

## SHORT NOTE:

### RECORDS OF TWO SPECIES OF *HYLARANA* (ANURA: RANIDAE)

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#### ABSTRACT

The genus *Hylarana* Tschudi is recorded and described for the first time for Zambia on the basis of specimens of *Hylarana darlingi* and *Hylarana galamensis* respectively. Specimens of the former species came from Livingstone and Monze districts whereas the latter species was collected from Chilubi island, Lake Bangweulu. *Hylarana galamensis* (Dumeril and Bibron) attains a larger body size (SVL) than that of *H. darlingi* (Boulenger).

#### INTRODUCTION

The genus *Hylarana* Tschudi is made up of what are commonly referred to as Golden backed or white-lipped frogs. The genus is widespread and is distributed throughout Africa south of the Sahara to Indonesia (Poynton and Broadley, 1985). Various species are known to inhabit a variety of habitats from forests to grassland and including swamps. Our present knowledge of the genus and the African species within the genus is based mainly on the work by Perret (1977) who reviewed the species of *Hylarana* known to occur in Cameroon and provided a list of the African species.

There are presently three species in the genus *Hylarana* known to occur in Zambia i.e. *H. lemairei*, (recently reported by Poynton and Broadley, 1985), *H. darlingi* and *H. galamensis*. Previous to the period of collection, i.e. 1975 and 1976 respectively, species in genus *Hylarana* were not known to occur within Zambia and indeed at the time when the Zambian checklist was published (Broadley, 1971) there was no definite record of the genus from Zambia. Two species are being described for the first time on the basis of one adult female specimen of *H. galamensis* and eight specimens (3 adult females and 5 males) of *H. darlingi*. Attempts to secure more specimen of the former species were in vain.

#### MATERIALS AND METHODS

The only available specimen of *Hylarana galamensis* was collected at Chilubi island, Lake Bangweulu (11° 11'S and 30° 01'E) by Mike Bingham in 1975. Later in the year, Mr. Bingham donated this lone adult female specimen to the Livingstone Museum. Efforts to acquire more specimens failed because of lack of funds.

Collecting expeditions were mounted around Livingstone district (17° 37'S and 25° 51'E) and Monze district (16° 7'S and 27° 29'E) respectively. This collecting venture was successful and resulted into

collection of yet another new species within the genus *Hylarana* never before recorded in Zambia. General description of these two species, based on preserved specimens housed in the Livingstone Museum, Zambia are given.

*Hylarana galamensis* (Dumeril and Bibron 1841).

*Hylarana galamensis* (Dumeril and Bibron)  
*Rana galamensis*: Dumeril and Bibron 1841:367. Lake Galam, Senegal. Holotype in the Museum Natural d'Histoire Naturelle, Paris. Boulenger 1907: 481, Parker, 1930:897.

*Limnodytes bravanus*: Peters 1882:9 Brava, Somalia. Type lost.



Fig. 1 *Hylarana galamensis*, adult female, general view.

*Rana galamensis bravana*: (Peters), Poynton, 1964a: 121 and 1964b: 204, Stewart, 1967:62.

An adult female specimen catalogue number NMZL 164 housed in the National Museum, Livingstone was collected at Chilubi island in Lake Bangweulu, northern province, Zambia.

#### DIAGNOSIS

A broad dorsal golden to brown band present. This brown band is demarcated by almost immaculate to heavily speckled area but usually leaving higher margin which overlies a pair of flattered ridges running from eyes to leg insertions. Flanks are light-spotted to marbled. Abdomen speckled, but less markedly so in adult specimens. Males have a pair of baggy, darkly pigmented gular pouches, that open through a pair of slits parallel to the mandible. Tips of fingers are not expanded into discs and generally the distance from nostril to eye is equal to interorbital distance (see Poynton and Broadley, 1985). Males are known to reach 78mm, females 86mm. The adult female specimen described herein had snout-vent length of 65.7mm.

#### HABITAT

Strongly aquatic species, that is restricted to permanent swamps and lakes.

#### DISTRIBUTION

Known to occur on Chulubi island. But it has also been recently recorded at Mpulungu and Nyamkolo (Poynton and Broadley, 1985). This represents an extension to the species range.

*Hylarana darlingi* (Boulenger, 1902).

*Rana darlingi* Boulenger, 1902:15. Monze and between Umtali (Mutare) and Marandellas (Marondera), Zimbabwe. Syntypes in the British Museum (N.H.), London, Broadley, 1971:113, Stevens, 1974:7.

*Hylarana darlingi* (Boulenger), Poynton, 1964a:119, Perret 1977:843.

Female specimen of *H. darlingi* in the National Museum of Zambia at Livingstone, catalogue number NWZL 303. Collected at Sinde River, Livingstone by Dr. M. P. Simbotwe and Mr. A. S. Muyundu on 30th March, 1976. Two adult female specimens of *H. darlingi* catalogue number NMZL 790 and NMZL 786 and five adult male specimens catalogue numbers, NMZL 783, 784, 785, 787, 789 were collected at Luyaba, Malundu and Keemba dams in Monze district, Zambia.

#### DIAGNOSIS

A broad golden to light brown band extends from the snout and backwards over head and upper eyelids to above vent (Poynton and Broadley, 1985). The glandular skin ridge not as conspicuous as in *H. galamensis*. Flanks fairly uniformly dark brown to olive. A white line runs from above the axilla below the tympanum and eye to the narial region. Adults are usually virtually immaculate below apart from light



Fig. 2 *Hylarana darlingi*, adult female, general view.

spotting on legs. Males have pouches that are barely developed and tips of fingers not expanded into discs. Males not normally exceeding 55mm, females not exceeding 63mm (Poynton and Broadley, 1985). Three female specimens, had snout-vent length ranging from 45 to 49mm whereas snout-vent length for five males ranged from 45 to 51mm.

#### HABITAT

This species inhabits open savannas and is strongly associated with permanent streams and dams. It has also been recorded in lowland evergreen forest at the Lusitu lagoon (Poynton and Broadley, 1985).

#### DISTRIBUTION

*H. darlingi* occurs in great abundance in Livingstone and Monze districts of Southern Zambia, but it has also recently been recorded from Kalabo, Lutakila R., Mpika and 16km W of Chisamba.

## DISCUSSION

I recommended that the search for new and previously unrecorded species of amphibians in Zambia should be endorsed under the forthcoming countrywide natural resources inventory project under implementation by the National Conservation Secretariat (NCS). *H. galamensis* should be sought for in Northern Zambia where it is expected to be widespread whereas *Hylaran darlingi* and *H. lemairei* may prove to be widespread in western, southern, central and northern provinces of Zambia. Further distribution records are necessary for all these species in order to ascertain their habitat range and extent of geographic distribution within Zambia.

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