

## SHORTER COMMUNICATIONS

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### Taxonomic Status of *Hyla camposseabrai* Bokermann, 1968 (Anura: Hylidae)

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**ABSTRACT.**—*Hyla camposseabrai* Bokermann, 1968, was described based on specimens obtained at Maracás, State of Bahia, Brazil. It was subsequently considered as a subspecies of *Hyla x-signata* Spix, 1824, and currently it has been considered a synonym of *Scinax x-signatus* (Spix, 1824). In this paper, the status of the species is revalidated and the new combination *Scinax camposseabrai* is established.

*Hyla camposseabrai* was described by Bokermann (1968) based on specimens obtained at “Fazenda Cana Brava” and “Fazenda Santo Onofre,” 10 km east of Maracás (13°25'S, 40°25'W, 1350 m altitude), State of Bahia, Brazil. Prior to that description, the name was cited in Bokermann (1966) without a diagnosis, and it was considered a nomen nudum. Additionally, *H. camposseabrai* Bokermann, 1968, was listed as a component of the South American fauna by Gorham (1974).

Lutz (1973) considered *H. camposseabrai* a subspecies of *Hyla x-signata* Spix, 1824, under the combination *Hyla x-signata camposseabrai*. Although Lutz (1973) had recognized that *H. camposseabrai* “is so much reduced in size and probably so well isolated that one might almost consider it as a full species,” this combination was followed and stabilized by Duellman (1977).

Through the transference of the components of the *Hyla rubra* group to the genus *Ololygon* by Fouquette and Delahoussaye (1977), the subspecies of *H. x-signata* (sensu Lutz, 1973) were considered as full species, except *H. camposseabrai* which was not mentioned by those authors. Furthermore, the combination *Ololygon x-signata camposseabrai* was established by Harding (1983).

Pombal and Gordo (1991) noted that *Scinax* Wagler, 1830, has priority over *Ololygon*. This act was formally reinstated by Duellman and Wiens (1992), who provided a diagnosis of the genus, but *Ololygon x-signata camposseabrai* was not mentioned again. Currently, *H. camposseabrai* Bokermann, 1968, has been considered a synonym of *Scinax x-signatus* (Spix, 1824; D. R. Frost, Amphibian Species of the World: An Online Reference. Vers. 3.0, <http://research.amnh.org/herpetology/amphibia/index.html>, American Museum of Natural History, New York, 2004).

During a survey project in the northern part of the State of Minas Gerais, Brazil, a series of specimens were collected and compared to the type specimens of *H. camposseabrai* and to specimens of *Scinax x-signatus* and other species of the *Scinax ruber* group. In this paper, we present our findings regarding the taxonomic status of *H. camposseabrai* and provide a new geographic occurrence for the species.

#### MATERIALS AND METHODS

Specimens examined (Appendix 1) are deposited in MNRJ (Museu Nacional, Rio de Janeiro, Brazil), MZUFV (Museu de Zoologia “João Moojen de Oliveira,” Universidade Federal de Viçosa, Minas Gerais, Brazil), MZUSP (Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil), WCAB (Werner C. A. Bokermann Collection, currently deposited at MZUSP) and AL-MN (Adolpho Lutz Collection, currently deposited at MNRJ). Measurements, in millimeters, are snout–vent length (SVL); head length (HL); head width (HW); internarial distance (IND); snout to nostril distance (SND); eye to nostril distance (END); eye diameter (ED); upper eyelid width (UEW); interorbital distance (IOD); tympanum diameter (TD); thigh length (THL); tibia length (TL); foot length (FL); fourth toe disc width (4TD); hand length (HaL); third finger disc width (3FD).

#### RESULTS

*Scinax camposseabrai* (Bokermann, 1968), revalidated,  
new combination  
Figures 1, 2

*Hyla camposseabrai* Bokermann, 1966 (*nomen nudum*).

*Hyla camposseabrai* Bokermann, 1968; Gorham, 1974.

*Hyla x-signata camposseabrai*—Lutz, 1973; Duellman, 1977.

*Ololygon x-signata*—Fouquette and Delahoussaye, 1977.

*Ololygon x-signata camposseabrai*—Harding, 1983.

*Scinax x-signatus*—Duellman and Wiens, 1992.

*Scinax x-signatus*—Köhler and Böhme, 1996; D. R. Frost, Amphibian Species of the World: An Online Reference. Vers. 3.0, <http://research.amnh.org/herpetology/amphibia/index.html>, American Museum of Natural History, New York, 2004.

**Diagnosis.**—A medium sized *Scinax* (males 28.9–33.5 mm SVL) belonging to the *S. ruber* clade, characterized by small head (males 7.5–8.2 mm HL) and short limbs, snout rounded in profile and in dorsal views, prominent eyes, canthus rostralis rounded, nearly indistinct, terminal nostrils directed dorsally, supratympanic and pectoral folds well marked, tympanum small and almost invisible, vocal sac single, subgular and expanded laterally. Skin smooth on dorsal and granular on ventral surface. In preservative, dorsal color tan with paired brown spots above shoulders and few small dots scattered on the dorsal surface of body and limbs. The flanks form

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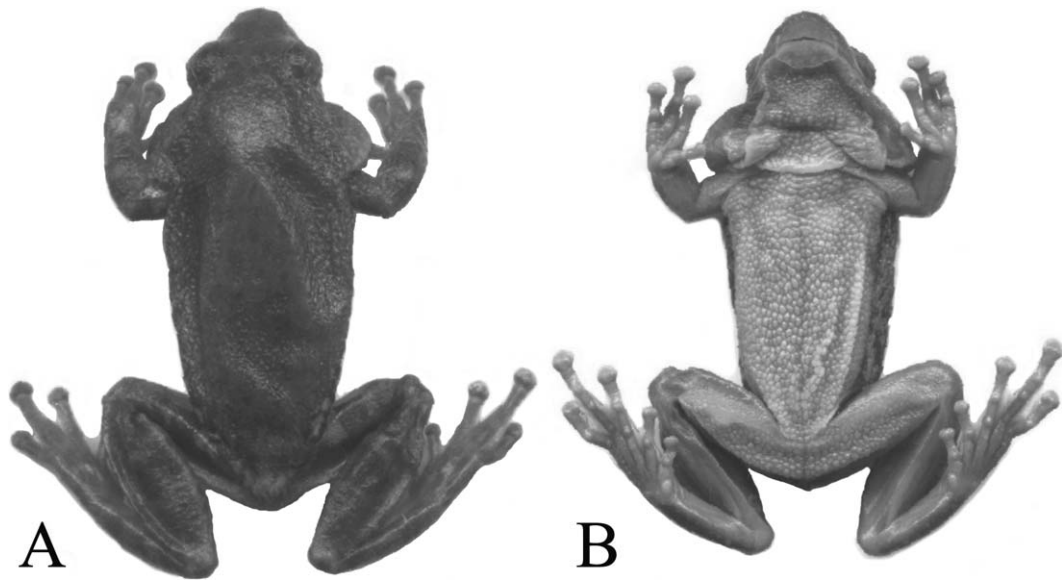


FIG. 1. Paratype of *Scinax camposseabrai* (MNRJ 4048). (A) Dorsal view; (B) ventral view.

a pattern of dark and yellowish spots that extends over the arms and tympanum and under the eyes until the maxillary.

*Scinax camposseabrai* differs from *S. x-signatus*, and the other Brazilian species of the group, mainly by the vocal sac expanded laterally, short limbs, reduced foot webbing, and lateral color pattern. By the small size and the much-reduced head (Table 1), *S. camposseabrai* is distinguished from *Scinax eurydice* (males 39.4–53.8 mm SVL; 13.2–17.2 mm HL), *Scinax fuscovarius* (males 38.7–47.9 mm SVL; 13.3–15.4 mm HL), *Scinax perereca* (males 33.7–39.5 mm SVL; 12.3–13.1 mm HL), and *S. x-signatus* (males 29.1–39.1 mm SVL; 9.9–12.8 mm HL). *Scinax similis* has equivalent body size, but the head is longer (males 29.4–34.7 mm SVL; 9.7–

12.5 mm HL). It differs from *Scinax alter*, *Scinax caldarum*, *Scinax crospedospilus*, *Scinax curicica*, *Scinax cuspidatus*, and *Scinax duartei* by the rounded snout in dorsal and lateral views (acuminate snout in the other species).

*Distribution*.—The distribution is known for the type-locality in Maracás, State of Bahia, and Matias Cardoso, State of Minas Gerais, Brazil.

#### DISCUSSION

Despite the remarkable similarities between most of the species within the *Scinax* groups, the original description performed by Bokermann (1968) allows the correct identification of *S. camposseabrai* and provides sufficient characters to distinguish it from those species of the *S. ruber* clade that occur in Northeastern and Southeastern Brazil.

*Scinax camposseabrai* present some morphological and behavioral characters ascribed to species of *S. ruber* group (sensu Pombal et al., 1995a), as snout not pointed, posterior surface of thighs with flash colors, advertisement call with multipulsed notes and breeding in open areas. Bokermann (1968) placed his *H. camposseabrai* into the “*Hyla rubra* group” by the color pattern. Despite the fact that the advertisement call of *S. camposseabrai* remains unknown, Bokermann (1968) made available some traits (“crack, crack, crack”) that led us to suppose it is composed by multipulsed notes. This author obtained some specimens from epiphytic bromeliads, and males were found calling in the middle of a large rainwater pool, floating with the vocal sac considerably inflated. On the other hand, the vocal sac expanded laterally observed in *S. camposseabrai* disagrees with the vocal sac single and subgular present in species of *S. ruber* group. The vocal sac expanded laterally was used to define the *Scinax rizibilis* group, although Pombal et al. (1995b) demonstrated this character might be variable and



FIG. 2. Female alive of *Scinax camposseabrai* (MUFV 3011) (Photo: Renato N. Feio).

TABLE 1. Measurements of *Scinax camposseabrai* (N, number of specimens; SD, standard deviation).

CHARACTERS	Males (N = 8)			Females (N = 4)		
	Range	Mean	SD	Range	Mean	SD
SVL	28.9–33.5	31.5	1.9	25.7–35.9	31.2	4.2
HL	7.5–8.2	7.9	0.2	6.6–8.8	7.8	0.9
HW	7.8–8.6	8.1	0.3	6.7–9.1	7.9	1.0
IND	1.7–2.1	1.9	0.1	1.7–2.1	1.9	0.2
SND	1.3–1.7	1.5	0.1	1.3–1.5	1.4	0.1
END	2.5–2.9	2.7	0.1	2.7–3.0	2.8	0.2
ED	3.1–3.6	3.3	0.2	2.5–3.6	3.2	0.5
UEW	1.8–2.2	2.0	0.1	1.8–2.3	2.0	0.2
IOD	2.6–3.0	2.8	0.1	2.5–2.9	2.7	0.2
TD	1.4–1.8	1.5	0.1	1.0–1.8	1.4	0.3
THL	10.4–13.3	11.8	1.1	9.2–13.4	11.4	1.7
TL	11.6–14.8	13.4	1.1	11.0–15.1	13.1	1.7
FL	17.7–21.8	19.5	1.6	16.1–22.4	19.5	2.6
4TD	1.4–1.6	1.5	0.1	0.9–1.7	1.4	0.3
HaL	7.2–8.6	7.9	0.6	6.4–8.8	7.8	1.0
3FD	1.4–1.7	1.6	0.1	0.8–1.8	1.5	0.4

transferred all species to *S. catharinae* group. Faivovich (2002) preserves this group synonymy.

Currently, the species of the *S. ruber* group are allocated to the *S. ruber* clade among species from the *Scinax rostrata* and *Scinax stauferi* groups (see Faivovich, 2002). Unfortunately, the synapomorphies of the *S. ruber* clade could not be observed since larvae are still unknown, and it is difficult to access internal morphology because there are few specimens available. So, we placed *S. camposseabrai* into this clade by overall similarities. Eighteen species assigned to the *S. ruber* clade have been recorded in Southeastern and Northeastern Brazil (see D. R. Frost, Amphibian Species of the World: An Online Reference. Vers. 3.0, <http://research.amnh.org/herpetology/amphibia/index.html>, American Museum of Natural History, New York, 2004). However, *Scinax auratus* (Wied-Neuwied, 1821), *Scinax cardosoi* (Carvalho-e-Silva and Peixoto, 1991), *Scinax fuscomaginitus* (Lutz, 1925), *Scinax hayii* (Barbour, 1909), *Scinax maracaya* (Cardoso and Sazima, 1980), and *Scinax squalirostris* (Lutz, 1925) are unlike *S. camposseabrai*, and they have such different color patterns that they probably would never be confounded with this species.

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#### APPENDIX 1

*Additional Specimens Examined.*—*Scinax alter*: BRAZIL: RIO DE JANEIRO: Restinga de Maricá (MNRJ 29386–29389, 29254–29258, 31956–31966, 36269); *Scinax caldarum*: BRAZIL: MINAS GERAIS: Poços de Caldas (MNRJ 4002 holotype, 4001 allotype, 4000 paratype); *Scinax camposseabrai*: BRAZIL: BAHIA: Maracás, Fazenda Cana Brava (MZUSP 74202 holotype ex-WCAB 31771, MZUSP 74203 allotype ex-WCAB 31765, MNRJ 4048 paratype ex-WCAB 31766); Fazenda Santo Onofre (MZUSP 73739–73741 paratypes ex-WCAB 31767, 31769–31770); Maracás (MZUSP 73755 paratype ex-WCAB 30673); MINAS GERAIS: Matias Cardoso, Reserva Legal (MZUFV 3011; 3623–3626); *Scinax curicica*: BRAZIL: MINAS GERAIS: Santana do Riacho (MNRJ 26327 holotype, 26321–26326, 26339–26340, 26848–26851 paratypes); *Scinax cuspidatus*: BRAZIL: RIO DE JANEIRO: Restinga de Maricá (MNRJ 29273–29275, 29409–29410); *Scinax crospeospilus*: BRAZIL:

RIO DE JANEIRO: Itatiaia (MZUSP 76516); Petrópolis (MZUSP 143); Teresópolis (MZUSP 102415); *Scinax duartei*: BRAZIL: RIO DE JANEIRO: Itatiaia (MNRJ 3257 holotype, 4094 allotype, 32129–32131); *Scinax eurydice*: BRAZIL: BAHIA: Maracás (MZUSP 74213 holotype ex-WCAB 31771, 74214 allotype ex-WCAB 31796, MNRJ 4050, MZUSP 73732–73733 paratypes ex-WCAB 31797–31806); Itacaré, Praia das Conchas (MNRJ 29222); Ilhéus, Praia do Sul (MNRJ 28917–28921); Porto Seguro, Reserva Particular do Patrimônio Natural (RPPN) Estação Vera Cruz (MNRJ 25598–25600, 25633, 28091); *Scinax fuscovarius*: BRAZIL: MINAS GERAIS: Juiz de Fora, Água Limpa (AL-MN 76 holotype, MZUSP 74154 paratype, MNRJ 34957–34960); Roça Grande, Fazenda Santa Cândida Maria (MNRJ 34961–34965); *Scinax perereca*: BRAZIL: SÃO PAULO: Ribeirão Branco (MZUSP 6937–6939 paratypes; MNRJ 16601–16604 paratypes; MZUSP 103320–103322; MNRJ 17648, 18226, 18705, 19378); *Scinax x-signatus*: BRAZIL: BAHIA: Caetité (MNRJ 25046–25059); Conde, Fazenda Tiririca (MNRJ 22652–22655); Curaçá (MNRJ 33729–33733); Ilhéus (MNRJ 22661–22664); Itagibá, Fazenda Barra do Cedro (MNRJ 22677–22681); Maracás (MNRJ 22656–22660); Nova Viçosa (MNRJ 34970).