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REVIEW ARTICLE / ARTÍCULO DE REVISIÓN

Brazilian Aspidogastrea (Platyhelminthes, Trematoda): an updated list of species with a temporal and spatial analysis

Aspidogastrea (Platyhelminthes, Trematoda) de Brasil: lista actualizada de especies con análisis temporal y espacial

ASPIDOGASTREA (PLATYHELMINTHES, TREMATODA) DO BRASIL: LISTA ATUALIZADA DE ESPÉCIES COM ANÁLISE TEMPORAL E ESPACIAL

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ABSTRACT

Aspidogastrea is a small group of trematodes found parasitizing mollusks, fishes, and turtles worldwide. Brazil is one of the most biodiverse countries, and some previous studies have presented data on species belonging to this group of trematodes. The goal of the present study was to provide an updated checklist of Aspidogastrea species recorded in Brazil up to August 2025, along with an analysis of temporal variation and spatial distribution of records. For this purpose, data were obtained from previously published works (catalogues and prior studies) and from articles identified through searches conducted in six databases. A total of eight described species and one undetermined species of Aspidogastrea were recorded parasitizing 14 fish species and one turtle species. Among the 25 records retrieved from the literature, most (n = 21; 84%) were associated with marine hosts. Temporal analysis revealed a peak in the number of records in 2010. Most records were reported from studies conducted in the states of Rio de Janeiro (n = 13; 52%) and Rio Grande do Sul (n = 6; 24%). The host *Trachinotus marginatus* Cuvier, 1832 exhibited the highest parasite richness (n = 2), and *Lobatostoma ringens* (Linton, 1905) Eckmann, 1932 was the most frequently recorded Aspidogastrea species, occurring in 44% (n = 11) of the fishes. Analysis of accumulated parasite richness indicated that the most recent species record dates from 2017. Based on these data, significant gaps in knowledge regarding Aspidogastrea biodiversity were identified, as well as a limited number of research groups working on this taxon. The present study updates the list of Aspidogastrea species recorded in Brazil and contributes to the knowledge of parasite biodiversity in the Neotropical Region.

Keywords: Aspidogastridae – Biodiversity – Multicalycidae – Neotropical Region – South America – Taxonomy

RESUMEN

Aspidogastrea es un pequeño grupo de trematodos que parasitan moluscos, peces y tortugas en todo el mundo. Brasil es uno de los países con alta biodiversidad, y algunos estudios previos ya han presentado datos sobre especies pertenecientes a este grupo de trematodos. El objetivo del presente estudio fue proporcionar una lista actualizada de las especies de Aspidogastrea registradas en Brasil hasta agosto de 2025, junto con un análisis de la variación temporal y la distribución espacial de los registros. Con este propósito, los datos se obtuvieron de trabajos previamente publicados (catálogos y estudios previos) y de artículos identificados mediante búsquedas realizadas en seis bases de datos. Se registró un total de ocho especies descritas y una especie no determinada de Aspidogastrea parasitando 14 especies de peces y una especie de

tortuga. Entre los 25 registros obtenidos de la literatura, la mayoría (n = 21; 84%) ocurrió en hospederos marinos. El análisis temporal mostró un pico en el número de registros en 2010. La mayoría de los registros proceden de estudios realizados en los estados de Río de Janeiro (n = 13; 52%) y Río Grande do Sul (n = 6; 24%). El hospedero *Trachinotus marginatus* Cuvier, 1832 presentó la mayor riqueza parasitaria (n = 2), y *Lobatostoma ringens* (Linton, 1905) Eckmann, 1932 fue la especie de Aspidogastrea registrada con mayor frecuencia, ocurriendo en el 44% (n = 11) de los peces. El análisis de la riqueza parasitaria acumulada indicó que el registro más reciente de una especie data de 2017. Con base en estos datos, se identificaron importantes lagunas en el conocimiento sobre la biodiversidad de Aspidogastrea, sumado al reducido número de grupos de investigación que trabajan en este taxón. El presente estudio actualiza la lista de especies de Aspidogastrea registradas en Brasil y contribuye al conocimiento de la biodiversidad de parásitos en la Región Neotropical.
Palabras clave: Aspidogastridae – Biodiversidad – Multicalycidae – Región Neotropical – Sudamérica – Taxonomía

RESUMO

Aspidogastrea é um pequeno grupo de trematódeos encontrados parasitando moluscos, peixes e tartarugas em todo o mundo. O Brasil é um dos países com elevada biodiversidade e alguns estudos prévios já apresentaram dados sobre espécies pertencentes a esse grupo de trematódeos. O objetivo do presente estudo foi fornecer uma lista atualizada das espécies de Aspidogastrea registradas para o Brasil até agosto de 2025, além de uma análise da variação temporal e distribuição espacial dos registros. Para isso, os dados foram obtidos a partir de trabalhos previamente publicados (por exemplo, catálogos e estudos prévios) e de artigos identificados por meio de buscas realizadas em seis bases de dados. Um total de oito espécies descritas e uma espécie indeterminada de Aspidogastrea foi registrado parasitando 14 espécies de peixes e uma espécie de tartaruga. Entre os 25 registros obtidos da literatura, a maioria (n = 21; 84%) esteve associada a hospedeiros marinhos. A análise temporal mostrou um pico no número de registros em 2010. A maioria dos registros foi proveniente de estudos realizados nos estados do Rio de Janeiro (n = 13; 52%) e Rio Grande do Sul (n = 6; 24%). O hospedeiro *Trachinotus marginatus* Cuvier, 1832 apresentou a maior riqueza parasitária (n = 2) e *Lobatostoma ringens* (Linton, 1905) Eckmann, 1932 foi a espécie de Aspidogastrea registrada com maior frequência, ocorrendo em 44% (n = 11) dos peixes. A análise da riqueza parasitária acumulada indicou que o registro mais recente de uma espécie data de 2017. A partir desses dados, foram identificadas lacunas

significativas no conhecimento sobre a biodiversidade de Aspidogastrea, bem como um número limitado de grupos de pesquisa atuando nesse táxon. O presente estudo atualiza a lista de espécies de Aspidogastrea registradas para o Brasil e contribui para o conhecimento da biodiversidade de parasitos na Região Neotropical.

Palavras-chave: América do Sul – Aspidogastridae – Biodiversidade – Multicalycidae – Região Neotropical – Taxonomia.

INTRODUCTION

Trematoda is a class of within the phylum Platyhelminthes and comprises two subclasses: Aspidogastrea and Digenea (Kostadinova & Pérez-del-Olmo, 2024). The former includes species that possess, on the ventral surface of the body, either a large holdfast organ bearing alveoli or rugae or, more rarely, a series of separate suckers (Gibson, 2002; Rohde, 2002). Historically, different names have been proposed for this taxon (Yamaguti, 1963; Rohde, 2002; Zamparo & Brooks, 2003; Alves *et al*., 2015a); however, the classification proposed by Gibson & Chinabut (1984) remains the most widely adopted (Gibson, 2002; Alves *et al*., 2015a).

Aspidogastreans comprise 61 (Alves *et al*., 2015a) or 80 species (possibly including synonyms) (Rohde, 2001). Globally, these species parasitize mainly mollusks, fishes, and turtles (Gibson, 2002; Rohde, 2002; Alves *et al*., 2015a). Some studies have compiled lists of aspidogastrean species, including records from Brazil (Yamaguti, 1963; Travassos *et al*., 1969; Kohn *et al*., 2007; Fernandes & Kohn, 2014; Alves *et al*., 2015a).

The first species recorded from Brazil were *Lophotaspis vallei* (Stossich, 1899) Looss, 1902 (Araujo, 1941; Yamaguti, 1963), *Aspidocotylus cochleariformis* Diesing, 1838, *Multicalyx cristata* Faust & Tang, 1936, and *Zonocotyle bicaecata* Travassos, 1947 (Travassos *et al*., 1969). However, *A. cochleariformis* and *Z. bicaecata* are now classified as digeneans (Jones, 2005a; 2005b; Bedin *et al*., 2024). The number of species recorded from Brazil increased through several studies and was compiled in the catalogues of Kohn *et al*. (2007) and Fernandes & Kohn (2014), which focused on trematodes parasitizing fishes and reptiles, respectively. Alves *et al*. (2015a) provided a worldwide compilation of aspidogastrean species and updated the number of species recorded from Brazil.

Parasite biodiversity is high; however, these organisms are often overlooked in studies (Rocha *et al*., 2016; Poulin *et al*., 2023). Brazil is considered a megadiverse country, harboring at least 14% of the world's known species and encompassing several biodiversity hotspots (Lewinsohn & Prado, 2002; Malecha *et al*., 2025). Despite the existing knowledge of helminth species recorded from Brazil, further studies on this group are still needed (Carlson *et al*., 2020). In this context, studies on parasite

biodiversity can contribute both to expanding our knowledge of these organisms and to clarifying host–parasite relationships. The aim of the present study was to update the list of aspidogastrean species recorded from Brazil based on the literature. Additionally, comments and analyses on the temporal variation and spatial distribution of the records were included.

MATERIAL AND METHODS

Data on aspidogastrean species were obtained from the works compiled by Yamaguti (1963), Travassos *et al*. (1969), Kohn *et al*. (2007), Fernandes & Kohn (2014), and Alves *et al*. (2015a). In addition, searches were conducted in six databases, including Biological Abstracts, BioOne, Google Scholar, ScienceDirect, Scopus, and Web of Science. Abstracts from conferences, theses, and similar materials do not constitute published works (Article 9) (ICZN, 1999) and were therefore excluded from the present study. To be considered a valid record, the analyzed study had to provide information on the parasite species (or an undetermined species), host species, and locality. Some records were excluded as they reported the same parasite species in the same host (and number examined), collected in the same locality and during the same period.

The data obtained for parasite species were organized in alphabetical order, and their respective hosts were arranged according to the chronological order of the records. In addition, information on habitat (freshwater, marine, or brackish), localities (collection sites of the hosts), and literature references was included. To analyze temporal variation and the spatial distribution of records, data on the year and geographic coordinates reported in the publications were compiled. In cases where studies provided coordinate ranges, the first and last geographic coordinates were considered. When necessary, additional comments on species and/or records were included.

The classification and systematics used for aspidogastreans followed Gibson & Chinabut (1984) and Rohde (2002), whereas those for hosts followed Froese & Pauly (2025) and Fricke *et al*. (2025) for fishes, and Rhodin *et al*. (2025) for turtles. In the present study, no evaluation was made regarding the validity of the species and records found in the literature. To analyze accumulated parasite richness over time, only records of identified species were used.

Ethical aspects: The data used in the present study were obtained from the literature and are in the public domain. This study did not involve experiments or procedures involving animals.

RESULTS

In the analyzed studies, 25 records were found, comprising a total of eight aspidogastrean species reported parasitizing 12 host species (Table 1). In addition, *Lobatostoma* sp. was recorded in two marine fish species and one freshwater species, bringing the total number of host species to 15. Most records (n = 11; 44%) corresponded to *Lobatostoma ringens* (Linton, 1905) Eckmann, 1932, and 84% (n = 21) occurred in hosts with marine habits. The marine fish *Trachinotus marginatus* Cuvier, 1832 showed the highest parasite richness, with two parasite species recorded.

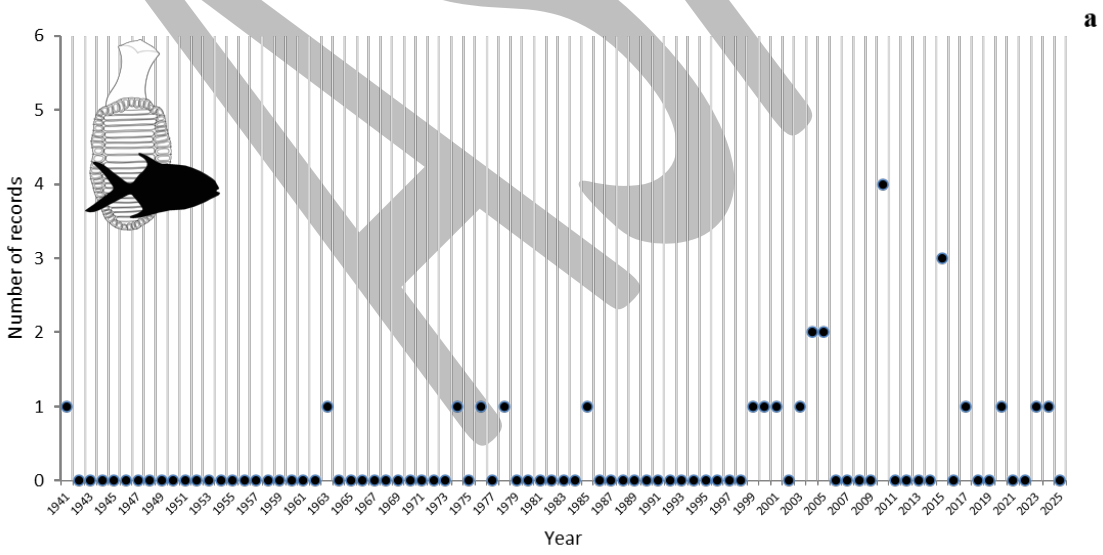
Table 1. Hosts, parasite richness, habitats, and locality records of Aspidogastrea from Brazil.

Host species	Parasite richness	Habitat	Locality (Brazilian state)	Reference
Actinopterygii, Teleostei				
Carangiformes, Carangidae				
Trachinotus carolinus	1	M	Rio de Janeiro	Fernandes *et al*. (1985), Alves *et al*. (2015b)
Trachinotus marginatus	2	M	Rio Grande do Sul	Pereira Junior *et al*. (2004)
Trachinotus ovatus	1	M	Rio de Janeiro	Gomes *et al*. (1978)
Cichliformes, Cichlidae				
Gymnogeophagus rhabdotus	1	F	Rio Grande do Sul	Kritscher (1974)
Dactylopteriformes, Dactylopteridae				
Dactylopterus volitans	1	M	Rio de Janeiro	Cordeiro & Luque (2005)
Eupercaria				
Haemulidae				
Conodon nobilis	1	M	Rio de Janeiro	Paschoal *et al*. (2023, 2024)
Sciaenidae				
Cynoscion guatucupa	1	M	Rio de Janeiro	Sabas & Luque (2003)
Micropogonias furnieri	1	M	Ceará, Bahia, Rio de Janeiro, Santa Catarina	Alves & Luque (2000, 2001a),

			e Rio Grande do Sul	Luque *et al*. (2010)
Pogonias cromis	1	M	Rio Grande do Sul	Gallas *et al*. (2017)
Tetraodontiformes, Tetraodontidae				
Colomesus psittacus	1	B/F	Pará	Giese *et al*. (2015, 2020)
Chondrichthyes, Elasmobranchii Rhinopristiformes, Rhinobatidae				
Pseudobatos percellens	1	M	Rio de Janeiro	Travassos *et al*. (1963)
Testudines, Cryptodira, Cheloniidae				
Caretta caretta	1	M	São Paulo	Araujo (1941)

Legend: B = brackish, F = freshwater, M = marine.

Analyzing the temporal variation, the first species was recorded in 1941, and the highest number of records (n = 4) occurred in 2010 (Fig. 1a). Over a period of 62 years (1941–2003), only ten records were found. Considering accumulated parasite richness (n = 8) (Fig. 1b), two peaks were observed: one in the 1970s (n = 3) and another in the 2010s (n = 2), with the last species recorded in 2017. Among the eight aspidogastrean species recorded, only two were new species (described in 1974 and 2015) from specimens collected from freshwater and/or brackish hosts (Fig. 2).



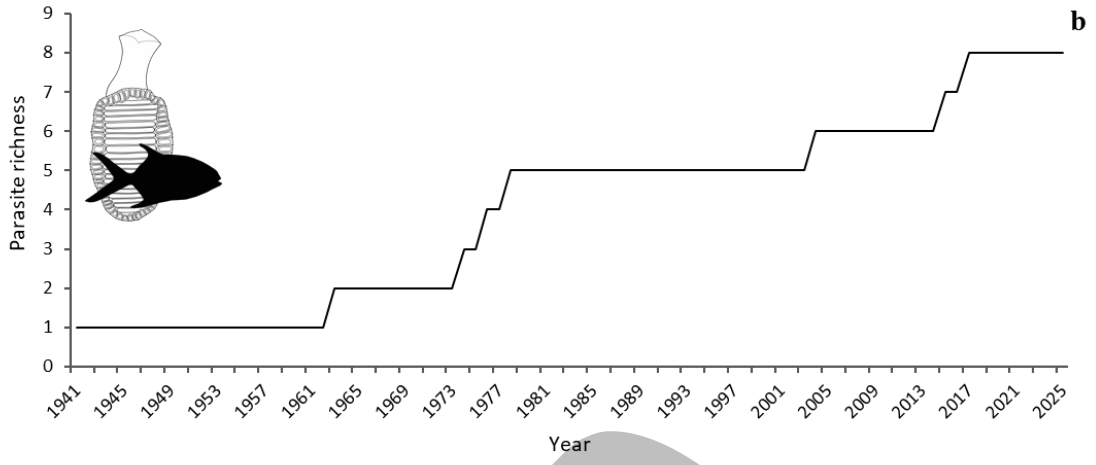


Figure 1. Aspidogastreans recorded in Brazil between 1941 and 2025: (a) time series showing the temporal variation in the number of records; (b) curve showing accumulated parasite richness.

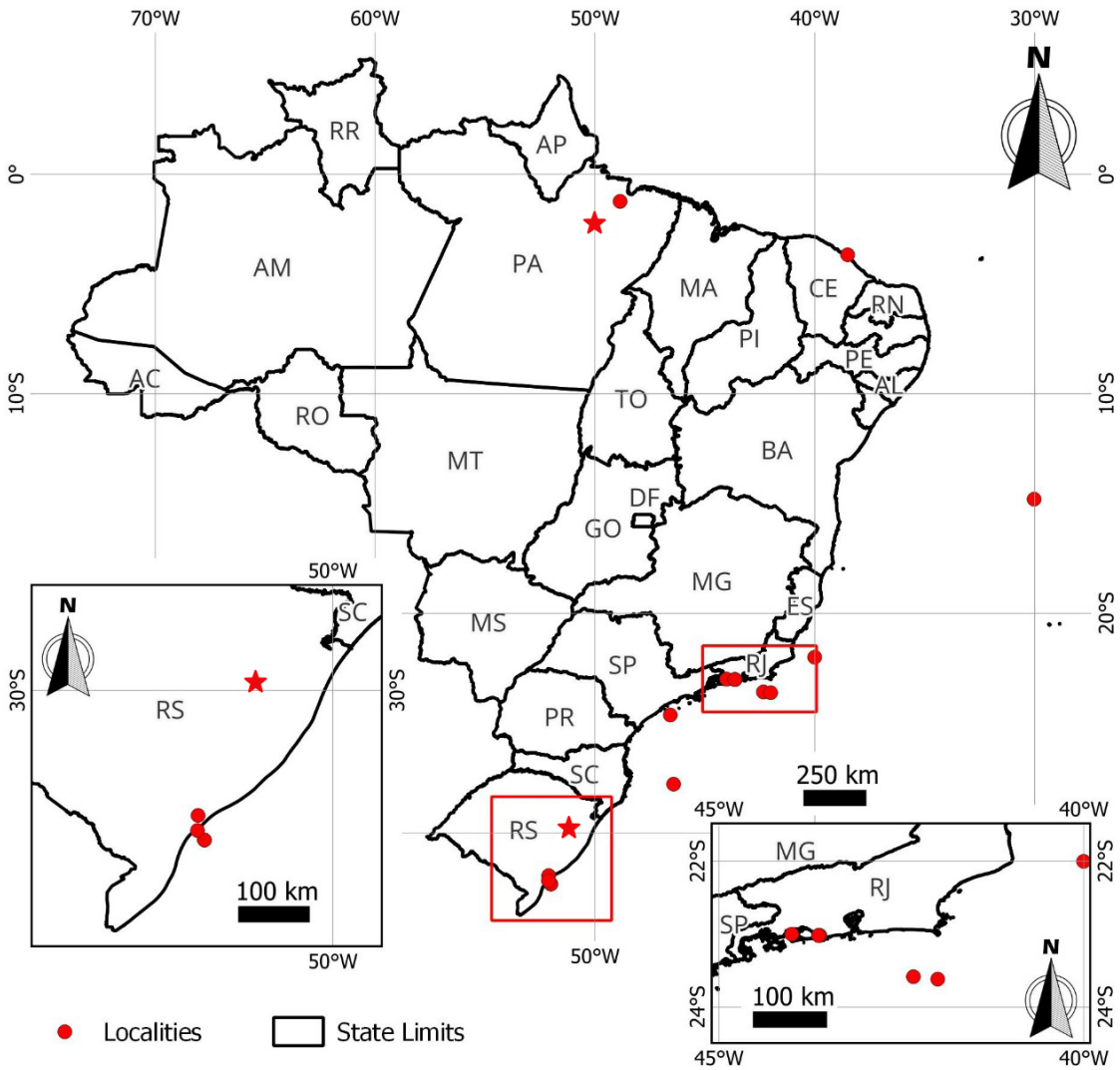


Figure 2. Geographic distribution of Aspidogastrea records in Brazil. Legend: red circles = record localities; red stars = type localities.

Most records were obtained from hosts collected in the states of Rio de Janeiro (n = 13; 52%) and Rio Grande do Sul (n = 6; 24%) (Table 1, Fig. 2). Based on the compiled data, the following parasite–host list summarizes the records obtained:

Parasite–Host list

Class Trematoda Rudolphi, 1808

Subclass Aspidogastrea Faust & Tang, 1936

Order Aspidogastrida Dollfus, 1958

Family Aspidogastridae Poche, 1907

Subfamily Aspidogastrinae Poche, 1907

Genus *Lobatostoma* Eckmann, 1932

Species: *Lobatostoma hanumanthai* Narasimhulu & Madhavi, 1980

Host: *Trachinotus marginatus* Cuvier, 1832 (Carangiformes, Carangidae)

Habitat: marine

Locality: Cassino Beach, Rio Grande, State of Rio Grande do Sul, Southern Brazil

Reference: Pereira Junior *et al*. (2004)

Species: *Lobatostoma jungwirthi* Kritscher, 1974

Host: *Gymnogeophagus rhabdotus* (Hensel, 1870) (Cichliformes, Cichlidae)

Habitat: freshwater

Locality: Sinos River, near the city of São Leopoldo, State of Rio Grande do Sul, Southern Brazil

Reference: Kritscher (1974)

Species: *Lobatostoma kemostoma* (MacCallum & MacCallum, 1913) Eckmann, 1932

Host: *Trachinotus ovatus* (Linnaeus, 1758) (Carangiformes, Carangidae)

Habitat: marine

Locality: Rio de Janeiro, State of Rio de Janeiro, Southeastern Brazil

Reference: Gomes *et al*. (1978)

Host: *Trachinotus carolinus* (Linnaeus, 1766) (Carangiformes, Carangidae)

Habitat: marine

Localities: between Saquarema and Cabo Frio; Angra dos Reis, State of Rio de Janeiro, Southeastern Brazil
References: Fernandes *et al*. (1985), Alves *et al*. (2015b)

Host: *Trachinotus marginatus*
Habitat: marine
Locality: Cassino Beach, Rio Grande, State of Rio Grande do Sul, Southern Brazil
Reference: Pereira Junior *et al*. (2004)

Species: *Lobatostoma ringens* (Linton, 1905) Eckmann, 1932
Host: *Micropogonias* sp.
Habitat: marine
Locality: Angra dos Reis, State of Rio de Janeiro, Southeastern Brazil
Reference: Gomes & Fábio (1976)

Host: *Micropogonias furnieri* (Desmarest, 1823) (Eupercaria, Sciaenidae)
Habitat: marine
Localities: Fortaleza, State of Ceará, and Ilhéus, State of Bahia, Northeast Brazil; Rio de Janeiro, and between Campos dos Goytacazes and Angra dos Reis, State of Rio de Janeiro, Southeastern Brazil; Florianópolis, State of Santa Catarina, and Cassino Beach, Rio Grande, State of Rio Grande do Sul, Southern Brazil
References: Alves & Luque (2000, 2001a), Luque *et al*. (2010)
Remarks: This host was also reported by Alves & Luque (2001b); however, the data (host and locality) are the same as those in their previous work (Alves & Luque, 2000). Therefore, only the record of Alves & Luque (2000) was included in the present study.

Host: *Cynoscion guatucupa* (Cuvier, 1830) (Eupercaria, Sciaenidae)
Habitat: marine
Locality: Rio de Janeiro, State of Rio de Janeiro, Southeastern Brazil
Reference: Sabas & Luque (2003)
Remarks: Timi *et al*. (2005) reported *L. ringens* in *C. guatucupa*; however, the data are the same as those reported by Sabas & Luque (2003). Thus, the record of Timi *et al*. (2005) was not included in the present study.

Host: *Dactylopterus volitans* (Linnaeus, 1758) (Dactylopteriformes, Dactylopteridae)
Habitat: marine

Locality: between Campos dos Goytacazes and Angra dos Reis, State of Rio de Janeiro, Southeastern Brazil
Reference: Cordeiro & Luque (2005)

Host: *Conodon nobilis* (Linnaeus, 1758) (Eupercaria, Haemulidae)
Habitat: marine
Locality: between Campos dos Goytacazes and Angra dos Reis, State of Rio de Janeiro, Southeastern Brazil
References: Paschoal *et al*. (2023, 2024)

Species: *Lobatostoma* sp.
Host: *Menticirrhus americanus* (Linnaeus, 1758) (Eupercaria, Sciaenidae)
Habitat: marine
Locality: between Campos dos Goytacazes and Angra dos Reis, State of Rio de Janeiro, Southeastern Brazil
Reference: Chaves & Luque (1999)

Host: *Balistes capriscus* Gmelin, 1789 (Tetraodontiformes, Balistidae)
Habitat: marine
Locality: between Campos dos Goytacazes and Angra dos Reis, State of Rio de Janeiro, Southeastern Brazil
Reference: Alves *et al*. (2005)

Host: *Geophagus brasiliensis* (Quoy & Gaimard, 1824) (Cichliformes, Cichlidae)
Habitat: freshwater
Locality: Patos Lagoon, State of Rio Grande do Sul, Southern Brazil
Reference: Rassier *et al*. (2015)

Genus *Lophotaspis* Looss, 1901
Species: *Lophotaspis vallei* (Stossich, 1899) Looss, 1901
Host: *Caretta caretta* (Linnaeus, 1758) (Testudines, Cheloniidae)
Habitat: marine
Locality: Santos, State of São Paulo, Southeastern Brazil
Reference: Araujo (1941)

Subfamily Cotylaspidinae Chauhan, 1954
Genus *Cotylogaster* Monticelli, 1892

Species: *Cotylogaster basiri* Siddiqi & Cable, 1960
Host: *Pogonias cromis* (Linnaeus, 1766) (Eupercaria, Sciaenidae)
Habitat: marine
Locality: Rio Grande, State of Rio Grande do Sul, Southern Brazil
Reference: Gallas *et al*. (2017)

Subfamily Rohdellinae Gibson & Chinabut, 1984
Genus *Rohdella* Gibson & Chinabut, 1984
Species: *Rohdella amazonica* Giese, Silva, Videira, Furtado, Matos, Gonçalves, Melo & Santos, 2015
Host: *Colomesus psittacus* (Bloch & Schneider, 1801) (Tetraodontiformes, Tetraodontidae)
Habitat: brackish, freshwater, marine
Localities: Cametá and Soure (Marajó Island), State of Pará, Northern Brazil
References: Giese *et al*. (2015, 2020)
Remarks: Silva *et al*. (2013) reported specimens identified as *Rohdella* sp.; however, the same data appear in the description of *R. amazonica* (Giese *et al*., 2015). The same species was subsequently studied by Świderski *et al*. (2021) and Conn *et al*. (2022a, b) using specimens collected in the same locality by Giese *et al*. (2020). The report of *R. amazonica* by Corrêa *et al*. (2023) was not included because the locality is near that reported by Giese *et al*. (2020).

Order Stichocotylida Gibson & Chinabut, 1984
Family Multicalycidae Gibson & Chinabut, 1984
Genus *Multicalyx* Faust & Tang, 1936
Species: *Multicalyx cristata* Faust & Tang, 1936
Host: *Pseudobatos percellens* (Walbaum, 1792) (Rhinopristiformes, Rhinobatidae)
Habitat: marine
Locality: Arraial do Cabo, State of Rio de Janeiro, Southeastern Brazil
Reference: Travassos *et al*. (1963)

DISCUSSION

Based on the data compiled in this study, a total of seven species had been recorded up to 2015 (Alves *et al*., 2015a), and the record of *C. basiri* (Gallas *et al*., 2017) increased the number of species known from Brazil. Although the number of species has increased with each new catalogue or checklist (Kohn *et al*., 2007; Fernandes & Kohn,

2014; Alves *et al*., 2015a), it remains low. These results indicate that, despite the long intervals between studies, research on aspidogastreans continues to contribute to the expansion of knowledge on biodiversity in Brazil.

The analysis of temporal variation between 1941 and 2025 revealed several periods without records, interspersed with periods containing one or more records. In comparison with other helminths, aspidogastreans represent the group with the lowest percentage of studies conducted between 1971 and 1996 (Hugot, 2002). Historically, the scarcity of studies on this group may be related to the fact that its species have no medical or economic importance (Rohde, 2002; Alves *et al*., 2015a). Furthermore, the lack of taxonomists and researchers interested in non-pathogenic parasitic species of humans has also contributed to this pattern (Hugot, 2002; Alves *et al*., 2015a). The present study supports these findings, reflecting the low priority historically assigned to this group.

Among the compiled records, most involve aspidogastreans collected from marine fishes in localities of Rio de Janeiro (Travassos *et al*., 1963; Gomes & Fábio, 1976; Gomes *et al*., 1978; Fernandes *et al*., 1985; Chaves & Luque, 1999; Alves & Luque, 2000, 2001a; Sabas & Luque, 2003; Alves *et al*., 2005; Cordeiro & Luque, 2005; Alves *et al*., 2015b; Paschoal *et al*., 2023, 2024) and Rio Grande do Sul (Kritscher, 1974; Pereira Junior *et al*., 2004; Rassier *et al*., 2015; Gallas *et al*., 2017). This association between Aspidogastrea species parasitizing marine fishes and these localities has also been reported in other studies (Alves *et al*., 2015a; Luque *et al*., 2017). The high number of records from these regions reflects the long-standing activity of research groups and investigators focused on helminth biodiversity, particularly in fishes from Brazil (Luque *et al*., 2017).

However, the pattern observed in Brazil differs from that reported worldwide, where most Aspidogastrea species have been recorded in freshwater hosts (Alves *et al*., 2015a). This difference may be associated with several factors, including the distribution of hosts and of species that infect bivalve mollusks (Unionidae), fishes (cyprinids), and turtles, which do not occur in Brazil (Alves *et al*., 2015a; Miyahira *et al*., 2017; Froese & Pauly, 2025; Rhodin *et al*., 2025).

Based on the data obtained in the present study and published records from South America, Brazil exhibits the greatest biodiversity of aspidogastreans (n = 8), followed by Argentina (n = 5), Peru (n = 4), and Chile (n = 4) (Alves *et al*., 2015a; Oyarzún-Ruiz & González-Acuña, 2022). In these countries, most records involve species parasitizing fishes (Alves *et al*., 2015a; Luque *et al*., 2017). The species *Lobatostoma platense* Mañé-Garzón & Holcman-Spector, 1976 and *Rugogaster callorhinchi* Amato & Pereira, 1995, recorded from *T. ovatus* and *Callorhinchus*

callorynchus (Linnaeus, 1758), respectively, in Uruguay (Kohn *et al*., 2007; Alves *et al*., 2015a), may also occur in Brazil. This hypothesis is supported by the geographic proximity between these countries and by the occurrence of these hosts in southern Brazil (Froese & Pauly, 2025).

Another important aspect identified during the searches conducted in the present study concerns the spelling of the taxon used to refer to this group, an issue previously discussed by several authors (Stunkard, 1962; Rohde, 2002; Zamparo & Brooks, 2003; Roberts *et al*., 2013; Alves *et al*., 2015a). Among the three spellings proposed (Aspidobothrea, Aspidocotylea, and Aspidogastrea), the term Aspidocotylea was found in only one study from Mexico (Méndez & Vidal-Martínez, 2017). The spellings Aspidobothrea (Carney, 2015; Roberts *et al*., 2013; Gallas *et al*., 2017) and Aspidogastrea (Aisien *et al*., 2021; Rohde, 2002; Alves *et al*., 2015b; Giese *et al*., 2015) are the most commonly used; however, despite the arguments presented by these authors, no consensus has yet been reached. Although the International Code of Zoological Nomenclature does not regulate or provide criteria for taxa above the family level, standardizing a single spelling and discontinuing the others would be desirable.

Aspidogastrean species described to date have been found parasitizing mainly mollusks, fishes, and turtles (Rohde, 2002). Among species parasitizing marine fishes, the highest number of records has been observed in the North Atlantic Ocean (Alves *et al*., 2015a). However, the most recently described species parasitizing vertebrates were obtained from specimens collected in chelonians (Aisien *et al*., 2021) and freshwater fishes (Giese *et al*., 2015).

Although the known biodiversity in Brazil is underestimated, many parasitic species have yet to be described or recorded, despite the efforts of numerous researchers (Carlson *et al*., 2020; Luque *et al*., 2017). Addressing this issue will require overcoming existing biases, recognizing parasites as an important group, and incorporating them into broader studies of ecosystems and biodiversity (Rocha *et al*., 2016). In this context, further studies are needed to uncover the unknown biodiversity of the South Atlantic Ocean and other environments, as well as that associated with the different host groups occurring in Brazil.

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