

DESCRIPTION OF THE TADPOLE OF *RANA PLESKII*, WITH NOTES ON ALLIED FORMS.

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The only species of Batrachian represented in Captain Stewart's collection is *Rana pleskii*, Günther, which has already been recorded from the neighbourhood of Gyantse by Boulenger (*Ann. Mag. Nat. Hist.* (7), xv, p. 378, 1905).

Rana pleskii, Günther.

R. Pleskii, Günther, *Ann. Mus. St. Petersb.*, 1896, p. 199.

Several adult specimens of various sizes, and tadpoles in various stages from the neighbourhood of Gyantse.

Boulenger (*op. cit.*) records this species from an altitude of 15,000 feet, and Captain Stewart tells me that it is abundant all about Gyantse, occurring even in small puddles of water and in mountain streams. Like its allies *R. vicina* and *R. liebigii* it appears to be mainly aquatic in its habits.

The fact that *R. pleskii* breeds at an altitude of 13,000 feet or over is interesting. There is a full-grown tadpole in Captain Stewart's collection which was taken in April at the height mentioned, and a very small frog taken in November at the same height. There are also several smaller tadpoles, all of which are unusually well preserved. The following description is drawn up from the largest tadpole, which has the hind legs about 10 mm. long but no signs of the fore limbs:—

Tadpole of *R. pleskii*, Günther—

Total length 72 mm.; length of tail 45 mm.; greatest breadth of body 13 mm.; depth of body 9 mm.; greatest depth of tail 12 mm.; of caudal muscles 8 mm. Head and body flat; eyes far apart, dorsal; nostril dorsal, a little nearer the tip of the snout than the eye; spiracle sinistral, pointing backwards and upwards; anus opening on the right side; caudal fin commencing well behind the level of the base of the hind limbs, continued round the tail to the anus, bluntly pointed at the tip. Lips moderately well developed, both with a fringe, which is only interrupted for a short distance in the middle of the upper lip; both jaws serrated at the edge and roughened on the external surface; the upper jaw bearing a couple of long, narrow teeth at either end; lower jaw crescentic,

undivided; dental formula $\frac{1}{3+3}$ / $\frac{4+4}{1}$. Colour slate-grey, indistinctly

marbled on the tail and fading to white on the belly.

For the sake of comparison I give a description of a somewhat similar tadpole which appears to be that of *R. vicina*, a frog found

above 6,000 feet in the Himalayas and common in the Simla district and in Kumaon. I have found this tadpole with the adult of the species to which I assign it both in Kumaon and in the Simla hills:—

Tadpole of *Rana vicina*, Stoliczka—

Total length (specimen without legs) 43 mm.; length of tail 30 mm.; greatest breadth of body 8 mm.; greatest depth of tail 8 mm.; of caudal muscles 5 mm. Head and body moderately flat; eyes far apart; nostrils nearer the eyes than the tip of the snout; eyes and nostrils dorsal; spiracle sinistral, pointing upwards and backwards; vent opening on the right side; caudal fin commencing in front of the base of the hind limbs, continued round the tail to the anus, sharply pointed at the tip. Lips very large, considerably larger than those of the tadpole of *R. pleskii*, resembling those of *R. liebigii* in extent; the lower lip fringed completely, the upper lip only at the corners; both jaws serrated; upper jaw in two parts, without enlarged teeth at the sides; dental formula $\frac{1}{\frac{1+4}{1+1}}$; a minute, round papilla, bearing horny teeth, exists on either side between the uppermost row and the first of the double rows on the upper lip. Colour brownish, more or less distinctly mottled and spotted, paler below.

The dental formula of the tadpole of *R. liebigii* (Annandale, *Journ. Asiat. Soc. Bengal*, 1906, p. 290) is $\frac{3}{\frac{5+5}{1+1}}$; otherwise the larva of this species is much like that of *R. vicina*.