

Hyperolius minutissimus n. sp.

Holotype. – ZMH R 079213 an adult male collected 10 miles west of Njombe, Tanzania 9.2.1971.

Paratypes. – 1 ♂: R 079211, same date and locality. 5 ♂♂: R 079450–54. Between Dabaga and Kilosa, Tanzania 12.2.1971.

Other material. – 1 ♀ R 079208, 10 miles west of Njombe, 9.2.1971.

1 ♀ R 079449. Between Dabaga and Kilosa, 12.2.1971. All the material was collected by ADM & AS.

Type in Copenhagen.

Diagnosis. – A species from the savanna at high altitude in southern Tanzania. The males minute (13–15 mm). Dorsum brown with light dorsolateral lines. Protective flap smooth and very large.

Description of the holotype. – See also table 5. Body rather flat, head rather broad and flat. Eyes protruding. Protective flap very large, width greater than length, smooth, beset with a few black chromatophores, but no spines (fig. 165). A few blacktipped spinosities present in front of the protective flap near the tip of the lower jaw. Webbing reduced. Coloration and webbing formula see below.

Description of the paratypes. – There is close agreement with the holotype in morphology and colour pattern. Several of the paratypes are smaller than the holotype, and some have a comparatively larger protective flap



Fig. 164. *H. minutissimus*.
Female (Njombe).

which is heartshaped in one male. There is a variation of the number of black chromatophores on the protective flap, and some variation of the number of blacktipped spines on the chin. In most specimens there are about ten such spines. One specimen has two blacktipped spines on the protective flap itself. Webbing formula of foot: 1 ($1-1\frac{1}{4}$), 2i ($1-1\frac{1}{2}$), 2e (1), 3i ($2-2\frac{1}{4}$), 3e (1), 4i (2), 4e (2), 5 (1).

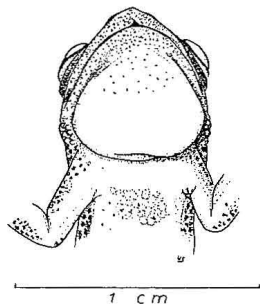


Fig. 165. Throat of
H. minutissimus
(A 079213).

Colour after preservation. – Dorsum light to dark brown with a regular, white, black-edged canthal and lateral stripe from tip of snout to groin. Ventrums and limbs whitish. In one of the females the lateral lines are very irregular (fig. 164).

Colour in life. – No colour notes were taken of the live males. The female R 07908, presumed to belong to the present species, was photographed (fig. 164): Dorsum dark reddish brown, darker towards the canthal and lateral stripes which are sulphureous yellow. Limbs and feet brownish, discs brownish red.

Voice. – No voice of this species has been heard.

Secondary sex characters. – If it is agreed that the two females belong to the present species, there is great sexual dimorphism in size, the females being $21\frac{1}{2}$ and 24 mm. The size and shape of the male vocal sac is mentioned above. Dorsal skin of both sexes with tiny asperities.

Systematical remarks. – I discovered the present males when sorting my material of *H. pictus*. They were assumed to be newly metamorphosed *H. pictus* when collected. They are, however, quite characteristic not only by the fully developed vocal apparatus but also by a colour pattern outside the variation of juvenile *H. pictus*. I have little doubt that the two females belong to the same species although they were supposed to be adult female *H. pictus* when collected. They agree with this species in size, and although *H. pictus* shows a very great variation in pattern, the very bright lateral stripes shown by these two females seem unknown in *H. pictus*. The female from Dabaga has exactly the same pattern as the males, the female from Njombe shows a disruption of the stripes not found in any of the males.

H. minutissimus shows a certain resemblance to *H. spinigularis* Stevens, a resemblance that may mean true relationship. Both have small males and great

sexual dimorphism, a flat broad protective flap and development of black-tipped spinosities. The colour pattern of *H. minutissimus* is rather similar to pattern type A in *H. spinigularis*. But there are several differences of such magnitude that I have decided against regarding the two forms as subspecies of one species. *H. minutissimus* is much smaller, with far fewer ventral spinosities and probably a much larger vocal sac, for some loose skin is seen distally to the protective flap and with more reduced webbing. The habitat preference seems to be different, *H. spinigularis* occurring in forest, *H. minutissimus* in savanna. Furthermore, *H. spinigularis* is morphologically rather constant on the two known localities, which are north and south of the localities for *H. minutissimus*.

Biological remarks. – Taken accidentally together with *H. pictus* on open, windswept grass-covered savannas at rather high altitudes. Probably taken on grass growing in inundated meadows.

Distribution. – Southern Tanzania. Should be searched for in northern Malawi (fig. 163).

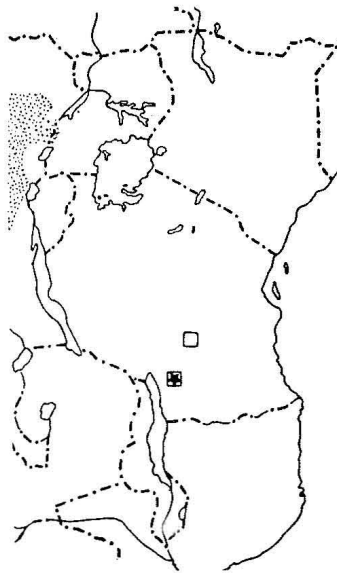


Fig. 163. Distribution of *H. minutissimus* (squares). Type locality indicated by a star.