

ground; throat has proportionately fewer markings, there being only a strong median and two lateral vermiform markings. An elongated white spot below eye, followed by a similar spot below tympanum (this may be continuous), which is followed by another spot leading to and then above, behind, and under juncture of forelimb to body, sending two branches down limb toward the elbow, one in front and one behind. A narrow, irregular stripe extending from groin about one-fourth of the distance between it and the hind-margin of the eye. Upper surfaces of thighs irregularly marked with light, there tending to be three diagonal markings. *In life*, dorsum deep red; sides black. Femur black; tibia deep red. All parts described as light in preservative, turquoise. Background color of venter, deep chocolate.

*Measurements of Holotype, in Millimeters.*—Snout to vent 17; width of head (behind eyes) 5.5; length of head 6; length of orbit 2.5; length of exposed part of eye 2; interorbital distance 2; internareal distance 2.5; subocular distance 1; eye to tip of snout 3; eye to nostril 2; greatest diameter of tympanum 1.2; length of femur (vent to knee) 7; length of tibia (knee to heel) 8; length of longest toe (measured from far side of outer metatarsal tubercle) 7; length of foot (heel to tip of longest toe) 12.

*Variation.*—In the four adult specimens dorsal variation is minute, the most notable being stronger or weaker markings on the upper surfaces of the thighs. Ventrally, the holotype possesses stronger markings (i. e., larger and proportionally more included area) than any of the adult paratypes. This is especially noticeable on the throats of the paratypes (that of SU 10585 being almost free of markings), though the tendency toward a median and two lateral throat markings remains. The abdominal markings of SU 10375 are mostly composed of round and oblong spots, the vermiform markings being greatly minimized. The ventral markings of the juveniles are poorly developed, the abdomens being mostly light and the throats dark, though in some the adult markings have begun to become defined. Snout to vent length of adult paratypes: 16-17 mm.

A specimen of *Phyllobates* (SU 10340) collected in the Río Suno Region, eastern Ecuador (Lat. 0° 40'-0° 44' × Long. 77° 10'-77° 20'; elevation 380-420 mtr.), by Jorge Olalla, was presented to me by Dr. Gustavo Orcés V. of the Escuela Politécnica Nacional, Quito. In preservation this specimen so closely resembles *P. espinosai* that I should be strongly inclined to place it in this species if its locality were not separated from the locality of *espinosai* by such a barrier as the Andes. The only morphological

difference between this and the adult specimens of *P. espinosai* which I have at hand is that it possesses a round, light blur covering the caudad two-thirds of the throat (possibly due to injury or preservation), has a white line bordering the upper lip and is slightly larger (19 mm. snout to vent).

*Tadpole* (Based on 3 tadpoles, SU 10586, collected from the back of paratype SU 10585).—Body 12 mm. long, somewhat depressed, four-fifths as broad as long; ventral profile slightly convex; no abdominal bulge. Eyes large, their longest diameter equal to almost one-fifth of body length, dorso-lateral in position and located in the second one-fifth of body length. Nostrils widely spaced, about half way between eye and tip of snout; internareal distance somewhat less than interorbital. Anus medial. Spiracle sinistral, slightly below the lateral axis and slightly nearer to base of tail than to tip of snout, its margin tubular and slightly projecting upward. Tail approximately twice body length. Fins well developed, the dorsal being distinctly keeled and having a maximum width of twice the ventral. Tip bluntly pointed.

Pigmentation in an even, close stippling of chromatophores on top of head and body. This extends about two-thirds of the way down the sides of the body and is continued on to the ventral side of the head where the stipples are spaced farther apart. Chromatophores of tail grouped into irregular spots with the individual chromatophores becoming smaller caudad. Chromatophores of ventral fin very sparse and small.

Rows of labial teeth 2/3, the teeth being of moderate size and crowding except for the third lower row where the teeth are minute and scarcely discernible. Second upper row divided, the middle one-third being vacant. The first lower row equal to or very slightly shorter than the two upper rows; the second lower row very slightly shorter than the first; and the third very slightly shorter than the second. Beaks narrowly edged with black; serrations comparable in size and spacing with the labial teeth; linear measurement from one side to the other equal to one-half of the first lower row of labial teeth. Upper beak broadly triangular; starting at the center the two sides first bow inward slightly, then outward. Lower beak also triangular with slightly narrower angle and the sides bowed very slightly inward. Single rows of papillae on lower and lateral labial margins forming three distinct series. The lower row is a continuous series below and lateral to the three lower tooth rows. Here the papillae number 22-28, are linearly arranged, and radiate outward. They are approximately twice as long as broad, are of fairly