

## THE HERPETOLOGICAL COLLECTION FROM BOLIVIA IN THE “ESTACIÓN BIOLÓGICA DE DOÑANA” (SPAIN)

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### ABSTRACT

The collection consists of 822 specimens, of which 529 are amphibians, all of them anurans (5 families, 17 genera and 51 species) and 293 specimens are reptiles (10 families, 28 genera and 49 species). The collection has around 25% of the amphibians species known to occur in Bolivia and about 19% of the reptile species. They come from 55 localities of the Bolivian Departments of Beni, Chuquisaca, Cochabamba, La Paz, Potosí and Santa Cruz and represent the following bioregions: Puna, Chaco, Chiquitanian Forest, Wet Savannas, Ceja de Montaña, Yungas, Interandean Dry Valleys and Humid Lowland Forest. The specimens of *Scinax chiquitanus* and *Phrynopus kempffi* are paratypes. The record of *Pleurodema borelli* is the first for the Santa Cruz Department and second for Bolivia. *Liolaemus dorbignyi* also constitutes the second report for the country and *Tropidurus melanopleurus* is cited for the first time for the Beni Department.

**Key words:** Amphibia, Reptilia, Bolivia, Collections, Estación Biológica de Doñana, Spain.

### RESUMEN

#### La colección herpetológica de Bolivia depositada en la Estación Biológica de Doñana

La colección se compone de 822 ejemplares, 529 anfibios y 293 reptiles. Los anfibios son todos anuros, pertenecientes a 51 especies de 17 géneros y cinco familias. Los reptiles están representados por 49 especies, incluidas en 28 géneros de 10 familias. Los ejemplares provienen de 55 localidades repartidas en los Departamentos bolivianos de Beni, Chuquisaca, Cochabamba, La Paz, Potosí y Santa Cruz, y representan las siguientes bioregiones: Puna, Chaco, Bosque Chiquitano, Sabanas Húmedas, Ceja de Montaña, Yungas, Valles Secos Interandinos y Bosque Húmedo de Llanura. Los ejemplares de *Scinax chiquitanus* y *Phrynopus kempffi* son paratipos. *Pleurodema borelli* es citada por primera vez para el Departamento de Santa Cruz y por segunda vez para Bolivia; también el registro de *Liolaemus dorbignyi* constituye el segundo para el país y el de *Tropidurus melanopleurus* el primero para el Departamento Beni.

**Palabras clave:** Amphibia, Reptilia, Bolivia, Colecciones, Estación Biológica de Doñana, España.

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## Introduction

Since the number of valid described species is supposed to represent close to 10% of the world's biodiversity and 90% of these inhabit the humid tropical forest (Stork, 1997), the study of tropical diversity has become an international priority. Consequently, taxonomy and systematics are again considered essential for biodiversity conservation (Patrick, 1997, Fjeldså, 2000). Natural history collections and museums are indispensable for the study and conservation of biodiversity but by themselves are insufficient. During the eighties, the Estación Biológica de Doñana (EBD) encouraged the study of tropical areas and numerous zoological expeditions took place in different countries: Argelia, Morocco, Gabon, Ecuatorial Guinea, Bolivia, Venezuela, Nicaragua, Chile, Argentina and Paraguay (Cabot, 1991) and added material to the collections of the EBD. The herpetology collection is outstanding with around 36,915 specimens belonging to more than 600 species (De la Riva & Mateo, 1991).

Due to its exceptional geographic situation and the extraordinary high species diversity in Bolivia (Köhler, 2000), the EBD organized five expeditions to this country from 1980 to 1990: Exp. Lipez, Exp. Chaco, Exp. Chapare, Exp. Estación Biológica Beni and Exp. Serranía de Huanchaca, authorized by Centro de Desarrollo Forestal (CDF) and with the co-operation of the local and regional institutions Instituto de Fomento Lanero (INFOL), Corporación para el Desarrollo de Santa Cruz (CORDECRUZ), and Zoológico Municipal de Santa Cruz de la Sierra. Most collections were made up of birds and mammals but representative samples of amphibians and reptiles from different biogeographical regions (Puna, Chaco, Chiquitania Forest, Wet Savannas, Ceja de Montaña, Yungas, Interandean Dry Valleys and Humid Lowland Forest) were taken. An inventory of the herpetological collection of the EBD was published by De la Riva & Mateo (1991) but it did not include the geographical origins of the specimens.

Despite of the fact that the knowledge of amphibians and reptiles from Bolivia has increased enormously in the last decade, most of the country remains unexplored by zoologists and the distributional patterns of many species are still unknown (Fugler *et al.*, 1995; Dirksen & De la Riva, 1999; De la Riva *et al.*, 2000; Köhler, 2000). This paper was written to call attention to the herpetological collection deposited in the EBD and to contribute to the knowledge of the distribution of the different species in the collection.

## Material and methods

For the nomenclature of amphibians we followed De la Riva *et al.*, 2000. The amphibians were identified by comparing them with specimens from other collections (museum notes of the authors) and using different bibliographical sources. For amphibians we mainly consulted Ceï (1980); De la Riva *et al.* (2000) and Köhler (2000) and other works dealing with specific groups. For the nomenclature of reptiles we followed Fugler *et al.* (1995) and Dirksen & De la Riva (1999). For the identification of the reptiles we used mainly Peters & Donoso-Barros (1970), Peters & Orejas-Miranda (1970), Ceï (1993), Avila-Pires (1995), Harvey & Gutberlet (1998) and others works dealing with specific groups.

The species in the list are sorted within the genus by alphabetical order and similarly the genus within families. Some juveniles, a few poorly preserved specimens, or those of unclear taxonomy could only be identified to the genus level and are cited by the genus followed by sp. (i.e., *Leptodactylus* sp.). Where the same genus has various unidentified species these are numbered (i.e., *Eleutherodactylus* sp. 1 and *Eleutherodactylus* sp. 2). The total number of specimens, the localities and catalogue number are listed (all specimens have EBD number collection). Each number corresponds to a specimen but some samples of tadpoles or froglets are referred to only by a single catalogue number which is indicated in the text.

Geographic records are listed by Bolivian departments (underlined), which are arranged in alphabetical order. Each locality is separated by a point. We used a comma if the locality is briefly described (i. e., Laguna Colorada, Reserva Eduardo Avaroa). Usually, coordinates given as kilometric distances from a given point are not provided. Instead, we provided coordinates of the locality of reference (Appendix 1).

## Check-list of the collection

AMPHIBIA  
ANURA

### BUFONIDAE

#### *Bufo arenarum* Hensel, 1867

Specimens: 6. Chuquisaca: 81 km from Ipati to Monteagudo, near Parapetí river (30316 to 30318). Cochabamba: Cochabamba (30411). Santa Cruz: 10 km before Camiri (21619).

***Bufo granulosus*** Spix, 1824

Specimens: 71. Beni: between Estación Biológica Beni and San Borja (30253 to 30312). Cochabamba: Villa Tunari (22124, 22125, 22136). Santa Cruz: between río Chico and río Grande, 120 km S of Santa Cruz de la Sierra to Camiri (30064, 30069). Cerro Colorado (21065 al 21070).

***Bufo marinus*** (Linnaeus, 1758)

Specimens: 2. Beni: Estación Biológica Beni (30070, 30071).

***Bufo paracnemis*** Lutz, 1925

Specimens: 20. Beni: Estación Biológica Beni (30076 to 30078, 30080 to 30085, 30129, 30198). Chuquisaca: 81 km from Ipati (21632). Santa Cruz: Los Arenales, 15 km S of Santa Cruz de la Sierra (21653). 20 km S of Cerro Colorado (21083 to 21085). Parque Nacional Noel Kempff (21060, 21061, 21062, 21063).

***Bufo poeppigii*** Tschudi, 1845

Specimens: 7. Cochabamba: Province Chapare and Cercado (22103 to 22109).

***Bufo quechua*** Gallardo, 1961

Specimens: 4. Cochabamba: Villa Tunari (30249 to 30252).

***Bufo spinulosus*** Wiegmann, 1834

Specimens: 37. Cochabamba: Cochabamba (30197). Chuquisaca: Villa Abecia (30129, 30199 to 30204). La Paz: Reserva de Ulla-Ulla (30319 to 30325). Mecapa, Valle de la Paz (30179 to 30183). Reserva de Ulla-Ulla (30062, 30063, 30239, 30133, 30134, 30135, 30136, 30388). Ichucota (30173, 30174, 30218). Road between La Paz and Tiquina (28591 to 28594, 28596 to 28598). Potosí: Reserva Eduardo Avaroa (30120).

***Bufo stanlani*** Lötters & Köhler, 1999

Specimens: 31. Cochabamba: Villa Tunari (22111 to 22123, 22126 to 22135, 22137 to 22144).

***Bufo* sp.**

Specimens: 46 (all young). Cochabamba: shore of Chapare river (30121). La Paz: Near Palos Blancos (28590). Road to Coroico (30382). Santa Cruz: stream 10 km before Camiri (44 specimen: 30196).

## DENDROBATIDAE

***Colostethus mediarmidi*** Reynolds & Foster, 1992

Specimens: 13. Cochabamba: road from Cochabamba to Villa Tunari (30221 to 30233).

***Epipedobates pictus*** (Bibron in Tschudi, 1838)

Specimens: 7. Beni: Estación Biológica Beni. (30189 to 30192). Santa Cruz: km 27 road from Espejillos to Cochabamba (21080 to 21082).

## HYLIDAE

***Hyla acreana*** Bokermann, 1964

Specimens: 4. Cochabamba: Villa Tunari (30210 to 30213).

***Hyla albonigra*** Nieden, 1923

Specimens: 2. Cochabamba: Río Julpe, 30 km S. of Totora (28926, 28927).

***Hyla andina*** Müller, 1924

Specimens: 2. La Paz: La Paz (30171, 30172).

***Hyla geographica*** Spix, 1824

Specimens: 1. Santa Cruz: Parque Nacional Noel Kempff (21052).

***Hyla lanciformis*** (Cope, 1870)

Specimens: 1. Cochabamba: Villa Tunari (22161).

***Hyla melanargyrea*** Cope, 1887

Specimens: 18. Santa Cruz: stream 10 km before Camiri (29177). Between río Chico and río Grande, 120 km from Santa Cruz de la Sierra to Camiri (30333 to 30349).

***Hyla nana*** Boulenger, 1889

Specimens: 2. Beni: Estación Biológica Beni (28587).

***Hyla raniceps*** (Cope, 1862)

Specimens: 6. Beni: Estación Biológica Beni (28589, 30166, 30208, 30209). San Borja (28588). Santa Cruz: Parque Nacional Noel Kempff (21049).

***Hyla* sp. 1.**

Specimens: 4. Cochabamba: road from Cochabamba to Chapare (30234 to 30237).

***Hyla* sp. 2.**

Specimens: 1. Santa Cruz: Province Cordillera (29179).

***Osteocephalus buckleyi*** (Boulenger, 1882)

Specimens: 2. Santa Cruz: Parque Nacional Noel Kempff (21051, 21053).

***Osteocephalus taurinus*** Steindachner, 1862

Specimens: 1. Santa Cruz: Santa Rosa (28507).

***Phrynohyas venulosa*** (Laurenti, 1768)

Specimens: 3. Beni: Estación Biológica Beni (30313 to 30315).

***Phyllomedusa boliviana*** Boulenger, 1902

Specimens: 33. Santa Cruz: between río Chico and río Grande, 120 km from Santa Cruz de la Sierra to Camiri (21625 to 21629, 30090 to 30117).

***Phyllomedusa hypochondrialis*** (Daudin, 1800)

Specimens: 3. Beni: Estación Biológica Beni (30177, 30178). Road from San Borja to Trinidad, between La Florida and río Matos (30332).

***Scinax chiquitanus*** (De la Riva, 1990)

Specimens: 14. Santa Cruz: Puerto Almacén (paratypes: 28828 to 28841).

***Scinax fuscovarius*** (Lutz, 1925)

Specimens: 2. Santa Cruz: stream 10 km before Camiri (29180). Cerro Colorado (21057).

***Scinax ruber*** (Laurenti, 1768)

Specimens: 4. Cochabamba: Villa Tunari (22164), (30167, 30168). Santa Cruz: Estación Biológica Beni (30217).

## LEPTODACTYLIDAE

***Adenomera hylaedactyla*** (Cope, 1868)

Specimens: 2. Cochabamba: Villa Tunari (30242, 30243).

***Ceratophrys cranwelli*** Barrio, 1980

Specimens: 3. Santa Cruz: Los Arenales, 15 km S of Santa Cruz de la Sierra (21633 to 21635).

***Eleutherodactylus cruralis*** (Boulenger, 1902)

Specimens: 1. Cochabamba: Villa Tunari (22165).

***Eleutherodactylus cf. fenestratus*** (Steindachner, 1864)

Specimens: 3. Cochabamba: Villa Tunari (30194, 30195). Road from Cochabamba to Villa Tunari (30238).

***Eleutherodactylus fraudator*** Lynch & McDiarmid, 1987

Specimens: 1. Cochabamba: road from Cochabamba to Chapare (30215).

***Eleutherodactylus sp. 1.***

Specimens: 1. Cochabamba: Provincia Chapare (22163).

***Eleutherodactylus sp. 2.***

Specimens: 1. Cochabamba: road from Cochabamba to Villa Tunari (30220).

***Leptodactylus bufonius*** Boulenger, 1894

Specimens: 3. Santa Cruz: Cerro Colorado (21054 to 21056).

***Leptodactylus chaquensis*** Cei, 1950

Specimens: 7. Beni: road from San Borja to Trinidad (30326 to 30329). Estación Biológica Beni (28583 to 28585).

***Leptodactylus elenae*** Heyer, 1978

Specimens: 2. Beni: Estación Biológica Beni (30215). Santa Cruz: between río Chico and río Grande, 120 km from Santa Cruz de la Sierra (29174).

***Leptodactylus fuscus*** (Schneider, 1799)

Specimens: 32. Beni: Estación Biológica Beni (28582, 30205 to 30227). Road from San Borja to Trinidad (30244 to 30248). Cochabamba: Villa Tunari (22162, 22166). Santa Cruz: Los Arenales, 15 km S of Santa Cruz de la Sierra (21630).

***Leptodactylus leptodactyloides*** (Andersson, 1945)

Specimens: 2. Beni: Estación Biológica Beni (30330, 30331).

***Leptodactylus podicipinus*** (Cope, 1862)

Specimens: 1. Beni: Estación Biológica Beni (28586).

***Leptodactylus rhodonotus*** (Günther, 1869)

Specimens: 11. Cochabamba: Villa Tunari (22149 to 22159).

***Leptodactylus sp.***

Specimens: 1. Beni: Estación Biológica Beni (21631).

***Phrynopus kempffi*** De la Riva, 1992

Specimens: 4. Cochabamba: La Siberia (paratypes: 28842 to 28845, one specimen stained).

***Phrynopus laplacai*** (Cei, 1968)

Specimens: 4. La Paz: Unduavi (28846 to 28848, 28850).

***Physalaemus biligonigerus*** (Cope, 1861 "1860")

Specimens: 20. Chuquisaca: 81 km from Ipati to Monteagudo (21621). Santa Cruz: stream 10 km before Camiri (21622, 21623, 29176, 30184 to 30188). Between río Chico and río Grande, 120 km from Santa Cruz de la Sierra to Camiri (30384 to 30387, 30389, 30390). Cerro Colorado (21050). Los Arenales, 15 km S from Santa Cruz de la Sierra (21642 to 21645).

***Pleurodema marmoratum*** (Duméril & Bibron, 1841)

Specimens: 36. La Paz: Kotacora, road from La Paz to Tiquina (28595). Reserva Ulla-Ulla (22024, 29178, 29181, 29550 to 29552, 29862, 30169, 30170, 30240, 30241 to 30244, 30351 to 30381).

***Pleurodema borelli*** (Peracca, 1895)

Specimens: 1. Santa Cruz: stream 10 km before Camiri (21624).

***Telmatobius culeus*** (Garman, 1875)

Specimens: 30. La Paz: Lago Titicaca (29173, 30086 to 30089, 30122 to 30126, 30130 to 30133, 30140 to 30142, 30153 to 30165).

***Telmatobius marmoratus*** (Duméril & Bibron, 1841)

Specimens: 1. Cochabamba: Laguna Wara-Wara (29175).

***Telmatobius sp.***

Specimens: 14. Potosí: Laguna Salada or Chalviri (4 tadpoles: 30118). Laguna Colorada, Reserva Eduardo Avaroa (30143, 30144). Bofedal, Quebrada Quetena (30145 to 30152).

## PSEUDIDAE

***Lysapsus limellus*** Cope, 1862

Specimens: 2. Beni: Estación Biológica Beni (30176, 30177).

REPTILIA  
CROCODYLIA

## ALLIGATORIDAE

***Caiman crocodylus*** (Linnaeus, 1758)

Specimens: 32. Beni: Los Tajibos, 40 km S of San Borja (29262, 29263, 29268). Estación Biológica Beni (25487, 26420, 29257 to 29261, 30391, 30395 to 30410). San Borja (2 ejemplares: 1566). Estancia Venecia (30404). Without locality (1544, 1545). Santa Cruz: Parque Nacional Noel Kempff (21108).

***Melanosuchus niger*** (Spix, 1825)

Specimens: 1. Beni: Estancia Tamarindo, between San Borja and Santa Ana (29821).

***Paleosuchus trigonatus*** (Schneider, 1801)

Specimens: 1. Santa Cruz: Parque Nacional Noel Kempff (22265).

## SAURIA

## GEKKONIDAE

*Phyllopezus pollicaris* (Spix, 1825)

Specimens: 1. Santa Cruz: Cerro Colorado (21071).

## GYMNOPTHALMIDAE

*Bachia dorbignyi* (Duméril & Briçon, 1839)

Specimens: 1. Beni: Estación Biológica Beni (23607).

*Pantodactylus schreibersii* (Wiegmann, 1834)

Specimens: 1. Beni: 50 km S from San Borja (28570).

## SCINCIDAE

*Mabuya cochabambae* Dunn, 1935

Specimens: 1. Cochabamba: Cochabamba (23538).

## TEIIDAE

*Ameiva ameiva* (Linnaeus, 1758)

Specimens: 9. Beni: Estancia Venecia (21393). 50 km S from San Borja to San Ignacio (28574 to 28576). Cochabamba: Villa Tunari (22147, 22148). Santa Cruz: 15 km E from Santa Cruz de la Sierra (28573). Parque Nacional Noel Kempff (21073, 21074).

*Cnemidophorus lacertoides* Duméril & Briçon, 1839

Specimens: 1. Cochabamba: Cochabamba (23537).

*Teius teyou* (Daudin, 1802)

Specimens: 1. Santa Cruz: Cerro Colorado (21075).

*Tupinambis teguixin* (Linnaeus, 1758)

Specimens: 1. Beni: Estación Biológica Beni (23643).

## TROPIDURIDAE

*Liolaemus alticolor* Barbour, 1904

Specimens: 5. La Paz: Patacamaya (21533, 21560, 21562). Corpa (23148). Potosí: La Cumbre-Impora (21555, 21561).

**Grupo "andinus"***Liolaemus* sp. 1

Specimens: 16. Potosí: Laguna Cañapa (21613, 21614, 21618). Laguna Colorada, Reserva Eduardo Avaroa (21565, 21578, 21579, 21581, 21583, 21584, 21592, 21598, 21599, 21608, 21610, 21615). Uyuni (21611).

*Liolaemus* sp. 2

Specimens: 2. La Paz: 10 km S from La Paz to Oruro (21604, 21612).

*Liolaemus* sp. 3

Specimens: 6. Potosí: Laguna Colorada, Reserva Eduardo Avaroa (21617, 21586). Laguna Verde, Reserva Eduardo Avaroa (21575 to 21577, 21595).

**Grupo "darwinii"***Liolaemus* sp. 4

Specimens: 1. La Paz: Corpa (23148).

*Liolaemus* sp. 5

Specimens: 6. Potosí: Peña Blanca (21590). La Paz: 100 km S from La Paz to Oruro (21605 to 21607, 21609, 21616).

*Liolaemus* sp. 6

Specimens: 12. Potosí: La Cumbre-Impora (21574, 21580, 21582, 21587 to 21589, 21591, 21594, 21596, 21597, 21601, 21603).

**Grupo "signifer"***Liolaemus dorbignyi* Koslowsky, 1898

Specimens: 6. Potosí: Reserva Eduardo Avaroa (21567 to 21569). Laguna Salada (21570, 21585, 21872).

*Liolaemus orientalis* Müller, 1924

Specimens: 2. Potosí: Pampa de Talapalca, near Villa Abecia (21602, 21573).

*Liolaemus signifer* (Duméril & Briçon, 1837)

Specimens: 148. La Paz: Reserva Ulla-Ulla (16063 to 16149, 21519 to 21554, 21636, 21637, 22299 to 22316, 23096 to 23103, 23147, 28566 to 28569).

**Liolaemus not assigned to group***Liolaemus* sp. 7

Specimens: 1. Potosí: La Cumbre-Impora (21566).

*Liolaemus* sp. 8

Specimens: 1. Potosí: Laguna Colorada, Reserva Eduardo Avaroa (21571).

*Liolaemus* sp. 9

Specimens: 2. Cochabamba: 30 km NW from Tiquipaya (23110, 23111).

*Liolaemus* sp. 10.

Specimens: 1. La Paz: Aranjuez, La Paz Valley (33146).

*Stenocercus caducus* (Cope, 1862)

Specimens: 1. La Paz: Coroico (21564).

*Tropidurus etheridgei* Cei, 1982

Specimens: 2. Cochabamba: 6 km from Quillacollo to Santibáñez (23108, 23109).

*Tropidurus spinulosus* (Cope, 1862)

Specimens: 2. Santa Cruz: Cerro Colorado (21059, 21076).

*Tropidurus umbra* (Linnaeus, 1758)

Specimens: 1. Santa Cruz: Parque Nacional Noel Kempff (21077).

*Tropidurus melanopleurus* Boulenger, 1902

Specimens: 1. Beni: between Palos Blancos and Yucumo (28571).

## SERPENTES

## COLUBRIDAE

*Atractus boettgeri* Boulenger, 1896

Specimens: 1. Beni: Estación Biológica Beni (23619).

***Chironius fuscus*** (Linnaeus, 1758)Specimens: 1. Cochabamba: Villa Tunari (23615).***Chironius monticola*** Rozé, 1952Specimens: 1. Cochabamba: 24 km from Colomi (30128).***Chironius* sp.**Specimens: 1. Beni: Estancia Venecia, near río Maniqui (26981).***Clelia clelia*** (Daudin, 1803)Specimens: 1. Santa Cruz: Parque Nacional Noel Kempff (21087).***Helicops leopardinus*** (Schlegel, 1837)Specimens: 1. Beni: Estación Biológica Beni (23616).***Hydrodynastes gigas*** (Duméril, Bribon & Duméril, 1854)Specimens: 3. Beni: Estación Biológica Beni (30137 to 30139).***Liophis reginae*** (Linnaeus, 1758)Specimens: 1. Santa Cruz: Asunción (16150).***Liophis* sp. 1.**Specimens: 1. Santa Cruz: 11 km from Comarapa (16149).***Liophis* sp. 2.**Specimens: 2. Beni: Estación Biológica Beni (23618, 30216).***Liophis* sp. 3.**Specimens: 1. Cochabamba: Laguna Alalai (30241).***Lystrophis semicinctus*** (Duméril, Bribon & Duméril, 1854)Specimens: 1. Santa Cruz: Estancia Perforación (21058).***Mastigodryas bifossatus*** (Raddi, 1820)Specimens: 1. Beni: Estación Biológica Beni (30383).***Philodryas olfersii*** (Lichtenstein, 1823)Specimens: 2. Santa Cruz: Parque Nacional Noel Kempff (21078, 21079).***Pseustes sulphureus*** (Wagler, 1824)Specimens: 1. Santa Cruz: Parque Nacional Noel Kempff (21089).***Tachymenis peruviana*** (Wiegmann, 1835)Specimens: 1. La Paz: Estrecho de Tiquina (23617).**Colubridae unidentified**Specimens: 1. Beni: without locality (28577). Specimen from the stomach of *Herpetotheres cachinnans* (Falconidae).

## ELAPIDAE

***Micrurus pyrrhocryptus*** (Cope, 1862)Specimens: 1. Santa Cruz: between Portachuelo and Montero (28565).**Ophidia unidentified**Specimens: 1. Santa Cruz: 11 km from Comarapa (16149).

## TESTUDINES

## PELOMEDUSIDAE

***Podocnemis unifilis*** Troschel, 1848

Specimens: 1. Bolivia, without locality (30393).

## TESTUDINIDAE

***Chelonoidis carbonaria*** (Spix, 1824)Specimens: 1. Santa Cruz: Cerro Colorado (21086).***Chelonoidis* sp.**Specimens: 2. Beni: without locality (30392, 30394).**Comments**

The herpetological collection from Bolivia has 822 specimens from 55 localities of the Bolivian Departments of Beni, Chuquisaca, Cochabamba, La Paz, Potosí and Santa Cruz. These records represent some of the main habitat types of Bolivia: Puna, Chaco, Chiquitanian Forest, Wet Savannas, Ceja de Montaña, Yungas, Interandean Dry Valleys and the Humid Lowland Forest (Beck *et al.*, 1993).

The amphibians are represented by 529 specimens, all of them anurans, of 5 families, 17 genera and 51 species. The best represented family is Leptodactylidae, with 19 species, followed by Hylidae with 16. Some immature of *Hyla*, *Eleutherodactylus* and *Leptodactylus* and a species of *Telmatobius* belong to the unidentified specimens. The specimens of *Scinax chiquitanus* and *Phrynopus kempffi* represent the only type material (paratypes) of the collection.

*Osteocephalus buckleyi* is an amazonian species rarely founded in Bolivia (De la Riva *et al.*, 2000). The two specimens deposited in the EBD, from Serranía de Huanchaca, constitute a new species record for the Parque Nacional Noel Kempff Mercado (Department Santa Cruz) and is the easternmost record known for this species in Bolivia.

One specimen of *Pleurodema* from a Chaco Montane Forest area of the Department Santa Cruz is assigned to *Pleurodema borelli*. De la Riva *et al.* (2000) tentatively considered *P. borelli* as a good species inhabiting the chacoan forest of Argentina and Bolivia. *Pleurodema borelli* was already reported by Peracca (1897) for Tarija and was suspected to occur in Department Chuquisaca by De la Riva *et al.* (2000). Therefore, this is the first record for Department Santa Cruz and second record for the country.

Among the specimens identified as *Physalaemus biligonigerus* we found a great morphological variability and some from

Department Santa Cruz were similar to the specimens described by Cei (1990) as *P. fuscomaculatus* (Steindachner). This species was already cited by Peracca (1897) in some localities in Tarija, although De la Riva *et al.* (2000) considered these records doubtful and did not include the species in their list. We tentatively assigned all specimens to *Physalaemus biliginigerous* until more evidence from field observation and calls is registered.

The reptiles are represented by 293 specimens of 10 families, 28 genera and 49 species. Some specimens could not be identified because they required a more thorough study of their unclear taxonomic status or because they were juveniles or badly conserved specimens. Among the families, Tropiduridae is the best represented (19 species), and *Liolaemus* the genus with more specimens (209 specimens of 14 species). It should be noted that only 16 species of *Liolaemus* have been cited for Bolivia and only three of the 14 species of the EBD could be identified. Six specimens of *Liolaemus dorbignyi* from Department Potosí represent the second record for the country. This species was already cited by Laurent (1995) in Campamento Khastor, in the same Department (see Dirksen & De la Riva, 1999). The record of *Tropidurus melanopleurus* is the first for Department Beni. Another infrequent lizard founded among the collection was one specimen of *Cnemidophorus lacertoides*, from Cochabamba City. This species had only been found previously in Arani (Department Cochabamba) and in El Fuerte and Santiago (Department Santa Cruz) (Dirksen & De la Riva, 1999).

The Colubridae, with sixteen species, is the second family in number of species of the reptile collection. Among these, *Clelia clelia* constitutes a new record for the Noel Kempff Mercado National Park. The specimens of *Philodryas olfersii* from the Serranía de Huanchaca were already cited by Fugler *et al.* (1995); however it was overlooked by Harvey *et al.* (1998) in the list of the Noel Kempff Mercado National Park.

*Micrurus pyrrhocryptus* has suffered numerous taxonomic changes and for a while was considered a subspecies of *M. frontalis* (Da Silva & Sites, 1999). It was already cited for Bolivia as *Micrurus frontalis* (Fugler *et al.*, 1995) but afterwards Da Silva & Sites (1999) stated that the distribution of this species has its occidental limit in the Cerrado formations of eastern Bolivia. According to Da Silva & Sites (1999) the specimen from the immediate area of Santa Cruz de la Sierra are *Micrurus pyrrhocryptus* and these localities represent the northernmost known records for this species.

Another new record for the National Park Noel Kempff Mercado is *Palaeosuchus trigonatus*. Although the presence of this species was mentioned for all tributaries of the Iténez River (Medem, 1983) and in Department Beni (Fugler, 1983) until now we knew of no records for the National Park.

Among the specimens deposited in the EBD since 1980, four amphibians species (*Bufo stanlaidi*, *Colostethus mcdiarmidi*, *Ceratophrys cranwelli* and *Eleutherodactylus fraudator*) and one reptile (*Tropidurus etheridgei*) were overlooked during the last 20 years and were originally described using specimens of other collections. Among these, the most outstanding is *Bufo stanlaidi* Lötters & Köhler, 1999, of which there were 31 specimens from the type locality deposited in the EBD since the eighties. The same is applicable to the 13 specimens of *Colostethus macdiarmidi* Reynolds & Foster, 1992, from the type region. Only two species were partially described with specimens of the EBD, *Scinax chiquitanus* De la Riva, 1990 and *Phrynopus kempffi* De la Riva, 1992.

Despite the limited size of the EBD collection from Bolivia, two new species were described, five could have eventually been described and another is actually under study (De la Riva pers. comm). We do not discard the possibility of discovering more new species when the taxonomic problems of some species are resolved. New species or records, specifically from the *Liolaemus* genus, could be discovered after more work with the specimens from the collection.

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**Appendix 1.**— Localities and coordinates.**Apéndice 1.**— Localidades y coordenadas.Department of **Beni**

<u>LOCALITY</u>	<u>COORDINATES (S/W)</u>
Estación Biológica Beni	14°51'/62°21'
Estancia Venecia	14°40'/65°24'
Estancia Tamarindo	14°00'/66°06'
Palos Blancos	15°34'/67°15'
San Borja	14°49'/66°51'
Santa Rosa	14°06'/66°46'
Trinidad	11°08'/66°10'
Yucumo	15°10'/67°04'

Department of **Chuquisaca**

<u>LOCALITY</u>	<u>COORDINATES (S/W)</u>
Monteagudo	19°45'/63°50'
Villa Abecia	20°55'/65°14'

Department of **Cochabamba**

<u>LOCALITY</u>	<u>COORDINATES (S/W)</u>
Chapare river	17°00'/65°10'
Cochabamba	17°24'/65°48'
Colomi	17°17'/65°36'
Espejillos	17°50'/63°25'
Laguna Alalai	17°24'/65°48'
Laguna Warawara	17°20'/65°48'
La Siberia	17°50'/64°45'
Quillacollo	17°25'/66°14'
Totora	17°44'/65°12'
Tiquipaya	17°20'/66°12'
Villa Tunari	16°57'/65°24'

Department of **La Paz**

<u>LOCALITY</u>	<u>COORDINATES (S/W)</u>
Aranjuez	16°30'/68°09'
Coroico	16°10'/67°44'
Corpa	16°41'/68°53'
Kotacora	15°51'/68°59'
Lago Titicaca	15°48'/69°24'
La Paz	16°30'/68°09'
Mecapa, Valle de la Paz	16°42'/68°00'
Palos Blancos	15°34'/67°16'
Patacamaya	17°14'/67°55'
Tiquina	16°14'/68°54'
Reserva Ulla-Ulla	15°03'/69°16'
Unduavi	16°19'/67°55'

Department of **Potosí**

<u>LOCALITY</u>	<u>COORDINATES (S/W)</u>
Impora	21°28'/65°21'
Quebrada Quetena (Peña Barrosa)	22°18'/67°25'
Laguna Cañapa	22°27'/67°22'
Laguna Colorada, Reserva Eduardo Avaroa	22°12'/67°46'
Laguna Salada or Chalviri	22°32'/67°34'
Laguna Verde, Reserva Eduardo Avaroa	22°47'/67°45'
La Cumbre	21°33'/65°41'
Pampa de Talpalca (pos. Tacalca)	21°43'/65°40'
Peña Blanca	21°39'/65°19'
Uyuni	20°28'/66°50'

Department of **Santa Cruz**

<u>LOCALITY</u>	<u>COORDINATES (S/W)</u>
Asunción	17°50'/60°10'
Between río Chico and río Grande	18°50'/63°59'
Camiri	20°02'/63°30'
Cerro Colorado	19°28'/62°21'
Comarapa	17°55'/64°32'
Estancia Perforación	19°55'/62°33'
Ipati	19°46'/63°34'
Los Arenales	17°48'/63°10'
Montero	17°22'/63°15'
Parque Nacional Noel Kempff	14°25'/60°50'
Portachuelo	17°22'/63°24'
Puerto Almacén	15°46'/62°15'
Santa Cruz de la Sierra	17°48'/63°10'