

Checklist of the nematode parasites of wild birds of Argentina

Authors: Drago, Fabiana B., Núñez, Verónica, and Díaz, Mariano Dueñas

Source: Revue suisse de Zoologie, 127(1) : 43-61

Published By: Muséum d'histoire naturelle, Genève

URL: <https://doi.org/10.35929/RSZ.0005>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Checklist of the nematode parasites of wild birds of Argentina

Fabiana B. Drago^{1,2*}, Verónica Núñez^{1,2} & Mariano Dueñas Díaz¹

¹ Universidad Nacional de La Plata, Facultad de Ciencias Naturales y Museo, División Zoología Invertebrados, Paseo del Bosque S/N° (1900) La Plata, Argentina

² Comisión de Investigaciones Científicas de la Provincia de Buenos Aires, (CIC), Argentina

* Corresponding author: fdrago@fcnym.unlp.edu.ar

Abstract: A commented checklist of the nematodes parasites of Argentinean wild birds is presented. This is the first compilation of parasitological papers about nematodes of Argentinean birds published between 1873 and November 2019. This review includes information about 64 nematode nominal species and 13 taxa identified at generic level, belonging to five orders, 16 superfamilies, 20 families, and 44 genera. Five species were considered *incertae sedis*, because they were described based only on larval stages, and one species was maintained as species *inquirenda*. The highest number of taxa of nematodes was recorded in the family Acuariidae with 20 nominal species and two taxa identified at generic level, followed by Anisakidae with eight nominal species and one taxon identified at generic level, and Tetrameridae with eight nominal species and two taxa identified at generic level. Of the 1042 species of birds reported in Argentina, only 65 (6.24%) were reported as hosts of adult nematodes. The families of birds with the highest number of reported taxa were Tinamidae (12 nematode taxa), Laridae (11), Anatidae (8) and Phalacrocoracidae (7). The present review provides data on hosts, geographical distribution, sites of infection, location of material deposited in Helminthological Collections, references, and taxonomic comments. A host/parasite list is also provided.

Keywords: Aves - Helminths - Nematoda.

INTRODUCTION

Argentina possesses a high diversity of birds with 1033 native species and 9 introduced (Roesler & González Táboas, 2016). Nematodes are an important group of parasites in birds and their taxonomy, phylogeny, zoogeography, and ecology still requires study (Zhang *et al.*, 2012). Particularly, in Argentina the literature on the nematode parasites of birds is scattered and the studies have focused mainly on taxonomy. The first reports of nematodes parasitizing Argentinean birds was carried out by the English parasitologist, Thomas Spencer Cobbold, who studied filariae found by Charles Darwin parasitizing the greater rhea from Bahía Blanca, Buenos Aires Province during his travel through South America between 1831 and 1836 (Cobbold, 1873, 1886). The next contribution was made by a German naturalist established in Argentina, Carlos Berg, who reported filariae in an egg of greater rhea (Berg, 1896). The next report was also carried out by a foreign scientist, Corrado Parona, who described some species of helminths from fishes, birds and mammals from material that was sent to him by

Carlos Berg for identification, among them, five species of nematodes from wild birds were reported (Parona, 1900). Between 1918 and 1928, several works on microfilariae found in bloodstream of wild birds were published by local scientists, among the most outstanding works are the publications of the physician and bacteriologist Salvador Mazza, who was the main researcher working on Chagas-Mazza disease in Argentina (Biglieri, 1918; Mazza *et al.*, 1927; Mazza & Franke, 1928). Between 1943 and 1975, fifteen papers were published on Nematoda of wild birds. Most of them were carried out by the veterinarians Juan José Boero and Jorge Eugenio Led (Boero & Led, 1968, 1971; Boero *et al.*, 1968; Boero *et al.*, 1972a, b). In this period the publications made by the European biologist Jacobus H. Schuurmans Stekhoven – who studied the nematodes of wild vertebrates of Argentina, Chile, and Paraguay during his stay in Argentina in the 50s – are particularly remarkable. He published an extensive work in which he described seven new species of nematodes parasitizing birds from northern Argentina and nine new geographical records (Schuurmans Stekhoven, 1951). During the following 20 years (1976-1995) only one

contribution was published (Zeiss & Seigmur, 1981). From 1996, the number of publications carried out by Argentinean scientists increased, published by several groups of parasitologists mostly from the University of La Plata (Buenos Aires Province) and Puerto Madryn (Chubut Province) and mainly dedicated to nematodes of birds related to aquatic environments.

The aim of this paper was to compile and summarize all the published reports about adult nematodes of wild birds from Argentina based on original records.

MATERIALS AND METHODS

This checklist was prepared on the basis of data published from 1873 to November 2019. Species reported in theses, dissertations, and scientific meetings were not listed because they represent informal publications. However, two proceedings of scientific meetings are mentioned in the comments, given that some species were originally described in these proceedings and were subsequently considered valid by other authors in formal publications. For the construction of this list only wild birds were included, domestic birds were not taken into account. Each taxonomic category of Nematoda is presented in alphabetical order. Each record contains information on the species or generic name, taxonomic authority, host(s), site of infection (SI), localities (Lo) (particular locality, Province and geographical coordinates when reported in the original paper were converted to WGS 84 decimal degrees), number of lots and collection acronym when material was deposited, and bibliographical references (numbers in superscript refer to the corresponding reference). The classification for nematodes follows the Keys to the Nematode Parasite of Vertebrates of Anderson *et al.* (2009) and Gibbons (2010), except for *Tetrameres* and *Microtetrameres* (Tetrameridae) which are considered as separate genera. The taxonomy of birds follows AVIBASE (Lepage, 2019), where also the taxonomic authorities of the bird taxa can be found. Acronyms used for the Biological Collections are: CHIOC (Coleção Helmintológica do Instituto Oswaldo Cruz, Rio de Janeiro, Brazil); CH-N-FML (Colección Helmintológica de la Fundación Miguel Lillo, Tucumán Province, Argentina); CNP-Par (Collection of the Centro Nacional Patagónico, Puerto Madryn, Argentina); IPCAS Helm. Coll (Helminthological Collection of the Institute of Parasitology, Biology Centre of the Czech Academy of Sciences, České Budějovice, Czech Republic); MLP-He, sometimes as CHMLP in the original papers (Colección Helmintológica del Museo de La Plata, Buenos Aires Province, Argentina); USNM (United States National Museum, National Museum of Natural History, Washington, U.S.A.), also cited with a previous acronym USNPC (United States National Parasite Collection); NHMUK (The Natural History Museum, London, U.K.), sometimes as BMNH (British Museum of Natural History) in the original papers; MNHN (Muséum

National d'Histoire Naturelle, Nematodes collection, Paris, France); MACN-pa (colección de parasitología, Museo Argentino de Ciencias Naturales "Bernadino Rivadavia", Buenos Aires, Argentina).

RESULTS

At present, 71 papers have been published on some aspects of nematodes infecting Argentinean wild birds – most of them are related to taxonomic aspects, distribution, and host-parasite associations – while a few dealt with the pathological effects caused by nematodes in birds. The checklist from the available literature on nematodes parasites of wild birds in Argentina comprises records on 64 nematode nominal species and 13 taxa identified at generic level, belonging to five orders, 16 superfamilies, 20 families and 44 genera associated with 13 species of Pelecaniformes; eight species of Charadriiformes and Passeriformes; six species of Strigiformes; five species of Anseriformes; four species of Tinamiformes; three species of Falconiformes, Podicipediformes and Psittaciformes; two species of Accipitriformes, Piciformes, Rheiformes and Sphenisciformes; and one species of Coraciiformes, Gruiformes, Phoenicopteriformes and Procellariiformes.

Parasite-Host List

Phylum Nematoda

Class Adenophorea

Order Enoplida

Superfamily Dioctophymatoidea

Family Dioctophymidae

Genus *Eustrongylides* Jägerskiöld, 1909

***Eustrongylides tubifex* (Nitzsch in Rudolphi, 1819)**

Host: *Podiceps major*. **SI:** proventriculus. **Lo:** Moreno Lake (-41.0667, -71.55), Río Negro Province.

Reference: Brugni & Viozzi (2003).

Superfamily Trichinelloidea

Family Trichuridae

Genus *Capillaria* Zeder, 1800

***Capillaria* sp.**

Host: *Larus dominicanus*. **SI:** not reported. **Lo:** San Carlos de Bariloche (-41.05, -75.4167), Río Negro Province. **Reference:** Kreiter & Semenas (1997).

Host: *Nothura maculosa nigroguttata*. **SI:** not reported. **Lo:** Buenos Aires Province. **Reference:** Boero *et al.* (1968).

Genus *Eucoleus* Dujardin, 1845

***Eucoleus penidoi* (Freitas & Almeida, 1935)**

Host: *Nothura maculosa*. **SI:** muscular stomach. **Lo:** Maipú, Buenos Aires Province. **Reference:** Kaseta

(1973). **Comment:** cited as *Capillaria penidoi* Freitas & Almeida, 1935. The genus *Eucoleus* was considered synonymous of *Capillaria* by Anderson *et al.* (2009), although both genera are so far considered valid (Moravec, 2001; Gibbons, 2010).

***Eucoleus* sp.**

Host: *Larus dominicanus*. **SI:** not reported. **Lo:** Chubut Province. **Reference:** Díaz *et al.* (2011a). **Comment:** immature adult specimens.

Genus *Ornithocapillaria* Baruš & Sergeeva, 1990
***Ornithocapillaria ovopunctata* (Linstow, 1873)**

Host: *Sturnus vulgaris*. **SI:** intestine. **Lo:** Bernal (-34.6956, -58.2667), Buenos Aires Province. **Material deposited:** MLP–He 6736. **Reference:** Valente *et al.* (2014).

Genus *Pterothominx* Freitas, 1959
***Pterothominx exilis* (Dujardin, 1845)**

Host: *Sturnus vulgaris*. **SI:** intestine. **Lo:** Bernal (-34.6956, -58.2667), Buenos Aires Province. **Material deposited:** MLP–He 6735. **Reference:** Valente *et al.* (2014).

Class Secernentea
Order Ascaridida
Superfamily Ascaridoidea
Family Anisakidae
Genus *Contracaecum* Railliet & Henry, 1912
***Contracaecum australe* Garbin *et al.*, 2011**

Host: *Phalacrocorax brasilianus*. **SI:** stomach. **Lo:** Piedras Moras Reservoir (-32.1667, -64.2833), urban Lake Villa Dalcar (-33.1; -64.36667), Pampean Lagoon (-34.7667, -63.6333) and Río Cuarto (-33.1167, -64.3) Córdoba Province. **References:** Biolé *et al.* (2012). **Comment:** adults and third and fourth stage larvae.

Host: *Phalacrocorax gaimardi*. **SI:** stomach. **Lo:** Isla del Rey (-47.7667, -66.05), Cañadón del Puerto (-47.75, -66) and Isla Elena (-47.75, -65.9333), Puerto Deseado, Santa Cruz Province. **Material deposited:** MLP–He 6758. **Reference:** Garbin *et al.* (2014). **Comment:** adults and third and fourth stage larvae.

***Contracaecum chubutensis* Garbin, Díaz, Cremonte & Navone, 2008**

Host: *Phalacrocorax atriceps*. **SI:** stomach. **Lo:** Bahía Bustamante (-45.1833, -66.50)^{1, 2} and Puerto Madryn (-42.7833, -65.0333)¹, Chubut Province. **Material**

deposited: MLP–He 5748, 5749, 5750¹. **References:** Garbin *et al.* (2008¹, 2011²).

***Contracaecum microcephalum* (Rudolphi, 1809)**

Host: *Ardea alba egretta* (cited as *Casmerodius albus egretta*). **SI:** esophagus, stomach and small intestine. **Lo:** Leales, Tucumán Province¹; La Plata Zoological Garden, Buenos Aires Province². **Material deposited:** CH–N–FML 1817¹. **References:** Schuurmans Stekhoven (1951)¹; Boero *et al.* (1972a)².

Host: *Ardea cocoi*. **SI:** esophagus, stomach and small intestine. **Lo:** La Plata Zoological Garden, Buenos Aires Province. **Reference:** Boero *et al.* (1972a).

Host: *Nycticorax nycticorax*. **SI:** esophagus, stomach and small intestine. **Lo:** Uribelarra¹ and La Plata Zoological Garden, La Plata², Buenos Aires Province. **References:** Boero & Led (1971)¹; Boero *et al.* (1972a)².

***Contracaecum mirounga* Nikolskiy, 1974**

Host: *Spheniscus magellanicus*. **SI:** proventriculus. **Lo:** Península Valdés (-42.0667 to -42.8833, -63.63 to -64.50), Chubut Province. **Material deposited:** MLP–He 7464. **Reference:** Garbin *et al.* (2019a).

***Contracaecum multipapillatum* (Drasche, 1882)**

Hosts: *Ardea alba* Linnaeus¹; *Ardea alba egretta* (cited as *Egretta alba egretta*)². **SI:** esophagus and stomach. **Lo:** De Monte pond, San Miguel del Monte (-35.45, -58.7833)¹ and Mar Chiquita coastal Lagoon (-37.7667, -57.45)², Buenos Aires Province. **Material deposited:** MACN–pa 385²; MLP–He 4598¹. **References:** Labriola & Suriano (1996)²; Navone *et al.* (2000)¹.

Host: *Bubulcus ibis ibis*. **SI:** esophagus and stomach. **Lo:** De Monte pond, San Miguel del Monte (-35.45, -58.7833), Buenos Aires Province. **Material deposited:** MACN–pa 385. **Reference:** Labriola & Suriano (1996).

Host: *Egretta thula thula*. **SI:** esophagus and stomach. **Lo:** De Monte pond, San Miguel del Monte (-35.45, -58.7833), Buenos Aires Province. **Material deposited:** MACN–pa 385. **Reference:** Labriola & Suriano (1996). **Comment:** Labriola & Suriano (1996) described *Contracaecum philomultipapillatum*, later this species was synonymized with *C. multipapillatum* by Navone *et al.* (2000).

***Contracaecum ovale* (Linstow, 1907)**

Host: *Rollandia rolland*. **SI:** stomach. **Lo:** Mar Chiquita Lagoon (-37.7667, -57.45) and Chascomús Lagoon

(-35.6667, -58.00), Buenos Aires Province. **Material deposited:** MLP–He 6313. **Reference:** Galeano & Tanzola (2012).

Contracaecum pelagicum
(Johnston & Mawson, 1942)

Host: *Eudyptes chrysocome* (cited as *E. crestatus*). **SI:** intestine. **Lo:** not reported. **Reference:** Boero *et al.* (1972b). **Comment:** cited as *Contracaecum spheniscus* Boero & Led, 1970.

Host: *Spheniscus magellanicus*^{1, 2, 3}. **SI:** intestine¹, stomach^{2, 3}. **Lo:** not reported¹, Península Valdés (-42.06667 to -42.8833, -63.63 to -64.5), Chubut Province^{2, 3}; and Mar del Plata (-38.0833, -57.6333), Buenos Aires Province². **Material deposited:** MLP–He 5591^{2, 3}. **References:** Boero *et al.* (1972b)¹; Garbin *et al.* (2007)²; Díaz *et al.* (2010)³. **Comment:** cited as *C. spheniscus* by Boero *et al.* (1972b).

Host: *Thalassarche melanophris* (cited as *Diomedea m.*). **SI:** stomach. **Lo:** Península Valdés (-42.0667 to -42.8833, -63.633 to -64.50), Chubut Province. **Material deposited:** MLP–He 5591. **Reference:** Garbin *et al.* (2007).

Comment: *Contracaecum spheniscus* was described in the proceedings of a congress in 1970, based only on male specimen found in the proventriculus of *S. magellanicus* from the La Plata Zoological Garden. Boero *et al.* (1972b) considered it valid, and reported males and females parasitizing penguins. Finally, Garbin *et al.* (2019a) synonymized *C. spheniscus* with *C. pelagicum*.

***Contracaecum travassosi* Gutiérrez, 1943**

Host: *Phalacrocorax albiventer*. **SI:** stomach. **Lo:** San José lighthouse, Chubut Province. **Material deposited:** CHIOC (number not provided). **Reference:** Gutiérrez (1943).

***Contracaecum* sp.**

Host: *Fulica leucoptera*. **SI:** intestine. **Lo:** Trelew, Chubut Province. **Reference:** Parona (1900). **Comment:** Cited by Parona (1900) as *Ascaris spiculigera* Rudolphi, 1809. There is much confusion in the literature about the many species of *Contracaecum*. Hartwich (1964) revised this genus and presented a list of synonyms. Among them, considered *Contracaecum spiculigera* (Rudolphi, 1809) and *A. spiculigera* synonymous of *C. microcephalum*. Also, he studied other specimens identified by Rudolphi (1809) as *A. spiculigera*, but considered these specimens as members of *Contracaecum rudolphii* Hartwich, 1964.

Host: *Larus dominicanus*. **SI:** not reported. **Lo:** San Carlos de Bariloche (-43.05, -75.4167), Río Negro Province¹; Chubut Province². **References:** Kreiter & Semenas (1997)¹; Díaz *et al.* (2011a)². **Comment:** immature adult specimens².

Host: *Phalacrocorax albiventer*. **SI:** recovered from pellets. **Lo:** Punta León Reserve (-43.0778, -64.4958), Chubut Province. **Reference:** Malacalza *et al.* (1988).

Host: *Phalacrocorax atriceps*. **SI:** recovered from pellets. **Lo:** Punta León Reserve (-43.0778, -64.4958), Chubut Province. **Reference:** Garbin *et al.* (2019b). **Comment:** third and fourth stage larvae and adults specimens.

Host: *Phalacrocorax brasilianus* (cited as *Phalacrocorax olivaceus olivaceus*). **SI:** proventriculus. **Lo:** Río de La Plata¹ (unspecified Province); and Los Quiroga dam, Santiago del Estero Province². **References:** Szidat & Nani (1951)¹; Zeiss & Seigmur (1981)². **Comment:** cited as *Contracaecum spiculigerum* (see previous taxonomic comment).

Host: *Phalacrocorax gaimardi*. **SI:** recovered from pellets. **Lo:** Isla Elena (-47.75, -65.9333), Ría Deseado, Santa Cruz Province. **Comment:** third and fourth stage larvae and adults specimens. **Reference:** Garbin *et al.* (2019b).

Host: *Spheniscus magellanicus*. **SI:** proventriculus. **Lo:** Río de la Plata (-35.4333 to -41.0333; -57.1167 to -62.8), Buenos Aires Province. **Material deposited:** MLP–He 7465. **Reference:** Garbin *et al.* (2019a).

Family Ascarididae

Genus *Porrocaecum* Railliet & Henry, 1912

***Porrocaecum heteropterum* (Diesing, 1851)**

Host: *Plegadis chihi*. **SI:** intestine. **Lo:** Guaminí (-37.00, -62.4833), Buenos Aires Province. **Material deposited:** MLP–He 4307/4 and NHMUK 1999.2.5.1–2. **Reference:** Digiani & Sutton (2001).

Host: *Theristicus melanopis* (Gmelin) (cited as *Theristicus melanopis melanopis*). **SI:** intestine. **Lo:** Rahue (-39.35, -70.9167), Neuquén Province. **Material deposited:** MLP–He 4599/1, 4600/1. **Reference:** Digiani & Sutton (2001).

Superfamily Heterakoidea

Family Ascaridiidae

Genus *Ascaridia* Dujardin, 1845

***Ascaridia hermaphrodita* (Frölich, 1789)**

Host: *Ara chloropterus*. **SI:** small intestine. **Lo:** San Cosme Department, Corrientes Province. **Reference:** Martínez *et al.* (2003).

Host: *Pionus maximiliani* siy. **SI:** small intestine. **Lo:**

San Antonio, Misiones Province. **Material deposited:** CH–N–FML 259. **Reference:** Schuurmans Stekhoven (1951).

Ascaridia sp.

Host: *Nothura maculosa annectens*. **SI:** small intestine. **Lo:** not reported. **Reference:** Bump & Bump (1969).

Family Heterakidae
Genus Heterakis Schrank, 1790
Heterakis sp.

Host: *Nothura darwinii darwinii*. **SI:** caecum. **Lo:** not reported. **Reference:** Bump & Bump (1969).

Host: *Nothura maculosa annectens*. **SI:** caecum. **Lo:** not reported. **Reference:** Bump & Bump (1969).

Genus Odontoterakis Skrjabin
& Schikhobalova, 1947
Odontoterakis valvata (Schneider, 1866)

Host: *Crypturellus tataupa*. **SI:** intestinal caeca. **Lo:** La Plata Zoological Garden, Buenos Aires Province. **Reference:** Boero & Led (1968).

Host: *Nothura maculosa*¹; *Nothura maculosa nigroguttata*². **SI:** intestinal caeca. **Lo:** Maipú, Magdalena, Tandil and Rauch, Buenos Aires Province¹; and Buenos Aires Province². **References:** Kaseta (1973)¹; Boero *et al.* (1968)².

Comment: cited as *Heterakis valvata* Schneider, 1866, this species was synonymized with *O. valvata* by Inglis (1991).

Superfamily Seuratoidea
Family Seuratidae
Genus Skrjabinura Gnedina, 1933
Skrjabinura sp.

Host: *Megascops choliba*. **SI:** intestine. **Lo:** La Marcela farm (-26.2931, -59.1439), Pirané, Formosa Province. **Material deposited:** MLP–He 7247. **Reference:** Drago *et al.* (2015).

Superfamily Subuluroidea
Family Subuluridae
Genus Oxyntema Linstow, 1899
Oxyntema sp.

Host: *Oreopholus ruficollis*. **SI:** intestine. **Lo:** La Plata Zoological Garden, Buenos Aires Province. **Reference:** Boero & Led (1968).

Genus Subulura Molin, 1860a
Subulura olympioi Barreto, 1918

Host: *Nothura maculosa*. **SI:** duodenum. **Lo:** Maipú, Magdalena, Coronel Dorrego and Rauch, Buenos Aires Province. **Reference:** Kaseta (1973).

Subulura strongylina (Rudolphi, 1819)

Host: *Crypturellus tataupa*. **SI:** intestine. **Lo:** La Plata Zoological Garden, Buenos Aires Province. **Reference:** Boero & Led (1968).

Subulura sp.

Hosts: *Nothura darwinii darwinii*; *Nothura darwinii salvadorii*. **SI:** caecum. **Lo:** not reported. **Reference:** Bump & Bump (1969).

Host: *Nothura maculosa annectens*. **SI:** caecum. **Lo:** not reported. **Reference:** Bump & Bump (1969).

Order Oxyurida
Superfamily Oxyuroidea
Family Heteroxynematidae

Genus Eudromoxyura Anderson & Prestwood, 1972
Eudromoxyura aspiculuris (Boero & Led, 1971)

Hosts: *Eudromia elegans*¹; *Eudromia elegans albida*²; *Eudromia elegans elegans*^{1, 2}; *Eudromia elegans wetmorei* (cited as *Eudromia elegans morenoi*)³. **SI:** caecum^{1, 2}. **Lo:** Buenos Aires Province¹; La Pampa, San Juan and Mendoza Provinces²; General Acha, La Pampa Province³. **Material deposited:** MLP–He 1621 D¹; MNHN kh–443¹, sb–559¹; USNM 1358790, 1358791, 1358792 (cited as USNPC 63080, 63081, 63082)². **References:** Boero & Led (1971)³; Anderson & Prestwood (1972)²; Hugot *et al.* (1991)¹. **Comment:** Boero & Led (1971) described *Syphaciella aspiculuris* from *E. e. wetmorei*. Anderson & Prestwood (1972) described *Eudromoxyura elonbyrdi* from *E. e. elegans* and *E. e. albida*. Later, Hugot *et al.* (1991) studied these specimens and synonymized both species with *E. aspiculuris*.

Order Spirurida
Superfamily Acuariioidea
Family Acuariidae

Genus Ancyracanthopsis Diesing, 1861a
Ancyracanthopsis winegardi Wong & Anderson, 1990

Host: *Larus dominicanus*. **SI:** gizzard. **Lo:** Balneario Orense (-38.70, -59.7833), Buenos Aires Province. **Material deposited:** MLP–He 4552. **Reference:** Cremonte *et al.* (2000).

Genus *Cosmocephalus* Molin, 1858a
***Cosmocephalus obvelatus* (Creplin, 1825)**

Host: *Larus dominicanus*. **SI:** esophagus. **Lo:** Chubut Province. **Material deposited:** MLP–He 4811-1 (cited as 4811) and CNP–Par 17. **Reference:** Díaz *et al.* (2011a).

Host: *Spheniscus magellanicus*. **SI:** esophagus. **Lo:** Peninsula (-42.0667 to -42.8833, -63.633 to -64.5), Chubut Province. **Material deposited:** MLP–He 4811. **References:** Díaz *et al.* (2001, 2010).

Genus *Desportesius* Chabaud & Campana, 1949
***Desportesius longevaginatus* (Molin, 1860b)**

Host: *Ciconia maguari*. **SI:** esophagus. **Lo:** not reported. **Reference:** Boero *et al.* (1972b). **Comment:** cited as *Synhimantus longevaginatus* (Molin, 1860b), and later this species was synonymized with *D. longevaginatus* by Wong *et al.* (1986).

Genus *Echinuria* Soloviev, 1912
***Echinuria cygni* Morini, Colombo & Martin, 1959**

Host: *Cygnus melancoryphus*. **SI:** proventriculus². **Lo:** Buenos Aires Zoological Garden, Buenos Aires city¹; La Plata Zoological Garden, Buenos Aires Province². **References:** Rodríguez & Boero (1964)¹; Boero & Led (1968)². **Comment:** the females of this species were originally described by Morini, Colombo & Martín in the proceedings of a meeting “*Actas y Trabajos del primer congreso Sudamericano de Zoología*” in 1959. Rodríguez & Boero (1964) and Boero & Led (1968) consider it a valid species, and described the males.

***Echinuria skrbjaniensis* Efimov in Skrbjabin, Sobolev & Ivashkin, 1965**

Host: *Calidris bairdii*. **SI:** proventriculus. **Lo:** Estancia María Cristina (-43.55, -70.6333), Sarmiento (-45.5833, -69.1167) and Estancia Quicahua (-42.45, -71.2167), Chubut Province. **Material deposited:** MLP–He 6346. **Reference:** Díaz *et al.* (2011b).

Host: *Calidris fuscicollis*. **SI:** proventriculus. **Lo:** Caleta Valdés (-42.50, -63.4167), Bahía Bustamante (-54.10, -66.5167) and Laguna del Ornitólogo (-43.2333, -65.2333), Chubut Province. **Material deposited:** MLP–He 6347. **Reference:** Díaz *et al.* (2011b).

Host: *Phoenicopterus chilensis*. **SI:** proventriculus. **Lo:** Epecuén Lake (-37.2167, -62.85), Buenos Aires Province. **Material deposited:** MLP–He 7258. **Reference:** Núñez *et al.* (2017).

***Echinuria uncinata* (Rudolphi, 1819)**

Host: *Lophonetta specularioides*. **SI:** lumen of proventriculus. **Lo:** San Jorge Gulf (-45.0333; -65.8667), Chubut Province. **Material deposited:** MLP–He 7021 and CNP–Par (number not provided). **Reference:** Agüero *et al.* (2015).

Host: *Netta peposaca*. **SI:** proximal esophagus, almost at the junction with the proventriculus, within granulomas. **Lo:** Alvear (-29.1536, -56.9094), Corrientes Province. **Material deposited:** CHIOC 36627, 36628. **Reference:** Silveira *et al.* (2006).

Genus *Ingliseria* Gibson, 1968
***Ingliseria cirrohamata* (Linstow, 1888)**

Host: *Phalacrocorax atriceps* [cited as *P. (atriiceps) albiventer*]. **SI:** esophagus. **Lo:** Patagonian Gulves (-42.0667 to -42.8833, -63.35 to -65.0667), Chubut Province. **Material deposited:** MLP–He 5863. **Reference:** Díaz *et al.* (2009).

Host: *Phalacrocorax brasilianus*. **SI:** esophagus. **Lo:** Patagonian Gulves (-42.0667 to -42.8833, -63.35 to -65.0667), Chubut Province. **Material deposited:** MLP–He 5864. **Reference:** Díaz *et al.* (2009).

Genus *Paracuaria* Rao, 1951
***Paracuaria adunca* (Creplin, 1846)**

Host: *Larus dominicanus*. **SI:** under the koilin at the junction of the proventriculus and gizzard¹ and esophagus². **Lo:** Puerto Madryn (-42.7833, -65.0333) and Fracasso Beach (-42.4167, -64.1167), Chubut Province¹; Chubut Province². **Material deposited:** MLP–He 5282^{1, 2}; CNP–Par 18². **References:** Díaz *et al.* (2004¹, 2011a²).

Genus *Pectinospirura* Wehr, 1933
***Pectinospirura argentata* Wehr, 1933**

Host: *Larus atlanticus*. **SI:** proventriculus. **Lo:** Bahía Blanca estuary¹ and Isla del Puerto (-38.80, -62.25)², Buenos Aires Province. **Material deposited:** MLP–He 5896¹. **References:** La Sala *et al.* (2009¹, 2012²).

Host: *Larus dominicanus*. **SI:** proventriculus. **Lo:** Balneario Orense (-38.70, -59.7833)¹ and Mar del Plata (-38.0833, -57.6333)², Buenos Aires Province. **Material deposited:** MLP–He 4064 (cited as 40,064)¹. **References:** Cremonte & Navone (1999)¹; Labriola & Suriano (2001)².

Genus *Sciadiocara* Skrjabin, 1916a***Sciadiocara haematopodi* Cremonte, Navone & Etchegoin, 1999**

Host: *Haematopus palliatus*. **SI:** gizzard. **Lo:** Mar Chiquita coastal lagoon (-37.7667, -57.45), Buenos Aires Province. **Material deposited:** MLP–He 4066/1, 4066/2, 4066/3 (cited as 40,066/1, 40,066/2, 40,066/3). **Reference:** Cremonte *et al.* (1999).

Host: *Larus dominicanus*. **SI:** gizzard. **Lo:** Balneario Orense (-38.70, -59.7833), Buenos Aires Province. **Reference:** Cremonte *et al.* (1999).

Comment: Cremonte *et al.* (2000) reported third and fourth stage larvae of this species parasitizing *Larus dominicanus* from Mar Chiquita coastal Lagoon.

***Sciadiocara legendrei* (Petter, 1967)**

Host: *Tachyeres leucocephalus*. **SI:** gizzard. **Lo:** San Jorge Gulf (-45.0333, -65.8667), Chubut Province. **Material deposited:** MLP–He 7023 and CNP–Par (number not provided). **Reference:** Agüero *et al.* (2015).

***Sciadiocara* sp.**

Host: *Larus atlanticus*. **SI:** proventriculus. **Lo:** Isla del Puerto (-38.80, -62.25), Bahía Blanca estuary, Buenos Aires Province. **Material deposited:** MLP–He 5898. **References:** La Sala *et al.* (2009, 2012).

Genus *Skrjabinoclava* Sobolev, 1943***Skrjabinoclava andersoni* Cremonte & Navone, 1999**

Host: *Larus atlanticus*. **SI:** proventriculus. **Lo:** Isla del Puerto (-38.80, -62.25), Bahía Blanca estuary, Buenos Aires Province. **Material deposited:** MLP–He 5897. **References:** La Sala *et al.* (2009, 2012).

Host: *Larus dominicanus*. **SI:** proventriculus. **Lo:** Balneario Orense (-38.70, -59.7833), Buenos Aires Province. **Material deposited:** MLP–He 4065/1, 4065/2, 4065/3 (cited as 40,065/1, 40,065/2, 40,065/3). **Reference:** Cremonte & Navone (1999).

***Skrjabinoclava* sp.**

Host: *Larus dominicanus*. **SI:** not reported. **Lo:** Mar del Plata (-38.0833, -57.6333), Buenos Aires Province. **Reference:** Labriola & Suriano (2001).

Genus *Stegophorus* Wehr, 1934***Stegophorus diomedea* (Johnston & Mawson, 1942)**

Host: *Thalassarche melanophris* (cited as *Diomedea m.*). **SI:** muscular stomach. **Lo:** Fracasso Beach (-42.4167, -64.1167) and San José Gulf, Península Valdés, Chubut Province. **Material deposited:** MLP–He 5095. **Reference:** Cremonte *et al.* (2002).

Genus *Streptocara* Railliet, Henry & Sisoff, 1912***Streptocara formosensis* Sugimoto, 1930**

Host: *Tachyeres leucocephalus*. **SI:** gizzard. **Lo:** Bahía Melo (-45.65, -65.8833)¹ and San Jorge Gulf (-45.0333, -65.8667)², Chubut Province. **Material deposited:** MLP–He 6661 and CNP–Par 60¹. **References:** Agüero & Díaz (2013)¹; Agüero *et al.* (2015)².

Genus *Syncuaria* Gilbert, 1927***Syncuaria diacantha* Petter, 1961**

Host: *Platalea ajaja*. **SI:** gizzard. **Lo:** Guaminí Lagoon (-37.00, -62.4833), Buenos Aires Province. **Material deposited:** MLP–He 4301/4. **Reference:** Digiani (1999).

***Syncuaria plegadisi* Digiani, 1999**

Host: *Plegadis chihi*. **SI:** gizzard. **Lo:** Punta Blanca (-34.9333, -57.6833), Guaminí Lagoon (-37.00, -62.4833) and Ramallo (-33.4667, -60.0333), Buenos Aires Province. **Material deposited:** MLP–He 3714/3, 3702/4, 3701/4, 3741/5, 3713/5, 3734/5 and IPCAS Helm. Coll. 749. **Reference:** Digiani (1999).

Genus *Synhimantus* Railliet, Henry & Sisoff, 1912***Synhimantus milvagoi* Boero & Led, 1971**

Host: *Phalcoboenus chimango*. **SI:** stomach. **Lo:** Uribelarrea, Buenos Aires Province. **Reference:** Boero & Led (1971).

Subgenus *Synhimantus* (*Dispharynx*) Railliet,**Henry & Sisoff, 1912*****Synhimantus* (*Dispharynx*) *brevicordon*****Schuermans Stekhoven, 1951**

Host: *Falco sparverius cinnamominus*. **SI:** cavity and stomach. **Lo:** Tañi del Valle, Tucumán Province. **Material deposited:** CH–N–FML 626. **Reference:** Schuurmans Stekhoven (1951). **Comment:** cited as *Dispharynx brevicordon*.

Host: *Muscisaxicola maculirostris maculirostris*. **SI:** cavity. **Lo:** Tañi del Valle, Tucumán Province. **Material**

deposited: CH–N–FML 582. **Reference:** Schuurmans Stekhoven (1951). **Comment:** cited as *Dispharynx brevicordon*.

***Synhimantus (Dispharynx) nasuta* Chabaud, 1975**

Host: *Sturnus vulgaris*. **SI:** esophagus, proventriculus, and gizzard. **Lo:** Bernal (-34.6956, -58.2667), Buenos Aires Province. **Material deposited:** MLP–He 6733. **Reference:** Valente *et al.* (2014).

Subgenus *Synhimantus (Synhimantus)* Railliet, Henry & Sisoff, 1912

***Synhimantus (Synhimantus) laticeps* (Rudolphi, 1819)**

Host: *Asio clamator*. **SI:** proventriculus. **Lo:** San Clemente del Tuyú (-36.35, -56.7167), Buenos Aires Province. **Material deposited:** MLP–He 7246. **Reference:** Drago *et al.* (2015). **Comment:** cited as *S.* (*S.*) cf. *laticeps*.

Host: *Tyto alba*. **SI:** gizzard. **Lo:** Mar Chiquita (-37.7667, -57.45), Buenos Aires Province. **Material deposited:** MLP–He 4609. **Reference:** Etchegoin *et al.* (2000).

Superfamily Aproctoidea

Family Aproctidae

Genus *Aprocta* Linstow, 1883

***Aprocta colaptidis* Schuurmans Stekhoven, 1951**

Host: *Colaptes campestris*. **SI:** neck (muscles and under the skin). **Lo:** Yabebiry Stream, San Ignacio, Misiones Province. **Reference:** Schuurmans Stekhoven (1951).

Host: *Furnarius rufus*. **SI:** squamous tissue of legs. **Lo:** Aguapey River, Misiones Province. **Reference:** Boero *et al.* (1972a).

Host: *Zonotrichia capensis*. **SI:** squamous tissue of legs. **Lo:** Aguapey River, Misiones Province. **Reference:** Boero *et al.* (1972a).

***Aprocta ptiloscelidis* Schuurmans Stekhoven, 1951**

Host: *Vanellus resplendens* (cited as *Ptiloscelys resplendens*). **SI:** nasal cavity. **Lo:** Tañi del Valle, Tucumán Province. **Material deposited:** CH–N–FML 236. **Reference:** Schuurmans Stekhoven (1951).

Genus *Tetracheilonema* Diesing, 1861a

***Tetracheilonema quadrilabiatum* (Molin, 1858b)**

Host: *Colaptes campestris*. **SI:** kidney (capsular membrane and adipose tissue) and neck (muscles and

under the skin). **Lo:** Yabebiry Stream, San Ignacio, Misiones Province. **Reference:** Schuurmans Stekhoven (1951).

Host: *Crypturellus tataupa*. **SI:** thoracic and abdominal cavity. **Lo:** La Plata Zoological Garden, Buenos Aires Province. **Reference:** Boero & Led (1968).

Hosts: *Nothura darwinii darwinii*; *Nothura darwinii salvadorii*. **SI:** body cavity. **Lo:** not reported. **Reference:** Bump & Bump (1969).

Hosts: *Nothura maculosa*¹; *Nothura maculosa annectens*²; *Nothura maculosa maculosa*³; *Nothura maculosa nigroguttata*⁴. **SI:** kidney (capsular membrane and adipose tissue) and neck (muscles and under the skin)³; thoracic and abdominal cavity^{1, 2, 4}. **Lo:** Maipú, Magdalena and Coronel Dorrego, Buenos Aires Province¹; not reported²; Yabebiry Stream, San Ignacio, Misiones Province³; Buenos Aires Province⁴. **Material deposited:** CH–N–FML 263, 264³. **References:** Schuurmans Stekhoven (1951)³; Boero *et al.* (1968)⁴; Bump & Bump (1969)²; Kaseta (1973)¹.

Superfamily Diplotriaenoidea

Family Diplotriaenidae

Genus *Dicheilonema* Diesing, 1861a

***Dicheilonema rhae* (Owen, 1843)**

Host: *Coscoroba coscoroba*. **SI:** general cavity. **Lo:** Azul, Buenos Aires Province. **Reference:** Gutiérrez (1956).

Hosts: *Rhea americana*^{1, 2, 3, 5, 6, 7}; *Rhea americana albescent* (cited as *Rhea americana rothschildi*)⁴. **SI:** stomach^{1, 2}, egg³, thoracic and abdominal cavity⁴, thoracic region (between flesh and bone)⁵; general cavity (peritoneum)⁶; abdominal and thoracic air sacs, coelomic cavity and subcutaneous tissue of left paw (femoro-tibial joint)⁷. **Lo:** Bahía Blanca, Buenos Aires Province^{1, 2}, Luján, Buenos Aires Province³, Buenos Aires Zoological Garden, Buenos Aires city⁴, San José, San Martín Department, Salta Province⁵; Argentinean Chaco⁶; Buenos Aires Province⁷. **Material deposited:** CH–N–FML 787⁵. **References:** Cobbold (1873¹, 1886²); Berg (1896)³; Marelli & Ubach (1923)⁴; Schuurmans Stekhoven (1951)⁵; Gutiérrez (1956)⁶; Comolli *et al.* (2011)⁷. **Comment:** Cobbold (1873, 1886), Berg (1896) and Marelli & Ubach (1923) cited these specimens as *Filaria horrida* Diesing, 1851. Yamaguti (1961) considered *F. horrida* synonymous of *D. rhae*.

Host: *Rhea pennata garleppi* (cited as *Pterocnemis p. g.*). **SI:** intercostal space (under the skin) and general cavity. **Lo:** Andalgalá, Catamarca Province. **Material deposited:** CH–N–FML 1060, 1071. **Reference:** Schuurmans Stekhoven (1951).

Genus *Diplotriaena* Henry & O'Zoux, 1909
***Diplotriaena modesta* Schuurmans Stekhoven, 1951**

Host: *Asthenes modesta modesta*. **SI:** general cavity. **Lo:** Tafi del Valle, Tucumán Province. **Material deposited:** CH–N–FML 624. **Reference:** Schuurmans Stekhoven (1951).

Diplotriaena muscisaxicola
Schuurmans Stekhoven, 1951

Host: *Muscisaxicola maculirostris maculirostris*. **SI:** general cavity. **Lo:** Tafi del Valle, Tucumán Province. **Reference:** Schuurmans Stekhoven (1951).

Genus *Hamatospiculum* Skrjabin, 1916b
***Hamatospiculum flagellispiculosum* Schuurmans Stekhoven, 1951**

Host: *Asio clamator* (cited as *Rhinoptynx clamator maculatus*). **SI:** neck. **Lo:** Bella Vista, Faimallá Departament, Tucumán Province. **Material deposited:** CH–N–FML 72. **Reference:** Schuurmans Stekhoven (1951).

Host: *Campephilus magellanicus*. **SI:** joints of the legs and tail. **Lo:** San Carlos de Bariloche (-41.179, -71.415), Río Negro Province. **Reference:** Casalins *et al.* (2019).

Host: *Myiodynastes maculatus solitarius* (cited as *Myiodynastes solitarius*). **SI:** intestine. **Lo:** Tafi Viejo, Tucumán Province. **Reference:** Schuurmans Stekhoven (1951).

***Hamatospiculum insigne* (Schneider, 1866)**

Host: *Colaptes campestroides*. **SI:** neck (muscles and under the skin). **Lo:** Yabebiry Stream, San Ignacio, Misiones Province. **Reference:** Schuurmans Stekhoven (1951).

Genus *Monopetalonema* Diesing, 1861a
***Monopetalonema alcedinis* (Rudolphi, 1819)**

Host: *Megaceryle torquata* (cited as *Ceryle torquata*). **SI:** abdominal cavity. **Lo:** Tucumán Province. **Reference:** Parona (1900). **Comments:** cited as *Filaria physalura* Bremser in Diesing 1851, and considered as synonymous of *M. alcedinis* by Yamaguti (1961).

Genus *Serratospiculum* Skrjabin, 1915
***Serratospiculum tendo* (Nitzsch in Giebel, 1857)**

Host: *Asio flammeus* (cited as *Asio brachyotus*). **SI:** under the skin of the nuchal region. **Lo:** not reported.

Reference: Parona (1900). **Comment:** cited as *Filaria attenuata* Rudolphi 1819.

Host: *Falco peregrinus cassini*. **SI:** air sacs. **Lo:** Maipú Department, Mendoza Province. **Reference:** Ibarra *et al.* (2019).

Superfamily Filarioidea
Family Filariidae
Genus *Filaria* Müller, 1787
***Filaria bipapillosa* Molin, 1858b**

Host: *Athene cunicularia* (cited as *Noctua cunicularia*). **SI:** under the skin. **Lo:** Buenos Aires Province. **Reference:** Parona (1900).

Family Onchocercidae
Genus *Pelecitus* Railliet & Henry, 1910
***Pelecitus fulicaeatrae* (Diesing, 1861a)**

Host: *Podiceps occipitalis*. **SI:** nodule of the tibiotarsotarsometatarsus articulation. **Lo:** Puerto Madryn (-42.00, -65), Chubut Province. **Material deposited:** MLP–He 5702. **Reference:** Escudero *et al.* (2007).

***Pelecitus tercostatus* (Molin, 1860c)**

Host: *Amazona vinacea*. **SI:** subcutaneous nodes in both legs. **Lo:** San Pedro (-26.6217, -54.1097), Misiones Province. **Material deposited:** MLP–He 6504. **Reference:** Díaz *et al.* (2012).

Host: *Pionus maximiliani* *siy*. **SI:** leg joints. **Lo:** San Antonio, Misiones Province. **Material deposited:** CH–N–FML 258. **Reference:** Schuurmans Stekhoven (1951).

Superfamily Habronematoidea
Family Habronematidae
Genus *Habronema* Diesing, 1861b
***Habronema* sp.**

Hosts: *Nothura darwinii darwinii*; *N. d. salvadorii*. **SI:** proventriculus and gizzard. **Lo:** not reported. **Reference:** Bump & Bump (1969).

Host: *Nothura maculosa annectens*. **SI:** proventriculus and gizzard. **Lo:** not reported. **Reference:** Bump & Bump (1969).

Genus *Procyrnea* Chabaud, 1958
***Procyrnea choique* Bagnato, Frixione, Digiani & Cremona, 2017**

Host: *Rhea pennata*. **SI:** proventriculus. **Lo:** Protected Natural Area Península Valdés (-42.5407, -64.7901),

Chubut Province. **Material deposited:** CNP–Par 144/1, 144/2, 144/3. **Reference:** Bagnato *et al.* (2017).

Family Tetrameridae

Genus *Tetrameres* Creplin, 1846

Tetrameres sp.

Host: *Coscoroba coscoroba*. **SI:** proventriculus. **Lo:** La Plata Zoological Garden, La Plata, Buenos Aires Province. **Reference:** Boero & Led (1968).

Host: *Phoenicopterus chilensis*. **SI:** proventriculus. **Lo:** La Plata Zoological Garden, Buenos Aires Province. **Reference:** Boero & Led (1968).

Subgenus *Tetrameres* (*Gynaecophila*) Gubanov, 1950 *Tetrameres* (*Gynaecophila*) *aspicula* Digiani, 2000

Host: *Plegadis chihi*. **SI:** proventriculus, females within the glands and males free in the lumen. **Lo:** Punta Blanca (-34.9333, -57.6833), Guaminí (-37.00, -62.4833) and Ramallo (-33.5833, -59.8167), Buenos Aires Province. **Material deposited:** MLP–He 3778/5, 3682/1 and NHMUK 1999.11.29.1-6. **Reference:** Digiani (2000).

Subgenus *Tetrameres* (*Petrowimeres*) Chertkova, 1953

Tetrameres (*Petrowimeres*) *fissispina* (Diesing, 1861a)

Host: *Lophonetta specularioides*. **SI:** proventricular glands. **Lo:** San Jorge Gulf (-45.0333, -65.8667), Chubut Province. **Material deposited:** MLP–He 7022 and CNP–Par (numbers not provided). **Reference:** Agüero *et al.* (2015).

Subgenus *Tetrameres* (*Tetrameres*) Creplin, 1846 *Tetrameres* (*Tetrameres*) *megaphasmidiata* CremonTE, Digiani, Bala & Navone, 2001

Host: *Calidris fuscicollis*. **SI:** proventriculus, females within the glands and males free in the lumen. **Lo:** Fracasso Beach, San Jorge Gulf (-42.4167, -64.1167), Chubut Province. **Material deposited:** MLP–He 4617. **Reference:** CremonTE *et al.* (2001).

Host: *Charadrius falklandicus*. **SI:** proventriculus, females within the glands and males free in the lumen. **Lo:** Fracasso Beach, San Jorge Gulf (-42.4167, -64.1167), Chubut Province. **Material deposited:** MLP–He 4614, 4615, 4616, 4618. **Reference:** CremonTE *et al.* (2001).

Tetrameres (*Tetrameres*) *salina* Núñez, Drago, Digiani & Lunaschi, 2017

Host: *Phoenicopterus chilensis*. **SI:** proventriculus. **Lo:** Epecuén Lake (-37.2167, -62.85) and Del Monte Lake (-36.9833, -62.4667), Buenos Aires Province. **Material deposited:** MLP–He 7254, 7255, 7256, 7257. **Reference:** Núñez *et al.* (2017).

Tetrameres (*Tetrameres*) *spirospiculum* Pinto & Vicente, 1995

Host: *Theristicus melanopsis* (as *Theristicus melanopsis melanopsis*). **SI:** proventriculus. **Lo:** Rahue (-39.35, -70.9167), Neuquén, Province. **Material deposited:** MLP–He 4600/2. **Reference:** Digiani & CremonTE (2001).

Tetrameres (*Tetrameres*) *tinamicola* Pence, Mollhagen & Prestwood, 1975

Hosts: *Eudromia elegans albida*; *Eudromia elegans elegans*. **SI:** proventriculus, females within the glands and males free in the lumen. **Lo:** Tupungato, Mendoza Province and San Luis Province. **Material deposited:** USNM 1369385, 1369386, 1369387 (cited as 73822, 72823, 73824). **Reference:** Pence *et al.* (1975).

Genus *Microtetrameres* (Travassos, 1915) *Microtetrameres canadensis argentinensis* Labriola & Suriano, 1996

Host: *Bubulcus ibis ibis*. **SI:** proventriculus. **Lo:** De Monte pond, San Miguel del Monte (-35.45, -58.7833), Buenos Aires Province. **Material deposited:** MACN–pa 384. **Reference:** Labriola & Suriano (1996).

Microtetrameres urubitinga Dueñas Díaz, Drago & Núñez, 2018

Host: *Buteogallus urubitinga*. **SI:** proventriculus; females within the glands, males free in the lumen. **Lo:** La Marcela farm (-26.2931, -59.1439), Pirané, Formosa Province. **Material deposited:** MLP–He 7447, 7448, 7449, 7450. **Reference:** Dueñas Díaz *et al.* (2018).

Microtetrameres sp.

Host: *Coryphospingus cucullatus*. **SI:** proventriculus. **Lo:** La Plata Zoological Garden, Buenos Aires Province. **Reference:** Boero & Led (1968).

Host: *Cyanocorax chrysops*. **SI:** proventriculus. **Lo:** La Plata Zoological Garden, Buenos Aires Province. **Reference:** Boero & Led (1968).

Host: *Sturnus vulgaris*. **SI:** proventriculus. **Lo:** Bernal (-34.6956, -58.2667), Buenos Aires Province. **Material deposited:** MLP–He 6734. **Reference:** Valente *et al.* (2014).

Superfamily Physalopteroidea

Family Physalopteridae

Genus *Physaloptera* Rudolphi, 1819

Physaloptera alata Rudolphi, 1819

Host: *Circus cinereus*. **SI:** cavity. **Lo:** Tafi del Valle, Tucumán Province. **Reference:** Schuurmans Stekhoven (1951).

Superfamily Thelazioidea

Family Thelaziidae

Genus *Thelazia* Bosc, 1819

Thelazia longicaudata Schuurmans Stekhoven, 1951

Host: *Strix rufipes rufipes*. **SI:** eyes. **Lo:** Pozo Hondo, Santiago del Estero Province. **Material deposited:** CH–N–FML 1297. **Reference:** Schuurmans Stekhoven (1951).

Order Strongylida

Superfamily Strongyloidea

Family Deiletocephalidae

Genus *Paradeiletocephalus* Freitas & Lent, 1947

Paradeiletocephalus minor (Molin, 1861)

Host: *Rhea americana*. **SI:** intestine. **Lo:** Los Planteles farm, Tandil, Buenos Aires Province¹. **References:** Parona (1900), Comolli *et al.* (2006)¹. **Comment:** cited as *Strongylus dimidiatus* (Diesing, 1851) by Parona (1900). This species was synonymized with *P. minor* by Freitas & Lent (1947).

Superfamily Trichostrongyloidea

Family Amidostomatidae

Genus *Epomidiostomum* Skrjabin, 1916a

Epomidiostomum vogelsangi Travassos, 1937

Host: *Cygnus melancoryphus*. **SI:** gizzard. **Lo:** La Plata Zoological Garden, Buenos Aires Province¹; Nuevo Gulf (-45.0333, -65.8667) and Bahía Engaño coast (-43.3333, -65.3333), Chubut Province². **Material deposited:** MLP–He 7024 and CNP–Par². **References:** Boero & Led (1968)¹; Agüero *et al.* (2015)².

Species *incertae sedis*

Microfilaria corderoi Mazza & Franke, 1928 in the bloodstream of *Campephilus leucopogon* (cited as *Scapanus leucopogon*) (Piciformes, Picidae) from Zapla, Jujuy Province (Mazza & Franke, 1928).

Microfilaria fonsecai Mazza & Franke, 1928 in the bloodstream of *Coryphospingus cucullatus* (Passeriformes, Thraupidae) from Zapla, Jujuy Province (Mazza & Franke, 1928).

Microfilaria parodii Mazza & Franke, 1928 in the bloodstream of *Cyanocorax chrysops* (Passeriformes, Corvidae) from Zapla, Jujuy Province (Mazza & Franke, 1928).

Microfilaria rojasi Mazza, Deautier & Steullet, 1927 in the bloodstream of *Ictinia plumbea* (Accipitriformes, Accipitridae) from Colonia Azara, Misiones (Mazza *et al.*, 1927).

Microfilariae in the bloodstream of *Turdus leucomelas* (Passeriformes, Turdidae) from Tucumán Province (Biglieri, 1918).

Species *inquirenda*

Cosmocephalus argentinensis Boero & Led, 1970 was briefly described in the proceedings of a congress, based only on female specimens found parasitizing *Spheniscus magellanicus* from the La Plata Zoological Garden. Later, it was considered *species inquirenda* by Díaz *et al.* (2001) because of its inadequate description, no type material deposited and not formally published.

Host-parasite list

Order Accipitriformes

Family Accipitridae

Buteogallus urubitinga

Microtetrameres urubitinga

Circus cinereus

Physaloptera alata

Order Anseriformes

Family Anatidae

Coscoroba coscoroba

Dicheilonema rheae

Tetrameres sp.

Cygnus melancoryphus

Echinuria cygni

Epomidiostomum vogelsangi

Lophonetta specularioides

Echinuria uncinata

Tetrameres (*Petrowimeres*) *fissispina*

Netta peposaca

Echinuria uncinata

Tachyeres leucocephalus

Sciadiocara legendrei

Streptocara formosensis

Order Charadriiformes

Family Charadriidae

Charadrius falklandicus

Tetrameres (*Tetrameres*) *megaphasmidiata*

Oreopholus ruficollis*Oxynema* sp.***Vanellus resplendens****Aprocta ptiloscelidis***Family Haematopodidae*****Haematopus palliatus****Sciadiocara haematopodi***Family Laridae*****Larus atlanticus****Pectinospirura argentata**Sciadiocara* sp.*Skrjabinoclava andersoni****Larus dominicanus****Ancyracanthopsis winegardi**Capillaria* sp.*Contracaecum* sp.*Cosmocephalus obvelatus**Eucolus* sp.*Paracuaria adunca**Pectinospirura argentata**Sciadiocara haematopodi**Skrjabinoclava andersoni**Skrjabinoclava* sp.**Family Scolopacidae*****Calidris bairdii****Echinuria skrjabiniensis****Calidris fuscicollis****Echinuria skrjabiniensis**Tetrameres* (*Tetrameres*) *megaphasmidiata***Order Coraciiformes****Family Alcedinidae*****Megaceryle torquata****Monopetalonema alcedinis***Order Falconiformes****Family Falconidae*****Falco peregrinus cassini****Serratospiculum tendo****Falco sparverius cinnamominus****Synhimantus* (*Dispharynx*) *brevicordon****Phalcoboenus chimango****Synhimantus milvagoi***Order Gruiformes****Family Rallidae*****Fulica leucoptera****Contracaecum* sp.**Order Passeriformes****Family Corvidae*****Cyanocorax chrysops****Microtetrameres* sp.**Family Furnariidae*****Asthenes modesta modesta****Diplotriaena modesta****Furnarius rufus****Aprocta colaptidis***Family Passerellidae*****Zonotrichia capensis****Aprocta colaptidis***Family Sturnidae*****Sturnus vulgaris* (introduced species)***Microtetrameres* sp.*Ornithocapillaria ovopunctata**Pterothominx exilis**Synhimantus* (*Dispharynx*) *nasuta***Family Thraupidae*****Coryphospingus cucullatus****Microtetrameres* sp.**Family Tyrannidae*****Muscisaxicola maculirostris maculirostris****Synhimantus* (*Dispharynx*) *brevicordon**Diplotriaena muscisaxicola****Myiodynastes maculatus solitarius****Hamatospiculum flagellispiculosum***Order Pelecaniformes****Family Ardeidae*****Ardea alba****Contracaecum multipapillatum****Ardea alba egretta****Contracaecum microcephalum**Contracaecum multipapillatum****Ardea cocoi****Contracaecum microcephalum****Bubulcus ibis ibis****Contracaecum multipapillatum**Microtetrameres canadensis argentinensis****Egretta thula thula****Contracaecum multipapillatum****Nycticorax nycticorax****Contracaecum microcephalum***Family Ciconiidae*****Ciconia maguari****Desportesius longevaginatus***Family Phalacrocoracidae*****Phalacrocorax albiventer****Contracaecum travassosi**Contracaecum* sp.***Phalacrocorax atriceps****Contracaecum chubutensis**Contracaecum* sp.*Ingliseria cirrohamata*

Phalacrocorax brasilianus*Contracaecum australe**Contracaecum* sp.*Ingliseria cirrohamata****Phalacrocorax gaimardi****Contracaecum* sp.*Contracaecum australe***Family Threskiornithidae*****Platalea ajaja****Syncuaria diacantha****Plegadis chihi****Porrocaecum heteropterum**Syncuaria plegadisi**Tetrameres (Gynaecophila) aspicula****Theristicus melanopis****Porrocaecum heteropterum**Tetrameres (Tetrameres) spirospiculum***Order Phoenicopteriformes****Family Phoenicopteridae*****Phoenicopus chilensis****Echinuria skrjabiniensis**Tetrameres (Tetrameres) salina**Tetrameres* sp.**Order Piciformes****Family Picidae*****Campephilus magellanicus****Hamatospiculum flagellispiculosum****Colaptes campestris****Aprocta colaptidis**Hamatospiculum insigne**Tetracheilonema quadrilabiatum***Order Podicipediformes****Family Podicipedidae*****Podiceps major****Eustrongylides tubifex****Podiceps occipitalis****Pelecitus fulicaeae****Rollandia rolland****Contracaecum ovale***Order Psittaciformes****Family Psittacidae*****Amazona vinacea****Pelecitus tercostatus****Ara chloropterus****Ascaridia hermaphrodita****Pionus maximiliani siy****Ascaridia hermaphrodita**Pelecitus tercostatus***Order Procellariiformes****Family Diomedidae*****Thalassarche melanophris****Contracaecum pelagicum**Stegophorus diomedae***Order Rheiformes****Family Rheidae*****Rhea americana****Dicheilonema rheae**Paradeletrocephalus minor****Rhea americana albescens****Dicheilonema rheae****Rhea pennata****Procyrnea choique****Rhea pennata garleppi****Dicheilonema rheae***Order Sphenisciformes****Family Spheniscidae*****Spheniscus magellanicus****Contracaecum mirounga**Contracaecum pelagicum**Contracaecum* sp.*Cosmocephalus obvelatus****Eudyptes chrysocome****Contracaecum pelagicum***Order Strigiformes****Family Tytonidae*****Tyto alba****Synhimantus (Synhimantus) laticeps***Family Strigidae*****Asio flammeus****Serratospiculum tendo****Asio clamator****Hamatospiculum flagellispiculosum**Synhimantus (Synhimantus) cf. laticeps****Athene cunicularia****Filaria bipapillosa****Megascops choliba****Skrjabinura* sp.***Strix rufipes rufipes****Thelazia longicauda***Order Tinamiformes****Family Tinamidae*****Crypturellus tataupa****Odontoterakis valvata**Subulura strongylina**Tetracheilonema quadrilabiatum****Eudromia elegans****Eudromoxyura aspiculuris****Eudromia elegans albida****Eudromoxyura aspiculuris**Tetrameres (Tetrameres) tinamicola*

Eudromia elegans elegans*Eudromoxyura aspiculuris**Tetrameres (Tetrameres) tinamicola****Eudromia elegans wetmorei****Eudromoxyura aspiculuris****Nothura darwinii darwinii****Habronema* sp.*Heterakis* sp.*Subulura* sp.*Tetracheilonema quadrilabiatum****Nothura darwinii salvadorii****Habronema* sp.*Subulura* sp.*Tetracheilonema quadrilabiatum****Nothura maculosa****Eucoleus penidoi**Odontoterakis valvata**Subulura olympioi**Tetracheilonema quadrilabiatum****Nothura maculosa annectens****Ascaridia* sp.*Habronema* sp.*Heterakis* sp.*Subulura* sp.*Tetracheilonema quadrilabiatum****Nothura maculosa maculosa****Tetracheilonema quadrilabiatum****Nothura maculosa nigroguttata****Capillaria* sp.*Odontoterakis valvata**Tetracheilonema quadrilabiatum***DISCUSSION**

Helminths of wild birds have been less studied than those of other vertebrates, mainly because the birds are one of the most charismatic and protected groups. Then, it is difficult to obtain a sufficient number of these hosts because many are protected by national and international laws (Pérez Ponce de León *et al.*, 2011). Much of the information available on parasites in wild birds comes from studies carried out in birds that died by natural causes (Núñez *et al.*, 2017, 2018). Other important sources of information for taxonomic studies on helminths of birds are the helminthological collections, which preserve information on spatial and temporal biodiversity (Drago *et al.*, 2018).

Reports of nematodes parasitizing wild birds were found in 17 of the 23 Argentinean Provinces. Most of the studies were carried out in Buenos Aires Province, with 63 reports, followed by Chubut and Tucumán Province with 38 and 11 reports, respectively. In Chaco, Entre Ríos, Jujuy, La Rioja, Santa Fe and Tierra del Fuego Provinces no nematodes have been reported parasitizing wild birds. The rest of the Provinces presented less

than ten records. Sixteen reports were carried out in Zoological Gardens. This seems to be more related to the development of this line of work in scientific research centers in these Provinces, than with the real diversity in each Province, i.e. Centro de Estudios Parasitológicos y de Vectores (CEPAVE), Museo de la Plata and Facultad de Ciencias Veterinarias de La Plata in Buenos Aires Province, Centro Nacional Patagónico (CENPAT) in Chubut Province and Instituto Miguel Lillo in Tucumán Province. Sixteen reports were carried out in Zoological Gardens.

In Argentina, 1042 species of birds (1033 native and nine introduced species) belonging to 86 families have been reported (Roesler & González Táboas, 2016); however, only 65 bird species (6.24%) grouped into 29 families have been reported to be parasitized by adult nematodes. The families of birds with the highest number of reported taxa are Tinamidae, Laridae, Anatidae and Phalacrocoracidae with 12, 11, 8 and 7 taxa reported, respectively. The bird species with the highest number of taxa of nematodes reported are *Larus dominicanus* (Laridae) and *Nothura maculosa* (Tinamidae) with 10 and 9 taxa reported, respectively. *Larus dominicanus* is an abundant species that inhabits a great diversity of environments and has a generalist and opportunistic diet (Yorio *et al.*, 2013), which means that it would be more likely to acquire a wide variety of nematodes with indirect life cycle. In addition, the helminths of these birds have been studied in numerous opportunities, being also the bird species with the highest number of digenean species reported (see Lunaschi *et al.*, 2007; Drago & Lunaschi, 2015). The higher number of reports in tinamids may be related to the abundance of these birds and their ease of collection, because it is a species consumed by local inhabitants and the contribution of rural hunters with viscera is frequent. Only one introduced species, the European starling (*S. vulgaris*), was reported as host of nematodes. The first sightings of these birds in Argentina were in the city of Buenos Aires in 1987, expanding its distribution to various Provinces (Jensen, 2008). Although only one paper related to its helminths was published, three nominal species and one taxon identified at generic level of nematodes were reported (Valente *et al.*, 2014).

The highest number of taxa of nematodes was recorded in the family Acuariidae with 20 nominal species and two taxa identified at generic level, followed by Anisakidae with eight and one, and Tetrameridae with eight and two, respectively. This could be related to the preference of habitat of studied birds, in this case mostly aquatic, given that these three families of Nematodes possess mainly aquatic life cycles.

In addition, five species of passeriform, accipitriform and piciform birds were reported as hosts of larval stages of nematodes (microfilariae) described as species of the genus *Microfilaria*. The name "*Microfilaria*" can be found as an informal generic name referring to a collective

group of blood filarioids, as proposed by Cobbod (1882). However, this genus is not valid and these names are also invalid. Unfortunately, it is not possible to assign these species to any other genus because adults are unknown, for proper identification it is necessary to found the adults housed in the subcutaneous tissue associated with these microfilariae. Numerous species of Filarioidea are known parasitizing birds (see Schmidt-Rhaesa, 2014), although in Argentina only two genera, *Pelecitus* (Onchocercidae) and *Filaria* (Filariidae), have been reported.

The group of helminths most studied in Argentinean birds are the digeneans (Drago & Lunaschi, 2015), with almost twice more nominal species reported than for nematodes (112 vs. 64), however the number of bird species studied is similar (70 vs. 65). The three families of birds with the highest number of digeneans reported are Laridae, Ardeidae and Accipitridae, while the families with the highest number of nematodes reported are Tinamidae, Laridae and Anatidae.

When comparing the number of species of nematodes in Argentinean birds with the richness found in other regions of similar birds diversity, for example Mexico, with 1096 bird species, it can be observed similar values of nematodes species. For example, García-Prieto *et al.* (2014) reported 64 nominal species and 17 indeterminate taxa of nematodes, parasitizing 65 bird species, which represents 5.9% of the birds present in this country.

These results highlights the need for further investigation and research on this group of parasites, expanding the number of bird species examined, especially in poorly explored regions.

ACKNOWLEDGMENTS

The present study was funded by UNLP (11/N880) and CIC.

REFERENCES

- Agüero M.L., Díaz J.I. 2013. First record of *Streptocara formosensis* (Nematoda: Acuariidae) from the Chubut Steamerduck, *Tachyeres leucocephalus*, endemic to the Patagonian coast, Southwest Atlantic. *Comparative Parasitology* 80: 304-307.
- Agüero M.L., Gilardoni C., Cremonte F., Díaz J.I. 2015. Stomach nematodes of three sympatric species of anatic birds off the coast of Patagonia. *Journal of Helminthology* 90(6): 663-667.
- Anderson R.C., Prestwood A.K. 1972. *Eudromoxyura elonbyrdi* n. g., n. sp. (Nematoda: Oxyuroidea) from crested tinamou (*Eudromia elegans*). *Canadian Journal of Zoology* 50: 297-300.
- Anderson R.C., Chabaud A.G., Willmont S. 2009. Keys to the Nematode Parasites of Vertebrates. Archival Volumen. *CABi, Wallingford*, 463 pp.
- Bagnato E., Frixione M., Digiani M.C., Cremonte F. 2017. A new species of *Procyrnea* (Nematoda: Habronematidae) parasitic in *Rhea pennata* (Aves: Rheidae) from Patagonia, Argentina, with a key to species of the genus. *Journal of Helminthology* 92(4): 1-10.
- Barreto A.L.B. 1918. Revisão da sub-família Subulurinae Travassos, 1914. Thesis Faculdade de Medicina do Rio de Janeiro, Rio de Janeiro, 161 pp.
- Baruš V., Sergeeva T.P. 1990. A new genus of capillariids from birds, *Ornithocapillaria* gen. n. (Nematoda: Capillariidae). *Folia Parasitologica* 37: 237-248.
- Berg C. 1896. Una "*Filaria horrida*" Dies. dentro de un huevo. *Anales del Museo Nacional de Buenos Aires* 5: 139-140.
- Biglieri R. 1918. Microfilaria hallada en la sangre de un pájaro el "*Turdus leucomelas*" (Charchalero pecho blanco). *Revista del Instituto Bacteriológico del Departamento Nacional de Higiene* 4: 481-484.
- Biolé F.G., Guagliardo S.E., Mancini M.A., Tanzola R.D., Salinas V., Gerardo Morra G. 2012. Primer registro de *Contracaecum australe* (Nematoda: Anisakidae) en *Phalacrocorax brasilianus* (Aves: Phalacrocoracidae) de la región central de Argentina. *BioScriba* 5(1): 1-11.
- Boero J.J., Led J.E. 1968. El parasitismo de la fauna autóctona. III. Los parásitos de las aves argentinas. *Revista de la Facultad de Ciencias Veterinarias, La Plata* 10: 97-129.
- Boero J.J., Led J.E. 1970. El parasitismo de la fauna Autóctona. VI. Los parásitos de la avifauna argentina I. *Actas de las V Jornadas de Veterinaria, Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata*, 65-78.
- Boero J.J., Led J.E. 1971. El parasitismo de la fauna autóctona. V. Los parásitos de las aves argentinas. VI. Los parásitos de los ofidios argentinos. VII Los parásitos de los murciélagos argentinos. *Analecta Veterinaria* 3: 91-103.
- Boero J.J., Menéndez N.A., Led J.E., Brandetti E. 1968. Estudios parasitológico y bacteriológico en perdices (*Nothura maculosa*). *Revista de la Facultad de Ciencias Veterinarias de La Plata* 10(23): 321-330.
- Boero J.J., Led J.E., Brandetti E. 1972a. El parasitismo de la fauna autóctona. *Revista de la Facultad de Agronomía y Veterinaria, Buenos Aires* 1: 17-29.
- Boero J.J., Led J.E., Brandetti E. 1972b. Algunos parásitos de la avifauna argentina. *Analecta Veterinaria* 4: 17-34.
- Bosc M. 1819. Sur un nouveau genre de Vers intestinaux découvert, décrit et dessiné par M. J. B. Rhodes, Vétérinaire à Plaisance, département du Gers. *Journal de Physique* 88: 214-216.
- Brugni N., Viozzi G. 2003. Presencia de *Eustrongylides tubifex* (Nematoda: Dioctophymatoidea) en la Patagonia, Argentina. *Parasitología latinoamericana* 58: 83-85.
- Bump G., Bump J.W. 1969. A study of the spotted tinamous and the pale spotted tinamous of Argentina. *Department of the Interior, Fish and Wildlife Service, Bureau of Sport Fisheries and Wildlife* 120: 1-160.
- Casalins L., Ibáñez Molina M., Wainer Gullo M., Brugni N., Ortiz G., Ojeda V. 2019. *Hamatospiculum flagellispiculosum* (Nematoda: Diplotriaeidae) causing severe disease in a new host from Argentine Patagonia: *Campephilus magellanicus* (Aves: Picidae). *Parasites and Wildlife* 8: 106-110.
- Chabaud A.G. 1958. Essai de classification des nématodes Habronematinae. *Annales de Parasitologie Humaine et Comparée* 33(4): 445-508.
- Chabaud A.G. 1975. Keys to genera of the order Spirurida. Part II. Spiruroidea, Habronematoida and Acuarioidea [pp. 29-58]. In: Anderson R.C., Chabaud A.G., Willmont. *CIH Keys to the Nematode Parasites of Vertebrates*.

- Commonwealth Institute of Helminthology, Farnham Royal, 463 pp.
- Chabaud A.G., Campana Y. 1949. A propos d'une variété nouvelle de *Synhimantus equispiculatus* Wu et Liu, 1943, création d'un nouveau sous-genre (*Desportesius*) n. subgen. *Annales de Parasitologie Humaine et Comparée* 24: 77-92.
- Chertkova A.N. 1953. A new nematode *Tetrameres* (*Petrowimeres*) *pavonis* nov. subgen., nov. sp., from peacocks [pp. 737-739]. In: Petrov et al. Contributions to helminthology on the 75th birthday of Academician K. I. Skrzjabin. *Izdatel'stvo Akademii Nauk S.S.S.R., Moscow*, 812 pp.
- Cobbold T.S. 1873. Notes on Entozoa. *Proceedings of the Zoological Society of London* 47: 736-742, 1 plate.
- Cobbold T.S. 1882. Human parasites: a manual of reference to all the known species of entozoa and ectozoa. *Longman, Green & Co, London*, 85 pp.
- Cobbold T.S. 1886. Notes on Parasites collected by the late Charles Darwin, Esq. *Journal of the Proceedings of the Linnean Society (Zoology)* 19: 174-178.
- Comolli J., Cayo D., Santa Cruz A., Milano F., Roux J. 2006. Aspectos morfológicos de *Paradeletrocephalus minor* (Molin, 1861) Freitas & Lent, 1947, en ñandú (*Rhea americana*), por medio de microscopio de luz y microscopio electrónico de barrido. *Parasitología latinoamericana* 61: 183-187.
- Comolli J., Santa Cruz A., Roux J., González A. 2011. Aspectos morfológicos de *Dicheilonema rhae* Owen 1843 en ñandúes (*Rhea americana*). *Revista Veterinaria* 22(2): 141-143.
- Cremonte F., Navone G.T. 1999. Co-occurrence of *Pectinosporura argentata* Wehr, 1933, *Skrjabinoclava andersoni* n. sp. and larvae (Nematoda: Acuariidae) in the proventriculus of *Larus dominicanus* Lichtenstein (Aves: Laridae), with notes on their attachment. *Systematic Parasitology* 42: 203-211.
- Cremonte F., Navone G.T., Etchegoin J.A. 1999. A new species of *Sciadiocara* Skrzjabin, 1916 (Nematoda: Acuariidae) parasitic in shorebirds in Argentina. *Systematic Parasitology* 42: 213-217.
- Cremonte F., Navone G.T., Etchegoin J.A. 2000. Morphological studies of *Ancyracanthopsis winegardi* Wong & Anderson, 1990 (Nematoda: Acuariioidea) and larval stages of acuariid nematodes parasitic in *Larus dominicanus* Lichtenstein (Aves: Laridae) from Argentina. *Systematic Parasitology* 45(2): 135-140.
- Cremonte F., Digiani M.C., Bala L.O., Navone G.T. 2001. *Tetrameres* (*Tetrameres*) *megaphasmidiata* n. sp. (Nematoda: Tetrameridae), a parasite of the two-banded plover, *Charadrius falklandicus*, and white-rumped sandpiper, *Calidris fuscicollis*, from Patagonia, Argentina. *Journal of Parasitology* 87: 148-151.
- Cremonte F., Díaz J.I., Navone G.T. 2002. Primer registro de *Stegophorus diomedae* (Nematoda: Acuariidae) parásito del albatros de ceja negra, en el Mar Argentino. *Neotropica* 48: 61-64.
- Creplin F.C.H. 1825. Observationes de entozois. *Sumtibus Ernesti Maurittii, Gryphiswaldiae* 86 pp.
- Creplin F.C.H. 1846. Nachträge zu Gurlt's Verzeichniss der Thiere, bei welchen Entozoen gefunden worden sind. *Archiv für Naturgeschichte* 1: 129-160.
- Díaz J.I., Cremonte F., Navone G.T. 2001. New host and distribution record of *Cosmocephalus obvelatus* (Creplin, 1825) (Nematoda: Acuariidae) with morphometric comparisons. *Comparative Parasitology* 68: 277-282.
- Díaz J.I., Cremonte F., Navone G.T. 2004. First record of the acuarioid nematode *Paracuaria adunca* from South America, with new morphological details and discussion of cordons. *Comparative Parasitology* 71: 238-242.
- Díaz J.I., Fonteneau F., Panisse G., Cremonte F., Navone G.T. 2009. Redescription of *Ingliseria cirrohamata* (Linstow, 1888) (Nematoda: Acuariidae), including new hosts and geographical records. *Journal of Parasitology* 95(2): 396-402.
- Díaz J.I., Cremonte F., Navone G.T. 2010. Helminths of the Magellanic penguin, *Spheniscus magellanicus* (Sphenisciformes), during the breeding season in Patagonian coast, Chubut, Argentina. *Comparative Parasitology* 77: 172-177.
- Díaz J.I., Cremonte F., Navone G. 2011a. Helminths of the kelp gull, *Larus dominicanus*, from the northern Patagonian coast. *Parasitology Research* 109: 1555-1562.
- Díaz J.I., Panisse G., Escudero G., Kinsella J.M. 2011b. New host and geographical records and morphological details for *Echinuria skrjabiniensis* (Nematoda, Acuariidae) from shorebirds in Argentina. *Acta Parasitologica* 56: 315-319.
- Díaz J.I., Di Nucci D.L., Falzone M.P., Demergassi N.M., Lois M.F., Zalazar R.O., Navone G.T., Gachen G.G. 2012. *Pelecitus tercostatus* (Molin, 1960) (Nematoda, Onchocercidae) in *Amazona vinacea* (Aves, Psittaciformes) from Argentina: morphological details and clinical findings. *Acta Parasitologica* 57(2): 194-198.
- Diesing C.M. 1851. Systema helminthum Vol. II. Apud Wilhelmum Braumüller, *Vindobonae*, 588 pp.
- Diesing C.M. 1861a. Revision der Nematoden. *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Classe* 42: 595-736.
- Diesing C.M. 1861b. Kleine Helminthologische Mittheilungen. *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Classe* 43: 269-282.
- Digiani M.C. 1999. First record of the genus *Synacuaria* (Nematoda: Acuariidae) in Argentina, with description of a new species. *Folia Parasitologica* 46: 139-144.
- Digiani M.C. 2000. *Tetrameres* (*Gynaecophila*) *aspicula* n. sp. (Nematoda: Tetrameridae), a proventricular parasite of the white-faced ibis *Plegadis chihi* in Argentina. *Systematic Parasitology* 47: 111-117.
- Digiani M.C., Cremonte F. 2001. New host and locality records for *Tetrameres* (*Gynaecophila*) *spirospiculum* Pinto & Vicente, 1995 (Nematoda: Tetrameridae), with new morphological data. *Memórias do Instituto Oswaldo Cruz* 96: 339-341.
- Digiani M.C., Sutton C.A. 2001. New reports and a redescription of *Porrocaecum heteropterum* (Diesing, 1851) (Ascarididae), a rare nematode parasitic in South American threskiornithid birds. *Systematic Parasitology* 49: 1-6.
- Drago F.B., Lunaschi L.I. 2015. Update of checklist of digenean parasites of wild birds from Argentina, with comments about the extent of their inventory. *Neotropical Helminthology* 9(2): 325-350.
- Drago F.B., Lunaschi L.I., Cabrera N.E., Barbieri L. 2015. Helminth parasites of four species of strigiform birds from central and northeastern from Argentina. *Revista Argentina de Parasitología* 4(1): 15-23.
- Drago F.B., Núñez V., Lunaschi L.I. 2018. Strigeid parasites of *Circus buffoni* from Argentina, with the description of a

- new species of *Parastrigea* Szidat, 1928. *Parasitology Research* 117(3): 751-758.
- Drasche R. 1882. Helminthologische Notizen. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien* 32: 139-142.
- Dueñas Díaz M., Drago F.B., Núñez V. 2018. A new species of *Microtetrameres* (Nematoda, Tetrameridae) parasitizing *Buteogallus urubitinga* (Aves, Accipitridae) from northeastern Argentina. *Anais da Academia Brasileira de Ciências* 90(3): 2967-2976.
- Dujardin F. 1845. Histoire naturelle des helminthes ou vers intestinaux. *Librairie Encyclopédique de Roret, Paris*, 654 pp.
- Escudero G., Díaz J.I., Notarnicola J. 2007. New host and distribution records of *Pelecitus fulicaeatrae* (Diesing, 1861) (Nematoda, Onchocercidae). *Acta Parasitologica* 52(4): 419-421.
- Etchegoin J.A., Cremonte F., Navone G.T. 2000. *Synhimantus* (*Synhimantus*) *laticeps* (Rudolphi, 1819) Railliet, Henry et Sisoff, 1912 (Nematoda, Acuariidae) parasitic in *Tyto alba* (Gmelin) (Aves, Tytonidae) in Argentina. *Acta Parasitologica* 45: 99-106.
- Freitas J.F.T. 1959. Escobo de novo arranjo sistemático para os Nematódeos Capilariíneos (Trichuroidea). *Atas da Sociedade de Biologia do Rio de Janeiro* 3(5): 4-6.
- Freitas J.F.T., Almeida J.L. 1935. Sobre os nematoda Capilariíneos parasitas de esophago e papo de aves. *Memórias do Instituto Oswaldo Cruz* 30: 123-56.
- Freitas J.F.T., Lent H. 1947. Revisão da sub-familia Deletrocephalinae Railliet, 1916 (Nematoda, Strongyloidea). *Revista Brasileira de Biologia* 7(1): 73-100.
- Frölich J.A. 1789. Beschreibungen einiger neuen Eingeweidewürmer. *Naturforscher* 24: 101-162.
- Galeano N.A., Tanzola R.D. 2012. *Contracaecum ovale* (Nematoda: Anisakidae) from *Rollandia rolland* Quoy & Gaimard 1824 (Aves, Podicipedidae) in Argentina. *Revista Brasileira de Parasitologia Veterinária* 21(2): 143-147.
- Garbin L.E., Navone G.T., Díaz J.I., Cremonte F. 2007. Further study of *Contracaecum pelagicum* (Nematoda: Anisakidae) in *Spheniscus magellanicus* (Aves: Spheniscidae) from argentinean coasts. *Journal of Parasitology* 93: 143-150.
- Garbin L.E., Díaz J.I., Cremonte F., Navone G.T. 2008. A new anisakid species parasitizing the Imperial cormorant *Phalacrocorax atriceps* from the north Patagonian Coast, Argentina. *Journal of Parasitology* 94: 852-859.
- Garbin L.E., Mattiucci S., Paoletti M., González-Acuña D., Nascetti G. 2011. Genetic and morphological evidences for the existence of a new species of *Contracaecum* (Nematoda: Anisakidae) parasite of *Phalacrocorax brasilianus* (Gmelin) from Chile and its genetic relationships with congeners from fish-eating birds. *Journal of Parasitology* 97(3): 476-492.
- Garbin L., Capasso S., Díaz J.I., Morgenthaler A., Millones A., Navone G. 2014. Nuevo hospedador y registro geográfico de *Contracaecum australe* (Nematoda, Anisakidae) parasitando a *Phalacrocorax gaimardi* (Aves, Phalacrocoracidae) en costas del Atlántico Sudoccidental. *Revista Argentina de Parasitología* 2(3): 6-11.
- Garbin L.E., Díaz J.I., Navone G.T. 2019a. Species of *Contracaecum* parasitizing the magellanic penguin *Spheniscus magellanicus* (Spheniscidae) from the Argentinean coast. *Journal of Parasitology* 105(2): 222-231.
- Garbin L.E., Díaz J.I., Morgenthaler A., Millones A., Kuba L., Fuchs D., Navone G.T. 2019b. Cormorant pellets as a tool for the knowledge of parasite-intermediate host associations and nematode diversity in the environment. *Helminthologia* 56(4): 296-302.
- García-Prieto L., Osorio-Sarabia D., Lamothe-Argumedo M.R. 2014. Biodiversidad de Nematoda parásitos de vertebrados en México. *Revista Mexicana de Biodiversidad, Supl.* 85: S171-S176.
- Gibbons L.M. 2010. Keys to the Nematode Parasite of Vertebrates. Supplementary Volume. *CABI, Wallingford*, 416 pp.
- Gibson G.G. 1968. Species composition of the genus *Streptocara* Railliet *et al.*, 1912 and the occurrence of these avian nematodes (Acuariidae) on the Canadian Pacific coast. *Canadian Journal of Zoology* 46(4): 629-645.
- Giebel G. 1857. Chr. L. Nitzsch's helminthologische Untersuchungen. *Zeitschrift für die Gesamten Naturwissenschaften* 9: 264-348.
- Gilbert L.I. 1927. Characteristics of two nematodes of the western part of the USSR [pp. 54-61]. In: *Sborn Rabot Gelminl Posv K. I. Skrjabin*.
- Gnedina M.P. 1933. Sur un nématode nouveau des oiseaux: *Skrjabinura spirulis* n. g., n. sp. *Annales de Parasitologie Humaine et Comparée* 11(3): 180-184.
- Gubanov N.M. 1950. Influence of the conditions of the environment on changes in the morphology of nematodes of birds. *Dokladi Akademii Nauk SSSR* 70: 173-175.
- Gutiérrez R.O. 1943. Sobre la morfología de una nueva especie de *Contracaecum* (Nematoda: Ascaridoidea). *Revista Brasileira de Biologia* 3: 159-172.
- Gutiérrez R.O. 1956. El ganso común *Coscoroba coscoroba* (Molina, 1782) huésped de *Dicheilonema rhea* (Owen, 1843). *Hombergia* 5(12-13): 227-331.
- Hartwich G. 1964. Revision der vogelparasitischen Nematoden Mitteleuropas II. Die Gattung *Contracaecum* Railliet & Henry, 1912 (Ascaridoidea). *Mitteilunge aus dem Zoologischen Museum* 40: 15-53.
- Henry A., O'Zoux. 1909. La Filaire du Foudi (*Filaria ozouxi* Railliet et Henry). *Bulletin de la Société de pathologie Exotique* 2(9): 544-547.
- Hugot J.P., Sutton C.A., Morand S. 1991. Morphological study of *Eudromoxyura aspiculuris* (Nematoda, Heteroxyematidae) from the tinamou *Eudromia elegans* (Aves, Tinamidae). *Systematic Parasitology* 19: 61-72.
- Ibarra J., Mera y Sierra R.L., Neira G., Ibáñez D.E.J., Saggese M.D. 2019. Air Sac Nematode (*Serratospiculum tendo*) Infection in an Austral Peregrine Falcon (*Falco peregrinus cassini*) in Argentina. *Journal of Wildlife Diseases* 55(1): 179-182.
- Inglis W.G. 1991. A revision of the nematode genus *Odontoterakis* Skrjabin & Schikhobalova, 1947 (Heterakoidea). *Systematic Parasitology* 20: 69-79.
- Jägerskiöld L.A. 1909. Zur Kenntnis der Nematoden Gattungen *Eustrongylides* und *Hystrichis*. *Nova acta Regiae Societatis Scientiarum Upsaliensis*. Ser. IV 2(3): 1-59.
- Jensen R.F. 2008. Nuevos registros de Estornino Pinto (*Sturnus vulgaris*) para el sureste de la provincia de Entre Ríos, Argentina. *Nuestras Aves* 53: 22.
- Johnston T.H., Mawson P.M. 1942. Nematodes from Australian albatrosses and petrels. *Transactions of the Royal Society of South Australia* 66: 66-70.
- Kaseta S.M. 1973. Nematodes en *Nothura maculosa* (Temminck). *Physis Sección C* 32(84): 83-91.

- Kreiter A., Semenas L. 1997. Helmintos parásitos de *Larus dominicanus* en la Patagonia, Argentina. *Boletín Chileno de Parasitología* 52: 39-42.
- Labriola J.B., Suriano D.M. 1996. Parasitic nematodes of birds from De Monte Pond, Buenos Aires, Argentina. *Boletín Chileno de Parasitología* 51: 59-65.
- Labriola J.B., Suriano D.M. 2001. Community structure of parasitic helminths of birds of the genus *Larus* from Mar del Plata, Argentina. *Vie et Milieu* 51: 67-76.
- La Sala L.F., Díaz J.I., Martorelli S.R., Alda P. 2009. Some nematodes from Olrog's gull *Larus atlanticus* Olrog, 1958 (Aves: Laridae) and prey crabs from the Bahía Blanca Estuary, Argentina. *Comparative Parasitology* 76: 293-296.
- La Sala L.F., Smits J.E., Martorelli S.R. 2012. Enteric infections by Trematodes and Nematodes in Olrog's Gull, *Larus atlanticus*. *Avian Diseases* 56: 764-767.
- Lepage D. 2019. Avibase - Bird Checklists of the World. Available from: <http://avibase.bsc-eoc.org/avibase.jsp> (accessed October 2019).
- Linstow O. 1873. Einige neue Nematoden nebst Bemerkungen über bekannte Arten. *Archiv für Naturgeschichte* 39: 293-306.
- Linstow O. 1883. Nematoden, Trematoden und Acanthocephalen gesammelt von Prof. Fedtschenko in Turkestan. *Archiv für Naturgeschichte* 49(1): 274-318.
- Linstow O. 1888. Report on the Entozoa collected by H. M. S. Challenger during the years 1873-76. *Reports of Science Research Voyage of H.M.S. Challenger, Zoology* 23: 1-25.
- Linstow O. 1899. Nematoden aus der Berliner Zoologischen Sammlung. *Mitteilungen aus der zoologischen Sammlung des Museums für Naturkunde in Berlin* 1: 1-34.
- Linstow O. 1907. Nematoden aus dem Königlichen Zoologischen Museum in Berlin. *Mitteilungen aus dem Zoologischen Museum in Berlin* 3: 251-259.
- Lunaschi L.I., Cremonte F., Drago F.B. 2007. Checklist of digenean parasites of birds from Argentina. *Zootaxa* 1403: 1-36.
- Malacalza V., Bertellotti M., Poretti T. 1998. Presencia de nematodos (*Contracaecum* sp.) en "pellets" del cormorán real (*Phalacrocorax albiventer*) en Punta León, Chubut, Argentina. *Naturalia Patagónica, Ciencias Biológicas* 6: 29-34.
- Marelli C.A., Ubach F.A. 1923. Observaciones de patología ornitológica. *Hornero* 3(1): 60-65.
- Martínez F.A., Troyano J.C., Ledesma S., Antonchuk L.A., Fescina N. 2003. Presencia de *Ascaridia hermaphrodita* (Froelich, 1789) en *Ara chloroptera* (Aves, Psittaciformes) en Argentina. *Revista de Salud Animal* 25(3): 212-214.
- Mazza S., Franke I. 1928. Algunas nuevas microfilarias de aves del norte. *Boletín del Instituto de Clínica Quirúrgica* 4: 625-627.
- Mazza S., Deautier E.A., Steullet A. 1927. Investigación de hemoparásitos en algunas aves de Misiones. *Hornero* 4(1): 49-52.
- Molin R. 1858a. Prospectus helminthum, quae in prodromo faunae helminthologicae Venetiae continentur. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe* 30: 127-158.
- Molin R. 1858b. Versuch einer Monographie der Filarien. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien – mathematisch-naturwissenschaftliche Classe* 28: 365-465.
- Molin R. 1860a. Trenta specie di nematodoidi. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien – mathematisch-naturwissenschaftliche Classe* 440: 331-358.
- Molin R. 1860b. Una monografia del genere *Dispharagus*. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien – mathematisch-naturwissenschaftliche Classe* 39: 479-506.
- Molin R. 1860c. Una monografia del genere *Spiroptera*. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien – mathematisch-naturwissenschaftliche Classe* 38(28): 911-1005.
- Molin R. 1861. Il sottordine degli acrofalli ordinato scientificamente secondo i risultamenti delle indagini anatomiche ed embriogeniche. *Memorie dell'I. R. Istituto Veneto di Scienze, Lettere ed Arti* 9: 427-633.
- Moravec F. 2001. Trichinelloid Nematodes Parasitic in Cold-blooded Vertebrates. *Academia, Prague*, 430 pp.
- Morini E.G., Colombo E.G., Martin A.A. 1959. Infestación de cisnes, *Cygnus melanocoryphus* con *Echinuria cygni* n. sp. (Nematoda: Acuariidae). *Actas y Trabajos del Primer Congreso Sudamericano de Zoología* 2: 223-228.
- Müller O. F. 1787. Verzeichniß der bisher entdeckten Eingeweidewürmer, der Thiere, in welchen sie gefunden worden, und der besten Schriften, die derselben erwähnen. *Der Naturforscher, Halle* 22: 33-86.
- Navone G., Etchegoin J.A., Cremonte F. 2000. *Contracaecum multipapillatum* (Nematoda: Anisakidae) from *Egretta alba* (Aves: Ardeidae), and comments on other species of this genus in Argentina. *Journal of Parasitology* 86: 807-810.
- Nikolskiy O.L. 1974. *Contracaecum mirounga* sp. n. (Nematoda: Anisakidae), a new nematode of the elephant seal from the Antarctic. *Izvestiya Tikhookeanskogo Nauchno-Issledovatel'skogo Instituta Rybnogo Khozyaystva i Okeanografii* 83: 107-109.
- Núñez V., Drago F.B., Digiani M.C., Lunaschi L.I. 2017. Nematode parasites of the Chilean Flamingo, *Phoenicopterus chilensis* (Phoenicopteridae) from Central Argentina, with a description of a new species of *Tetrameres* (Tetrameridae). *Acta Parasitologica* 62(2): 422-431.
- Núñez V., Drago F.B., Jones S., Lunaschi L.I. 2018. Helminth parasites of the endangered hooded grebe, *Podiceps gallardoi* from Patagonia Argentina, with the description of two new digenean species. *Journal of Helminthology* 92(5): 563-571.
- Owen R. 1843. Lectures on comparative anatomy and physiology of the invertebrate animals. *Longman, Brown, Green and Longman, London*, 392 pp.
- Parona C. 1900. Di alcuni Elminti del Museo Nacional di Buenos Aires. *Comunicaciones del Museo Nacional de Buenos Aires* 1: 190-196.
- Pence D.B., Mollhagen T.R., Prestwood A.K. 1975. *Tetrameres* (*Tetrameres*) *tinamicola* sp. n. from the crested tinamou, *Eudromia elegans*, with comments on the subgenus *Petrowimeres* (Nematoda: Tetrameridae). *Journal of Parasitology* 61: 825-829.
- Pérez-Ponce de León G., García-Prieto L., Mendoza-Garfias B. 2011. Describing parasite biodiversity: the case of the helminth fauna of wildlife vertebrates in Mexico [pp. 33-54]. In: Grillo O., Venora G. Changing diversity in changing environment. *InTech, Rijeka*.
- Petter A.J. 1961. Un nouvel Acuariidé, *Syncuaria diacantha*, n. sp., parasite de la spatule: *Ajaja ajaja* (L.). *Annales de Parasitologie Humaine et Comparée* 36(5-6): 764-769.

- Petter A.J. 1967. Trois espèces d'Acuariidae parasites du gésier de *Numenius phaeopus* à l'Île d'Europa. *Bulletin du Muséum National d'Histoire Naturelle* 38: 940-948.
- Pinto R.M., Vicente J.J. 1995. *Tetrameres* (*Tetrameres*) *spiroscopiculum* n. sp. (Nematoda: Tetrameridae) from the buff-necked ibis, *Theristicus caudatus caudatus* (Boddaert) (Aves, Threskiornithidae). *Memórias do Instituto Oswaldo Cruz* 90: 615-617.
- Railliet A., Henry A. 1910. Les onchocercques, nématodes parasites du tissu conjonctif. *Comptes rendus des séances de la Société de biologie et de ses filiales* 68(6): 248-251.
- Railliet A., Henry A. 1912. Quelques nématodes parasites des reptiles. *Bulletin de la Société de Pathologie Exotique* 5: 251-259.
- Railliet A., Henry A., Sisoff P. 1912. Sur les affinités des dispharages (*Acuaria* Bremser), nématodes parasites des oiseaux. *Comptes rendus hebdomadaires des séances et Mémoires de la Société de Biologie* 73(2): 622-624.
- Rao N.S.K. 1951. *Paracuaria macdonaldi* n.g., n.sp. (Family Acuariidae, Subfamily Acuariinae) from the sea gull (*Larus argentatus*). *Canadian Journal of Zoology* 29(3): 167-172.
- Rodríguez A., Boero J.J. 1964. *Echinuria cyni* Morini, Colombo y Martin 1959 (nematoda-Acuariidae). *Revista de Medicina Veterinaria* (Buenos Aires) 45(6): 371-375.
- Roesler F., González Táboas F. 2016. Lista de las aves argentinas. *Aves Argentinas, Buenos Aires*, 68 pp.
- Rudolphi C.A. 1809. Entozoorum sive vermium intestinalium. *Historia Naturalis. Vol. 2. Sumtibus Tabernae Librariae et Artium, Amsterdam*, 463 pp.
- Rudolphi C.A. 1819. Entozoorum synopsis cui accedunt mantissa duplex et indices locuple-tissimi. *Sumtibus Augusti Rücker, Berlin*, 814 pp.
- Schmidt-Rhaesa A. 2014. Handbook of Zoology Gastrotricha, Cycloneuralia and Gnathifera. Vol 2. Nematoda. *De Gruyter, Berlin*, 775 pp.
- Schneider A. 1866. Monographie der Nematoden. *Georg Reimer, Berlin*, 357 pp.
- Schrank F.P. 1790. Förteckning på nagre hittills obeskrifne intestinal-krak. *Kongl Vetenskaps Academiens nya Handlingar* 11: 118-126
- Schuermans Stekhoven J.H. 1951. Nematodes parásitos de anfibios, pájaros y mamíferos de la República Argentina. *Acta Zoológica Lilloana* 3: 315-400.
- Silveira E.F., Amato J.F.R., Amato S.B. 2006. *Echinuria uncinata* (Rudolphi) (Nematoda, Acuariidae) in *Netta peposaca* (Vieillot) (Aves, Anatidae) in South America. *Revista Brasileira de Zoologia* 23: 520-528.
- Skrjabin K.I. 1915. Filaria in birds of Turkestan. 1. *Serratospiculum turkestanicum* n. g. n. sp. 2. *Diplotriaeana tricuspis* Fedtsch., 1894. *Vestnik Obshestvnoi Veterinari, Saint Petersburg* 27(4): 131-138.
- Skrjabin K.I. 1916a. Nématodes des oiseaux du Turkestan russe. *Ezhgodnik Zoologicheskogo muzeia* 20: 457-557.
- Skrjabin K.I. 1916b. Contributions à l'étude de la faune helminthologique du Paraguay. I. Nématodes. *Journal of Russe Zoology* 1: 736-757.
- Skrjabin K.I., Schikhobalova N.P. 1947. A division of the nematode genus *Heterakis* into generic components. *Dokladi Akademii Nauk SSSR* 58: 1865-1876.
- Skrjabin K.I., Sobolev A.A., Ivashkin V.M. 1965. Spirurata of animals and man and the diseases caused by them. Spirurata. Part 3. Acuarioidea [pp. 264-299]. In: Skrjabin K.I. *Osnovy Nematodologii*, Vol. 14. *Izd. Nauka, Moscow*, 572 pp.
- Sobolev A.A. 1943. A revision of the family Acuariidae (Nematoda) with description of the new subfamily Echinuriinae n. subf. and new genus *Skrjabinoclava* n. g. *Trudy Gorkovsk Gosudarstv Sel'sko-Khoziaistv Institut* 4: 285-302.
- Soloviev P.F. 1912. Paraziticheskie chervi ptits Turkestana. *Akad. Nauk. SSSR. Leningrad. Zoologicheskii Mysei, Ezhegodnik* 17: 86-115.
- Sugimoto M. 1930. On a new nematode parasite (*Streptocara formosensis* sp. nov.) in the gizzard of Formosan domestic ducks. *Japanese Journal of Tropical Agriculture* 2: 135-144.
- Szidat L., Nani A. 1951. Diplostomiasis cerebri del pejerrey. *Revista del Instituto Nacional de Investigaciones de las Ciencias Naturales, Ciencias Zoológicas* 1(8): 323-394.
- Travassos L. 1915. Sobre as espécies brasileiras do genero *Tetrameres* Creplin, 1846. *Brazil Medico* 29(88): 297-298.
- Travassos L. 1937. Revisao da familia Trichostrongylidae Leiper, 1912. Monographias do Instituto Oswaldo Cruz 1. *Instituto Oswaldo Cruz, Rio de Janeiro*, 512 pp.
- Valente R., Ibañez L.M., Lorenti E., Fiorini V.D., Montalti D., Díaz J.I. 2014. Helminth parasites of the European starling (*Sturnus vulgaris*) (Aves, Sturnidae), an invasive bird in Argentina. *Parasitology Research* 113: 2719-2724.
- Wehr E.E. 1933. Description of two new parasitic nematodes from birds. *Journal of the Washington Academy of Science* 23: 391-396.
- Wehr E.E. 1934. Description of three bird nematodes including a new genus and new species. *Journal of the Washington Academy of Science* 24: 341-347.
- Wong P.L., Anderson R.C. 1990. *Ancyracanthopsis winegardi* n. sp. (Nematoda: Acuarioidea) from *Pluvialis squatarola* (Aves: Charadriidae) and *Ancyracanthus heardi* n. sp. from *Rallus longirostris* (Aves: Rallidae), and a review of the genus. *Canadian Journal of Zoology* 68: 1297-1306.
- Wong P.L., Anderson R.C., Bartlett C.M. 1986. Revision of the genus *Syncuaria* Gilbert, 1927 (Nematoda: Acuarioidea). *Canadian Journal of Zoology* 64: 1186-1196.
- Yamaguti S. 1961. Systema Helminthum. Vol. 3. The nematodes of vertebrates, Part 1. *Interscience Publish, New York*, 679 pp.
- Yorio P., Marinao C., Retana M.V., Suárez N. 2013. Differential use of food resources between the Kelp Gull *Larus dominicanus* and the Threatened Olrog's Gull *L. atlanticus*. *Ardeola* 60(1): 29-44.
- Zeder J.G.H. 1800. Erster Nachtrag zur Naturgeschichte der Eingeweidewürmer mit Zufüssen und Anmerkungen herausgegeben. XX. *Crusius, Leipzig*, 320 pp.
- Zeiss E., Seigmur G. 1981. Observaciones sobre Nematodes parásitos en peces del dique "Los Quiroga" (Pcia. de Santiago del Estero, Argentina). *Ecología Argentina* 6: 115-118.
- Zhang S., Bu Y., Huang G., Wen Q., Zhang L. 2012. A checklist of parasitic nematodes (Nematoda) from birds (Aves) in China. *Zootaxa* 3446: 1-31.