

NOTE

Rediscovery of *Hyalinobatrachium chirripoi* (Anura: Centrolenidae) in southeastern Costa Rica

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Abstract: The Suretka glass frog, *Hyalinobatrachium chirripoi*, has been recently rediscovered in the southeastern region of Costa Rica. This species was last reported in Costa Rica in the 1950's. *H. chirripoi* is distinguished from *H. colymbiphylum*, which appears to be its most closely Costa Rican related taxon, by having extensive webbing between fingers II-III.

Key Words: Anura, Centrolenidae, *Hyalinobatrachium chirripoi*, Costa Rica, glass frog.

In 1954 Edward H. Taylor collected nine specimens of an unusual centrolenid frog near Suretka, Limón Province, Costa Rica. This form had nearly as extensive webbing between fingers II-III as between fingers III-IV. Taylor (1958) described these specimens as a new species, *Cochranella chirripoi*. Later this species was referred to the genus *Centrolenella* (Goin 1964), and in 1991 it was placed into the new, and currently recognized genus *Hyalinobatrachium* (Ruiz-Carranza and Lynch 1991). Since Taylor's discovery in 1954 this frog has not been reported from Costa Rica until now (Savage pers. comm.). This species is also known from Panama (Ibáñez and Jaramillo 1997) and Colombia (Hayes and Starrett 1980).

On July 15, 2001, I surveyed a tributary of the Río Banano, Limón Province, Costa Rica. The site consisted of a small lowland creek approximately 2-2.5 m wide, and with an average depth of 0.3-0.5 m. This creek originates in the nearby mountains and empties into one of the larger tributaries of the Río Banano. The habitats surrounding the creek were a mixture of secondary forest, abandoned cacao planta-

tion, and disturbed open habitat. The area is defined as Tropical Moist Forest (Holdridge 1967), at an altitude of approximately 80 m.a.s.l.

During the survey I encountered a small glass frog that strongly resembled *H. colymbiphylum* both in appearance and call. Upon further observation this species was found to be common at the site. One calling male was collected (UCR 17066) from the underside of a palm leaf overhanging the water. Several other calling males and egg masses were seen on the vegetation along the creek. An amplexant pair was also observed moving among the leaves of a small shrub next to the creek.

In life the collected specimen was lime green dorsally, with numerous small yellow spots (Fig. 1). The venter was transparent, lacking white pigmentation in the parietal peritoneum. The liver, stomach, and intestinal tract were covered in a white visceral peritoneum. The pericardial peritoneum was transparent, and the red heart was visible (Fig. 2). The absence of pigment in the parietal pericardium is characteristic of the *chirripoi* subgroup (Ruiz-Carranza and Lynch 1998). The



Fig. 1. Dorsal view of *H. chirripoi*.



Fig. 2. Ventral view of *H. chirripoi*.

webbing between fingers II-III is nearly as extensive as that between fingers III-IV, in agreement with Taylor's (1958) description of *H. chirripoi*. The specimen (UCR 17066) has a snout-vent length of 25 mm. The bones in the living specimen were white. The female that was seen in amplexus had greenish-white eggs visible through the skin of the stomach and flanks.

H. chirripoi appears to be most closely related to *H. colymbiphyllum* among Costa Rican centrolenids. The overall appearance, calls, and ecology of these two species are very similar. I compared the specimen of *H. chirripoi*, to a *H. colymbiphyllum* (UCR 17082) I collected from Rincón de Osa,

Puntarenas Province, Costa Rica. Coloration in life and other physical characteristics show little noticeable difference between the two apart from the webbing. *H. chirripoi* (Fig. 3) has extensive webbing between fingers II-III, but *H. colymbiphyllum* (Fig. 4) has little webbing between fingers II-III (Taylor 1949, and Starrett and Savage 1973). The only reliable differentiating feature, especially while working with live specimens in the field, is the difference in the finger webbing.

One other species of Costa Rican centrolenid, *H. pulveratum*, also has extensive webbing between fingers II-III and III-IV. *H. pulveratum* is easily distinguished from *H. chirripoi* by having white pigment in its parietal pericardium. Some individuals of *H. fleischmanni* have a similar dorsal coloration to that of *H. chirripoi*, but *H. fleischmanni* is easily distinguished by the presence of white pigment in the parietal pericardium.

H. chirripoi reproduces by laying greenish-white eggs in a single layer on the underside of smooth leaved plants overhanging streams. Males were most often seen calling from below palm fronds or other smooth leaves between 1-4 m above the water. Males were also seen calling from the upper sides of vegetation, but much less frequent. The previously unknown call of *H. chirripoi* (Savage 2002) is a high-pitched insect-like buzz, extremely similar to that of *H. colymbiphyllum*. All observed egg masses had between 65-80 eggs, and were on the underside of leaves. One male was seen guarding eggs on July 15th, 2001 (Fig. 5). I was not able to return the following morning to see if he was still present near the egg mass, but on a recent visit to the site a single male was observed guarding eggs during daylight hours.

After finding the population near the Río Banano, I discovered *H. chirripoi* in another small stream in the Hitoy Cerere Biological Reserve, Limon Province, Costa Rica. A single male was seen calling from a height of 1.5 m, on a group of ginger plants (family Zingiberaceae) growing along the bank of the stream. This section of stream was disturbed open habitat.

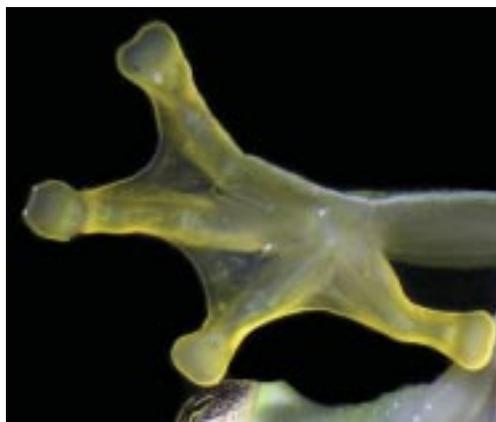


Fig. 3. Hand of *H. chirripoi*.



Fig. 4. Hand of *H. colymbiphyllum*.



Fig. 5. Male *H. chirripoi* guarding an egg mass.



Fig. 6. Collecting sites for *H. chirripoi* in Costa Rica.

In a recent review of material at the University of Costa Rica, I found one misidentified specimen of *H. chirripoi* (UCR 11057), labeled *H. colymbiphyllum*. The specimen is from the Hitoy Cerere Biological Reserve, and was collected in 1990. *H. chirripoi* is now known from three sites on the Atlantic versant of Costa Rica (Fig. 6).

At the Río Banano site *H. chirripoi* occurs sympatrically with *H. fleischmanni*, *H. valerioi*, and *Cochranella granulosa*. At the stream in the Hitoy Cerere Biological Reserve the only other species of centrolenid seen or heard was *H. valerioi*.

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RESUMEN

La rana de vidrio de Suretka, *Hyalinobatrachium chirripoi*, fue redescubierta recientemente en la región sureste de Costa Rica. Esta especie fue reportada por última vez en Costa Rica en los años cincuentas. *H. chirripoi* puede ser distinguida de *H. colymbiphyllum*, la rana de vidrio costarricense a la que más se le asemeja, por la presencia de membranas extensivas entre dedos II-III.

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