

Encounter with *Hyla angustilineata* Taylor, 1952 (Anura: Hylidae) in a cloud forest of Costa Rica

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Declining or extinction of the amphibian population has been a concern of herpetologists and other scientists for more than 20 years in the Neotropics and in other parts of the world (e.g. Pounds *et al.* 1997, Ron *et al.* 2003, Piotrowski *et al.* 2004; Stuart *et al.* 2004). One of the drastic declines in Costa Rica was of the golden toad (*Bufo periglenes* Savage) in Monteverde. For more than 15 years until 1987, over 1 500 individuals appeared at the routine mating site each year; however, in 1988 and 1989 only one individual appeared (Pounds & Crump 1994). Since then, no golden toad has ever been observed (A. Pounds & F. Bolaños, pers. comm.). Currently the species is listed as 'extinct' in the 2006 IUCN Red List of Threatened Species (IUCN 2006, IUCN *et al.* 2006). Under such depressing conditions communication is one of the essential ways to gain knowledge of current amphibian status which guides studies in a right direction (Young *et al.* 2001). *Hyla angustilineata* is one of the species that has been rarely observed and occurs in cordillera Volcánica Central, Cordilleras de Tilarán, and Talamanca regions of Costa Rica through Panama at elevations approximately between 1500 and 2000 m (Savage 2002). Here I report an encounter with the tree frog, *Hyla angustilineata* Taylor, 1952 (Anura: Hylidae) (Figs. 1-2) in a region where it had not been seen for many years. A part of the study called "A new species of hylid frog" (Nishida *et al.* in prep.) was conducted on May 6th, 2005 in an open swampy field (Fig. 3) situated right next to an oak forest of volcán Barva in cordillera Volcánica Central region. The field is located at an elevation of 2050 m, 10° 10' 34" N, 84° 06' 41" W, in Braulio Carrillo National Park, approximately 6 km East Northeast from the town of Vara Blanca, Heredia Province. The biotic condition of the region is 'cold tropic-very humid without dry season'

(Herrera & Gómez 1993). The weather at the study site is very rainy and windy, or cloudy with a few hours of sunshine (pers. observ.). The average temperature of rainy days during the daytime was 11.3 °C and probably goes down to 5-6 °C at night (S. Mohammadi, unpublished data; pers. observ.). The habitat is a regenerating pasture (Figs. 3, 4) that is heavily vegetated with *Juncus* sp. (Juncaceae), *Lycopodium* sp. (Lycopodiaceae), herbaceous plants, ferns, shrubs, and epiphytes (Project ALAS 2002; pers. observ.). Two mature male *Hyla pseudopuma* Gunther, 1901 and an unknown hylid frog (later identified as a male *H. angustilineata*) (Figs. 1, 2), were found in a small pool (Fig. 4) near each other. The *H. pseudopuma* males were calling prior to the capture. At the capture, the weather was cold and windy with drizzling rain. The pool was basically covered with old and new *Juncus* growths, and the water depth was ca. 20 cm. These three specimens were collected and deposited in Colección de Herpetología, Museo de Zoología, UCR under collection tags numbers as follows: *H. anustilineata* 17576 male (liver sample extracted), *H. pseudopuma* 17579 male (liver sample extracted) and 17580 male. This finding of *H. angustilineata* turned out to be a rediscovery of this species for the cordillera Volcánica Central region—the frog had not been collected or seen there for close to 20 years. Before 1986, individuals of *H. angustilineata* were seen in Tapantí National Park and frequently observed in cerro Chompipe in Braulio Carrillo National Park—even during the day time, at least three to four individuals were seen (F. Bolaños, pers. comm. May 2005). However, no records came from those frequently visited study sites—the conditions of anuran populations or species are noticed by monitoring and collecting of specimens via repetitive visits in designated study sites (e.g. La

Marca *et al.* 2005). Individuals of *H. angustilineata* are still seen in Monteverde in cordillera de Tilarán region; however, disappearance of population was observed from several monitoring sites in the region (A. Pounds, pers. comm.). Until recently, the study site was untouched by herpetologists and no monitoring had been done. Thus the discovery was most likely just a new record for the species. It is unknown whether the population in the site has fluctuated drastically or been steady. Six short visits in the last four years to the site did not produce any frogs besides a few small unknown tree frogs (K. Nishida *et al.*, in preparation.).

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Figures 1-4. *Hyla angustilineata*. 1. Male latero-frontal view. 2. dorsal view. 3. General habitat. 4. A small pool (arrow) in *Juncus* and *Lycopodium* growths.