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AMPHIBIANS RECENTLY RECORDED FROM THE SURROUNDINGS OF IQUITOS (DEPARTAMENTO LORETO, PERU). I. HYLIDAE

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Abstract. The presented paper summarises faunistic and natural history data on 30 hylid species (Hylidae) obtained in the surroundings of Iquitos (Departamento Loreto, Peru) in March 2001 and March–April 2002. *Osteocephalus deridens* is recorded for the first time from Peru.

■ **Amphibia, Hylidae, distribution, Amazonia, Iquitos, Peru.**

INTRODUCTION

The scientific cooperation between National Museum, Prague and Universidad Nacional de la Amazonía Peruana, Iquitos (UNAP) resulted in two short-termed research excursions of the first author to the Iquitos region of the Peruvian Amazonia in March 2001 and March–April 2002. Herpetofaunal diversity was surveyed at six selected localities lying 17–50 km W to SW of Iquitos with the aim to improve the current knowledge of the composition of the local herpetofauna. The preliminary partial report and the first part of the results summarising the information regarding reptile species found in 2001 have been already published (Moravec et al. 2001, 2002). This report brings an annotated list of the hylid species observed at the visited localities.

MATERIAL AND METHODS

Altogether 29 complete days and nights were spent in the field by the first author (exact periods of the field activities are given in the list of the investigated localities). For two thirds of this time (19 days and nights) the localities were surveyed by two persons (assistance of co-authors or students of UNAP). During the remaining 10 days and nights (distributed more or less randomly within the whole period of investigation) the fieldwork was conducted by one person. Only the data collected during these complete day are used for a rough quantification of the obtained results. The selected voucher material is deposited in the collection of the National Museum Prague (abbr. NMP6V).

LOCALITIES INVESTIGATED

1. Puerto Almendras

Area of disturbed primary rainforest lying on the right bank of the Rio Nanay at the village of Puerto Almendras (03° 49’ 46’’ S, 73° 22’ 32’’ W; ca. 17 km straight SW of

Iquitos). The research was focused on the plot called "Arboretum", which serves as a field study area of the UNAP.

Period of the fieldwork: March 6–12, 2001; April 8–11, 2002.

2. Zona Reservada Allpahuayo-Mishana

Protected area of more or less well-preserved primary rainforest lying along the right side of the road Iquitos–Nauta (ca. 25–30 km SW of Iquitos). The research was conducted along the maintained trails in non-flooded forest up to 4.5 km around the Estación Biológica Allpahuayo (03° 58' 03'' S; 73° 25' 08'' W).

Period of the fieldwork: March 14–18, 2001.

3. Sacha Mama

Surroundings of the settlement of Sacha Mama (03° 55' 17'' S; 73° 21' 44'' W; ca. 23 km straight SW of Iquitos). The landscape is formed by a mosaic of low ridges with remains of more or less disturbed primary forest, areas of swamps, secondary growths and cultivated or abandoned fields.

Period of the fieldwork: March 20–22, 2001.

4. Tarapoto

Area of fairly well preserved primary forest (03° 47' 12'' S; 73° 25' 43'' W) ca. 5 km NW of the village of Tarapoto (03° 48' 17'' S; 73° 24' 19'' W; ca. 19 km straight SW of Iquitos) and secondary forests, swamps and abandoned fields around the village of Tarapoto.

Period of the fieldwork: March 23–28, 2001; April 5–8, 2002.

5. Study area of UNAP

Area in property of UNAP covered by a mosaic of pastures, plots of secondary forests and stripes of more or less disturbed non-flooded primary forest including so called *varillall* – a local type of wet *tiera firme* forest occurring on sandy substrates. It was indicated by dense growths of the thin usually up to 20 m high trees of the genera *Caraipa, Decymbe* and *Pachira*, presence of palms of the genera *Euterpe*, *Mauritia* and *Mauritiella* and abundant occurrence of epiphytic and terrestrial bromeliads. The field investigations were performed in the area lying around the field station of UNAP at 31st km of the road Iquitos–Nauta (04° 00' 11'' S; 73° 26' 04'' W) and along the trails up to 4 km straight to NW.

Period of the fieldwork: March 20–24, 2002.

6. Anguilla

Surroundings of the village of Anguilla (03° 54' 45'' S; 73° 39' 39'' W) lying on the right bank of Rio Nanay ca. 50 km straight W of Iquitos and ca. 27 km straight NW of Loc. 5. The investigated area included relatively undisturbed flooded forest lying along the river, secondary growths and plantations around the village and different types of disturbed or relatively undisturbed primary *tierra firme* forest (inclusive of extensive areas of *varillal*) up to 5 km S and SW of the village.

Period of the fieldwork: March 28– April 3, 2002.

For additional data on the localities Nos. 1–4 as well as photographs of their typical habitats see Moravec at al. (2002).

Hemiphractus scutatus (SPIX, 1824)
Records: 2001: Loc. 2.
One specimen was collected by students in the primary forest N of the Estación Biológica Allpahuayo.

Hyla boans (Linnaeus, 1758)
Records: 2002: Loc. 4, 6.
Material: NMP6V 71249, Loc. 6.
At both localities calling males sitting on flooded vegetation along the riverbanks were observed. The males occupied their calling sites on floating branches and rests of vegetations anchored at emergent trunks as well as on bushes and trees up to 1–2 m above the water. The choruses of *H. boans* began just after sunset and preceded regular vocalisation of other frogs. In one case an adult female approaching the calling male to 75 cm was observed. SVL of the biggest measured male and female was 118 mm and 124 mm, respectively.

Hyla brevifrons DUELLMAN et CRUMP, 1974
Records: 2001: Loc. 1.
Material: NMP6V 71177.
Solitary specimen was collected in ruderal herbaceous growths at the side of a path at the edge of the village of Puerto Almendras.

Hyla calcarata TROSCHEL, 1848
Records: 2002: Loc. 5.
Material: NMP6V 71250.
Association of four calling males was found around a swampy micro-depression in the *varillal* forest. The frogs occupied their calling places on vines and branches of lower trees up to ca. 2 m above the ground. Mutual distances between the individual calling places were ca. 3–12 m.

Hyla fasciata GÜNTHER, 1858
Records: 2001: Loc. 2, 4.
2002: Loc. 4.
Material: NMP6V 71149; 71251/1–2.
Found at the edge of a relatively undisturbed primary *tierra firme* forest and along a small stream crossing a path in a secondary forest. At night the frogs were sitting on horizontally lying stems or branches 50–80 cm above the ground. One individual was observed on a vertical vine ca. 140 cm above the ground.

Hyla geographica SPIX, 1824
Records: 2001: Loc. 1, 2, 4.
2002: Loc. 6.
Material: NMP6V 71201, Loc. 2; NMP6V 71252/1–2, Loc. 6.
Usually encountered at night in secondary growths. During the day only one sleeping female was found sitting freely on a palm leaf ca. 110 cm above the ground in a relatively undisturbed *tierra firme* forest in Zona Reservada Allpahuayo Mishana. A chorus of 8–10

males sitting hidden among leafs in bushes and small trees up to 140 cm above the flooded ground in an open swamp was observed at the village of Anguilla. The minimum calling distances did not exceed 150 cm.

Hyla granosa BOULENGER, 1882
Records: 2001: Loc. 2, 3.
2002: Loc. 4, 5, 6.
Material: NMP6V 71253, Loc. 5; NMP6V 71254/1–2, Loc. 6.
Common inhabitant of open habitats. Most frequently encountered in pastures and open swamps where it aggregated around small water bodies (including temporal puddles appearing after heavy rains). Calling males perched on leafs of herbaceous plants and on bushes usually less than 100 cm above the ground. At Loc. 6 this species formed numerous choruses on floating and emergent vegetation in Rio Nanay. In flooded swamps (Loc. 3 and 6) the calling males were observed also on palms (*Mauritia flexuosa*) up to 2 m above the water.

Hyla lanciformis (COPE, 1871)
Records: 2001: Loc. 1, 2, 3, 4.
2002: Loc. 4, 5, 6.
Material: NMP6V 71185, Loc. 1; NMP6V 71186, Loc. 3; NMP6V 71255, Loc. 6.
Very common species widespread in a variety of ruderal and secondary habitats (pastures, different fields and plantations, swamps, edges of secondary forests). It does not avoid small villages (Loc. 1, 4, 6) nor the periphery of Iquitos (e.g. Morona Cocha). At the localities investigated *H. lanciformis* usually formed mixed choruses with *H. granosa* and occurred syntopically with a number of other species of frogs preferring or tolerating open situations and secondary growths (e.g. *Bufo marinus, Hyla brevifrons, H. fasciata, H. geographica, H. leali, H. leucophyllata, H. microderma, H. parviceps, H. punctata, H. rhodopepla, H. sarayacuensis, Leptodactylus leptodactyloides, Phrynohyas venulosa, Rana palmipes, Scinax garbei, S. ruber, Sphaenorhynchus lacteus*). The calling males perched on herbs and bushes up to 4 m high, but usually preferred lower positions up to 150 cm. In the places with low graminoid plants they vocalised commonly also from the ground.

Hyla leali BOKERMANN, 1964
Records: 2001: Loc. 1.
Material: NMP6V 71183.
After heavy rains numerous assemblages of this frog appeared around the very temporary puddles in ditches along the unpaved road in Puerto Almendras as well as around a semipermanent pool at the close edge of a secondary forest. Contrary to the situation in Bolivian savannas (see Reichle et Köhler 1998) the males called from herbaceous plants up to 50 cm above the water only. During the dry days most of the puddles dried out completely and the tadpoles survived only in very small shallow rests of water hidden among dense tufts of graminoids.

Hyla leucophyllata (BEIREIS, 1783)
Records: 2002: Loc. 4, 5, Iquitos.
Material: NMP6V 71256/1–2; NMP6V 71257, Iquitos.
H. leucophyllata was observed only in secondary or ruderal habitats. In Iquitos both adult

and subadult specimens fed on insects attracted to lights along the pedestrian zone on the Amazon embankment.

A high level of colour-pattern polymorphism is reported for this taxon. In the examined sample (n=16) specimens with more or less developed dark hour-glass-shaped mark on the light dorsum prevailed (n=12; some of them possessed also small dark dots or spots in the light parts of the dorsum and shanks). Two other individuals had reticulated "*favosa*" pattern, one specimen had small rounded dark spots combined with dark vermiculation on the back and the last one was uniformly yellow from above. The pattern of the latter two specimens resembled the colouration of *H. triangulum*. Not a single specimen had the typical *leucophyllata* pattern (sensu Chek 1999) figured e.g. by Rodríguez et Duellman (1994) or De la Riva et al. (2000).

Hyla marmorata (LAURENTI, 1768)
Records: 2001: Loc. 4.
Material: NMP6V 71147.
Two specimens were found to be hidden among leaves of an old *Musacea* in a banana plantation at the edge of a primary forest.

Hyla microderma PYBURN, 1977
Records: 2002: Loc. 1, 6.
Material: NMP6V 71258/1–2.
The observed males called from higher herbs, bushes and low trees (1–2 m above the ground) around swampy sections of the trails in a secondary forest (Loc. 6). At Loc. 1 the vocalising males were heard from trees around a swampy area in a disturbed primary forest. Here the males were sitting higher than 3–4 m above the ground whereas one gravid female and one juvenile were found on herbs at the height 100–150 cm.

Hyla miyatai VIGLE et GOBERDHAN-VIGLE, 1990
Records: 2002: Loc. 6.
Material: NMP6V 71259.
Males vocalised from leafs of emergent vegetation in the still parts of Rio Nanay and along the wider channels in the flooded forest. Locally they formed multispecies assemblages with *Hyla boans* and *H. granosa.*

Hyla parviceps BOULENGER, 1882
Records: 2001: Loc. 1, 2.
2002: Loc. 1, 6.
Material: NMP6V 71178, Loc. 1; NMP6V 71260/1–2, Loc. 6.
H. parviceps was usually encountered around temporary puddles in secondary habitats. At the Loc. 1 individual specimens intruded also the periphery of a disturbed primary forest. The vocalisation was apparently initiated by longer rains. The males called hidden in low dense herbaceous vegetation or from lower parts of bushes up to 50 cm above the ground or water. At the Loc. 1 they formed numerous mixed choruses with *H. leali.*

Hyla punctata (SCHNEIDER, 1799)
Records: 2001: Loc. 1.
2002: Loc. 5, 6.
Material: NMP6V 71188/1–3, Loc. 1.

Fig. 1. *Hyla* **sp., NMP6V 71202/1, male.**

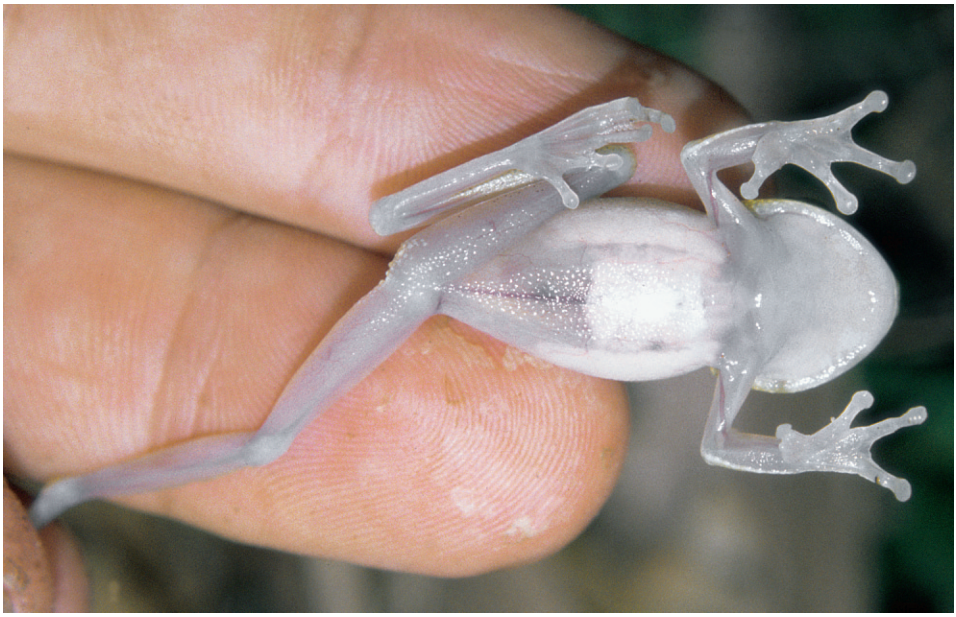

Fig. 2. *Hyla* **sp., NMP6V 71202/1, ventral view.**

Fig. 3. *Osteocephalus deridens*, male.

Fig. 4. Habitat of *Osteocephalus deridens* at Loc. 6.

Males vocalised from herbs and bushes in the vicinity of semipermanent pools at the edges of secondary growths (Loc. 1, 5) or in an open swamp surrounded by a secondary forest (Loc. 6). Six observed males adopted their calling places 80–200 cm above the ground which is relatively high in comparison with the data given by Rodríguez et Duellman (1994) or Reichle et Köhler (1998).

Hyla rhodopepla GÜNTHER, 1858
Records: 2001: Loc. 1.
Material: NMP6V 71179.
This species occurred syntopically with *Hyla brevifrons, H. leali, H. parviceps, H. punctata* and *Scinax ruber*.

Hyla sarayacuensis SHREVE, 1935
Records: 2001: Loc. 2.
2002: Loc. 6.
Material: NMP6V 71261.
A small breeding assemblage of 8–10 males concentrated around a small semipermanent shallow pool in a secondary forest was observed during two nights at Loc. 6. Calling males were sitting on large dry leafs, fallen branches as well as on bushes ca. 50–150 cm above the ground or water. Other males vocalised from trees at positions higher than 2 m. Two fresh clutches of eggs deposited over water were found. First one on a large fallen leaf of *Cecropia* 80 cm above the water and the second one on the palm trunk (*Mauritia flexuosa*) 3.5 m high. At Loc. 2 only one road-killed specimen was found on the road Iquitos-Nauta.

Hyla sp.
Records: 2001: Loc. 4.
Material: NMP6V 71202/1–2.
This frog (Figs 1–2) has not been assigned to any of the hylid species known from the Peruvian Amazonia. Two collected specimens (SVL male: 31.5 mm, SVL female: 35.5 mm) resemble morphologically *Hyla microderma* by slender body (narrower than head), truncate snout, large eyes with uniformly cream to creamy gold iris and a black periphery and by the dorsal pattern of a darker reticulation formed by transverse, diagonal and middorsal lines. However, they differ by absence of golden reticulation in the lower eyelid and absence of tubercular calcars on heals. Moreover, the dorsum is light yellowish green and the flanks, hidden surfaces of limbs and ventral side are bluish white to translucent. The long bones are green.

Both specimens were found in a swampy area of a primary forest with abundant epiphytes and vines and dense growth of herbaceous plants, low palms and samplings on the ground floor. They perched on the same plant ca. 10 cm beside each other, ca. 130 cm above the ground.

Nyctimantis rugiceps BOULENGER, 1882
Records: 2001: Loc. 2.
An adult male (SVL: 54.0 mm) was found in closed primary forest sitting at night at the edge of a tree cavity ca. 2.5 m above the ground. When disturbed it hid in to water in the cavity. The distinctive herbal odour of this frog was smelt also on other places of the Loc. 2 and 4, but no other individual was discovered.

Osteocephalus cabrerai (COCHRAN et GOIN, 1970)
Records: 2001: Loc. 4.
Material: NMP6V 71144/1–2.
Both specimens (SVL male: 43.5 mm and SVL female: 51.0 mm) were collected on horizontal leafs ca. 120 cm above the ground in the same habitat as *Hyla* sp. mentioned above.

Osteocephalus deridens JUNGFER, RON, SEIPP et ALMENDÁRIZ, 2000
Records: 2001: Loc. 2.
2002: Loc. 5, 6.
Material: NMP6V 71262/1–5, Loc. 5; NMP6V 71263, Loc. 6.
O. deridens was described by Jungfer et al. (2000) from Ecuadorian Amazonia (Provincia Napo). Our findings extend its known range ca. 500 km to the southeast and represent the first record of this taxon from Peru. It is likely, that *O. deridens* is the right name for the unnamed tree frog "*Osteocephalus* sp. nov." sensu Rivera Gonzales (1999), who reported this taxon to be the most abundant tree frog in the area of *varillales* 20–30 km SW of Iquitos.

According to our observations *O. deridens* (Fig. 3) was abundant in a closed *tierra firme* forest, where it together with syntopic *O. planiceps* represented the most frequently encountered tree frog. Occasionally, the calling males were heard also from canopies of large trees surviving in small groups in pastures (Loc. 5). *O. deridens* was strictly connected with epiphytic or terrestrial bromeliads. Usually, the males vocalised on high trees. However, on the places with higher humidity, where bromeliads grew also on lower parts of tree trunks or on the ground, the calling males were common also in the forest floor. The highest density of this species was recorded in the areas of *varillal*, especially in its humid form – *varillal humedo.* This forest was characterised by plentiful occurrence of the trees of the genera *Caraipa* and *Decymbe*, presence of palms *Euterpe catinga* and *Mauritia carana* and by abundant ferns and bromeliads (Fig. 4). Here *O. deridens* markedly predominated *O. planiceps.* Locally, up to 8 calling males were registered both in terrestrial bromeliads and in epiphytic ones growing up to 2.5 m on the plot 10x10 m (Loc. 5). The males were hidden in the middle of the leaf rosette or (especially when the rosette centre was filled by detritus) in lateral leaf axils. During the day both males and females were observed to be sitting at the mouth of the rosette (Figs 5–6) or on the margins of leafs axils. When disturbed they usually stepped rapidly back deep in to the rosette/axil.

The body size of our voucher specimens (SVL males: 35.0, 35.0, 26.0, 40.0 mm; SVL females: 51.5, 57.5 mm) slightly exceeds the SVL values of the type specimens published by Jungfer et al. (2000) (SVL male 34.9 mm; SVL female: 43.7–50.6 mm).

Another species of *Osteocephalus* living in bromeliads was reported from the Iquitos region by Rodríguez et Duellman (1994) and Duellman et Mendelson (1995). This till now unnamed species, which differs from *O. deridens* above all in having white bones, has not been found by us in the surveyed localities.

Osteocephalus planiceps COPE, 1874
Records: 2001: Loc. 1, 2, 3, 4.
2002: Loc. 1, 5, 6.
Material: NMP6V 71174/1–5, Loc. 1; NMP6V 71204/1–2, Loc. 4; NMP6V 71264/1–2, Loc. 6.

Fig. 5. Male of *Osteocephalus deridens* by day.

Fig. 6. Female of *Osteocephalus deridens* by day.

Fig. 7. *Scinax* sp., NMP6V 71267/1, female.

Fig. 8. *Scinax* sp., NMP6V 71267/2, male.

Inside the closed *trierra firme* forest *O. planiceps* was the most common hylid frog from all the surveyed localities except for the areas of *varillal* at Loc. 5 and 6, where it seemed to be relatively rare in comparison with abundant *O. deridens.* According to Rivera Gonzales (1999) *O. planiceps* occupies bromeliads and also Jungfer et Hödl (2002) mentioned that males of this species call from bromeliads. Therefore, a competition pressure of *O. deridens* could explain the low density of *O. planiceps* in *varillales.* On the other hand, none of the more than 30 observed or collected specimens of *O. planiceps* was found to be in any relationship with bromeliads. Both sexes of this tree frog were often encountered in forests, where nearly no bromeliads were available in lower heights.

Osteocephalus taurinus STEINDACHNER, 1862
Records: 2001: Loc. 1.
Material: NMP6V 71184.
Subadult male (SVL 47.5 mm) was collected on the forest floor close to a fallen large tree bromeliad.

Phrynohyas venulosa (LAURENTI, 1768)
Records: 2001: Loc. 2, Iquitos.
2002: Loc. 1, 6, Iquitos.
At night observed in ruderal habitats, houses, lightened tree trunks or walls.

Phylomedusa tomopterna (Cope, 1868)
Records: 2001: Loc. 3.
One road-killed specimen was identified on the road Iquitos-Nauta in the area of pastures and open swamps.

Phylomedusa vaillanti BOULENGER, 1882
Records: 2001: Loc. 2.
This record concerns the male sleeping by day on a broad leaf at an unusually low position (ca. 30 cm high) on the trail in a primary forest.

Scinax garbei (MIRANDA–RIBEIRO, 1926)
Records: 2001: Loc. 1, 2, 3.
2002: Loc. 5.
Material: NMP6V 71150, Loc. 1; NMP6V 71151, Loc. 3; NMP6V 71266/1–2, Loc. 5.
Not rare in secondary growths near semipermanent water bodies. During the rainy nights relatively often found on the road Iquitos-Nauta at Loc. 2. Occasionally, observed also in the peripheral zones of a disturbed primary forest (Loc. 1).

Scinax ruber (LAURENTI, 1768)
Records: 2001: Loc. 1, 2, 3, 4.
2002: Loc. 4, 5, 6.
Material: NMP6V 71152/1–4, NMP6V 71191, Loc. 1; NMP6V 71145, Loc. 3; NMP6V 71265, Loc. 6.
This very common frog occupied similar habitats as *H. lanciformis* (different ruderal places, pastures, gardens, fields, plantations, open swamps and secondary forest edge situations). Assemblages of calling males were present even in gardens and neighbourhoods of houses in small villages (Loc. 1, 4, 6). It occurred also on the clearings in a primary

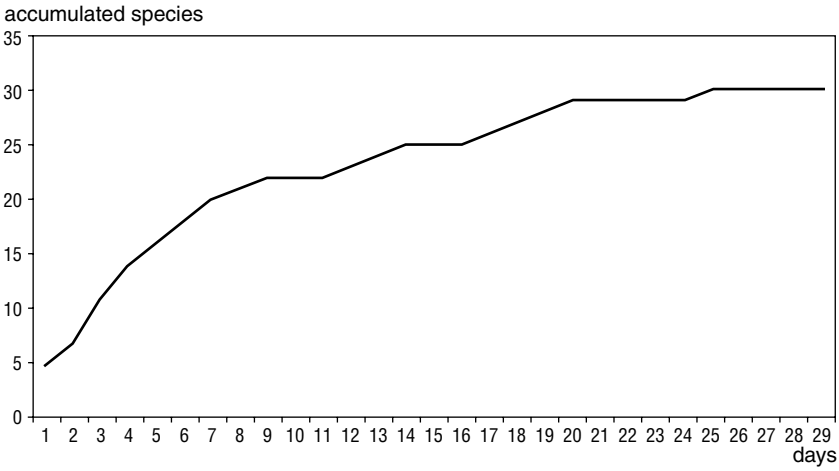

Fig. 9. Species accumulation curve of the Iquitos surroundings tree frog community.

forest where it usually hid under loose bark of stubs and remaining trees. The calling activity increased considerably during or after the rains. Calling males often aggregated in individual bushes near the water. Numerous choruses appeared also around small but more or less permanent water bodies e.g. wells and water hollows nearby isolated forest houses. Masculine spelling of *Scinax* follows Kwet (2001).

Scinax sp.
Records: 2001: Loc. 1.
2002: Loc. 1.
Material: NMP6V 71182, 71267/1–3.
According to the key to the *Scinax* species of Amazonian Ecuador and Peru (Duellman et Wiens 1993) it appears that this frog (Figs 7–8) corresponds in most characters to *Scinax icterica.* However, in comparison with the diagnosis and description of this taxon (see Duellman et Wiens 1993) it differs in its larger size (SVL male: 35.0 mm, SVL females: 38.5, 38.5 mm), interorbital distance slightly wider than width of eyelid, smooth skin on throat, absence of conspicuous ulnar and tarsal tubercles (inconspicuous very low traces of small tubercles can be detected on proximal outer edge of tarsus) and absence of small tubercles in supratympanic region and on dorsal surfaces of shanks. It seems that there are also some differences in colouration. Our three adult specimens have neither a dark canthal stripe nor the transverse dark marks on limbs. The dorsal pattern consists of small round dark dots and spots, which are randomly distributed on head and are concentrated mostly in areas of inconspicuous darker transverse blotches in interorbital, scapular and sacral area. Similar dots occur on lips. Flanks are bright yellow by day and are covered by very distinct black round spots of progressing size towards groin. Anterior and posterior surfaces of thighs are black. The black colour continues from the posterior part of thigh to inner surface of shank and to tarsus. There is also a row of black spots on the anterior ventral side of the thighs

All specimens were collected in a disturbed primary forest on leafs or palm trunks up to 150 cm high. Both adult females were gravid.

A more detailed description and comparison of this taxon will be published elsewhere.

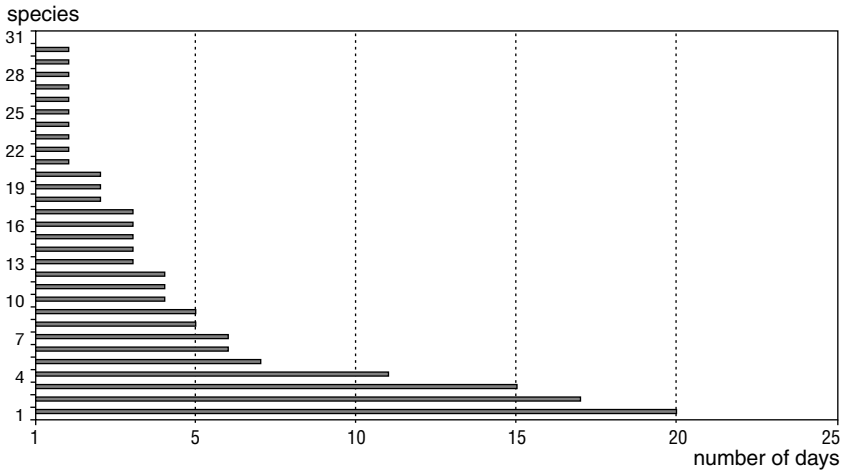

Fig. 10. Number of days when individual species were encountered. (1) *H. lanciformis*, (2) *S. ruber*, (3) *O. planiceps*, (4) *H. granosa*, (5) *O. deridens*, (6) *H. parviceps*, (7) *S. garbei*, (8) *H. geographica*, (9) *H. leucophyllata*, (10) *H. leali*, (11) *H. microderma*, (12) *H. punctata*, (13) *H. boans*, (14) *H. fasciata*, (15) *H. sarayacuensis*, (16) *P. venulosa*, (17) *Scinax* sp., (18) *H. miyatai*, (19) *O. cabrerai*, (20) *S. lacteus*, (21) *H. scutatus*, (22) *H. brevifrons*, (23) *H. calcarata*, (24) *H. marmorata*, (25) *H. rhodopepla*, (26) *Hyla* sp., (27) *N. rugiceps*, (28) *O. taurinus*, (29) *P. tomopterna*, (30) *P. vaillanti*.

Sphaenorhynchus lacteus (DAUDIN, 1802)

Records: 2002: Loc. 4.

Material: NMP6V 71268.

A very numerous assemblage of this frog was concentrated around a permanent swampy pool in a secondary forest. Males occupied their calling places both on herbs at the shore and on different fallen branches, old palm leafs and emergent vegetation in the pool (up to 30–50 cm high). In two cases silent satellite males (sexual parasites) associated with the calling ones were observed.

FAUNISTIC NOTES

Rodríguez et al. (1993) listed 42 species of tree frogs for the whole Departamento Loreto and one year later Rodríguez et Duellman (1994) included 50 hylid species in their Guide to the frogs of the Iquitos region. In the meantime this list was completed for at least 5 other taxa (e.g. Duellman et Mendelson 1995, De la Riva et Duellman, 1997, Ron et Pramuk 1999, Jungfer et al. 2002). A number of additional undetermined hylid taxa listed by Lamar (1998) from Iquitos region (a radius up to 500 km) indicates that much higher diversity of tree frogs can be expected in this area. Our sample of 30 recorded species involves roughly 50 % of the hylid species currently recognized from the Iquitos region, one new species (*Osteocephalus deridens*) for Peru and two probably still undescribed taxa (*Hyla* sp. and *Scinax* sp.). The recorded species represent largely the most common and widespread tree frogs in the area. More than 70 % of them were found during the first 10 days of the conducted survey (see Fig. 9), which is 2.2 newly observed species per day (1.0 species per day for the whole period). It is difficult to express abun-

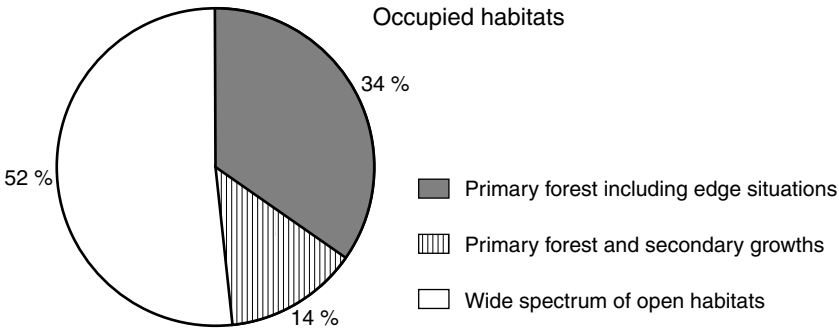

Fig. 11. Main types of habitats occupied by the observed individuals of the recorded tree frogs.

dance of the individual species because of their different breeding and calling activities, difference in their reproductive modes and spatial segregation as well as different time spent on the surveyed localities. Nevertheless, summarization of the days when the individual species were observed (not only heard) demonstrates at least the most and the less frequently encountered taxa (Fig. 10). An assortment of 29 species according to their habitat preference (see Fig. 11) has shown that more than 50 % of them represent the species living in one or more types of deforested open habitats including farming areas, ruderal places, villages and human habitations.

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