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ENLARGING THE KNOWLEDGE ON *Didelphis albiventris* (DIDELPHIMORPHIA, DIDELPHIDAE) IN NORTHERN PATAGONIA: NEW RECORDS AND DISTRIBUTION EXTENTION

*Expandiendo el conocimiento sobre Didelphis albiventris (Didelphimorphia, Didelphidae)
en el norte de Patagonia: nuevos registros y extensión en su distribución*

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INTRODUCCIÓN

The White-eared Opossum [*Didelphis albiventris* (Lund, 1840)] is one of the largest marsupials of the Neotropic. It lives in forested areas, savannas and grasslands, although it prefers vegetated areas near water basins, including rural and urban areas (Parodi, 1937; Flores *et al.*, 2007). It is a generalist species that uses local and exotic resources (coops, fruit plantations, etc.; Santori and Astúa de Moraes, 2006). The White-eared Opossum has expanded its geographical distribution because of favorable conditions created by humans, such as the establishment of farms and other facilities in areas not used by the species, allowing it to obtain resources for their feeding and reproduction (Parera, 2002). It is a widespread species in South America, its geonemy extends from the mid-Atlantic coast of Brazil, to the center and south -without reaching the Amazon basin- eastern Bolivia, Paraguay, Uruguay to central Argentina (Cerqueira and Tribe, 2007). In Argentina it is found in different ecoregions: Humid and Dry Chaco, Yungas, Espinal, Pampa and Monte (Canevari and Vaccaro, 2007; Flores, 2006; Massoia *et al.*, 2000). To date, the southern boundary of its distribution is the Negro River, in Argentine Patagonia (see Cabrera and Yepes, 1960; Redford and Eisenberg, 1992; Brown, 2004; Flores *et al.*, 2007; Cerqueira and Tribe, 2007). Despite the consensus that seems to have pointed out the Negro River as the southern boundary of the distribution of the White-eared Opossum, there are no locality records (but see Massoia *et al.*, 2000: 56) and specimens deposited in scientific collections (see Flores *et al.*, 2007) to support this statement.

The aim of this contribution is to report new records of the presence of the White-

eared Opossum in Argentine Patagonia and expand its geographical distribution into the south.

RESULTS

In September 2008, the authors of this contribution collected a specimen of White-eared Opossum on the southern shore of Negro River, near its mouth, 6.5 km W of Viedma (40°48'55.5"S; 63°04'32.9"W). This specimen is housed at the Colección de la Cátedra de Anatomía Sistemática y Aplicada en Mamíferos (acronym CASAM 52), Facultad de Ciencias Naturales, Puerto Madryn, Universidad Nacional de la Patagonia San Juan Bosco. While in 2012 a road-killed specimen was photographically documented (Bernardis, pers. com.) in Neuquén city (38°55'31"S; 68°03'38"W), and two other specimens from Cipolletti (38°56'28"S; 68°00'20"W) were collected by A. Bernardis and deposited in the Colección de Vertebrados de la Universidad Nacional del Comahue (acronym COVUNCO) under accession numbers COVUNCO 9 and COVUNCO 10. Both localities found in the headwaters of the Negro River. The three above mentioned records strongly suggest that the geographical distribution of *D. albiventris* is continuous along the Negro River, as previously reported in literature (see Cabrera and Yepes, 1960, Redford and Eisenberg, 1992; Flores *et al.*, 2007; Canevari and Vaccaro, 2007).

In April 2013, two specimens of the White-eared Opossum were recorded (Figure 1). One young specimen (accession number CASAM 58) was captured by rural people in a farm located two kilometers to north of Valcheta (40°40'12.61"S; 66°08'30.52"W; Figure 1) and another specimen, a mummified adult (accession number CASAM

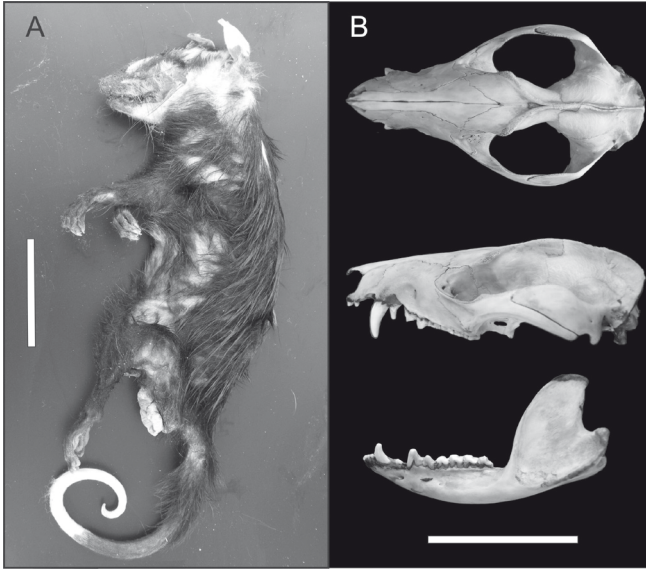


Figure - 1. Specimens of *Didelphis albiventris* found 2 km N of Valcheta (A) and 8 km N of Valcheta (B), Río Negro province. A, Specimen preserved in fluid. B, Lateral view of left mandible, and lateral and dorsal views of skull. Scale bar: 5 cm.



Figure - 2. Map of north-central Patagonia and adjacent areas with ecoregions (sensu Cabrera, 1976) showing the new localities for *Didelphis albiventris* reported in this contribution. 1, 6.5 km W of Viedma; 2, Cipolletti; 3, Neuquén city (this contribution, but see also Massoia et al., 2000); 4, 2 km N of Valcheta; 5, 8 km N of Valcheta.

59), was collected in a farm gate around eight kilometers to north of Valcheta (40°37'51.78"S; 66°04'48.24"W; Figures 1 and 2). These two new records extend the area of distribution of the White-eared Opossum about 120 km south of the Negro River, well into Patagonia (Figure 2), near the northern foothills of Somuncurá plateau in the department of Valcheta, Río Negro province.

DISCUSSION

The morphological characters that allowed the specific determination of the specimens reported here were as follows (Figure 1): fur on the back and feet is thick and black, with some tan hairs, the belly is light brown. The face is white and has a black stripe on the dorsal midline while around the eyes fur is black. The ears are whitish with irregular black spots at the base. The skull has large nasal bones that extend back reaching the height of the supraorbital apophysis, the postorbital constriction is very marked and the sagittal crest is well developed (Delupi *et al.*, 1995).

The White-eared Opossum is a nocturnal animal and its diet is based on insects, small reptiles, birds, eggs (Parodi, 1937) and fruits, especially grapes (Sastre, 1938; Cabrera and Yepes, 1960). Specimens from Valcheta were found in farms located in the vicinity of the Valcheta stream, where there are many ancient trees, grapevines and fig trees introduced by men since the beginning of the twentieth century. An old local resident commented that he started to see the White-eared Opossum in the region 20 years ago. He mentioned that it is a common animal in the area and that it is very harmful to farm activities since it kills poultry and eats fruits.

These new records allow us to infer that the geographical expansion of the White-eared Opossum could have extended south, since there are favorable anthropic environments that meet the requirements of the species, such as the lower Chubut River valley, about 300 km south of Valcheta (see Figure 2). In the lower Chubut River valley, farm settlements have generated environmental conditions similar to those of the Negro River and Valcheta stream. A possible dispersing agent could be associated with the continuous exchange of agricultural products through vehicles carrying livestock, hay bales, wood, etc, between these regions.

Finally, it is interesting to note that in previous years there have been several cases where Brazilian or Pampean faunal elements penetrate into southern localities, placed in the interior of Patagonia, as snakes (Carrera and Avila, 2008), sigmodontine rodents (Formoso *et al.*, 2010), birds (Llanos *et al.*, 2011) and bats (Udrizar Sauthier *et al.*, 2013). This could be linked to the modifying action man has on natural environments, or have a correlation with global phenomena such as global warming, that has produced faunal replacements in the northern hemisphere (Moritz *et al.*, 2008). The combined study of this faunal evidence could have an important connotation in understanding environmental and biological evolution in northern Patagonia.

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