISTORIA ASILIA: Madume yanaita mchana kutoka kwenye mashimo yaliyopo kwenye nyasi nyingi. Musimu wa kuzaliana ni mfupi, majuma machache mwanzoni mwa msimu wa mvua. Taarifa zao ni chache sana kwa sababu wanakuwa chini ya ardhi karibu mwaka wote. Inadhaniwa vyura wanataga mayai chini ya ardhi na vyura wanatotolewa moja kwa moja bila kupitia hatua ya viluwilwi viwanavyoogelea. Vyura wachanga wanaonekana mwezi wa Machi. **ENEO SPISHI INAPOPATIKANA KWENYE MTMMP:** Maeneo ya Iringa pamoja na Milima ya Udzungwa.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kigwembimbi, Wilaya ya Iringa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: > 1500 m

HALI YA UHIFADHI: Haiko hatarini



Breviceps mossambicus (Peters, 1854)

Flat-faced Frog, Mozambique Rain Frog, Mozambique Short-headed Frog



V. Mercurio

SVL: ♀ < 52 mm

DESCRIPTION: A robust frog with extremely short legs and a short snout. The dorsal color is variable, but is usually gray-brown with dark specks. A dark mark extends from the eye to the arm, obscuring the tympanum. The ventral surface is smooth with a marbled brown pattern on a white background. In males the throat is darkly pigmented. Toes are unwebbed and the two outer toes of each foot are reduced.

SIMILAR SPECIES: see account for *B. fichus*

HABITAT: *B. mossambicus* is primarily a savanna species, but can be found in a wide range of habitat types including open woodland and mountain sides. Tolerates a degree of habitat alteration.

NATURAL HISTORY: A sticky substance is secreted during amplexus, allowing the male to become temporarily glued to the female. Large unpigmented eggs are laid in terrestrial burrows. Clutches are relatively small, usually consisting of no more than twenty eggs. Non-feeding tadpoles hatch six to eight weeks later and complete their development in the nest. Emerging metamorphs are 8-9 mm.

CALL: Males call at ground level from leaf litter or from the mouth of burrows. Channing and Howell (2006) describe the call as “a short chirp, 0.05 s long”

DISTRIBUTION IN THE EACF: Eastern and southern Tanzania.

TYPE LOCALITY: Cape of Good Hope, Western Cape Province, Rep. South Africa

ELEVATIONAL RANGE: < 1800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♀ < 52 mm

MAELEZO: Chura huyu mwenye nguvu ana miguu mifupi sana na pua fupi. Rangi ya sehemu ya chini inatofautiana lakini, kwa kawaida, ni kijivu kahawia na ina madoa meusi. Kuna alama nyeusi inayotoka jichoni hadi mkononi na kufunika kiwambo cha sikio. Sehemu ya chini ni laini yenye mchanganyiko wa weupe na weusi na usuli mweupe. Koo la madume lina rangi nyeusi. Vidole vya miguuni havina utando na vidole viwili vya nje vya kila mguu ni vidogo.

SPISHI INAZOFANANA NAZO: Angalia taarifa za *B. fichus*

MAZINGIRA: Kwa ujumla, *Breviceps mossambicus* ni spishi ya savana lakini inaweza kupatikana kwenye aina mbalimbali za mazingira, pamoja na maeneo ya miombo na kando ya milima. Inavumilia mazingira yaliyoharibiwa kiasi.

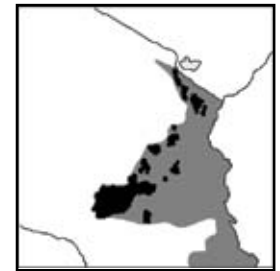
HISTORIA ASILIA: Madume wanatoa kitu kinachonata ili kuweza kujishikilia kwa majike wakati wa kupandana. Mayai makubwa yasiyokuwa na rangi yanatagwa kwenye mashimo ardhini. Makundi ya mayai ni madogo na hayazidi mayai 20. Viluwilwi vinatolewa majuma 6 hadi 8 baadaye na wanamalizia hatua ya kukua wakiwa kwenye viota. Vyura wadogo wanaotoka kupata umbile la chura mzima wanaojitokeza wanakuwa na urefu wa 8-9 mm.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Mashariki na Kusini mwa Tanzania.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Rasi ya Tumaini Jema (Cape of Good Hope), Afrika ya Kusini

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:
< 1800 m

HALI YA UHIFADHI: Haiko hatarini



Callulina dawida (Loader, Measey, de Sá and Malonza, 2009)
Taita Warty Frog



G. J. Measey

SVL: ♂ 21-33 mm, ♀ 39 – 50 mm

DESCRIPTION: A robust *Callulina* with variable dorsal coloring from shades of light yellow through orange, brown to dark brown. In darker individuals, the sides and legs are normally lighter sometimes with white-tipped tubercles. The ventrum is pale but occasionally spotted.

SIMILAR SPECIES: This is the only *Callulina* known to occur in the Taita Hills

HABITAT: Dependent on indigenous forest. Found in thick leaf litter and rotting logs on the forest floor

NATURAL HISTORY: Assumed to breed by direct development. Males call from the ground or from low (1-2 m) perches in small trees. The call can be heard in indigenous Taita forests during the dry months (June to October). Females have been found brooding clutches of eggs in nests in the leaf litter.

CALL: Five to seven short buzzes interspersed with differing periods of silence.

DISTRIBUTION IN THE EACF: Dawida and Mbololo in the Taita Hills

ELEVATIONAL RANGE: 1200 - 2200 m

TYPE LOCALITY: Taita Hills

CONSERVATION STATUS: Critically Endangered

UREFU WA MWILI: ♂ 21 – 33 mm, ♀ 39 – 50 mm

MAELEZO: Chura huyu ni *Callulina* mwenye rangi tofauti sehemu ya juu, kati ya njano iliyofifia, rangi ya machungwa, kahawia na kahawia iliyokolea. Kwenye vyura wenye rangi iliyokolea zaidi, rangi ya pembeni na miguu ya nyuma na mbele inakuwa imefifia na wakati mwingine vipande vya ngozi vigumu na vilivyoinuka vinakuwa na ncha nyeupe. Sehemu ya chini ina rangi iliyofifia na wakati mwingine inakuwa na madoa.

SPISHI INAZOFANANA NAZO: Hii ndiyo spishi peke yake inayopatikana kwenye Milima ya Taita

MAZINGIRA: Misitu asilia. Inapatikana kwenye majani mengi yaliyoanguka na magogo yanayooza, kwenye ardhni msituni.

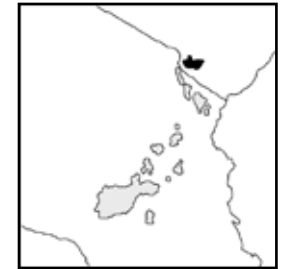
HISTORIA ASILIA: Inadhaniwa vyura wachanga wanatolewa moja kwa moja kutoka kwenye mayai. Madume yanaita kutoka ardhini au kutoka 1-2 m juu ya miti midogo. Mwito unaweza kusikika kwenye misitu asilia ya Taita wakati wa miezi ya kiangazi (Juni – Oktoba). Majike yameonekana yakiatamia makundi ya mayai kwenye viota vilivyo kwenye majani yaliyoanguka.

ENEO SPISHI INAPOPATIKANA SPISHI KWENYE MTMMP: Dawida na Mbololo ya Milima ya Taita

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima ya Taita

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1200 - 2200 m

HALI YA UHIFADHI: Spishi iko hatarini sana



Callulina kisiwamsitu (de Sá, Loader and Channing, 2004)
Mazumbai Warty Frog



E. Harper

SVL: ♂ < 32 mm; ♀ < 41 mm

DESCRIPTION: A stout arboreal frog. The tympanum is visible in most individuals and slightly oval. Legs are short. The dorsum is brown with small white-tipped warts. The ventral surface is cream colored with brown marbling on the sides. Toe and finger tips are not expanded.

SIMILAR SPECIES: *C. kisiwamsitu* is very similar in appearance to *C. dawidae* and *C. kreffti*, however *C. kisiwamsitu* is found only in the West Usambara Mountains where the other species do not occur.

HABITAT: Forest dependent

NATURAL HISTORY: Assumed to breed by direct development. Males call from vegetation up to 2 m above the ground.

CALL: A long trill with 8 – 18 notes per call

DISTRIBUTION IN THE EACF: West Usambara Mountains, including Mazumbai Forest Reserve, Ambangula Forest Reserve, Shume-Mugambo Forest Reserve and Lushoto.

ELEVATIONAL RANGE: 1200 - 1500 m

TYPE LOCALITY: Mazumbai, West Usambara Mountains, Tanzania

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ < 32 mm; ♀ < 41 mm

MAELEZO: Chura huyu ana nguvu na anaishi mtini. Kiwambo cha sikio kinaonekana katika idadi kubwa ya vyura na kina umbo la tufe kidogo. Miguu ni mifupi. Sehemu ya juu ni kahawia na ina chunjua ndogo zenye ncha nyeupe. Sehemu ya chini ina rangi ya malai na mchanganyiko wa rangi nyeusi na nyeupe pembeni. Vidole vya miguuni na mikononi siyo vipana.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana sana na *C. dawidae* na *C. kreffti*, lakini *Callulina kisiwamsitu* anapatikana kwenye Milima ya Usambara Magharibi tu wakati spishi zingine hazipatikani hapo.

HISTORIA ASILIA: Inadhaniwa vyura wachanga wanatolewa moja kwa moja kutoka kwenye mayai. Madume yanaita kutoka kwenye uoto mita 2 juu ya ardhi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Magharibi pamoja na Hifadhi ya Misitu ya Mazumbai, Hifadhi ya Misitu ya Ambangula, Hifadhi ya Misitu ya Shume-Mugambo na Lushoto.

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1200 - 1500 m

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mazumbai, Milima ya Usambara Magharibi, nchini Tanzania

HALI YA UHIFADHI: Spishi iko hatarini



Callulina krefftii (Nieden, 1911)
Krefft's Secret Frog, Krefft's Warty Frog



E. Harper

SVL: < 38 mm

DESCRIPTION: *C. krefftii* is a stout arboreal frog with expanded tips on the fingers and toes. The dorsum is gray-brown and warty without distinct markings. The legs are short. The tympanum is visible and is smaller than ½ the diameter of the eye

SIMILAR SPECIES: *C. krefftii* is not found in the West Usambara Mountains where *C. kisiwamsitu* occurs. *C. krefftii* is a complex of several species that are in the process of being split. The populations in the North and South

Pares are comprised of three different species.

HABITAT: On forest floor often under rocks and logs, most active during rain. Tolerates a moderate degree of habitat degradation.

NATURAL HISTORY: Breeding mode is unknown, but is assumed to be by direct development. Frequently observed on low vegetation 1 – 2 m high.

CALL: Described by Channing and Howell (2006) as “a rolling trill” with 2 seconds between calls.

DISTRIBUTION IN THE EACF: Taita Hills, North Pare, South Pare, East Usambara, Uluguru, Nguu, Nguru, Ukaguru and Udzungwa Mountains

TYPE LOCALITY: Amani, East Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 300 – 2200 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: < 38 mm

MAELEZO: *C. krefftii* ni chura mwenye nguvu, anaishi mitini na ana ncha pana kwenye vidole vya mikononi na miguuni. Sehemu ya juu yenye chunjua ni kijivu kahawia na haina alama maalum. Miguu ni miembamba. Kiwambo cha sikio kinaonekana na ni chini ya ½ ya kipenyo cha jicho.

SPISHI INAZOFAN ANA NAZO: *C. krefftii* haipatikani kwenye Milima ya Usambara Magharibi anakopatikana *C. kisiwamsitu*. *C. krefftii* ni mchanganyiko wa spishi kadhaa zilizopo kwenye mchakato wa kuzigawa. Vyura wa spishi hii waliopo Pare Kaskazini na Kusini wanagawanyika katika spishi tatu tofauti.

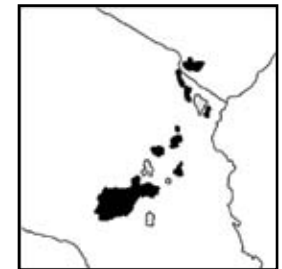
MAZINGIRA: Msituni, kwenye ardhi, mara nyingi chini ya miamba na magogo. Vyura wanafanya shughuli zao wakati wa mvua. Wanavumilia kiasi mazingira yaliyoharibiwa kiasi.

HISTORIA ASILIA: Hakuna taarifa juu ya kuzaliana lakini inadhaniwa mayai yanatolewa vyura wachanga bila kupitia hatua ya viluwilwi vinavyoogelea. Mara nyingi huonekana kwenye uoto wa chini, 1-2 m kutoka ardhini. ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Taita, Milima ya Pare Kaskazini na Pare Kusini, Usambara Mashariki, Uluguru, Nguu, Nguru, Ukaguru na Milima ya Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Amani, Milima ya Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 300 – 2200 m

HALI YA UHIFADHI: Haiko hatarini



Probreviceps durostris

(Loader, Channing, Menegon, and Davenport, 2006)



M. Menegon

SVL: ♀ < 35 mm

DESCRIPTION: The dorsum is brown with angled gray bands. The snout is protruding and pointed, ending in a blue-gray tip. A dark mark extends from the eye to the arm. The tympanum is distinctly visible and is very large in males.

SIMILAR SPECIES: Most closely related to *Probreviceps rungwensis*, however the geographic location and pointed blue-gray snout of *P. durostris* are distinct.

HABITAT: Leaf litter in montane forest

NATURAL HISTORY: Assumed to lay eggs in the leaf litter that hatch directly into small frogs.

CALL: Described by Channing and Howell (2006) as “a slow series of clicks” with a 2 second interval.

DISTRIBUTION IN THE EACF: Endemic to the Ukaguru Mountains, found in the Mamiwa-Kisara and Ikwamba Forest Reserves

TYPE LOCALITY: Ikwamba Forest Reserve, Ukaguru Mountains, Tanzania

ELEVATIONAL RANGE: 1500 – 1900 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♀ < 35 mm

MAELEZO: Sehemu ya juu ni kahawia na ina mistari kijivu yenye umbo la pembe. Pua imejitokeza na kuchongoka na inaishia kwenye ncha ya bluu kijivu. Alama nyeusi inatoka kwenye jicho hadi mkononi. Kiwambo cha sikio kinaonekana wazi na ni kikubwa sana kwenye madume.

SPISHI INAZOFANANA NAZO: Ina uhusiano wa karibu sana na *Probreviceps rungwensis* lakini eneo inapopatikana ni tofauti na ana pua bluu kijivu iliyochongoka.

MAZINGIRA: Msituni kwenye majani yaliyoanguka, zaidi ya 1200 m kutoka usawa wa bahari.

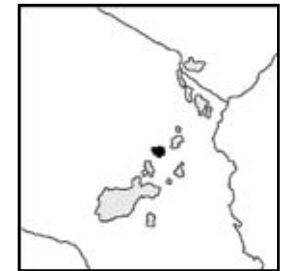
HISTORIA ASILIA: Inadhaniwa chura anataga mayai kwenye majani yaliyoanguka na yanatolewa vyura bila kupitia hatua ya viluwiluwi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Inapatikana tu kwenye Milima ya Ukaguru, Hifadhi za Misitu za Mamiwa-Kisara na Ikwamba

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Ikwamba, Milima ya Ukaguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1500 – 1900 m

HALI YA UHIFADHI: Spishi iko hatarini



Probreviceps loveridgei (Parker, 1931)

Loveridge's Forest Frog

Chura wa Misituni wa Loveridge



SVL: ♂ < 33 mm; ♀ < 45 mm

DESCRIPTION: A stout burrowing frog with short legs and a blunt snout. The dorsum is brown with darker brown on the sides of the face and body. Toe tips are not expanded. A fold of skin angles from the eye down to the arm. The tympanum is distinctly visible and smaller than the eye.

SIMILAR SPECIES: Previously lumped with *Probreviceps macrodactylus*. In the Udzungwa Mountains the range may overlap with *Probreviceps rungwensis*, but the snout of *P. loveridgei* does not protrude as in *P. rungwensis*. Range may also overlap with *P. uluguruensis* in the Uluguru Mountains, but *P. uluguruensis* lacks a visible tympanum, whereas the tympanum is visible in *P. loveridgei*.

HABITAT: Common in montane and submontane forest. Requires vegetation for cover.

NATURAL HISTORY: *P. loveridgei* is semi-fossorial. Males call from burrows. Eggs are laid in burrows in the leaf litter of the forest floor and hatch directly into small frogs.

CALL: Channing and Howell (2006) describe the call as consisting of “4 or 5 notes in 0.6 seconds. Each note consists of 2 – 5 pulses.”

DISTRIBUTION IN THE EACF: Uluguru Mountains and escarpment of the Udzungwa Mountains

TYPE LOCALITY: Bagilo, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 900 – 2100 m in the Udzungwa Mountains and 1200 – 1500 m in the Uluguru Mountains

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ < 33 mm; ♀ < 45 mm

MAELEZO: Chura huyu ana nguvu na anafukua mashimo ardhini; ana miguu mifupi na pua butu. Sehemu ya juu ni kahawia na kuna kahawia iliyokolea pembeni mwa uso na mwilini. Ncha za vidole vya miguuni siyo pana. Kuna mkunjo wa ngozi kutoka jichoni hadi mkononi. Kiwambo cha sikio kinaonekana na ni kidogo kuliko jicho.

SPISHI INAZOFANANA NAZO: Awali, spishi hii iliwekwa pamoja na *Probreviceps macrodactylus*. Kwenye Milima ya Udzungwa, spishi hii inaweza kupatikana kwenye maeneo sawa na ya *Probreviceps rungwensis*, lakini pua ya *Probreviceps loveridgei* haijitokezi kama ya *P. uluguruensis*. Aidha, spishi hii inaweza ikapatikana kwenye maeneo sawa na *P. uluguruensis* ya Milima ya Uluguru lakini *P. uluguruensis* hana kiwambo cha sikio kinachoonekana, wakati kinaonekana kwenye *Probreviceps loveridgei*.

MAZINGIRA: Inapatikana sana kwenye misitu iliyo karibu au zaidi ya 1200 m kutoka usawa wa bahari. Inahitaji uoto ambamo inaweza kujificha

HISTORIA ASILIA: *Probreviceps loveridgei* anaishi chini ya ardhi kwenye mashimo muda mwingi. Madume yanaita kutoka mashimoni. Mayai yanatagwa kwenye mashimo yaliyopo kwenye majani yaliyoanguka chini msituni na yanatolewa vyura bila kupitia hatua ya viluwilwi vinavyoogelea.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Uluguru na ya Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Bagilo, Milima ya Uluguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 900 – 2100 m (Milima ya Udzungwa) na 1200 – 1500 m (Milima ya Uluguru)

HALI YA UHIFADHI: Inaweza kuathirika



Probreviceps macrodactylus (Nieden, 1926)

Usambara Big-fingered Frog



E. Harper

SVL: ♂ < 40 mm; ♀ < 65 mm

DESCRIPTION: A stout frog with short legs and a blunt snout. The dorsum is brown with yellow-brown on the sides. The arms and legs are dark brown. A fold of skin slants down from the eye to the arm and the area below the fold is dark brown. The tympanum is visible and equal to or less than ½ the diameter of the eye. The toe tips are not expanded and the toes are almost completely without webbing.

SIMILAR SPECIES: Can be distinguished from other members of

the genus by its geographic location, lack of strongly protruding snout and its small but visible tympanum.

HABITAT: Moist montane and sub-montane forest. Requires vegetation for cover.

NATURAL HISTORY: Terrestrial to semi-fossorial, frequently found under logs in forest. May move through open habitats following rains. Eggs are laid in burrows on the forest floor during the short rains and hatch directly into small frogs. One clutch of eggs found at Amani during the dry season contained both fertilized (32) and infertile (21) eggs.

CALL: Unknown

DISTRIBUTION IN THE EACF: East and West Usambara Mountains, North Pares

TYPE LOCALITY: Usambaras, Tanzania

ELEVATIONAL RANGE: 900 – 2100 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ < 40 mm; ♀ < 65 mm

MAELEZO: Chura huyu ana nguvu, miguu mifupi na pua butu. Sehemu ya juu ni kahawia na pembeni ni njano kahawia. Mikono na miguu ni kahawia iliyokolea. Kuna mkunjo wa ngozi kutoka jichoni hadi mkononi na eneo chini ya mkunjo huo ni kahawia iliyokolea. Kiwambo cha sikio kinaonekana na ni sawa au chini ya ½ ya kipenyo cha jicho. Ncha za vidole vya miguu ni siyo pana na utando kwenye vidole hivyo ni kidogo mno.

SPISHI INAZOFANANA NAZO: Spishi hii inatofautishwa na spishi zingine za jenasi kwa eneo lake la kijiografia, kukosekana kwa pua inayojitokeza sana na kiwambo cha sikio kidogo na kinachoonekana.

MAZINGIRA: Misituyenye unyenyevu iliyo karibu au zaidi ya 1200 m kutoka usawa wa bahari. Inahitaji uoto ambamo inaweza kujificha

HISTORIA ASILIA: Inaishi chini ya ardhi muda mwingi na mara nyingi hupatikana mstuni, chini ya magogo. Inaweza kupita kwenye maeneo yasiyokuwa na uoto mwingi baada ya mvua. Mayai yanatagwa kwenye mashimo chini msituni wakati wa mvua za vuli na vyura wanatolewa moja kwa moja bila kupitia hatua ya viluwilwi. Kundi moja la mayai lililopatikana Amani wakati wa kiangazi lilikuwa na mayai 32 yenye mbeugu za kiume na 21 bila mbeugu za kiume.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Magharibi na Mashariki, Milima ya Pare Kaskazini

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Usambara, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 900 – 2100 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Probreviceps rungwensis (Loveridge, 1932)



M. Menegon

SVL: ♂ < 48 mm; ♀ < 60 mm

DESCRIPTION: A stout burrowing frog with short legs. The snout is pointed and protrudes beyond the lower jaw. The dorsum is brown without distinct markings. The sides, arms and legs are dark brown with white-tipped warts. The tympanum is distinctly visible below a fold of skin that runs from the eye to the arm. The tympanum is large, typically greater than ½ the diameter of the eye in females and ½ to 1 ½ times the diameter of the eye in males.

SIMILAR SPECIES: Can be

distinguished from other members of the genus by its geographic location, large tympanum and protruding snout.

HABITAT: Montane and submontane forest.

NATURAL HISTORY: A semi-fossorial species. Eggs are laid in burrows in the leaf litter and hatch directly into small frogs.

CALL: Unknown

DISTRIBUTION IN THE EACF: Mount Rungwe and the Udzungwa Mountains

TYPE LOCALITY: Nkuka Forest, Rungwe Mountain, Tanzania

ELEVATIONAL RANGE: 1050 – 2100 m in the Udzungwa Mountains and 1550 m on Mt. Rungwe.

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ < 48 mm; ♀ < 60 mm

MAELEZO: Chura huyu ana nguvu na anafukua mashimo ardhini; ana miguu mifupi. Pua imechongoka na inajitokeza mbele ya taya la chini. Sehemu ya juu ni kahawia na haina alama zinazoonekana. Pembeni, mikono na miguu ni kahawia iliyokolea na kuna chunjua zenye ncha nyeupe. Kiwambo cha sikio kinaonekana wazi chini ya mkunjo wa ngozi unaotoka jichoni hadi mkononi. Kiwambo cha sikio ni kikubwa na zaidi ya ½ ya kipenyo cha jicho kwa majike na kati ya ½ hadi 1 ½ ya kipenyo cha jicho kwa madume.

SPISHI INAZOFANANA NAZO: Spishi hii inatofautishwa na spishi zingine za jenasi kutokana na eneo lake la kijiografia inapopatikana, kiwambo cha sikio kikubwa na pua inayojitokeza. Inafanana na *Probreviceps loveridgei*, *P. macrodactylus*, na *P. uluguruensis*

MAZINGIRA: Misitu iliyo karibu au zaidi ya 1200 m kutoka usawa wa bahari.

HISTORIA ASILIA: Spishi hii inaishi chini ya ardhi muda mwingi. Mayai yanatagwa msituni kwenye mashimo yaliyopo kwenye majani yaliyoanguka na vyura wanatolewa moja kwa moja bila kupitia hatua ya viluwiluwi

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Rungwe na Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Misitu ya Nkuka , Mlima Rungwe, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: Milima ya Udzungwa (1050 – 2100 m) na Mlima Rungwe (1550 m).

HALI YA UHIFADHI: Inaweza kuathiriwa



Probreviceps uluguruensis (Loveridge, 1925)
Uluguru Big-fingered Frog, Uluguru Forest Frog



W. Ngalason

SVL: ♂ < 30 mm; ♀ < 43 mm

DESCRIPTION: A stout burrowing frog with a brown dorsum and dark sides. Females may have a reddish band on the sides. The tympanum is not visible. The legs are short. Toes lack webbing.

SIMILAR SPECIES: Can be distinguished from other members in the genus by its geographic location and lack of a visible tympanum.

HABITAT: Montane grasslands and in forest near grassland habitat.

NATURAL HISTORY: A semi-fossorial species. Approximately 20 eggs with

white yolks are laid in burrows in the ground and hatch directly into small frogs.

CALL: Channing and Howell (2006) describe the call as “a low-pitched chirp”

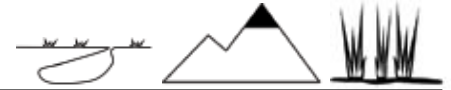
DISTRIBUTION IN THE EACF: Known only from a single site in the Uluguru Mountains

TYPE LOCALITY: Bagilo, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 1800 – 2500 m

CONSERVATION STATUS: Vulnerable

Chura wa Misituni
wa Uluguru



UREFU WA MWILI: ♂ < 30 mm; ♀ < 43 mm

MAELEZO: Chura huyu ana nguvu na anachimba mashimo ardhini; sehemu ya juu ni kahawia na pembeni ni nyeusi. Majike yana mstari mwekundu pembeni. Kiwambo cha sikio hakionekani. Miguu ni mifupi na vidole vya miguuni havina utando.

SPISHI INAZOFANANA NAZO: Inafanana na *Probreviceps loveridgei*, *P. macrodactylus*, na *P. rungwensis*. Spishi hii inatofautiana na spishi zingine za jenasi kutokana na eneo lake la kijiografia na kiwambo cha sikio kisichoonekana

MAZINGIRA: Nyika zilizopo zaidi ya 1200 m kutoka usawa wa bahari na msituni karibu na nyika.

HISTORIA ASILIA: Spishi hii inaishi chini ardhini muda mwingi. Takaribani mayai 20 yenye kiini cheupe yanatagwa kwenye mashimo chini ya ardhi na vyura wanatolewa moja kwa moja bila kupitia hatua ya viluwiluwi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Imepatikana kwenye eneo moja tu kwenye Milima ya Uluguru.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Bagilo, Milima ya Uluguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1800 – 2500 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Bufonidae

Bufonids are common on nearly all continents, but the Eastern Arc contains many unique toads, including two entire genera that are found nowhere else in the world. These genera include *Churamiti*, and *Nectophrynoides*. The genus *Churamiti* was erected in 2002 and consists of a single unusual and brightly colored species, *Churamiti maridadi*, which is known from only a few specimens. There are several species of *Nectophrynoides* in the Eastern Arc, many of which have only recently been described. Many more have been collected and photographed, but are still awaiting formal description. The Eastern Arc also contains several small forest toads in the genus *Mertensophryne*. Many of these species were previously in the genus *Stephopaedes* which is no longer recognized. The genus *Amietophrynus* includes species that were previously lumped in the genus *Bufo*. *Amietophrynus* species are stout, warty, short-legged toads that are widespread especially in lowland areas. The single species of *Schismaderma* found in the Eastern Arc and coastal forests, is also a large toad commonly found in lowland areas.

Vyura Matomvu

Bufonids wanapatikana kwenye mabara yote duniani lakini Tao la Mashariki lina spishi nyingi za pekee pamoja na jenasi mbili kamili ambazo hazipatikani mahali pengine popote ulimwenguni. Jenasi hizo ni *Churamiti* na *Nectophrynoide*. Jenasi ya *Churamiti* ilipewa jina mwaka 2002 na ina spishi moja isiyo ya kawaida na yenye rangi inayong'aa, inayoitwa *Churamiti maridadi*; vielelezo vyake vilivyokamatwa ni vichache. Kuna spishi kadhaa za *Nectophrynoides* kwenye Tao la Mashariki na ni hivi karibuni tu ndiyo sifa za spishi nyingi zimebainishwa na spishi hizi kupewa majina. Spishi nyingi zaidi zimekamatwa na kupigwa picha zikisubiri kuelezewa sifa zao na kupewa majina. Aidha, Tao la Mashariki lina vyura wadogo wa misituni waliopo kwenye jenasi ya *Mertensophryne*. Awali, spishi nyingi hizi zilikuwa kwenye jenasi ya *Stephopaedes*, jina ambalo halitumiki tena. Jenasi ya *Amietophrynus* inajumuisha spishi ambazo awali zilikuwa kwenye jenasi ya *Bufo*. Spishi za *Amietophrynu* ni nene, zina chunjua, miguu mifupi na zinapatikana kwenye maeneo mengi, hasa yaliyo tambarare. *Schismaderma*, spishi pekee inayopatikana Tao la Mashariki na Misitu ya Pwani, ni kubwa sana na inapatikana sana kwenye maeneo tambarare.



Female *Amietophrynus brauni*
J. Vonesh

Amietophrynus brauni (Nieden, 1911)

Dead-leaf Toad, Braun's Toad



E. Harper

SVL: ♂ 65 -70 mm; ♀ 80 - 110 mm

DESCRIPTION: A large toad. The dorsum is warty and brown with darker brown patches. Some individuals have reddish tinges. A black band begins on the snout and passes above the eye, under the large parotid gland and along the side of the body. A single light line runs vertically from the eye to the mouth. The arms and legs are banded with darker brown. The tympanum is distinctly visible, greater than ½ the diameter of the eye and may be slightly oval in larger individuals. The first finger is longer than the second. Toes are webbed only slightly at the base.

SIMILAR SPECIES: The black band along the side of the head and body distinguish this species from most others in the genus. *A. reesi* also has the dark stripe, but has more extensive toe webbing than *A. brauni*. *Schismaderma carens* also has a dark stripe, but lacks parotid glands.

HABITAT: Leaf litter in submontane and montane forest. May be found in villages and smallholdings near forest. Breeds in streams.

NATURAL HISTORY: Long strings of thousands of small, darkly pigmented eggs are laid directly in streams.

CALL: A single long deep note. Described by Channing and Howell (2006) as “a loud rattling snore” with 72 pulses per second.

DISTRIBUTION IN THE EACF: East and West Usambara, Uluguru Nguru, and Udzungwa Mountains.

TYPE LOCALITY: Amani, East Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 750-1800 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ 65 -70 mm; ♀ 80 - 110 mm

MAELEZO: Chura huyu ni mkubwa. Aidha, sehemu ya juu ni kahawia na ina chunjua na madoa yenye kahawia iliyokolea. Baadhi ya vyura wana alama ndogondogo nyekundu. Kuna mstari mweusi kutoka puani, unapita juu ya jicho, nyuma ya jicho na chini ya tezi kubwa iliyopo nyuma ya jicho na pembeni mwa mwili. Mstari mmoja uliofifia na ulio wima unatoka jichoni hadi mdomoni. Mikono na miguu ina mistari yenye rangi ya kahawia iliyofifia. Kiwambo cha sikio kinaonekana na ni zaidi ya ½ ya kipenyo cha jicho na kinaweza kuwa na umbo la tufe kiasi kwenye vyura wakubwa. Kidole cha mkononi cha kwanza ni kirefu kuliko cha pili. Vidole vya miguuni vina utando kiasi kidogo mwanzoni.

SPISHI INAZOFANANA NAZO: *Amietophrynus reesi*, *Schismaderma carens*. Mstari mweusi pembeni mwa kichwa na mwili unatofautisha spishi hii na zingine za jenasi. Aidha, *A. reesi* naye ana mstari mweusi lakini ana utando zaidi kwenye vidole vya miguuni kuliko *A. brauni*. *Schismaderma carens* anao mstari mweusi pia lakini hana tezi nyuma chini ya jicho.

MAZINGIRA: Majani yaliyoanguka chini kwenye misitu iliyopo karibu au zaidi ya 1200 m kutoka usawa wa bahari. Spishi hii inapatikana pia kwenye vijiji na mashamba madogo karibu na misitu. Inazaliana kwenye vijito.

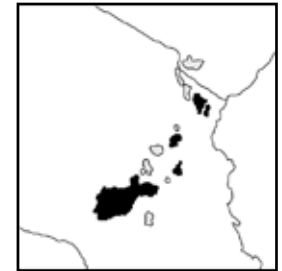
HISTORIA ASILIA: Mistari mirefu ya maelfu ya mayai madogo yenye rangi nyeusi yanatagwa kwenye vijito.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Magharibi na Mashariki, Uluguru, Nguru, na Udzungwa.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Amani, Milima ya Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 750-1800 m

HALI YA UHIFADHI: Spishi iko hatarini



Amietophrynus garmani (Meek, 1897)

Garman's Square-backed Toad, Eastern Olive Toad



SVL: ♂ 63 -72 mm; ♀ 55 - 74 mm

DESCRIPTION: A large toad with long, distinct parotid glands. The dorsum is warty and light brown with paired, regular darker square patches. Some of the markings may have a reddish tinge. The tympanum is visible. Toes are webbed only slightly at the base.

SIMILAR SPECIES: *A. garmani* can be confused with *A. maculatus*, *A. xeros* and *A. gutturalis*. Juveniles of all members of this genus are difficult to distinguish. *A. garmani* lacks the light cross on the head or light band between the eyes that is typically seen in *A. maculatus*, and *A. xeros*. *A. garmani* also lacks dark markings on the snout in contrast to many other *Amietophrynus* species.

HABITAT: Savannas, grasslands and agricultural areas.

NATURAL HISTORY: Females lay copious black eggs in long strings during the onset of short rains in November. Males can be found calling from the water edge at night and hidden areas during the day.

CALL: Described by Channing and Howell (2006) as “a loud ‘kwaak’”

DISTRIBUTION IN THE EACF: Found in disjunct populations throughout eastern Africa. Within the Eastern Arc, this species can be found in the Shimba Hills and Taita Hills.

TYPE LOCALITY: Haileh, Somalia

ELEVATIONAL RANGE: 0 – 2000 m

CONSERVATION STATUS: Least Concern

UREFU WA MWILI: ♂ 63 – 72 mm; ♀ 55 – 74 mm

MAELEZO: Chura huyu ni mkubwa sana na ana tezi ndefu zinazoonekana, nyuma ya jicho. Sehemu ya juu ina chunjua, ni kahawia iliyoifia na ina madoa ya mraba meusi yaliyo mawili mawili. Baadhi ya alama zina wekundu. Kiwambo cha sikio kinaonekana. Vidole vya miguuni vina utando kidogo sana mwanzoni.

SPISHI INAZOFANANA NAZO: Ni rahisi kuchanganya spishi hii na *A. maculatus*, *A. xeros* na *A. gutturalis*. Ni vigumu kutofautisha vyura wadogo wa spishi zote za jenasi hii. *A. garmani* haina msalaba kwenye kichwa wala mstari kati ya macho ambayo upo kwenye *A. maculatus* na *A. xeros*. Aidha, *A. garmani* hana alama nyeusi puani tofauti na spishi zingine za *Amietophrynus*.

MAZINGIRA: Savana, nyika na maeneo ya kilimo.

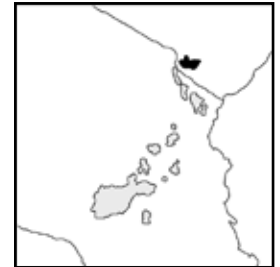
HISTORIA ASILIA: Majike yanataga mayai mengi meusi kwenye mitungo mirefu wakati mvua za vuli zinaanza mwezi Novemba. Madume yanaita kutoka pembeni mwa maji nyakati za usiku na yanajificha usiku.

ENE SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Shimba na ya Taita.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Haileh, Somalia

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 0 – 2000 m

HALI YA UHIFADHI: Haiko hatarini



Amietophrynus gutturalis (Power, 1927)

Marbled Toad, Common Toad, Common African Toad, Guttural Toad, Square-marked Toad, Leopard Toad, Greater Cross-marked Toad, Flat-backed Toad



SVL: ♂ 64 – 90mm; ♀ 62 - 120 mm

DESCRIPTION: A large toad. Individual markings can be highly variable. The dorsum is yellow-brown with irregular darker brown blotches, and red patches on the back of the thigh. A light middorsal stripe is often present. Between the eyes, a pale cross is formed by two sets of dark patches. The forearm is edged with a row of conspicuous white tubercles. The parotid glands are large and distinct. Toes are webbed only very slightly at the base. The ventral surface is pale and granular, and the throat of the male is darkly pigmented. Males in breeding condition have distinct dark nuptial pads.

SIMILAR SPECIES: *A. maculatus* and *A. xeros* can also have a light cross or stripe between the eyes. The parotid glands are distinctly elevated in *A. gutturalis* but are level with the head in *A. maculatus*. *A. maculatus* also lacks the red infusions on the thigh that are present in *A. gutturalis*. *A. xeros* often has red markings on the thigh and vent as in *A. gutturalis*, but lacks distinct dark dorsal markings.

HABITAT: Savannas, grasslands and agricultural areas. *A. gutturalis* is a widespread disturbance tolerant species that can be found in towns and cities.

NATURAL HISTORY: Clutches are laid by amplexant pairs throughout the year, but especially during peak rainy periods. Small black eggs are laid in two parallel strings containing a total of 15,000 to 25,000 small black eggs. Small dark tadpoles with bright specks emerge after 2 - 3 days and reach metamorphosis after 75 days.

This is a very common and familiar species which can be found in small-holdings, around and even in houses. These toads often congregate around lights in the evenings to pick up insects which are attracted to them. In addition to the usual invertebrate prey, adult *B. gutturalis* are able to consume lizards and even frogs as large as *Leptopelis spp.* When attacked by predators *B. gutturalis* exudes a toxin from the parotid glands which contains epinephrine and can be fatal to small mammals. Despite this defense, adults may still be preyed upon.

CALL: Males call while floating in bodies of water, including garden pools. The call is a loud extended snore repeated at three second intervals. Males call alternately with one another or with males of different species.

DISTRIBUTION IN THE EACF: common throughout East Africa.

TYPE LOCALITY: Dombe, Benguela, Angola

ELEVATIONAL RANGE: 0 – 1900 m

CONSERVATION STATUS: Least Concern

UREFU WA MWILI: ♂ 64 – 90mm; ♀ 62 – 120 mm

MAELEZO: Chura huyu ni mkubwa sana. Alama zinaweza kutofautiana sana. Sehemu ya juu ni njano kahawia na ina madoa kahawia iliyokolea na mengine mekundu nyuma ya paja. Mara nyingi kuna mstari uliofifia katikati ya sehemu ya juu. Aidha, kuna msalaba unaotokana na seti mbili za madoa meusi katikati ya macho. Pembeni mwa sehemu ya mbele ya mkono kuna mstari wenye vipande vya ngozi vigumu na vilivyoinuka vinavyoonekana. Tezi zilizopo nyuma ya jicho ni kubwa sana na zinaonekana. Vidole vya miguuni vina utando kidogo sana mwanzoni. Madume yanapokuwa kwenye msimu wa kupandana yanakuwa na maeneo magumu ya ngozi yanayotumika kumkamata jike wakati wa kupandana.

SPISHI INAZOFANANA NAZO: *A. maculatus* na *A. xeros* wanaweza pia kuwa na msalaba au mstari kati ya macho. Tezi nyuma ya macho ziko juu kwenye *A. gutturalis* lakini ziko kwenye mstari mmoja na kichwa kwenye *A. maculatus* ambaye pia hana eneo jekundu kwenye paja, zilizomo kwenye *A. gutturalis*. Mara nyingi, *A. xeros* anakuwa na alama nyekundu kwenye paja na tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi, kama ilivyo kwenye *A. gutturalis* lakini hana alama nyeusi zinazoonekana sehemu ya juu.

MAZINGIRA: Savana, nyika na maeneo ya kilimo. *A. gutturalis* ni spishi inayovumilia mazingira yaliyoharibiwa na inapatikana mijini pia.



Amietophrynus gutturalis (Power, 1927)

Marbled toad, Common toad, Common African Toad, Guttural Toad, Square-marked Toad, Leopard Toad, Greater cross-marked Toad, Flat-backed Toad



G.J. Measey

HISTORIA ASILIA: Mistari ya mayai inatagwa mwaka mzima lakini hasa wakati wa kilele cha msimu wa mvua. Mayai madogo meusi yanatagwa kwenye mistari miwili sambamba ikiwa na jumla ya mayai 15,000 hadi 25,000. Viluwiluwu wadogo wenye madoa yanayong'aaa hujitokeza baada ya siku 2-3 na wanapata umbile la chura lililokamilika baada ya siku 75.

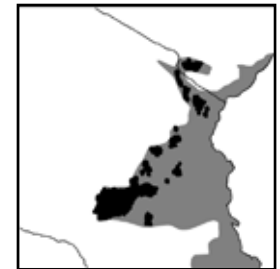
Spishi hii inaonekana mahali pengi na inapatikana kwenye mashamba madogo na hata kwenye nyumba au maeneo yanayoizunguka. Mara nyingi, vyura mapovu hawa wanakusanyika kwenye mwanga wakati wa jioni ili kukamata wadudu ambao wanavutiwa na mwanga. Wanakula wanyama wasiokuwa na uti wa mgongo lakini *A. gutturalis* wazima wanakula pia mijusi na hata chura wakubwa kama *Leptopelis spp.* Inapochokozwa na wanyama, *A. gutturalis* inatoa sumu kutoka tezi nyuma ya jicho ambayo ina epinephrine na inaweza kuuwa wanyama wadogo. Mbali na kujilinda huku, vyura mapovu wazima wanaweza kuuawa.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: inapatikana mahali pengi Afrika ya Mashariki pote.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Dombe, Benguella, Angola

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 0 – 1900 m

HALI YA UHIFADHI: Haiko hatarini



Amietophrynus maculatus (Hallowell, 1854)

Merten's Striped Toad, Lesser Square-marked Toad, Flat-backed toad, Striped Toad, Lesser Cross-marked Toad, Hallowell's Toad



E. Harper

SVL: ♂ < 64 mm; ♀ < 80 mm

DESCRIPTION: The dorsum is tan with darker blotches and a light patch just below the eye. A light middorsal stripe is usually present and a pale cross is formed on the top of the head between the eyes. The parotid glands are distinct, but are not elevated as in *A. gutturalis*. Black tipped warts cover the dorsum and the parotid glands. A row of white tubercles is present on the forearm. Toes are webbed only slightly at the base. The ventral surface is granular and light with some gray mottling.

SIMILAR SPECIES: *A. maculatus* and *A. gutturalis* are similar in build and dorsal markings, but *A. maculatus* does not have the distinctly raised parotid glands seen in *A. gutturalis*, and also lacks the reddish markings on the thigh. *A. maculatus* is also smaller than *A. gutturalis*, with females reaching 80 mm rather than 120 mm.

HABITAT: *A. maculatus* is a widespread species associated with lowland rivers, forest edges and humid savanna. Tolerates degraded habitat including agricultural fields.

NATURAL HISTORY: Long strings of darkly pigmented eggs are laid directly in water including rivers, streams, pools and ditches. Tadpoles are 14 – 17 mm in length.

CALL: Males call from partially concealed positions among vegetation at the edge of streams and pools. The call is a rapid trill half a second in duration.

DISTRIBUTION IN THE EACF: throughout East Africa

TYPE LOCALITY: Liberia

ELEVATIONAL RANGE: < 1700 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 64 mm; ♀ < 80 mm

MAELEZO: Sehemu ya chini ina rangi ya hudhurungi lakini kuna madoa meusi na sehemu ndogo yenye rangi iliyofifia chini kidogo ya jicho. Kwa kawaida, kuna mstari wenye rangi iliyofifia katikati ya sehemu ya chini na kuna msalaba uliofifia juu ya kichwa katikati ya macho. Tezi nyuma ya jicho zinaonekana lakini haziko juu kama ilivyo kwa *A. gutturalis*. Chunjua zenye ncha nyeusi zinafungua sehemu ya juu na tezi nyuma ya jicho. Sehemu ya mbele ya mkono ina sehemu ya ngozi ngumu iliyoinuka. Mwanzoni mwa vidole vya mguuni kuna utando kidogo sana. Sehemu ya chini ina chembec hembe na ina rangi iliyofifia na mchanganyiko wa weupe na weusi.

SPISHI INAZOFANANA NAZO: *A. maculatus* na *A. gutturalis* zinafana kimaumbile na kwa alama sehemu ya juu lakini *A. maculatus* hana tezi juu ya macho zilizopanda juu sana kama *A. gutturalis* na hana alama nyekundu kwenye paja. Aidha, *A. maculatus* ni mdogo kuliko *A. gutturalis*, huku majike yake yakiwa na urefu wa 80 mm na siyo 120 mm.

MAZINGIRA: *A. maculatus* anapatikana sana kwenye mito iliyo kwenye maeneo tambarare, pembezoni mwa misitu na savana yenye unyevu. Inavumilia mazingira yaliyoharibiwa na inapatikana hata kwenye mashamba ya kilimo.

HISTORIA ASILIA: Mistari mirefu ya mayai meusi yanatagwa kwenye maji, mito, vijito, mabwaa na madimbwi. Viluwiluwi vina urefu kati ya 14 - 17 mm.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: inapatikana mahali pengi Afrika ya Mashariki pote.

MAHALI KIELELEZO KILIPOPEWA JINA KWA

MARA YA KWANZA: Liberia

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:
< 1700 m

HALI YA UHIFADHI: Haiko hatarini



Amietophrynus reesi (Poynton, 1977)

Merera Toad, Rees' Toad



SVL: ♂ < 57mm; ♀ < 63mm

DESCRIPTION: The dorsum is warty, spiny in males and marked with paired dark patches. A dark mark runs under the eye to the arm. The tympanum is visible and larger than ½ the diameter of the eye. Parotid glands are flat but visible. The ventral surface is yellow. Toes are extensively webbed.

SIMILAR SPECIES: *A. reesi* has a dark stripe along the side of the head that is similar to *A. brauni*, but *A. brauni* has less extensive webbing and lacks the yellow ventral surface of *A. reesi*.

HABITAT: Floodplain grasslands

NATURAL HISTORY: Unknown

CALL: Unknown

DISTRIBUTION IN THE EACF: The only records of this species are from Merera, Mbega and the Kihansi-Kilombero floodplain.

TYPE LOCALITY: Kihansi-Kilombero floodplain, Merera, Tanzania

ELEVATIONAL RANGE: 200 – 500 m

CONSERVATION STATUS: Data deficient

UREFU WA MWILI: ♂ < 57mm; ♀ < 63mm

MAELEZO: Sehemu ya juu ina chunjaa zenye miiba kwenye madume na pia madoa meusi yaliyokaa mawili mawili. Alama nyeusi inatoka chini ya jicho hadi mkononi. Kiwambo cha sikio kinaonekana na ni zaidi ya ½ ya kipenyo cha jicho. Tezi nyuma ya jicho ni pana na zinaonekana. Sehemu ya chini ni njano. Vidole vya miguuni vina utando sana.

SPISHI INAZOFANANA NAZO: *A. reesi* ana mstari mweusi pembeni mwa kichwa unaofanana na wa *A. brauni*, lakini *A. brauni* hana utando ulioenea na siyo njano kwenye sehemu ya chini kama *A. reesi*

MAZINGIRA: Nyika za maeneo tambarare yanayofurika maji

HISTORIA ASILIA: Haijulikani

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo tambarare ya Merera, Mbega na Kihansi-Kilombero

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Maeneo tambarare ya Kihansi-Kilombero, Merera, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 200 – 500 m

HALI YA UHIFADHI: Hakuna taarifa za kutosha

Amietophrynus xeros (Tandy, Keith & Duffy-MacKay, 1976)

Sub-Saharan Toad, Waza Toad, Savanna Toad, Desert Toad



A. Channing

SVL: ♀ 57 - 97 mm; ♂ 59 - 82 mm

DESCRIPTION: The parotid glands are smooth, and the dorsal coloration is cream with pairs of dark blotches. Towards the sides the warty skin has distinctive dark spines, while the ventrum is cream to white with bright red venation around the upper legs and vent. The tympanum is visible, oval and slightly greater than ½ the diameter of the eye. The first finger is longer than the second. Glands on forearm form a distinct continuous ridge.

SIMILAR SPECIES: *A. xeros* may be confused with *A. gutturalis* and *A. maculatus*, but the dorsal markings on *A. xeros* are not as dark in contrast with the dorsum. Also, *A. xeros* has distinctly raised parotid glands and red markings on the thighs that are absent in *A. maculatus*.

HABITAT: Found in a wide range of arid habitat types including dry savannas, woodlands, dry riverbeds and near oases. Within the Eastern Arc this species is most often found between mountain blocks or in their rain shadows.

NATURAL HISTORY: Breeding occurs in permanent bodies of water or during seasonal flooding

CALL: Like a loud "hoot"

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc and coastal forests in Kenya and Tanzania

TYPE LOCALITY: Ghinda, Eritrea, Ethiopia

ELEVATIONAL RANGE: 200 - 1800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♀ 57 – 97 mm; ♂ 59 – 82 mm

MAELEZO: Tezi nyuma ya jicho ni laini na sehemu ya juu ni hudhurungi na ina madoa meusi yaliyokaa mawili mawili. Kuelekea pembeni mwa chura huyo, ngozi ina chunjua na miiba mieusi inayoonekana na, sehemu ya chini ina rangi ya hudhurungi hadi nyeupe na alama nyekundu zinayong'aa kwenye sehemu za juu za miguu na tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Kiwambo cha sikio kinaonekana, kina umbo la tufe na ni zaidi kidogo ya ½ ya kipenyo cha jicho. Kidole cha kwanza cha mkononi ni kirefu zaidi ya cha pili. Tezi zilizoko sehemu ya mbele ya mkono zinaunda tuta mfululizo linaoonekana.

SPISHI INAZOFANANA NAZO: Ni rahisi kumchanganya *A. xeros* na *A. gutturalis* na *A. maculatus*, lakini alama zilizopo sehemu ya juu kwenye *A. xeros* zina rangi iliyofifia ukilinganisha na rangi ya sehemu hiyo nzima. Aidha, tezi juu ya macho za *A. xeros* zimeinuka sana ukilinganisha na alama nyekundu kwenye paja, vitu ambavyo havipo kwenye *A. maculatus*.

MAZINGIRA: Spishi hii inapatikana kwenye mazingira mbalimbali kame pamoja na savana kame, maeneo ya miombo, mito iliyokauka na karibu na oasisi. Kwenye MTMMP, mara nyingi spishi hii hupatikana kati ya makundi ya milima au kwenye upande usiopata mvua wa milima

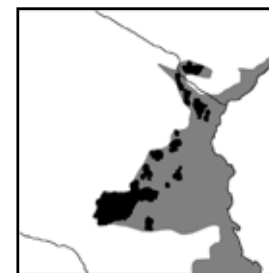
HISTORIA ASILIA: Spishi hii huzaliana kwenye maji ya kudumu au wakati wa msimu wa mafuriko.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya MTMMP ya Tanzania na Kenya

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Ghinda, Eritrea, Ethiopia

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 200 - 1800 m

HALI YA UHIFADHI: Haiko hatarini



Churamiti maridadi (Channing & Stanley, 2002)

Beautiful Forest Toad



M. Menegon

SVL: ♀ < 53 mm

DESCRIPTION: An unusual toad with a bright metallic yellow-green dorsum (females) or black dorsum with silvery vermiculations (males) and red-orange arms and legs. The back is smooth and glandular, but the parotid glands are not distinct. The eyes are large and protruding with horizontal pupils. The toes end in distinct truncated disks.

SIMILAR SPECIES: The appearance is distinct and not easily confused with other species. It is the only species in the genus.

HABITAT: Wet montane forest, especially in wet valleys

NATURAL HISTORY: Assumed to be arboreal because of its large toe pads. Reproductive mode is unknown, but eggs are large and pigmented.

CALL: Unknown (males have never been observed or collected)

DISTRIBUTION IN THE EACF: Ukaguru Mountains. The species is known only from four specimens from the type locality.

TYPE LOCALITY: Morogoro Region, Kilosa District, Ukaguru Mts, Mamiwa-Kisara Forest Reserve, Tanzania

ELEVATIONAL RANGE: 1840 m

CONSERVATION STATUS: Critically endangered

UREFU WA MWILI: ♀ < 53 mm

MAELEZO: Chura huyu si wa kawaida, sehemu ya juu ina rangi ya njano kijani ya chuma inayong'aa, mikono na miguu ni miekundu njano. Mgongo ni laini na una chembechembe, lakini hauna tezi nyuma ya jicho zinazoonekana. Macho ni makubwa, yanajichomoza na mboni ni za mlalo.

SPISHI INAZOFANANA NAZO: Umbo lake ni tofauti na haliwezi kuchanganywa na la spishi zingine, Hii ndiyo spishi pekee kwenye jenasi yake.

MAZINGIRA: Misitu yenye unyevu, zaidi ya 1200 m kutoka usawa wa bahari, hususan kwenye mabonde yenye maji

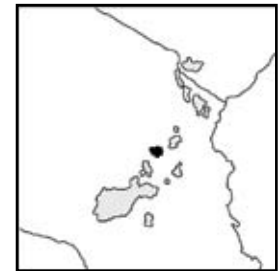
HISTORIA ASILIA: Inadhaniwa kwamba spishi hii inaishi kwenye miti, kutokana na sehemu zenye ngozi ngumu kwenye vidole vya miguuni. Mfumo wake wa kuzaliana haujulikani lakini mayai yake ni makubwa na yana rangi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Ukaguru. Spishi hii inajulikana tu kutokana na vielelezo vine kutoka mahali vilipokamatwa na spishi kupewa jina kwa mara ya kwanza

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mkoa wa Morogoro, Wilaya ya Kilosa, Milima ya Ukaguru, Hifadhi ya Misitu ya Mamiwa-Kisara, nchini Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1840 m

HALI YA UHIFADHI: Spishi iko hatarini sana



Mertensophryne lindneri (Mertens, 1955)

Lindner's Dwarf Toad



SVL: ♂ < 23 mm; ♀ 34 mm

DESCRIPTION: A small toad with spiny skin and a pointed head. The dorsum is gray-brown with small reddish brown spots. The parotid glands are long and flattened. The ventral surface is light, usually with a distinct dark line from the throat to the vent. Toe and finger tips are pointed, but not expanded and toes are slightly webbed.

SIMILAR SPECIES: *M. lindneri* is similar to other species in the genus, but can be distinguished by the dark line on the ventral surface. The long flat parotid glands also distinguish it from several other species in the genus.

HABITAT: Coastal lowlands including woodland, dry forest and farmland. Often associated with areas of sandy soil or rocks. Tolerates a small amount of habitat degradation and can be found in areas of low-intensity agriculture.

NATURAL HISTORY: Mode of breeding is unknown, but it is thought to breed in streams or ponds.

CALL: Unknown

DISTRIBUTION IN THE EACF: Coastal areas of Tanzania, Malundwe, Udzungwas, Mahenge, Uluguru

TYPE LOCALITY: Dar es Salaam, Tanzania

ELEVATIONAL RANGE: < 650 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 23 mm; ♀ 34 mm

MAELEZO: Chura huyu ni mdogo, ana ngozi yenye miiba na kichwa kilichochoongoka. Sehemu ya juu ni kijivu kahawia na kuna madoa madogo mekundu kahawia. Tezi nyuma ya jicho ni ndefu na bapa. Sehemu ya chini ina rangi ya kufifia na kawaida ina msitari mweusi unaonekana kutoka kooni hadi kwenye tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Ncha za vidole vya miguuni na mikononi zimechongoka lakini siyo pana na vidole vya miguuni havina utando.

SPISHI INAZOFANANA NAZO: Inafanana na spishi zingine kwenye jenasi lakini ina mstari mweusi kwenye sehemu ya chini. Tezi ndefu na bapa juu ya jicho inaitofautisha pia na spishi kadhaa za jenasi.

MAZINGIRA: Maeneo tambarare ya pwani pamoja na miombo, misitu kame na maeneo ya kilimo. Mara nyingi, spishi hii inapatikana kwenye udongo wenye mchanga au miamba. Inavumilia uharibifu mdogo wa mazingira na naweza kupatikana kwenye maeneo yanayolimwa kidogo.

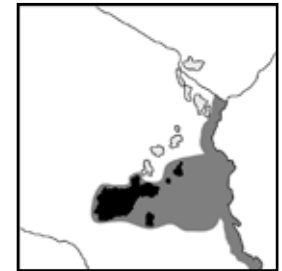
HISTORIA ASILIA: Mfumo wa uzalianaji haujulikani lakini inadhaniwa spishi hii inazaliana kwenye vijito au madimbwi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo ya pwani ya Tanzania, Malundwe, Udzungwas, Mahenge na Uluguru

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Dar es Salaam, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 650 m

HALI YA UHIFADHI: Haiko hatarini



Mertensophryne loveridgei (Poynton, 1991)

Mahenge Toad, Loveridges Forest Toad



SVL: ♂ < 35 mm; ♀ < 38 mm

DESCRIPTION: The dorsum is dark brown with a darker brown chevron and is covered in small spines. There is often a thin light middorsal stripe. The tympanum is not visible. The ventral surface is light, sometimes with a dark blotch on the chest. Toes are partially webbed.

SIMILAR SPECIES: Similar to other species in the genus. Like *M. uzunguensis*, there is a dark spot on the chest, but *M. loveridgei* does not occur in the high elevation grasslands where *M. uzunguensis* is found. *M. loveridgei* can be distinguished from other species in the genus by its wide parotid gland that extends from behind the eye down to the corner of the mouth.

HABITAT: Coastal forest and woodland

NATURAL HISTORY: Unknown

CALL: Unknown

DISTRIBUTION IN THE EACF: Mahenge, the Kilombero Valley and coastal areas from the Kichi Hills south to the Rondo Plateau.

TYPE LOCALITY: Mahenge, Tanzania

ELEVATIONAL RANGE: < 1000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 35 mm; ♀ < 38 mm

MAELEZO: Sehemu ya chini ni kahawia iliyokolea na ina alama zenye umbo la “V” kahawia iliyokolea zaidi na sehemu hii imefunikwa na miiba midogo. Mara nyingi, kuna mstari mwembamba uliofifia katikati ya sehemu ya juu. Kiwambo cha sikio hakionekani. Sehemu ya chini ina rangi iliyofifia na wakati mwingine kuna doa jeusi kifuani. Vidole vya miguuni vina utando kiasi.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana na spishi zingine za jenasi. Ina doa jeusi kifuani kama *M. uzunguensis* lakini *M. loveridgei* hapatikani kwenye nyika za miinuko ya juu ambapo *M. uzunguensis* inapatikana. *M. loveridgei* inatofautiana na spishi zingine kwenye jenasi kwa kuwa na tezi pana inayotoka nyuma ya jicho hadi kwenye kona ya mdomo.

MAZINGIRA: Misitua na miombo ya pwani.

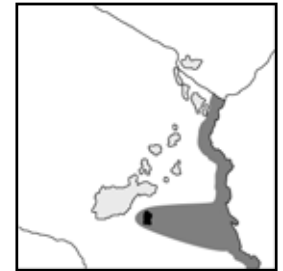
HISTORIA ASILIA: Haijulikani

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Mahenge, Bonde la Kilombero na pwani kutoka Milima ya Kichi hadi kusini kwenye Uwanda wa Rondo.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mahenge, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1000 m

HALI YA UHIFADHI: Haiko hatarini



Mertensophryne micranotis (Loveridge, 1925)

Loveridge's Snouted Toad, Woodland Toad



E. Harper

SVL: < 24 mm

DESCRIPTION: A small toad. The dorsum is dark brown with conspicuous light patches on the scapular and sacral regions. There is no tympanum and the parotid glands are indistinct. The ventral surface is heavily marked. Males have rough thumbs that aid in clasping the female during mating. The outer toe is reduced. Toes lack webbing.

SIMILAR SPECIES: *M. micranotis* is very similar to all other species in the genus, but can be distinguished from the other species because it lacks toe

webbing, does not have distinctly raised parotid glands and has a dark belly and mottled throat.

HABITAT: Lowland coastal forest, and woodland. Tolerates some degree of habitat alteration if adequate cover is available.

CALL: Unknown

NATURAL HISTORY: Considered a 'tree toad' for its ability to climb. The vent of the male is spiny and protruding. Fertilization is internal. Eggs are laid in clutches of 8 – 12 often in tree holes, snail shells or coconut shells. Tadpoles have a fleshy circular crown that allows them to float on the surface of the water. This unusual structure may also aid in respiration, providing greater surface area for gas exchange.

DISTRIBUTION IN THE EACF: Coastal areas of southeastern Kenya including the Arabuko-Sokoke Reserve and Shimba Hills. Eastern Tanzania including the foothills of the East Usambara Mountains, the Uluguru Mountains, Zanzibar and Songo Songo Islands, also inland areas of Tanzania including Kilosa and the Kihansi Gorge in the Udzungwa Mountains.

TYPE LOCALITY: Kilosa, Morogoro District, Tanzania

ELEVATIONAL RANGE: < 800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: < 24 mm

MAELEZO: Chura huyu ni mdogo. Sehemu ya juu ni kahawia iliyokolea na ina madoa yaliyofifia na yanayoonekana sana kwenye maeneo ya kombe la mkono na sehemu ya chini ya mgongo. Hakuna kiwambo cha sikio na tezi nyuma ya jicho hazionekani. Sehemu ya chini ina alama nyingi. Madume yana vidole gumba vinavyokwaruza ambavyo vinasaidia kushikilia jike mwanamke wakati wa kupandana. Kidole cha mguuni cha nje ni kidogo. Vidole vya mguuni havina utando.

SPISHI INAZOFANANA NAZO: *M. micranotis* inafanana sana na spishi zingine za jenasi lakini ni tofauti nazo kwani haina utando kwenye vidole vya miguuni, haina tezi zilizoinuka nyuma ya jicho, lakini ina tumbo jeusi tumbo jeusi na koo lenye mchanganyiko wa rangi.

MAZINGIRA: Misitua ya maeneo tambarare ya pwani na miombo. Inavumilia uharibifu kiasi wa mazingira kama kuna uoto anapoweza kujificha.

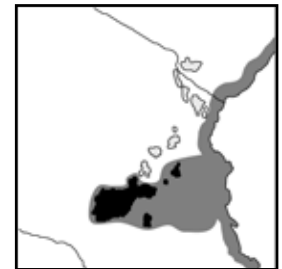
HISTORIA ASILIA: Spishi hii inaitwa chura miti kutokana na uwezo wake wa kukwea. Tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi la dume lina miiba na linajitokeza. Dume linaweka mbegu zake ndani ya jike. Mayai yanatagwa kwenye makundi ya 8-12, mara nyingi kwenye mashimo ya mti, nyumba ya konokono na vifuu vya nazi. Kuna eneo mvingo juu ya viluwilwi lenye nyama nyingi na linalowezesha viluwilwi kuelea juu ya maji. Eneo hili lisilo la kawaida huenda linasaidia pia kupumua kwa kutoa nafasi kubwa ya kubadilisha gesi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMP: Maeneo ya pwani ya Kenya kusini mashariki pamoja na Hifadhi ya Arabuko-Sokoke na Milima ya Shimba, Tanzania Mashariki pamoja na milima midogo ya Milima ya Usambara Mashariki, Milima ya Uluguru, Zanzibar na Visiwa vya Songo Songo, maeneo ya Kilosa na Kihansi Gorge kwenye Milima ya Udzungwa.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kilosa, Wilaya ya Morogoro, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 800 m

HALI YA UHIFADHI: Haiko hatarini



Mertensophryne taitana (Peters, 1878)

Black-chested Dwarf Toad



G.J. Measey

SVL: ♂ 25 – 31 mm; ♀ 32 – 35 mm

DESCRIPTION: A small thin toad.

Both sexes are light brown to grey with darker markings. The tympanum is not visible. The parotid glands are long and flat. The ventrum is pale. Males have a conspicuous black chest. The first finger is shorter than the second. Toes are only slightly webbed. Males in breeding condition have distinct dark nuptial pads.

SIMILAR SPECIES: *M. taitana* is very similar to other members of the genus, but can be distinguished by the black

chest of the males and by the distinctly long raised parotid glands.

HABITAT: Wooded grassland and open savanna. Tolerates some degree of habitat alteration and can be found in agricultural areas. Typically associated with sandy soil.

NATURAL HISTORY: Breeds in streams and temporary pools especially road puddles where adults congregate for only a few days of the year (typically November). Males congregate at pools and many can ambush females on arrival forming small balls of individuals. Eggs are laid in strings (up to 350 eggs). Larvae have distinctive crown on their heads and can reach metamorphosis in as little as 13 days. During this time they feed on the soft mud at the edges of their temporary puddles with only their flickering tails visible from above.

CALL: This species has no advertisement call although both males and females will emit a distress call.

DISTRIBUTION IN THE EACF: Southern Kenya and throughout Tanzania

TYPE LOCALITY: Taita, Kenya

ELEVATIONAL RANGE: < 1300 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 25 – 31 mm; ♀ 32 – 35 mm

MAELEZO: Chura huyu ni mdogo na mwembamba. Vyura wa jinsia zote mbili ni kahawia iliyofifia hadi kijivu na wana alama zenye rangi iliyokolea zaidi. Tezi nyuma ya jicho ni ndefu na pana. Sehemu ya chini ina rangi iliyofifia. Madume yana kifua cheusi na imara. Kidole cha kwanza cha mkononi ni kifupi kuliko cha pili. Vidole vya miguuni vina utando mdogo sana. Madume yanapokuwa kwenye msimu wa kupandana, yanakuwa na maeneo magumu ya ngozi yanayotumika kumkamata jike.

SPISHI INAZOFANANA NAZO: *Spishi ya M. taitana* inafanana sana na spishi zingine za jenasi lakini tofauti yake ni kwamba madume yana kifua cheusi na tezi nyuma ya jicho ndefu na zilizo inuka sana.

MAZINGIRA: Nyika zenye miombo na savana. Inavumilia uharibifu kiasi wa mazingira na inapatikana pia kwenye maeneo ya kilimo. Lakini zaidi inapatikana kwenye maeneo yenye mchanga.

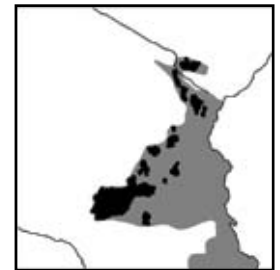
HISTORIA ASILIA: Spishi hii inazaliana kwenye vijito na madimbwi ya muda barabarani ambapo vyura wazima wanakusanyika kwa siku chache tu kila mwaka (hasa Novemba). Spishi hii haina kiwambo cha sikio. Madume yanakusanyika kwenye madimbwi na yanaweza kuvamia majike yanayofika. Mayai yanatagwa kwenye mistari yenye hadi mayai 350. Sehemu ya juu ya kichwa cha viluwiluwi ni ya pekee, viluwiluwi vinaweza kufikia umbile kamili la chura katika siku 13. Vinakula matope laini pembezoni mwa madimbwi ya muda na ni sehemu ya pezi tu inayoonekana juu ya ardhini.

ENEO SPISHI INAOPATIKANA KWENYE MTMMP: Kusini mwa Kenya na mahali pote Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Taita, Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1300 m

HALI YA UHIFADHI: Haiko hatarini



Metensophryne usambarae (Poynton & Clarke, 1999)

Usambara Forest Toad



SVL: ♂ < 35 mm; ♀ < 45 mm

DESCRIPTION: A small toad with wide, flat, spiny parotid glands. The dorsum is brown with light colored spines and variable darker markings. The upper lip is pale. This species lacks a tympanum. The legs are short (tibia less than ½ SVL). The ventral surface has some mottling.

SIMILAR SPECIES: *M. usambarae* is very similar to the other species in the genus, but the ventral surface is light with darker mottling and lacks the distinct chest spot, ventral stripe or black belly found in the other species. *M. usambarae* is ecologically similar to *M. micranotis*, and the two species often occur together.

HABITAT: Lowland forest. Tolerates some degree of habitat degradation including selective logging.

NATURAL HISTORY: Breeding behavior has not been observed. Tadpoles have a conspicuous circular crown that is thought to aid in respiration. A similar structure is found in the tadpoles of *M. micranotis* and *M. taitana*.

CALL: Unknown

DISTRIBUTION IN THE EACF: Known only from the East Usambara foothills including the Kwangumi, Segoma and Mtai Forest Reserves

TYPE LOCALITY: Kwangumi Forest Reserve, East Usambara foothills, Tanzania

ELEVATIONAL RANGE: < 410 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ < 35 mm; ♀ < 45 mm

MAELEZO: Chura huyu ni mdogo; ana tezi pana nyuma ya jicho, bapa na yenye miiba. Sehemu ya juu ni kahawia na ina miiba yenye rangi iliyofifia na alama zinazotofautiana zenye rangi iliyokolea. Mdomo wa juu una rangi iliyofifia. Spishi hii haina kiwambo cha sikio. Miguu ni mifupi (chini ya ½ SVL). Sehemu ya chini ina madoa.

SPISHI INAZOFANANA NAZO: *M. usambarae* inafanana sana na spishi zingine za jenasi lakini sehemu yake ya chini ina rangi iliyofifia yenye madoa yenye mchanganyiko wa rangi iliyokolea zaidi. Aidha, spishi hii haina doa kifua, mstari sehemu ya chini wala tumbo jeusi kama spishi zingine. Spishi hii inafanana na *M. micranotis* kiikolojia na mara nyingi, spishi hizi mbili hupatikana mahali pamoja.

MAZINGIRA: Misitu ya maeneo tambarare. Inavumilia uharibifu kiasi wa mazingira na hata ukataji yakinifu wa miti ya magogo.

HISTORIA ASILIA: Tabia ya kuzaliana haijafanyiwa utafiti. Sehemu ya juu ya kichwa ni mviringo na kahawia; inadhaniwa sehemu hiyo inasaidia wakati wa kupumua; sehemu hiyo inapatikana pia kwenye viluwiluvi vya *M. micranotis* na *M. taitana*.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Spishi inapatikana tu kwenye milima midogo ya Usambara Mashariki pamoja na Hilfadhi za Misitu za Kwangumi, Segoma na Mtai

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Kwangumi, milima midogo ya Usambara Mashariki, nchini Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 410 m

HALI YA UHIFADHI : Spishi iko hatarini



Mertensophryne uzunguensis (Loveridge, 1932)

Udzungwa Toad



M. Menegon

SVL: ♀ < 30 mm

DESCRIPTION: A small toad. The dorsum is brown, often with a thin light vertebral stripe and paired darker markings. There is typically a small dark blotch on the middle of the chest. The legs are barred. The parotid glands are long and thin. The species lacks a tympanum. The first finger is shorter than the second. Toes have only a very small amount of webbing. Males in breeding condition have dark nuptial pads.

SIMILAR SPECIES: Similar in

appearance to many of the other species in the genus, but *M. uzunguensis* is the only *Mertensophryne* species known to occur in high elevation grasslands in the Udzungwas and southern highlands.

HABITAT: Swampy grasslands at high elevations

NATURAL HISTORY: Breeds in wet grasslands

CALL: Unlikely to have an advertisement call

DISTRIBUTION IN THE EACF: Udzungwa Mountains and Southern Highlands

TYPE LOCALITY: Kigogo, Uzungwe [Udzungwa] Mountains, Tanzania

ELEVATIONAL RANGE: > 1800 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♀ < 30 mm

MAELEZO: Chura huyu ni mdogo. Sehemu ya juu ni kahawia na mara nyingi ina mstari mwembamba mgongoni uliofifia na madoa yaliyokaa mawili mawili yenye rangi iliyokolea. Miguu ina mistari. Tezi nyuma ya jicho ni fu na nyembamba. Spishi hii haina kiwambo cha sikio. Kidole cha kwanza cha mkononi ni kifupi kuliko cha pili. Vidole vya miguuni vina utando mdogo sana. Madume yanapokuwa kwenye msimu wa kupandana, yanakuwa na maeneo magumu ya ngozi yanayotumika kumkamata jike wakati wa.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana na spishi nyingi za jenasi lakini *M. uluguruensis* ni spishi ya *Mertensophryne* pekee ambayo inapatikana kwenye nyika zilizopo kwenye miinuko ya juu sana ya Milima ya Udzungwa na ya nyanda za kusini.

MAZINGIRA: Nyika za kwenye kinamasi kwenye miinuko ya juu sana.

HISTORIA ASILIA: Inazaliana kwenye nyasi zenye unyevu.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa na nyanda za Kusini

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kigogo, Milima ya Uzungwe [Udzungwa], Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: > 1800 m

HALI YA UHIFADHI: Inaweza kuathirika



Nectophrynoides asperginis

(Poynton, Howell, Clarke and Lovett, 1999)

Kihansi Spray Toad



A. Channing

This species is likely extinct in the wild, with the last confirmed sighting in 2005. The small area of habitat used by the toads was severely altered by the construction of a dam on the Kihansi River as part of the Lower Kihansi Hydropower Project. Sprinkler systems intended to imitate the natural spray of the waterfall were not sufficient to maintain the quality of the habitat. A fungal pathogen, chytridiomycosis is also thought to have contributed to the ultimate population crash. Some toads were collected from the wild population and are now housed at captive breeding facilities in the Toledo and Bronx Zoos.

Breeding facilities for this species are currently being developed in Tanzania.

SVL: ♂ 15 - 17 mm; ♀ 18 - 20 mm

DESCRIPTION: A small frog. The dorsum is yellow-brown with a pair of darker brown stripes that run from behind the eye to the groin. Some irregular dark markings may be present on the dorsum. There are no dark markings on the ventral surface. The tympanum is not visible. The snout is short, and the eyes are large with horizontal pupils. This species lacks distinct parotid glands. Finger tips are rounded and not expanded. Toes and fingers are webbed.

SIMILAR SPECIES: The dorsal stripes are distinctive and the fingers are webbed.

HABITAT: A wetland area of approximately 2 hectares created in the spray zone of the Kihansi River Gorge falls in the Udzungwa Mountains

NATURAL HISTORY: Fertilization is internal and females give live birth to approximately 16 - 18 young.

CALL: Two calls are known – an advertisement call and an aggression call.

Calls can be heard during the day as well as at night. The advertisement call is described by Channing and Howell as “a single note with 1 – 4” pulses and the aggression call is “a series of advertisement calls”.

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: Kihansi River Gorge, Udzungwa Mountains, Tanzania

ELEVATIONAL RANGE: 600 – 940 m

CONSERVATION STATUS: Critically endangered

Inawezekana spishi hii imetoweka porini kwani, ilionekana mwaka 2005 kwa mara mwisho. Eneo dogo ilimokuwa inaishi liliharibiwa vibaya wakati bwawa lilipojengwa kwenye Mto wa Kihansi, kama sehemu ya Mradi wa Umeme wa Kihansi. Mfumo wa kunyunyizia maji ambao ulitengenezwa kama mbadala wa mfumo asilia wa maporomoko haukuweza kudumisha ubora wa mazingira. Inasadikiwa kwamba, kuku inayosababisha ugonjwa wa “chytridiomycosis” ulichangia pia kutoweka kwa spishi hiyo ya vyura. Baadhi ya vyura walichukuliwa kutoka porini na sasa wanahifadhiwa kwenye maeneo maalum ya kuzaliana ya bustani za wanyama za Toledo na Bronx nchini Marekani. Aidha, kwa sasa, makazi ya kuzaliana ya spishi hizi yanaandaliwa nchini Tanzania.

UREFU WA MWILI: ♂ 15 - 17 mm; ♀ 18 - 20 mm

MAELEZO: Chura huyu ni mdogo. Sehemu ya juu ni njano kahawia na kuna mistari miwili kahawia iliyokolea, inayotoka nyuma ya jicho hadi kina. Inawezekana pia yakawepo madoa meusi kwenye sehemu ya juu. Hakuna madoa meusi kwenye sehemu ya chini. Kiwambo cha sikio hakionekani. Pua ni fupi, macho ni makubwa na yana mboni za mlalo. Hakuna tezi nyuma ya jicho zinazoonekana. Ncha za vidole vya mkononi ni mvingo na sio pana. Vidole vya mguuni na mkononi havina utando.

SPISHI INAZOFANANA NAZO: Spishi hii inatofautiana na zingine kwa kuwa na mistari ya sehemu ya juu na utando kwenye vidole vya mikononi.

MAZINGIRA: Ardhi oevu yenye takribani hekta mbili zilizotengenezwa kwenye maporomoko ya Mto wa Kihansi kwenye Milima ya Udzungwa.

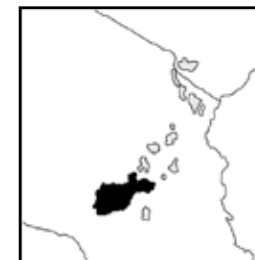
HISTORIA ASILIA: Dume linaweka mbegu zake ndani ya jike ambalo linazaa takribani vyura wachanga 16-18.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Kihansi tu

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kihansi kwenye Milima ya Udzungwa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 600 – 940 m

HALI YA UHIFADHI: Iko hatarini sana



Nectophrynoides cryptus (Perret, 1971)

Uluguru Forest Toad

This species has not been observed since it was originally collected in 1926 and 1927

SVL: ♂ < 26 mm; ♀ 34 mm

DESCRIPTION: A small thin toad with a pointed snout. Tympanum is not visible, although there is an indentation in that region. The first finger is shorter than the second. The toe and finger tips are not expanded. There is a moderate amount of webbing on the toes and fingers. Parotid glands are located in the scapular region.

SIMILAR SPECIES: This species has more extensive webbing than other species in the genus that occur in the Uluguru Mountains.

HABITAT: Forest including banana patches

NATURAL HISTORY: Fertilization is internal. Females retain eggs and give live birth.

CALL: Unknown

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: Nyingwa, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 600 – 2200 m

CONSERVATION STATUS: Endangered

Spishi hii haijaonekana tangu ilipokamatwa mwaka 1926 na 1927



UREFU WA MWILI: ♂ < 26 mm; ♀ 34 mm

MAELEZO: Chura huyu ni mdogo na ana pua iliyochongoka. Kiwambo cha sikio kinaonekana ingawa kuna mbonyeo. Kidole cha mkono cha kwanza ni kifupi kuliko cha pili. Ncha za vidole vya mkononi na mguuni siyo pana. Kuna utando kiasi kwenye vidole vya miguuni na mikononi. Tezi nyuma ya jicho ziko kwenye eneo la kombe la mkono.

SPISHI INAZOFANANA NAZO: Spishi hii ina utando ulioenea zaidi kuliko spishi zingine zilizopo Milima ya Uluguru.

MAZINGIRA: Misitu na mashamba ya ndizi

HISTORIA ASILIA: Dume linaweka mbegu zake ndani ya jike. Mayai yanabaki ndani ya jike, na linazaa vyura wachanga.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Nyingwa tu

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Nyingwa, kwenye Milima ya Uluguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 600 – 2200 m

HALI YA UHIFADHI: Spishi iko hatarini



Nectophrynoides frontierei

(Menegon, Salvadio, and Loader, 2004) Frontier Forest Toad



SVL: ♂ < 18 - 19 mm

DESCRIPTION: A very small toad with a broad head. The dorsum is brown with lighter blotches. The tympanum is only weakly visible. Parotid glands are absent, although a few small glands may be present in the parotid area. The upper eyelid has a distinctly glandular ridge. The snout extends slightly beyond the lower lip. Finger and toe tips are not expanded. Toes have a small amount of webbing at the base, fingers lack webbing.

SIMILAR SPECIES: *N. frontierei* can be distinguished from most other species in the genus by its lack of clearly visible tympanum and parotid glands. *N. asperginis*, has much more extensive webbing than *N. frontierei*.

HABITAT: Submontane forest

NATURAL HISTORY: Known only from two males that were captured in pitfall traps near a stream in 1999. Reproduction is assumed to be similar to that of other species in the genus with internal fertilization and live birth.

CALL: Unknown

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: Amani-Sigi Forest, Amani Nature Reserve, East Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 920 - 950 m

CONSERVATION STATUS: Data deficient

UREFU WA MWILI: ♂ < 18 - 19 mm

MAELEZO: Chura huyu ni mdogo sana na ana kichwa kipana. Sehemu ya juu ni kahawia na ina madoa yenye rangi iliyofifia. Kiwambo cha sikio hakionekani vizuri. Hakuna tezi kubwa nyuma ya jicho, ingawa inawezekana tezi chache ndogo zikawepo. Kigubiko cha jicho la juu kina tuta lenye tezi. Pua inaendelea kidogo mbele ya mdomo wa chini. Vidole vya miguuni na mikononi siyo vipana. Vidole vya miguuni vina utando kidogo mwanzoni lakini vidole vya mkononi havina.

SPISHI INAZOFANANA NAZO: Tofauti kati ya *N. frontierei* na spishi zingine za jenasi ni kuwa spishi hii haina kiwambo cha sikio kinachoonekana wala tezi chini ya jicho. Aidha, utando umeenea zaidi kwenye *N. asperginis* kuliko kwenye *N. frontierei*.

MAZINGIRA: Misitua karibu na 1200 m kutoka usawa wa bahari.

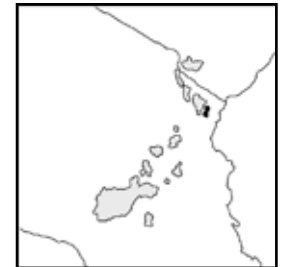
HISTORIA ASILIA: Taarifa za spishi hii zilizopo zinatokana na madume mawili yaliyokamatwa kwenye mitego karibu na kijito mwaka 1999. Inadhaniwa kwamba mfumo wa kuzaliana unafanana na wa spishi zingine za jenasi; dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Spishi imeonekana tu mahali kielelezo kilipopewa jina kwa mara ya kwanza.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Misitu ya Amani-Sigi, Hifadhi ya Misitu ya Amani na Milima ya Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:
920 - 950 m

HALI YA UHIFADHI: Hakuna taarifa za kutosha



Nectophrynoides laevis (Menegon, Salvidio, and Loader, 2004)
Smooth Forest Toad



SVL: ♂ = 24.8 mm

DESCRIPTION: Lacks a tympanum. The dorsum is light gray with irregular dark markings and is smooth with small warts. Parotid glands are twice as long as their width. A very small amount of webbing is present on the toes. Fingers lack webbing. Finger tips are expanded and slightly truncate. A thin dark line runs along the center of the ventral surface. A pale vertebral stripe was present on the single individual collected; however this is a trait that varies among individuals in other species.

SIMILAR SPECIES: Can be distinguished from other members of the genus by its lack of tympanum and the presence of expanded toe tips and a distinct parotid gland.

HABITAT: Upper montane forest

NATURAL HISTORY: This species is known from a single specimen collected in 2002. Reproduction is assumed to be similar to that of other species in the genus with internal fertilization and live birth.

CALL: Unknown

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: Uluguru South Forest Reserve, Uluguru Mountains, Morogoro Region, Tanzania

ELEVATIONAL RANGE: a single specimen was collected at 2000 m

CONSERVATION STATUS: Data deficient

UREFU WA MWILI: ♂ = 24.8 mm

MAELEZO: Chura huyu haina kiwambo cha sikio. Sehemu ya juu ni kijivu kilichofifia, ina alama bila mpangilio, iko laini na ina chunjua ndogo. Tezi nyuma ya jicho zina urefu maradufu ya upana wao. Vidole vya miguuni vina utando kidogo sana. Vidole vya mikononi havina utando. Ncha za vidole vya mikononi ni pana na mvingo kidogo. Kuna mstari mwembamba na mweusi unaotoka mwanzo hadi mwisho wa sehemu ya chini. Kulikuwa na msitari mmoja mwembamba wenye rangi iliyofifia mgongoni mwa chura mmoja aliyekamatwa; lakini hali hii hutofautiana katika spishi zingine.

SPISHI INAZOFANANA NAZO: Tofauti na spishi zingine za jenasi, *N. laevis* hana kiwambo cha sikio, ina ncha za vidole vya miguuni pana na tezi juu ya jicho inayoonekana.

MAZINGIRA: Misitu iliyopo zaidi ya 1200 m. kutoka usawa wa bahari.

HISTORIA ASILIA: Kielelezo kimoja tu kilikamatwa mwaka 2002. Inadhaniwa kwamba mfumo wa kuzaliana unafanana na wa spishi zingine za jenasi; dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Mahali kielelezo kilipopewa jina kwa mara ya kwanza

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Uluguru Kusini, Milima ya Uluguru, nchini Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 2000 m

HALI YA UHIFADHI: Hakuna taarifa za kutosha



Nectophrynoides laticeps

(Channing, Menegon, Salvadio, and Akker, 2005)



M. Menegon

SVL: < 24 mm

DESCRIPTION: A small frog with slender limbs. The tympanum is visible, but not distinct. It is smaller than $\frac{1}{2}$ the diameter of the eye. The dorsum is brown with raised bumps. The sides are slightly darker, but there are no distinct markings on the dorsum or sides. There is a light band that runs from the eye to the corner of the mouth. Toe and finger tips are rounded and not expanded. Toes and fingers lack webbing.

SIMILAR SPECIES: *N. paulae* and *N. tornieri* also occur in the Ukaguru

Mountains, but *N. laticeps* lacks the conical dorsal spines of *N. paulae* and has rounded finger tips unlike the truncate finger tips of *N. tornieri*.

HABITAT: Leaf litter in montane forest.

NATURAL HISTORY: Reproduction is assumed to be similar to that of other species in the genus with internal fertilization and live birth.

CALL: Described by Channing et al. (2005) as “a whistle followed by a short chirp, although later in the year only the chirp is produced.”

DISTRIBUTION IN THE EACF: Ukaguru Mountains

TYPE LOCALITY: Mamiwa-Kisara Forest Reserve, Ukaguru Mountains, Tanzania

ELEVATIONAL RANGE: 1800 – 2200 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: < 24 mm

MAELEZO: Chura huyu ni mdogo na ana miguu na mikono miembamba. Kiwambo cha sikio kinaonekana na ni kidogo kuliko $\frac{1}{2}$ ya kipenyo cha jicho. Sehemu ya juu ni kahawia na ina nundu zilizojitokeza. Sehemu za pembeni ni nyeusi kidogo lakini hakuna alama maalum kwenye sehemu ya juu au pembeni. Kuna mstari uliofifia unaotoka jichoni hadi kwenye kona ya mdomo. Ncha za vidole vya miguuni na mikononi ni mvingo lakini siyo pana. Hakuna utando kwenye vidole vya miguuni wala mikononi.

SPISHI INAZOFANANA NAZO: *N. paulae* na *N. tornieri* zinapatikana pia Milima ya Ukaguru lakini *N. laticeps* hana miiba sehemu ya juu yenye umbo la pia na ana ncha mvingo za vidole vya mikononi, tofauti na *N. tornieri* mwenye ncha butu

MAZINGIRA: Majani yaliyoanguka chini kwenye misitu iliyopo zaidi ya 1200 m kutoka usawa wa bahari.

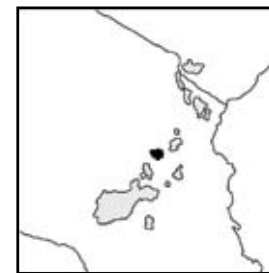
HISTORIA ASILIA: Inadhaniwa kwamba mfumo wa kuzaliana unafanana na wa spishi zingine za jenasi. Dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Ukaguru Milima.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Mamiwa-Kisara, Milima ya Ukaguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1800 – 2200 m

HALI YA UHIFADHI: Spishi iko hatarini



Nectophrynooides minutus (Perret, 1972)

Minute Tree Toad, Dwarf Forest Toad



SVL: ♂ < 19 mm; ♀ < 22 mm

DESCRIPTION: A small slender frog. The tympanum is visible. Lacks a distinct parotid gland, although some small glands are present in the parotid region. Finger and toe tips are not expanded. Toes have only a very small amount of webbing. The first finger is shorter than the second.

SIMILAR SPECIES: Similar to *N. asperginis*, but the tympanum is visible in *N. minutus*. Also, *N. minutus* is not known to occur in the Udzungwa Mountains.

HABITAT: Undisturbed montane forest and montane grassland

NATURAL HISTORY: Fertilization is internal and females give birth to 20 – 31 young.

CALL: Unknown

DISTRIBUTION IN THE EACF: Uluguru North and South Forest Reserves and the Ukwiva Forest Reserve in the Rubeho Mountains

TYPE LOCALITY: Bagilo, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: > 1200 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ < 19 mm; ♀ < 22 mm

MAELEZO: Chura huyu ni mdogo na mwembamba. Kiwambo cha sikio kinaonekana. Hana tezi kubwa nyuma ya jicho inayoonekana ingawa kuna tezi ndogo ndogo. Ncha za vidole vya miguuni na mikononi siyo pana. Vidole vya miguuni vina utando kidogo sana. Kidole cha kwanza ni kifupi kuliko cha pili.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana na *N. asperginis* lakini kiwambo cha sikio cha *N. minutus* kinaonekana. Aidha, *N. minutus* haijawahi kupatikana kwenye Milima ya Udzungwa.

MAZINGIRA: Misitu na nyasi zilizopo zaidi ya 1200 m kutoka usawa wa bahari, lakini kwenye mazingira ambayo hayajaguswa.

HISTORIA ASILIA: Dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura 20-31.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Hifadhi zya Misitu ya Uluguru Kaskazini na Uluguru Kusini, Hifadhi ya Misitu ya Ukwiva ya Milima ya Rubeho.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Bagilo, Milima ya Uluguru, nchini Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: > 1200 m

HALI YA UHIFADHI: Spishi iko hatarini



Nectophrynooides paulae

(Menegon, Salvadio, Ngalason, and Loader, 2007)



M. Menegon

SVL: 15 – 24 mm

DESCRIPTION: A small dark toad with slender limbs. The dorsum is covered in large conical spines. The tympanum is distinctly visible. Parotid glands are absent. Finger and toe tips are rounded and not expanded.

SIMILAR SPECIES: The large conical spines on the dorsum are distinctive.

HABITAT: Montane forest, typically found on vegetation

NATURAL HISTORY: Known only from 10 specimens collected at the

type locality and a single subsequent record. These individuals were found on vegetation near a stream with standing water. Males call on rainy nights while perched on vegetation approximately 1 m off the ground. Reproduction is assumed to be similar to that of other species in the genus with internal fertilization and live birth.

CALL: The call consists of 3 – 5 pulses

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: Mamiwa-Kisara North Forest Reserve, Ukaguru Mountains, Tanzania

ELEVATIONAL RANGE: 1800 m

CONSERVATION STATUS: Critically endangered

UREFU WA MWILI: 15 – 24 mm

MAELEZO: Chura huyu ni mdogo, mweusi na ana miguu na mikono midogo. Sehemu ya juu ina miiba mikubwa yenye umbo la pia. Kiwambo cha sikio kinaonekana wazi. Hakuna tezi nyuma ya jicho. Ncha za vidole vya miguuni na mikononi siyo pana.

SPISHI INAZOFANANA NAZO: Spishi hii inajitofautisha na zingine kwa kuwa na miiba mikubwa yenye umbo la pia.

MAZINGIRA: Misitu iliyopo zaidi ya 1200 m kutoka usawa wa bahari

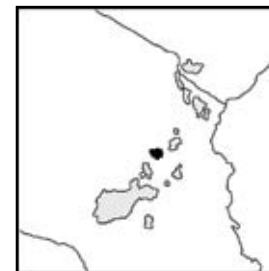
HISTORIA ASILIA: Taarifa zinatokana na vielelezo 10 vilivyokamatwa mahali spishi ilipopewa jina na baada ya hapo ilipatikana tena mara moja. Vyura hawa walipatikana kwenye uoto karibu na kijito chenye maji yaliyosimama. Madume yanaita usiku mvua inaponyesha, yakiwa juu kwenye uoto takribani 1 m kutoka ardhini. Mfumo wa kuzaliana unadhaniwa kuwa sawa na wa spishi zingine za jenasi; dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Mahali ilipopewa jina kwa mara ya kwanza.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Mamiwa-Kisara Kaskazini, Milima ya Ukaguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1800 m

HALI YA UHIFADHI: Spishi iko hatarini sana



Nectophrynoides poyntoni

(Menegon, Salvidio, and Loader, 2004)

Poynton's Forest Toad



M. Menegon

SVL: ♂ 24 mm

DESCRIPTION: A medium-sized *Nectophrynoides* with a broad head and short, slender legs. The dorsum is light brown with irregular darker brown markings and a dark line from the eye to the shoulder. The dorsal pattern is variable. Parotid glands are present and distinct, but discontinuous, appearing as a broken ridge from the eye to the shoulder. The tympanum is visible. Toe tips are rounded not expanded or truncate. There is some webbing on the fourth and fifth toes.

SIMILAR SPECIES: *N. poyntoni* can be distinguished from other species in the genus by its rounded finger and toe tips, body size, clearly visible tympanum and distinct parotid glands.

HABITAT: Near streams in moist submontane rainforest

NATURAL HISTORY: Individuals hide under logs during the day and perch on vegetation approximately 1 m off the ground at night. Reproduction is assumed to be similar to that of other species in the genus, with internal fertilization and live birth.

CALL: Described by Menegon et al. (2004) as "a group of trains of 6 to 8 pulses."

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: Mkalazi Valley, Uzungwa Scarp Forest Reserve, Uzungwa Mountains, Tanzania

ELEVATIONAL RANGE: 1200 m

CONSERVATION STATUS: Critically endangered

UREFU WA MWILI: ♂ 24 mm

MAELEZO: *Nectophrynoides* huyu ni mkubwa kiasi na ana kichwa kipana na miguu mifupi na miembamba. Sehemu ya juu ni kahawia iliyofifia na yenye alama bila mpangilio na zenye rangi ya kahawia iliyokolea; kuna mstari mweusi unaotoka jichoni hadi begani. Mpangilio wa sehemu ya juu unatofautiana. Kuna tezi nyuma ya jicho zinazoonekana lakini hazijakaa mfululizo, bali zipo kwenye tuta ambalo limekatika, kutoka jicho hadi begani. Kiwambo cha sikio kinaonekana. Ncha za vidole vya miguuni ni mviringo lakini siyo pana wala butu. Kuna utando kiasi kwenye vidole vya nne na tano vya mguuni.

SPISHI INAZOFANANA NAZO: Tofauti na spishi zingine za jenasi, *N. Poynton* ina ncha za vidole mviringo mikononi na miguuni, saizi ya mwili wake tofauti, ina kiwambo cha sikio kinachoonekana na tezi nyuma ya jicho zinazoonekana.

MAZINGIRA: Karibu na vijito kwenye misitu yenye unyevu, zaidi ya 1200 kutoka usawa wa bahari.

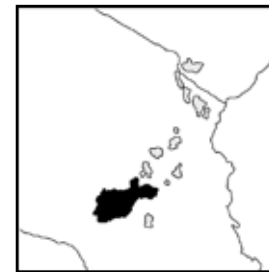
HISTORIA ASILIA: Vyura wanajificha chini ya magogo mchana kutwa na usiku wanakaa kwenye uoto takribani 1 m kutoka ardhini. Mfumo wa kuzaliana unadhaniwa kuwa sawa na wa spishi zingine za jenasi; dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Imepatikana tu mahali ilipopewa jina

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Bonde la Mkalazi, Hifadhi ya Misitu ya Uzungwa, Milima ya Uzungwa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1200 m

HALI YA UHIFADHI: Spishi iko hatarini sana



Nectophrynoides pseudotornieri

(Menegon, Salvidio and Loader, 2004)

Pseudo Forest Toad



SVL: ♂ 25 mm; ♀ 29 mm

DESCRIPTION: A medium-sized *Nectophrynoides* with a broad head, protruding eyes and large hands and feet relative to other members of the genus. The dorsum is light brown with irregular darker brown markings. This species lacks a tympanum. The parotid glands are present, but small and indistinct. They are located in the scapular region and are shorter than the length of the eye. The toe tips are expanded and the tips of some of the digits are truncate. Fingers are webbed at the base. Toes are partially webbed.

SIMILAR SPECIES: *N. pseudotornieri* can be distinguished from other members of the genus by the amount of webbing on the fingers and toes, and the lack of tympanum.

HABITAT: Submontane rainforest

NATURAL HISTORY: Known only from two specimens collected in 1996 and 2000. Hides under logs during the day and perch on vegetation approximately 1 m off the ground at night. Reproduction is assumed to be similar to that of other species in the genus with internal fertilization and live birth.

CALL: Unknown

DISTRIBUTION IN THE EACF: Uluguru North Forest Reserve on the eastern side of the Uluguru Mountains

TYPE LOCALITY: Uluguru North Forest Reserve, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 1080 – 1345 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ 25 mm; ♀ 29 mm

MAELEZO: *Nectophrynoides* huyu ni mkubwa kiasi, ana kichwa kipana, macho yanayochochoza; ana mikono na miguu mikubwa ukilinganisha na vyura wengine wa jenasi. Sehemu ya juu ni kahawia iliyofifia na ina alama bila mpangilio, zenye rangi kahawia iliyokolea. Spishi hii haina kiwambo cha sikio. Kuna tezi nyuma ya jicho lakini ni ndogo na hazionekani. Ncha za vidole vya miguuni ni pana na baadhi ni butu. Vidole vya mkononi vina utando mwanzoni na vya mguuni vina utando kidogo.

SPISHI INAZOFANANA NAZO: *Nectophrynoides pseudotornieri* inatofautiana na spishi zingine za jenasi kutokana na uwingi wa utando kwenye vidole vya miguuni na mikononi na kutokuwa na kiwambo cha masikio.

MAZINGIRA: Misitu iliyopo karibu na 1200 m kutoka usawa wa bahari.

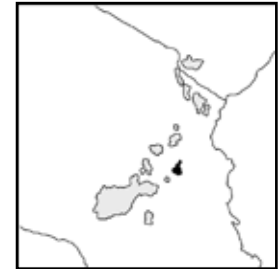
HISTORIA ASILIA: Spishi hii inajulikana kutokana na vielelezo viwili vilivyokamatwa 1996 na 2000. Vyura wanajificha chini ya magogo mchana kutwa na usiku wanakaa kwenye uoto takribani 1 m kutoka ardhini. Inadhaniwa kuwa mfumo wa kuzaliana ni sawa na wa spishi zingine za jenasi; dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Hifadhi ya Misitu ya Uluguru Kaskazini, mashariki mwa Milima ya Uluguru

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Uluguru Kaskazini, Milima ya Uluguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1080 – 1345 m

HALI YA UHIFADHI: Spishi iko hatarini



Nectophrynoides tornieri (Roux, 1906)

Tornier's Tree Toad, Usambara Viviparous Toad,
Tornier's Forest Toad



E. Harper

SVL: 21 – 30 mm

DESCRIPTION: A small toad with a wide head and slender body. The dorsum is light brown. The limbs are very thin, and the finger tips are expanded and truncate. The tympanum is small, but distinctly visible.

SIMILAR SPECIES: The widely expanded and truncate finger and toe tips, along with the visible tympanum distinguish this species from most other species in the genus.

HABITAT: Lowland and montane forest and forest edges. Tolerates a moderate

amount of habitat degradation and can be found in banana patches.

NATURAL HISTORY: Found on low vegetation. Fertilization is internal, and eggs are retained in the oviducts where they complete development.

CALL: Males call while perched on leaves in the forest, usually about 0.5 – 1.0 meters above the ground. The call consists of one, two or three high-pitched clicks.

DISTRIBUTION IN THE EACF: Abundant in the Usambara, Uluguru, Nguru, Mahenge, and Udzungwa Mountains

TYPE LOCALITY: Ukami, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 300 – 1800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: 21 – 30 mm

MAELEZO: Chura huyu ni mdogo, ana kichwa kipana na mwili mwembamba. Sehemu ya juu ni kahawia iliyofifia. Miguu na mikono ni miembamba sana wakati ncha za vidole vya mkononi ni pana na butu. Kiwambo cha sikio ni kidogo lakini kinaonekana wazi.

SPISHI INAZOFANANA NAZO: Tofauti ya spishi hii na zingine kwenye jenasi ni kwamba ina ncha pana sana na butu za vidole vya miguuni na mikononi. Kiwambo cha sikio ni kidogo na kinaonekana.

MAZINGIRA: Misitu ya maeneo tambarare, misitu iliyopo zaidi ya 1200 m kutoka usawa wa bahari na pembezoni mwa misitu. Inavumilia uharibifu kiasi wa mazingira na inapatikana pia kwenye mashamba ya ndizi.

HISTORIA ASILIA: Inazaliana kwenye uoto wa chini. Dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga. Mayai yanabaki kwenye kirijaova mpaka hatua zote za kuzaliana zinapokamilika.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Inapatikana kwa wingi kwenye milima ya Usambara, Uluguru, Nguru, Mahenge, na Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Ukami, Milima ya Uluguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 300 – 1800 m

HALI YA UHIFADHI: Haiko hatarini



Nectophrynoides vestergaardi

(Menegon, Salvidio, and Loader, 2004)

Vestergaard's Forest Toad



M. Vestergaardi

SVL: ♀ 24 mm

DESCRIPTION: A medium-sized *Nectophrynoides* with short slender limbs. The dorsum is light, with dark sides. Many individuals have a dark mid dorsal stripe. The tympanum is clearly visible. Parotid glands are raised with dark edges and are longer than they are wide. Toe and finger tips are not expanded and may be rounded or slightly pointed. Fingers are webbed only slightly at the base. Toes are partially webbed.

SIMILAR SPECIES: Similar to *N.*

tornieri, but toe tips are rounded rather than truncate. *N. vestergaardi* can be distinguished from *N. minutus* by the presence of the continuous elongate parotid gland. The presence of a tympanum also distinguishes *N. vestergaardi* from many other species in the genus.

HABITAT: Submontane forest to upper montane forest

NATURAL HISTORY: Use rotting logs for cover. Reproduction is assumed to be similar to that of other species in the genus with internal fertilization and live birth. One female was found containing 18 embryos.

CALL: Unknown

DISTRIBUTION IN THE EACF: West Usambara Mountains including Shume-Magamba Forest Reserve, Mazumbai Forest Reserve and Ambangulu

TYPE LOCALITY: Shume Magamba Forest Reserve, West Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 1230 – 2000 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♀ 24 mm

MAELEZO: *Nectophrynoides* huyu ni mkubwa kiasi na ana miguu miembamba. Sehemu ya juu ina rangi iliyofifia wakati pembeni kuna rangi nyeusi. Vyura wengi wa spishi hii wana mstari mweusi katikati ya mgongo. Kiwambo cha sikio kinaonekana wazi. Tezi nyuma ya jicho ziko juu, ni nyeusi pembeni na ndefu zaidi kuliko zilivyo pana. Ncha za vidole vya mguuni na mkononi sio pana na zinaweza kuwa mviringo au zimechongoka kidogo. Vidole vya mkononi vina utando kidogo mwanzoni. Vidole vya miguuni vina utando kiasi.

SPISHI ZINAZOFANANA NAZO: Spishi hii inafanana na *N. tornieri*, lakini ncha za vidole vya miguuni ni mviringo, siyo butu. Tofauti na *N. minutus*, *Nectophrynoides vestergaardi* ina tezi nyuma ya jicho ambayo ni ndefu. Aidha, kuwepo kwa kiwambo cha sikio unaitofautisha na *Nectophrynoides vestergaardi* na spishi zingine za jenasi.

MAZINGIRA: Milima iliyopo karibu na 1200 m kutoka usawa wa bahari.

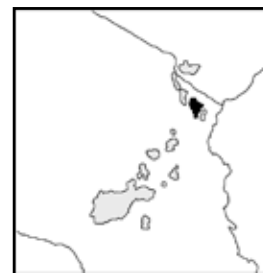
HISTORIA ASILIA: Inajificha kwenye magogo yanayooza. Mfumo wa kuzaliana unafanana na wa spishi zingine za jenasi. Dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga. Jike moja lilionekana na viinitete 18.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Magharibi pamoja na Hifadhi ya Misitu ya Shume-Magamba, Hifadhi ya Misitu ya Mazumbai na Ambangulu

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Shume Magamba, Milima ya Usambara Magharibi, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1230 – 2000 m

HALI YA UHIFADHI : Spishi iko hatarini



Nectophrynoides viviparus (Tornier, 1905)
Morogoro Tree Toad, Robust Forest Toad



M. Menegon

SVL: ♂ < 56 mm; ♀ < 60 mm

DESCRIPTION: A robust *Nectophrynoides* with very large distinct glands on the limbs. The skin is smooth and glandular. The dorsal coloration can be extremely variable, including gray, reddish, and green colors, but the color of the glands is usually in contrast with the rest of the body. The tympanum is visible and round, but may be difficult to see. Fingers are webbed only slightly at the base. Toes have some webbing.

SIMILAR SPECIES: The large size and enormous glands of this species are distinct.

HABITAT: Montane forest, bamboo and grasslands near forest. Usually associated with the forest floor, but may climb on vegetation especially during the breeding season. They can tolerate some habitat modification, but must be in close proximity to forest.

NATURAL HISTORY: Fertilization is internal. Females retain eggs and give birth to live toadlets.

CALL: Described by Channing and Howell (2006) as "A series of slow creaks... with 35 pulses at a rate of 52/s."

DISTRIBUTION IN THE EACF: Mountains of central and southwest Tanzania including the Uluguru and Udzungwa Mountains and the Southern Highlands

TYPE LOCALITY: Mt. Rungwe, Tanzania

ELEVATIONAL RANGE: 1350 – 2800 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ < 56 mm; ♀ < 60 mm

MAELEZO: *Nectophrynoide* huyu ana nguvu na ana tezi kubwa sana zinazoonekana kwenye miguu na mikono. Ngozi yake ni laini na ina tezi. Rangi ya sehemu ya juu inaweza kutofautiana sana, ikiwa ni pamoja na kijivu, nyekundu nyekundu na kijani lakini rangi ya tezi kwa kawaida inakuwa tofauti na rangi ya sehemu zingine za mwili. Kiwambo cha sikio kinaonekana na ni mviringo lakini huenda ikawa vigumu kukiona. Vidole vya mkononi vina utando kidogo mwanzoni. Vidole vya miguuni vina utando kiasi.

SPISHI INAZOFANANA NAZO: Tofauti na spishi zingine, spishi hii ni kubwa na ina tezi kubwa.

MAZINGIRA: Misitu iliyopo 1200 m kutoka usawa wa bahari, mianzi na karibu na misitu. Kwa kawaida, spishi hii inapatikana kwenye ardhi, lakini inaweza kupanda kwenye uoto, hususan wakati wa kuzaliana. Vyura wanavumilia mabadiliko kiasi ya mazingira, lakini lazima wabaki karibu sana na misitu.

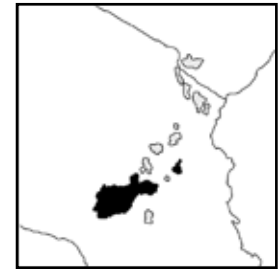
HISTORIA ASILIA: Dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya kati na kusini magharibi ya Tanzania, pamoja na Milima ya Uluguru, ya Udzungwa na ya Nyanda za juu za Kusini.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mlima Rungwe, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1350 – 2800 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Nectophrynoides wendyae (Clarke, 1988)



M. Menegon

SVL: ♂ < 18 mm; ♀ < 22 mm

DESCRIPTION: A small *Nectophrynoides* with smooth skin. There is a distinct dark spot on the chest. The snout projects out over the lips and there is a light line on the upper lip. This species lacks a tympanum. The parotid glands are long and narrow, extending along the dorsum as dorsolateral folds. The undersides of the thighs are dark with prominent white tubercles. The first finger is longer than the second. The first toe is reduced and there is only a very small amount of webbing on the toes. The undersides

of the feet are dark brown with contrasting white tubercles. Males in breeding condition have nuptial pads and a red throat.

SIMILAR SPECIES: The dark undersides of the thighs with white tubercles are distinct.

HABITAT: On the forest floor of undisturbed moist montane forest

NATURAL HISTORY: Fertilization is internal and females give live birth to small toadlets.

CALL: This species lacks a tympanum and associated hearing apparatus and is assumed to have no advertisement call.

DISTRIBUTION IN THE EACF: Known only from the type locality where it is very common in a single area approximately 300 x 300 m.

TYPE LOCALITY: Udzungwa Scarp Reserve, Udzungwa Mountains, Tanzania

ELEVATIONAL RANGE: 1500 – 1650 m

CONSERVATION STATUS: Critically endangered

UREFU WA MWILI: ♂ < 18 mm; ♀ < 22 mm

MAELEZO: *Nectophrynoides* huyu ni mdogo na ana ngozi laini. Kifuani kuna alama nyeusi inayoonekana. Pua inajichomoza juu ya midomo na kuna mstari uliofifia kwenye mdomo wa juu. Spishi hii haina kiwambo cha sikio. Tezi nyuma ya jicho ni ndefu na nyembamba, ziko sehemu ya juu pembeni kama makunjo ya mgongoni. Sehemu za chini za mapaja ni nyeusi na zina sehemu nyeupe ya ngozi ngumu iliyoinuka kwenye sehemu ya ndani ya mguu. Kidole cha kwanza cha mkononi ni kirefu kuliko cha pili. Kidole cha mguuni cha kwanza kimeingia ndani na kuna utando kidogo sana kwenye vidole vya miguuni. Sehemu ya chini ya wayo ni kahawia iliyokolea, kinyume cha sehemu ya ngozi ngumu iliyoinuka kwenye sehemu ya ndani ya mguu ambazo ni nyeupe. Madume yanapokuwa katika msimu wa kupandana yanakuwa na koo jekundu, maeneo magumu ya ngozi yanayotumika kumkamata jike.

SPISHI INAZOFANANA NAZO: Tofauti na spishi zingine, sehemu ya ndani ya mapaja ya spishi hii ni nyeusi na yana ngozi ngumu nyeupe iliyoinuka sehemu ya ndani ya mguu

MAZINGIRA: Ardhini kwenye misitu yenye unyevu na isiyoharibiwa, iliyopo zaidi ya 1200 m kutoka usawa wa bahari

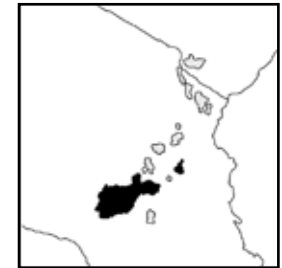
HISTORIA ASILIA: Dume linaweka mbegu zake ndani ya jike ambalo linazaa vyura wachanga. **ENEO SPISHI INAPOPATIKANA KWENYE MTMPM:** Imepatikana tu mahali kielelezo kilipopewa jina mara ya kwanza ambapo inapatikana kwa wingi katika eneo moja lenye ukubwa wa 300 x 300 m.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kwenye miteremko ya Hifadhi ya Udzungwa, Milima ya Udzungwa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:

1500 – 1650 m

HALI YA UHIFADHI: Spishi iko hatarini sana



Schismaderma carens (Smith, 1848)

Red Toad, Red-backed Toad, African Split-skin Toad



M. Menegon

SVL: 80 mm

DESCRIPTION: A large toad with broad glandular dorsolateral ridges. Dorsal coloration and markings are highly variable, ranging from reddish, gray or brown with darker markings including spots, triangles or X's on the dorsum.

SIMILAR SPECIES: *S. carens* is superficially similar to *Amietophrynus brauni*, but lacks parotid glands.

HABITAT: Grasslands, shrubland, wooded savanna and disturbed areas including ranches, agricultural areas and towns. Common, but generally only seen when it is breeding.

NATURAL HISTORY: Males call after the start of the long rains. Females lay long double strings of eggs in standing water, often attached to vegetation. Clutches typically contain over 2000 eggs. Eggs and tadpoles develop quickly, often metamorphosing in just over a month.

CALL: The call is described by Channing and Howell (2006) as “a very loud, long whoop.”

DISTRIBUTION IN THE EACF: Southwestern Kenya and most of Tanzania

TYPE LOCALITY: “Interior of Southern Africa”

ELEVATIONAL RANGE: Unknown

CONSERVATION STATUS: Least concern

UREFU WA MWILI: 80 mm

MAELEZO: Chura huyu ni mkubwa na ana matuta mapana mgongoni na pembeni ambayo yenye tezi. Rangi ya sehemu ya juu na ya alama inatofautiana sana; sehemu hiyo inakuwa nyekundu nyekundu, kijivu au kahawia na alama za mgongoni ni nyeusi na zinaweza kuwa na madoa, pemбетatu au X.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana na *Amietophrynus brauni* kwa juu juu lakini haina tezi nyuma ya jicho.

MAZINGIRA: Nyika, maeneo yenye vichaka, miombo na maeneo yaliyoharibiwa kidogo pamoja na mashamba ya mifugo, mashamba ya kilimo na mijini. Inapatikana mahali pengi lakini kwa kawaida inaonekana wakati wa kuzaliana.

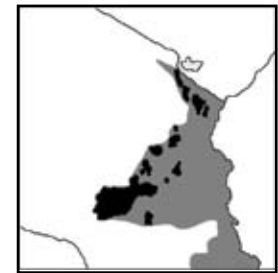
HISTORIA ASILIA: Madume yanaita baada ya masika kuanza. Majike yanataga mistari miwili miwili mirefu ya mayai kwenye maji yaliyosimama, mara nyingi yakiwa yamejishikilia kwenye uoto. Makundi yanaweza kuwa na mayai zaidi ya 2000. Mayai na viluwiluwi vinabadilika haraka na mara nyingi mabadiliko yanakamilika baada ya mwezi mmoja.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya Kusini na Magharibi mwa Kenya na Tanzania.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Afrika ya Kusini

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: Haijulikani

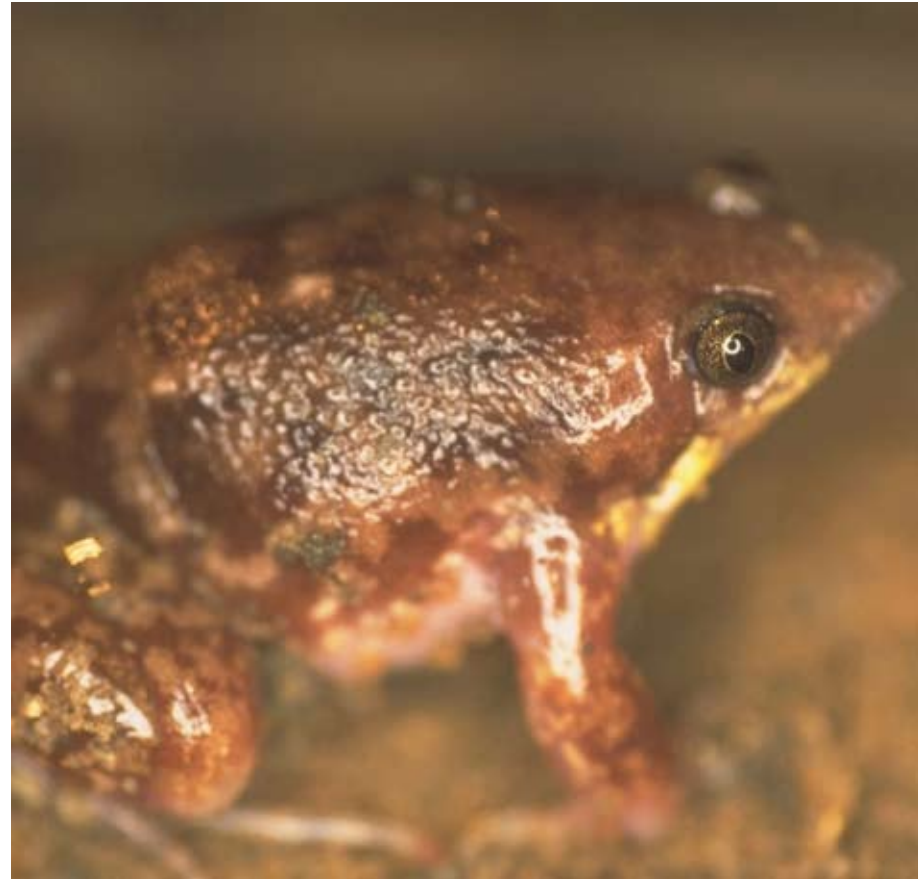
HALI YA UHIFADHI: Haiko hatarini



Hemisotidae

Known as 'snout-burrowers,' these frogs have pointy, hardened snouts allowing them to burrow head first into the ground. They are associated with savanna habitat and are not generally seen in forested areas. A single species, *Hemisus marmoratus*, occurs in the Eastern Arc and Coastal Forests.

Chura hawa wanaojulikana kama “wachimbaji kwa pua” wana pua iliyochongoka na ngumu inayowawezesha kuchimba ardhini na kuingia, wakitanguliza kichwa. Aidha, wanaishi kwenye savana na kwa kawaida, hawapatikani kwenye misitu. Spishi moja tu, *Hemisus marmoratus*, inapatikana MTMMP.



Hemisus marmoratus
E. Harper

Hemisus marmoratus (Peters, 1854)

Mottled Burrowing Frog, Marbled Snout-burrower, Shovel-nosed Burrowing Frog, Pig-nosed frog



G.J. Measey

SVL: ♂ 25 - 35 mm; ♀ 29 - 55 mm

DESCRIPTION: A medium-sized frog with a small head and distinctly pointed snout. The dorsum is yellowish brown usually with darker markings and often with a light vertebral stripe. The ventral surface is smooth and pale pink. Males have darkly pigmented throats. The toes are webbed only very slightly at the base.

SIMILAR SPECIES: The appearance of this species is distinctive.

HABITAT: Primarily a savanna species, but may also be found in grasslands,

plantations, agricultural areas and secondary forest, especially in sandy areas.

NATURAL HISTORY: A fossorial species that is common, but usually only seen during heavy rains when they emerge to breed. *H. marmoratus* feeds mainly on termites and is thought to forage underground. Amplexing pairs burrow into the mud and deposit clutches of 150 – 200 eggs. Females remain with the clutch until hatching. Large tadpoles emerge after eight days and make their way from the burrow to water either by swimming out when the burrow floods, or being carried by the female. Females often dig shallow channels to aid the tadpoles as they move toward water.

CALL: Males call from muddy areas near water. The call is an extended buzzing lasting several seconds and repeated frequently.

DISTRIBUTION IN THE EACF: Most of sub-Saharan Africa

TYPE LOCALITY: Cabaceira, Mozambique

ELEVATIONAL RANGE: < 1850 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 25 - 35 mm; ♀ 29 - 55 mm

MAELEZO: Chura huyu ana ukubwa wa kati, kichwa kidogo na pua iliyochongoka sana. Sehemu ya juu ni njano kahawia na ina alama zenye rangi iliyokolea na mstari mgongoni ulioffia. Sehemu ya chini ni laini na rangi ya waridi iliyoffia. Madume yana makoo yeye rangi iliyokolea. Vidole vya mguuni vina utando kidogo mwanzoni tu.

SPISHI INAZOFANANA NAZO: Umbo lake ni tofauti na la spishi zingine.

MAZINGIRA: Savana lakini inapatikana pia kwenye nyika, mashamba makubwa, maeneo ya kilimo na misitu isiyokuwa asilia, hasa kwenye maeneo ya mchanga mchanga.

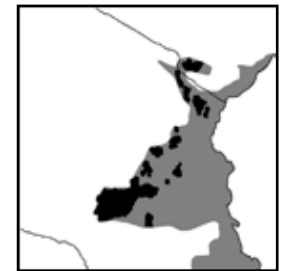
HISTORIA ASILIA: *H. marmoratus* inaishi kwenye mashimo chini ya ardhi na kwa kawaida, vyura hawa wanaonekana tu wakati wa mvua kubwa wanapojitokeza kuzaliana. *H. marmoratus* anakula zaidi kumbikumbi na anatafuta chakula chini ya ardhi. Jike na dume yanajichimbia chini ya ardhi na kuacha mayai kati ya 150 hadi 200 ambayo yanawekewa mbegu za kiume yanapotoka nje ya jike. Jike linabaki na mayai hadi yanapototolewa, Viluwiluwi ikubwa vinatoka shimoni baada ya siku nane na kwenda majini kwa kuogelea wakati shimo linapofurika au kwa kubebwa na jike. Kwa kawaida, majike yanachimba mifereji ili kuvisaia viluwiluwi kwenda kwenye maji.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Sehemu kubwa ya Afrika Kusini mwa Sahara

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Cabaceira, Msumbiji

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1850 m

HALI YA UHIFADHI: Haiko hatarini



Hyperoliidae

The family Hyperoliidae is restricted to sub-Saharan Africa and includes dozens of small brightly colored frogs. They are commonly associated with reeds and other vegetation in and around water. All species in the family are arboreal and have prominent digital disks with the exception of the running frogs, *Kassina maculata* and *Kassina senegalensis*. *Phlyctimantis keithae* is closely related to the *Kassina* species. The majority of hyperoliids in the Eastern Arc are small reed frogs in the genus *Hyperolius* or *Afrixalus*. *Hyperolius* species have horizontal pupils whereas *Afrixalus* species have vertical pupils. There is still a great deal of taxonomic confusion surrounding many of these species and they are often categorized into a bewildering array of groups, complexes and superspecies.

Hyperoliidae Vyura Miti

Familia ya Hyperoliidae inapatikana tu Afrika kusini mwa Sahara na ina dazani nyingi za vyura wadogo wenye rangi ya kung'aa. Kwa kawaida, vyura wanapatikana kwenye matete na uoto mwingine ulio ndani au karibu na maji. Spishi zote za familia hii zinaishi kwenye miti, zina ncha mviringo za vidole na miguu zinazojitokeza, isipokuwa vyura wa spishi za *Kassina maculata* na *Kassina senegalensis*. *Phlyctimantis keithae* ina mahusiano ya karibu na spishi za *Kassina*. Idadi kubwa ya hyperoliids wa Tao la Mashariki ni vyura wadogo wanaoishi kwenye matete na wako kwenye jenasi ya *Hyperolius* au *Afrixalus*. Spishi za *Hyperolius* zina mboni mlalo wakati spishi za *Afrixalus* zina mboni wima. Bado kuna utata katika kuainisha spishi hizi nyingi na mara nyingi zinawekwa kwenye makundi mbalimbali yanayochanganya na ambayo ni makubwa sana.



Hyperolius parkeri
J. Vonesh

Afrivalus delicatus (Pickersgill, 1984)

Pickersgill's Banana Frog, Delicate Spiny Reed Frog



E. Harper

SVL: ♂ < 25 mm; ♀ < 27 mm

DESCRIPTION: A small slender frog with a silvery or yellow dorsum. Small dark tipped spines cover the heads of the females and the heads and backs of males. A dark band with light spots runs along each side from the snout to the groin. The dorsal pattern is variable across the species range, but in the EACF there is usually a pair of dorsolateral stripes from the vent to a patch behind the eyes. The legs are pale with dark bands. Toe tips are yellow with expanded disks. In males the throat is yellow. Females have white throats.

SIMILAR SPECIES: This species is referred to as *Afrivalus brachycnemis* in Channing and Howell 2006. *A. delicatus* and *A. stuhlmanni* are the two dwarf *Afrivalus* species that occur in the coastal lowland savannas. *A. stuhlmanni* has a similar dorsal pattern but lacks the patch behind the eyes.

HABITAT: Savanna, shrubland and grasslands – usually near permanent water

NATURAL HISTORY: Males call from vegetation at the edges of permanent water. Eggs are laid on vegetation.

CALL: Described by Pickersgill (2007) as “a prolonged rattle”

DISTRIBUTION IN THE EACF: Coastal areas of Tanzania and Kenya

TYPE LOCALITY: St Lucia village, Natal, South Africa

ELEVATIONAL RANGE: < 500 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 25 mm; ♀ < 27 mm

MAELEZO: Chura huyu ni mdogo na sehemu ya juu ni kijivu au njano. Miiba midogo yenye ncha nyeusi iko kwenye kichwa cha majike na kichwa na mgongo wa madume. Mstari mweusi wenye madoa yaliyofifia unapatikana kila upande, toka puani hadi kwenye kinena. Mpangilio wa sehemu ya juu inatofautiana baina ya spishi, lakini kwa kawaida spishi za MTMMP zina mistari miwili pembeni na mgongoni kutoka sehemu ya chini hadi kwenye doa nyuma ya jicho. Miguu ina rangi iliyofifia na mistari mieusi. Ncha za vidole vya miguuni ni njano na mviringo. Koo la madume ni njano. Majike yana koo jeupe.

SPISHI INAZOFANANA NAZO: Channing and Howell (2006) wanatumia jina la *Afrivalus brachycnemis* kwa spishi hii. *A. delicatus* na *A. stuhlmanni* ndiyo spishi bushuti za *Afrivalus* ambazo zinapatikana kwenye savana ya maeneo tambarare ya pwani. *A. stuhlmanni* ina mpangilio wa sehemu ya juu unaofanana na wa *A. delicatus* lakini haina doa nyuma ya macho.

MAZINGIRA: Savana, maeneo yenye vichaka na nyika, kwa kawaida karibu na maji.

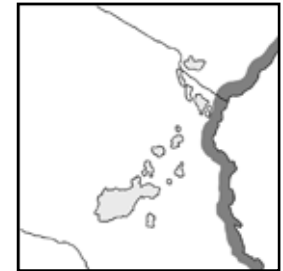
HISTORIA ASILIA: Madume yanaita kutoka kwenye uoto pembezoni mwa maji ya kudumu. Mayai yanatagwa kwenye uoto.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo ya pwani ya Tanzania na Kenya

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kijiji cha St Lucia, Natal, Afrika ya Kusini

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 500 m

HALI YA UHIFADHI: Haiko hatarini



Afrivalus fornasini (Bianconi, 1849)

Spiny Reed Frog, Greater Leaf-folding Frog, Brown and White Spiny Reed Frog, Fornasini's Banana Frog, Silver-Banded Banana Frog



E. Harper

SVL: 30 – 40 mm

DESCRIPTION: A large slender *Afrivalus*. The dorsum and tibia are silvery white with small black-tipped spines that are larger on males than on females. Many individuals have a broad brown mid-dorsal band as well. At night the entire dorsum appears translucent brown. The sides, arms and feet are clear brown with white flecking. The fingers are webbed slightly at the base and the toes are webbed with the exception of the tip of the fourth toe.

SIMILAR SPECIES: The large size and

white dorsum of *A. fornasini* are distinctive when compared to other members of the genus in the EACF.

HABITAT: Primarily dense savanna, but also dry forest and shrubland

NATURAL HISTORY: Eggs are laid over permanent water on reeds which are folded and glued over the eggs. Clutches contain approximately 80 unpigmented eggs. Hatching occurs five to ten days later. The tadpoles are long and slender with flattened heads and a total length reaching 65 mm. The larval stage can last seventy-five days. *A. fornasini* often feeds on the egg masses of other frogs including *Chiromantis spp.* and *Hyperolius spinigularis* consuming part, but not all of the eggs in the clutch. Surviving eggs generally hatch earlier than those from egg masses that have not been preyed upon.

The skin of *A. fornasini* contains chemicals called tachykinins, which deter some mammalian predators.

CALL: Males call from reeds in deep ponds. The call consists of an initial vibrating pulse followed by a rapid stutter. It has been compared to the sound of a small machine gun.

DISTRIBUTION IN THE EACF: Coastal areas of southern Kenya and Tanzania

TYPE LOCALITY: Mozambique

ELEVATIONAL RANGE: Typically below 300 m although it has been recorded up to 1300 m in Malawi

CONSERVATION STATUS: Least concern

UREFU WA MWILI: 30 – 40 mm

MAELEZO: Huyu *Afrivalus* ni mkubwa na mwembamba. Sehemu ya juu na muundi goko zina rangi nyeupe ya fedha na kuna miiba midogo yenye ncha nyeusi ambazo ni kubwa zaidi kwenye madume kuliko kwenye majike. Vyura wengi wana msitari mpana kahawia katikati ya mgongo. Usiku, sehemu yote ya juu inakuwa kahawia angavu. Pembeni, mikononi na nyayo ni kahawia yenye weupe weupe. Vidole vya mkononi vina utando kidogo mwanzoni na vidole vya miguu vina utando, isipokuwa ncha ya kidole cha nne.

SPISHI INAZOFANANA NAZO: Tofauti na spishi zingine za jenasi kwenye MTMMP, spishi hii ni kubwa na sehemu ya juu ni nyeupe.

MAZINGIRA: Savana yenye uoto mnene lakini pia kwenye misitu kame na maeneo yenye vichaka.

HISTORIA ASILIA: Mayai yanatagwa kwenye maji ya kudumu kwenye matete ambayo yanakunjwa na kugandishwa kwenye mayai. Makundi ya mayai yanakuwa na takribani mayai 80 bila rangi. Mayai yanatolewa baada ya siku 5-10. Viluwiluwi ni virefu na vyembamba vyenye vichwa bapa na jumla ya urefu wa 65 mm. Mabadiliko hadi kutokea chura mchanga yanaweza kukamilika baada ya siku 75. Mara nyingi *A. fornasini* anakula mayai ya vyura wengine ikiwa ni pamoja na mayai ya *Chiromantis spp* na *Hyperolius spp.* Anakula sehemu tu ya mayai kwenye kundi, siyo yote. Mayai yanayobaki yanatolewa mapema kuliko yaliyoko kwenye makundi ambayo hayajavamiwa.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP:

Misitu ya pwani ya Kenya Kusini na Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA

MARA YA KWANZA: Msumbiji

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:
< 300 m (Tanzania na Kenya); < 1300 m (Malawi)

HALI YA UHIFADHI: Haiko hatarini



Afrixalus morerei (Dubois, 1986)

Morere's Spiny Reed Frog, Dabaga Leaf-Folding Frog



M. Menegon

SVL: 21 – 23 mm

DESCRIPTION: A small *Afrixalus* with short legs (tibia less than $\frac{1}{2}$ SVL). The dorsum is light with two brown stripes that run from the eyes to the vent. There is also a brown dot on top of each eye and a single brown band in the middle of each tibia.

SIMILAR SPECIES: Not easily confused with other species. The dorsal stripes are distinctive.

HABITAT: Wet montane grasslands

NATURAL HISTORY: Little is known about the natural history of this species

CALL: Schiøtz (1999) describes the call as “a long, even buzzing.”

DISTRIBUTION IN THE EACF: Southern Udzungwa highlands

TYPE LOCALITY: Dabaga, Tanzania

ELEVATIONAL RANGE: 1800 – 2050 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: 21 – 23 mm

MAELEZO: *Afrixalus* huyu ana miguu mifupi (chini ya $\frac{1}{2}$ SVL). Sehemu ya juu ina rangi iliyofifia na mistari miwili kahawia inayotoka jichoni hadi kwenye tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Aidha, kuna doa kahawia juu ya kila jicho na mistari mmoja kahawia katikati ya kila muundi goko.

SPISHI INAZOFANANA NAZO: Siyo rahisi kuchanganya spishi hii na zingine. Mistari ya sehemu ya juu ni ya pekee na inaonekana.

MAZINGIRA: Nyika zilizopo zaidi ya 1200 m na zenye unyevu.

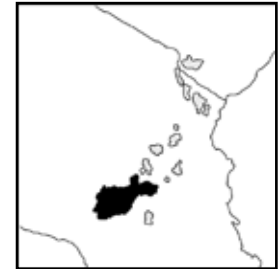
HISTORIA ASILIA: Taarifa juu ya spishi hii ni chache sana.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Udzungwa Kusini

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Dabaga, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1800 – 2050 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Afrivalus stuhlmanni (Pfeffer, 1893)

Lesser Banana Frog, Stuhlmann's Spiny Reed Frog, Forest Spiny Reed Frog



M. Menegon

There is considerable taxonomic confusion regarding this species. *Afrivalus brachycnemis*, *A. pygmaeus*, and *A. sylvaticus* are considered synonymies of *A. stuhlmanni* by Pickersgill (2005).

SVL: ♂ 15 – 21 mm; ♀ 17 – 27 mm

DESCRIPTION: A very small frog with short legs and protruding eyes. The dorsum is light with brown sides and darker bands or stripes. Small light dots are present on the brown patches and small brown dots occur on the light patches. Toes and fingers have a small

amount of webbing at the base. Toe and finger tips end in distinct disks.

SIMILAR SPECIES: Similar to *A. uluguruensis*, but lacks dorsal spines.

HABITAT: Grassland, savanna, and coastal forests

NATURAL HISTORY: Eggs are laid on blades of grass

CALL: A series of clicks

DISTRIBUTION IN THE EACF: Coastal areas of Tanzania and inland to the Kilombero floodplain.

TYPE LOCALITY: Zanzibar Island, Tanzania

ELEVATIONAL RANGE: 0 – 1200 m

CONSERVATION STATUS: Least concern

Kuna utata mwingi kuhusu uainishaji wa spishi hii. Inadhaniwa kwamba *Afrivalus brachycnemis*, *A. pygmaeus*, na *A. sylvaticus* ni majina mengine ya *A. stuhlmanni* by Pickersgill (2005).

UREFU WA MWILI: ♂ 15 – 21 mm; ♀ 17 – 27 mm

MAELEZO: Chura huyu ni mdogo sana, ana miguu mifupi na macho yanayochochoza. Sehemu ya juu ina rangi iliyofifia, na mistari kahawia iliyokolea. Kuna madoa madogo yenye rangi iliyofifia kwenye maeneo yaliyo kahawia na madoa madogo kahawia kwenye maeneo yenye rangi iliyofifia. Vidole vya miguuni na mkononi vina utando kidogo kwa chini. Ncha za vidole vya miguuni na mkononi ni mvingo.

SPISHI INAZOFANANA NAZO Inafanana na *A. uluguruensis* lakini spishi hii haina miiba mgongoni.

MAZINGIRA: Nyika, savana na misitu ya pwani.

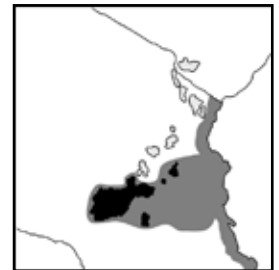
HISTORIA ASILIA: Mayai yanatagwa kwenye jani la nyasi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Misitu ya pwani ya Tanzania na ndani hadi bonde linalofurika maji la Kilombero.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kisiwa cha Zanzibar, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 0 – 1200 m

HALI YA UHIFADHI: Haiko hatarini



Afrixalus uluguruensis (Barbour & Loveridge, 1928)

Uluguru Banana Frog



M. Menegon

SVL: ♂ 21 – 25 mm; ♀ 24 – 28 mm

DESCRIPTION: A small to medium-sized *Afrixalus*. The head is broad with a short snout, and the eyes are large and protruding. The tympanum is not visible. The white dorsum is scattered with irregular darker patches, usually without forming a distinct pattern. Fingers and toes are yellow and end in expanded orange disks. Males have fine dorsal asperites, while females are smooth.

SIMILAR SPECIES: Pickersgill (2007) considers the populations from the Usambara Mountains to be a separate species (*Afrixalus dorsimaculatus*) from the Uluguru population.

HABITAT: Intact moist lowland and montane forest

NATURAL HISTORY: Eggs are placed on vegetation above water. Clutches are small, containing 10 - 12 eggs.

CALL: A quiet buzzing sound of variable duration.

DISTRIBUTION IN THE EACF: Uluguru, and Udzungwa Mountains; also unconfirmed records in coastal areas of Tanzania

TYPE LOCALITY: Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: Wide elevational range

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ 21 – 25 mm; ♀ 24 – 28 mm

MAELEZO: Huyu *Afrixalus* ana saizi ndogo hadi kubwa. Ana kichwa kipana, pua fupi na macho makubwa yanayochomoza. Kiwambo cha sikio hakionekani. Sehemu ya juu ni nyeupe na ina maeneo meusi ambayo hayana mpangilio. Vidole vya mguuni na mikononi ni njano na mwishoni kuna ncha pana na njano. Madume yana miiba midogo sana mgongoni na ngozi ya majike ni laini.

SPISHI INAZOFANANA NAZO: Pickersgill (2007) anaamini kwamba spishi za Milima ya Usambara ni *Afrixalus dorsimaculatus*, tofauti na spishi za vyura vya Uluguru

MAZINGIRA: Mazingira yasiyoguswa ya maeneo tambarare na misitu iliyopo zaidi ya 1200 kutoka usawa wa bahari.

HISTORIA ASILIA: Mayai yanatagwa kwenye uoto juu ya maji. Makundi ya mayai ni madogo, ya mayai 10-12.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Uluguru, na Udzungwa; pia, kuna taarifa ambazo hazijathibitishwa za kuwepo kwenye misitu ya pwani ya Tanzania

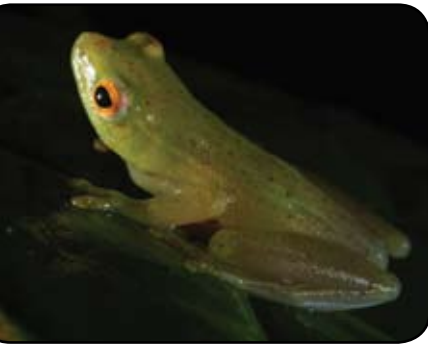
MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima ya Uluguru, Tanzania

HALI YA UHIFADHI: Spishi iko hatarini



Hyperolius nasutus (Günther, 1931)

Long Reed Frog, Sharp-nosed Reed Frog



M. Menegon

Hyperolius nasutus is considered a 'superspecies,' a complex of multiple species that are morphologically similar, but vary in their advertisement calls and occur throughout much of sub-Saharan Africa. Included in debates over this complex are *H. acuticeps*, *H. adspersus*, *H. benguelensis*, *H. lamottei*, *H. nasutus*, *H. poweri*, *H. quinquevittatus*, and *H. viridis*. More work is necessary to determine the limits of species boundaries within this complex. See Channing et al. (2002), Schiøtz (2006), and Pickersgill (2007) for further discussion.

SVL: ♂ & ♀ 19 - 26 mm

DESCRIPTION: A small, slender, translucent green frog with a sharp snout. There is a pair of light dorsolateral stripes that begin at the snout and continue over the eyes to the base of the legs. The tympanum is small and may be difficult to see. The throat of males is yellow. The ventral surface is white. Webbing is variable, but there is a small amount of webbing on the fingers. The toes are not extensively webbed.

SIMILAR SPECIES: See above

HABITAT: Found in a wide range of habitat types including savanna, shrubland, grassland, and degraded habitats such as agricultural and urban areas.

NATURAL HISTORY: Breeding takes place in rivers, lakes and swamps with emergent vegetation. Eggs are laid directly in the water in clutches of around 200 eggs.

CALL: Variable within the complex.

DISTRIBUTION IN THE EACF: Western and southern Kenya and throughout Tanzania

TYPE LOCALITY: Konde-Nyika, Tanzania

ELEVATIONAL RANGE: < 900 m

CONSERVATION STATUS: Least concern

Hyperolius nasutus inachukuliwa kama spishi ya juu kabisa ambayo ni mchanganyiko wa spishi nyingi ambazo zinafanana kimaumbile lakini zinatofautiana kwa miito na zinapatikana karibu maeneo yote ya Afrika kusini mwa Sahara. Mchanganyiko huu wa spishi unajumuisha za *H. acuticeps*, *H. adspersus*, *H. benguelensis*, *H. lamottei*, *H. nasutus*, *H. poweri*, *H. quinquevittatus*, na *H. viridis*. Kuna haja ya kufanya utafiti zaidi ili kutofautisha spishi kwenye mchanganyiko huu.

UREFU WA MWILI: ♂ & ♀ 19 - 26 mm

MAELEZO: Chura huyu ni mdogo, mwembamba, ana rangi ya kijani angavu na pua iliyochongoka. Kuna mistari miwili mgongoni na pembeni inayoanzia kwenye pua, inapita juu ya macho hadi mwanzoni mwa miguu. Kiwambo cha sikio ni kidogo na ni vigumu kuonekana mara nyingine. Koo la madume ni njano. Sehemu ya chini ni nyeupe. Utando unatofautiana lakini ni kidogo kwenye vidole vya mikononi. Vidole vya miguuni havina utando mwingi.

SPISHI INAZOFANANA NAZO: Rejea maelezo yaliyopo juu.

MAZINGIRA: Inapatikana kwenye mazingira mbalimbali pamoja na savana, vichaka, nyika na mazingira yaliyoharibiwa, kwa mfano maeneo ya kilimo na mijini.

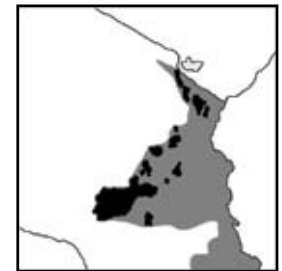
HISTORIA ASILIA: Spishi hii inazaliana kwenye mito, maziwa na vinamasi kwenye uoto unaojitokeza juu ya maji. Takribani makundi ya mayai 200 yanatagwa kwenye maji moja kwa moja.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Kusini na Magharibi mwa Kenya na Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Konde-Nyika, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 900 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius argus (Peters, 1854)

Argus Reed Frog, Argus Sedge Frog, Yellow Spotted Reed Frog, Golden Spotted Reed Frog, Boror Reed Frog



E. Harper

SVL: ♂ & ♀ 27 - 34 mm

DESCRIPTION: A large *Hyperolius* with a broad body. Males and females differ from one another in coloration. In males the dorsum is greenish or yellowish brown with small darker spots and light canthal and dorsolateral stripes. The ventral surface in males is white or cream and the throat and undersides of the limbs are similar in color to the dorsum. Females are light pinkish-brown with pale canthal stripes and large cream-colored spots outlined in black. The ventral surface of the female is orange and the throat and

undersides of the limbs are red. Fingers and toes have extensive webbing.

SIMILAR SPECIES: In more southern parts of their range *H. argus* may appear similar to *H. puncticulatus*, but in the EACF the two species have distinctly different dorsal patterns. Males are similar in coloration to *H. pusillus* and *H. acuticeps*, but are substantially larger.

HABITAT: *H. argus* is a widely distributed lowland species found in ponds and temporary pools in savanna, shrubland, and grassland. Also found in forest at Amani in the East Usambara Mountains.

NATURAL HISTORY: Eggs are attached to submerged vegetation in clutches of around 200 eggs. Emerging tadpoles are pale brown with mottled tails and may reach 48 mm in length.

CALL: Males call from floating vegetation. The call is a series of rapidly repeated clucks.

DISTRIBUTION IN THE EACF: Coastal areas of Kenya and Tanzania

TYPE LOCALITY: Boror, Mozambique

ELEVATIONAL RANGE: < 800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ & ♀ 27 - 34 mm

MAELEZO: *Hyperolius* huyu ni mkubwa na ana mwili mpana. Rangi za madume na majike zinatofautiana. Sehemu ya juu ya madume ni kijani kijani au njano kahawia, kuna madoa madogo yenye rangi iliyokolea na mistari iliyofifia kati ya pua na macho, mgongoni na pembeni. Sehemu ya chini ya madume ni nyeupe au ina rangi ya malai na rangi za koo, mikono na miguu zinafanana na za sehemu ya chini. Majike yana rangi ya waridi kahawia, mistari kati ya pua na macho na madoa makubwa yenye rangi ya malai yaliyozungushiwa rangi nyeusi. Sehemu ya chini ya majike rangi ya machungwa wakati koo na sehemu ya chini ya miguu na mikono ni nyekundu. Vidole vya mkononi na miguu vina utando sana.

SPISHI INAZOFANANA NAZO: Kwenye maeneo ya kusini sana spishi hii inapopatikana, *H. argus* inaweza kufanana na *H. puncticulatus*, lakini kwenye MTMMP spishi hizi mbili zina mpangilio tofauti wa sehemu ya juu. Madume yana rangi inayofanana na ya *H. pusillus* na *H. acuticeps* lakini madume ya *H. argus* ni makubwa zaidi.

MAZINGIRA: *H. argus* inapatikana kwenye mazingira mengi ya maeneo tambarare, kwenye madimbwi na mabwawa ya muda savana, maeneo ya vichaka na nyika. Aidha, spishi hii inapatikana kwenye misitu ya Amani, Milima ya Usambara Mashariki.

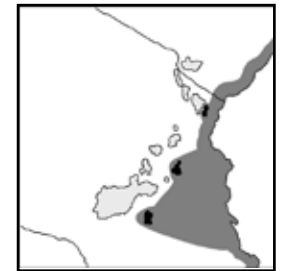
HISTORIA ASILIA: Mayai yanashikizwa kwenye uoto uliozama kwenye maji, yakiwa kwenye makundi yenye takribani mayai 200. Viluwilwi vinavyototolewa ni kahawia iliyofifia na mikia yenye mchanganyiko wa rangi nyeupe na nyeusi na vinaweza kufikia urefu wa 48 mm.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Misitu ya pwani ya Kenya na Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Boror, Msumbiji

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 800 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius glandicolor (Peters, 1878)

Peters' Reed Frog



G.J. Measey

SVL: ♂ 30 – 33 mm; ♀ 30 – 33 mm

DESCRIPTION: Females have a distinctive reticulate patterning of black on yellow, while males may take one of two forms, either female-like or a plain brown form. The ventrum in both sexes is pale, occasionally with red axial pigmentation.

SIMILAR SPECIES: *Hyperolius glandicolor* is part of the *Hyperolius viridiflavus* superspecies which consists of around 45 'subspecies' that all have similar calls, morphology and natural history, but differ in their dorsal patterns

and tend not to co-occur. The taxonomy of the *Hyperolius viridiflavus* complex is still not well resolved. Wieczorec et al. (2001) analyzed the mitochondrial DNA of 24 of the 45 recognized subspecies. They concluded that of these 24, 10 should be considered separate species, including *H. glandicolor* and *H. goetzei*. More work is needed to assess the status of the subspecies that were not included in Wieczorec et al. (2001). Here we use the name *H. glandicolor* to refer to the form endemic to the Taita Hills and surrounding area.

HABITAT: Typically found on vegetation at the edge of water bodies including swamps, lakes and ponds in savannas, grasslands, and shrublands.

NATURAL HISTORY: Eggs are deposited on vegetation under water in ditches, puddles and permanent water bodies.

CALL: Channing and Howell (2006) describe the call as a "brief click"

DISTRIBUTION IN THE EACF: Taita Hills

TYPE LOCALITY: Taita, Kenya

ELEVATIONAL RANGE: 800 – 1800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 30 – 33 mm; ♀ 30 – 33 mm

MAELEZO: Majike yana mpangilio unaofanana na wavu mweusi na usuli njano. Madume yanaweza kufanana na majike au kuwa na rangi ya kahawia kawaida. Sehemu za chini za madume na majike zina rangi iliyofifia na wakati mwingine yana makwapa mekundu.

SPISHI INAZOFANANA NAZO: *Hyperolius glandicolor* imo kwenye spishi ya juu kabisa ya *Hyperolius viridiflavus* ambayo ina makundi madogo ya spishi 45 yenye miito, maumbile na Historia Asilia inayofanana, ila zinatofautiana kwenye mipangilio ya sehemu ya juu na mara nyingi hazipatikani mahali pamoja. Bado kuna utata katika uainishaji wa spishi za *Hyperolius viridiflavus*. Wieczorec et al. (2001) walifanya utafiti wa kijenetiki wa makundi madogo ya spishi 24 kati ya 45 yanayojulikana. Utafiti huo ulionyesha kwamba kati ya makundi hayo 24 madogo ya spishi, makundi 10 ni spishi tofauti, yakijumuisha *H. glandicolor* na *H. goetzei*. Kuna haja ya kufanya utafiti zaidi ili kujua vizuri makundi madogo ambayo hayakufanyiwa utafiti na Wieczorec et al. (2001). Tunatumia jina la *H. glandicolor* kwa ajili ya spishi inayopatikana tu kwenye Milima ya Taita na maeneo yanayozunguka milima hiyo.

MAZINGIRA: Inapatikana kwenye uoto kandokando ya maeneo yenye mkusanyiko wa maji, kwa mfano vinamasi, maziwa na madimbwi kwenye savana, nyika na maeneo ya vichaka.

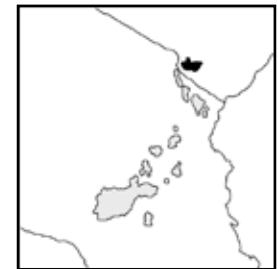
HISTORIA ASILIA: Mayai yanatagwa kwenye uoto chini ya maji kwenye mifereji, madimbwi na kwenye mkusanyiko wa maji ya kudumu.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Taita

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kenya Kusini na Magharibi na Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 800 – 1800 m

HALI YA UHIFADHI: Haiko hatarini





A. Schiötz

SVL: ♂ & ♀ < 25 mm

DESCRIPTION: The dorsal pattern is variable, usually gray or tan with darker marbling on the dorsum and legs. The head is broad. The ventral surface is reddish or white with red near the vent and on the undersides of the legs.

SIMILAR SPECIES: *Hyperolius goetzei* is part of the *Hyperolius viridiflavus* superspecies and is closely related to *H. glandicolor*.

HABITAT: High altitude grassland

NATURAL HISTORY: Males call from emergent vegetation around a wide variety of aquatic habitat types.

CALL: A whistle

DISTRIBUTION IN THE EACF: Savanna at high altitude in central Tanzania, from the Eastern Arc escarpment westwards.

TYPE LOCALITY: Uhehe, Tanzania

ELEVATIONAL RANGE: < 2400 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ & ♀ < 25 mm

MAELEZO: Mpangilio wa sehemu ya juu unatofautiana, lakini ni kijivu au hudhurungi pamoja na mchanganyiko wa rangi nyeusi na nyeupe kwenye sehemu ya juu na miguu. Kichwa ni kipana. Sehemu ya chini ni nyekundu nyekundu karibu na tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi na kwenye sehemu ya chini ya miguu.

SPISHI INAZOFANANA NAZO: *Hyperolius goetzei* ni sehemu ya spishi ya juu kabisa ya *Hyperolius viridiflavus* na inafanana sana na *H. glandicolor*

MAZINGIRA: Nyasi, zaidi ya 1200 m kutoka usawa wa bahari

HISTORIA ASILIA: Madume yanaita kutoka uoto uliopo juu ya maji kwenye maeneo yanayozunguka maji

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Savana kwenye maeneo ya juu ya kati ya Tanzania, kuanzia mharara wa Tao la Mashariki kuelekea magharibi

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Uhehe, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 2400 m

HALI YA UHIFADHI: Haiko hatarini

Hyperolius kihangensis (Schlötter & Westergaard, 1999)
Kihanga Reed Frog



M. Menegon

SVL: ♂ 16 - 19 mm; ♀ 23 - 26 mm

DESCRIPTION: A small *Hyperolius*. The dorsum is mottled brown and gray with small dark spots, a broad light band across the lower back and a small white dot on each heel. Some individuals have an hourglass pattern on the dorsum. Toes and fingers are yellowish to reddish. The ventral surface is yellow in males and reddish in females.

SIMILAR SPECIES: The dorsal pattern of this species is distinctive.

HABITAT: Swamps in montane forest

NATURAL HISTORY: The natural history of this species is not well known.

CALL: A series of quiet clicks

DISTRIBUTION IN THE EACF: Known only from the Luhega Forest in the Uzungwa Mountains

TYPE LOCALITY: Uzungwa Scarp Forest Reserve, Uzungwa Mountains, Tanzania

ELEVATIONAL RANGE: 1740 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ 16 - 19 mm; ♀ 23 - 26 mm

MAELEZO: *Hyperolius* huyu ni mdogo. Sehemu ya mgongoni ina madoa ya kahawia na kijivu; aidha ina madoa madogo meusi, mstari mpana wenye rangi iliyofifia kutoka upande mmoja hadi mwingine wa sehemu ya chini ya mgongo na doa moja dogo jeupe kwenye kila wayo. Baadhi ya vyura wana umbo la "V" mbili zinazogusana moja ikiwa chini juu kwenye sehemu ya juu. Vidole vya miguu na mikononi ni njano njano hadi rangi nyekundu nyekundu. Sehemu ya chini ya madume ni njano na ya majike ni nyekundu nyekundu.

SPISHI INAZOFANANA NAZO: Mpangilio wa sehemu ya juu unatofautisha spishi hii na nyingine kwenye jenasi.

MAZINGIRA: Vinamasi kwenye misitu iliyopo zaidi ya 1200 m kutoka usawa wa bahari

HISTORIA ASILIA: Historia asilia ya spishi hii haijulikani vizuri.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Misitu ya Luhega ya Milima ya Udzungwa tu

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Miteremko ya Hifadhi ya Misitu ya Milima ya Udzungwa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1740 m

HALI YA UHIFADHI: Spishi iko hatarini



Hyperolius mariae (Barbour and Loveridge, 1928)

Mary's Reed Frog



J. Vonesh

SVL: ♂ & ♀ < 25 mm

DESCRIPTION: A small *Hyperolius* with a short snout. The dorsum is pale tan with a dark blueish-black band low on each side. Black canthal stripes are usually present, sometimes extending over the eye to the base of the arm. The tympanum is not visible. The hands, feet and ventral surface are reddish. The toes are nearly fully webbed.

SIMILAR SPECIES: The dorsal markings are distinct. *H. mariae* is part of the *Hyperolius viridiflavus* superspecies (see discussion under *H. glandicolor*).

Pickersgill (2007) considers coastal and island populations to be *Hyperolius viridiflavus renschi*, and only the populations further inland to be *H.v. mariae*.

HABITAT: Swamps, rivers and lakes in savanna, grassland and shrubland.

NATURAL HISTORY: Males call from exposed sites on vegetation near water. Clutches of around 330 small black and white eggs are deposited in open water. Tadpoles hatch after about six days.

CALL: Schiøtz (1999) describes the call as “a fast series of high-pitched clicks.”

DISTRIBUTION IN THE EACF: Coastal areas of southern Kenya and Tanzania, inland to Mikumi National Park and the islands of Pemba, Zanzibar and Mafia.

TYPE LOCALITY: East Usambara Mountains, Tanzania

ELEVATIONAL RANGE: < 1400 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ & ♀ < 25 mm

MAELEZO: *Hyperolius* huyu ni mdogo na ana pua fupi. Sehemu ya juu ni hudhurungi iliyofifia na kuna mstari bluu nyeusi chini ya kila upande. Kwa kawaida, kuna mistari kati ya pua na macho, na wakati mwingine inatoka juu ya jicho hadi mwanzoni mwa mkono. Kiwambo cha sikio hakionekani. Viganja, nyayo na sehemu ya chini vina rangi nyekundu nyekundu. Vidole vya miguuni vina utando.

SPISHI INAZOFANANA NAZO: Alama kwenye sehemu ya juu zinaitofautisha spishi hii na nyingine kwenye jenasi. *H. marie* ni sehemu ya spishi ya juu kabisa ya *Hyperolius viridiflavus* (rejea taarifa za *H. glandicolor*). Msimamo wa Pickersgill (2007) ni kwamba spishi za pwani na visiwani ni *Hyperolius viridiflavus renschi* na spishi za bara tu ni *H. v. mariae*.

MAZINGIRA: Vinamisi, mito na maziwa kwenye maeneo ya savana, nyika na vichaka.

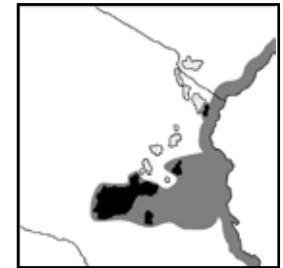
HISTORIA ASILIA: Madume yanaita kutoka sehemu wazi kwenye uoto karibu na maji. Makundi ya mayai madogo meusi na meupe takribani 330 yanatagwa kwenye maji. Viluwilwi vinatolewa baada ya takribani siku sita.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo ya pwani ya kusini mwa Kenya na Tanzania, bara hadi Hifadhi ya Taifa ya Mikumi na visiwa vya Pemba, Zanzibar na Mafia.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima ya Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1400 m

HALI YA UHIFADHI: Spishi haiko hatarini



Hyperolius minutissimus (Schjøtz, 1975)

Tiny Reed Frog, Dwarf Reed Frog



M. Menegon

SVL: ♂ 12 – 17 mm; ♀ 18 – 24 mm

DESCRIPTION: A small *Hyperolius* with a brown dorsum and broad light canthal and dorsolateral stripes that may be green or yellow. Some individuals also have light spots on the legs and dorsum.

SIMILAR SPECIES: The tiny males may be confused with *H. pictus* metamorphs, but the latter typically have three distinct lines on the dorsum which *H. minutissimus* lacks. *H. minutissimus* is similar to *H. spinigularis*, but *H. minutissimus* lacks blue coloration and the males are substantially smaller than in *H. spinigularis*.

HABITAT: Open high-elevation grasslands and forest clearings

NATURAL HISTORY: Breeds in temporary pools in grasslands.

CALL: Described by Schjøtz (1999) as “a fast series of quiet, unmelodic clicks.”

DISTRIBUTION IN THE EACF: Udzungwa Mountains and the Southern Highlands

TYPE LOCALITY: 10 miles west of Njombe, Tanzania

ELEVATIONAL RANGE: Above 1800 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ 12 – 17 mm; ♀ 18 – 24 mm

MAELEZO: *Hyperolius* huyu ni mdogo na sehemu ya juu ni kahawia. Aidha, ana mistari mipana kati ya pua na macho, mgongoni na pembeni ambayo ni kijani au njano. Baadhi ya vyura wana madoa yaliyofikia kwenye miguu na sehemu ya juu.

SPISHI INAZOFANANA NAZO: Ni rahisi kuchanganya madume yake madogo sana na *H. pictus* anayetoka kupata umbile la chura mzima, ana mistari mitatu sehemu ya juu ambayo *Hyperolius minutissimus* hana. Aidha, *Hyperolius minutissimus* anafanana na *H. spinigularis* lakini *Hyperolius minutissimus* haina rangi ya bluu na madume yake ni madogo zaidi kuliko ya *H. spinigularis*.

MAZINGIRA: Nyika zilizo wazi kwenye miinuko ya juu.

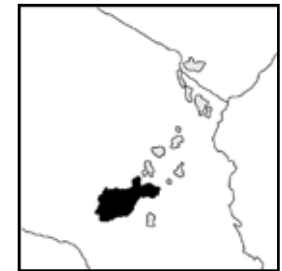
HISTORIA ASILIA: Spishi inazaliana kwenye madimbwi ya muda nyikani.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa na ya Nyanda za Kusini

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Maili 10 magharibi mwa Njombe, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: > 1800 m

HALI YA UHIFADHI: Spishi inaweza kuathiriwa



Hyperolius mitchelli (Loveridge, 1953)

Mitchell's Reed Frog



E. Harper

SVL: ♂ 23 – 27 mm; ♀ 25 – 32 mm

DESCRIPTION: The dorsum is orange to brown, often with small dark spots especially in young individuals. Light canthal and dorsolateral stripes are always present and are usually outlined in black, and in some cases yellow as well. The dorsolateral stripes extend midway down the dorsum and in some individuals reach the groin. A light spot is present on each heel. The ventral surface of males may be yellow or orange, but in females is typically orange. Males have a yellow gular flap.

SIMILAR SPECIES: *H. mitchelli* can be distinguished from *H. puncticulatus* by the light spots on the heels.

HABITAT: Dry and moist forest, also found in degraded habitat including gardens and low-intensity agricultural land.

NATURAL HISTORY: Clutches of 50 – 100 eggs are laid on vegetation over water. Tadpoles hatch after five or six days.

CALL: Males call from vegetation over streams or ponds. Schiøtz (1999) describes the call as “an irregular series of screams.”

DISTRIBUTION IN THE EACF: Eastern Tanzania including the foothills of the Udzungwa, Ulunguru, Malundwe, Mahenge, Nguu, Nguru and Usambara Mountains

TYPE LOCALITY: Mtimbuka, Lake Nyasa, Malawi

ELEVATIONAL RANGE: up to 1200 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 23 – 27 mm; ♀ 25 – 32 mm

MAELEZO: Sehemu ya juu ni njano hadi kahawia na mara nyingi kuna madoa madogo meusi kwenye vyura wadogo. Mistari ya mgongoni na pembeni ipo wakati wote na mara nyingi inazungukwa na rangi nyeusi na wakati mwingine rangi ya njano. Kwenye baadhi ya vyura, mistari ya mgongoni na pembeni inapita kwenye nusu ya sehemu ya juu hadi kwenye kinena. Kuna doa dogo lenye rangi iliyofifia kwenye wayo. Sehemu ya chini ya madume ni njano au rangi ya machungwa lakini kwenye majike ni ya machungwa tu. Madume yana kipande cha ngozi njano chini ya koo.

SPISHI INAZOFANANA NAZO: Madoa yenye rangi iliyofifia kwenye visingo *H. mitchelli* na *H. puncticulatus*.

MAZINGIRA: Misitu kame na yenye mvua, mazingira yaliyoharibiwa, bustani na maeneo ya kilimo yasiyolimwa sana.

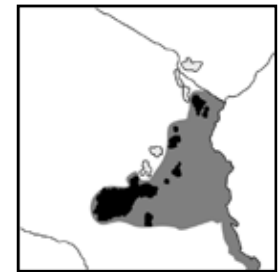
HISTORIA ASILIA: Makundi yenye mayai 50 - 100 yanatagwa kwenye uoto juu ya maji. Viluwiluwi vinatolewa baada ya siku tano au sita.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Tanzania Mashariki pamoja na milima midogo ya Milima ya Usambara Magharibi, Usambara Mashariki, Nguu, Nguru, Mahenge, Uluguru, Malundwe, Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mtimbuka, Ziwa Nyasa, Malawi

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1200 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius parkeri (Loveridge, 1933)

Parker's Reed Frog, Brown-or-green Sedge Frog



E. Harper

SVL: 21 – 28 mm

DESCRIPTION: A small *Hyperolius* with an elongate body and pointed snout. Unlike other *Hyperolius spp.*, the males are larger than the females. Dorsal color may be brown or green in males while females are green. Both have distinct light dorsolateral bands outlined with small dark spots. Toes are extensively webbed. Males in breeding condition have small black spines on the undersides of the legs.

SIMILAR SPECIES: Not easily confused with other species.

HABITAT: Coastal savannas, humid woodlands and degraded forest

NATURAL HISTORY: Clutches of 36 – 110 unpigmented eggs are attached to vegetation in marshes above the water's surface. The tadpoles are unknown.

CALL: Males call from concealed positions on vegetation over streams or ponds and call without elevating the head. Schiøtz (1999) describes the call as "a high-pitched trill" approximately 1.5 seconds in duration.

DISTRIBUTION IN THE EACF: Coastal areas of Kenya and Tanzania inland to the Kilombero flood plain, also found on the island of Zanzibar

TYPE LOCALITY: Mogoni swamp, south of Dar es Salaam, Usaramo, Tanzania

ELEVATIONAL RANGE: < 1000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: 21 – 28 mm

MAELEZO: *Hyperolius* huyu ni mdogo, ana mwili mrefu na pua iliyochongoka. Tofauti na *Hyperolius spp.* wengine, madume ni makubwa kuliko majike. Sehemu ya juu ya madume ni kahawia au kijani wakati ya majike ni kijani. Madume na majike yana mistari iliyofifia mgongoni na pembeni, iliyozungukwa na madoa madogo meusi. Vidole vya mguuni vina utando mwingi. Madume yanapokuwa kwenye msimu wa kupandana yana miiba midogo mieusi sehemu ya chini ya miguu.

SPISHI INAZOFANANA NAZO: Siyo rahisi kuichanganya na spishi zingine

MAZINGIRA: Savana ya pwani, miombo yenye unyevu na misitu iliyoharibiwa

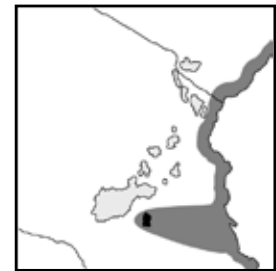
HISTORIA ASILIA: Makundi ya mayai 36 - 110 yasiyokuwa na rangi yanagandishwa kwenye uoto juu ya maji, maeneo ya vinamasi. Hakuna taarifa za viluwilwi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Pwani ya Kenya na Tanzania hadi bara kwenye Bonde la Kilombero, na kisiwa cha Zanzibar.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kinamasi cha Mogoni, kusini mwa Dar es Salaam, Uzaramo, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1000 m

HALI YA UHIFDHI: Haiko hatarini



Hyperolius pictus (Ahl, 1931)

Variable Reed Frog, Ahl's Painted Reed Frog, Variable Montane Sedge Frog



M. Menegon

SVL: ♂ & ♀ 23 – 31 mm

DESCRIPTION: A medium-sized *Hyperolius* with short legs and variable dorsal patterns. Individuals may be brown with cream or green canthal, dorsolateral and middorsal stripes. Green spots may be present on the arms and legs. Some individuals may be green without brown markings. The ventral surface and insides of the legs are yellow. Juveniles are typically brown with three green dorsal stripes. There is a small amount of webbing on the fingers. Toes are approximately ½ webbed.

SIMILAR SPECIES: Some individuals have color patterns similar to morphs of *H. minutissimus*.

HABITAT: High elevation grasslands. Tolerates a moderate degree of habitat modification and can be found in some agricultural areas.

NATURAL HISTORY: Breeds in streams and permanent and temporary pools. Females lay groups of 60 – 90 eggs on vegetation above water.

CALL: Schiøtz (1999) describes the call as “alternating slow and fast unmelodic creaks, uttered with rather long intervals.”

DISTRIBUTION IN THE EACF: Udzungwa Mountains, Southern Highlands, and Ufipa Plateau. Records from the East Usambaras and Kilombero Valley are unconfirmed.

TYPE LOCALITY: “Krater des Ngori-See’s” Tanzania

ELEVATIONAL RANGE: Approximately 1400 – 2000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ & ♀ 23 – 31 mm

MAELEZO: Chura huyu ni *Hyperolius* mwenye saizi ya kati, miguu mifupi na mpangilio wa sehemu ya juu unaotofautiana. Baadhi ya vyura ni kahawia na wana mistari kati ya pua na macho, mgongoni na pembeni na katikati ya sehemu ya juu, yenye rangi ya malai au kijani. Wakati mwingine panakuwa na madoa ya kijani mikononi na miguuni. Baadhi ya vyura wanaweza kuwa kijani bila alama za kahawia. Sehemu ya chini na chini ya miguu ni manjano. Vyura wadogo ni kahawia na wana mistari mitatu ya kijani sehemu ya juu. Kuna utando kidogo kwenye vidole vya mikononi. Vidole vya miguuni vina utando kwenye ½ ya sehemu.

SPISHI INAZOFANANA NAZO: Baadhi ya vyura wana mpangilio wa rangi unaofanana na vyura wa *H. minutissimus* katika hatua mbalimbali.

MAZINGIRA: Nyika za miinuko ya juu. Inavumilia mabadiliko kiasi ya mazingira na inapatikana pia kwenye maeneo ya kilimo.

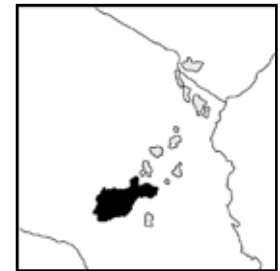
HISTORIA ASILIA: Inazaliana kwenye vijito na mabwawa ya muda na ya kudumu. Majike yanataga makundi ya mayai 60-90 kwenye uoto juu ya maji.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa, Nyanda za Kusini na Uwanda wa Ufipa. Aidha, kuna taarifa ambazo hazijathibitishwa za spishi kupatikana Usambara Mashariki na Bonde la Kilombero.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: “Krater des Ngori-See’s” Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: takribani 1400 – 2000 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius pseudargus (Schiztz & Westergaard, 1999)
Mette's Reed Frog



M. Menegon

SVL: ♂ 32 – 35 mm

DESCRIPTION: A green *Hyperolius* with narrow yellow canthal and dorsolateral stripes, although stripes may be less distinct in some individuals than others. Most individuals have small yellow dots on the dorsum. The upper eyelid is yellow or slightly reddish. The ventral surface is yellow. Toes and fingers are yellow-green and have a small amount of webbing at the base. The throat of males is yellow-green, but the vocal sac appears blue when males are calling.

SIMILAR SPECIES: Similar coloration to

male *H. argus*, but *H. pseudargus* has less extensive webbing on the toes.

HABITAT: High elevation grasslands and degraded habitats including open farmland, pastures, gardens and former forest.

NATURAL HISTORY: Breed in permanent and temporary marshes, pools and ponds. Males call while perched on emergent and floating vegetation.

CALL: Schiztz (1999) describes the call as “a fast series of very loud, harsh clicks in a somewhat accelerating rhythm, about 10 per second and decelerating towards the end.”

DISTRIBUTION IN THE EACF: Udzungwa Mountains and Njombe in the Southern Highlands

TYPE LOCALITY: Udzungwa Mountains, Tanzania

ELEVATIONAL RANGE: 1500 – 1850 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 32 – 35 mm

MAELEZO: *Hyperolius* huyu ana mistari miembamba na kijani kati ya pua na macho, mgongoni na pembeni, ingawa mistari huenda haionekani sana katika baadhi ya vyura. Idadi kubwa ya vyura wana madoa madogo ya njano kwenye sehemu ya juu. Kigubiko cha jicho la juu ni njano au chekundu kidogo. Sehemu ya chini ni njano. Vidole vya miguuni na mikononi ni njano kijani na vina utando kidogo mwanzoni. Koo la majike ni njano kijani lakini kifuko cha sauti kinaonekana bluu madume yanapoita.

SPISHI INAZOFANANA NAZO: Madume yana rangi inayofanana na ya *H. argus*, lakini *H. pseudargus* hana utando mwingi kwenye vidole vya miguuni.

MAZINGIRA: Nyika kwenye miinuko ya juu na mazingira yaliyoharibiwa, pamoja na maeneo ya kilimo, malisho ya wanyama, bustani na mahali palipokuwa na misitu awali.

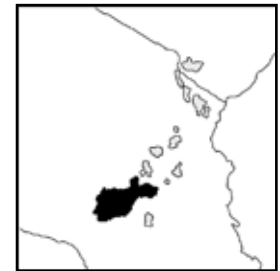
HISTORIA ASILIA: Inazaliana kwenye vinamasi vya muda na vya kudumu na madimbwi. Madume yanaita yakiwa kwenye uoto ulio juu ya maji au unaoelea.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa na Njombe, Nyanda za juu za Kusini

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima ya Udzungwa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1500 – 1850 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius puncticulatus (Pfeffer, 1893)
Spotted Reed Frog



E. Harper

SVL: ♂ 21 – 29 mm; ♀ 30– 37 mm

DESCRIPTION: Color pattern is highly variable. The dorsum is typically orange with light canthal and dorsolateral stripes that are often outlined in black. The dorsolateral stripes extend almost to the vent in some individuals, and continue as a series of spots in others. One or two spots may also be present along the middle of the dorsum. An alternate morph consists of orange individuals with black reticulations, although this pattern is less common. In a third morph, the dorsum is covered in yellow spots

outlined in black, with very little orange showing through. The throat of males is orange and the ventral surface is yellow. Males have a yellow gular flap.

SIMILAR SPECIES: *H. puncticulatus* is similar to *H. mitchelli* in size and coloration, but lacks the light spots on the heels. Pickersgill (2007) considers this species to be *H. substriatus*.

HABITAT: Dry and moist forest, savanna and shrubland. Tolerates some degree of habitat alteration.

NATURAL HISTORY: Males call while perched on emergent vegetation in permanent and temporary pools. Females attach masses of pigmented eggs to vegetation above water. Clutch size has not been recorded, and the tadpoles have not been described.

CALL: The call is a series of short high-pitched clicks.

DISTRIBUTION IN THE EACF: Eastern Tanzania

TYPE LOCALITY: “Magrotto bei Tanga,” East Usambaras, Tanzania

ELEVATIONAL RANGE: 0 - 2000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 21 – 29 mm; ♀ 30 – 37 mm

MAELEZO: Sehemu ya juu ina rangi ya machungwa na mistari iliyofifia kati ya pua na macho, mgongoni na pembeni ambayo ni mieusi mara nyingi. Mistari ya mgongoni na pembeni inafika karibu na tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi katika baadhi ya vyura na baada ya hapo kuna madoa. Inawezekana kukawa na doa moja au mawili katikati ya mgongo kwenye vyura wengine. Kuna mpangilio mwingine wa rangi; baadhi ya vyura ni njano na wana wavu mweusi lakini mpangilio huu haupo sana. Koo la madume lina rangi ya machungwa na sehemu ya chini ni njano. Madume yana kipande cha ngozi chini ya koo.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana na *H. mitchelli* kwa saizi na rangi, lakini haina madoa kwenye kisigino. Maoni ya Pickersgill (2007) ni kwamba spishi hii ni *H. substriatus*.

MAZINGIRA: Misitua kame na yenye mvua, savana, maeneo ya vichaka. Inavumilia mazingira yaliyobadilika kiasi.

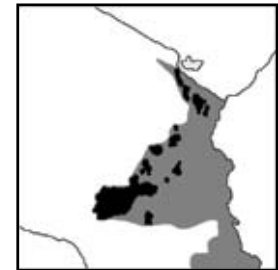
HISTORIA ASILIA: Madume yanaita yanapokuwa kwenye uoto uliopo juu ya maji kwenye madimbwi ya muda na ya kudumu. Majike yanataga na kugandisha mayai yenye rangi kwenye uoto juu ya maji. Hakuna taarifa juu ya ukubwa wa makundi ya mayai na hakuna maelezo juu ya viluwiluwi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Mashariki Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: “Magrotto bei Tanga,” Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 0 - 2000 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius pusillus (Cope, 1862)

Translucent Tree Frog, Water Lily Reed Frog



R. Drewes

SVL: ♂ & ♀ < 25 mm

DESCRIPTION: A small translucent *Hyperolius* with variable dorsal patterns. The dorsum is typically green, but may also appear clear or yellowish. There are dark canthal stripes and often dark dots on the dorsum. Many individuals have light dorsolateral stripes. The tibia is approximately ½ SVL. Fingers are webbed at the base and the toes are extensively webbed. Toes and fingers can be yellow, orange or green. The ventrum has a transparent patch through which the internal organs are visible.

SIMILAR SPECIES: Not easily confused with other species.

HABITAT: It is common and abundant in swampy areas with vegetation in savannas, shrubland, and grassland habitat.

NATURAL HISTORY: Males call while perched on floating vegetation. Breeding takes place in a wide range of aquatic habitat types.

CALL: Schiøtz (1999) describes the call as “a fast series of high-pitched screams.”

TYPE LOCALITY: KwaZulu-Natal, Republic of South Africa

DISTRIBUTION IN THE EACF: Coastal Kenya and Tanzania, including Mafia and Songo Songo islands.

ELEVATIONAL RANGE: < 800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ & ♀ < 25 mm

MAELEZO: *Hyperolius* huyu ni mdogo, angavu na ana mpangilio unaotofautiana sehemu ya juu. Kwa kawaida, sehemu ya juu ni kijani lakini inaweza pia kuwa njano. Aidha, kuna mistari kati ya pua na macho na madoa meusi sehemu ya juu. Vyura wengi wana mistari mgongoni na pembeni. Miguu ni takribani ½ ya SVL. Vidole vya mikononi vina utando mwanzoni na vidole vya miguuni vina utando mwingi. Vidole vya miguuni na mikononi vinaweza kuwa njano, rangi ya machungwa au kijani. Sehemu ya chini ina doa angavu linaloweza kuona ogani za ndani.

SPISHI INAZOFANANA NAZO: Sio rahisi kuchanganya spishi hii na zingine.

MAZINGIRA: Inapatikana kwa wingi kwenye vinamasi vyenye uoto, kwenye savanna, maeneo ya vichaka na nyika.

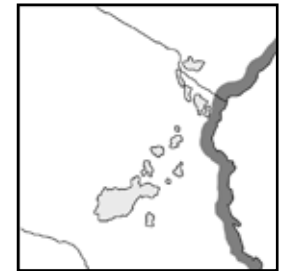
HISTORIA ASILIA: Madume yanaita yanapokuwa kwenye uoto unaoelea. Spishi inazaliana kwenye aina nyingi za mazingira yenye maji

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: KwaZulu-Natal, Jamhuri ya Afrika ya Kusini

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Pwani ya Kenya na Tanzania, pamoja na visiwa vya Mafia na Songo Songo.

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 800 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius reesi (Schlötter, 1982)

Magombero Reed Frog



A. Schlötter

SVL: ♂ 22 mm; ♀ 26 mm

DESCRIPTION: A medium-sized *Hyperolius* with long legs and large dark eyes. The dorsum is yellow-brown to pale green. On the sides are distinct dark and light vertical stripes. In a few individuals the lighter stripes are more variable and may appear as dots or be completely absent. The nostrils are typically outlined in black. The ventral surface is white. Toes are pinkish or yellow and are partially webbed. There are small dark dots on the hands and feet. The throat is yellow in males and white in females.

SIMILAR SPECIES: Part of the *Hyperolius viridiflavus* complex. Similar to *H. mariae*, but the vertical stripes on the sides are distinctive.

HABITAT: Found in a wide variety of habitat types including forest, grasslands, shrubland and savanna.

NATURAL HISTORY: Breeding takes place in nearly any type of aquatic habitat that has emergent vegetation including lakes, ponds, streams and swamps.

CALL: Schlötter (1982) described the call as “a fast series of clicks”

TYPE LOCALITY: Magombero Forest, Kilombero-Rufiji area, Tanzania

DISTRIBUTION IN THE EACF: Udzungwa Mountains and Kilombero floodplains

TYPE LOCALITY: Kilombero-Rufiji region, Tanzania

ELEVATIONAL RANGE: 200 – 900 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 22 mm; ♀ 26 mm

MAELEZO: *Hyperolius* huyu ana saizi ya kati, miguu mirefu na macho makubwa meusi. Sehemu ya juu ni njano kahawia hadi kijani kilichofifia. Pembeni kuna mistari wima mieusi inayoonekana. Vyura wachache wana mistari iliyofifia na inayotofautiana na wakati mwingine inaonekana kama madoa au inakuwa haipo kabisa. Mashimo ya pua yamezungushiwa rangi nyeusi pembeni. Vidole vya miguuni ni rangi ya waridi au njano na vina utando kiasi. Kuna madoa madogo meusi kwenye mikono na miguu. Koo la madume ni njano na la majike ni jeupe.

SPISHI INAZOFANANA NAZO: Spishi hii ni sehemu ya mchanganyiko wa spishi wa *Hyperolius vidiflavus*. Inafanana na *H. mariae* lakini ina mistari wima pembeni.

MAZINGIRA: Inapatikana kwenye aina mbalimbali za mazingira pamoja na misitu, nyika, vichaka na savana.

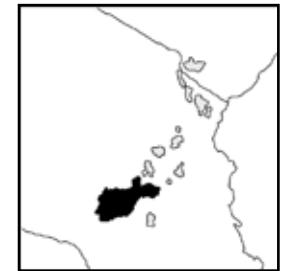
HISTORIA ASILIA: Inazaliana karibu kwenye kila aina ya mazingira ya maji ambayo yana uoto uliopo juu ya maji; mazingira haya ni maziwa, madimbwi, vijito na vinamasi.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Misitu ya Magomero, eneo la Kilombero-Rufiji, Tanzania

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa na Bonde la Kilombero.

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 200 - 900 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius rubrovermiculatus (Schjøtz, 1975)

Shimba Red-Vermiculated Reed Frog



E. Harper

SVL: ♂ 24 – 30 mm; ♀ 28 – 32 mm

DESCRIPTION: All individuals have light canthal and dorsolateral stripes and a light spot on each heel. In some individuals the dorsum is very dark with red spots while in others the dorsum is lighter with faint markings. The throat and ventral surfaces are yellow-orange and the feet are reddish.

SIMILAR SPECIES: *H. rubrovermiculatus* is possibly a subspecies of *H. mitchelli*. Their distributions do not overlap.

HABITAT: Coastal forests and formerly forested areas of Kenya

NATURAL HISTORY: See account for *H. mitchelli*

CALL: Schjøtz (1999) describes the call as “a series of brief screams”

DISTRIBUTION IN THE EACF: Known only from the Shimba Hills in Kenya

TYPE LOCALITY: Shimba Hills, Kenya

ELEVATIONAL RANGE: 140 – 350 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ 24 – 30 mm; ♀ 28 – 32 mm

MAELEZO: Vyura wote wana mistari iliyofifia kati ya pua na macho, mgongoni na pembeni na doa lililofifia kwenye kila wayo. Kwenye baadhi ya vyura, sehemu ya juu ni nyeusi sana na ina madoa mekundu; sehemu ya juu ya vyura wengine ina rangi na alama zilizofifia. Koo na sehemu ya chini ni njano-rangi ya machungwa na nyayo ni nyekundu nyekundu.

SPISHI INAZOFANANA NAZO: Inawezekana *H. rubrovermiculatus* ni spishi ndogo ya *H. mitchelli*. Spishi hizi mbili zinapatikana maeneo tofauti.

MAZINGIRA: Misitua ya Pwani na mahali palipokuwa na misitua awali.

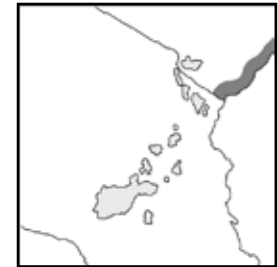
HISTORIA ASILIA: Rejea taarifa za *H. mitchelli*.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Shimba tu, Kenya.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima vya Shimba, Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 140 – 350 m

HALI YA UHIFADHI: Iko hatarini



Hyperolius spinigularis (Stevens, 1971)

Spiny-throated Reed Frog, Spiny Reed Frog, Mulanje Reed Frog



J. Vonesh

SVL: ♂ 24 < mm; ♀ < 28 mm

DESCRIPTION: A small *Hyperolius*. The dorsum is a translucent green or brown with pale canthal and dorsolateral stripes. In some individuals the entire area of the snout in front of the eyes may be white. Both males and females have small spines on the dorsum. In males the throat and undersides of the legs are covered with conspicuous black spines.

SIMILAR SPECIES: *H. spinigularis* is very similar in appearance to *H. tanneri*. The black spines on the throat of the males distinguish this species from others in the genus.

HABITAT: Wet areas of forest and agricultural land

NATURAL HISTORY: Clutches of unpigmented eggs are attached to vegetation over water. Females often return to egg masses on subsequent nights to deposit additional water, preventing the eggs from drying out. Tadpoles hatch and drop into the water after five days.

CALL: The call of *H. spinigularis* has not been recorded in the field; however captive individuals emit a quiet, high-pitched rasping call. It is unclear whether this is a territorial or mating call.

DISTRIBUTION IN THE EACF: Usambara, Uluguru, and Nguru Mountains and the Ruvu South Forest Reserve in the coastal lowlands of Tanzania

TYPE LOCALITY: Chisambo Tea Estate, Mulanje, Malawi

ELEVATIONAL RANGE: < 2000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 24 < mm; ♀ < 28 mm

MAELEZO: *Hyperolius* huyu ni mdogo. Sehemu ya juu ni kijani angavu au kahawia yenye mistari iliyofifia kati ya pua na macho, mgongoni na pembeni. Kwenye baadhi ya vyura, eneo lote la pua mbele ya jicho linaweza kuwa jeupe. Madume na majike yana miiba midogo sehemu ya juu. Kwenye madume, koo na sehemu ya chini ya miguu ina miiba mieusi inayojitokeza sana.

SPISHI INAZOFANANA NAZO: *H. spinigularis* inafanana sana na *H. tanneri*. Mistari mieusi ya koo la madume inatofautisha spishi hii na zingine kwenye jenasi.

MAZINGIRA: Maeneo ya msituni yenye unyevu na ya kilimo.

HISTORIA ASILIA: Makundi ya mayai yasiyokuwa na rangi yanagandishwa kwenye uoto juu ya maji. Mara nyingi, majike yanarudi kwenye mayai usiku kuyawekea maji zaidi ili yasikauke. Viluwilwi vinatolewa na kuanguka majini baada ya siku tano.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara, Uluguru, na Nguru na Hifadhi ya Misitua ya Ruvu Kusini kwenye maeneo tambarare ya pwani, Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mulanje, Malawi

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 2000 m

HALI YA UHIFADHI: Haiko hatarini



Hyperolius tanneri (Schjøtz, 1982)

Synonymous with *Hyperolius tannerorum* (Schjøtz, 1999)

Tanner's Reed Frog



E. Harper

SVL: ♂ 20 – 23 mm; ♀ 29 – 34 mm

DESCRIPTION: The dorsum is green with light canthal and dorsolateral stripes. Fingers and toes are yellow. The throat and ventral surface are blue-green.

SIMILAR SPECIES: *H. tanneri* is very similar in appearance to *H. spinigularis*, but *H. tanneri* lacks black spines on the throat and ventrum.

HABITAT: Undisturbed montane forest

NATURAL HISTORY: Breed in forest swamps. Eggs are unpigmented.

CALL: May not have an advertisement call.

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: Mazumbai Forest Reserve, West Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 1410 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ 20 – 23 mm; ♀ 29 – 34 mm

MAELEZO: Sehemu ya juu ni kijani yenye mistari iliyofikia kati ya pua na macho, mgongoni na pembeni. Vidole vya mikononi na miguuni ni njano. Koo na sehemu ya chini ni bluu kijani.

SPISHI INAZOFANANA NAZO: *H. tanneri* inafanana sana na *H. spinigularis*, lakini haina mistari mieusi kwenye koo na sehemu ya chini.

MAZINGIRA: Misitu iliyopo zaidi ya 1200 m kutoka usawa wa bahari ambayo haijaguswa.

HISTORIA ASILIA: Inazaliana msituni kwenye vinamasi. Mayai hayana rangi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Imepatikana tu mahali kielelezo kilipopewa jina kwa mara ya kwanza

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Mazumbai, Milima ya Usambara Magharibi, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1410 m

HALI YA UHIFADHI: Iko hatarini



Hyperolius tuberlinguis (Smith, 1849)

Green Reed Frog, Tinker Reed Frog, Straw-or-green Sedge Frog,
Yellow-green Reed Frog, Smith's Reed Frog



R. Drewes

SVL: ♂ 25 – 33 mm; ♀ 30 – 40 mm

DESCRIPTION: A large *Hyperolius* with a broad head and a sharply pointed snout. Most individuals are solid yellow, tan or near translucent green, but some may be marked with a faint hourglass figure on the dorsum or a light triangle between the eyes. The throat is bright yellow in males and pale yellow in females. The insides of the legs are red.

SIMILAR SPECIES: Similar in appearance to *H. glandicolor* morphs that lack dorsal markings, but *H. tuberlinguis* has yellow rather than pink or red disks on the toes and fingers.

HABITAT: Abundant in coastal lowland savanna and grassland. Tolerates some degree of habitat modification and can be found in parks and agricultural areas.

NATURAL HISTORY: Males call from emergent vegetation around a wide variety of aquatic habitat types. Clutches of 240 – 400 unpigmented eggs are attached to vegetation over water. Tadpoles are brown with bright specks and the undersides are light in color. Tadpoles reach 45 mm in length. Mouthparts are small and not heavily keratinized.

CALL: Males call from vegetation near water. Schiøtz (1999) describes the call as “a series of slow, coarse creaks, sometimes two in rapid succession.”

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc Mountains and coastal forests in Tanzania and Kenya.

TYPE LOCALITY: South Africa

ELEVATIONAL RANGE: < 1000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 25 – 33 mm; ♀ 30 – 40 mm

MAELEZO: *Hyperolius* huyu ni mkubwa na ana kichwa kipana na pua iliyochongoka sana. Vyura wengi ni njano au kijani angavu lakini baadhi yao wanaweza kuwa na umbo la “V” mbili zinazogusana moja ikiwa chini juu, kwenye sehemu ya juu au pembetatu iliyofifia kati ya macho. Koo la madume lina rangi ya njano angavu na kwa majike, njano iliyofifia. Sehemu ya ndani ya miguu ni nyekundu.

SPISHI INAZOFANANA NAZO: Inafanana na vyura wa *H. glandicolor* wakiwa kwenye hatua mbalimbali ambao hawana alama zozote sehemu ya juu. Lakini *Hyperolius tuberlinguis* ina ncha za vidole miguuni na mikononi zilizo njano na siyo rangi ya waridi

MAZINGIRA: Inapatikana kwa wingi kwenye maeneo ya savana na nyika tambarare ya pwani. Inavumilia mazingira yaliyobadilika kiasi na inapatikana kwenye hifadhi za taifa na maeneo ya kilimo.

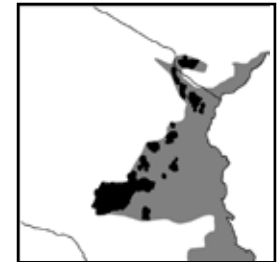
HISTORIA ASILIA: Madume yanaita yakiwa kwenye uoto uliojitokeza juu ya maji kwenye mazingira ya aina nyingi ya maji. Makundi ya mayai 240 - 400 yasiyokuwa na rangi yanagandishwa kwenye uoto juu ya maji. Viluwiluwu ni kahawia na vina madoa madogo madogo yanayong'aa na sehemu ya chini yana rangi iliyofifia; vinafikia urefu wa 45 mm. Sehemu za mdomo ni ndogo na hazina umbile maalum kwa ajili ya kula

ENEO SPISHI INAPATIKANA KWENYE MTMMP: Maeneo yote ya MTMMP ya Tanzania na Kenya.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Afrika ya Kusini

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:
< 1000 m

HALI YA UHIFADHI: Haiko hatarini



Kassina maculata (Duméril, 1853)

Vlei frog, Red-legged Kassina, Red-legged Pan frog, Spotted Running Frog



J. Vonesh

SVL: ♂ 55 mm; ♀ 65 mm

DESCRIPTION: A large, primarily aquatic frog with a gray dorsum covered in large dark spots outlined in white. The groin and inner parts of the thigh are bright red. The ventral surface is light often with dark mottling. Toe and finger tips are expanded into rounded disks. In females the area around the vent is covered with spines.

SIMILAR SPECIES: *K. maculata* is similar to *K. senegalensis*, but has distinctive bright red-orange markings on the thigh.

HABITAT: Common in savanna, grassland, and shrubland in coastal lowlands. Tolerates some degree of habitat alteration and may be found in agricultural areas.

NATURAL HISTORY: Breeding takes place in a wide range of temporary and permanent bodies of water. Egg masses are attached to submerged vegetation. Tadpoles reach 130 mm in length and have heavy beaks and high fins. The larval period can last as 10 months. The skin of *K. maculata* contains a variety of toxins to deter mammalian predators.

CALL: Males call while floating in the water, often propped on aquatic vegetation. The call is a single rising note repeated at irregular intervals.

DISTRIBUTION IN THE EACF: Coastal areas of Kenya and Tanzania

TYPE LOCALITY: Zanzibar Island, Tanzania

ELEVATIONAL RANGE: < 1400 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 55 mm; ♀ 65 mm

MAELEZO: Chura huyu ni mkubwa sana na anaishi majini muda mwingi; sehemu ya juu ni kijivu yenye madoa makubwa meusi yaliyozungushiwa rangi nyeupe. Kinena na sehemu ya ndani ya mapaja ni nyekundu inayong'aa. Sehemu ya chini ina rangi iliyofifia na ina madoa meusi mara nyingi. Ncha za vidole vya miguuni na mikononi ni pana na mviringo. Kwenye majike, kuna miiba kwenye eneo linalozunguka tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi.

SPISHI INAZOFANANA NAZO: *K. maculata* inafanana na *K. senegalensis* lakini ina alama nyekundu njano inayong'aa kwenye mapaja

MAZINGIRA: Inapatikana kwa wingi kwenye savana, nyika na vichakani kwenye maeneo tambarare ya pwani. Inavumilia mazingira yaliyobadilika kiasi na inapatikana pia kwenye maeneo ya kilimo.

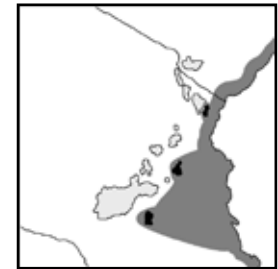
HISTORIA ASILIA : Inazaliana kwenye aina mbalimbali za maji ya kudumu au ya muda. Mayai yanagandishwa kwenye uoto ulio chini ya maji. Viluwiluwi vinafikia urefu wa 130 mm na vina midomo mizito na pezi za juu. Mabadiliko hadi kufikia chura mchanga yanaweza kuchukua miezi 10. Ngozi ya *K. maculata* ina aina mbalimbali za sumu ili kujilinda dhidi ya mamalia wanaowawinda.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Pwani ya Kenya na Tanzania.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kisiwa cha Zanzibar, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1400 m

HALI YA UHIFADHI: Haiko hatarini



Kassina senegalensis (Duméril and Bibron, 1841)

Senegal Running Frog, Running Frog, Senegal Land Frog,
Bubbling Kassina



R. Drewes

SVL: ♂ 33 – 40 mm; ♀ 33 – 40 mm

DESCRIPTION: The dorsum is pale gray with large dark spots and a broad, dark vertebral stripe. Toe and fingertips are expanded into small disks.

SIMILAR SPECIES: *K. senegalensis* lacks the bright red-orange markings that are present on the thigh of *K. maculata*. *K. senegalensis* may be composed of multiple cryptic species.

HABITAT: Found in a wide range of habitat types including savannas, shrubland, and grassland. Also tolerates degraded habitats.

NATURAL HISTORY: Breeding takes place in a range of temporary and aquatic habitat types, primarily pools with abundant vegetation. Clutches of 260 – 400 eggs are attached to submerged vegetation. Tadpoles are large with high tail fins.

CALL: Males call in groups of 3-10 from concealed positions in vegetation near, but not usually in, water. The call is a series of rising notes sounding like bubbles.

DISTRIBUTION IN THE EACF: Coastal and southern Kenya and throughout Tanzania

TYPE LOCALITY: Senegal

ELEVATIONAL RANGE: < 2000 m

UREFU WA MWILI: ♂ 33 – 40 mm; ♀ 33 – 40 mm

MAELEZO: Sehemu ya juu ni kijivu iliyofifia, ina madoa makubwa meusi na mstari mmoja mpana mgongoni.

SPISHI INAZOFANANA NAZO: *K. senegalensis* haina alama nyekundu njano inayong'aa kama kwenye mapaja ya *K. maculate*. Inawezekana *K. senegalensis* inajumuisha spishi zingine ambazo bado hazjaainishwa.

MAZINGIRA: Inapatikana kwenye aina nyingi za mazingira pamoja na savana, vichaka na nyika. Inavumilia mazingira yaliyoharibiwa.

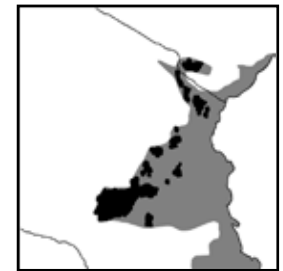
HISTORIA ASILIA; Inazaliana kwenye mazingira ya aina nyingi ya maji ya muda au ya kudumu, hususan kwenye madimbwi yenye uoto mwingi. Makundi ya mayai 260 - 400 yanagandishwa kwenye uoto uliopo chini ya maji. Viluwiluwi ni vikubwa na vina pezi zilizoinuka juu.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Pwani ya Kenya, Kusini mwa Kenya na mahali pote Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Senegal

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 2000 m

HALI YA UHIFADHI: Haiko hatarini



Phlyctimantis keithae (Schizøtz, 1975)

Keith's Striped Frog, Keith's Wot-wot



SVL: 39 – 43 mm

DESCRIPTION: The dorsum is black and covered with small white-tipped warts. Arms and legs are banded black and gray. The tympanum is small but distinctly visible. The ventral surface has blue and black mottling. Toes are expanded and end in small disks. Toes have a small amount of webbing. The base of the arms and the inner parts of the legs are bright red-orange and black.

SIMILAR SPECIES: Most similar to the *Kassina spp.* but easily distinguished by its white-tipped warts.

HABITAT: Found in forest, grassland and agricultural areas near forest.

NATURAL HISTORY: Forest dependent, but uses open areas for breeding. Males call from emergent vegetation around pools and ponds.

CALL: Channing and Howell (2006) describe the call as sounding like “wot-wot...pulsed....with a duration of 0.15 seconds...There are 8 pulses in a typical call.”

DISTRIBUTION IN THE EACF: Udzungwa Mountains

TYPE LOCALITY: Dabaga Forest, Udzungwa Mountains, Tanzania

ELEVATIONAL RANGE: 1800 – 2000 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: 39 – 43 mm

MAELEZO: Sehemu ya juu ni nyeusi na ina chunjua ndogo zenye ncha nyeupe. Mikono na miguu ina mistari mieusi na kijivu. Kiwambo cha sikio ni kidogo lakini kinaonekana. Sehemu ya chini ina madoa meusi. Vidole vya miguuni ni vipana na vina ncha mviringo na ndogo. Vidole vya miguuni vina utando kidogo. Mwanzo wa mikono na sehemu za ndani za miguu ni nyekundu machungwa ya kung'aa na nyeusi.

SPISHI INAZOFANANA NAZO: Inafanana sana na *Kassina spp* lakini ina chunjua zenye ncha nyeupe

MAZINGIRA: Inapatikana kwenye misitu, nyika na maeneo ya kilimo karibu na misitu.

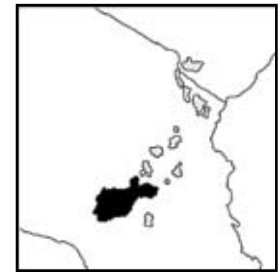
HISTORIA ASILIA: Inapenda sana misitu lakini inazaliana kwenye maeneo wazi. Madume yanaita kutoka kwenye uoto uliojitokeza juu ya maji karibu na madimbwi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Misititu ya Dabaga, Milima ya Udzungwa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1800 – 2000 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Microhylidae

Microhylids are geographically widespread, but several genera that occur in the Eastern Arc are found nowhere else in the world. *Parhoplophryne usambarica* is the only species in its genus and is known only from the East Usambara Mountains. *Hoplophryne rogersi* and *H. uluguruensis* are forest species that occur on only a few of the mountains in the Eastern Arc chain. *Spelaeophryne methneri* is a secretive burrowing frog endemic to Tanzania. *Phrynomantis bifasciatus*, in contrast, is a more widespread and disturbance tolerant species that is common throughout much of southern and central Africa. All five species of microhylids in the Eastern Arc are stout, burrowing frogs with short limbs and short snouts.

Microhylids zinapatikana maeneo mengi lakini spishi kadhaa zinazopatikana kwenye Tao la Mashariki hazipo mahali pengine popote duniani. *Parhoplophryne usambarica* ndiyo spishi pekee kwenye jenasi yake na inapatikana kwenye Milima ya Usambara Mashariki tu. Spishi za *Hoplophryne rogersi* na *H. uluguruensis* zinapatikana msituni na kwenye misitu michache tu ya milima ya Tao la Mashariki. Vyura wa spishi ya *Spelaeophryne methneri* wanajificha karibu wakati wote, wanachimba mashimo ardhini na wanapatikana Tanzania tu. Lakini spishi ya *Phrynomantis bifasciatus* inapatikana mahali pengi, inavumilia usumbufu na inapatikana sana karibu maeneo yote ya Afrika ya kati na kusini mwa Afrika. Spishi zote tano za microhylids zilizopo Tao la Mashariki ni nene, zinachimba mashimo ardhini, zina miguu na mikono mifupi na pua fupi.



Hoplophryne rogersi
J. Vonesh

Hoplophryne rogersi (Barbour and Loveridge, 1928)
Roger's Three-fingered Frog, Usambara Blue-bellied Frog



J. Vonesh

SVL: ♂ & ♀ 23 – 28 mm

DESCRIPTION: A small frog with a smooth dorsum that is dark gray with darker blotches. The short snout comes to a sharp point. A dark band extends from the tip of the snout, under the eye to the base of the arm. The ventral surface is dark with small white blotches. The tips of the fingers and toes are slightly expanded and truncated. Females have only three fingers, while in males the first finger (or 'thumb') is modified into a spiny projection that presumably aids in clasping the female during mating. Males in breeding condition have enlarged glands in the pectoral region and on the arms.

SIMILAR SPECIES: There are no known similar species within the geographic range of *H. rogersi*.

HABITAT: Lowland and montane forest

NATURAL HISTORY: Typically found only during the breeding season. Breeding takes place in water-filled tree holes or bamboo cups. A small number of unpigmented eggs are laid

on the vertical surface above the water. The pale tadpoles are slender with long tails. They possess a unique structure on the abdomen, a 'belly-finger,' which allows them to maneuver in small spaces.

CALL: Unknown

DISTRIBUTION IN THE EACF: Usambara, Magrotto and Nguru Mountains

TYPE LOCALITY: Mt. Bomoli, Amani, East Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 600 – 1200 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ & ♀ 23 – 28 mm

MAELEZO: Chura huyu ni mdogo na sehemu ya juu ni laini, kijivu iliyokolea na madoa yaliyokolea zaidi. Pua yake fupi ina ncha iliyochongoka. Kuna mstari mweusi kutoka ncha ya pua chini ya jicho hadi mwanzo wa mkono. Sehemu ya chini ni nyeusi na ina madoa madogo meupe. Ncha za vidole vya mkononi na miguuni ni pana kidogo na butu. Majike yana vidole vya mkononi vitatu tu; kidole cha tatu (kidole gumba) cha mkononi cha madume ni kama mwiba unaojichomoza, ambao unalisaidia dume kulikamata jike wakati wa kupandana. Wakati wa msimu wa kupandana, madume yanakuwa na tezi pana kifuani na mikononi.

SPISHI INAZOFANANA NAZO: Hakuna spishi zinazofanana nayo zinazojulikana kwenye maeneo inapatikana.

MAZINGIRA: Misitu ya maeneo tambarare na zaidi ya 1200 m kutoka usawa wa bahari.

HISTORIA ASILIA: Inapatikana wakati wa msimu wa kuzaliana. Inazaliana kwenye mashimo ya miti yaliyojaa maji au mashimo ya kwenye mashina ya mianzi. Idadi ndogo ya mayai yasiyokuwa na rangi yanatagwa kwenye upande ulio wima juu ya maji. Viluwiluwi wana rangi iliyofifia, ni wembamba na wana mikia mirefu. Wana umbo la pekee kwenye tumbo linalowawezesha kupita penye nafasi ndogo.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara, Magrotto na Nguru

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mlima Bomoli, Amani, Milima ya Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:
600 – 1200 m

HALI YA UHIFADHI: Ipo hatarini



Hoplophryne uluguruensis (Barbour & Loveridge, 1928)
Uluguru Three-fingered Frog, Uluguru Blue-bellied Frog



SVL: ♂ < 25 mm; ♀ < 21 mm

DESCRIPTION: A robust, flat frog with a small head. The dorsum is uniform dark brown to black and smooth. A fold of skin angles from the eye to the base of the arm. The first finger is reduced and in males has three spines. Toe tips are expanded. Toes lack webbing. The ventral surface is yellow-brown without markings. Males have short, fat arms and legs with light-colored spines on the legs.

SIMILAR SPECIES: This species is similar to *Hoplophryne rogersi*, but their distributions do not overlap.

HABITAT: Undisturbed montane forest

NATURAL HISTORY: Eggs are laid in water-filled tree holes, leaf axils, banana leaves or bamboo.

CALL: Unknown

DISTRIBUTION IN THE EACF: Uluguru and Udzungwa Mountains

TYPE LOCALITY: Mt. Mbova above Nyange, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: Unclear, but can be found above 1200 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ < 25 mm; ♀ < 21 mm

MAELEZO: Chura huyu ana nguvu, ni bapa na ana kichwa kidogo. Sehemu ya juu ni kahawia iliyokolea hadi nyeusi na laini. Kunjo la ngozi linatoka jichoni hadi mwanzoni mwa mkono. Kidole cha kwanza cha mkononi kimeingia ndani na kina miiba mitatu kwenye madume. Ncha za vidole vya mguuni ni vipana. Vidole vya mguuni havina utando. Sehemu ya chini ni njano kahawia na hakuna alama zozote. Madume yana miguu na mikono mifupi, minene na kuna miiba yenye rangi iliyofifia kwenye miguu.

SPISHI INAZOFANANA NAZO: Spishi hii inafanana na *Hoplophryne rogersi* lakini maeneo zinapopatikana spishi hizi mbili ni tofauti.

MAZINGIRA: Mimitu zaidi ya 1200 kutoka usawa wa bahari ambayo haijaguswa

HISTORIA ASILIA: Mayai yanatagwa kwenye mashimo ya miti yaliyojaa maji, kwenye sehemu iliyo kati ya kikonyo na shina la majani, majani ya ndizi au mianzi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Uluguru na Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mlima Mbova, Milima ya Uluguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: > 1200 m

HALI YA UHIFADHI: Inaweza kuathiriwa.



Parhoplophryne usambarica (Barbour & Loveridge, 1928)
Amani Forest Frog, Usambara Black-banded Frog



This species has not been seen since the 1920's and may be extinct

SVL: ♀ < 23 mm

DESCRIPTION: A small stout frog. The dorsum is gray-blue with a black stripe that runs from the snout to the eye, along the side and upper leg ending at the knee. The ventral surface is black with blue and white vermiculations. Toes lack webbing and toe tips are not expanded. The legs are barred. Males have blue glands on the arms and chest.

SIMILAR SPECIES: Similar to the *Hoplophryne* species, but in *Hoplophryne* the first finger is reduced and spines are present in males.

HABITAT: Leaf litter in submontane forest

NATURAL HISTORY: Unknown

CALL: Unknown

DISTRIBUTION IN THE EACF: Known only from the type locality

TYPE LOCALITY: West of Amani, Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 900 m

CONSERVATION STATUS: Critically endangered

Spishi hii haijaonekana tangu miaka ya 1920 na huenda imetoweka.

UREFU WA MWILI: ♀ < 23 mm

MAELEZO: Chura huyu ni mdogo na mnene. Sehemu ya juu ni kijivu bluu na kuna mstari mweusi kutoka puani hadi kwenye jicho, pembeni mwa mwili na kwenye sehemu ya juu ya mguu na kuishia kwenye goti. Sehemu ya chini ni nyeusi na ina mistari bluu na mieupe iliyopindapinda. Vidole vya miguuni havina utando na ncha za vidole hivyo siyo pana. Miguu ina mistari. Madume yana tezi za bluu mkononi na kifua.

SPISHI INAZOFANANA NAZO: Inafanana na *Hoplophryne* lakini kidole cha kwanza cha mikononi cha *Hoplophryne* ni butu na madume yake yana miiba.

MAZINGIRA: Msituni kwenye majani yalioanguka chini, kwenye maeneo yaliyopo takribani 1200 m kutoka usawa wa bahari

HISTORIA ASILIA: Haijulikani

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Mahali ambapo kielelezo kilipewa jina kwa mara ya kwanza

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Magharibi mwa Amani, Milima ya Usambara, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 900 m

HALI YA UHIFADHI: Iko hatarini sana



Phrynomantis bifasciatus (Smith, 1847)

Two-striped Frog, Red-banded Frog, Banded Rubber Frog



R. Drewes

SVL: ♂ < 53 mm; ♀ < 65 mm

DESCRIPTION: A large shiny black frog with two bright red-orange stripes running from the eyes to the groin. There is also a large red spot above the vent. The arms and legs are covered in red spots. The tympanum is visible in red spots. The tympanum is slightly smaller than the eye. Toe and finger tips are expanded and end in small truncate disks. The ventral surface is gray with white spots.

SIMILAR SPECIES: The coloration of this species is distinctive.

HABITAT: Grasslands and wooded

savanna. Tolerates some habitat modification and can be found in agricultural areas

NATURAL HISTORY: Breeding takes place in flooded grasslands and temporary pools during the summer rainy season. Clutches are deposited directly in water and contain 300 – 1500 eggs.

CALL: Channing and Howell (2006) describe the call as “a long melodious trill, lasting up to 3 seconds.”

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc and Coastal Forests in Tanzania and Kenya

TYPE LOCALITY: Limpopo Province, South Africa

ELEVATIONAL RANGE: 50 – 1450 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 53 mm; ♀ < 65 mm

MAELEZO: Chura huyu ni mkubwa anayeng'aa na ana mistari miwili njano inayong'aa kutoka machoni hadi kwenye kinena. Aidha, kuna doa moja kubwa jekundu juu ya tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Mikono na miguu ina madoa mekundu. Kiwambo cha sikio kinaonekana na kidogo kiasi kuliko jicho. Ncha za vidole vya mguuni na mkononi ni pana na mviringo. Sehemu ya chini ni kijivu na ina madoa meupe.

SPISHI INAZOFANANA NAZO: Rangi ya spishi hii inamtofautisha na spishi zingine

MAZINGIRA: Nyika na savana yenye miti. Inavumilia mazingira yaliyoharibiwa kiasi na inapatikana kwenye maeneo ya kilimo.

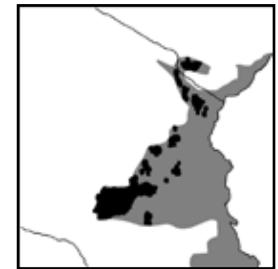
HISTORIA ASILIA: Inazaliana kwenye nyasi zilizofurika maji na madimbwi ya muda wakati wa msimu wa mvua na joto. Makundi yanakuwa na mayai 300 – 1,500 yanayotagwa moja kwa moja kwenye maji.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya MTMMP ya Tanzania na Kenya.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Jimbo la Limpopo, Afrika ya Kusini

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 50 – 1450 m

HALI YA UHIFADHI: Haiko hatarini



Spelaeophryne methneri (Ahl, 1924)

African Striped Frog, Scarlet-snouted Frog



SVL: < 53 mm

DESCRIPTION: The dorsum is black with bright red canthal stripes that extend over the eye to above the tympanum. There is a fold of skin running from the eye to the arm. There is some variation among individuals, with some having a red stripe between the eyes and others lacking any red markings on the head. The tympanum is visible and approximately the same size as the eye. The finger and toe tips are not expanded. The ventral surface is brown.

SIMILAR SPECIES: This is the only species in its genus

HABITAT: Moist lowland and montane forest, savanna, and miombo woodland

NATURAL HISTORY: A secretive species that burrows into rotting logs. Breeding habits are unknown, but it is assumed to lay eggs that hatch directly into small frogs.

CALL: Unknown

DISTRIBUTION IN THE EACF: Uluguru and Udzungwa Mountains and Mt. Rungwe

TYPE LOCALITY: Nangoma Cave, Matumbi near Kilwa, Tanzania

ELEVATIONAL RANGE: < 1600 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: < 53 mm

MAELEZO: Sehemu ya juu ni nyeusi; ina mistari miekundu inayong'aa kati ya pua na macho, inayotoka juu ya jicho hadi juu ya kiwambo cha sikio. Kuna mkunjo wa ngozi kutoka jichoni hadi mkononi. Kuna tofauti baina ya vyura, baadhi wana mstari mwekundu kati ya macho na wengine hawana alama nyekundu yoyote kichwani. Kiwambo cha sikio kinaonekana na ukubwa wake ni takribani sawa na wa jicho. Vidole vya mkononi na mguuni siyo vipana. Sehemu ya chini ni kahawia.

SPISHI INAZOFANANA NAZO: Ni spishi peke yake kwenye jenasi

MAZINGIRA: Maeneo tambarare yenye maji na misitu iliyopo zaidi ya 1200 m kutoka usawa wa bahari, savana na miombo

HISTORIA ASILIA: Spishi hii inajificha kwenye magogo yanayooza. Mfumo wa uzalishaji haujulikani lakini inadhaniwa kwamba inataga mayai na viluwiluwi vinatolewa moja kwa moja

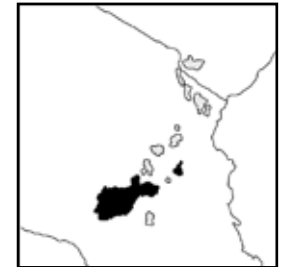
ENEO INAPOPATIKANA SPISHI KWENYE MILIMA YA TAO LA MASHARIKI NA

MISITU YA PWANI: Milima ya Uluguru, Udzungwa na Rungwe

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Pango ya Nangoma, Matumbi, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1600 m

HALI YA UHIFADHI: Haiko hatarini



Petropedetidae

The family Petropedetidae is confined to sub-Saharan Africa. Two species, both in the genus *Petropedetes*, can be found in the Eastern Arc Mountains. They are typically found in or near rocky streams. Both species have toe and finger disks that are distinctly divided into two lobes.

Familia ya Petropedetidae inapatikana Afrika kusini mwa Sahara tu. Spishi mbili, zote zikiwa kwenye jenasi ya *Petropedetes*, zinapatikana Milima ya Tao la Mashariki. Kwa kawaida, chura hawa wanaishi karibu na au kwenye vijito vyenye miamba. Spishi zote mbili zina ncha butu za vidole vya miguuni na mikononi zilizogawanyika katika ndewe.



Petropedetes eggs.

J. Vonesh



Petropedetes yakusini
E. Harper

Petropedetes martiensseni (Nieden, 1911)

Tanzania Rocky River Frog, Usambara Montane Torrent Frog,
Martienssen's Torrent Frog, Usambara Torrent Frog



J. Vonesh

SVL: ♂ 74 mm; ♀ 50 – 67 mm

DESCRIPTION: A large frog usually found near rocky streams. The dorsum is light tan or brown with irregular darker blotches, and usually with a rosy tinge to the limbs. The dorsal surface is granular in texture with a few scattered bumps and ridges. A fold of skin stretches from the eye to the base of the arm over the tympanum. The tympanum is visible and is smaller than the eye. Toe and finger tips are expanded into heart-shaped disks. Fingers lack webbing, and toes are webbed only

slightly at the base. Males in breeding condition have thick arms.

SIMILAR SPECIES: *Petropedetes yakusini* is similar in appearance, but the ranges of the two species do not overlap.

HABITAT: Rocky forest streams in undisturbed forest

NATURAL HISTORY: Eggs are laid on wet rocks near streams or seepage areas. Tadpoles have wide mouths that allow them to cling to and graze on the surface of rocks. Metamorphs are around 12 mm in length. Outside of the breeding season adults are found on the forest floor in holes and among rocks.

CALL: Males call from rocky crevices near running water. The call is a loud, deep single note.

DISTRIBUTION IN THE EACF: East and West Usambara Mountains

TYPE LOCALITY: Tanga, Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 600 – 1800 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ 74 mm; ♀ 50 – 67 mm

MAELEZO: Chura huyu ni mkubwa sana na anapatikana kwenye vijito vyenye miamba. Sehemu ya juu ni hudhuru iliyoifia au kahawia na ina madoa meusi yasiyokuwa na mpangilio, na mara nyingi kunakuwa na rangi ya waridi kwenye mikono na miguu. Sehemu ya juu ina chembechembe, nundu na matuta machache. Mkunjo wa ngozi unatoka jichoni hadi kiwambo cha sikio na mwanzoni mwa mkono. Kiwambo cha sikio kinaonekana na ni kidogo kuliko jicho. Ncha za vidole vya mguuni na mkononi ni pana na zina umbo la moyo. Vidole vya mkononi havina utando na vidole vya mguuni vina utando kidogo mwanzoni. Madume yanakuwa na mikono minene yakiwa kwenye msimu wa kupandana.

SPISHI INAZOFANANA NAZO: Inafanana na *Petropedetes yakusini* lakini spishi hizi mbili hazipatikani mahali pamoja.

MAZINGIRA: Vijito vya misituni vyenye miamba kwenye misitu ambayo haijaguswa

HISTORIA ASILIA: Mayai yanatagwa kwenye miamba yenye unyevu karibu na vijito au maeneo maji yanapovuja. Viluwiluwi vina midomo mipana inayoviwzesha kujishikilia na kula kwenye miamba. Urefu wa vyura wachanga ni 12 mm. Nje ya msimu wa kuzaliana, vyura wazima wanapatikana kwenye mashimo ardhini kwenye msitu au miamba.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Magharibi na Usambara Mashariki

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Tanga, Milima ya Usambara, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 600 – 1800 m

HALI YA UHIFADHI: Iko hatarini



Petropedetes yakusini (Channing, Moyer, and Howell, 2002)
Southern Torrent Frog



E. Harper

SVL: ♂ < 73 mm; ♀ 68 mm

DESCRIPTION: A large frog with a broad head. The dorsum is gray to brown with dark markings. The tympanum is visible and slightly smaller than $\frac{1}{2}$ the diameter of the eye. Toe tips are expanded with bifurcate disks. Toes have a small amount of webbing. The throat and the back of the thighs are dark with small white speckling. The ventral surface is lighter than the dorsum and has lighter speckling. Males in breeding condition have a round, dark black protuberance on the upper part of the tympanum.

SIMILAR SPECIES: Similar to *Petropedetes martiensseni*, but their ranges do not overlap.

HABITAT: Rocky streams in undisturbed montane forest

NATURAL HISTORY: Breeding peaks during the short rains in November. Eggs are laid on wet rocks near streams or seepage areas. Tadpoles have wide mouths that allow them to cling to and graze on the surface of rocks. Outside of the breeding season adults are found on the forest floor in holes and among rocks near streams.

CALL: Channing and Howell (2006) describe the call as “a series of short ‘wauks’ repeated at long intervals of up to 25 seconds.”

DISTRIBUTION IN THE EACF: Uluguru, Udzungwa and Mahenge Mountains, Tanzania

TYPE LOCALITY: Njokomoni River, Udzungwa Mountains National Park, Tanzania

ELEVATIONAL RANGE: 300 – 1950 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ < 73 mm; ♀ 68 mm

MAELEZO: Chura huyu ni mkubwa sana na ana kichwa kipana. Sehemu ya juu ni kijivu hadi kahawia na kuna alama nyeusi. Kiwanbo cha sikio kinaonekana na ni chini ya $\frac{1}{2}$ ya kipenyo cha jicho. Ncha za vidole vya miguuni ni pana, mvingiro na zinagawanyika. Vidole vya mguuni vina utando kidogo. Koo na sehemu ya nyuma ya mapaja ni nyeusi na ina madoa madogo meupe meupe. Sehemu ya chini ina rangi iliyofifia zaidi kuliko sehemu ya juu na ina madoa yaliyofifia. Madume yaliyo kwenye msimu wa kupandana yana sehemu mvingiro na nyeusi inayojitokeza kwenye sehemu ya juu ya kiwanbo cha sikio.

SPISHI INAZOFANANA NAZO: Inafanana na *Petropedetes martiensseni* lakini spishi hizi hazipatikani mahali pamoja.

MAZINGIRA: Vijito vyenye miamba kwenye misitu isiyoguswa iliyopo zaidi ya 1200 m kutoka usawa wa bahari.

HISTORIA ASILIA: Kuzaliana kunafikia kilele wakati wa mvua za vuli mwezi Novemba. Mayai yanatagwa kwenye miamba yenye unyevu karibu na vijito au maeneo maji yanapovuja. Viluwilwi vina midomo mipana inayoviwezesha kujishikilia na kula kwenye miamba. Inapokuwa siyo msimu wa kuzaliana, vyura wazima wanapatikana kwenye mashimo ardhini kwenye msitu au miamba.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Uluguru, Udzungwa na Mahenge, Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mto Njokomoni, Hifadhi ya taifa ya Milima ya Udzungwa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 300 – 1950 m

HALI YA UHIFADHI: Iko hatarini



Phrynobatrachidae

The “puddle frogs” are small brown frogs with variable color patterns and small raised bumps on the dorsum. They are commonly found near puddles, streams or flooded grassy areas. Several new species have been discovered recently and there are likely many undescribed species. The family is confined to sub-Saharan Africa.

“Vyura wa vidimbwi” hawa ni wadogo na kahawia wenye mipangilio ya rangi inayotofautiana na wana nundu ndogo zilizo inuka kwenye sehemu ya juu. Chura hawa hupatikana karibu na vidimbwi, vijito au maeneo ya mafuriko yenye majani. Hivi karibuni, spishi kadhaa mpya ziligunduliwa na inaelekea kuna spishi nyingi ambazo bado hazina maelezo ya sifa zao. Familia hii inapatikana tu Afrika kusini mwa Sahara.



Phrynobatrachus
E. Harper

Phrynobatrachus acridoides (Cope, 1867)

East African Puddle Frog, Zanzibar Puddle Frog, Cope's Toad-frog, Eastern Puddle Frog



E. Harper

SVL: ♂ 28 mm; ♀ 30 mm

DESCRIPTION: A small gray-brown frog. The dorsal pattern is variable, often with a green or tan middorsal stripe or band and/or stripes on the legs. The dorsum is bumpy in most individuals, often with paired chevron shaped ridges between the arms. A fold of skin arches from the eye to the arm over the clearly visible tympanum. The tympanum is smaller than the eye. Toe and finger tips are faintly expanded, but lack distinct disks. Toes are partially webbed, but the extent of webbing varies somewhat

among individuals. The ventral surface is smooth and pale, usually with a yellowish tinge near the vent. In males the throat is uniform light gray or black. Females have mottled throats.

SIMILAR SPECIES: Larger than *P. ukingensis*. Can be distinguished from other species in the genus by the black or gray throat of the males, expanded finger tips and visible tympanum.

HABITAT: Forest, grassland, shrubland and savannas. Tolerates a degree of habitat alteration.

NATURAL HISTORY: Breeding takes place in still water including ponds, pools, swamps and ditches. Small dark eggs are laid in a single layer that floats just below the surface of the water or is attached to grass.

CALL: Males call while propped on vegetation in shallow water. The call is a continual harsh creaking snore, also described as "cricket-like"

DISTRIBUTION IN THE EACF: Eastern Tanzania

TYPE LOCALITY: Zanzibar Island, Tanzania

ELEVATIONAL RANGE: Usually below 700 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 28 mm; ♀ 30 mm

MAELEZO: Chura huyu ni mdogo na kijivu kahawia. Mpangilio wa sehemu ya juu unatofautiana na mara nyingi kuna mstari wa kijani au hudhurungi katikati ya sehemu ya juu au mistari kwenye miguu. Sehemu ya juu ina nundu kwenye vyura wengi na mara nyingi kuna matuta mawili mawili yenye umbo la "V" kati ya mikono. Mkunjo wa ngozi unatoka kwenye jicho, unapita juu ya kiwambo cha sikio kinachoonekana hadi mkononi. Kiwambo cha sikio ni kidogo kuliko jicho. Vidole vya mguuni na mkononi vipana kidogo lakini havina ncha mwingiro zinazoonekana. Vidole vya miguuni vina utando kiasi lakini kuenea kwa utando kunatofautiana baina ya vyura. Sehemu ya chini ni laini, imefia na mara nyingi ni njano njano karibu na tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Koo la madume ni kijivu iliyofifia au jeusi. Majike yana koo lenye madoa.

SPISHI INAZOFANANA NAZO: Spishi hii ni kubwa kuliko *P. ukingensis* Koo jeusi au kijivu la madume, ncha pana za vidole vya mkononi na kiwambo cha sikio vinaitofautisha spishi hii na zingine kwenye jenasi.

MAZINGIRA: Misit, nyika, vichaka na savana. Inavumilia mazingira yaliyobadilika kiasi.

HISTORIA ASILIA: Inazaliana kwenye maji yaliyosimama ya madimbwi, vinamasi na mifereji. Mayai madogo na meusi yanatagwa kwenye tabaka moja linaloelea chini kidogo ya maji au linagandishwa kwenye majani.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Kaskazini Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA

MARA YA KWANZA: Kisiwa cha Zanzibar, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:
< 700 m

HALI YA UHIFADHI: Haiko hatarini.



Phrynobatrachus kreffti (Boulenger, 1909)
Kreff's River Frog, Kreff's Puddle Frog



E. Harper

SVL: ♂ 36 mm; ♀ 41mm

DESCRIPTION: The dorsum is pale yellowish brown to dark reddish brown, sometimes with broad pale dorsolateral stripes or a pale triangle on the snout. Most individuals have a light tan stripe between the eyes. Toe and finger tips are distinctly swollen. Toes are approximately ½ webbed. The tympanum is visible, but is small and not particularly distinct. Females have pale throats. In males the throat is bright yellow, thumb pads are present and there are sharp spines on the toes.

SIMILAR SPECIES: The bright yellow throat of *P. kreffti* males is distinctive. *P. scheffleri* males also have yellow on the throat, but not as bright. Also, *P. scheffleri* do not have a visible tympanum.

HABITAT: Montane and submontane forest. Tolerates a moderate degree of habitat alteration, but is always found near forest.

NATURAL HISTORY: Males are territorial, and have been observed to approach one another and inflate their large, bright yellow vocal sacs without emitting any sound. This is presumably a territorial display. Males call during the day in shallow water, usually in rocky areas with vegetation. Egg masses, containing around 15 – 30 darkly pigmented eggs, are attached to rocks or vegetation near the water. Tadpoles are brown with two golden spots on the head.

DISTRIBUTION IN THE EACF: East and West Usambara Mountains and Magrotto Mountains

TYPE LOCALITY: Amani, East Usambaras, Tanzania

ELEVATIONAL RANGE: 700 – 1500 m

CONSERVATION STATUS: Endangered

UREFU WA MWILI: ♂ 36 mm; ♀ 41mm

MAELEZO: Sehemu ya juu ni njano iliyoifia kahawia hadi nyekundu kahawia, na wakati mwingine kuna mistari mipana mgongoni na pembeni au pembetatu iliyoifia kwenye pua. Idadi kubwa ya vyura ina mstari hudhurungi uliyoifia kati ya macho. Vidole vya miguuni na mkononi vimevimba sana. Vidole vya miguuni vina utando kwa ½. Kiwambo cha sikio kinaonekana lakini ni kidogo na hakijitokezi sana. Majike yana koo lenye rangi iliyoifia. Madume yana koo la njano inayong'aa, kuna uvimbe kwenye ngozi chini ya kidole gumba na miiba iliyoichongoka kwenye vidole vya miguuni.

SPISHI INAZOFANANA NAZO: Madume ya *P. kreffti* yana koo la njano inayong'aa. Aidha, madume ya *P. scheffleri* yanaweza pia kuwa na koo la njano lakini lisilong'aa. *P. scheffleri* hana kiwambo cha sikio kinachoonekana.

MAZINGIRA: Misititu iliyopo karibu au zaidi ya 1200 m kutoka usawa wa bahari. Inavumilia mabadiliko kiasi ya mazingira lakini inapatikana karibu na misititu wakati wote.

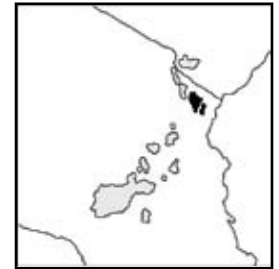
HISTORIA ASILIA: Madume yanalinda maeneo yao na yameonekana yakisogelea wenzao na kutunisha vifuko vyao vya sauti vikubwa na njano inayong'aa bila kutoa mlio wowote. Inadhaniwa kuwa hii ni njia ya kulinda eneo lao. Madume yanaita yakiwa kwenye maji yenye kina kifupi, kwenye uoto na miamba. Makundi yenye mayai 15 - 30 yenye rangi nyeusi yanagandishwa kwenye miamba au uoto karibu na maji. Viluwiluwi ni kahawia na vina madoa mawili kichwani yenye rangi ya dhahabu.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Magharibi, Usambara Mashariki na Magrotto

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Amani, Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 700 – 1500 m

HALI YA UHIFADHI: Iko hatarini



Phrynobatrachus natalensis (Smith, 1849)
Snoring Puddle Frog, Natal Dwarf Puddle Frog



M. Menegon

SVL: ♂ 34 mm; ♀ 40 mm

DESCRIPTION: Most individuals are dark brown with variable dorsal patterns including light vertebral stripes and bands. Finger tips lack disks or distinct swelling. The tympanum is visible and larger than $\frac{1}{2}$ the diameter of the eye. Webbing is not consistent, possibly because of taxonomic confusion.

SIMILAR SPECIES: This species is likely a complex of multiple cryptic species. It can be distinguished from other *Phrynobatrachus* species in the EACF by its visible tympanum and lack

of expanded finger and toe tips.

HABITAT: Vegetation on the edges of water in forest, grassland, savanna and agricultural areas.

NATURAL HISTORY: Breeds in a wide range of aquatic habitat types, usually in still water including temporary pools and streams. Small dark brown eggs are laid in clutches of approximately 200. Metamorphosis is typically completed within 40 days.

CALL: Males can be heard calling during the day as well as at night. Channing and Howell (2006) describe the call as “a slow quiet snore”

DISTRIBUTION IN THE EACF: Eastern Tanzania

TYPE LOCALITY: Durban, South Africa

ELEVATIONAL RANGE: < 2200 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 34 mm; ♀ 40 mm

MAELEZO: Idadi kubwa ya vyura ni kahawia iliyokolea na wana mipangilio mbalimbali sehemu ya juu, ikiwa ni pamoja na mistari yenye rangi iliyofifia kwenye mgongo. Vidole vya mkononi havina ncha mvingo au uvimbe unaoweza kuona. Kiwambo cha sikio kinaonekana na kinazidi $\frac{1}{2}$ ya kipenyo cha jicho. Utando unatofautiana, labda kutokana na utata uliopo katika kuainisha spishi mbalimbali.

SPISHI INAZOFANANA NAZO: Inawezekana spishi hii inajumuisha spishi zingine ambazo hazijaainishwa bado. Tofauti na spishi zingine za MTMP, spishi hii ina kiwambo cha sikio kinachoonekana na haina ncha pana za vidole vya mguuni wala mkononi.

MAZINGIRA: Msituni kwenye uoto kando kando ya maji, nyika, savana na maeneo ya kilimo.

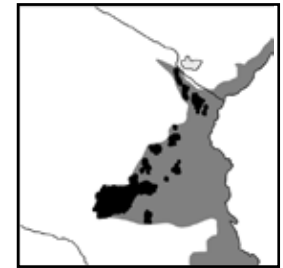
HISTORIA ASILIA: Inazaliana kwenye aina nyingi za mazingira ya maji, kwa kawaida kwenye maji yaliyosimama, pamoja na madimbwi ya muda na vijito. Mayai madogo na kahawia yanatagwa kwenye makundi yenye takribani mayai 200. Mabadiliko yote yanatokea ndani ya siku 40.

ENEO SPISHI INAPOPATIKANA KWENYE MTMP: Kaskazini Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Durban, Afrika ya Kusini

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 2200 m

HALI YA UHIFADHI: Haiko hatarini



Phrynobatrachus rungwensis (Loveridge, 1932)

Rungwe River Frog, Rungwe Puddle Frog



SVL: < 24 mm

DESCRIPTION: A small brown frog with darker markings on the dorsum and raised bumps. The tympanum is not visible. Males have mottled gray throats. Finger tips are slightly swollen, but lack distinct disks. Toes have small disks and are only partially webbed. The legs are barred.

SIMILAR SPECIES: Similar to *P. scheffleri*, and *P. uzunguensis* but the throat of males is gray in *P. rungwensis*. *P. rungwensis* can be distinguished from other species in the genus by its lack of a visible tympanum, its slightly swollen finger tips and disks on the toes.

HABITAT: Grassy pools and puddles in miombo woodland, savannas and montane grassland.

NATURAL HISTORY: The natural history of this species is not well known.

CALL: Unknown

DISTRIBUTION IN THE EACF: Udzungwa Mountains

TYPE LOCALITY: Ilolo, Rungwe Mountain, Tanzania

ELEVATIONAL RANGE: 1000 – 2000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: < 24 mm

MAELEZO: Chura huyu ni mdogo, kahawia na ana alama zenye rangi iliyokolea zaidi na nundu zilizochomoza kwenye sehemu ya juu. Kiwambo cha sikio hakionekani. Madume yana madoa kijivu kwenye koo. Vidole vya mkononi vimevimba lakini havina ncha mviringo zinazoonekana. Vidole vya mguuni vina ncha ndogo mviringo na utando kiasi. Miguu ina mistari.

SPISHI INAZOFANANA NAZO: Inafanana na *P. scheffleri* na *P. uzunguensis* lakini koo la madume ya *P. rungwensis* ni kijivu. Aidha, *P. rungwensis* ni tofauti na spishi zingine za jenasi kwani haina kiwambo cha sikio kinachoonekana, ina ncha za vidole vya mkononi vilivyovimba kidogo na ncha mviringo kwenye vidole vya mguuni.

MAZINGIRA: Madimbwi yenye nyasi kwenye miombo, savana na nyika zilizopo zaidi ya 1200 m kutoka usawa wa bahari.

HISTORIA ASILIA: Haijulikani vizuri

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Ilolo, Mlima Rungwe, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1000 – 2000 m

HALI YA UHIFADHI: Haiko hatarini



Phrynobatrachus scheffleri (Nieden, 1911)

Scheffler's Puddle Frog



E. Harper

SVL: ♂ 16 - 20 mm; ♀ 18 - 22 mm

DESCRIPTION: A small brown frog with raised bumps on the dorsum between the arms. A dark triangle between the eyes points toward the rear. The males have yellow throats and females have white throats. The tympanum is not visible. Toes have only slight webbing. Finger and toe tips are slightly expanded, but lack distinct disks.

SIMILAR SPECIES: Taxonomists previously confused *P. scheffleri* with *P. minutus*. The taxonomy is still not well defined. Both *P. scheffleri* and *P. krefftii*

males have yellow on their throats, but in *P. krefftii* the tympanum is visible.

HABITAT: Leaf litter, frequently found in dry shady stream beds, often clustered around small stony pools.

NATURAL HISTORY: Males call from vegetation near water. Eggs are laid during both rainy seasons and float in a raft on the water.

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc Mountains and Coastal Forest of Kenya and Tanzania, also on the island of Zanzibar

TYPE LOCALITIES: Kibwesa, Mpapua and Zanzibar, Tanzania; Nairobi, Kenya

ELEVATIONAL RANGE: 0 – 1800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 16 - 20 mm; ♀ 18 - 22 mm

MAELEZO: Chura huyu ni mdogo na ana nundu zilizochomoza kwenye sehemu ya juu, kati ya mikono. Kuna pambetatu nyeusi kati ya macho na inayotazama nyuma. Madume yana koo njano na majike, koo jeupe. Kiwambo cha sikio hakionekani. Vidole vya mguuni vina utando kidogo sana. Vidole vya mkononi na mguuni ni vipana kidogo lakini havina ncha mviringo.

SPISHI INAZOFANANA NAZO: *P. minutus* na *P. krefftii*

MAZINGIRA: Majani yaliyoanguka chini, wakati mwingi kwenye vijito vilivyokauka na vyenye kivuli na mara nyingi vyura wanajikusanya eneo linalozunguka madimbwi madogo yenye mawe.

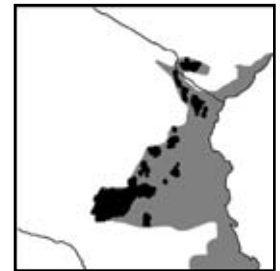
HISTORIA ASILIA: Madume yanaita kutoka kwenye uoto karibu na maji. Mayai yanatagwa wakati wa misimu miwili ya mvua na yanaelea kwenye chelezo juu ya maji.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya Tanzania na Kenya, na kisiwa cha Zanzibar

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Kibwesa, Mpapua na Zanzibar, Tanzania na Nairobi, Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 0 – 1800 m

HALI YA UHIFADHI: Haiko hatarini



Phrynobatrachus ukingensis (Loveridge, 1932)

Ukinga River Frog, Ukinga Puddle Frog



SVL: ♂ 19 mm; ♀ 21 mm

DESCRIPTION: Very small frogs with smooth brown skin and flat bumps. Some individuals have light vertebral lines or bands on the dorsum and/or lines on the legs. Males have black throats. Toes end in distinct disks. The tips of the fingers are swollen. The tympanum is visible.

SIMILAR SPECIES: The taxonomic relationships between *P. ukingensis*, *P. mababiensis*, and *P. parvulus* are unclear. *P. mababiensis* lacks distinct toe disks in contrast to *P. ukingensis*.

HABITAT: Montane forest and grassland

NATURAL HISTORY: Assumed to breed in pools and marshes. Eggs are small and black and float on the surface of the water.

CALL: Buzzes and clicks

DISTRIBUTION IN THE EACF: Uluguru, Ukinga and Rungwe Mountains

TYPE LOCALITY: Madehani, Ukinga Mountains, Tanzania

ELEVATIONAL RANGE: above 1000 m

CONSERVATION STATUS: Data deficient

UREFU WA MWILI: ♂ 19 mm; ♀ 21 mm

MAELEZO: Chura hawa ni wadogo sana na wana ngozi laini kahawia na nundu pana. Baadhi ya vyura wana mistari mgongoni ambayo imefia au mistari kwenye sehemu ya juu na / au mistari miguuni. Madume yana koo jeusi. Mwisho wa vidole vya mguuni kuna ncha mviringo zinazojitokeza. Ncha za vidole vya mkononi vimevimba. Kiwambo cha masikio kinaonekana.

SPISHI INAZOFANANA NAZO: Mahusiano kati ya *P. mababiensis*, *P. parvulus* na *P. ukingensis* hayajajulikana vizuri. Tofauti na *P. ukingensis*, *P. mababiensis* hana ncha mviringo za vidole.

MAZINGIRA: Misitua ni nyika zilizopo 1200 m kutoka usawa wa bahari.

HISTORIA ASILIA: Inadhaniwa spishi hii inazaliana kwenye madimbwi na vinamasi. Mayai ni madogo na meusi na yanaelea juu ya maji.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Uluguru, Ukinga na Rungwe

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Madehani, Milima ya Ukinga, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: > 1000 m

HALI YA UHIFADHI: Hakuna taarifa za kutosha



Phrynobatrachus uzunguensis (Grandison & Howell, 1984)



M. Menegon

SVL: ♂ 21 mm; ♀ 25 mm

DESCRIPTION: A small frog with long legs (tibia greater than $\frac{1}{2}$ SVL). The arms, finger tips and some dorsal markings are red-orange. Fingers and toes have small disks. The tympanum is not clearly visible. Males in breeding condition have small white spines on the dorsum, and dark thumb pads. In both males and females the lower jaw is black, but the throat is white, sometimes with darker mottling.

SIMILAR SPECIES: Similar to *P. rungwenis*, but the throat is white in

P. uzunguensis. *P. uzunguensis* can be distinguished from other members of the genus by its small disks and lack of a visible tympanum.

HABITAT: Streams in montane and submontane forest.

NATURAL HISTORY: Breeding is assumed to take place in streams

CALL: Unknown

DISTRIBUTION IN THE EACF: Udzungwa, Uluguru and Nguu Mountains. Likely occurs in other mountains of the Eastern Arc.

TYPE LOCALITY: Mwanihana Forest Reserve, Udzungwa Mountains, Tanzania

ELEVATIONAL RANGE: Above 900 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ 21 mm; ♀ 25 mm

MAELEZO: Chura huyu ni mdogo mwenye miguu mirefu (muundi gongo ni zaidi ya $\frac{1}{2}$ ya SVL). Mikono, ncha za kucha za vidole vya mkononi na baadhi ya alama za sehemu ya juu ni nyekundu machungwa. Vidole vya mikononi na miguuni vina ncha mviringo na ndogo. Kiwambo cha sikio hakionekani vizuri. Kwenye msimu wa kupandana, madume yana miiba midogo na mieupe sehemu ya juu na uvimbe mweusi chini ya kidole gumba. Taya ya chini ya madume na majike ni nyeusi lakini koo ni jeupe na wakati mwingine linakuwa na madoa meusi.

SPISHI INAZOFANANA NAZO: Inafanana na *P. rungwenis*, lakini koo la *P. uzunguensis* ni jeupe. Tofauti na spishi zingine za jenasi, *P. uzunguensis* ina ncha za vidole mviringo ndogo na haina kiwambo cha sikio kinachoonekana.

MAZINGIRA: Vijito kwenye misitu karibu au zaidi ya 1200 m kutoka usawa wa bahari.

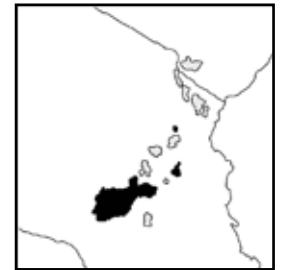
HISTORIA ASILIA: Inadhaniwa inazaliana kwenye vijito.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa, Uluguru na Nguu. Huenda inapatikana kwenye milima mingine ya Tao la Mashariki.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Hifadhi ya Misitu ya Mwanihana, Milima ya Udzungwa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: > 900 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Pipidae

The family Pipidae includes two species that can be found in the Eastern Arc and Coastal Forests. Both are in the genus *Xenopus*. These species are fully aquatic, and have flattened stream-lined bodies, small eyes, smooth skin and black claws on the inner three toes.

Familia ya Pipidae inajumuisha spishi mbili ambazo zinapatikana kwenye TMMP kwenye jenasi ya *Xenopus*. Aidha, spishi zote zinaishi majini na zina miili iliyonyooka, macho madogo, ngozi laini na makucha meusi kwenye sehemu ya ndani na vidole vitatu vya mguuni.



Claws of *Xenopus*
J. Vonesh

Xenopus borealis (Parker, 1936)

Northern Clawed Frog



J. Vonesh

SVL: ♂ 50 -60 mm; ♀ 59 - 80 mm

DESCRIPTION: *X. borealis* is a small clawed frog with olive to brown skin, occasionally with darker mottling. The vent can be bright orange which is concentrated in axillary areas with a paler vent, all with black splotches to varying degree of intensity. Lateral lines appear as "stitching" all over the body, but obviously in rings around the eyes. Males develop dark nuptial pads on the arms during breeding periods, females have three cloacal lips which become pink and swollen.

SIMILAR SPECIES: The sub-ocular tentacle of *X. borealis* is much shorter than $\frac{1}{2}$ the diameter of the eye while that of *X. muelleri* is grater than $\frac{1}{2}$ the diameter of the eye.

HABITAT: Permanent ponds in forest or agricultural landscapes. Habitats also include very small wells in which it may fall when dispersing.

NATURAL HISTORY: Breeding activity starts with the onset of heavy rains. Males call from within the water (although the calls can be heard sometimes quite loudly but muffled from outside), and appear to be very territorial getting into wrestling matches with other males. Males clasp females in inguinal amplexus, swimming underwater and depositing eggs singly onto vegetation. Tadpoles are suspension feeders which swim in schools hanging in mid-water with just a flicker at the ends of their tails. They resemble catfish with long tentacles projecting from the corners of their wide mouths.

CALLS: Males call with a series of trills and clicks. Females probably also vocalize in this species.

DISTRIBUTION IN THE EACF: Kenyan highlands and adjoining upland areas of Tanzania.

TYPE LOCALITY: Marsabit, Kenya

ELEVATIONAL RANGE: 600 – 1700 m

CONSERVATION STATUS: Least Concern

UREFU WA MWILI: ♂ 50 – 60 mm; ♀ 59 – 80 mm

MAELEZO: *X. borealis* ni chura mdogo mwenye makucha na ngozi yenye rangi ya mzeituni hadi kahawia, na wakati mwingine anakuwa na madoa madoa meusi. Tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi linaweza kuwa rangi ya machungwa inayong'aa, iliyokolea zaidi kwenye makwapa na madoa meusi ambayo kukolea kwake kunatofautiana. Mistari ya pembeni inaonekana kama imeunganishwa kwa kushona kwenye mwili mzima na inazunguka macho. Wakati wa msimu wa kupandana, madume yanakuwa na ngozi nyeusi inayokwaruza ya kusaidia kukamata majike, majike yanakuwa na vipande vitatu vya ngozi rangi ya waridi na vilivyovimba kwenye eneo la tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi.

SPISHI INAZOFANANA NAZO: Mnyiri chini ya jicho wa *X. borealis* ni mfupi zaidi ya $\frac{1}{2}$ ya kipenyo cha jicho wakati mnyiri wa *X. muelleri* ni zaidi ya $\frac{1}{2}$ ya kipenyo cha jicho.

MAZINGIRA: Madimbwi ya kudumu kwenye misitu au maeneo ya kilimo; aidha, vyura hawa wanapatikana kwenye visima vidogo sana ambapo wanaanguka wanapotawanyika.

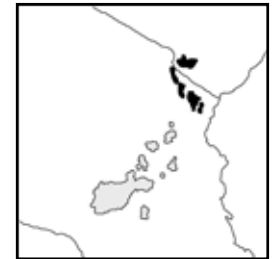
HISTORIA ASILIA: Kuzaliana kunaanza mwanzoni mwa mvua kubwa. Madume yanaita yakiwa majini (ingawa miito inaweza kusikika kwa nguvu lakini siyo kutoka nje) na yanalinda sana maeneo yao na hata kupigana miereka na madume mengine. Madume yanakamata majike kutoka miguu ya nyuma wakati wa kupandana, yanaogelea chini ya maji na kupeleka mayai moja moja kwenye uoto. Viluwiluwi vinakula vitu vidogo sana vinavyoelea majini na vinaogelea kwenye makundi, vikiring'inia katikati ya maji; sehemu ndogo sana ya mwishoni mwa mkia ndiyo inaonekana. Vinafanana na kambare mwenye mijiri mirefu inayojitokeza kutoka kona za midomo mipana.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Kusini mwa Kenya na Kaskazini mwa Tanzania.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Marsabit, Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 600 – 1700 m

HALI YA UHIFADHI: Haiko hatarini.



Xenopus muelleri (Peters, 1844)

Yellow-bellied Platanna, Northern Platanna, Müller's Clawed Frog, Savanna Clawed Frog



E. Harper

SVL: ♂ < 50 mm; ♀ < 90 mm

DESCRIPTION: A large aquatic frog. The dorsum is gray with scattered darker blotches, and the ventral surface is light with bright yellow below the legs. Some faint gray shading is often present in the pectoral region. The eyes are small with round pupils and a conspicuous sub-ocular tentacle that is greater than ½ the diameter of the eye. Lateral line organs are clearly visible, appearing as a series of 22 – 27 'stitches' along each side. The toes are fully webbed and the tips of the inner three toes end

in darkly pigmented claws.

SIMILAR SPECIES: The sub-ocular tentacle of *X. borealis* is much shorter than ½ the diameter of the eye while that of *X. muelleri* is greater than ½ the diameter of the eye.

HABITAT: Aquatic habitat in lowland savanna, including permanent and temporary ponds, streams and rivers. Tolerates habitat modification and can be found in agricultural areas.

NATURAL HISTORY: Breeding takes place in muddy pools. The breeding behavior of this species is not well known. It is likely similar to that of other species in the genus in which eggs are attached to submerged rocks or vegetation. The eggs are small and darkly pigmented. Tadpoles are large with long tentacles that are at least ¼ the total length. Tadpoles lack keratinized mouthparts and form schools, feeding on unicellular algae in the water column. All *Xenopus spp.* lack tongues, and feed by sucking in aquatic prey, sometimes with the aid of their long fingers.

CALL: Males call while under water, and lack a visible vocal sac. The call is a series of clicks emitted at a rate of two per second.

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc Mountains, also on the islands of Zanzibar and Mafia.

TYPE LOCALITY: Mozambique

ELEVATIONAL RANGE: Primarily lowland, but may occur up to 2000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 50 mm; ♀ < 90 mm

MAELEZO: Chura huyu ni mkubwa sana na anaishi majini. Sehemu ya juu ni kijivu na ina madoa yenye rangi iliyokolea zaidi hapa na pale na sehemu ya chini ina rangi iliyofifia, isipokuwa chini ya miguu yenye njano inayong'aa. Mara nyingi kuna kijivu kilichofifia kifuani. Macho ni madogo, yana mboni mvingo na mnyiri chini ya jicho ambao ni zaidi ya ½ ya kipenyo cha jicho. Ogani za fahamu zinaonekana kama mfululizo wa mishono 22-27 kila upande. Vidole vya mguuni vina utando na ncha za vidole vitatu vya ndani mguuni zina makucha yenye rangi nyeusi.

SPISHI INAZOFANANA NAZO: Mnyiri chini ya jicho wa *X. borealis* ni mfupi zaidi ya ya kipenyo cha jicho wakati mnyiri wa *X. muelleri* ni zaidi ya ya kipenyo cha jicho

MAZINGIRA: Mazingira ya maji kwenye savana ya maeneo tambarare, pamoja na madimbwi ya kudumu na ya muda, vijito na mito. Inavumilia mazingira yaliyobadilika na inapatikana kwenye maeneo ya kilimo.

HISTORIA ASILIA: Inazaliana kwenye madimbwi yenye tope. Mfumo wake wa kuzaliana haujulikani vizuri na inadhaniwa unafanana na wa spishi zingine za jenasi ambapo mayai yanagandishwa kwenye miamba au uoto chini ya maji. Mayai ni madogo na meusi sana. Viluwilwi ni virefu na vina minyiri yenye urefu ambao ni angalau ¼ ya urefu mzima. Aidha, viluwilwi havina sehemu maalum kwa ajili ya kula uoto wa majini na vinakuwa kwenye makundi na kula mwani wenye seli moja. *Xenopus spp* wote hawana ulimi na wanakula kwa kufyonza chakula, wakati mwingine kwa kutumia vidole virefu vya mkononi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP:

Maeneo yote ya MTMMP ya Tanzania na Kenya na visiwa vya Zanzibar na Mafia.

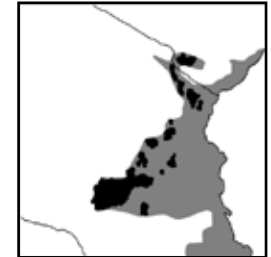
MAHALI KIELELEZO KILIPOPEWA JINA KWA

MARA YA KWANZA: Msumbiji

ENEO LA SPISHI KUTOKA USAWA WA BAHARI:

Maeneo tambarare lakini inaweza kupatikana hadi kwenye 2000 m

HALI YA UHIFADHI: Haiko hatarini



Ptychadenidae

Until recently, the species in this family were considered to be in the family Ranidae. Ptychadenidae consists of three genera, with the majority of species in the genus *Ptychadena*. Species in two genera, *Hildebrandtia* and *Ptychadena*, can be found in the Eastern Arc and Coastal Forests. *Hildebrandtia ornata* is a stocky burrowing frog with short legs. The *Ptychadena* species, in contrast, typically have streamlined bodies with long legs and are excellent jumpers. They are notoriously difficult to catch and are often referred to as “rocket frogs”.

Mpaka hivi karibuni, spishi katika familia hii zilikuwa zimeingizwa kwenye familia ya Ranidae. Ptychadenidae ina jenasi tatu na idadi kubwa ya spishi ziko kwenye jenasi ya *Ptychadena*. Spishi katika jenasi mbili za *Hildebrandtia* na *Ptychadena* zinapatikana kwenye TMMP. *Hildebrandtia ornata* ni chura mnene, ana miguu mifupi na anachimba mashimo ardhini. Lakini spishi za *Ptychadena* zina miili iliyoonyoka, miguu mizuri na zinaruka vizuri sana. Ni vigumu sana kuwakamata vyura hawa na mara nyingi wanajulikana kama “vyura roketi”



Ptychadena
E. Harper

Hildebrandtia ornata (Peters, 1878)

Ornate Pyxie, Black-throated Pyxie, Ornate Burrowing Frog,
Hildebrandt's Burrowing Frog



A. Channing

SVL: ♂ 44 – 49 mm; ♀ < 45 mm

DESCRIPTION: A plump looking frog with warty and folded skin, prominent eyes and short legs. The color pattern on the dorsum can be striking to dull with combinations of yellow brown to olive green with dark mottling on the sides. The ventrum is white to cream. Males have dark spots or mottling on the throat and paired lateral vocal sacs.

SIMILAR SPECIES: Similar body shape to *Pyxicephalus edulis*, but *H. ornata* lacks the teeth-like projections on the jaw.

HABITAT: Savanna, especially in areas with sandy soil.

NATURAL HISTORY: A fossorial species that comes above ground only during the breeding season. Breeding takes place in temporary pools that lack vegetation. Males call from the water's edge. Single eggs are scattered by the female during amplexus, typically during the beginning of the rainy season.

CALL: A short "hoot"

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc Mountains in Kenya and Tanzania and in coastal areas of Tanzania. Its distribution is patchy within its range due to its habitat requirements.

TYPE LOCALITY: Taita, Kenya

ELEVATIONAL RANGE: < 1200 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 44 – 49 mm; ♀ < 45 mm

MAELEZO: Chura huyu ni mnene, ana ngozi yenye chunjuwa na mkunjo kwenye ngozi, macho makubwa na miguu mifupi. Mpangilio wa rangi sehemu ya juu ni wa kuvutia au hapana, ni mchanganyiko wa kahawia, njano, hadi kijani mzeituni na madoa pembeni. Aidha, chura hawa ni weupe sehemu ya chini na madume yana madoa meusi au madoa yenye rangi mbalimbali kwenye koo na vifuko ya sauti viwili viwili.

SPISHI INAZOFANANA NAZO: Umbile la mwili linafanana na la *Pyxicephalus edulis* lakini *H. ornata* hana sehemu iliyochochoza kama meno kwenye taya

MAZINGIRA: Savana, hasa kwenye maeneo yenye udongo wa mchanga.

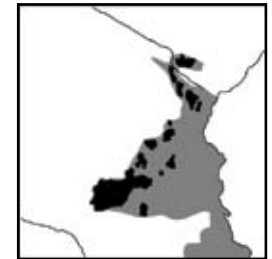
HISTORIA ASILIA: Spishi hii inachimba mashimo ardhini na kuishi humo muda mwingi na inajitokeza juu ya ardhi msimu wa kuzaliana tu. Inazaliana kwenye madimbwi ya muda bila uoto na madume yanaita kutoka pembeni mwa madimbwi. Jike linataga mayai, dume linaweka mbegu zake kwenye mayai yanapotoka nje ya jike, ambalo huyatawanya moja moja.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya MTMMP ya Tanzania na Kenya.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Taita, Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1200 m

HALI YA UHIFADHI: Haiko hatarini



Ptychadena anchietae (Bocage, 1867)

Plain Grass Frog, Savanna Ridged Frog, Anchieta's Ridged Frog, Long-legged Grass Frog



E. Harper

SVL: ♂ < 51 mm; ♀ < 62 mm

DESCRIPTION: A medium-sized frog with long legs. The dorsum is uniform brown with around 7 rows of parallel ridges. Some individuals have darker blotches scattered over the dorsum. Middorsal and tibial stripes are never present. A distinct pale triangle covers the area of the snout in front of the eyes. The tympanum is clearly visible and edged in white. The toes are nearly fully webbed, with only the tip of the fourth toe free of webbing.

SIMILAR SPECIES: *P. anchiete* can be distinguished from other members of the genus by the pale triangle on the snout, horizontal stripes on the backs of the thighs, and extensive toe webbing with only the last joint of the longest toe free of webbing.

HABITAT: Open areas in lowland savannas, grasslands and woodlands. Tolerates some habitat modification and may be found in former forest, agricultural and suburban areas. Typically found near water.

NATURAL HISTORY: Small eggs, gray on top and white below, are laid in a single layer that floats on the surface of the water. Tadpoles are brown above and light below with a clear fin and may reach 45 mm in length.

CALL: Males call near the edge of temporary pools and flooded grasslands. The call is a rapid high-pitched trill repeated three times every two seconds.

DISTRIBUTION IN THE EACF: Throughout Kenya and Tanzania

TYPE LOCALITY: Benguela, Angola

ELEVATIONAL RANGE: < 1800 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 51 mm; ♀ < 62 mm

MAELEZO: Chura huyu ana saizi ya kati na miguu mirefu. Sehemu yote ya juu ni kahawia na ina takribani safu 7 za matuta sambamba. Baadhi ya vyura wana madoa meusi yaliyotapakaa sehemu ya juu. Hakuna mistari ya juu katikati ya mgongo wala muundi goko. Pembetatu iliyofifia inafunika eneo la pua na mbele ya macho. Kiwambo cha sikio kinaonekana na pembeni kina rangi nyeupe. Karibu vidole vyote vya mguu vina utando isipokuwa ncha ya kidole cha tano.

SPISHI INAZOFANANA NAZO: Tofauti ya *P. anchiete* na spishi zingine za jenasi ni kwamba ina pembetatu yenye rangi ya kufifia kwenye pua, mistari mlalo nyuma ya mapaja na utando mwingi kwenye vidole vya mguuni isipokuwa kifundo cha kidole kirefu kuliko vyote ambacho hakina kabisa.

MAZINGIRA: Maeneo wazi na tambarare ya savana, nyika na miombo. Inavumilia mazingira yaliyobadilika kidogo na inapatikana palipokuwa na misitu awali, maeneo ya kilimo na viunga vya miji. Inapatikana karibu na maji.

HISTORIA ASILIA: Mayai madogo ambayo ni kijivu juu na meupe chini yanatagwa kwenye tabaka moja linaloelea juu ya maji. Viluwiluwi ni kahawia juu na rangi iliyofifia chini na vina pezi angavu na vinaweza kufikia urefu wa 45 mm.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya Kenya na Tanzania

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Benguela, Angola

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1800 m

HALI YA UHIFADHI: Haiko hatarini



Ptychadena grandisonae (Laurent, 1954)
Muita Grassland Frog, Grandison's Ridged Frog



A. Channing

SVL: ♀ < 44 mm; ♂ < 50 mm

DESCRIPTION: A medium-sized frog with long legs. The dorsum has dark spots and raised parallel ridges, but the ridges do not extend onto the snout. There is usually a light middorsal stripe. The tympanum is distinctly visible with a light dot in the center. There is no light line on the tibia. There are spots rather than bands on the back of the thighs. Three joints of the fourth toe are free of webbing.

SIMILAR SPECIES: Multiple characteristics are necessary to

distinguish *P. grandisonae* from other members of the genus. The back of the thigh is mottled, in contrast to the horizontal or vertical bands of several of the other species in the genus. *P. grandisonae* lacks ridges on the snout, does not have a pale triangle on the snout, and has long legs (tibia longer than $\frac{1}{2}$ SVL).

HABITAT: High elevation savannas and grassland

NATURAL HISTORY: Breeding takes place in wet grassy areas.

CALL: Channing (2001) describes the call as a "slow rising 'wauk'"

DISTRIBUTION IN THE EACF: Udzungwa Mountains

TYPE LOCALITY: Muita, Luembe, Angola

ELEVATIONAL RANGE: < 1900 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♀ < 44 mm; ♂ < 50 mm

MAELEZO: Chura huyu ana saizi ya kati na miguu mirefu. Sehemu ya juu ina madoa meusi na matuta sambamba yaliyoinka, lakini matuta hayafiki puani. Kwa kawaida, kuna mstari uliofifia katikati ya mgongo. Kiwambo cha sikio kinaonekana na katikati, kina doa lililofifia. Hakuna mstari uliofifia kwenye muundi goko. Nyuma ya mapaja, kuna madoa na siyo mistari. Viungo vitatu vya kidole cha nne cha miguuni havina utando.

SPISHI INAZOFANANA NAZO: Sifa nyingi zinaitofautisha *P. grandisonae* na spishi zingine za jenasi. Sehemu ya nyuma ya mapaja ina mchanganyiko wa rangi, tofauti na mistari wima au mlalo ya spishi kadhaa za jenasi. *P. grandisonae* haina matuta wala pembetatu kwenye pua na ina miguu mirefu.

MAZINGIRA: Savana na nyika kwenye miinuko ya juu

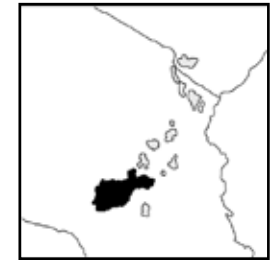
HISTORIA ASILIA: Inazaliana kwenye maeneo yenye nyasi zenye unyevu

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Muita, Luembe, Angola

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1900 m

HALI YA UHIFADHI: Haiko hatarini



Ptychadena mascareniensis (Duméril & Bibron, 1841)

Mascarene Grass Frog, Broad-banded Ridged Frog, Mascarene Rocket Frog



G.J. Measey

SVL: ♂ 38 – 48 mm; ♀ 48 – 66 mm

DESCRIPTION: A medium-sized greenish brown frog with long legs and several rows of parallel ridges on the dorsum. There are several dark squarish markings on the dorsum and additional markings that can vary in color including reds, greens and yellows. The snout is long and pointed and the nostrils are nearer to the snout than to the eyes. The tympanum is visible, usually with a light mark in the center, and is slightly smaller than the diameter of the eye. A light middorsal stripe is usually present, as well as a thin light

line on the tibia. There is a distinct light stripe on the upper lip. The ventral surface is smooth and light without mottling. The last two joints of the longest toe are free of webbing. The back of the thighs are mottled yellow or green and black, but lack distinct stripes or large spots.

SIMILAR SPECIES: *P. mascareniensis* likely contains at least 5 cryptic species. This species can be distinguished from other members of the genus by the horizontal stripes on the backs of the thighs, the lack of a pale triangle on the snout and the extent of toe webbing.

HABITAT: Wet lowland areas in humid savanna and agricultural areas. Also common in roadside ditches in forest.

NATURAL HISTORY: Breeding takes place in pools, ditches and tire ruts. Small black and white eggs are laid in shallow water. Tadpoles are small and metamorphose after nine weeks.

CALL: Males call from the water's edge or while propped on aquatic vegetation. The call is described as "a series of clucking sounds, repeated rapidly," by Channing (2001).

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc and Coastal Forests of Kenya and Tanzania, also on Mafia Island

TYPE LOCALITY: Réunion and Mascarene Islands, Indian Ocean [although Réunion populations were likely introduced]

ELEVATIONAL RANGE: 0 – 2000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 38 – 48 mm; ♀ 48 – 66 mm

MAELEZO: Chura huyu ana saizi ya kati, ni kijani-kahawia, ana miguu mirefu na safu kadhaa za matuta sambamba kwenye sehemu ya juu. Aidha, kuna alama nyeusi za mraba kwenye sehemu ya juu na alama zingine zinazotofautiana rangi, zikiwepo nyekundu, kijani na njano. Pua ni ndefu na imechongoka; matundu ya pua yako karibu zaidi na pua kuliko macho. Kiwambo cha sikio kinaonekana na kwa kawaida, kina alama iliyofifia katikati na ni kidogo kuliko kipenyo cha jicho. Kuna mstari wenye rangi iliyofifia na unaojitokeza vizuri kwenye mdomo wa juu. Sehemu ya chini ni laini, ina rangi iliyofifia na haina madoa. Viungo viwili vya mwisho vya kidole cha mguuni virefu kuliko vyote havina utando. Sehemu ya nyuma ya mapaja ina mistari sambamba isiyokuwa na mpangilio. Kuna mstari uliofifia kwenye miguu.

SPISHI INAZOFANANA NAZO: *Ptychadeni mascareniensis* ina angalau spishi 5 ambazo bado hazijaainishwa. Tofauti ya spishi hii na zingine kwenye jenasi ni kwamba ina mistari mlalo sehemu ya nyuma ya mapaja, haina pembetatu kwenye pua na kuenea kwa utando kwenye vidole vya mguu ni tofauti pia.

MAZINGIRA: Maeneo tambarare yenye unyevu kwenye savana na maeneo ya kilimo. Inapatikana sana pia kwenye madimbwi kando kando ya barabara misituni.

HISTORIA ASILIA: Inazaliana kwenye madimbwi na matairi. Mayai madogo meusi na meupe yanatagwa kwenye maji ya kina kifupi. Viluwiluwini ni vidogo na vinamaliza hatua zote za mabadiliko baada ya majuma tisa.

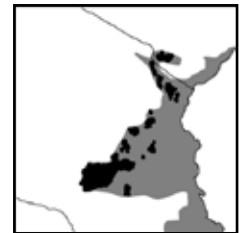
ENEO SPISHI INAPOPATIKANA KWENYE MTMMP:

Maeneo yote ya MTMMP ya Tanzania na Kenya na kwenye kisiwa cha Mafia

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Réunion na Mascarene

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 0 – 2000 m

HALI YA UHIFADHI: Haiko hatarini



Ptychadena mossambica (Peters, 1854)

Single-striped Grass Frog, Broad Banded Grass Frog,
Mozambique Grass Frog



SVL: ♂ 29 – 35 mm; ♀ 33 – 44 mm

DESCRIPTION: The dorsum is brown or olive green with dark spots and a wide pale middorsal stripe. The parallel ridges on the dorsum are continuous rather than interrupted. The snout is sharply pointed. There is no light spot on the tympanum. Unlike most of the frogs in this genus, the tibia is less than ½ the SVL. Three sections of the longest toe are free of webbing. The back of the thigh is mottled without distinct stripes or large spots. Some individuals have a light line on the tibia.

SIMILAR SPECIES: *P. mossambica* can be distinguished from other members of the genus by its shorter legs (tibia equal to or less than ½ SVL).

HABITAT: Dry grassland, shrubland and savanna

NATURAL HISTORY: Breeding takes place in temporary pools and flooded grassland

CALL: Pickersgill (2007) describes the call as “a nasal honk”

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc Mountains and Coastal Forest of Kenya and Tanzania

TYPE LOCALITIES: Tete, Mozambique

ELEVATIONAL RANGE: 200 – 1200 m (possibly higher)

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 29 – 35 mm; ♀ 33 – 44 mm

MAELEZO: Sehemu ya nyuma ni kahawia au rangi ya mzeituni, kuna madoa meusi na katikati, msitari mpana uliofifia. Kuna matuta sambamba kwenye sehemu ya juu ambayo ni mfululizo, hayajakatika. Pua imechongoka sana. Hakuna doa lililofifia kwenye kiwambo cha sikio. Tofauti na vyura wengi wa jenasi hii, muundi goko ni chini ya ½ ya SVL. Sehemu tatu za kidole cha mguuni hazina utando. Sehemu ya nyuma ya paja ina madoa madogo lakini haina mistari wala madoa makubwa. Baadhi ya vyura wana mstari uliofifia kwenye muundi goko.

SPISHI INAZOFANANA NAZO: Tofauti na spishi zingine za jenasi, *Ptychadena mossambica* ina miguu mifupi zaidi (muundi goko ni au chini ya ½ ya SVL)

MAZINGIRA: Nyika kame, vichaka na savanna

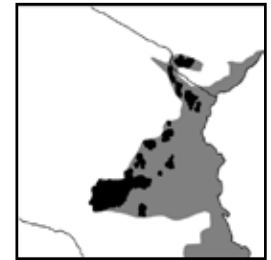
HISTORIA ASILIA: Inazaliana kwenye madimbwi ya muda na nyika zinazofurika maji

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya MTMMP ya Tanzania na Kenya

TYPE LOCALITIES: Tete, Mozambique

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 200 – 1200 m

HALI YA UHIFADHI: Haiko hatarini



Ptychadena oxyrhynchus (Smith, 1849)

Shrarp-snouted Ridged Frog, Sharp-nosed Grass Frog, Sharp-nosed Rocket Frog



E. Harper

SVL: ♂ < 42 - 62 mm; ♀ 58 - 85 mm

DESCRIPTION: A medium-sized frog with very long legs and an acutely sharp snout. The dorsum is brown, often with dark spots, and with several rows of parallel ridges. Some individuals also have bright orange markings. There is a pale triangle on the snout. Distinct, light dorsolateral folds are clearly visible. There is a light stripe on the upper lip that extends below the eye and the tympanum. The tympanum is clearly visible and has a light dot at the center. The nostrils are closer to the tip of the snout than to the

eyes. The ventral surface is smooth and light, sometimes with yellowing toward the groin. Toes are extensively webbed, with only the last one or two joints of the longest toe free of webbing. The back of the thighs are mottled yellow or green and black, but lacks distinct stripes or large spots.

SIMILAR SPECIES: *P. anchiete* and *P. oxyrhynchus* both have a pale triangle on the snout, but *P. anchiete* has horizontal stripes on the posterior surface of the thigh rather than mottling as in *P. oxyrhynchus*.

HABITAT: Wet areas of savanna, agricultural areas and degraded forest.

NATURAL HISTORY: Small brown and white eggs are deposited in small temporary pools, ditches and ruts in clutches as large as 3500. Eggs are laid in short strings which later break apart allowing eggs to float singly on the surface of the water. Tadpoles are gray with a pale head and a clear tail with scattered dark spots. Tadpoles are up to 54 mm in length.

CALL: Males call from the ground, sometimes but not always near water. The call is a long sharp trill.

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc and Coastal Forest

TYPE LOCALITY: Durban, South Africa

ELEVATIONAL RANGE: < 2000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 42 - 62 mm; ♀ 58 - 85 mm

MAELEZO: Chura huyu ana saizi ya kati, miguu mirefu sana na pua iliyochongoka sana. Sehemu ya juu ni kahawia na mara nyingi ina madoa meusi na safu kadhaa za matuta sambamba. Baadhi ya vyura wana alama za rangi ya machungwa inayong'aa. Kuna pembetatu iliyofifia kwenye pua. Makunjo yenye rangi iliyofifia yanaonekana katikati ya mgongo. Kuna mstari uliofifia kwenye mdomo wa juu unaopita chini ya jicho na kiwambo cha sikio. Kiwambo cha sikio kinaonekana vizuri na kina doa lililofifia sehemu ya katikati. Matundu ya pua yako karibu zaidi na ncha ya pua kuliko na macho. Sehemu ya chini ni laini na ina rangi iliyofifia, na wakati mwingine njano njano karibu na kinena. Vidole vya miguuni vina utando sehemu kubwa; kiungo kimoja au viwili tu vya kidole kirefu kuliko vyote hakina utando. Sehemu ya mwisho ya mapaja ina madoa njano, kijani au meusi lakini haina mistari au madoa makubwa.

SPISHI INAZOFANANA NAZO: *P. anchiete* na *P. oxyrhynchus* zina pembetatu zenye rangi iliyofifia kwenye pua, lakini *P. anchiete* ina mistari mlalo sehemu ya mbele ya paja na siyo madoa kama ilivyo kwa *P. oxyrhynchus*

MAZINGIRA: Maeneo ya savana yenye unyevu, maeneo ya kilimo na misitu iliyoharibiwa.

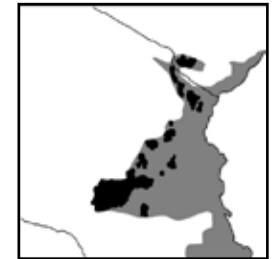
HISTORIA ASILIA: Mayai madogo kahawia na meupe yanatagwa kwenye madimbwi madogo, mifereji na matairi; vyura wanataga mayai kwenye makundi yenye mayai 3500, kwenye mistari mifupi ambayo baadaye inakatika na kuacha mayai yakielea moja moja juu ya maji. Viluwilwi ni kijivu na vina vichwa vyenye rangi iliyofifia na mkia angavu wenye madoa meusi. Urefu wa viluwilwi unafikia 54 mm.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya MTMMP ya Tanzania na Kenya.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Durban, Afrika ya Kusini

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 2000 m

HALI YA UHIFADHI: Haiko hatarini



Ptychadena taenioscelis (Laurent, 1954)

Stripe-legged Frog, Dwarf Grass Frog, Spotted Throated Ridged Frog, Lukula Grassland Frog, Small Ridged Frog



G.J. Measey

SVL: ♂ < 35 mm; ♀ < 40 mm

DESCRIPTION: A small to medium-sized frog with long legs and a pointed snout. The dorsum is brown with darker squarish markings. There are raised parallel ridges on the dorsum, and two of the ridges extend between the eyes onto the snout. The tympanum is clearly visible, smaller than the eye and has a light dot at the center. The nostrils are closer to the tip of the snout than to the eyes. A light ridge of skin runs from the tip of the snout under the eye and tympanum to the base of the

arm. Raised dorsolateral folds may be red or yellowish in color. A thin light line typically runs from the tip of the snout to the vent. There may also be a thin light line on the tibia. The backs of the thighs have distinct vertical stripes. The legs are darkly barred. Toes are partially webbed, but three sections of the longest toe are free of webbing.

SIMILAR SPECIES: The distinct vertical bands on the backs of the thighs and the pair of ridges on the snout distinguish this species from others in the genus.

HABITAT: Grasslands and savanna woodland

NATURAL HISTORY: Breeding takes place in shallow pools and flooded grassland

CALL: The advertisement call is described by Channing and Howell (2006) as “a rapid chirp” with each call consisting of “22 – 25 rapid pulses”

DISTRIBUTION IN THE EACF: Coastal Tanzania and in the Eastern Arc Mountains from the Ukagurus south to the Udzungwa Mountains

TYPE LOCALITY: Lukula, Democratic Republic of Congo

ELEVATIONAL RANGE: Unclear

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 35 mm; ♀ < 40 mm

MAELEZO: Chura huyu ana saizi ndogo hadi kubwa kiasi, miguu mirefu na pua iliyochoongoka. Sehemu ya mgongoni ni kahawia na ina alama ya mraba mweusi. Kuna matuta sambamba yaliyooinuka kwenye sehemu ya chini na matuta mawili yanatoka katikati ya macho hadi kwenye pua. Kiwambo cha sikio kinaonekana vizuri, ni kidogo kuliko jicho na kina doa lililofifia katikati. Matundu ya pua yako karibu zaidi ya ncha ya pua kuliko macho. Tuta la ngozi lililofifia linatoka ncha ya pua chini ya jicho, linapita kiwambo cha sikio hadi mwanzoni mwa mkono. Makunjo yaliyooinuka ya katikati ya mgongo ni mekundu au njano njano. Mstari mwembamba uliofifia unatoka ncha ya pua hadi kwenye tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Inawezekana pia kukawa na mstari mwembamba uliofifia kwenye muundi goko. Sehemu ya nyuma ya mapaja ina mistari wima inayoonekana vizuri. Miguu ina mistari mieusi. Vidole vya miguuni vina utando kiasi lakini sehemu tatu za kidole kirefu kuliko vyote hazina utando.

SPISHI INAZOFANANA NAZO: *Ptychadena* spishi

MAZINGIRA: Tofauti na spishi zingine za jenasi, spishi hii ina mistari wima nyuma ya mapaja na matuta mawili mawili kwenye pua.

HISTORIA ASILIA: Inazaliana kwenye madimbwi yenye kina kifupi na nyika zilizofurika maji.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Pwani ya Tanzania na Milima ya Tao la Mashariki kuanzia Ukaguru kuelekea kusini hadi Milima ya Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Lukula, Jamhuri ya Kidemokrasia ya Kongo

HALI YA UHIFADHI: Haiko hatarini



Ptychadena uzungwensis (Loveridge, 1932)
Udzungwa Ridged Frog, Udzungwa Grassland Frog



A. Channing

SVL: ♂ < 42 mm; ♀ < 48 mm

DESCRIPTION: A medium-sized frog with parallel ridges on the dorsum that are broken rather than continuous. The dorsal color is dark brown with darker brown spots. There are two distinct ridges on the snout. Light dorsolateral folds of skin run along each side of the body. There is a light middorsal stripe. The back of the thigh is faintly spotted and in some individuals the spots join to form a horizontal band. Three joints of the longest toe are free of webbing. Males have yellow throats and yellow patches near the groin.

SIMILAR SPECIES: *P. uzungwensis* has a pair of ridges on the snout and the backs of the thighs are not striped distinguishing this species from others in the genus.

HABITAT: Wet grasslands at moderate to high elevations

NATURAL HISTORY: Breeding takes place in shallow water

CALL: The call is a trill

DISTRIBUTION IN THE EACF: Udzungwa Mountains

TYPE LOCALITY: Dabaga, Udzungwa Mountains, Tanzania

ELEVATIONAL RANGE: 800 – 2300 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 42 mm; ♀ < 48 mm

MAELEZO: Chura huyu ana saizi ya kati; sehemu ya juu kuna matuta sambamba ambayo yamekatika na siyo mfululizo. Sehemu ya juu ni kahawia na ina madoa kahawia iliyokolea zaidi. Kuna matuta mawili yanayoonekana vizuri kwenye pua. Kuna makunjo mgongoni na pembeni. Kuna mstari uliofifia katikati ya mgongo. Sehemu ya nyuma ya paja ina madoa yaliyofifia na kwenye baadhi ya vyura, madoa yameungana na kutengeneza mstari mlalo. Vifundo vitatu vya kidole cha mguuni virefu kuliko vyote na havina utando. Madume yana koo na madoa njano karibu na kinena.

SPISHI INAZOFANANA NAZO: Tofauti na spishi zingine za jenasi, *Ptychadena uzungwensis* ina matuta mawili kwenye pua na hakuna mistari nyuma ya mapaja.

MAZINGIRA: Nyika zenye unyevu kwenye miinuko ya kati hadi ya juu

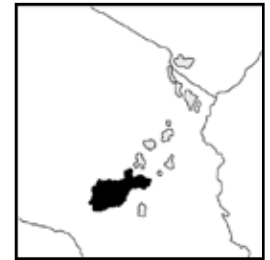
HISTORIA ASILIA: Inazaliana kwenye maji ya kina kifupi

ENE SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Dabaga, Milima ya Udzungwa, Tanzania

ENE LA SPISHI KUTOKA USAWA WA BAHARI: 800 – 2300 m

HALI YA UHIFADHI: Haiko hatarini



Pyxicephalidae

The family Pyxicephalidae includes genera that until recently were considered to be in the family Ranidae. In the Eastern Arc and Coastal Forests, these genera include *Amietia*, *Strongylopus* and *Pyxicephalus*. Several species have historically been lumped under the name *Amietia angolensis*, (previously referred to as *Rana angolensis* or *Afrana angolensis*). Pickersgill (2007) recently removed two Eastern Arc species, *Amietia tenuoplicata* and *Amietia viridireticulata* from this species complex; however more work is still needed. The remaining two genera in this family are each represented by a single species, *Strongylopus fuelleborni* and *Pyxicephalus edulis*.

Familia ya Pyxicephalidae inajumuisha jenasi ambazo mpaka hivi karibuni zilikuwa kwenye familia ya Ranidae. Jenasi zilizopo kwenye MTMMP ni pamoja na *Amietia*, *Strongylopus* na *Pyxicephalus*. Kwa muda mrefu, spishi kadhaa zilipewa jina la *Amietia angolensis*, (kabla ya hapo zilijulikana kama *Rana angolensis* au *Afrana angolensis*). Hivi karibuni, Pickersgill (2007) aliondoa spishi mbili za Tao la Mashariki, *Amietia tenuoplicata* na *Amietia viridireticulata* kutoka kundi hili lakini bado kuna haja ya kufanya utafiti zaidi. Miongoni mwa jenasi mbili zilizobaki kwenye familia, kila moja ina spishi moja tu, *Strongylopus fuelleborni* na *Pyxicephalus edulis*.



Pyxicephalus edulis
R. Drewes

Amietia angolensis (Bocage, 1866)

Common River Frog, Angola River Frog, Dusky-throated Frog



E. Harper

This species is widespread and is almost certainly a complex of multiple cryptic species. *A. tenuoplicata* and *A. viridireticulata* were recently split from *A. angolensis* by Pickersgill (2007). However the ranges of these new species are unknown and it may be that all of the species formerly called *A. angolensis* in the EACF fall under one of these two names. Alternately there may be additional species that will be split from *A. angolensis* in the future. Because the type locality of *A. angolensis* is in Angola it is likely that once the taxonomy is better understood there will no longer be

any species in the EACF called *A. angolensis*. Clearly more work is needed.

SVL: ♀ < 90 mm

DESCRIPTION: A large frog with long legs. The dorsal color and markings are variable, usually browns, greens and yellows, sometimes with darker marks. Dorsal texture is also variable, from smooth to ridged. The tympanum is visible and slightly larger than ½ the diameter of the eye. A fold of skin curves from the eye to the arm over the tympanum. Toes are webbed, usually with only the last section of the longest toe free of webbing, but webbing is variable among populations.

HABITAT: A widespread species in forest, grassland, savanna and agricultural areas. Associated with permanent water.

NATURAL HISTORY: Eggs are laid in shallow water in ponds on the edges of streams in forest and in open areas. The large tadpoles are brown with some flecking, and can reach a total length of 80 mm or greater.

CALL: Males call from the water's edge, often partially submerged. Two different calls, usually emitted in succession, consist of a rattle and a brief croak.

DISTRIBUTION IN THE EACF: Unclear given current taxonomic revisions, but widespread

TYPE LOCALITY: "Duque de Bragança", Angola

ELEVATIONAL RANGE: < 2800 m

CONSERVATION STATUS: Least concern

Spishi hii imeenea mahali pengi na ni wazi kwamba inajumuisha spishi nyingi zinazofanana ambazo bado hazijaainishwa. *A. tenuoplicata* na *A. viridireticulata* ziliondolewa na Pickersgill (2007) hivi karibuni kwenye spishi ya *A. angolensis*. Hata hivyo, bado spishi hizi mpya hazijajulikana vizuri na inawezekana kwamba spishi zote ambazo awali zilikuwa zinaitwa *A. angolensis* kwenye MTMMP zikawekwa chini ya jina moja kati ya haya mawili. Inawezekana pia zikawepo spishi zingine ambazo zinaweza kuondolewa kwenye *A. angolensis* katika siku zijazo. Kwa vile eneo inakopatikana *A. angolensis* liko Angola, inawezekana kwamba baada ya kuainisha vizuri spishi hizi, huenda kusiwepo spishi zozote kwenye MTMMP zinazoitwa *A. angolensis*. Ni wazi kwamba kuna haja ya kufanya utafiti zaidi.

UREFU WA MWILI: < 90 mm

MAELEZO: Chura huyu ni mkubwa na ana miguu mirefu. Rangi ya sehemu ya juu na alama inatofautiana lakini kwa kawaida ni kahawia, kijani na njano na wakati mwingine yanakuwepo madoa meusi pia. Sehemu ya juu inatofautiana pia, inaweza kuwa laini hadi kuwa na matuta. Kiwambo cha sikio kinaonekana na kinazidi kidogo ½ ya kipenyo cha jicho. Mkunjo wa ngozi unaanzia kwenye jicho, unapita juu ya kiwambo cha sikio hadi mkononi. Vidole vya mguuni vina utando, kwa kawaida ni sehemu moja tu ya kidole cha mguu kirefu kuliko vyote ambayo haina utando, lakini utando unatofautiana kati ya vyura.

MAZINGIRA: Inapatikana kwenye mazingira mengi kama misituni, nyika, savana na maeneo ya kilimo, kwenye maji ya kudumu.

HISTORIA ASILIA: Mayai yanatagwa kwenye madimbwi yenye kina kifupi kando kando ya vijito msituni na maeneo wazi. Viluwiluwi ni wakubwa, kahawia na wana madoa madogo, na wanaweza kufikia urefu wa 80 mm au zaidi.

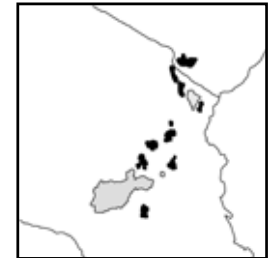
ENEO SPISHI INAPOPATIKANA KWENYE MTMMP:

Bado haijulikani kutokana na marekebicho ya uainishaji yanayoendelea, lakini inapatikana mahali pengi

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: "Duque de Bragança", Angola

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 2800 m

HALI YA UHIFADHI: Haiko hatarini





SVL: ♀ 57 - 87 mm; males smaller

DESCRIPTION: A large frog with long legs and distinct dorsolateral folds. The dorsum is smooth and brown, often with dark spots. There is a dark line from the snout to the eye that continues as a larger band from the eye, over the tympanum to the corner of the mouth. A light fold of skin extends from the eye over the tympanum to the base of the arm. The tympanum is visible and slightly smaller than the eye. Toe tips are not expanded. The tibia is slightly longer than $\frac{1}{2}$ SVL. The second finger is shorter than the first. One to two segments of the fourth toe are unwebbed. The ventral surface is light, sometimes with dark mottling on the throat. Males in breeding condition have darkly pigmented nuptial pads.

HABITAT: Forest streams

NATURAL HISTORY: Eggs are laid on the edges of streams. Larvae hatch and develop in the water.

CALL: Unclear

DISTRIBUTION IN THE EACF: Currently known only from the type locality, however additional research will likely find that this species is more widespread.

TYPE LOCALITY: Amani, East Usambaras, Tanzania

ELEVATIONAL RANGE: 750 – 1000 m

CONSERVATION STATUS: Data deficient

UREFU WA MWILI: ♀ 57 – 87 mm

MAELEZO: Chura huyu ni mkubwa sana, ana miguu mirefu na mikunjo mgongoni na pembeni inayoonekana. Sehemu ya juu ni laini na kahawia, na mara nyingi ina madoa meusi. Kuna mstari mweusi kutoka puani hadi kwenye macho na unaendelea kama mstari mpana kutoka machoni, kupitia kiwambo cha sikio hadi kwenye kona ya mdomo. Mkunjo wa ngozi uliofifia unatoka jichoni, unapita kwenye kiwambo cha sikio hadi mwanzoni mwa mkono. Kiwambo cha sikio kinaonekana na kidogo kiasi kuliko jicho. Ncha za vidole vya mguuni siyo pana. Miguu ni mirefu kidogo zaidi ya $\frac{1}{2}$ ya SVL. Kidole cha pili cha mkononi kifupi kuliko cha kwanza. Sehemu moja au mbili za kidole cha nne cha mguuni hazina utando. Sehemu ya chini ina rangi iliyofifia na wakati mwingine kuna madoa meusi kwenye koo. Madume yakiwa kwenye msimu wa kupandana yanakuwa na maeneo magumu meusi ya ngozi yanayotumika kumkamata jike.

MAZINGIRA: Vijito vya msituni

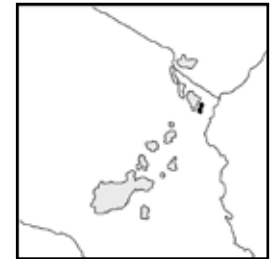
HISTORIA ASILIA: Mayai yanatagwa pembeni mwa vijito. Lava wanatolewa na kukua majini.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Kwa sasa, inapatikana tu mahali kielelezo kilipopewa jina kwa mara ya kwanza; lakini utafiti zaidi unaweza kuonyesha kwamba spishi imeenea mahali pengi

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Amani, Milima ya Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 750 – 1000 m

HALI YA UHIFADHI : Hakuna taarifa za kutosha





SVL: ♂ 41 – 81 mm; ♀ < 50 - 90 mm

DESCRIPTION: A large brown to olive green frog with irregular darker markings on the dorsum. The dorsal pattern and color can vary. The snout is pointed in profile. Some individuals have a light vertebral stripe. Dorsolateral folds are distinct. There are raised glands scattered along the sides. There is a light stripe above the lip and a dark mask that runs from the tip of the snout, under the eye and over the tympanum. Toes are extensively webbed, with at most one joint of the longest toe free of webbing.

HABITAT: Streams in forest and montane grassland.

NATURAL HISTORY: Eggs are laid on the edges of streams. Larvae hatch and develop in the water.

CALL: Unclear

DISTRIBUTION IN THE EACF: Udzungwa Mountains

TYPE LOCALITY: Dabaga, Tanzania

ELEVATIONAL RANGE: 1740 – 2000 m

CONSERVATION STATUS: Data deficient

UREFU WA MWILI: ♂ 41 – 81 mm; ♀ < 50 – 90 mm

MAELEZO: Chura huyu ni mkubwa, ana rangi ya kahawia hadi kijani ya mzeituni na ana alama nyeusi sehemu ya chini. Kuna tofauti kwenye mpangilio wa sehemu ya juu na rangi. Pua imechongoka. Baadhi ya vyura wana mstari uliofifia mgongoni. Mikunjo ya mgongoni na pembeni inaonekana. Kuna tezi zilizoinuka kila upande. Kuna mstari uliofifia juu ya mdomo na barakoa nyeusi kutoka ncha ya pua, chini ya macho na juu ya kiwambo cha sikio. Vidole vya miguuni vina utando mwingi na angalau kifundo kimoja cha kidole kirefu kuliko vyote vya mguuni hakina utando.

MAZINGIRA: Vijito vya msituni na nyika zilizopo 1200 m kutoka usawa wa bahari

HISTORIA ASILIA: Mayai yanatagwa pembeni mwa vijito. Lava wanatotolewa na kukua majini.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Udzungwa

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Dabaga, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1740 – 2000 m

HALI YA UHIFADHI: Hakuna taarifa za kutosha



Strongylopus fuelleborni (Nieden, 1911)

Long-toed Grass Frog, Fülleborn's Stream Frog



E. Harper

SVL: ♂ < 40 mm; ♀ < 53 mm

DESCRIPTION: A slender, long-legged frog with extremely long toes. The snout is pointy. A dark line runs from the snout to the eye and continues under the eye, across the tympanum to the base of the arm. A pale stripe runs from below the eye to the arm under the dark band. There is a pair of distinct skin ridges that begin behind the eye and run to the vent. These ridges are outlined in black and have a lighter color between them that forms a middorsal stripe. The stripe may be tan or greenish. There

are also broken parallel ridges on the dorsum. The tibia is approximately $\frac{3}{4}$ SVL. There is only a small amount of webbing at the base of the toes.

SIMILAR SPECIES: This species is similar to the *Ptychadena* species, but has only a very minimal amount of webbing. The extremely long toes are distinctive. There is still some disagreement regarding the species boundary between *S. fuelleborni* and *S. merumontanus* which some taxonomists consider to occur only on Mt. Meru.

HABITAT: Montane grasslands

NATURAL HISTORY: Breeding takes place in grassland streams. Eggs are laid under dense vegetation at the edges of streams and tadpoles hatch and develop in the water.

CALL: Pickersgill (2007) describes the call as “a breathy whistle, repeated singly or in sets of two or rarely three.”

DISTRIBUTION IN THE EACF: Mount Rungwe, Ufipa Plateau, and West Usambara, Uluguru, Rubeho, and Udzungwa Mountains.

TYPE LOCALITY: Poroto Mountains, Tanzania

ELEVATIONAL RANGE: 1500 – 3000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 40 mm; ♀ < 53 mm

MAELEZO: Chura huyu ni mwembamba, ana miguu mirefu na vidole vya mguuni virefu sana. Pua imechongoka. Mstari mrefu mweusi unatoka puani hadi jichoni na unaendelea chini ya jicho, kupitia kiwambo cha sikio hadi mwanzoni mwa mkono. Mstari uliofifia unatoka chini ya jicho hadi mkononi chini ya mstari mweusi. Kuna matuta mawili mawili ya ngozi yanayoanzia nyuma ya jicho hadi kwenye tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Matuta haya ni meusi na kati yao, kuna rangi iliyofifia ambayo inaunda mstari katikati ya sehemu ya juu. Mstari huo unaweza kuwa rangi ya hudhurungi au kijani kijani. Aidha, kuna matuta sambamba yaliyokatika kwenye sehemu ya juu. Miguu ni takribani $\frac{3}{4}$ ya SVL. Kuna utando kidogo sana mwanzoni mwa vidole vya mguuni.

SPISHI INAZOFANANA NAZO: *Ptychadena*

MAZINGIRA: Nyika zilizopo 1200 m kutoka usawa wa bahari

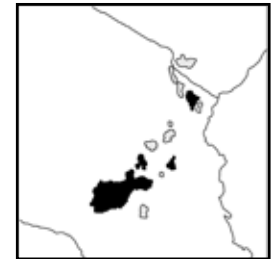
HISTORIA ASILIA: Inazaliana kwenye vijito vya nyikani. Mayai yanatagwa kwenye uoto mnene pembeni mwa vijito; viluwiluwi wanatolewa na kukua majini

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima Rungwe, Uwanda wa Ufipa, na Milima ya Usambara Magharibi, Uluguru, Rubeho, na Udzungwa.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima ya Uporoto, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1500 – 3000 m

HALI YA UHIFADHI: Haiko hatarini



Pyxicephalus edulis (Peters, 1854)

Lesser Bull-frog, Edible Bullfrog, Edible Frog



R. Drewes

SVL: ♂ < 100 mm; ♀ < 145 mm

DESCRIPTION: A large rotund frog with short legs. The dorsum is brown to green and covered in rough glands that are elongate or round. There are projections on the lower jaw that resemble teeth. The tympanum is small, but distinctly visible. The first finger is longer than the second. The toes are webbed only at the base.

SIMILAR SPECIES: Previously considered a subspecies of *P. adspersus*. The teeth-like projections and large size are distinctive.

HABITAT: Flooded grasslands and shrubland

NATURAL HISTORY: It is a fossorial species that is seen only in the rainy season. Breeding takes place in shallow pools with ample vegetation. Females lay several thousand eggs singly and scattered. Males guard tadpoles.

CALL: Described by Channing (2001) as sounding like “the barking of a small dog.

DISTRIBUTION IN THE EACF: Throughout the Eastern Arc Mountains and coastal forests of Kenya and Tanzania

TYPE LOCALITY: Tete, Mozambique

ELEVATIONAL RANGE: < 1500 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ < 100 mm; ♀ < 145 mm

MAELEZO: Chura huyu ni mkubwa, mviringo na ana miguu mifupi. Sehemu ya juu ni kahawia hadi kijani na ina tezi za kukwaruza ambazo ni ndefu ndefu na mviringo. Kwenye taya ya chini, kuna sehemu zilizojitokeza ambazo zinafanana na meno. Kiwambo cha sikio ni kidogo lakini kinaonekana. Kidole cha kwanza cha mkononi ni kirefu kuliko cha pili. Vidole vya mguuni vina utando mwanzoni tu.

SPISHI INAZOFANANA NAZO: Awali, ilidhaniwa kuwa spishi hii ni spishi ndogo ya *P. adspersus*. Spishi hii inatofautiana na zingine kwa sehemu zinazochomoza na kufanana na meno na saizi yake kubwa

MAZINGIRA: Nyika zilizofurika maji na maeneo ya vichaka

HISTORIA ASILIA: Spishi hii inachimba mashimo na kuishi chini ya ardhi na inaonekana tu msimu wa mvua. Inazaliana kwenye madimbwi yenye kina kifupi na uoto mwingi. Majike yanataga maelfu kadhaa ya mayai moja moja na yanatawanyika. Madume yanalinda viluwiluwi.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo yote ya MTMMP ya Tanzania na Kenya

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Tete, Mozambique

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1500 m

HALI YA UHIFADHI: Haiko hatarini.



Ranidae

The family Ranidae includes only one species found in the Eastern Arc and Coastal Forests. *Hylarana galamensis* is widespread, occurring across the savannas of eastern, central and western sub-Saharan Africa.

Familia ya Ranidae ina spishi moja tu inayopatikana MTMMP. Spishi hii ni *Hylarana galamensis* na inapatikana mahali pengi, kwenye maeneo ya savanna na mashariki, kati na magharibi mwa Afrika kusini mwa Sahara.



Hylarana galamensis
R. Drewes

Hylarana galamensis (Duméril and Bibron, 1841)

Marble-legged Frog, Golden-backed Frog, Galam White-lipped Frog



R. Drewes

SVL: ♂ 78mm; ♀ 86 mm

DESCRIPTION: The dorsum is glandular, with raised yellow-brown glands on smooth dark brown skin. There are broad, light dorsolateral folds. A pale ridge of skin runs across the upper lip from the tip of the snout to above the arm. There is a dark line above this ridge that runs from the nostril to the eye. The tympanum is visible, dark with white edges, and slightly smaller than the eye. The legs are short (tibia slightly less than ½ SVL) and stocky. There is at least one irregular dark horizontal line

on the tibia. Toe tips are not expanded. Toes are partially webbed.

SIMILAR SPECIES: The glandular texture of this species skin distinguishes it from similar species.

HABITAT: Permanent bodies of water in savannas; also common in towns

NATURAL HISTORY: Breeds in lakes and ponds and is seldom found far from permanent water. Females lay multiple clutches of over a thousand eggs. The eggs float on the surface of the water in a single layer.

CALL: Males call while floating in the water or from vegetation in the water. The call is described as “a nasal bleat” by Channing and Howell (2006).

DISTRIBUTION IN THE EACF: Coastal areas of Kenya and Tanzania, southern and western Tanzania and Mafia Island

TYPE LOCALITY: Senegal

ELEVATIONAL RANGE: < 900 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 78mm; ♀ 86 mm

MAELEZO: Sehemu ya juu ina tezi za njano kahawia zilizoinuka, kwenye ngozi laini na kahawia iliyokolea. Kuna mikunjo ya ngozi mipana iliyofifia mgongoni na pembeni. Tuta moja la ngozi lenye rangi iliyofifia linapita kwenye mdomo wa juu, kutoka ncha ya pua hadi juu ya mkono. Kuna mstari mweusi juu ya tuta hili unaotoka kwenye tundu la pua hadi jichoni. Kiwambo cha sikio kinaonekana, ni cheusi, chenye weupe pembeni na ni kidogo kidogo kuliko jicho. Miguu ni mifupi (kidogo chini ya ½ ya SVL) na minene. Kuna angalau mstari mmoja wa mlalo bila mpangilio kwenye muundi goko. Ncha za vidole vya mguuni siyo pana na zina utando kiasi.

SPISHI INAZOFANANA NAZO: Ngozi ya spishi hii yenye tezi inaitofautisha na zingine zinazofanana nayo.

MAZINGIRA: Mkusanyiko wa kudumu wa maji kwenye savana, lakini pia inapatikana sana mijini.

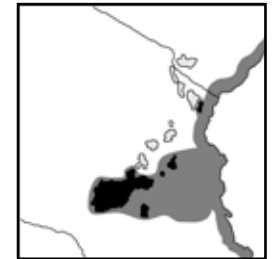
HISTORIA ASILIA: Inazaliana kwenye maziwa na madimbwi na anapatikana kwa nadra mbali na maji ya kudumu. Majike yanataga makundi mengi yenye zaidi ya mayai 1,000. Mayai yanaelea juu ya maji yakiwa kwenye tabaka moja

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Pwani ya Kenya na Tanzania, Tanzania Kusini na Magharibi na kisiwa cha Mafia.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Senegal

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 900 m

HALI YA UHIFADHI: Haiko hatarini



Rhacophoridae

Rhacophoridae is primarily an Asian family, with only one genus, *Chiromantis*, occurring in Africa. Two species are found in the Eastern Arc and Coastal Forests. Both are large gray tree frogs with distinct disks on the fingers and toes. They build foam nests above water that protect their eggs until tadpoles hatch.

Vyura mchanga

Rhacophoridae ni familia ambayo kwa sehemu kubwa inapatikana bara la Asia; jenasi moja tu, *Chiromantis*, ndiyo inapatikana Afrika. Spishi mbili zinapatikana MTMMP; zote mbili zina vyura kijivu wakubwa sana wenye ncha butu za vidole vya mguuni na mkononi. Vyura hawa wanajenga viota vya povu juu ya maji ambavyo vinalinda mayai mpaka viluwiluwi vinapotokeza.



Chiromantis xerampelina
E. Harper

Chiromantis petersii (Boulenger, 1882)

Peters' Foam-nest Treefrog, Central Foam-nest Tree Frog



G.J. Measey

SVL: ♂ 37 – 44 mm; ♀ 50 – 53 mm

DESCRIPTION: Dorsum white to grey with prominent tubercles. The ventral surface is white. Males have a gray throat. The tympanum is distinctly visible. The eyes are large with horizontal pupils. The toes are expanded with small disks. The toes are extensively webbed with only one joint of the longest toe free of webbing.

SIMILAR SPECIES: Toes are not as extensively webbed as *C. xerampelina*. Toe disks are smaller than in *X. xerampelina*.

HABITAT: Dry savanna, shrubland and grassland. Can be found in agricultural and suburban areas as well.

NATURAL HISTORY: Foam nests are constructed by males whipping up secretions from their backs using their rear legs. The foam hardens on

vegetation overhanging temporary pools. Tadpoles hatch and drop in the water where they complete their development.

CALL: A series of quiet creaking croaks, sometimes repeated in short pulses.

DISTRIBUTION IN THE EACF: Inland areas of Tanzania and Kenya

TYPE LOCALITY: "Interior of East Africa"

ELEVATIONAL RANGE: < 1100 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 37 – 44 mm; ♀ 50 – 53 mm

MAELEZO: Sehemu ya juu ni nyeupe hadi kijivu na ina sehemu ya ngozi ngumu iliyoinuka kwenye sehemu ya ndani ya mguu inayojitokeza. Sehemu ya chini ni nyeupe. Madume yana koo kijivu. Kiwambo cha sikio kinaonekana vizuri. Macho ni makubwa na yana mboni za mlalo. Vidole vya mguuni ni vipana na vina ncha ndogo mviringo. Vidole vya mguuni vina utando sana na kifundo kimoja tu cha kidole kirefu kuliko vyote hakina utando.

SPISHI INAZOFANANA NAZO: Vidole vya mguuni havina utando mwingi kama vya *C. xerampelina* na ncha mviringo za vidole ni ndogo zaidi pia.

MAZINGIRA: Savana kame, vichaka na nyika. Inapatikana pia kwenye maeneo ya kilimo na viunga vya miji

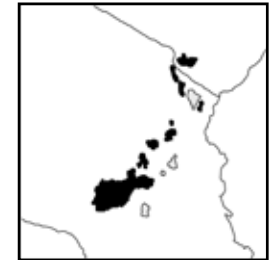
HISTORIA ASILIA: Madume yanatengeneza viota vya mapovu kwa kupiga majimaji yanayotoka mgongoni kwa miguu ya nyuma. Mapovu yanaganda kwenye uoto juu ya madimbwi ya muda. Viluwiluwi vinatolewa na kuanguka majini vinakokaa mpaka vikipata umbo kamili.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Maeneo ya bara ya Tanzania na Kenya

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: " Maeneo ya bara ya Afrika Mashariki"

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1100 m

HALI YA UHIFADHI: Haiko hatarini



Chiromantis xerampelina (Peters, 1854)
African Gray Treefrog, Foam Nest Treefrog



J. Vonesh

SVL: ♂ 43 – 75 mm; ♀ < 60 – 90 mm
DESCRIPTION: A slender gray treefrog, appearing almost completely white during the daytime. In some individuals the dorsum is mottled with a darker brown pattern resembling tree bark. The eyes are large with horizontal pupils, and the tympanum is distinctly visible. The fingers have wide expanded disks and are arranged in opposable pairs that wrap easily around small branches. Toes are completely webbed.

SIMILAR SPECIES: Toes are more extensively webbed than *C. petersii*. Toe disks are larger than in *C. petersii*.

HABITAT: Humid wooded savannas and semi-deciduous forests

NATURAL HISTORY: A single female and several males construct a foam nest on leaves or branches above water. The female must return to the pool several times during the construction of the nest to absorb enough water to complete the task. In some cases, she may even return the following night to add water to the nest. The large unpigmented eggs develop into small dark tadpoles which drop into the water after three to five days. The small tadpoles are only 18 mm in length.

CALL: Males call from vegetation above water. The call is described by Schiøtz as “subdued croaks and squeaks emitted irregularly.”

DISTRIBUTION IN THE EACF: Coastal Kenya and Tanzania and southern Tanzania. Also on the island of Zanzibar.

TYPE LOCALITY: Mozambique

ELEVATIONAL RANGE: < 1000 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 43 – 75 mm; ♀ < 60 – 90 mm

MAELEZO: Amfibia minyoo huyu ni mwembamba, anaishi mitini na anaonekana karibu mweupe kabisa kutwa mzima. Katika baadhi ya vyura, sehemu ya juu ina madoa kahawia iliyokolea na mpangilio unaofanana na gome la mti. Macho ni makubwa, ana mboni mlalo na kiwambo cha sikio kinaonekana. Vidole vya mkononi vina ncha pana, mviringo na zimepangwa mbilimbili zikitazamana na kuweza kukamata vizuri kwenye matawi madogo. Vidole vya mguuni vina utando.

SPISHI INAZOFANANA NAZO: Spishi hii ina utando mwingi zaidi kuliko *C. petersii* na ncha mviringo za vidole ni vikubwa zaidi kuliko vya *C. petersii*.

MAZINGIRA: Savana yenye miombo na unyevu na misitu ambayo baadhi ya miti yake inaangusha majani yote wakati mmoja

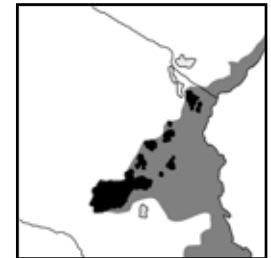
HISTORIA ASILIA: Jike moja na madume kadhaa wanajenga kiota cha mapovu kwenye majani au matawi juu ya maji. Jike linarudi kwenye maji mara kadhaa wakati wa ujenzi wa kiota ili kuleta maji ya ujenzi. Wakati mwingine, linaweza hata likarudi usiku unaofuata kuongeza maji kwenye kiota. Mayai makubwa yasiyokuwa na rangi yanageuka viluwiluwi vidogo na vyeusi vinavyoanguka majini baada ya siku tatu hadi tano. Viluwiluwi ni vidogo na vina urefu wa 18 mm tu.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Pwani ya Kenya na Tanzania, kusini mwa Tanzania na kisiwa cha Zanzibar.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Msumbiji

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: < 1000 m

HALI YA UHIFADHI: Haiko hatarini



Order Gymnophiona

Caecilians are elongate, limbless amphibians that are highly specialized for burrowing. Like frogs, they are carnivorous, eating most soil macroinvertebrates. The body is greatly elongate and segmented by annular grooves (folds in the skin) which may help them move through their burrows. Counting these primary annuli can help determine the species. The tail is short, but not present in any known African species. The eyes are small and covered with skin or bone. To the casual observer, they could be easily mistaken for earthworms.

Kabila la Amfibia minyoo

Caecilians ni vyura warefu sana, hawana miguu wala mikono na ni wachimbaji ardhi hodari sana. Kama vyura, wanakula wanyama na hasa karibu wanyama wote bila mti wa mgongo wanaoishi ardhini. Mwili ni mrefu sana na una mikunjo ya ngozi ambayo inajitokeza kama mistari inayozunguka mwili na inayougawanya katika sehemu ambazo zinawasaidia vyura kupita kwenye mashimo yao. Mistari hii inayozunguka mwili inaweza kusaidia kutofautisha spishi. Mkia ni mfupi lakini haupo kwenye spishi zozote za Afrika zinazojulikana. Macho ni madogo na yamefunikwa na ngozi na mifupa. Mtu asiye mtaalam anaweza kufikiri chura hawa ni minyoo.



Boulengerula niedeni
G.J. Measey

Caeciliidae

Boulengerula boulengeri (Tornier, 1896)

Usambara bluish-gray caecilian



G.J. Measey

SVL: ♂ 142 – 242 mm; ♀ 150 – 229 mm

DESCRIPTION: A pale blue to grey caecilian, darker above than below, from 80 to 250 mm in length. The mouth is recessed and the tail is absent. The heads of males are slightly larger than females, although the sexes are hard to tell apart in other ways. Oviductal eggs are visible through the skin of females. Primary annuli: 124 – 134.

SIMILAR SPECIES: The West Usambaras has a similar looking species.

HABITAT: It is a common species in the Usambaras and is found in the soil (typically the top 20 cm) in forests and on small-

farms. It is absent from compacted soils (e.g. tea plantations), but can penetrate very hard forest soils to depths > 50 cm.

NATURAL HISTORY: *B. boulengeri* lays eggs in a nest in moist soil that hatch directly into small pink caecilians. This species may have extended parental care with hatchlings feeding from the skin of their brooding mother, as reported for *B. taitana*. Eggs have been found in December and pink juveniles with their mothers during December and January, within the short rainy season. Adults are known to eat mostly termites and earthworms, but will take on most soil invertebrates which they find in their galleries, including large crickets which they spin to reduce the size so that it can fit into their mouths. Predators include the Usambara Garter Snake *Elapsoidea nigra*, which may predate solely upon caecilians. However, the most abundant predators are almost certainly invertebrates, including safari ants (*Dorylus molestus*).

DISTRIBUTION IN THE EACF: East and West Usambara (Channing & Howell 2006 recognize these animals as a different undescribed species. Details are likely to be very similar to the above) Mountains and on the Magrotto Ridge

TYPE LOCALITY: East Usambaras, Tanga, Tanzania

ELEVATIONAL RANGE: 300 – 1500 m

CONSERVATION STATUS: Least concern

Caeciliidae

Familia ya Amfibia minyoo



UREFU WA MWILI: ♂ 142 – 242 mm; ♀ 150 – 229 mm

MAELEZO: Amfibia minyoo huyu ana rangi iliyofifia, ni mweusi zaidi juu kuliko chini na ana urefu kati ya sentimita 80 na 250. Mdomo umerudi ndani na hakuna mkia. Vichwa vya madume ni vidogo kidogo kuliko vya majike, na ni vigumu kutofautisha madume na majike kwa njia nyingine. Mayai ya kirijaova yanaonekana kupitia ngozi angavu ya majike. Kuna mistari 124 – 134 inayozunguka mwili

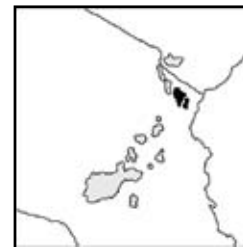
SPISHI INAZOFANANA NAZO: Kuna spishi inayofanana nayo Usambara Magharibi **MAZINGIRA:** Inapatikana kwa wingi Usambara Magharibi na kwenye udongo (20 mm za juu) wa msituni na mashamba madogo. Haiyo kwenye udongo uliohindiliwa (kwa mfano wa mashamba ya chai) lakini inaweza kupenya udongo mgumu wa misitu hadi kwenye kina cha > 50 cm.

HISTORIA ASILIA: *Boulengerula boulengeri* inataga mayai kwenye kiota kilichopo kwenye udongo wenye unyevu; mayai haya hutotolewa moja kwa moja na kuwa caecilians wadogo wenye rangi ya waridi. Majike yanaweza kuhudumia vichanga vyao kwa muda mrefu na vitoto vinakula kutoka kwenye ngozi ya mama yao, kama ilivyoripotiwa kuhusu *B. taitana*. Mayai yalionekana mwezi wa Desemba na vitoto vyenye rangi ya waridi pamoja na mama zao walionekana miezi ya Desemba na Januari, wakati wa mvua za vuli. Amfibia minyoo wazima wanakula kumbikumbi na minyoo ya ardhini lakini wanakula pia wanyama bila mti wa mgongo wa kwenye udongo wenye unyevunyevu wanaokutana nao, pamoja na nyenje wanaowazungusha ili kupunguza saizi yao na hivyo kuenea mdomoni mwao. Wanyama wanaokula spishi hii ni Nyoka wa Usambara *Elapsoidea nigra*, ambaye wakati mwingine anawinda caecilians tu; wengine ni ni wale wasiokuwa na uti wa mgongo, kwa mfano siafu (*Dorylus molestus*).

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Usambara Magharibi na Mashariki (Channing and Howell wanaona kwamba wanyama hawa ni spishi tofauti ambayo haijatolewa maelezo. Taarifa zinafanana sana na za hapo juu), Milima na safu ya Magrotto.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Usambara Mashariki, Tanga, Tanzania
ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 300 – 1500 m

HALI YA UHIFADHI: Haiko hatarini



Boulengerula chamgamwensis (Loveridge, 1932)

Chamgamwe caecilian



SVL: ♂ 180 – 225 mm, ♀ 193 – 216 mm

DESCRIPTION: A small to medium-sized caecilian which is pink with a slightly blue hue. The head can appear as a creamy yellow. The body can take on the colors of the soil in the gut (from earthworm and termite prey) or body organs (dark liver). Oviductal eggs are easily seen in females. Primary annuli 140 - 148

SIMILAR SPECIES: Similar to *B. uluguruensis* but differs as it has a distinct diastema between vomerine and palatine teeth

HABITAT: This species has been found in very low numbers in agricultural areas. The only protected area within its Kenyan distribution is Shimba Hills where they occur in natural forest.

NATURAL HISTORY: With very few specimens collected, little is known of the natural history of this species. Adults eat termites, earthworms and other soil macroinvertebrates. They are likely to be similar to other species in the genus, including direct development and possibly maternal care of hatchlings.

DISTRIBUTION IN THE EACF: Found only in the Chamgamwe to Shimba Hills area on top of the escarpment above Mombasa. A single specimen is also known from the Shire Highlands of Malawi.

TYPE LOCALITY: Chamgamwe, Kenya

ELEVATIONAL RANGE: 140 – 450 m

CONSERVATION STATUS: Data Deficient

UREFU WA MWILI: ♂ 180 – 225 mm, ♀ 193 – 216 mm

MAELEZO: Chura minyoo huyu ana saizi ndogo hadi ya kati na ana rangi ya waridi na ya bluu kidogo. Kichwa kinaweza kuwa na rangi ya malai njano. Mwili unaweza kuchukua rangi ya udongo uliopo tumboni (kutoka minyoo na mchwa ambavyo chura anakula) au kutoka ogani (maini yenye rangi iliyokolea). Mayai ya kirijaova yanaonekana vizuri kwenye majike. Kuna mistari 140-148 inayozunguka mwili.

SPISHI INAZOFANANA NAZO: Inafanana na *B. uluguruensis* lakini *B. chamgamwensis* ina nafasi kati ya meno ya “vomerine” na “palatine”

MAZINGIRA: Idadi ndogo sana imepatikana kwenye maeneo ya kilimo. Nchini Kenya, inapatikana tu kwenye eneo tengefu la Milima vya Shimba ambapo kuna msitu asilia.

HISTORIA ASILIA: Taarifa juu ya spishi hii ni chache sana kwa sababu vielelezo vilivyokamatwa ni vichache sana. Inakula kumbikumbi, minyoo na wanyama wengine wadogo bila uti wa mgongo. Inafanana na spishi zingine kwenye jenasi, kwa mfano inazaa moja kwa moja bila kutaga mayai na inatunza vichanga vinavyozaliwa.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Eneo kati ya Chamgamwe na Milima ya Shimba tu, juu ya mharara uliopo juu ya Mombasa. Kielelezo kimoja tu kilipatikana Nyanda za Shire, Malawi.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Chamgamwe, Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 140 – 450 m

HALI YA UHIFADHI: Hakuna taarifa za kutosha

Boulengerula niedeni (Müller, Measey, Loader, and Malonza, 2005)
Sagalla Caecilian



G.J. Measey

SVL: ♂ 160 – 280 mm; ♀ 150 – 275 mm

DESCRIPTION: A medium-sized caecilian which appears light brown to dark grey above with only a slightly lighter ventrum. The head sometimes appears lighter as the skin is stretched over the bone, has tentacles and recessed mouth, but no visible eye, which is beneath the bone. Primary annuli 141-148

SIMILAR SPECIES: Similar to *B. taitanus* but more slender and lacks the blue-black ventrum.

HABITAT: Relatively common (but more scarce than *B. taitanus*) on small farms, especially those near streams or with old manure heaps, of eastern Sagalla (above 1000 m). Absent from eucalyptus plantations and only rarely encountered in small fragments of remaining indigenous forests.

NATURAL HISTORY: Eggs can be seen when in the oviducts of females, being laid in chambers within the soil. These are guarded by the female and hatch directly into pink altricial young. Adults eat termites, earthworms and other soil macroinvertebrates within their subterranean burrows.

DISTRIBUTION IN THE EACF: Known only from Sagalla Hill in the Taita Hills

TYPE LOCALITY: Sagalla Hills, Taita-Taveta District, Kenya

ELEVATIONAL RANGE: 1000 - 1550 m

CONSERVATION STATUS: Critically endangered

UREFU WA MWILI: ♂ 160 – 280 mm; ♀ 150 – 275 mm

MAELEZO: Chura minyoo huyu ana saizi ya kati na rangi ya kahawia iliyofifia hadi kijivu iliyokolea, na sehemu ya chini ina rangi iliyofifia zaidi kidogo. Wakati mwingine, rangi ya kichwa inafifia ngozi inapokuwa imetanuka juu ya mfupa; aidha chura huyu ana mnyiri na mdomo uliorudi ndani, jicho halionekani na liko chini ya mfupa. Kuna mistari 141-148 inayozunguka mwili.

SPISHI INAZOFANANA NAZO: Inafanana na *B. taitana* lakini ni nyembamba zaidi na sehemu ya chini siyo bluu

MAZINGIRA: Inapatikana kwa wingi (lakini siyo kama *B. taitanus*) kwenye mashamba madogo, hasa yaliyopo karibu na vijito au marundo ya mbolea ya zamani mashariki mwa Sagalla (zaidi ya 1000 m kutoka usawa wa bahari). Haipatikani kwenye mashamba ya mkaratusi na inaonekana mara chache sana kwenye vipande vidogo vya misitu asilia iliyobaki.

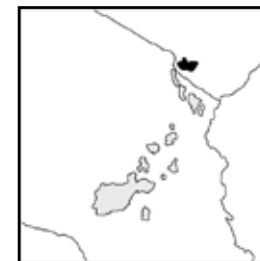
HISTORIA ASILIA: Mayai yanaonekana yakiwa kwenye virijaova, yanapotagwa kwenye vyumba ndani ya udongo. Yanalindwa na majike na vyura minyoo wachanga wanatolewa moja kwa moja, wakiwa na rangi ya waridi. Vyura minyoo wazima wanakula kumbikumbi, minyoo ya ardhini na wanyama wengine wadogo bila uti wa mgongo kwenye mashimo yao chini ya ardhi

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Sagalla, kwenye Milima ya Taita

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima ya Sagalla, Wilaya ya Taita-Taveta, Kenya

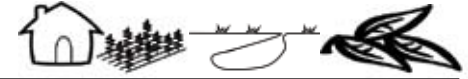
ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1000 – 1550 m

HALI YA UHIFADHI: Iko hatarini sana



Boulengerula taitana (Loveridge, 1935)

Taita Mountains Caecilian



G.J. Measey

SVL: ♂ 150 – 370 mm; ♀ 140 – 320 mm

DESCRIPTION: This medium-sized caecilian appears grey to black from above, blue to blue-grey from below and a combination of both colors in blue serrations from the sides. The eyes are beneath the bone, but the head features a strongly recessed mouth, globular tentacles and a pair of nostrils just below the tip. Males are slightly larger than females, and their heads slightly larger. Oviductal eggs are visible through the skin of females. Primary annuli: 137 – 144.

SIMILAR SPECIES: The nearby Sagalla caecilian, *B. neideni* is similar, but adults are brown and do not have the lateral serrations.

HABITAT: This species has been found in the soil of montane forest and altered habitats including rich soil on small farms.

NATURAL HISTORY: Males have an intromittant organ (phallosodium) which is inserted into the female cloaca during subterranean mating. As testes are active all year, mating may happen at any time, but breeding is associated with the short rains (October to December). Gravid females build round egg chambers in the soil, in which they lay their eggs (clutch size 1 to 10 eggs). Eggs hatch into small (30 mm) altricial juveniles with special foetal dentition which is used to remove shedding skin from the brooding female. Females are thought to shed more frequently and their skin contains extra nutrients. Juveniles stay with mothers until they reach 80 mm, after which they leave to live independently in the soil beginning with dark dorsal pigmentation, and later developing the blue ventrum. Adults are known to eat a wide range of soil macroinvertebrates dominated by termites and earthworms. Oversized prey is strongly gripped in the mouth while the animal rotates around its longitudinal axis.

DISTRIBUTION IN THE EACF: Occurs on three of the four Taita blocks: Dawida, Mbololo and Kasigau.

TYPE LOCALITY: Mt. Mbololo, Taita Mountains, Kenya

ELEVATIONAL RANGE: 1000 – 2000 m

CONSERVATION STATUS: Vulnerable

UREFU WA MWILI: ♂ 150 – 370 mm; ♀ 140 – 320 mm

MAELEZO: Chura minyoo huyu mwenye saizi ya kati anaonekana wa kijivu hadi mweusi kutoka juu, bluu hadi bluu kijani kutoka chini na mchanganyiko wa rangi zote mbili kutoka pembeni. Macho yake yapo chini ya mfupa, lakini kichwa kina mdomo uliongia sana ndani, minyiri ya mvingo na matundu mawili ya pua chini kidogo ya ncha ya pua. Madume ni makubwa kidogo kuliko majike na vichwa vyao pia. Mayai ya kirijaova yanaonekana kupitia ngozi angavu ya majike. Kuna mistari 137 – 144 inayozunguka mwili.

SPISHI INAZOFANANA NAZO: Inafanana na chura minyoo wa Sagalla, *B. neideni* lakini vyura wazima ni kahawia na hawana mistari pembeni.

MAZINGIRA: Spishi hii imeonekana kwenye udongo wa misitu iliyopo zaidi ya 1200m kutoka usawa wa bahari, pamoja na mazingira yaliyobadilika, kwa mfano kwenye udongo wenye rutuba wa mashamba madogo.

HISTORIA ASILIA: Madume yanaingiza uume kwenye tundu la jike la kupokelea mbegu za uzazi, wakati wa kupandana chini ya ardhi. Kwa vile mapumbu yanafanya kazi mwaka mzima, vyura minyoo hawa wanaweza kupandana wakati wowote lakini wanazaliana wakati wa mvua za vuli (Oktoba-Desemba). Majike yanayobeba mayai yenye mbegu za kiume yanachimba mashimo mvingo kwenye udongo yanapotaga mayai (idadi ya mayai inaweza kuwa 1-10). Mayai yanatolewa na kutoa vyura wachanga (urefu wa 30 mm) ambao hawajiwezi na wana mbonyeo maalum unaotumiwa wakati wa kuambua ngozi ya jike linaloatamia vyura wachanga. Majike yanaambua ngozi yao mara kwa mara; ngozi yao ina virutubisho vya ziada. Vichanga vinakaa na mama yao hadi vinapofikia urefu wa 80 mm, baada ya hapo vinaondoka na kuishi kwenye udongo vikijitegemea; mwanzoni vinakuwa vyeusi sehemu ya juu na baadaye sehemu ya chini inakuwa bluu. Vyura minyoo wazima wanakula aina nyingi ya wanyama wengine wadogo bila uti wa mgongo kwenye mashimo yao chini ya ardhi, lakini hasa kumbikumbi na minyoo ya ardhini. Viumbe wanavyowinda kwa ajili ya chakula na ambavyo ni vikubwa sana vinakamatwa kwa nguvu mdomoni na huku chura minyoo akijizungusha kwenye mhimili wima.

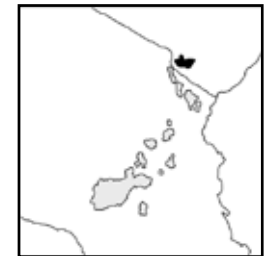
ENEO SPISHI INAPOPATIKANA KWENYE MTMMP:

Inapatikana kwenye maeneo matatu kati ya manne ya Milima ya Taita: Dawida, Mbololo na Kasigau

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Mlima Mbololo, Milima ya Taita, Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 1000 – 2000 m

HALI YA UHIFADHI: Inaweza kuathiriwa



Boulengerula uluguruensis (Barbour and Loveridge, 1928)

Letheobia Uluguruensis Lighter Pink



G.J. Measey

SVL: ♂ 130 – 221; ♀ 133 – 195 mm

DESCRIPTION: A medium to small caecilian uniformly pink with a blue hue. The head can appear as a creamy yellow. The body can take on the colors of soil in the gut (from earthworm and termite prey) or body organs (dark liver). Oviductal eggs are easily seen in females. Primary annuli 128-144

SIMILAR SPECIES: A superficial resemblance to *B. chamgamwensis* as both species are pink.

HABITAT: In the soil of montane and submontane forest and altered habitats including small farms.

NATURAL HISTORY: Although little is known about its breeding habits, it is assumed to lay eggs terrestrially that hatch directly into small versions of the adults. Adults feed on subterranean macroinvertebrates, including earthworms and termites. These amphibians can be abundant and have been found in relatively high densities, up to 0.4 m⁻².

DISTRIBUTION IN THE EACF: Nguu, Nguru and Uluguru Mountains.

TYPE LOCALITY: Vituri, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 400 - 1450 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 130 – 221; ♀ 133 – 195 mm

MAELEZO: Chura minyoo huyu mwenye saizi ya kati ana rangi ya waridi na ya bluu. Kichwa kinaweza kuwa rangi ya malai njano. Mwili unaweza kuchukua rangi ya utumbo (kutoka minyoo na mchwa ambao chura anakula) au kutoka ogani (maini yenye rangi iliyokolea). Mayai ya kirijaova yanaonekana vizuri kwenye majike. Kuna mistari 128 – 144 inayozunguka mwili.

SPISHI INAZOFANANA NAZO: Inafanana juu juu na *B. chamgamwensis* kwani spishi zote mbili zina rangi ya waridi.

MAZINGIRA: Udongo wa misitu iliyopo karibu na au zaidi ya 1200 m kutoka usawa wa bahari.

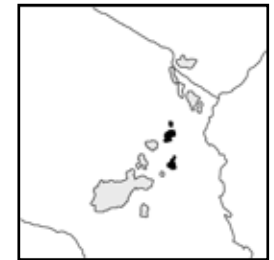
HISTORIA ASILIA: Ingawa hakuna taarifa juu ya mfumo wa kuzaliana, inadhaniwa kwamba inataga mayai ardhini ambayo hutotolewa na kuwa vyura minyoo wenye maumbile ya vyura wazima. Vyura minyoo wazima wanakula wanyama wengine wadogo bila uti wa mgongo kwenye mashimo yao chini ya ardhi, pamoja na mchwa na minyoo ya ardhini. Vyura minyoo hawa wanaweza kupatikana kwa wingi, kwa mfano kwenye msongamano wa 0.4m²

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Nguu, Nguru na Uluguru.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Vituri, Milima ya Uluguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 400 - 1450 m

HALI YA UHIFADHI: Haiko hatarini



Schistometopum gregorii (Boulenger, 1895)

East African Flood Plain Caecilian



G.J. Measey

SVL: 160 – 330 mm

DESCRIPTION: A large, robust, fast moving caecilian which can appear from black through grey to dark brown. The head often appears to be a different color where the skin is stretched over the head. Primary annuli 110 – 119.

SIMILAR SPECIES: Could be confused with *B. niedeni* in color but otherwise distinct.

HABITAT: Found in large numbers in mud near rice paddies and other water bodies.

NATURAL HISTORY: These caecilians are very good swimmers and may use this to disperse within the aquatic habitats alongside which they live. They can tolerate a wide range of temperatures and are capable of burrowing into the sticky black soil of river deltas. Females become obviously swollen when gravid, giving

birth to live young. They have been found in mud close to water in the dry season, but it is not known whether they also aestivate deep in the soil. Diet includes earthworms, termites and other soil macroinvertebrates.

DISTRIBUTION IN THE EACF: Abundant in both Tana River Delta and Bagamoyo with other records from central coastal Tanzania.

TYPE LOCALITY: Ngatana (Tana River Delta), Kenya

ELEVATIONAL RANGE: Only known from just above sea level (0 – 10 m).

CONSERVATION STATUS: Least concern

UREFU WA MWILI: 160 – 330 mm

MAELEZO: Huyu chura minyoo ni mkubwa sana, ana nguvu na anakwenda haraka sana; anaweza kuwa na rangi nyeusi, kijivu hadi kahawia iliyokolea. Mara nyingi kichwa kinaonekana kuwa na rangi tofauti pale ngozi inapokuwa imetanuka juu ya kichwa. Kuna mistari 110 – 119 inayozunguka mwili.

SPISHI INAZOFANANA NAZO: Rangi yake inafanana na ya *B. niedeni* la sivyo ni tofauti

MAZINGIRA: Idadi kubwa inapatikana kwenye matope karibu na mashamba ya mpunga na mikusanyiko mingine ya maji

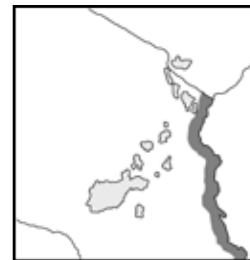
HISTORIA ASILIA: Vyura minyoo hawa ni waogeleaji hodari na wanaogelea ili kusafiri kwenye mazingira ya maji wanamoishi. Wanavumilia viwango vingi vya joto na wanaweza kufukua mashimo kwenye udongo mweusi unaonata wa delta. Majike yanavimba yanapokuwa na mimba na kuzaa vyura wachanga. Wanapatikana kwenye matope karibu na maji wakati wa kiangazi lakini haijulikani iwapo wanalala ndani ya udongo muda wote wa msimu wa kiangazi. Wanakula minyoo ya ardhini, kumbikumbi na wanyama wengine wadogo bila uti wa mgongo wa ardhini.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Inapatikana kwa wingi kwenye Delta a Mto Tana, Bagamoyo na pwani ya kati ya Tanzania.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Ngatana (Delta ya Mto Tana), Kenya

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: Imeonekana juu kidogo tu ya 0-10 m kutoka usawa wa bahari

HALI YA UHIFADHI: Haiko hatarini



Scolecormorphus kirkii (Boulenger, 1883)
Lake Tanganyika Caecilian Kirk's Caecilian



M. Menegon

SVL: ♂ 163 – 312 mm; ♀ 288 – 463 mm

DESCRIPTION: The dorsum is an olive brown color which extends part way down the sides of the animal, which are pink to the ventrum in some individuals. Females are larger than males. Primary annuli: males 130 – 142, females 140 – 152.

SIMILAR SPECIES: Resembles *S. uluguruensis* and *S. vittatus*.

HABITAT: In the soil and leaf litter of the forest and within loose soil on small

farms

NATURAL HISTORY: Assumed to give live birth to live young which are probably nurtured by the mother. The eyes of this species are connected to the globulate tentacles and were the first described vertebrate with protrusible eyes. The visual acuity is thought to be low, only capable of helping determine light and dark areas when on the surface. Adults eat earthworms, termites and other macroinvertebrates.

DISTRIBUTION IN THE EACF: Ubena and Mahenge highlands, Nguru, Rubeho, Uluguru, North Pare and Udzungwa Mountains. Also known from mountains in Malawi and Mozambique.

TYPE LOCALITY: Iringa, Tanzania

ELEVATIONAL RANGE: 500 – 1400 m.

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 163 – 312 mm; ♀ 288 – 463 mm

MAELEZO: Sehemu ya juu ina rangi ya mzeituni kahawia inayoanzia katikati ya pembeni mwa mnyama, ambayo ina rangi ya waridi hadi sehemu ya chini, kwenye baadhi ya vyura. Majike makubwa kuliko madume. Mistari inayozunguka mwili wa madume: 130 – 142, majike: 140 – 152.

SPISHI INAZOFANANA NAZO: Inafanana na *S. uluguruensis* na *S. vittatus*.

MAZINGIRA: Udongo, majani ya msituni yaliyoanguka chini na udongo wa mashamba madogo.

HISTORIA ASILIA: Inadhaniwa kwamba inazaa vyura wachanga ambao wanatunzwa na mama yao. Macho ya spishi hii yanaungana na mnyiri mwingiro na maelezo ya awali yalisema wana macho yanayojitokeza sana. Hawaoni vizuri na wanaweza tu kuona maeneo yenye mwanga au ya giza wanapokuwa juu kwenye ardhi. Vyura wazima wanakula minyoo ya ardhini, kumbikumbi na wanyama wengine wadogo wa ardhini bila uti wa mgongo.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Nyanda za Ubena na Mahenge, Milima ya Nguru, Rubeho, Uluguru, Pare Kaskazini na ya Udzungwa. Milima ya Malawi na Msumbiji pia.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Iringa, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 500 – 1400 m.

HALI YA UHIFADHI: Haiko hatarini



Scolecormorphus uluguruensis (Barbour & Loveridge, 1928)

Uluguru Black Caecilian,



SVL: ♂ 158 – 311 mm, ♀ 146 – 330 mm

DESCRIPTION: Darkly colored dorsum and ventrum, with pink throat and vent. Smaller individuals may have a thick pink stripe on the ventrum. Females are larger than males. Primary annuli: males 124 – 136, females 132 – 149.

SIMILAR SPECIES: *S. kirkii* and *S. vittatus* are both lighter in color and usually have pink ventra.

HABITAT: Within the soil and leaf litter of montane forest and probably in loose fertile soil on farms.

NATURAL HISTORY: Females give live birth to young which are probably nurtured as others in this genus. Males of this genus are the only known caecilians to have calcified spines on their phallosome (penis). Adults eat earthworms, termites and other macroinvertebrates. The tentacles are presumed to carry the eyes out of the skull and adults probably move around on the surface.

DISTRIBUTION IN THE EACF: Uluguru Mountains

TYPE LOCALITY: Nyingwa, Uluguru Mountains, Tanzania

ELEVATIONAL RANGE: 600 – 2000 m.

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 158 – 311 mm, ♀ 146 – 330 mm

MAELEZO: Chura huyu ni mweusi sana sehemu ya juu na chini lakini ana rangi ya waridi kwenye sehemu za mwisho kabisa za koo na tundu la kutolea haja na kutoa na kupokelea mbegu za uzazi. Vyura wadogo wanaweza kuwa na mstari mpana wa rangi ya waridi sehemu ya chini. Majike makubwa kuliko madume. Mistari inayozunguka mwili ni; madume, 124 – 136; majike: 132 – 149.

SPISHI INAZOFANANA NAZO: Inafanana na *S. kirkii* na *S. vittatus* ambazo zina rangi iliyofifia zaidi na kwa kawaida zina tundu lenye rangi ya waridi la kutolea haja na kutoa na kupokelea mbegu za uzazi

MAZINGIRA: Kwenye udongo na majani yaliyoanguka chini kwenye misitu iliyopo 1200 m kutoka usawa wa bahari na huenda pia kwenye udongo wa mashamba yenye rutuba.

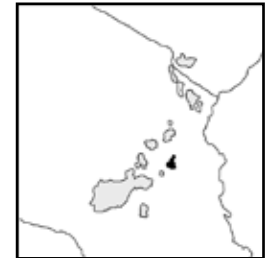
HISTORIA ASILIA: Inadhaniwa kwamba inazaa vyura ambao wanatunzwa na mama yao kama ilivyo kwa spishi zingine za jenasi. Madume ndiyo vyura minyoo pekee ambao wana miiba yenye kalisi kwenye uume wao. Vyura minyoo wazima wanakula minyoo ya ardhini, kumbikumbi na wanyama wengine wadogo bila uti wa mgongo wa ardhini.

ENEO SPISHI INAPOPATIKANA KWENYE MTMMP: Milima ya Uluguru

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Nyingwa, Milima ya Uluguru, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 600 – 2000 m.

HALI YA UHIFADHI: Haiko hatarini



Scolecormorphus vittatus (Boulenger, 1895)
Banded Caecilian, Ribbon Caecilian



G.J. Measey

SVL: ♂ 226 – 252 mm, ♀ 159 – 352 mm

DESCRIPTION: The dorsum is a dark olive brown to glossy black coloration and dull to bright pink ventrum; from the side these animals appear to have a pink stripe. Females are larger than males. Primary annuli: 127 – 132, males 124 – 132.

SIMILAR SPECIES: *S. kirkii* and *S. uluguruensis*

HABITAT: Within the soil and leaf litter of the forest and within soil on small farms. May be seen on the surface as

well as within the soil.

NATURAL HISTORY: Viviparous based on morphology of embryos which have a beard of foetal teeth. The shape of the mouth suggests that young feed on maternal skin after birth. Adults feed both in the soil and leaf litter on earthworms, termites and other macroinvertebrates. The eyes of this species are connected to the tentacles and can be protracted out of the skull, like other members of the genus. Adults can be found moving on the surface of the leaf litter. They have a very bad taste with burning chilli-pepper like sensations in the mouth, indicating that they may carry potent toxins in their skin.

DISTRIBUTION IN THE EACF: East and West Usambara, Nguu, Nguru, Ukaguru, and Uluguru Mountains and North and South Pare Mountains

TYPE LOCALITY: East Usambara Mountains, Tanzania

ELEVATIONAL RANGE: 400 – 1500 m

CONSERVATION STATUS: Least concern

UREFU WA MWILI: ♂ 226 – 252 mm, ♀ 159 – 352 mm

MAELEZO: Sehemu ya juu ina rangi ya mzeituni kahawia iliyokolea hadi nyeusi inayong'aa na sehemu ya chini. Vyura hawa wanaonekana kuwa na mstari wa rangi ya waridi kutoka upande. Majike ni makubwa kuliko madume. Mistari inayozunguka mwili ni: madume, 127 – 132; majike, 124 – 132.

SPISHI INAZOFANANA NAZO: *S. kirkii* na *S. uluguruensis*

MAZINGIRA: Kwenye udongo, majani yaliyoanguka chini kwenye misitu na udongo kwenye mashamba madogo, Inaonekana juu na chini ya udongo.

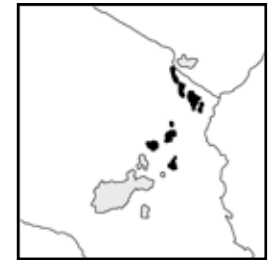
HISTORIA ASILIA: Spishi hii inayozaa vyura wachanga na viitete vina meno madogo. Umbile la mdomo linaonyesha kwamba vyura wadogo wanakula ngozi ya mama yao baada ya kuzaliwa. Vyura wazima wanakula minyoo, kumbikumbi, wanyama wengine wadogo bila uti wa mgongo waliopo kwenye udongo na majani yaliyoanguka chini. Macho ya spishi hii yameunganishwa na minyiri na inajitokeza nje ya kichwa, kama spishi zingine za jenasi. Vyura wazima wanaonekana wakipita kwenye majani yaliyoanguka chini. Wana ladha mbaya sana mdomoni, kama pilipili inayowasha, ikiwa ni ishara kwamba huenda wana sumu kwenye ngozi yao.

ENEO SPISHI INAPOPATIKANA KWENYE MTMP: Milima ya Usambara Magharibi na Mashariki, Nguu, Nguru, Ukaguru, Uluguru, Pare Kaskazini na Pare Kusini.

MAHALI KIELELEZO KILIPOPEWA JINA KWA MARA YA KWANZA: Milima ya Usambara Mashariki, Tanzania

ENEO LA SPISHI KUTOKA USAWA WA BAHARI: 400 – 1500 m

HALI YA UHIFADHI: Haiko hatarini



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