



<http://dx.doi.org/10.11646/zootaxa.3980.4.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:F6823A76-8DE0-4C57-86E8-5A7564CB2A62>

## Checklist of nematode parasites of amphibians from Argentina

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### Abstract

This review includes information about 47 taxa of nematode parasites reported from 34 species of Argentinean amphibians, all belonging to order Anura (33 native species and 1 introduced species). Thirty four nematode species have been reported as adults and 13 species were reported as larvae (10 taxa) or juveniles (3 taxa). Two species, *Cosmocerca parva* and *C. podicipinus* (Cosmocercidae), collected as adults, are the most commonly occurring adult nematodes in Argentinean amphibians; each of them parasitize 14 amphibian species. The bufonid *Rhinella schneideri* and the leptodactylid *Leptodactylus bufonius* present the highest species richness of parasitic nematodes (9 species); followed by *Rhinella fernandezae*, *R. arenarum* and *Leptodactylus chaquensis*, each of which is parasitized by 8 nematode species. Mean species richness was highest for the family Bufonidae ( $4.5 \pm 3.4$ ; range: 1-9); followed by the Leptodactylidae ( $3.5 \pm 2.8$ ; range: 1-9). Data on hosts, geographical distribution, site of infection, location of deposited materials, and information about life cycles are provided. This is the first compilation of information on nematode parasites of amphibians in Argentina.

**Key words:** review, Nematoda, Argentinean Amphibians

### Introduction

Nematode biodiversity has been estimated at 24,783 species included in 267 families, 31 orders and 3 classes (Hodda 2011). Global species richness of Nematoda in amphibian hosts was estimated at 2,631 by Poulin & Morand (2004). Specifically, in some South American countries, e.g. in Brazil, Peru and Paraguay, studies on nematode parasites of amphibians are numerous, whereas in others, e.g. in Guyana, Colombia, Uruguay and French Guiana, such research is scanty and sporadic, and yet in others, such as Bolivia and Suriname, to our knowledge, no research has been undertaken about nematode parasites in these hosts.

In Argentina, the first record of nematode parasites of amphibians was by Mazza & Franke (1927), who found microfilariae *Microfilaria tamborinii* Mazza and Franke, 1927 in the blood of the “criolla frog”, *Leptodactylus latrans* (Steffen, 1815) (syn. *L. ocellatus*) collected in Jujuy province; currently, this nematode is a *species inquirenda* (Baker 1987). The following year, a new species, *Aplectana fusiforme* Savazzini, 1928, was described from the digestive tract of the same host (Savazzini 1928).

Very few contributions were made in the following decades (30s 'and 40s); indeed, a gap of more than 20 years existed between the studies of Schuurmans Stekhoven (1952) and Sueldo & Ramírez (1976). Since then, there have been sporadic studies in different provinces, generally corresponding to descriptions of new species or new hosts or reports of new geographic records.

In the last decade, research about nematode parasites of anuran amphibians was done mainly in northwestern Argentina, with descriptions of new species (Ramallo *et al.* 2007a; 2007b; 2007c; 2008), and in the northeast of the country, where research was focused especially on systematic aspects (González 2009; González & Hamann 2004; 2005; 2006a; 2006b; 2007a; 2007b; 2007c; 2008; 2009a; 2010a; 2010b; 2011; 2012a; 2012b; 2013; 2014; González *et al.* 2012) and ecological traits such as population structure and seasonal occurrence of some species in natural and agricultural environments (González & Hamann 2009b; 2012c).