Aquatic Coleoptera from Mburucuyá National Park (Corrientes Province, Argentina)

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Los coleópteros acuáticos del Parque Nacional Mburucuyá (Provincia de Corrientes, Argentina)

■ **RESUMEN.** Se presenta una lista de las especies de coleópteros acuáticos colectadas en el Parque Nacional Mburucuyá. Se identificaron 128 especies, incluidas en 44 géneros y siete familias. Diez especies se citan por primera vez para la Argentina: *Agaporomorphus mecolobus* Miller y *Bidessonotus obtusatus* Régimbart (Dytiscidae); *Mesonoterus laevicollis* Sharp, *Suphisellus hyeroglyphicus* Zimmermann, *S. rufulus* Zimmermann, *S. sexnotatus* (Régimbart) y *Notomicrus traili* Sharp (Noteridae); *Berosus pluripunctatus* Mouchamps, *Enochrus guarani* Fernández y *Helobata corumbaensis* Fernández & Bachmann (Hydrophilidae). Dos familias (Scirtidae y Spercheidae), 12 géneros y 69 especies son citados por primera vez para la provincia de Corrientes.

PALABRAS CLAVE. Coleópteros acuáticos. Biodiversidad. Inventario. Esteros del Iberá. Región Neotropical.

■ **ABSTRACT.** A list of the species of aquatic Coleoptera collected in Mburucuyá National Park is presented. One hundred and twenty-eight species included in 44 genera and seven families were identified. Ten species are new for Argentina: *Agaporomorphus mecolobus* Miller and *Bidessonotus obtusatus* Régimbart (Dytiscidae); *Mesonoterus laevicollis* Sharp, *Suphisellus hyeroglyphicus* Zimmermann, *S. rufulus* Zimmermann, *S. sexnotatus* (Régimbart), and *Notomicrus traili* Sharp (Noteridae); *Berosus pluripunctatus* Mouchamps, *Enochrus guarani* Fernández and *Helobata corumbaensis* Fernández & Bachmann (Hydrophilidae). Two families (Scirtidae and Spercheidae), 12 genera and 69 species are first cited for Corrientes Province.

KEY WORDS. Aquatic Coleoptera. Biodiversity. Inventory. Iberá marshes. Neotropical Region.

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INTRODUCTION

Mburucuyá National Park is a protected area that covers 17,660 ha. It is located in the north-western part of Corrientes Province, Argentina, between 27° 58´ to 26° 05´ S and 57° 59´ to 58° 08´ W (Fig. 1). The park was created in 1991, and according to Ringuelet (1961) it belongs to the Mesopotamic District, which is within the Subtropical Dominion of the Neotropical Region. The area has a wide range of habitats: marshes, ponds, streams, flood-prone areas, forests and grasslands, and the landscape presents single-layered semixerophilous vegetation, herbaceous grasses, halophilic sedges, rushes, reeds, grasses and trees.

Several authors postulated the use of aquatic macroinvertebrates as indicators of quality conditions in freshwater ecosystems (e.g., Usseglio-Polatera *et al.*, 2000), and others found a correlation between the composition of aquatic invertebrate communities and environmental conditions (e.g., Baldigo *et al.*, 2009; Beyene *et al.*, 2009). More specifically, aquatic Coleoptera have proven to be very useful as biological indicators and suitable for developing conservation criteria (Eyre & Foster, 1989; Eyre & Rushton, 1989; Foster *et al.*, 1990; Ribera & Foster, 1993). Therefore, in order to evaluate possible future changes in water ecosystems it is important to know with a reasonable detail the current structure of the Coleoptera assemblages of a particular region.

This paper is part of a series of recent studies on the aquatic Coleoptera from different protected areas of Argentina (Torres *et al.*, 2007, 2008; von Ellenrieder, 2007; Fernández *et al.*, 2008, 2010). The aim of the present paper is to provide the first inventory of aquatic Coleoptera from the Iberá marshes eco-region, based on material collected in Mburucuyá National Park.

MATERIAL AND METHODS

Study area. Mburucuyá N. P. (Fig. 1) belongs to the Iberá marshes eco-region and has a vast variety of habitats, which represent important refuges for the native flora and fauna. Altitude within the park ranges between 60 and 98 MASL, average annual precipitation is 1200 mm, and mean annual temperature is 22°C. Prevailing winds are from the east. The landscape is mainly represented by rolling hills, marshes and extensive flatlands with a slight SW slope. Water accumulates throughout the valleys, originating wetlands such as marshes, swamps, gulleys, ponds and temporary pools.

Lentic habitats sampled

Marsh 1 (Fig. 1-A). Small marsh at Santa Teresa Ranch. Location: 28° 00′ 59.18′′ S, 58° 01′ 50.71′′ W. Dimensions: 185 x 200 m. Depth at sampling site: 40 cm. Insolation: very high. Vegetation: *Eichhornia* sp. (water hyacinth), *Nymphoides indica* (water snowflake), *Salvinia* sp. (water fern), *Ludwigia* sp. (primrose-willow). Soil: sandy. Turbidity: medium. Organic matter: high.

Pond 1 (Fig. 1-B). Round lagoon 200 m apart from the main road of the park. Location: 28° 02′ 2.76′′ S, 58° 04′ 48.93′′ W. Dimensions: 200 m x 230 m. Depth at sampling site: 40 cm. Insolation: very high. Vegetation: large marginal patches of *Eichhornia crassipes* (common water hyacinth), *Salvinia* sp., *Myriophyllum* sp. (water milfoil), *Ricciocarpus* sp. (fringed heartwort). Soil: muddy. Turbidity: very low. Organic matter: very high.

Marsh 2 (Fig. 1-C). Large, irregularly shaped marsh about 500 m apart from the main road of the park. Sampling site location: 28° 01′ 10.01′′ S, 58° 04′ 10.69′′ W. Depth at sampling site: 5–10 cm. Insolation: very high. Vegetation: unidentified Gramineae, *Schoenoplectus californicus* (California bulrush), *Salvinia* sp. covering most of surface, *Eichhornia azurea* (anchored water hyacinth), some *Pontederia cordata* (pickerelweed). Soil: muddy. Turbidity: high. Organic matter: high.

Pond 2 (Fig. 1-D). Small rounded lagoon besides the main road, known as one of

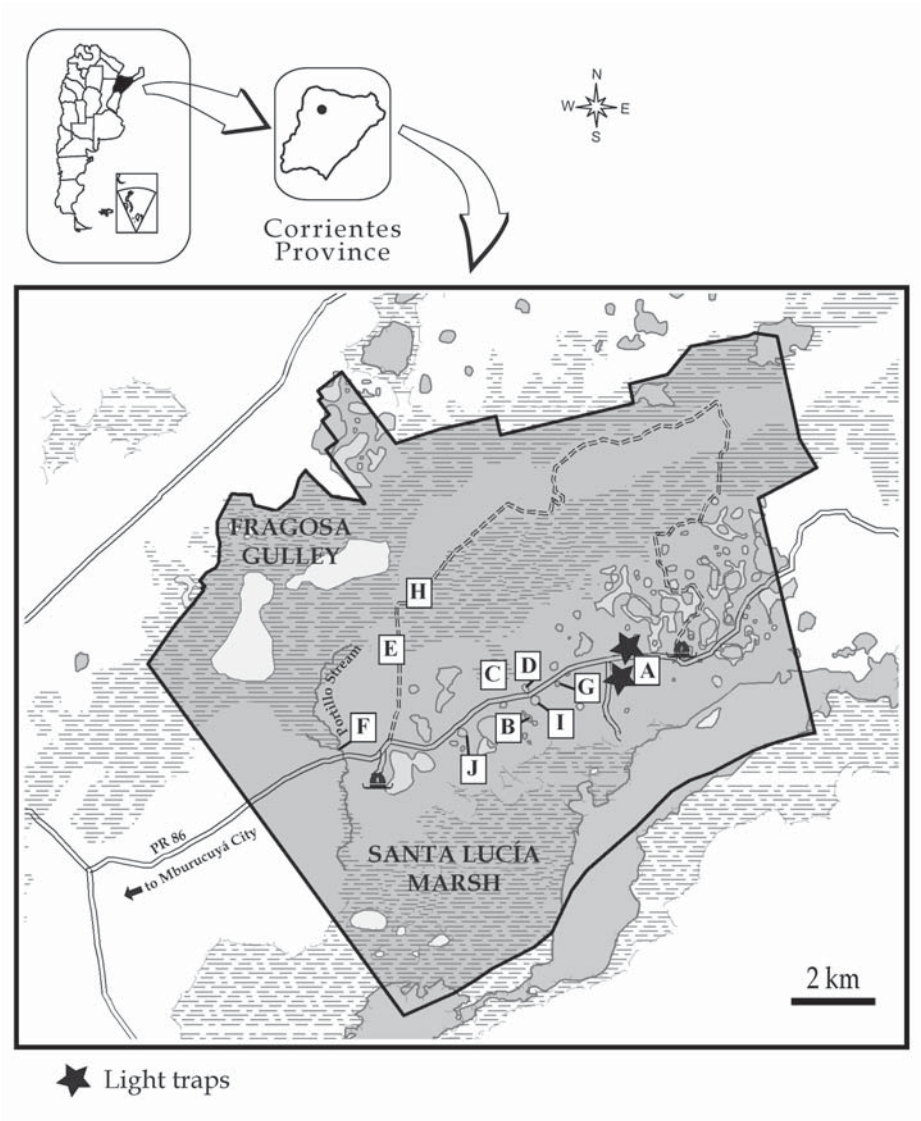

Fig. 1. Mburucuyá National Park (Corrientes Province) and sampling sites. (A) Marsh 1 at Santa Teresa Ranch; (B) Pond 1; (C) Marsh 2; (D) Pond 2 "facing pond"; (E) First stream heading to Portillo Gulley; (F) Portillo Stream; (G) Pond 3; (H) Second stream heading to Portillo Gulley; (I) Pond 4 "facing pond"; (J) Pond 5.

the facing ponds. Location: 28° 01′ 17.30′′ S, 58° 03′ 40.89′′ W. Dimensions: 150 x 225 m. Depth at sampling site: 30–50 cm. Insolation: very high. Vegetation: *Nymphoides indica*, *Ludwigia grandiflora* (large-flower primrose-willow), *Salvinia* sp., *Eichhornia* sp., unidentified Gramineae. Soil: muddy. Turbidity: medium. Organic matter: medium.

Pond 3 (Fig. 1-G). Small rounded lagoon at the side of the main road of the park. Location: 28° 01′ 05.89′′ S, 58° 03′ 01.50′′ W. Dimensions: 140 x 140 m. Depth at sampling site: 90 cm. Insolation: very high. Vegetation: covering 2/3 of the surface. *Eichhornia* sp., *Salvinia* sp., some *Nymphoides indica*. Soil: muddy. Turbidity: medium. Organic matter: medium.

Pond 4 (Fig. 1-I). The other facing pond, in front of pond 2. Location: 28° 01′ 29.95′′ S, 58° 03′ 32.07′′ W. Dimensions: 235 x

280 m. Depth at sampling site: 30–50 cm. Insolation: very high. Vegetation: *Nymphoides indica*, *Ludwigia grandiflora*, *Eichhornia* sp., unidentified Gramineae. Soil: muddy. Turbidity: medium. Organic matter: medium.

Pond 5 (Fig. 1-J). Rounded lagoon about 50 m aside from the main road. Location: 28° 01′ 54.42′′ S, 58° 04′ 40.48′′ W. Dimensions: 220 x 250 m. Depth at sampling site: 30–50 cm. Insolation: very high. Vegetation: *Eichhornia azurea, Schoenoplectus californicus* (California bulrush)*, Nymphoides indica, Salvinia* sp., *Ludwigia* sp. Soil: sandy. Turbidity: medium. Organic matter: high.

Lotic habitats sampled

First stream heading to Portillo Gulley (Fig. 1-E). Several shallow ditches belonging to the first stream in the road to Portillo Gulley. Location: 28° 01′ 41.89′′ S, 58° 05′ 49.13′′ W. Depth at sampling site: 50 cm. Insolation: high. Vegetation: *Nymphoides indica*, *Ludwigia grandiflora*, *Eichhornia crassipes*, *Cortaderia selloana* (Pampas grass), *Schoenoplectus californicus*, unidentified Gramineae. Soil: muddy. Turbidity: medium. Organic matter: medium. Current: very slow.

Portillo Stream (Fig. 1-F). Main stream of the park, close to its entrance, running with NS direction between Fragosa Gulley and Santa Lucía Marsh. Sampling site location: 28° 02′ 11.08′′ S, 58° 06′ 33.27′′ W. Insolation: very high. Depth at sampling site: 20–30 cm. Vegetation: *Nymphoides indica*, *Eichhornia* sp., *Sagittaria montevidensis* (giant arrowhead), *Pontederia cordata*, unidentified Gramineae. Soil: muddy. Turbidity: low. Organic matter: low. Current: slow.

Second stream heading to Portillo Gulley (Fig. 1-H). *Location*: 28° 0′ 9.10′′ S, 58° 05′ 43.94′′ W. Depth at sampling site: 20 cm. Insolation: very high. Vegetation: unidentified Gramineae, *Salvinia* sp., *Pontederia cordata*. Soil: muddy. Turbidity: medium. Organic matter: high. Current: very slow.

Insect sampling and taxonomic identification

Samples came from a field trip to Mburucuyá N. P. from 14 to 18 January 2008. Techniques employed to collect specimens included the use of aquatic nets (0,5–1,0 mm mesh), hand-picking, and mercury light traps (250 watts). When collecting in aquatic habitats, the net was passed from the bottom to the surface of water and from the shoreline to the reachable deepest edge of the water body. The vegetation was swept with the net for several minutes, and the content of the net was then transferred to a tray with clear water. Visible insects were sorted from debris and hand-picked with the aid of a pipette and fixed in small vials containing 96% ethyl alcohol. The remaining net contents were also fixed with 96% ethyl alcohol and examined later in the laboratory. The light traps were set in four occasions from sunset to past midnight in the surroundings of Santa Teresa Ranch. One particular light trap (17.i.2008) provided several thousand specimens. All insects collected at light were fixed with 96% ethyl alcohol.

Taxonomic identifications were done to the lowest possible taxonomic level, using available keys and literature (Young, 1974; Grosso, 1979; Trémouilles, 1989; Young, 1990; Grosso, 1993; Miller, 2000, 2001b, 2002; Oliva *et al.*, 2002; Trémouilles *et al.*, 2004, 2005; Miller, 2005; Archangelsky *et al.*, 2009; Libonatti *et al.*, 2011). The material is held in the collection of the Laboratory of Entomology, Buenos Aires University, Argentina.

RESULTS

In total, 128 species of Coleoptera included in 44 genera and seven families were identified (Table I). Dytiscidae was the richest family with regards to genera and species (20, 41), followed by Hydrophilidae (12, 38); Noteridae (6, 27); Scirtidae (2, 13), Gyrinidae (2, 2); Hydrochidae (1, 5), and Spercheidae (1, 1). Ten species are new for Argentina: *Agaporomorphus mecolobus*

Table I. List of species of aquatic Coleoptera collected at Mburucuyá National Park. Letters A–J refer to the habitats detailed in Fig. 1 and in Material and Methods.

	NEW FOR ARGENTINA	NEW FOR CORRIENTES	LIGHT TRAPS	A	B	C	D	E	F	G	H	I	J
ADEPHAGA													
DYTISCIDAE													
Copelatinae													
Copelatini													
Agaporomorphus mecolobus Miller	+	+	+										
Copelatus caelatipennis Aubé		+	+										
Copelatus sp. 1		+	+										
Copelatus sp. 2		+	+										
Copelatus sp. 3		+	+										
Dytiscinae													
Aciliini													
Thermonectus nobilis Zimmermann				+			+						
T. succinctus (Aubé)										+		+	+
Aubehydrini													
Notaticus fasciatus Zimmermann										+		+	
N. fasciatus (larvae)							+	+					
Cybistrini													
Megadytes (Trifurcitus) fallax (Aubé) (larvae)									+				
M. (Megadytes) sp. (larvae)							+		+				
Hydrodytinae													
Hydrodytes opalinus (Zimmermann)			+										
Hydroporinae													
Bidessini													
Anodocheilus maculatus Babington			+	+			+	+	+		+		+
A. maculatus (larvae)									+		+		
Bidessonotus obtusatus Régimbart	+	+	+						+				+
Brachyvatus acuminatus (Steinheil)			+										
Hemibidessus conicus (Zimmermann)			+					+	+				
H. spiroductus Miller			+										
Liodessus sp.			+						+				

	NEW FOR ARGENTINA	NEW FOR CORRIENTES	LIGHT TRAPS	A	B	C	D	E	F	G	H	I	J
Hydrovatini													
Hydrovatus crassulus Sharp		+	+										
Queda youngi Biström			+						+				
Hyphydrini													
Desmopachria concolor Sharp		+	+						+				
Desmopachria sp. 1		+	+										
Desmopachria sp. 2		+	+										
Desmopachria sp. 3		+							+				
Pachydrus obesus Sharp			+										
P. obesus (larvae)				+									
Methlini													
Celina sp. 1			+										
Celina sp. 2			+										
Celina sp. 3			+										
Celina sp. 4			+										
Celina sp. 5			+										
Celina sp. 6			+										
Celina sp. 7			+										
Celina sp. (larvae)									+				
Vatellini													
Derovatellus lentus (Wehncke)			+										+
Vatellus haagi Wehncke			+										
V. wheeleri Miller			+				+						
Laccophilinae													
Laccophilini													
Laccophilus sp. 1		+	+								+		
Laccophilus sp. 2		+	+										
Laccophilus sp. 3		+	+	+			+	+	+				+
Laccophilus sp. 4		+	+										
Laccophilus sp. 5		+	+					+					
Laccophilus sp. 6		+	+										
Laccophilus sp. 7		+	+	+			+	+		+		+	
Laccophilus sp. (larvae)				+	+		+	+	+			+	

	NEW FOR ARGENTINA	NEW FOR CORRIENTES	LIGHT TRAPS	A	B	C	D	E	F	G	H	I	J
Laccophilinae (unpublished genus)			+										
GYRINIDAE													
Gyrininae													
Gyrinini													
Gyrinus violaceus Régimbart		+	+					+					
Orectochilini													
Gyretes sp.			+										
NOTERIDAE													
Noterinae													
Noterini													
Hydrocanthus debilis Sharp			+	+		+	+	+	+	+	+	+	
Hydrocanthus paraguayensis Zimmermann			+				+						
Hydrocanthus sharpi Zimmermann		+	+									+	
Hydrocanthus socius Sahlberg		+	+				+	+	+			+	
Mesonoterus laevicollis Sharp	+	+	+					+	+				
Suphis cimicoides Aubé			+		+		+		+		+	+	
Suphis freudei Mouchamps		+	+									+	
Suphisellus balzani (Régimbart)		+	+								+		
Suphisellus curtus (Sharp)		+	+										
Suphisellus flavopictus (Régimbart)		+	+				+	+	+		+		
Suphisellus grammicus (Sharp)		+	+				+					+	
Suphisellus grossus (Sharp)		+	+					+					
Suphisellus hyeroglyphicus Zimmermann	+	+	+	+		+							
Suphisellus nigrinus (Aubé)		+	+	+			+	+	+		+	+	+
Suphisellus pinguiculus (Régimbart)		+	+					+					
Suphisellus remator (Sharp)			+						+				
Suphisellus rotundatus (Sharp)		+	+							+			
Suphisellus rufulus Zimmermann	+	+							+				
Suphisellus sexnotatus (Régimbart)	+	+	+										
Suphisellus variicollis Zimmermann		+	+										
Suphisellus sp. 1			+										
Suphisellus sp. 2			+										
Suphisellus sp. 3			+										

	NEW FOR ARGENTINA	NEW FOR CORRIENTES	LIGHT TRAPS	A	B	C	D	E	F	G	H	I	J
Suphisellus sp. 4			+										
Noterini (larvae)				+	+		+	+	+			+	+
Pronoterini													
Pronoterus punctipennis Sharp		+	+										+
Notomicrinae													
Notomicrini													
Notomicrus brevicornis Sharp		+	+										
Notomicrus traili Sharp	+	+	+										
POLYPHAGA													
HYDROCHIDAE													
Hydrochus argutus Knisch			+										
H. ducalis Knisch		+	+										
H. pupillus Orchymont			+										
H. richteri Bruch			+										
H. variabilis Knisch			+										
HYDROPHILIDAE													
Hydrophilinae													
Acidocerini													
Chasmogenus sapucay Fernández		+	+										
Enochrus circumcinctus (Bruch)		+	+										
E. guarani Fernández	+	+	+										
E. obsoletus (Bruch)			+										
E. sublongus (Fall)		+	+										
E. vulgaris (Steinheil)			+						+				
Enochrus sp. (larvae)									+				
Helobata confusa Fernández & Bachmann		+	+										
H. corumbaensis Fernández & Bachmann	+	+	+										
H. cossyphoides (Bruch)			+										
Helochares chaquensis Fernández		+	+										
H. cochlearis Fernández			+										
H. femoratus (Brullé)			+										
H. mesostitialis Fernández			+										
H. oculatus Sharp			+										

	NEW FOR ARGENTINA	NEW FOR CORRIENTES	LIGHT TRAPS	A	B	C	D	E	F	G	H	I	J
H. pallipes (Brullé)		+	+										
H. spatulatus Fernández			+										
H. ventricosus Bruch			+										
Anacaenini													
Anacaena sp.		+	+										
Paracymus sp. 1		+	+						+				
Paracymus sp. 2		+	+										
Paracymus sp. (larvae)				+					+				
Berosini													
Berosus minimus Knisch			+										
B. patruelis Berg			+				+						
B. pedregalensis Jensen-Haarup		+	+										
B. pluripunctatus Mouchamps	+	+	+										
B. truncatipennis Castelnau			+										
Berosus sp. (larvae)									+				
Derallus angustus Sharp			+						+				
D. paranensis Oliva			+	+			+		+	+		+	+
D. paranensis (larvae)				+					+			+	
Chaetarthriini													
Chaetarthria sp. 1		+	+										
Chaetarthria sp. 2		+	+										
Hydrophilini													
Hydrobiomorpha rudesculpta (Orchymont)			+										
H. spinosa (Orchymont)			+										
Hydrophilus ensifer Brullé			+										
H. palpalis Brullé			+										
H. palpalis (larvae)									+				
Tropisternus burmeisteri Fernández & Bachmann							+						
T. collaris (Fabricius)		+					+						+
T. laevis (Sturm)				+					+				
T. longispina Fernández & Bachmann							+						
T. ovalis Castelnau				+		+	+		+	+	+	+	
Tropisternus sp. (larvae)				+			+		+	+	+	+	+

	NEW FOR ARGENTINA	NEW FOR CORRIENTES	LIGHT TRAPS	A	B	C	D	E	F	G	H	I	J
SCIRTIDAE													
Ora sp. 1		+	+										
Ora sp. 2		+	+										
Ora sp. 3		+	+										
Ora sp. 4		+	+										
Ora sp. 5		+	+										
Ora sp. 6		+	+										
Ora sp. (larvae)												+	
Scirtes sp. 1		+	+										
Scirtes sp. 2		+	+										
Scirtes sp. 3		+	+										
Scirtes sp. 4		+	+										
Scirtes sp. 5		+	+										
Scirtes sp. 6		+	+										
Scirtes sp. 7		+	+										
SPERCHEIDAE													
Spercheus fimbriicollis Bruch		+	+										

Miller and *Bidessonotus obtusatus* Régimbart (Dytiscidae); *Mesonoterus laevicollis* Sharp, *Suphisellus hyeroglyphicus* Zimmermann, *S. rufulus* Zimmermann, *S. sexnotatus* (Régimbart), and *Notomicrus traili* Sharp (Noteridae); *Berosus pluripunctatus* Mouchamps, *Enochrus guarani* Fernández and *Helobata corumbaensis* Fernández & Bachmann (Hydrophilidae).

Two families (Scirtidae and Spercheidae) and 12 genera (Dytiscidae: *Copelatus* Erichson, *Laccophilus* Leach; Noteridae: *Mesonoterus* Sharp, *Pronoterus* Sharp, *Notomicrus* Sharp; Hydrophilidae: *Anacaena* Thomson, *Chaetarthria* Stephens, *Chasmogenus* Sharp, *Paracymus* Thomson; Spercheidae: *Spercheus* Kugelann; Scirtidae: *Ora* Clark, *Scirtes* Illiger) are herein first recorded for Corrientes Province. Sixty-nine species (Table I) are first cited for Corrientes, rising to 165 the number of species of aquatic Coleoptera recorded for the province. Eighty-three taxa were collected exclusively with light traps; of these, 40 species are new records for the province.

DISCUSSION

Suborder Adephaga

Family Dytiscidae

The Dytiscidae ae currently represented in the Argentinean fauna by 119 species in 31 genera (Libonatti *et al.*, 2011). Dytiscids are abundant and widespread in Mburucuyá

N. P., with 20 genera and 41 species (Table I) in four of the eight subfamilies present in Argentina. The subfamily Copelatinae was represented by two genera: *Copelatus* and *Agaporomorphus* Zimmermann. The collection of four species of *Copelatus* (Table I) is the first mention of the genus for Corrientes Province. *Copelatus* had been previously cited from Buenos Aires, Entre Ríos, Misiones, Salta, Jujuy and Chaco Provinces (Trémouilles, 1998; Torres *et al.*, 2008). On the other hand, *Agaporomorphus* was recently cited as new for Argentina (Libonatti *et al.*, 2011) based on material from Mburucuyá N. P. and from Misiones Province; here we report *A. mecolobus* Miller as new for the Argentinean fauna, which was only known from near São Paulo, Brazil (Miller, 2001b).

The subfamily Dytiscinae was represented by three genera: *Thermonectus* Dejean, *Notaticus* Zimmermann, and *Megadytes* Sharp. *Thermonectus* has five species in Argentina. Both *T. nobilis* Zimmermann and *T. succinctus* (Aubé) (Table I) had been previously recorded from Corrientes (Trémouilles, 1989). However, this is the first concrete locality record for *T. nobilis*. The single species of *Notaticus, N. fasciatus* Zimmermann, has been cited from northern Argentina, and in particular from two localities in Corrientes Province, Santo Tomé (Trémouilles & Bachmann, 1981) and Mburucuyá N. P. (Michat & Alarie, 2009). The genus *Megadytes* was only collected as larvae in this study. Although several species of *Megadytes* were expected in the area, only *M. fallax* (Aubé) has been cited from Mburucuyá N. P. (Michat, 2010).

Hydrodytinae was erected by Miller (2001a, 2002) to include several species previously placed in *Agaporomorphus*, and was recently reported as new for Argentina by Libonatti *et al.* (2011). Only *Hydrodytes opalinus* (Zimmermann), a widespread species distributed from northern South America to Honduras (Miller, 2002), is present in Corrientes and Misiones Provinces.

The subfamily Hydroporinae accounted for 12 genera and 23 species in this study (Table I). Libonatti *et al.* (2011) mentioned *Bidessodes* Régimbart and *Queda* Sharp as first records for Argentina, and *Anodocheilus* Babington, *Bidessonotus* Régimbart, *Derovatellus* Sharp, *Desmopachria* Babington, *Hemibidessus* Zimmermann and *Pachydrus* Sharp as first records for Corrientes Province, without giving reference to a specific locality. However, all these findings are based on material coming from this study. Three specimens of *Queda* were captured in Portillo Stream (Fig. 1, F), which represents the first note about the habitat of the genus. We also enlarge the distributional range of *Bidessonotus obtusatus* Régimbart, which was known only from Brazil and Paraguay (Nilsson, 2001). Other novelties for Corrientes Province are *Hydrovatus crassulus* Sharp (known from Chaco Province) and four species of *Desmopachria* (Table I). *Desmopachria concolor* Sharp was known from Buenos Aires, Entre Ríos, Santa Fe and Chaco Provinces (Trémouilles, 1998).

Laccophilinae is a speciose subfamily represented in Argentina by *Laccophilus* and an unpublished genus (Toledo & Michat, in prep.) that occurs in Chaco, Corrientes and Entre Ríos Provinces (Libonatti *et al.*, 2011). Both genera were collected in this study (Table I). *Laccophilus* is frequent and widespread in Argentina; however, this is the first record for Corrientes Province. The genus is in need of a taxonomic revision for the Neotropical Region; seven unidentified species were captured in this survey (Table I).

Family Gyrinidae

The family is represented in Argentina by three genera (*Andogyrus* Ochs, *Gyretes* Brullé and *Gyrinus* Müller) and about 26 species (Michat & Archangelsky, in press). We found two species in this study (Table I). *Gyrinus violaceus* Régimbart is reported as new for Corrientes Province. This species, known from Argentina, Brazil, and Uruguay, had been previously cited from Salta and Misiones Provinces (Bruch, 1927; Fernández *et al.*, 2008; Michat & Archangelsky, in press).

Family Noteridae

Noterids include six genera in Argentina, all of which were captured in Mburucuyá N. P. (Table I). Twenty-seven species were recognized, five of which are new records for the country: *Mesonoterus laevicollis*, *Suphisellus hyeroglyphicus*, *S. rufulus*, *S. sexnotatus*, and *Notomicrus traili*. Also, three genera are regarded as new to Corrientes Province: *Mesonoterus*, *Pronoterus*, and *Notomicrus*. The genus *Mesonoterus* has four species in total and two in the Argentinean fauna, *M. crassicornis* (Régimbart) cited by Zimmermann (1920) but without giving any concrete locality, and *M. laevicollis*, distributed in Bolivia, Brazil, Cuba, Guatemala, Mexico, Paraguay, and new to the Argentinean fauna. Our record constitutes the first locality for the genus in Argentina. On the other hand, the genus *Pronoterus* has three species, of which only *P. punctipennis* Sharp is distributed in South America (Argentina and Brazil); this species was previously cited from Buenos Aires and Chaco Provinces (Benetti *et al.*, 2003) and our record is the first for Corrientes Province. Within *Notomicrus*, nine species are recognized (Nilsson & van Vondel, 2005). Only *N. brevicornis* Sharp had been previously cited from Argentina (Santa Fe Province) (Bruch, 1927); this is the first record for Corrientes. *Notomicrus traili* is added to the Argentinean fauna; it was known from Brazil, Bolivia and Suriname (Nilsson & van Vondel, 2005). Nineteen species of *Suphisellus* are known to inhabit Argentina (Bruch, 1915, 1927; Benetti *et al.*, 2003). *Suphisellus flavopictus* (Régimbart) and *S. grossus* (Sharp) were mentioned for the Paraná River floodplain (Poi de Neiff & Neiff, 2006), but only *S. remator* (Sharp) has been precisely cited for Corrientes (Bruch, 1915, 1927). Here we report 11 *Suphisellus* species new to the fauna of the province (Table I) as well as three species new to Argentina: *S. hyeroglyphicus* and *S. sexnotatus*, known from Brazil, and *S. rufulus,* known from Bolivia and Brazil. For *S. curtus* (Sharp) this is the first locality record in Argentina. *Hydrocanthus* Say is represented by six species in Argentina (Nilsson & van Vondel, 2005). *H. sharpi* Zimmermann and *H. socius* Sahlberg in Mburucuyá N. P. constitute the first records for Corrientes Province; both species had been cited only from Chaco Province (Benetti *et al.*, 2003), though Bruch (1915, 1927) mentioned *H. sharpi* (under the names *H. atripennis* Say and *H. iricolor* Say) for Buenos Aires and Misiones Provinces. The genus *Suphis* Aubé is represented by six species in Argentina, of which only *S. cimicoides* Aubé and *S. notaticollis* Zimmermann were previously recorded from Corrientes Province (Grosso, 1993). We report the occurrence of *S. freudei* Mouchamps as new to Corrientes; this species was known from Buenos Aires and Chaco Provinces (Grosso, 1993).

Suborder Polyphaga

Family Hydrochidae

A monogeneric family with about 180 worldwide species and represented by 17 species in Argentina, most of them distributed in the northern part of the country (Oliva *et al.*, 2002). Several species have been cited from Corrientes Province (Fernández & Bachmann, 1998). In this paper we report the presence of *H. ducalis* Knisch as new to Corrientes; it is also known from Buenos Aires, Santa Fe, Chaco and Formosa Provinces. Other species occurring in Mburucuyá N. P. are *H. purpureus* Knisch and *H. pumilio* Knisch (Oliva, pers. obs, 1997).

Family Hydrophilidae

The argentinean hydrophilids are represented by approximately 150 species in 22 genera and two subfamilies. Thirty-eight species in 12 genera where recorded in this study, all belonging to the subfamily Hydrophilinae (Table I). The tribe Acidocerini was represented in our samplings by the four genera occurring in Argentina: *Chasmogenus* Sharp, *Enochrus* Thomson, *Helobata* Bergroth and *Helochares* Mulsant. For *Chasmogenus*, this is the first record for Corrientes Province. The sole species of *Chasmogenus* present in Argentina, *C. sapucay* Fernández, was previously known from Formosa and Santiago del Estero Provinces (Oliva *et al.*, 2002). Within

Enochrus, *E. guarani* is recorded as new to Argentina. This species was known from Paraguay (Fernández, 1988). Also, *Enochrus circumcinctus* (Bruch), widespread in the northern half of Argentina, and *E. sublongus* (Fall), only known to occur in Chaco and Formosa Provinces, are herein listed as new for Corrientes. With regards to *Helobata*, *H. corumbaensis* is new to Argentina; this species was known from Brazil (Fernández & Bachmann, 1987). In addition, *H. confusa* Fernández & Bachmann, cited only from Entre Ríos Province, is reported here as first record for Corrientes. Eight species of *Helochares* were collected in the park (Table I), of which two are new to Corrientes Province: *H. chaquensis* Fernández, known to occur in Chaco and Formosa Provinces, and *H. pallipes* (Brullé), previously recorded from Buenos Aires, Entre Ríos, Santa Fe and Santiago del Estero Provinces (Oliva *et al.*, 2002).

The tribe Anacaenini has two genera in Argentina, *Anacaena* and *Paracymus*, both of which are first records for Corrientes Province. Komarek (2005) recently revised the Neotropical *Anacaena* and listed *A. suturalis* (Leconte) from Buenos Aires and Santiago del Estero Provinces, and *A. coruscalis* Orchymont from Buenos Aires; Torres *et al.* (2008) cited an unidentified species from Jujuy. On the other hand, *Paracymus* is in need of a revision; according to Oliva *et al.* (2002) and Torres *et al.* (2007) four species are known from Argentina but many others are expected to occur. The known localities for *Paracymus* are in Buenos Aires, Entre Ríos, Misiones, Tucumán and San Luis Provinces, and our record is the first for Corrientes.

Within the tribe Berosini, two genera were collected: *Berosus* Leach and *Derallus* Sharp (Table 1). *Berosus* is a speciose genus, accounting for 39 species in Argentina (Oliva *et al.*, 2002). Sixteen species were already known from Corrientes (Oliva *et al.*, 2002) and here we cite one species new to Argentina (*B. pluripunctatus*) and one new to Corrientes (*B. pedregalensis* Jensen-Haarup). *Berosus pluripunctatus* was known from Venezuela and Brazil.

The genus *Chaetarthria* is the only representative of the tribe Chaetarthriini in Argentina with six species. The occurrence of two unidentified species in Mburucuyá N. P. enlarges the distribution of the genus to Corrientes Province, being the first record for the Mesopotamia.

The tribe Hydrophilini was represented in this study by three genera and nine species (Table I), most of them widespread and frequent. *Tropisternus collaris* (Fabricius), a common species in South America and the northern part of Argentina, is first cited for Corrientes Province.

Family Spercheidae

This monogeneric family has 18 species and two in the Neotropical Region, *Spercheus fimbriicollis* Bruch and *S. halophilus* Archangelsky, both present in Argentina. The occurrence of *S. fimbriicollis* in Mburucuyá N. P. represents the first record of the family for Corrientes Province. *Spercheus fimbriicollis* distributes in Buenos Aires, Santa Fe, Chaco and Formosa Provinces, whereas *S. halophilus* is only known from Córdoba Province.

Family Scirtidae

In spite of being cosmopolitan and including 1300 species in almost 50 genera all over the world, the current state of knowledge of this family is extremely deficient in the Neotropical Region (Klausnitzer, 2009). Only 11 species and four genera (*Cyphon* Paykull, *Microcara* Thomson, *Ora* Clark and *Scirtes* Illiger) have been cited so far in Argentina (Trémouilles *et al.*, 1995). In this study, we report the finding of seven unidentified species of *Scirtes* and six unidentified species of *Ora*, representing the first records of the family and those genera for Corrientes Province.

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