

TABLE S1 | Studied fish species from the Serra da Bodoquena karst freshwater system in Western Brazil. Vouchers numbers refer to specimens deposited in Coleção Zoológica da Universidade Federal de Mato Grosso do Sul (ZUFMS). SL = average standard length in mm. N = number of analyzed specimens. Degree refers to the number of consumed items by the species. Module refers to the module number to which the species belongs. The c and z coefficients represent a species' contribution to the connectivity between modules (c) and within modules (z). Grouping indicates the most frequent item recorded in the gut contents of the fish.

TAXA	Voucher	SL	N	Degree	Module	c	z	Grouping
CHARACIFORMES								
Crenuchidae								
<i>Characidium borellii</i> (Boulenger, 1895)	5412	36.09	22	5	7	0.72	-0.72457	Chironomid larvae
<i>Characidium</i> aff. <i>zebra</i> Eigenmann, 1909	6727	35.2	25	4	7	0.625	-0.61178	Chironomid larvae
Erythrinidae								
<i>Hoplerhythrinus unitaeniatus</i> (Spix & Agassiz, 1829)	6757	150.86	14	3	9	0.667	-0.70711	Aquatic insects
<i>Hoplias malabaricus</i> (Bloch, 1794)	4605	117.23	10	2	11	0	1.0445	Fish
Parodontidae								
<i>Parodon nasus</i> Kner, 1859	1102	69.02	10	2	10	0.5	-0.96362	Algae
Serrasalmidae								
<i>Serrasalmus marginatus</i> Valenciennes, 1837	3836	79.72	10	2	11	0.5	-0.87039	Fish
Anostomidae								
<i>Leporellus vittatus</i> (Valenciennes, 1850)	7467	123.1	10	3	11	0.4445	1.0445	Scales
<i>Leporinus friderici</i> Bloch, 1794	1062	226	15	2	3	0	-1.1547	Fruits
<i>Leporinus striatus</i> Kner, 1858	6812	50.37	10	3	7	0.4445	1.2076	Chironomid larvae
<i>Megaleporinus obtusidens</i> (Valenciennes, 1837)	7395	285	10	3	7	0.6667	-0.7246	Aquatic insects
Curimatidae								
<i>Steindachnerina brevipinna</i> (Eigenmann & Eigenmann, 1889)	913	71.17	10	1	10	0	-0.9636	Detritus
<i>Steindachnerina nigrotaenia</i> (Boulenger, 1902)	4547	76.79	10	1	10	0	-0.9636	Detritus
Prochilodontidae								
<i>Prochilodus lineatus</i> Valenciennes, 1836	3351	245	10	1	10	0	-0.9636	Detritus
Lebiasinidae								
<i>Pyrrhulina australis</i> Eigenmann & Kennedy, 1903	6792	32.19	26	5	2	0.72	-0.5884	Ants
Gasteropelecidae								
<i>Thoracocharax stellatus</i> (Kner, 1858)	6790	47.62	10	2	2	0	-0.5883	Ants
Bryconidae								
<i>Brycon hilarii</i> (Valenciennes, 1850)	5244	218.2	18	2	3	0	0.5773	Fruits
Iguanodectidae								
<i>Bryconops melanurus</i> (Bloch, 1794)	6725	84.04	25	4	2	0.625	-0.5883	Ants
Acestrorhynchidae								
<i>Acestrorhynchus pantaneiro</i> Menezes, 1992	4592	130	10	0	11	0	-0.7961	Fish
Characidae								
<i>Aphyocharax anisitsi</i> Eigenmann & Kennedy, 1903	6714	27.16	28	5	4	0.64	0.7071	Microcrustaceans
<i>Aphyocharax dentatus</i> Eigenmann & Kennedy, 1903	6385	35.24	18	5	8	0.8	-1.118	Terrestrial insects
<i>Astyanax abramis</i> (Jenyns, 1842)	133	72.15	21	8	8	0.75	1.188	Ants
<i>Astyanax lacustris</i> (Lütken, 1875)	793	63.97	17	4	2	0.625	-0.5883	Terrestrial insects
<i>Astyanax lineatus</i> (Perugia, 1891)	129	59.27	24	6	6	0.7778	-0.6117	Chironomid larvae
<i>Astyanax</i> sp. 1	4888	42.81	11	8	13	0.7813	0	Mayfly-larvae
<i>Astyanax</i> sp. 2	2568	36.66	14	4	2	0.625	-0.5883	Ants
<i>Brachyhalcinus retrospina</i> Boulenger, 1892	4517	42.5	12	6	8	0.6667	1.118	Ants
<i>Bryconamericus exodon</i> Eigenmann, 1908	1047	39.3	14	4	6	0.75	-0.6118	Dipteran-larvae
<i>Creagrutus meridionalis</i> Vari & Harold, 2001	6687	49.34	10	3	6	0.6667	-0.6118	Dipteran-larvae
<i>Deuterodon</i> cf. <i>luetkenii</i> (Boulenger, 1887)	2518	39.81	23	8	6	0.8438	-0.7648	Terrestrial insects
<i>Hemigrammus lunatus</i> Durbin, 1918	2665	35.22	14	8	8	0.7813	0	Terrestrial insects
<i>Holohessthes pequirá</i> (Steindachner, 1882)	1057	35.84	10	3	5	0.4445	-0.4472	Algae
<i>Hyphessobrycon eques</i> Steindachner, 1882	3810	25.27	12	5	6	0.72	0.7648	Dipteran-larvae
<i>Jupiaba acanthogaster</i> (Eigenmann, 1911)	130	40.77	10	6	6	0.7778	-0.6118	Dipteran-larvae
<i>Moenkhausia bonita</i> Benine, Castro & Sabino, 2004	1034	38.24	18	7	2	0.5714	1.765	Terrestrial insects



TABLE S1 | (Continued)

TAXA	Voucher	SL	N	Degree	Module	c	z	Grouping
<i>Moenkhausia oligolepis</i> (Günther, 1864)	2774	49.42	14	4	2	0	1.765	Ants
<i>Odontostilbe paraguayensis</i> Eigenmann & Kennedy, 1903	6818	33.7	11	4	7	0.625	1.2076	Chironomid larvae
<i>Oligosarcus perdido</i> Ribeiro, Cavallaro & Froehlich, 2007	5460	95.8	10	1	11	0	-0.8704	Fish
<i>Phenacogaster tegatus</i> (Eigenmann, 1911)	3802	32.57	10	3	8	0.6667	-1.118	Insects
<i>Piabarchus analis</i> (Eigenmann, 1914)	3823	31.37	10	5	2	0.56	0.5883	Ants
<i>Piabarchus torrenticola</i> Mahnert & Géry, 1988	3811	34.82	10	5	12	0.72	1.0954	Aquatic insects
<i>Poptella paraguayensis</i> (Eigenmann, 1907)	1450	41.25	10	2	2	0	-0.5884	Ants
<i>Psalidodon marionae</i> (Eigenmann, 1911)	131	38.9	16	7	8	0.8163	0	Insects
<i>Psellogrammus kennedyi</i> Eigenmann, 1903	5988	36.45	12	6	4	0.8333	-0.7071	Microcrustaceans
<i>Salminus brasiliensis</i> (Cuvier, 1816)	3350	377	10	1	11	0	-0.8704	Fish
<i>Serrapinnus calliurus</i> (Boulenger, 1900)	2532	30.59	10	2	5	0	-0.4472	Algae
<i>Xenurobrycon macropus</i> Myers & Miranda Ribeiro, 1945	1109	16.2	13	8	6	0.6875	2.1412	Terrestrial insects
GYMNOTIFORMES								
Apterodontidae								
<i>Apterodontus caudimaculosus</i> de Santana, 2003	4521	185.52	10	5	1	0.72	1.1547	Odonata larvae
Sternopygidae								
<i>Sternopygus macrurus</i> (Bloch & Schneider, 1801)	4714	331	10	2	1	0.5	-0.5773	Odonata larvae
Gymnotidae								
<i>Gymnotus carapo</i> Linnaeus, 1758	3828	155.53	10	3	9	0.4445	0.7071	Aquatic insects
SILURIFORMES								
Trichomycteridae								
<i>Ituglanis herberti</i> (Miranda Ribeiro, 1940)	5743	69.07	10	2	12	0.5	-0.7303	Aquatic insects
Callichthyidae								
<i>Callichthys callichthys</i> (Linnaeus, 1758)	4940	77.77	10	2	7	0.5	-0.7246	Chironomid larvae
<i>Osteogaster aeneus</i> (Gill, 1858)	1101	37.75	10	5	7	0.8	-0.7246	Chironomid larvae
Loricariidae								
<i>Ancistrus</i> sp.	703	57.91	10	2	10	0	0.9636	Periphyton
<i>Farlowella paraguayensis</i> Retzer & Page, 1997	874	107.56	10	3	5	0.4445	1.7889	Algae
<i>Hemiodontichthys acipenserinus</i> (Kner, 1853)	4695	86.72	10	3	10	0.4445	0.9636	Detritus
<i>Hypostomus basilisko</i> Tencatt, Zawadzki & Froehlich, 2014	1039	87.2	10	2	10	0	0.9636	Periphyton
<i>Hypostomus froehlichi</i> Zawadzki, Nardi & Tencatt, 2021	786	182.2	10	2	10	0	0.9636	Periphyton
<i>Hypostomus perdido</i> Zawadzki, Tencatt & Froehlich, 2014	861	171.35	10	3	5	0.4445	-0.4472	Algae
<i>Hypostomus</i> sp. 2	3605	99.5	10	2	10	0	0.9636	Detritus
<i>Loricaria luciae</i> Thomas, Rodriguez, Cavallaro, Froehlich & Castro, 2013	1501	111.97	10	2	12	0.5	-0.7303	Aquatic insects
<i>Otocinclus vittatus</i> Regan, 1904	2437	29.79	10	2	10	0	0.9636	Periphyton
<i>Rineloricaria lanceolata</i> (Günther, 1868)	1549	85.94	10	3	5	0.6667	-0.4472	Algae
<i>Rineloricaria parva</i> (Boulenger, 1895)	3839	69.71	10	2	10	0	0.9636	Periphyton
Aspredinidae								
<i>Bunocephalus doriae</i> Boulenger, 1902	5920	22.81	10	1	6	0	-0.6118	Aquatic insects
Auchenipteridae								
<i>Tatia neivai</i> (Ihering, 1930)	2379	29.3	12	3	2	0.4445	-0.5883	Terrestrial insects
Heptapteridae								
<i>Imparfinis schubarti</i> (Gomes, 1956)	860	63.07	18	3	12	0.6667	-0.7303	Caddisfly larvae
<i>Phenacorhamdia</i> sp.	877	54.02	12	2	13	0	0.3262	Mayfly larvae
<i>Pimelodella taeniophora</i> (Regan, 1903)	907	84.18	22	5	7	0.8	-0.7246	Aquatic insects
<i>Rhamdia quelen</i> (Quoy & Gaimard, 1824)	1046	114.77	26	6	7	0.7778	1.0445	Aquatic insects
Pimelodidae								
<i>Pseudoplatystoma reticulatum</i> Eigenmann & Eigenmann, 1889	4768	441	10	1	11	0	-0.8704	Fish
Pseudopimelodidae								
<i>Pseudopimelodus mangurus</i> (Valenciennes, 1835)	3336	244	10	2	11	0	1.0445	Fish



TABLE S1 | (Continued)

TAXA	Voucher	SL	N	Degree	Module	c	z	Grouping
SYNBRANCHIFORMES								
Synbranchidae								
<i>Synbranchus marmoratus</i> Bloch, 1795	1293	216.31	16	5	11	0.72	1.0445	Fish
CICHLIFORMES								
Cichlidae								
<i>Aequidens plagiozonatus</i> Kullander, 1984	3796	33.15	10	4	12	0.625	1.0954	Aquatic insects
<i>Australoheros</i> sp.	2502	116.17	10	4	9	0.6667	-0.9636	Insects
<i>Bujurquina vittata</i> (Heckel, 1840)	1092	66.4	10	5	7	0.72	1.2076	Chironomid larvae
<i>Cichlasoma dimerus</i> (Heckel, 1840)	3598	70.68	10	6	3	0.7222	0.5773	Aquatic insects
<i>Coptodon rendalli</i> (Boulenger, 1897)	2508	205.5	10	4	9	0.5	-0.9636	Aquatic insects
<i>Crenicichla vittata</i> Heckel, 1840	1307	91.43	10	2	11	0.5	-0.8704	Fish
<i>Saxatilia lepidota</i> (Heckel, 1840)	1078	114.17	12	6	1	0.8333	-0.5773	Aquatic insects
CYPRINODONTIFORMES								
Poeciliidae								
<i>Poecilia reticulata</i> Peters, 1859	2119	25.75	10	3	10	0.667	0.9636	Detritus
BELONIFORMES								
Belonidae								
<i>Potamorhaphis eigenmanni</i> Ribeiro, 1915	2442	161.73	10	2	11	0.5	-0.8703	Fish



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Official Journal of the
Sociedade Brasileira de Ictiologia

HOW TO CITE THIS ARTICLE

- Severo-Neto F, Ceron K, Ceneviva-Bastos M, Covich AP, Casatti L. Fish trophic network in karst streams from Brazilian Pantanal headwaters. *Neotrop Ichthyol.* 2024; 22(3):e240018. <https://doi.org/10.1590/1982-0224-2024-0018>