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Data Article

Dataset of concentrations of mercury and methylmercury in fish from a tropical river impacted by gold mining in the Colombian Pacific



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ABSTRACT

This data article includes information on the impact of gold mining along five zones of a tropical river in the Pacific region of Colombia. The concentrations of total mercury (THg), total length, mertimercury (MeHg) were determined in 16 species of fish. With this information, it was shown as the concentrations of mercury in fish are influenced by the distribution in the contamination along the Atrato River Basin [1]. Further, THg and MeHg concentrations were related with the trophic level to show biomagnification, and with total length to show bioaccumulation, which is important to establish the potential risk to the environment and also to the health of the inhabitants living along the basin from the consumption of fish.

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Specifications Table

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Program version 3.6.1. Data source location [Institution: University Technological of Chocó, City/Town/Region: Chocó Country: Colombia Latitude and longitude (and GPS coordinates, if possible) for collected samples/data: Atrato River Basin, the zones were: Rio Quito (5 °, 20' 53"N, 76 °, 44' 21" W), Medio Atrato (5 °, 59' 07"N, 76 °, 46' 17" W), Murindó (6 °, 58' 30"N, 76 °, 49' 37" W) & Vigía del Fuerte (6 °, 56' 10"N, 76 °, 36' 10" W), Riosucio (7 °, 26' 34"N, 76 °, 07' 12" W) & Carmen del Darién (7 °, 09' 25"N,		the data analysis [1], which was performed using the R Project Statistical
Data source location [Institution: University Technological of Choco, City/Town/Region: Chocó Country: Colombia Latitude and longitude (and GPS coordinates, if possible) for collected samples/data: Atrato River Basin, the zones were: Rio Quito (5 °, 20' 53"N, 76 °, 44' 21" W), Medio Atrato (5 °, 59' 07"N, 76 °, 46' 17" W), Murindó (6 °, 58' 30"N, 76 °, 49' 37" W) & Vigía del Fuerte (6 °, 56' 10"N, 76 °, 36' 10" W), Riosucio (7 °, 26' 34"N, 76 °, 07' 12" W) & Carmen del Darién (7 °, 09' 25"N,	_	Program version 3.6.1.
City/Town/Region: Chocó Country: Colombia Latitude and longitude (and GPS coordinates, if possible) for collected samples/data: Atrato River Basin, the zones were: Rio Quito (5 °, 20' 53"N, 76 °, 44' 21" W), Medio Atrato (5 °, 59' 07"N, 76 °, 46' 17" W), Murindó (6 °, 58' 30"N, 76 °, 49' 37" W) & Vigía del Fuerte (6 °, 56' 10"N, 76 °, 36' 10" W), Riosucio (7 °, 26' 34"N, 76 °, 07' 12" W) & Carmen del Darién (7 °, 09' 25"N,	Data source location	[Institution: University Technological of Chocó,
Country: Colombia Latitude and longitude (and GPS coordinates, if possible) for collected samples/data: Atrato River Basin, the zones were: Rio Quito (5 °, 20' 53"N, 76 °, 44' 21" W), Medio Atrato (5 °, 59' 07"N, 76 °, 46' 17" W), Murindó (6 °, 58' 30"N, 76 °, 49' 37" W) & Vigía del Fuerte (6 °, 56' 10"N, 76 °, 36' 10" W), Riosucio (7 °, 26' 34"N, 76 °, 07' 12" W) & Carmen del Darién (7 °, 09' 25"N,		City/Town/Region: Chocó
Latitude and longitude (and GPS coordinates, if possible) for collected samples/data: Atrato River Basin, the zones were: Rio Quito ($5 \circ$, 20' 53"N, 76 \circ , 44' 21" W), Medio Atrato ($5 \circ$, 59' 07"N, 76 \circ , 46' 17" W), Murindó ($6 \circ$, 58' 30"N, 76 \circ , 49' 37" W) & Vigía del Fuerte ($6 \circ$, 56' 10"N, 76 \circ , 36' 10" W), Riosucio (7 \circ , 26' 34"N, 76 \circ , 07' 12" W) & Carmen del Darién (7 \circ , 09' 25"N,		Country: Colombia
samples/data: Atrato River Basin, the zones were: Rio Quito (5 $^{\circ}$, 20' 53"N, 76 $^{\circ}$, 44' 21" W), Medio Atrato (5 $^{\circ}$, 59' 07"N, 76 $^{\circ}$, 46' 17" W), Murindó (6 $^{\circ}$, 58' 30"N, 76 $^{\circ}$, 49' 37" W) & Vigía del Fuerte (6 $^{\circ}$, 56' 10"N, 76 $^{\circ}$, 36' 10" W), Riosucio (7 $^{\circ}$, 26' 34"N, 76 $^{\circ}$, 07' 12" W) & Carmen del Darién (7 $^{\circ}$, 09' 25"N,		Latitude and longitude (and GPS coordinates, if possible) for collected
76 °, 44' 21" W), Medio Atrato (5 °, 59' 0/"N, 76 °, 46' 17" W), Murindo (6 °, 58' 30"N, 76 °, 49' 37" W) & Vigía del Fuerte (6 °, 56' 10"N, 76 °, 36' 10" W), Riosucio (7 °, 26' 34"N, 76 °, 07' 12" W) & Carmen del Darién (7 °, 09' 25"N,		samples/data: Atrato River Basin, the zones were: Rio Quito (5 °, 20' 53"N,
58° 30 N, 76 °, 49 37 ° W) & Vigia del Fuerte (6 °, 56 10 N, 76 °, 36 10 W), Riosucio (7 °, 26' 34"N, 76 °, 07' 12" W) & Carmen del Darién (7 °, 09' 25"N,		76° , 44' 21'' W), Medio Atrato (5°, 59' 0/"N, 76°, 46' 1/" W), Murindo (6°,
$Riosucio (7^{\circ}, 26^{\circ}34^{\circ}N, 76^{\circ}, 07^{\circ}12^{\circ}W) \otimes Cannen dei Darien (7^{\circ}, 09^{\circ}25^{\circ}N, 12^{\circ}W) \otimes Cannen dei Darien (7^{\circ}) \otimes Cannen dei Darien ($		58 30°N, 76° , 49 37° W) & Vigia del Fuerte (6 °, 56° 10°N, 76° , 36° 10° W),
70.0 57 50 M and $Cianan de Linguía (0.0.01) 22" M 77.0 02) 21" M) 0$		RIOSUCIO (7° , 26 34 N, 76°, 07 12 W) & Carineni dei Darieni (7° , 09 25 N, 76°, 57' 58" W) and Giánara da Unaviá (8°, 01' 22"N, 77°, 02' 21" W) 8
70° , 57° , 58° W), alled Clendedd der Ulingula (8° , 01° , 25° N), 77° , 02° , 51° W) \otimes Tumperdid (7° , 64° , $07''$ N), 77° , $02'$, $21''$ W).		70° , 57 58 VV), dilu Cielidga de Oliguia (8 °, 01 23 N, 77 °, 02 31 VV) & Tumperadó (7 °, 46' 07"N, 77 °, 02' 21" W)
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ming at the Colombian Pacific region Chemosphere		mining at the Colombian Pacific region Chemosphere
https://doi.org/10.1016/i.chemosphere.2020.128478		https://doi.org/10.1016/i.chemosphere.2020.128478

Value of the Data

- The data set includes valuable MeHg concentrations in fish samples (n = 520) collected in the Atrato River Basin, a tropical ecosystem highly impacted by goldmining.
- The data set contains extremely scarce and therefore very valuable MeHg concentration values in fish, which are more suitable than THg values for human health risk assessment.
- The data set describes the distribution of the contamination by mercury in five areas of the Atrato River basin. Also show the correlations between THg (n=842) and MeHg concentrations and the total length of the fish per area.
- The data set can be used as a reference to identify the most polluted areas throughout the basin, establish possible environmental effects and the risk to human health from fish consumption.

1. Data Description

In this article, we will describe data on mercury concentrations in fish samples of 16 different species, from five areas of the Atrato River Basin, a tropical ecosystem highly impacted by gold mining [1]. The data set was summarized in Tables 1–5. They describe the THg and MeHg concentrations and length of fish caught in the areas of: Rio Quito (RQ), Medio Atrato (MA),

Total mercury concentrations (THg), total length, methylmercury concentrations (MeHg) and percentage of methylmercury in fish captured in the Rio Quito (RQ) zone, Atrato River Basin, Colombia. P: piscivore, C: carnivore, OC: omnivore with a tendency to carnivore, O: omnivore, D: detritivore. The RQ site is located in the south-central zone of the Chocó Department, and the fish samples were caught in the Quito River within 5 °25′25″ N 76 °43′29″ W and 5 °41′07″ N 76 °39′58″ W.

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
Hoplias malabaricus (P)	185.20	28.3	172.23	93.0
	376.39	30.0	358.04	95.1
	299.62	25.7	272.65	91.0
	156.93	22.6	136.94	87.3
	58.02	20.3	53.96	93.0
	411.92	26.5	388.09	94.2
	625.39	33.7	598.61	95.7
	908.41	34.5	874.82	96.3
	522.47	30.4	475.89	91.1
	410.04	24.8	382.34	93.2
	375.55	28.1	329.26	87.7
	56.50	18.8	48.55	85.9
	87.43	19.3	73.31	83.8
	260.88	23.7		
	130.10	21.2		
	134.91	24.6		
	286.64	24.1		
	1,254.59	36.9		
	408.23	23.3		
Ctenolucius beani (C)	1,191.06	33.0	1,087.00	91.3
	422.63	38.8	381.22	90.2
	129.72	20.3	120.10	92.6
	335.61	29.1	316.83	94.4
	265.50	24.7		
	123.53	19.6		
Caquetaia umbrifera (C)	176.82	19.0	154.94	87.6
	165.70	18.5	142.37	85.9
Sternopygus macrurus (C)	250.43	42.2	221.66	88.5
	153.43	32.5	137.43	89.6
	42.70	28.4	35.78	83.8
	79.21	25.2	67.14	84.8
	83.12	27.0		
Caquetaia kraussi (OC)	605.34	27.8	582.97	96.3
	323.12	23.2	305.50	94.5
	384.56	25.8	347.64	90.4
	202.00	19.8	186.86	92.5
	272.44	19.0	242.37	89.0
	397.00	21.7	359.21	90.5
	80.85	18.0	65.19	80.6
	118.20	18.5		
	158.11	10.0		
	74.04	17.4		
	74.04	10.0		
Phamdia qualan (OC)	200.00	10.0	660 46	02.5
Khamala quelen (OC)	/14.00	24.2	27762	92.5
	205 55	23.3	377.0Z 377.0Z	95.5
	445.02	22.0	405 70	90.2
	280.81	23.0	703.73	90.5
	200.01	21.0	257.90	881
	409 48	20.3	362 51	88 5
	228.07	24.5	207 54	91.0
	356 30	22.0	320.23	89.9
	330.30		520.23	55.5

Table 1 (continued)

4

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	63.86	28.0	56.76	88.9
	263.58	20.2	203.14	77.1
	273.96	20.9	231.59	84.5
	30.55	16.5	22.80	74.6
	50.69	17.1	42.31	83.5
	51.74	22.0	39.76	76.9
	313.32	19.2		
	211.45	23.2		
	96.17	20.7		
	146.34	20.8		
	115.60	18.2		
	95.16	22.1		
Astyanax fasciatus (OC)	378.74	16.2	344.65	91.0
	322.31	14.5	298.43	92.6
	293.06	16.3	256.78	87.6
	273.36	17.1	244.88	89.6
	161.54	15.4	150.77	93.3
	143.46	14.8	123.23	85.9
	140.00	10.8	130.46	93.2
	139.17	10.7	128.00	92.0
	136.43	12.6	126.54	92.8
	123.56	10.7	105.66	85.5
	121.72	11.2	107.22	88.1
	118.60	8.5	104.34	88.0
	91.06	12.5	66.29	72.8
	83.26	14.0	62.96	75.6
	89.43	13.0	81.32	90.9
	65.20	14.0	60.41	92.6
	98./1	10.8	90.95	92.1
	118.38	8.46		
	117.19	11.3		
	114.75	9.1		
	108.33	12.4		
	101.30	0.4		
	101.51	0.2 10 5		
	97.76	60		
	91.64	76		
	90.98	63		
Pimelodus nunctatus (OC)	145.60	25.4	122 44	841
Timetouus punctutus (oc)	13630	22.1	112 77	82.7
	277.40	24.8	243.63	87.8
	125.50	17.5		
	76.80	23.1		
Leporinus muvscorum (O)	65.70	30.2	61.23	93.2
	34.70	33.5	32.15	92.6
	221.50	44.2	210.76	95.2
	183.80	28.7	171.85	93.5
	143.10	32.6	132.75	92.8
	103.42	31.0	88.61	85.7
	53.40	29.1		
	32.50	24.6		
Prochilodus magdalenae (D)	875.07	38.7	839.93	96.0
	635.70	35.4	614.95	96.7
	533.20	36.3	517.92	97.1
	576.30	35.8	554.63	96.2
	108.40	36.3	103.34	95.3
	459.46	37.2	429.68	93.5
	322.79	37.1	307.92	95.4
	92.66	29.6	87.49	94.4

Table 1 (continued)

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	39.92	18.4	36.28	90.9
	70.91	29.3		
	57.84	24.6		
	35.63	16.7		
	74.39	27.3		
	116.36	28.5		
	112.04	29.1		
	49.40	23.8		
Hypostomus hondae (D)	69.29	15.7	56.89	82.1
	49.13	14.5	37.80	76.9
	30.49	16.7	25.12	82.4
	27.35	18.6	22.51	82.3
	24.88	15.8	20.74	83.4
	83.61	26.7	64.77	77.5
	134.14	25.3	104.52	77.9
	125.49	21.8	102.46	81.6
	154.30	27.1	111.80	72.5
	44.61	25.8	33.90	76.0
	49.78	20.5	38.29	76.9
	49.10	11.2	42.39	86.3
	43.00	12.2	33.61	78.2
	43.94	11.4	30.98	70.5
	55.84	11.3	39.96	71.6
	45.21	11.2	33.58	74.3
	25.67	16.0	18.83	73.4
	15.95	14.0	12.78	80.1
	19.28	14.2	13.52	70.1
	19.63	12.0	13.65	69.5
	61.13	9.5		
	56.14	10.9		
	16.94	14.1		
	31.05	14.6		
	120.33	18.5		
	120.67	20.4		
	110.84	18.7		
	114.56	25.3		
Cyphocharax magdalenae (D)	26.58	10.2	22.40	84.3
	31.35	17.5	25.80	82.3
	16.38	9.5	12.64	77.2
	26.23	12.6	20.90	79.7
	30.50	15.0		
	32.57	14.7		

Murindó & Vigía del Fuerte (MVF), Riosucio & Carmen del Darién (RS) and Ciénaga Unguía & Tumaradó (CUT), respectively. For samples of fish with carnivore habits, the tables shown that the WHO limit for the protection of populations at risk (200 µg/kg⁻¹ w/w) [3] is exceeded in 27.1% (n = 42) for RQ, 37.7% (n = 75) for MA, 53.1% (n = 86) for MVF, 37.7% (n = 92) for RS and 8.5% (n = 7) for CUT zones. Within of this samples, 4.5% (n = 7) for RQ, 11.6% (n = 23) for MA, 37.7% (n = 61) for MVF, 11.5% (n = 28) for RS and 2.4% (n = 2) for CUT, exceeded the WHO maximum limit of THg in fish for human consumption (500 µg/kg⁻¹ w/w) [2]. For samples of fish with non-carnivore habits, the WHO limit of 200 µg/kg⁻¹ w/w) [3] was exceeded in 4.5% (n = 7) for RQ, and 1.2% (n = 1) for CUT. Within of this samples, 2.6% (n = 4) for RQ exceeded the WHO limit 500 µg/kg⁻¹ w/w) [2]. The data also show that methylmercury is the mercury species found in highest queantity among fish samples analyzed (68.1% - 98.8%); therefore, the risk of mercury contamination from fish ingestion, especially in the inhabitants of the MVF zone, is high.

This data set was useful to describe the Spearman's correlation coefficients between THg and MeHg concentrations and the total length of the fish, with which the bioaccumulation of these

Total mercury concentrations (THg). total length. methylmercury concentrations (MeHg) and percentage of methylmercury in fish captured in the Medio Atrato (MA) zone, Atrato River Basin. Colombia. P: piscivore, C: carnivore, OC: omnivore with a tendency to carnivore, OPV: omnivore with preference for fish and vegetal material, O: omnivore, D: detritivore. The MA site is located in the south-central zone of the Chocó Department (north of Río Quito zone), and the fish samples were caught in the Atrato River within 5 °52′01′′ N 76 °42′33′′ W and 6 °10′13′′ N 76 °42′56′′ W.

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
Ageneiosus pardalis (P)	1,318.72	53.2	1,254.34	95.1
	1,614.15	58.4	1,576.21	97.7
	958.52	36.3	892.43	93.1
	1,403.13	63.5	1,358.73	96.8
	316.85	42.6	288.54	91.1
	150.67	30.4		
	132.76	18.7		
	142.76	20.7		
Hoplias malabaricus (P)	1,334.50	37.6	1,289.74	96.6
	1,304.50	36.2	1,218.74	93.4
	1,065.40	32.8	998.75	93.7
	708.47	34.6	686.79	96.9
	546.01	27.5	539.56	98.8
	529.70	30.6	509.55	96.2
	528.31	28.2	511.64	96.8
	516.33	33.4	502.75	97.4
	468.54	32.5	428.76	91.5
	452.54	25.7	432.99	95.7
	415.44	26.7	387.46	93.3
	374.16	27.8		
	344.16	25.2		
	313.42	25.0		
	333.42	32.2		
	263.03	23.8		
	181.53	24.5		
Trachelyopterus fisheri (P)	518.32	26.6	487.45	94.0
	441.35	25.2	401.60	91.0
	348.19	24.1	317.87	91.3
	412.38	21.5	395.16	95.8
	289.51	20.2		
Pseudopimelodus schultzi (C)	3,112.62	57.2	3,034.75	97.5
	2,977.69	57.0	2,775.76	93.2
	2,206.35	46.8	2,165.77	98.2
	2,035.61	46.3	1,967.87	96.7
	486.63	63.9	467.89	96.1
	472.18	47.5	448.98	95.1
	442.02	63.1	420.56	95.1
	441.49	47.5	423.65	96.0
	309.85	53.3		
	304.06	49.8		
	263.90	44.3		
	363.12	50.5		
	293.21	43.2		
Ctenolucius beani (C)	461.34	32.6	438.56	95.1
• •	423.87	27.4	387.40	91.4
	276.21	22.1	260.72	94.4
	213.50	26.5	187.43	87.8
	373.50	29.7		
Sternopygus macrurus (C)	1,611.32	58.4	1,496.73	92.9
	978.65	52.4	892.54	91.2
	177.55	34.3	156.49	88.1

Table 2 (continued)

Species	THg (µg kg $^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	138.30	32.7	118.39	85.6
	67.25	25.1		
	158.93	30.8		
Caquetaia kraussii (OC)	655.64	28.1	602.46	91.9
	297.16	28.0	276.46	93.0
	284.05	27.5	274.84	96.8
	253.99	26.5	234.21	92.2
	185.73	27.3	173.46	93.4
	181.50	27.7	165.78	91.3
	181.44	24.7	178.47	98.4
	177.06	25.3	156.45	88.4
	176.63	25.1	167.90	95.1
	158.13	26.0	147.47	93.3
	136.60	22.4	128.99	94.4
	110.22	23.3	101.32	91.9
	109.44	23.0	99.46	90.9
	85.85	21.5	73.57	85.7
	83.77	21.7		
	83.02	20.2		
	70.65	18.2		
	48.24	16.0		
	71.26	19.4		
	83.97	19.0		
	81.96	17.5		
Rhamdia auelen (OC)	1.160.98	25.2	1.098.10	94.6
1	409.82	24.5	398.54	97.2
	363.50	23.6	352.53	97.0
	235.01	22.8	216.94	92.3
	227.00	23.3	216.72	95.5
	217.98	24.7	208.78	95.8
	196.70	20.3	183.82	93.5
	168.46	24.5	143.46	85.2
	167.25	22.1	158.63	94.8
	166.65	19.8	153.55	92.1
	165.76	24.2	150.45	90.8
	145.32	20.7		
	132.59	21.0		
	124.57	18.3		
	114.60	23.4		
	111.76	18.1		
	111.02	21.6		
	91.70	17.4		
	66.55	19.1		
	60.11	17.6		
	45.27	17.0		
Astyanax fasciatus (OC)	636.59	18.2	588.66	92.5
	517.80	15.5	489.32	94.5
	470.15	17.3	456.25	97.0
	368.74	15.1	354.65	96.2
	312.31	16.4	298.43	95.6
	283.06	15.8	256.78	90.7
	273.36	12.8	234.88	85.9
	272.02	11.7	254.23	93.5
	261.79	14.6	235.67	90.0
	244.88	14.7	234.23	95.7
	231.50	12.2	216.47	93.5
	223.46	9.5	213.55	95.6

Table 2 (continued)

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	222.03	11.5	212.99	95.9
	219.13	12.3	188.54	86.0
	217.53	10.1	195.36	89.8
	212.82	13.4	186.47	87.6
	201.60	7.4	189.43	94.0
	197.27	9.2	188.68	95.6
	184.81	11.5		
	170.75	7.9		
	166.90	10.6		
	101.36	8.3		
	101.31	6.7		
	101.05	6.4		
	97.76	8.4		
	91.64	6.3		
	90.98	8.2		
	89.08	9.2		
	88.38	7.7		
	83.35	7.0		
	81.48	6.3		
Andinoacara pulcher (OPV)	288.80	15.8	257.65	89.2
	211.65	12.3	195.21	92.2
	192.81	15.1	178.33	92.5
	191.87	10.2	166.47	86.8
	190.56	11.8	168.99	88.7
	187.97	14.2	164.98	87.8
	168.95	12.0	149.68	88.6
	168.13	11.3	154.56	91.9
	166.55	13.7	145.68	87.5
	57.52	9.8	49.32	85.7
	32.58	7.8	27.82	85.4
	148.43	10.5	123.66	83.3
	144.70	13.6	117.79	81.4
	142.26	13.8		
	97.50	10.2		
	85.09	9.6		
	134.13	14.5		
	129.54	12.1		
	127.68	10.5		
	122.65	10.1		
	116.09	8.4		
	112.37	8.7		
(<u>)</u>	106.18	9.4	120.45	02.2
Leporinus muyscorum (0)	139.98	28.0	130.45	93.2
	139.12	29.0	128.88	92.6
	122.71	29.0	110.70	95.2
	52.00	32.0	89.80	93.5
	52.80	35.0	48.98	92.8
	112.40	31.0	96.30	85.7
	143.40	33.2	126.80	88.4
	70.20	30.6		
	80.70	28.5		
Duoshilodus mandalawan (D)	133.40	34.U 21.0	126 70	05.0
Prochuoaus magaalenae (D)	142.59	31.0	130./0	95.9
	120.40	38.U 25.0	115.//	96.1
	102.25	35.0	99.32	97.1
	101.57	30.U 24.0	97.75	96.2
	100.43	34.U 28.0	97.54	97.1
	93.96	38.U	81.87	93.5
	88.15	33.U 22.0	84.09	95.4
	87.22	32.0	/5.//	86.9
	83.//	34.0	80.34	95.9

Table 2 (continued)
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Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	75.57	29.0		
	70.17	29.0		
	68.54	24.0		
	52.58	24.0		
	47.53	38.0		
	45.71	33.0		
Hypostomus hondae (D)	241.09	28.7	201.46	83.6
	220.73	36.9	184.58	83.6
	200.72	30.8	165.34	82.4
	196.70	26.8	161.93	82.3
	176.14	25.6	146.86	83.4
	172.85	19.0	154.78	89.5
	169.91	18.2	129.85	76.4
	156.34	22.0	141.24	90.3
	144.80	29.1	106.80	73.8
	137.86	20.9	106.42	77.2
	135.15	17.7	111.21	82.3
	132.92	24.3	101.93	76.7
	132.77	17.2	101.47	76.4
	126.33	17.0	95.75	75.8
	124.67	18.2		
	120.84	20.1		
	117.56	18.5		
	116.77	25.5		
	112.35	23.3		
	95.58	22.5		
	94.41	18.4		
	88.27	21.6		
	79.05	19.5		
	77.64	18.3		

pollutants could be established in fish species of each of the studied areas. The data set also served to shown the median concentration of THg and MeHg in fish tissues by species in all the areas studied, and how many analyzed samples surpassed the warning levels for populations at risk and the maximum limits recommended for human consumption of fish established by WHO [2,3]. Finally, in data set, it is shown that MeHg was the predominant form of mercury in the fish of the Atrato River Basin.

Total mercury concentrations (THg), total length, methylmercury concentrations (MeHg) and percentage of methylmercury in fish captured in the Murindó & Vigía del Fuerte (MVF) zone, Atrato River Basin, Colombia. P: piscivore, C: carnivore, OC: omnivore with a tendency to carnivore, OPV: omnivore with preference for fish and vegetal material, O: omnivore, D: detritivore. The MVF site is located in the western zone of the Antioquia Department (east of the Chocó Department), and the fish samples were caught in the Atrato River within 6 °34′59″ N 76 °53′57″ W and 6 °58′38″ N 76 °49′23″ W.

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
Ageneiosus pardalis (P)	1,440.74	66.3	1,412.77	98.1
	1,301.65	58.4	1,281.30	98.4
	1,033.01	55.0	955.33	92.5
	708.00	28.0	674.32	95.2
	693.78	30.0	645.90	93.1
	684.01	27.0	666.43	97.4
	654.19	29.0	623.41	95.3
	842.91	26.0	800.43	95.0
	574.39	27.0	554.76	96.6
	926.73	25.5	900.20	97.1
	681.67	26.3	643.44	94.4
	779.46	25.0	744.88	95.6
	809.30	25.8	776.30	95.9
	867.41	37.0	822.70	94.8
	815.48	26.1	767.89	94.2
	562.90	26.0	529.12	94.0
	808.85	29.7	766.11	94.7
	435.86	20.9		
	156.90	25.0		
	594.01	27.1		
	829.77	33.0		
	979.51	53.6		
	950.12	45.3		
	264.60	22.0		
	754.73	28.0		
	936.60	37.5		
	625.65	27.5		
	494.47	27.0		
Hoplias malabaricus (P)	798.79	36.0	779.98	97.6
	657.62	34.0	614.39	93.4
	721.04	38.0	675.94	93.7
	600.78	33.0	582.40	96.9
	753.89	35.0	740.46	98.2
	542.35	37.0	521.73	96.2
	575.42	39.0	557.26	96.8
	727.49	36.0	708.36	97.4
	577.88	38.0	551.93	95.5
	732.58	32.0	700.94	95.7
	726.14	34.5		
	614.98	33.6		
	797.29	39.0		
	524.57	28.8		
	590.04	32.0		
	209.99	27.3		
Trachelyopterus fisheri (P)	418.82	17.2	398.06	95.0
	731.44	24.0	680.19	93.0
	387.38	21.0	342.03	88.3
	1032.54	27.5	1010.07	97.8
	842.86	24.2	794.90	94.3
	808.40	25.7	782.53	96.8
	692.04	23.3		
	748.74	25.0		
	241.80	18.1		

Table 3 (continued)

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
Ctenolucius beani (C)	961.52	30.0	923.65	96.1
	584.73	33.4	546.11	93.4
	506.25	29.0	480.90	95.0
	415.42	24.7	368.85	88.8
	414.67	20.6		
Sternopygus macrurus (C)	657.14	67.1	610.23	92.9
100 ()	1,345.98	70.5	1,308.14	97.2
Caauetaia kraussii (OC)	293.33	23.0	275.40	93.9
	586.86	23.0	551.83	94.0
	429.84	20.5	420.20	97.8
	143.80	20.0	132.60	92.2
	761.87	22.0	711.52	93.4
	552.48	20.0	504.63	91.3
	880.19	21.0	865.78	98.4
	247.83	17.0	228 90	92.4
	761.19	19.5	731.19	96.1
	461 21	30.0	439 33	95.3
	514.01	26.2	199199	0010
	387.24	20.2		
	417.81	20.3		
	474.98	20.3		
	482.04	20.5		
	382.04	19.6		
Phamdia qualan (OC)	510.94	271	406.88	05.6
Khamala quelen (OC)	456 27	27.1	490.88	95.0
	430.27	27.5	440.4J 002.25	97.8
	905.14	29.0	002.33	97.5
	297.34	27.0	277.45	93.3
	640.22	28.0	017.04	96.5
	472.00	26.0	456.80	96.8
	529.02	27.0	503.91	95.3
	008.28	28.8		
	376.46	26.0		
	400.55	26.0		
	91.84	17.1	142.20	00 F
Astyanax fasciatus (OC)	153.27	8.5	143.26	93.5
	320.60	10.0	309.38	96.5
	84.78	8.0	78.04	92.0
	46.96	6.7	41.88	89.2
	54.89	6.2	51.35	93.6
	58.73	7.5		
	290.84	12.2		
Andinoacara pulcher (OPV)	29.85	7.0	24.60	82.4
	35.94	8.7	31.35	87.2
Leporinus muyscorum (O)	32.69	27.0	27.70	84.7
	30.17	25.0	25.10	83.2
	96.64	27.5	84.40	87.3
	70.69	24.1	65.70	92.9
Prochilodus magdalenae (D)	94.27	24.0	86.07	91.3
	163.32	23.0	147.28	90.2
	192.47	24.0	171.70	89.2
	85.00	24.0	71.52	84.1
	172.90	24.5	160.97	93.1
	149.34	23.0	132.02	88.4
	236.15	23.0	223.63	94.7
	194.18	24.0	185.06	95.3
	114.72	24.0	101.07	88.1
	151.42	23.0	126.59	83.6
	61.05	28.0	53.30	87.3
	85.27	24.0	75.81	88.9

Table 3 (continued)

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	111.70	24.5	101.76	91.1
	56.20	25.0	48.64	86.5
	93.09	23.2	84.34	90.6
	63.63	21.6	52.97	83.2
	50.51	18.8	45.61	90.3
	87.53	22.0	81.58	93.2
	91.11	26.0	84.73	93.0
	101.73	24.2	90.80	89.3
	70.70	28.8	61.88	87.5
	111.43	32.0	102.96	92.4
	138.45	30.0	130.36	94.2
	120.72	25.0	115.65	95.8
	32.03	18.5	27.80	86.8
	190.18	27.0	179.40	94.3
	125.64	28.0	119.56	95.2
	114.11	26.0		
	159.30	23.0		
	144.11	31.0		
	35.81	23.4		
	24.26	19.4		
	217.16	29.4		
	148.47	23.4		
	108.52	28.0		
	120.07	25.0		
	129.90	25.2		
	93.32	26.5		
	89.25	29.0		
	141.70	32.0		
	112.31	30.0		
	100.19	23.0		
	135.57	26.0		
	119.47	24.0		
	107.17	25.2		
	119.01	22.0		
	111.10	31.0		
	115.02	30.0		
Hypostomus hondae (D)	43.51	23.5	37.23	85.6
	14.08	22.7	12.20	86.6
	29.45	22.0	25.73	87.4
	65.05	25.5	56 19	86.4
	18.81	16.0	15.53	82.5
	30.36	170	26.24	86.4
	44.84	25.4	40.51	90.3
	15.60	16.1		
	58.11	25.0		
	11 04	15.0		
	43.10	24.0		
	70.88	24.0		
	106 55	35.4		
	11 57	14.2		
	11.57	17,2		

Total mercury concentrations (THg), total length, methylmercury concentrations (MeHg) and percentage of methylmercury in fish captured in the Riosucio & Carmen del Darién (RS) zone, Atrato River Basin, Colombia. P: piscivore, C: carnivore, OC: omnivore with a tendency to carnivore, OPV: omnivore with preference for fish and vegetal material, O: omnivore, D: detritivore. The RS site is located in the northern zone of the Chocó Department, and the fish samples were caught in the Atrato River within 7 °09'25'' N 76 °58'04'' W and 7 °26'47'' N 77 °07'04'' W.

Ageneiosus pardalis (P) 690.45 36.5 661.45 95.8 495.92 47.3 467.90 94.3 341.86 35.4 312.76 91.5 996.30 40.7 943.12 94.7
495.9247.3467.9094.3341.8635.4312.7691.5996.3040.7943.1294.7
341.8635.4312.7691.5996.3040.7943.1294.7
996.30 40.7 943.12 94.7
563.04 47.4 543.81 96.6
502.21 40.5 467.70 93.1
311.92 40.1 281.34 90.2
1,102.15 50.8 1,078.43 97.8
462.14 45.0 413.88 89.6
664.11 47.6 621.74 93.6
682.62 67.0 632.55 92.7
724.77 29.1
715.32 33.0
747.78 28.8
446.28 33.5
449.69 31.0
513.32 30.0
318.94 33.0
Hoplias malabaricus (P) 262.50 36.7 247.13 94.1
170.30 30.2 152.38 89.5
214.30 30.1 189.30 88.3
416.60 36.0 397.44 95.4
305.10 30.5 288.74 94.6
401.40 37.0 373.30 93.0
328.10 32.5 292.13 89.0
436.80 38.9 411.22 94.1
426.50 40.2 390.65 91.6
123.30 22.1 104.67 84.9
456.90 33.5 434.92 95.2
180.30 25.7
178.40 24.5
135.20 22.8
300.50 28.5
157.80 23.5
225.40 27.5
286.60 26.7
343.30 31.2
282.50 33.0
356.40 40.0
352.96 38.0
4/4./9 3/.0
570.00 26.0
576.00 50.0 E71.01 22.0
91022 26.0
104013 40.0
1,010,10 10,00
Trachelvonterus fisheri (P) 345 34 20.6 321 75 93 2
Trachelyopterus fisheri (P) 345.34 20.6 321.75 93.2 374.27 25.8 334.65 89.4
Trachelyopterus fisheri (P) 345.34 20.6 321.75 93.2 374.27 25.8 334.65 89.4 314.64 22.1 292.16 92.9
Trachelyopterus fisheri (P) 345.34 20.6 321.75 93.2 374.27 25.8 334.65 89.4 314.64 22.1 292.16 92.9 270.19 20.1 235.47 87.1
Trachelyopterus fisheri (P) 345.34 20.6 321.75 93.2 374.27 25.8 334.65 89.4 314.64 22.1 292.16 92.9 270.19 20.1 235.47 87.1 243.43 19.7 19.7 19.7

Table 4 (continued)

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
Pseudopimelodus schultzi (P)	567.16	52.3	552.98	97.5
	453.29	58.6	422.55	93.2
	484.34	54.8	436.53	90.1
	423.83	48.7	409.73	96.7
	297.46	55.6	276.00	92.8
	335.67	43.7		
	223.24	48.8		
	291.89	47.5		
	412.90	47.7		
Ctenolucius beani (P)	165.32	28.1	150.21	90.9
	231.31	25.9	217.87	94.2
	192.62	26.8	1/8.30	92.6
	109.22	23.3	160.51	88.3
	100.52	10.4		
	844.22	30.0		
	1 005 70	29.0		
Caquetaia umbrifera (P)	125.65	23.0	105.40	83.0
cuquetata ambrigera (1)	238 72	27.8	219.45	91.9
	20118	25.8	187 70	93.3
	175 30	24.3	154 12	879
	218 54	261	188 33	86.2
	729.34	23.5	689.25	94.5
	256.60	24.0	220.43	85.9
	542.34	25.0	500.18	92.2
	731.63	27.5	702.76	96.1
	112.50	19.5		
	449.53	23.0		
	515.50	24.5		
	551.87	25.0		
Sternopygus macrurus (P)	438.65	70.0	402.45	91.7
	274.03	49.0	237.67	86.7
	234.89	30.0	200.08	85.2
Caquetaia kraussii (OC)	218.00	26.2	200.56	92.0
	247.74	27.4	218.72	88.3
	237.16	21.0	208.19	87.8
	184.58	21.5	164.82	89.3
	126.49	23.0	109.93	86.9
	117.41	20.7	98.02	83.5
	300.13	25.2	286.12	95.3
	205.95	24.0	204.07	95.8
	40.00	18.3	40.92	87.7
	572.55 AG EE	27.0	559.55	90.0
	40.55	10.2		
	36.01	17.7		
	1/3 13	22.6		
	171 21	22.0		
	290.42	25.8		
	30915	26.5		
	106.99	21.0		
	201.31	21.5		
	537.40	22.8		
	337.98	21.5		
	293.58	24.0		
	113.94	20.0		
	314.35	25.0		
	292.59	23.0		
	745.26	21.5		

Table 4 (continued)

308.04 26.0 640.087 20.0 661.70 21.0 661.70 21.0 112.30 21.4 104.19 92.8 135.50 23.1 127.31 94.0 155.10 23.0 139.14 89.7 148.80 22.5 135.41 91.0 127.00 22.8 114.57 90.2 88.09 20.7 78.16 88.7 81.40 20.1 70.08 86.1 98.32 21.0 89.48 91.0 138.30 23.2 140.05 88.5 89.50 19.3 123.70 23.0 90.60 21.3 22.6 22.16 21.19 16.2 198.31 93.8 23.05 182.94 91.0 21.19 16.2 198.31 93.8 33.66 6.5 34.98 91.7 33.07 6.2 30.58 92.5 33.01 13.	Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg (µg kg ⁻¹)	% MeHg
Rhamdia quelen (OC)60170 622.10 113.5021.0 12.11 12.31 12.31 12.31 135.00 23.019.14 12.31 12.31 12.31 135.01 135.01 23.019.14 12.31 135.01 135.01 23.019.14 12.31 13.31 13.31 14.8.30 13.31 14.8.30 13.31 14.8.30 13.31 <b< th=""><th></th><th>308.04</th><th>26.0</th><th></th><th></th></b<>		308.04	26.0		
Rhemdia quelen (0C)22.1623.024.110.41.992.8112.3023.1127.3192.8135.5023.0139.1489.7148.8022.5135.4191.0127.0022.813.54.190.2127.0022.814.45.790.288.0920.778.1688.781.4020.170.0886.198.3221.089.4891.0158.3023.2140.0585.198.5019.312.312.312.3723.2140.0585.112.3713.712.312.312.3713.712.312.312.3713.712.312.312.3917.525.612.425.616.248.4792.912.13016.2198.9193.839.637.236.6592.533.076.230.9892.533.076.234.9891.733.076.234.9891.733.076.234.9891.733.076.234.9891.733.076.234.9892.532.056.64.8592.532.056.64.8592.532.056.64.8592.532.056.64.8593.115.1013.8150.6095.732.0515.015.040.6542.046.54.85 </th <th></th> <th>640.87</th> <th>20.0</th> <th></th> <th></th>		640.87	20.0		
Benendia quelen (OC)112.3021.4104.1992.81135.5023.1127.3194.0135.5023.019.1489.7148.8022.5135.4191.0148.8022.6114.5790.288.0920.778.1685.789.3221.089.4891.0158.3023.2140.0585.589.5019.312.37023.090.6021.314.0585.589.5020.512.37023.07.718.8.9092.623.6917.718.8.9092.624.6120.521.391.012.37023.09.5182.9490.6021.39.5182.9491.0115.256.917.512.3709.5182.9491.025.6917.5182.9491.021.1916.2198.9193.830.637.238.165.333.076.234.9891.733.076.234.9891.733.076.234.9893.732.056.025.235.332.056.025.235.332.056.025.232.0513.8150.6095.334.410.416.531.0104.3913.67.391.012.8023.7108.2185.932.0515.045.07.391.00 </th <th></th> <th>622.16</th> <th>23.0</th> <th></th> <th></th>		622.16	23.0		
Bhamdia quelen (OC)112.3021.4104.1992.8135.0023.11127.1394.01155.1023.0130.1480.7148.8022.5135.4191.0127.0022.8114.5790.288.0920.778.1688.781.4020.170.0886.198.3221.089.4891.015.3.0023.2140.0585.983.7019.323.7140.0515.823.023.014.112.3023.015.323.712.3716.238.139.6382.6020.523.622.625.6917.7168.9092.620.10.39.5182.9491.021.1916.2189.9193.839.637.236.6592.533.166.534.9891.733.076.230.5892.533.076.230.5892.533.076.230.5892.530.667.7168.9095.3104.407.754.0415.142.046.030.266.030.266.073.8781.011.4020.573.8781.011.4020.573.8781.011.4020.573.8781.011.1021.9915.696.912.899.696.773.8713.9914.111.657		661.70	21.0		
 135.50 23.1 127.31 94.0 135.80 23.0 139.14 87.1 148.80 22.5 135.41 91.0 127.00 28 114.57 90.2 88.09 20.7 78.16 88.7 89.50 19.3 158.30 23.2 140.05 88.5 89.50 19.3 123.70 23.0 23.0 140.05 85.5 89.50 19.3 22.60 21.3 82.60 20.5 78.70 18.7 34.77 17.0 25.69 6.2 48.47 92.9 15.30 95.5 182.94 91.0 22.69 7.7 168.90 92.6 21.19 16.2 198.91 93.8 36.6 6.5 34.98 91.7 33.07 6.2 48.94 91.7 33.07 6.2 38.16 6.5 34.98 91.7 33.07 6.2 33.06 6.1 22.5 32.05 6.0 28.52 89.0 158.10 13.8 150.60 95.3 10.439 10.5 88.50 10.2 11.4 14.7 14.1 14.7 14.1 14.7 14.1 14.	Rhamdia quelen (OC)	112.30	21.4	104.19	92.8
Pinelodus punctatus (OC) 155.10 23.0 13.14 155.10 22.5 13.541 91.541 91.541 90.2 88.09 20.7 78.16 88.7 88.09 20.1 78.16 88.7 89.32 21.0 89.48 91.0 15.30 23.2 140.05 88.5 19.3 12.370 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 25.69 17.0 25.69 17.1 16.2 198.91 92.6 20.103 95 182.94 91.0 22.6 20.103 95. 182.94 91.0 22.6 20.103 95. 182.94 91.0 22.6 20.103 95. 182.94 91.0 22.6 20.103 95. 182.94 91.0 22.6 20.103 95. 182.94 91.0 22.6 20.103 95. 182.94 91.0 91.0 53.0 83.16 6.2 30.60 28.52 88.50 84.8 93.0 10.5 88.50 84.8 10.40 78.7 108.21 84.8 10.40 78.7 108.21 84.8 78.0 78.6 66.0 77.3 96.0 96.7 96.5 96.7 96.5 96.7 96.5 96.7 97.2 8.8 87.8 87.8 87.8 87.9 80.9 11.3 65.31 83.9 80.9 13.1 14.1 18.6 87.9 80.9 13.1 13.6 65.0 13.4 14.1 18.8 14.4 14.1 18.6 15.2 87.9 88.8 87.8 87.9 87.9 88.8 87.8 87.9 87.9 88.8 87.8 87.9 87.9 88.8 87.9 87.9 88.8 87.9 87.9 88.8 87.9 87.9 88.8 87.9 87.9 88.8 87.9 <p< th=""><th></th><th>135.50</th><th>23.1</th><th>127.31</th><th>94.0</th></p<>		135.50	23.1	127.31	94.0
Pinelodus punctatus (OC) 148.80 22.8 158.00 20.7 78.16 88.00 20.7 78.16 88.10 20.7 78.16 88.20 21.0 88.20 23.2 140.05 88.51 89.50 19.3 123.70 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.1 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 23.0 24.0 25.0 25.0 26.1 26.2 26.2 27.1 18.2.30 7.7 182.94 91.0 26.2 27.1 18.2.30 7.7 182.94 91.0 26.2 26.2 26.2 27.1 18.2.30 7.7 182.94 91.0 21.19 9.5 182.94 91.0 21.19 16.2 18.2.34 92.6 23.0 24.0 15.0 10.5 88.50 88.50 84.8 10.4 10.4 25.1 36.6 7.7 36.65 92.5 36.6 7.7 36.65 92.5 36.6 7.7 18.0 17.1 18.0 17.1 18.0 18.0 17.1 18.1 <th></th> <th>155.10</th> <th>23.0</th> <th>139.14</th> <th>89.7</th>		155.10	23.0	139.14	89.7
Pimelodus punctatus (OP) 12700 228 114.57 90.2 88.09 20.7 78.16 88.7 88.09 20.1 70.06 86.1 98.32 21.0 89.48 91.0 158.30 12.3 140.05 85.4 99.60 23.2 140.05 85.7 90.60 21.3 12.3 12.3 90.60 23.0 12.3 12.3 25.60 17.5 12.3 2.5 25.61 6.2 48.47 92.9 18.2 7.7 168.90 92.6 2010.3 9.5 182.94 91.0 21.9 16.2 19.89 13.8 39.63 7.2 36.65 92.5 38.16 6.5 34.98 91.7 33.07 6.2 30.50 84.8 104.39 10.5 85.50 84.8 104.39 10.5 85.50 84.8 104.39 10.5 85.60 84.8 104.39 10.5 85.60 7.3 104.40 7.7 7.3 10.8 7.3 105.2 2.66 7.3 1.3 7.5 12.60		148.80	22.5	135.41	91.0
 Non 20,7 78,16 88,7 Non 20,7 78,16 88,7 Non 20,7 78,16 88,7 Non 20,1 70,08 86,1 Non 20,2 1,0 89,48 91,0 Non 23,2 140,05 88,5 Non 23,2 140,05 88,5 Non 23,0 19,3 Non 23,0 19,3 Non 23,0 19,3 Non 20,0 23,0 Non 20,0 20,0 19,3 Non 20,0 19,0 19,0 19,0 19,0 19,0 19,0 19,0 1		127.00	22.8	114.57	90.2
Pinelodus punctatus (OC) 81.40 20.1 70.08 86.1 98.32 21.0 89.48 91.0 185.30 23.2 140.05 88.5 89.50 19.3 12.7 10.05 88.5 90.60 21.3 12.7 17.7 17.0 17.7 78.70 18.7 7.7 168.90 92.6 20.03 9.5 182.94 91.0 211.99 16.2 198.91 93.8 211.99 16.2 198.91 92.9 31.6 6.5 34.98 91.7 30.6 7.2 36.0 92.5 38.16 6.5 34.98 91.7 30.7 6.2 30.58 92.5 38.16 6.5 34.98 91.7 30.05 6.0 28.52 89.0 10.40 7.7 84.7 92.9 32.05 6.0 28.52 89.0 102.40 7.7 7.2 84.7 102.40 7.7 7.1 7.1 <		88.09	20.7	78.16	88.7
 Pis32 Pis32 Pis30 		81.40	20.1	70.08	86.1
183.0123140.0588.589.5019.312.312.3.7023.090.6021.385.6020.578.7018.734.7717025.6917.5123.007.7120.039.5182.307.7198.3193.839.616.2201.039.5182.307.238.166.538.166.538.166.238.166.230.710.582.056.020.056.020.056.020.0613.8104.3910.582.068.142.046.030.266.026.896.626.896.626.896.626.896.626.896.626.896.630.266.030.266.030.266.030.266.030.266.030.266.030.266.030.2615.091.2018.973.8781.991.2018.991.2018.991.2018.991.2018.9134.9914.111.4020.58.8876.895.795.395.795.395.813.395.485.3134.9914.1 <td< th=""><th></th><th>98.32</th><th>21.0</th><th>89.48</th><th>91.0</th></td<>		98.32	21.0	89.48	91.0
Pinelodus punctatus (OC) 89.50 19.3 123.70 23.00 21.3 82.60 20.5 82.60 17.5 182.30 7.7 168.20 91.62 188.29.4 91.62 91.62 91.62 91.62 91.62 91.62 91.65 91.7 16.2 90.9 91.62 91.65 91.7 16.2 90.9 91.62 90.9 91.7 91.62 90.9 90.9		158.30	23.2	140.05	88.5
Astyanax fasciatus (OC) 123,70 23.0 90,60 21.3 8,60 20.5 78.70 18.7 34.77 170 25.69 17.5 20103 9.5 188.90 92.6 20103 9.5 182.94 91.0 21.199 16.2 198.91 93.8 36.63 7.2 30.665 92.5 38.16 6.5 34.98 91.7 30.7 6.2 30.58 92.5 38.16 6.5 34.98 91.7 30.7 6.0 28.52 89.0 158.10 13.8 150.60 95.3 102.40 7.7 56.04 81.5 102.40 7.7 56.04 81.5 102.40 7.2 7.3 7.3 Pimelodus punctatus (OC) 15.0 40.65 7.7.3 11.40 20.5 24.00 16.5 7.1 12.05 16.6 7.2 7.3 7.3 111.40 13.6 121.68		89.50	19.3		
90.6021.382.6020.57.7018.734.7717.025.6917.510.309.5182.307.7182.9491.021.9916.219.916.233.076.233.076.233.076.233.076.233.076.233.076.235.669.5158.1013.8158.009.5158.1013.8104.3910.588.5084.8104.390.588.5084.8104.3910.588.5084.8104.3910.588.5084.8114.3910.588.5084.742.046028.96.674.607.271127.8011.4020.511.4020.511.4020.524.4016.511.4020.511.4020.524.4016.511.4020.524.4013.613.49914.113.49914.113.49914.113.49914.113.49914.113.49914.113.49914.113.49914.114.598.3313.49914.114.598.6315.213.415.213.415.4233		123.70	23.0		
82.6020.578.7018.734.7717.025.6917.582.307.7168.80201039.5182.94211.9916.2198.9139.637.236.6532.056.028.5238.166.534.9832.056.028.5232.056.028.5232.056.028.5230.6313.8100.6095.3158.1013.8104.3910.588.50102.407.756.046.626.896.674.607.2772.9027.8023.7108.2184.745.3017.035.4078.152.6015.972.8023.711.4020.520.6115.973.8781.011.4020.520.6115.973.8781.011.4020.511.4020.511.4020.511.4020.511.4013.611.4115.699.798.88.887.688.913.4914.115.2313.416.45.3113.417.583.413.4914.114.6915.413.4914.414.6915.499.798.880.9511.365.80 <td< th=""><th></th><th>90.60</th><th>21.3</th><th></th><th></th></td<>		90.60	21.3		
Astyanax fasciatus (OC)78.70 34.77 25.6917.7 17.0 25.6948.47 92.9 92.6 92.7 93.816 93.816 93.816 93.816 93.816 93.816 93.816 93.816 93.816 93.816 94.62 94.62 94.62 95.3 95.4 95.3 95.4 95.3 95.4 95.3 95.4 95.3 95.4 		82.60	20.5		
34.77 170 25.69 17.5 Astyanax fasciatus (0C) 182.30 7.7 168.90 92.6 182.30 7.7 168.90 92.6 201.03 9.5 182.94 91.0 39.63 7.2 36.65 92.5 38.16 6.5 34.98 91.7 33.07 6.2 30.58 92.5 32.05 6.0 28.52 89.0 32.05 6.0 28.52 89.0 104.39 10.5 88.50 84.8 102.40 7.7 - - 49.10 6.6 - - 26.89 6.6 - - 74.60 7.2 - - Pimelodus punctatus (OC) 127.80 23.7 108.21 84.7 45.30 17.0 35.40 78.1 91.20 18.9 73.87 81.0 111.40 20.5 - -		78.70	18.7		
Asyanax fasciatus (0C)25.6917.552.166.248.4792.9201.039.5182.9491.0211.9916.2198.9193.839.637.236.6592.538.166.534.9891.733.076.230.5892.538.166.534.9891.733.076.230.5892.532.056.028.5289.0104.1910.588.5084.8102.407.7102.407.756.048.1102.407.274.607.27.484.774.607.27.884.711.106.67.7.391.2015.040.657.7.391.2015.040.657.7.391.2015.040.657.7.391.2018.97.3.8781.052.6015.040.657.7.391.2018.97.3.8781.011.4020.524.406.573.4111.688.5.88.7.880.9511.36.6.3393.4165.729.69.6.779.1.599.798.88.607.9.191.978.88.607.9.191.978.88.607.9.191.978.88.607.9.191.978.88.607.9.191.978.88.607.9.1 <trr>91.978.88.6</trr>		34.77	17.0		
Astyanax fasciatus (OC)52.166.248.4792.9182.307.7188.9092.6201039.5182.9491.0211.9916.2198.9193.839.637.236.6592.533.076.230.5892.532.056.028.5289.0158.1013.8105.06085.3104.3910.588.5084.8102.407.756.0481.50.6084.8102.407.756.0481.0610.220.556.02.85.289.084.8102.407.756.0481.0610.220.56.02.85.289.084.8102.407.756.0484.730.026.02.884.730.056.02.87.3108.2184.77.37.820.2615.040.6577.391.2013.67.37.391.2013.67.37.391.2013.67.58.5111.4020.52.4121.6887.87.990.978.87.6887.980.9511.367.5683.4105.729.69.67791.599.798.87.6887.980.9511.367.5683.4105.729.69.67791.599.798.886.07.90154.2310.4<		25.69	17.5		
Image and (15) 12 7 168.90 92.6 20103 9.5 132.94 91.0 211.99 16.2 198.91 93.8 39.63 7.2 36.65 92.5 38.16 6.5 34.98 91.7 33.07 6.2 30.58 92.5 32.05 6.0 28.52 89.0 158.10 13.8 150.60 95.3 102.40 7.7 56.04 8.1 49.10 6.6	Astvanax fasciatus (OC)	52.16	6.2	48.47	92.9
201.03 9.5 182.94 91.0 211.99 16.2 198.91 93.8 39.63 7.2 36.65 92.5 38.16 6.5 34.98 91.7 33.07 6.2 30.58 92.5 32.05 6.0 28.52 89.0 158.10 13.8 150.60 95.3 104.39 10.5 88.50 84.8 102.40 7.7 56.04 8.1 42.04 6.0 26.89 6.6 74.60 7.2 7.3 7.3 91.02 18.9 7.3 7.3 91.02 16.0 7.3 7.3 91.02 18.9 7.3 7.3 91.02 15.0 40.65 7.3 91.02 18.9 7.3 7.3 91.02 18.9 7.3 7.3 91.02 18.9 7.3 7.3 91.02 16.5 7.3	····· · · ····· · · ····· · ··· ···	182.30	7.7	168.90	92.6
211.99 16.2 198.91 93.8 39.63 7.2 36.65 92.5 38.16 6.5 34.98 91.7 32.07 6.2 30.58 92.5 38.16 6.5 34.98 91.7 32.05 6.0 28.52 89.0 158.10 13.8 150.60 95.3 104.39 10.5 88.50 84.8 102.40 7.7 56.04 8.1 49.10 6.6 - - 74.60 7.2 - - 74.60 7.2 - - 74.60 7.2 - - 74.60 7.2 - - 74.60 7.2 - - - 74.60 7.2 - - - 74.60 7.2 - - - 74.60 7.2 - - - 9120 18.9 73.87		201.03	95	182.94	91.0
Andinoaccara Duel Tab. Tab. <thtab.< th=""> Tab. Tab.</thtab.<>		211 99	16.2	198 91	93.8
Jobb Jac Jobb Jac Jac </th <th></th> <th>39.63</th> <th>72</th> <th>36.65</th> <th>92.5</th>		39.63	72	36.65	92.5
Base Base Base Base Base 33.07 6.2 30.58 92.5 32.05 6.0 28.52 89.0 158.10 13.8 150.60 95.3 104.39 10.5 88.50 84.8 102.40 7.7 56.04 8.1 49.10 6.6		3816	65	34.98	917
J32.05 6.0 28.52 89.0 158.10 13.8 150.60 95.3 104.39 10.5 88.50 84.8 102.40 7.7 56.04 8.1		33.07	62	30.58	92.5
Andinoacara pulcher (OPV) 158.10 13.8 150.60 95.3 104.39 10.5 88.50 84.8 102.40 7.7 56.04 8.1 42.04 6.0 30.26 6.0 26.89 6.6		32.05	6.0	28 52	89.0
Pimelodus punctatus (OC) 10.5 85.50 84.8 102.40 7.7 56.04 8.1 49.10 6.6 56.04 8.1 42.04 6.0 30.26 6.0 26.89 6.6 7.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.6 24.40 16.5 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 164.53 14.8 154.44 93.9 164.53 14.8 154.44 93.9 164.53 14.8 154.44 93.9 164.53 14.8 154.44 93.9		158 10	13.8	150.60	95.3
102.40 7.7 56.04 8.1 49.10 6.6 42.04 6.0 30.26 6.0 26.89 6.6 74.60 7.2 Pimelodus punctatus (OC) 127.80 23.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5		104 39	10.5	88 50	84.8
56.04 8.1 49.10 6.6 42.04 6.0 30.26 6.0 26.89 6.6 74.60 7.2 Pimelodus punctatus (OC) 127.80 23.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 11.1 11.1 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 105.42 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45		102.40	77	00.50	04.0
40.04 6.0 42.04 6.0 30.26 6.0 26.89 6.6 74.60 7.2 Pimelodus punctatus (OC) 127.80 23.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5 24.40 16.5 7.8 11.3 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 145.43 14.4 14.64 93.9 154.23 10.4 126.46 82.0 154.23 10.4 126.46 82.0 121.66 9.5 88.60 <td< th=""><th></th><th>56.04</th><th>9.1</th><th></th><th></th></td<>		56.04	9.1		
42.04 6.0 30.26 6.0 26.89 6.6 74.60 7.2 Pimelodus punctatus (OC) 127.80 23.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 105.1 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0		49.10	66		
12.01 6.0 26.89 6.6 74.60 7.2 Pimelodus punctatus (OC) 127.80 23.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 134.99 14.1 118.56 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 47.45 83.5 34.50 7.3 8.9 14.10 16.6 12.16		42.04	6.0		
30.20 6.6 74.60 7.2 Pimelodus punctatus (OC) 127.80 23.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5 24.40 16.5 77.3 91.5 99.79 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 44.10 7.6 77.22 8.9 58.50 58.50 <		30.26	6.0		
Pimelodus punctatus (OC) 127.80 23.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 7.6 77.22 8.9 68.50 10.6 10.6 10.6 10.6		26.89	6.6		
Pimelodus punctatus (OC) 12780 23.7 108.21 84.7 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5		74 60	72		
Andinoacara pulcher (OPV) 121.0 25.7 162.1 78.1 45.30 17.0 35.40 78.1 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 105.12 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 164.53 14.8 154.44 93.9 154.23 10.4 126.466 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 73 24.10 7.6 77.22 8.9 58.60 79.0 68.50	Pimelodus nunctatus (OC)	127.80	23.7	108 21	847
45.50 17.6 52.60 15.0 40.65 77.3 91.20 18.9 73.87 81.0 111.40 20.5 24.40 16.5 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6	Timetouus punctutus (OC)	45 30	170	35.40	78.1
12.0 18.9 73.87 81.0 111.40 20.5 24.40 16.5 24.40 16.5 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		52.60	15.0	40.65	773
111.40 20.5 24.40 16.5 24.40 16.5 114.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 8.9 1.6		91.20	18.9	73.87	810
24.40 16.5 Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.9 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 58.50 10.6		111 40	20.5	, 3,07	01.0
Andinoacara pulcher (OPV) 141.69 13.6 121.68 85.9 134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		24.40	16.5		
134.99 14.1 118.56 87.8 105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6	Andinoacara pulcher (OPV)	141 69	13.6	121.68	85.9
105.72 9.6 96.77 91.5 99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6	mumoucuru putener (or v)	134.99	14.1	118 56	878
99.79 8.8 87.68 87.9 80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		105 72	96	96.77	91.5
80.95 11.3 67.55 83.4 60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		99.79	8.8	8768	879
60.31 10.1 56.33 93.4 164.53 14.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		80.95	11 3	67.55	83.4
164.53 164.8 154.44 93.9 154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 7.6 77.22 68.50 10.6 10.6		60.31	10.1	56.33	93.4
154.23 10.4 126.46 82.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		164 53	14.8	154 44	93.9
10.125 10.4 120.40 02.0 112.16 9.5 88.60 79.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		154 23	10.4	126.46	82.0
112.10 5.5 50.00 73.0 56.80 10.2 47.45 83.5 34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		112 16	95	88.60	79.0
34.50 7.3 24.10 7.6 77.22 8.9 68.50 10.6		56.80	10.2	47.45	83.5
24.10 7.6 77.22 8.9 68.50 10.6		34 50	73	17.75	05,5
77.22 8.9 68.50 10.6		24 10	76		
68.50 10.6		77.22	89		
00.50		68 50	10.6		
56.40 9.1		56.40	9.1		

Table 4 (continued)

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Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	21.30	8.8		
Leporinus muyscorum (0)	77.50	36.5	70.20	90.6
	67.23	35.0	60.70	90.3
	29.90	37.0	25.10	83.9
	221.89	52.0	207.50	93.5
	167.46	30.0	150.20	89.7
	88.74	23.0	81.70	92.1
	227.80	43.0	198.43	87.1 05 0
	150.90	33.7	129.54	85.8 85.0
	08 03	31.0	103.22 81.85	82.7
	185.45	35.0	01.05	02.7
	199.89	30.0		
	226.19	35.0		
	301.78	33.0		
	89.35	35.0		
	176.00	32.5		
	123.45	32.0		
Prochilodus magdalenae (D)	118.02	24.0	114.20	96.8
	26.91	27.0	20.20	75.1
	58.55	28.0	47.40	81.0
	52.69	28.0	46.10	87.5
	25.85	28.0	17.60	68.1
	57.25	30.0	50.70	88.6
	84.09	23.0	//.14	91.7
	41.51	27.0	52.00	79.0 84.2
	08.23	29.0	04.90 92 <i>4</i> 0	04.2
	50.25	33.0	52.40	88 7
	112.43	30.0	100.90	89.7
	80.43	34.0	70.55	87.7
	94.77	26.0	80.23	84.7
	73.80	25.0	60.58	82.1
	73.46	30.0	58.91	80.2
	65.50	28.0		
	69.10	34.0		
	106.82	24.0		
	120.93	27.0		
	33.41	26.0		
	117.00	27.0		
	47.20	36.0		
	45 78	33.0		
	91.64	25.0		
	216.27	26.7		
	124.44	27.1		
Hypostomus hondae (D)	93.30	27.2	77.96	83.6
	64.61	35.4	51.03	79.0
	56.45	29.3	46.50	82.4
	11.65	25.3	9.59	82.3
	77.30	24.1	64.45	83.4
	30.12	17.5	22.97	76.3
	25.00 27.05	20.5	13.11 21.44	70.4
	27.03 58.74	20.5	∠1. 11 43 32	73.8
	1736	19.4	13 40	772
	16.35	16.2	131.10	
	35.51	22.8		
	10.51	15.7		
	5.48	14.5		
	7.47	16.7		

Table 4 (continued)

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	6.19	18.6		
	6.85	15.8		
	26.96	28.0		
	31.74	27.0		
	22.04	25.0		
	163.18	50.0		
Cyphocharax magdalenae (D)	224.80	18.0	200.12	89.0
	113.40	10.2	93.54	82.5
	35.10	11.3	28.40	80.9
	129.50	15.4	110.60	85.4
	12.90	9.8		
	40.01	11.7		
	38.51	11.3		
	41.67	13.8		

Total mercury concentrations (THg), total length, methylmercury concentrations (MeHg) and percentage of methylmercury in fish captured in the Ciénaga de Unguía & Tumaradó (CUT) zone, Atrato River Basin, Colombia. P: piscivore, C: carnivore, OC: omnivore with a tendency to carnivore, O: omnivore, D: detritivore. The Ciénaga de Unguía is located in the municipality of Unguía in the northern zone of the Chocó Department ($8 \circ 01'11'' N 77 \circ 02'28'' W$). The Ciénaga de Tumaradó is located in the municipality of Turbo in the northwestern zone of the Antioquia Department ($7 \circ 46'12'' N 77 \circ 02'42'' W$).

Species	THg (µg kg ⁻¹)	Total length (cm)	MeHg (μ g kg ⁻¹)	% MeHg
Ageneiosus pardalis (P)	547.95	36.9	455.04	83.0
0 1 ()	88.13	34.1	70.52	80.0
	67.62	27.0	55.12	81.5
Hoplias malabaricus (P)	235.95	33.9	196.81	83.4
	146.05	34.6	122.72	84.0
	150.83	32.9	125.91	83.5
	169.28	27.8	153.28	90.5
	208.34	43.1		
	653.31	38.0		
	80.65	34.0		
Trachelyopterus fisheri (P)	183.69	21.2	154.73	84.2
	182.45	21.0	165.55	90.7
	91.22	17.6	76.21	83.5
Ctenolucius beani (C)	200.67	21.0	186.03	92.7
	225.26	21.4	205.37	91.2
	184.56	22.0	152.02	82.4
	200.77	18.5	192.06	95.7
Caquetaia umbrifera (C)	113.50	25.0	92.18	81.2
	68.02	24.5	50.65	74.5
Sternopygus macrurus (C)	173.03	67.0	153.11	88.5
	115.32	58.0	100.18	86.9
	177.03	69.0		
Caquetaia kraussii (OC)	184.30	24.0	146.66	79.6
	183.70	22.8	148.82	81.0
	87.90	23.2	80.75	91.9
	70.24	21.0		
	167.40	19.5		
	64.82	19.5		
Rhamdia quelen (OC)	124.49	27.7	91.11	73.2
	40.00	25.8	31.97	79.9
	89.58	23.7	66.98	74.8
	55.83	24.0	46.76	83.8
	49.05	29.0		
	38.24	26.5		
	43.00	24.0		
Astyanax fasciatus (OC)	56.13	16.1	49.10	87.5
	136.35	14.1	123.40	90.5
	59.44	15.0	48.76	82.0
Pimelodus punctatus (OC)	43.82	26.5	32.81	74.9
	48.72	23.0	40.16	82.4
Leporinus muyscorum (0)	46.40	26.1	40.75	87.8
	44.52	33.5	36.47	81.9
	26.73	33.0	20.80	77.8
Prochilodus magdalenae (D)	106.97	28.9	96.39	90.1
	52.72	28.9	39.42	74.8
	90.79	31.4	84.40	93.0
	67.04	30.3	52.86	78.8
	29.30	26.9	23.13	79.0
	64.87	26.9	54.01	83.3
	125.16	30.8	101.35	81.0
	46.69	30.9	38.40	82.2
	96.56	29.6	83.68	86.7
	81.55	32.0	58.59	/1.8
	56.75	28.2	42.07	74.1

Table 5 (continued)

Species	THg ($\mu g \ kg^{-1}$)	Total length (cm)	MeHg ($\mu g \ kg^{-1}$)	% MeHg
	68.83	32.5	60.90	88.5
	64.33	31.7	53.69	83.5
	96.50	30.3	81.23	84.2
	50.11	28.5	43.64	87.1
	89.99	29.2	70.31	78.1
	82.41	29.4	72.83	88.4
	93.27	27.8	72.59	77.8
	77.28	30.3	61.05	79.0
	104.34	31.7	85.11	81.6
	41.78	29.8	33.79	80.9
	83.25	29.9	69.99	84.1
	308.13	28.4		
	63.46	25.0		
	79.77	28.0		
	35.02	29.9		
	72.90	32.1		
	138.24	28.8		
Hypostomus hondae (D)	25.61	23.8	19.58	76.4
	67.73	40.5	54.94	81.1
	53.67	41.0	39.19	73.0
	52.82	38.4	47.20	89.4
	76.62	39.0		
	53.33	25.1		
	55.85	36.0		
Cyphocharax magdalenae (D)	21.20	18.5	16.12	76.0
	27.57	18.8	22.73	82.4
	28.59	19.0	21.66	75.8
	32.55	20.5	29.04	89.2

2. Experimental Design, Materials and Methods

2.1. Sampling collection

The fish samples were obtained in five areas of the Atrato River Basin, between April and December 2019, subsequently classified using specialized keys [4]. A total of 842 samples were obtained, the length and weight of the fish were measured and a portion of dorsal muscle of 20–50 grams (g) was taken. The samples obtained were stored in polyethylene bags and refrigerated until the measurement of THg and MeHg concentrations.

2.2. Analysis of mercury species

To determine THg concentrations, fish samples were lyophilized for several days to dryness, then 0.02 g of sample was taken and introduced into a direct mercury analyzer (DMA-80 TRI-CELL, Milestone Inc., Italy), according the EPA 7473 method [5]. A certified dogfish muscle standard DORM-2 ($4.46 \pm 0.25 \ \mu g \ g^{-1}$) from NRCC was used for process quality control. The recovery percentage of THg (99.6 $\pm 0.2\%$, n = 3), the detection and quantification limit were calculated based on the methodology proposed by Marrugo-Negrete et al., [6].

For the measurements of MeHg concentrations, 0.2–0.3 g of fresh fish were used, the samples were subjected to digestion in a 50 mL centrifuge tube, with 10 mL of hydrobromic acid by manual shaking. To this solution 20 mL of toluene was added, then the mixture was stirred vigorously for 2 min (min). Then, the resulting mixture was centrifuged for 10 min at 3000 rpm, subsequently 15 mL of the upper organic phase were extracted, which were added in a 50 mL tubes containing 6.0 mL of 1% L-cysteine solution. Finally, a 100 µL aliquot of the aqueous phase was taken and injected into a direct mercury analyzer [7].

Ethics Statement

The authors declare that they have read and follow the ethical requirements for publication in Data in Brief.

CRediT Author Statement

Carlos Salazar-Camacho: Writing- Reviewing and Editing. **Manuel Salas-Moreno:** Performed the experiments, and data/evidence collection. Wrote the initial draft. **Roberth Paternina-Uribe**: Supervision, visualization of the Investigation. **José Marrugo-Negrete:** Developed and designed the methodology for investigation, provided reagents, materials, instrumentation and computing resources for direct mercury analyzer, critical review, commentary and revision for the pre-publication stage. **Sergi Díez:** Supervision, revision for the pre-publication stage.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships which have or could be perceived to have influenced the work reported in this article.

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