

TABLE S1 | Morphological data of *Potamotrygon motoro*. Natural History Museum, London (BMNH); Instituto de Investigación de Recursos Biológicos Alexander von Humboldt, Villa de Leyva (IAvH); Instituto de Ciencias Naturales, Bogotá (ICN - UNAL); Instituto de Investigaciones de la Amazonia Peruana, Iquitos (IIAP); Instituto Nacional de Pesquisas da Amazônia, Manaus (INPA); Museum für Naturkunde, Berlin, Germany (ZMB); Muséum national d'Histoire naturelle, Paris (MNHN); Museu de Historia Natural, Lima (MUSM); Naturhistorisches Museum, Vienna (NMW); Zoologisches Museum der Humboldt-Universität (ZMH).

<i>Potamotrygon motoro</i>	MNHN 1988- 809	M adult	IAvH uncat 23	M adult	IAvH uncat 24	M adult	IAvH uncat 2	M adult	IAvH uncat 1	M adult	MNHN A.1004	F adult
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	564	100.0	445	100.0	425	100.0	424	100.0	422	100.0	420	100.0
Interocular distance	81	14.4	73	16.4	65	15.3	58	13.7	60	14.2	62	14.8
Interspiracular distance	123	21.8	103	23.1	97	22.8	94	22.2	88	20.9	93	22.1
Eye length	12	2.1	14	3.1	14	3.3	15	3.5	12	2.8	10	2.4
Spiracle length	47	8.3	44	9.9	44	10.4	36	8.5	37	8.8	32	7.6
Preorbital length	129	22.9	122	27.4	104	24.5	101	23.8	101	23.9	99	23.6
Prenasal length	72	12.8	60	13.5	61	14.4	72	17.0	70	16.6	60	14.3
Preoral length	110	19.5	100	22.5	92	21.6	103	24.3	103	24.4	93	22.1
Internasal distance	48	8.5	39	8.8	34	8.0	36	8.5	33	7.8	37	8.8
Mouth width	64	11.3	61	13.7	50	11.8	43	10.1	42	10.0	50	11.9
Distance between the 1st pair of gill slits	154	27.3	135	30.3	119	28.0	115	27.1	103	24.4	123	29.3
Distance between the 5th pair of gill slits	109	19.3	115	25.8	93	21.9	85	20.0	80	19.0	92	21.9
Brachial basket length	97	17.2	72	16.2	67	15.8	74	17.5	69	16.4	76	18.1
Pelvic fin length	137	24.3	120	27.0	98	23.1	98	23.1	95	22.5	-	-
Pelvic fin width	220	39.0	245	55.1	248	58.4	205	48.3	200	47.4	-	-
Clasper external length	83	14.7	72	16.2	65	15.3	60	14.2	62	14.7	-	-
Clasper internal length	158	28.0	125	28.1	105	24.7	103	24.3	104	24.6	-	-
Tail length	343	60.8	-	-	243	57.2	-	-	-	-	-	-
Tail width	58	10.3	48	10.8	43	10.1	-	-	42	10.0	-	-
Precloacal length	428	75.9	-	-	359	84.5	390	92.0	363	86.0	-	-
Axilla of the pelvic fin	53	9.4	40	9.0	36	8.5	35	8.3	43	10.2	-	-
Sting length	-	-	-	-	-	-	-	-	-	-	89	21.2



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	INPA 37449	M adult	IAvH 11896	M adult	NMW 88291c	M adult	IAvH uncat 22	M adult	MUSM 11850	F adult	NMW 88291b	F adult
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	409	100.0	400	100.0	394	100.0	389	100.0	383	100.0	381	100.0
Interocular distance	58	14.2	67	16.8	66	16.8	65	16.7	69	18.0	70	18.4
Interspiracular distance	90	22.0	105	26.3	87	22.1	96	24.7	93	24.3	92	24.1
Eye length	13	3.2	15	3.8	14	3.6	13	3.3	13	3.4	10	2.6
Spiracle length	30	7.3	31	7.8	37	9.4	42	10.8	35	9.1	40	10.5
Preorbital length	102	24.9	82	20.5	115	29.2	95	24.4	88	23.0	96	25.2
Prenasal length	67	16.4	75	18.8	70	17.8	75	19.3	70	18.3	64	16.8
Preoral length	92	22.5	102	25.5	103	26.1	104	26.7	102	26.6	95	24.9
Internasal distance	31	7.6	38	9.5	34	8.6	35	9.0	38	9.9	37	9.7
Mouth width	50	12.2	46	11.5	52	13.2	48	12.3	46	12.0	45	11.8
Distance between the 1st pair of gill slits	105	25.7	112	28.0	105	26.6	112	28.8	108	28.2	112	29.4
Distance between the 5th pair of gill slits	84	20.5	88	22.0	79	20.1	88	22.6	86	22.5	89	23.4
Brachial basket length	64	15.6	69	17.3	60	15.2	69	17.7	70	18.3	70	18.4
Pelvic fin length	100	24.4	88	22.0	100	25.4	83	21.3	90	23.5	70	18.4
Pelvic fin width	201	49.1	245	61.3	241	61.2	240	61.7	251	65.5	250	65.6
Clasper external length	59	14.4	58	14.5	82	20.8	71	18.3	-	-	-	-
Clasper internal length	-	-	99	24.8	104	26.4	110	28.3	-	-	-	-
Tail length	-	-	300	75.0	296	75.1	318	81.7	385	100.5	346	90.8
Tail width	40	9.8	46	11.5	46	11.7	45	11.6	58	15.1	43	11.3
Precloacal length	369	90.2	382	95.5	352	89.3	374	96.1	375	97.9	382	100.3
Axilla of the pelvic fin	37	9.0	34	8.5	36	9.1	41	10.5	48	12.5	42	11.0
Sting length	87	21.3	94	23.5	-	-	-	-	63	16.4	-	-



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH uncat 3	M adult	IAvH uncat 21	M adult	IAvH uncat 7	M adult	ZMB 21918	F adult	IAvH uncat 8	M adult	IAvH uncat 35	M adult
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	381	100.0	380	100.0	373	100.0	372	100.0	372	100.0	371	100.0
Interocular distance	54	14.2	54	14.2	58	15.5	63	16.9	56	15.1	57	15.4
Interspiracular distance	90	23.6	86	22.6	89	23.9	84	22.6	83	22.3	87	23.5
Eye length	11	2.9	13	3.4	13	3.5	9	2.4	12	3.2	12	3.2
Spiracle length	31	8.1	32	8.4	35	9.4	30	8.1	32	8.6	32	8.6
Preorbital length	95	24.9	94	24.7	93	24.9	89	23.9	92	24.7	89	24.0
Prenasal length	70	18.4	56	14.7	58	15.5	49	13.2	61	16.4	62	16.7
Preoral length	108	28.3	82	21.6	85	22.8	70	18.8	90	24.2	92	24.8
Internasal distance	35	9.2	31	8.2	33	8.8	25	6.7	32	8.6	29	7.8
Mouth width	45	11.8	37	9.7	50	13.4	39	10.5	44	11.8	38	10.2
Distance between the 1st pair of gill slits	106	27.8	100	26.3	112	30.0	90	24.2	104	28.0	91	24.5
Distance between the 5th pair of gill slits	90	23.6	75	19.7	82	22.0	68	18.3	77	20.7	68	18.3
Brachial basket length	66	17.3	62	16.3	64	17.2	58	15.6	61	16.4	59	15.9
Pelvic fin length	100	26.2	72	18.9	75	20.1	82	22.0	103	27.7	99	26.7
Pelvic fin width	192	50.4	184	48.4	215	57.6	148	39.8	192	51.6	219	59.0
Clasper external length	54	14.2	68	17.9	60	16.1	-	-	56	15.1	61	16.4
Clasper internal length	103	27.0	109	28.7	82	22.0	-	-	101	27.2	105	28.3
Tail length	278	73.0	277	72.9	285	76.4	254	68.3	284	76.3	286	77.1
Tail width	35	9.2	40	10.5	46	12.3	38	10.2	39	10.5	41	11.1
Precloacal length	375	98.4	334	87.9	334	89.5	295	79.3	343	92.2	322	86.8
Axilla of the pelvic fin	28	7.3	25	6.6	40	10.7	43	11.6	30	8.1	18	-
Sting length	78	20.5	77	20.3	-	-	81	21.8	77	20.7	66	17.8



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	MUSM 8239	F adult	IAvH 2887	M adult	IAvH uncat 6	M adult	MNHN 1988- 810	F adult	NMW 78061	F adult	IAvH 4582	M adult
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	367	100.0	365	100.0	360	100.0	360	100.0	356	100.0	348	100.0
Interocular distance	63	17.2	51	14.0	58	16.1	60	16.7	59	16.6	50	14.4
Interspiracular distance	90	24.5	80	21.9	85	23.6	73	20.3	82	23.0	74	21.3
Eye length	13	3.5	12	3.3	12	3.3	11	3.1	11	3.1	12	3.4
Spiracle length	32	8.7	31	8.5	31	8.6	32	8.9	28	7.9	32	9.2
Preorbital length	90	24.5	80	21.9	95	26.4	74	20.6	90	25.3	92	26.4
Prenasal length	59	16.1	57	15.6	57	15.8	50	13.9	43	12.1	51	14.7
Preoral length	88	24.0	82	22.5	87	24.2	71	19.7	85	23.9	75	21.6
Internasal distance	31	8.4	31	8.5	30	8.3	25	6.9	30	8.4	27	7.8
Mouth width	44	12.0	42	11.5	37	10.3	30	8.3	40	11.2	32	9.2
Distance between the 1st pair of gill slits	102	27.8	96	26.3	98	27.2	95	26.4	100	28.1	86	24.7
Distance between the 5th pair of gill slits	74	20.2	72	19.7	73	20.3	52	14.4	70	19.7	65	18.7
Brachial basket length	63	17.2	66	18.1	58	16.1	54	15.0	58	16.3	47	13.5
Pelvic fin length	84	22.9	86	23.6	84	23.3	70	19.4	77	21.6	80	23.0
Pelvic fin width	234	63.8	208	57.0	161	44.7	212	58.9	211	59.3	169	48.6
Clasper external length	-	-	56	15.3	53	14.7	-	-	-	-	65	18.7
Clasper internal length	-	-	93	25.5	103	28.6	-	-	-	-	79	22.7
Tail length	253	68.9	218	59.7	275	76.4	236	65.6	-	-	240	69.0
Tail width	40	10.9	35	9.6	41	11.4	45	12.5	44	12.4	35	10.1
Precloacal length	330	89.9	317	86.8	319	88.6	324	90.0	308	86.5	269	77.3
Axilla of the pelvic fin	43	11.7	27	7.4	22	6.1	38	10.6	43	12.1	32	9.2
Sting length	81	22.1	64	17.5	77	21.4	-	-	-	-	69	19.8



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH 4683	M adult	IAvH uncat 5	F adult	IAvH uncat 18	M adult	IAvH uncat 19	M adult	IAvH uncat 34	M adult	MNHN A.1003	M adult
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	344	100.0	338	100.0	336	100.0	330	100.0	327	100.0	323	100.0
Interocular distance	55	16.0	54	16.0	50	14.9	52	15.8	50	15.3	55	17.0
Interspiracular distance	84	24.4	73	21.6	82	24.4	80	24.2	74	22.6	74	22.9
Eye length	13	3.8	11	3.3	12	3.6	12	3.6	11	3.4	10	3.1
Spiracle length	28	8.1	29	8.6	30	8.9	31	9.4	27	8.3	29	9.0
Preorbital length	81	23.5	73	21.6	87	25.9	76	23.0	80	24.5	80	24.8
Prenasal length	56	16.3	53	15.7	61	18.2	50	15.2	47	14.4	48	14.9
Preoral length	80	23.3	76	22.5	85	25.3	78	23.6	74	22.6	72	22.3
Internasal distance	28	8.1	24	7.1	29	8.6	29	8.8	26	8.0	29	9.0
Mouth width	40	11.6	32	9.5	38	11.3	35	10.6	34	10.4	40	12.4
Distance between the 1st pair of gill slits	88	25.6	88	26.0	95	28.3	89	27.0	84	25.7	89	27.6
Distance between the 5th pair of gill slits	66	19.2	70	20.7	65	19.3	67	20.3	67	20.5	69	21.4
Brachial basket length	55	16.0	54	16.0	57	17.0	59	17.9	51	15.6	50	15.5
Pelvic fin length	71	20.6	73	21.6	72	21.4	78	23.6	79	24.2	75	23.2
Pelvic fin width	196	57.0	210	62.1	191	56.8	186	56.4	178	54.4	175	54.2
Clasper external length	62	18.0	-	-	63	18.8	60	18.2	53	16.2	60	18.6
Clasper internal length	88	25.6	-	-	88	26.2	89	27.0	83	25.4	95	29.4
Tail length	230	66.9	247	73.1	268	79.8	-	-	-	-	255	78.9
Tail width	41	11.9	35	10.4	37	11.0	37	11.2	34	10.4	35	10.8
Precloacal length	298	86.6	-	-	327	97.3	318	96.4	282	86.2	283	87.6
Axilla of the pelvic fin	25	7.3	32	9.5	28	8.3	32	9.7	12	-	27	8.4
Sting length	76	22.1	67	19.8	-	-	-	-	-	-	69	21.4



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH uncat 20	M adult	IAvH uncat 41	M adult	ICN 12973	M adult	MUSM 6828	M adult	MUSM no id .6.	F adult	IAvH 11891	M adult
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	321	100.0	318	100.0	316	100.0	285	100.0	285	100.0	278	100.0
Interocular distance	47	14.6	50	15.7	43	13.6	39	13.7	46	16.1	49	17.6
Interspiracular distance	67	20.9	72	22.6	62	19.6	58	20.4	67	23.5	60	21.6
Eye length	11	3.4	11	3.5	10	3.2	11	3.9	12	4.2	9	3.2
Spiracle length	26	8.1	27	8.5	24	7.6	23	8.1	27	9.5	24	8.6
Preorbital length	86	26.8	76	23.9	75	23.7	59	20.7	63	22.1	59	21.2
Prenasal length	48	15.0	48	15.1	50	15.8	40	14.0	45	15.8	43	15.5
Preoral length	69	21.5	74	23.3	69	21.8	57	20.0	63	22.1	62	22.3
Internasal distance	25	7.8	26	8.2	24	7.6	23	8.1	25	8.8	23	8.3
Mouth width	38	11.8	38	11.9	31	9.8	30	10.5	32	11.2	28	10.1
Distance between the 1st pair of gill slits	87	27.1	82	25.8	73	23.1	67	23.5	76	26.7	75	27.0
Distance between the 5th pair of gill slits	70	21.8	62	19.5	61	19.3	56	19.6	57	20.0	57	20.5
Brachial basket length	48	15.0	52	16.4	48	15.2	45	15.8	45	15.8	47	16.9
Pelvic fin length	68	21.2	79	24.8	69	21.8	65	22.8	57	20.0	55	19.8
Pelvic fin width	190	59.2	174	54.7	135	42.7	143	50.2	160	56.1	168	60.4
Clasper external length	56	17.4	54	17.0	45	14.2	50	17.5	-	-	54	19.4
Clasper internal length	81	25.2	86	27.0	79	25.0	71	24.9	-	-	80	28.8
Tail length	249	77.6	238	74.8	279	88.3	252	88.4	187	65.6	202	72.7
Tail width	32	10.0	35	11.0	37	11.7	25	8.8	33	11.6	33	11.9
Precloacal length	274	85.4	273	85.8	268	84.8	230	80.7	247	86.7	265	95.3
Axilla of the pelvic fin	30	9.3	30	9.4	17	5.4	23	8.1	-	-	25	9.0
Sting length	-	-	68	21.4	52	16.5	74	26.0	48	16.8	-	-



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH 11892	F adult	IAvH 4725-1	M adult	IAvH uncat 40	F adult	MUSM no id	M adult	IAvH uncat 36	M adult	IAvH uncat 12	F juvenile
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	276	100.0	273	100.0	268	100.0	265	100.0	265	100.0	265	100.0
Interocular distance	47	17.0	39	14.3	43	16.0	44	16.6	46	17.4	42	15.8
Interspiracular distance	63	22.8	60	22.0	61	22.8	70	26.4	56	21.1	60	22.6
Eye length	10	3.6	10	3.7	12	4.5	10	3.8	9	3.4	10	3.8
Spiracle length	24	8.7	25	9.2	25	9.3	23	8.7	26	9.8	23	8.7
Preorbital length	65	23.6	50	18.3	74	27.6	62	23.4	63	23.8	68	25.7
Prenasal length	40	14.5	32	11.7	45	16.8	42	15.8	44	16.6	37	14.0
Preoral length	62	22.5	52	19.0	68	25.4	60	22.6	63	23.8	53	20.0
Internasal distance	22	8.0	22	8.1	22	8.2	23	8.7	20	7.5	20	7.5
Mouth width	28	10.1	28	10.3	32	11.9	30	11.3	28	10.6	28	10.6
Distance between the 1st pair of gill slits	76	27.5	73	26.7	72	26.9	74	27.9	66	24.9	73	27.5
Distance between the 5th pair of gill slits	60	21.7	54	19.8	54	20.1	56	21.1	49	18.5	58	21.9
Brachial basket length	48	17.4	46	16.8	44	16.4	48	18.1	41	15.5	40	15.1
Pelvic fin length	60	21.7	56	20.5	72	26.9	54	20.4	65	24.5	54	20.4
Pelvic fin width	182	65.9	147	53.8	165	61.6	162	61.1	161	60.8	145	54.7
Clasper external length	-	-	50	18.3	-	-	55	20.8	47	17.7	-	-
Clasper internal length	-	-	68	24.9	-	-	84	31.7	70	26.4	-	-
Tail length	224	81.2	-	-	190	70.9	187	70.6	210	79.2	196	74.0
Tail width	32	11.6	30	11.0	30	11.2	31	11.7	29	10.9	28	10.6
Precloacal length	-	-	224	82.1	245	91.4	241	90.9	-	-	225	84.9
Axilla of the pelvic fin	25	9.1	19	7.0	32	11.9	24	9.1	24	9.1	30	11.3
Sting length	47	17.0	-	-	60	22.4	72	27.2	61	23.0	41	15.5



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH 11892	F adult	IAvH 4725-1	M adult	IAvH uncat 40	F adult	MUSM no id	M adult	IAvH uncat 36	M adult	IAvH uncat 12
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm
Disc width	276	100.0	273	100.0	268	100.0	265	100.0	265	100.0	265
Interocular distance	47	17.0	39	14.3	43	16.0	44	16.6	46	17.4	42
Interspiracular distance	63	22.8	60	22.0	61	22.8	70	26.4	56	21.1	60
Eye length	10	3.6	10	3.7	12	4.5	10	3.8	9	3.4	10
Spiracle length	24	8.7	25	9.2	25	9.3	23	8.7	26	9.8	23
Preorbital length	65	23.6	50	18.3	74	27.6	62	23.4	63	23.8	68
Prenasal length	40	14.5	32	11.7	45	16.8	42	15.8	44	16.6	37
Preoral length	62	22.5	52	19.0	68	25.4	60	22.6	63	23.8	53
Internasal distance	22	8.0	22	8.1	22	8.2	23	8.7	20	7.5	20
Mouth width	28	10.1	28	10.3	32	11.9	30	11.3	28	10.6	28
Distance between the 1st pair of gill slits	76	27.5	73	26.7	72	26.9	74	27.9	66	24.9	73
Distance between the 5th pair of gill slits	60	21.7	54	19.8	54	20.1	56	21.1	49	18.5	58
Brachial basket length	48	17.4	46	16.8	44	16.4	48	18.1	41	15.5	40
Pelvic fin length	60	21.7	56	20.5	72	26.9	54	20.4	65	24.5	54
Pelvic fin width	182	65.9	147	53.8	165	61.6	162	61.1	161	60.8	145
Clasper external length	-	-	50	18.3	-	-	55	20.8	47	17.7	-
Clasper internal length	-	-	68	24.9	-	-	84	31.7	70	26.4	-
Tail length	224	81.2	-	-	190	70.9	187	70.6	210	79.2	196
Tail width	32	11.6	30	11.0	30	11.2	31	11.7	29	10.9	28
Precloacal length	-	-	224	82.1	245	91.4	241	90.9	-	-	225
Axilla of the pelvic fin	25	9.1	19	7.0	32	11.9	24	9.1	24	9.1	30
Sting length	47	17.0	-	-	60	22.4	72	27.2	61	23.0	41



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	MUSM 9967	M juvenile	IAvH uncat 44	M adult	ZMB 4661	M juvenile	IAvH uncat 11	M juvenile	IAvH uncat 14	M juvenile	NMW 88291a	F juvenile
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	261	100.0	254	100.0	254	100.0	250	100.0	250	100.0	247	100.0
Interocular distance	42	16.1	40	15.7	34	13.4	38	15.2	38	15.2	37	15.0
Interspiracular distance	60	23.0	57	22.4	47	18.5	53	21.2	54	21.6	51	20.6
Eye length	11	4.2	9	3.5	8	3.1	11	4.4	9	3.6	9	3.6
Spiracle length	22	8.4	21	8.3	20	7.9	18	7.2	20	8.0	23	9.3
Preorbital length	59	22.6	63	24.8	66	26.0	61	24.4	62	24.8	60	24.3
Prenasal length	42	16.1	41	16.1	41	16.1	59	-	37	14.8	37	15.0
Preoral length	61	23.4	62	24.4	55	21.7	57	22.8	54	21.6	55	22.3
Internasal distance	23	8.8	22	8.7	17	6.7	20	8.0	18	7.2	21	8.5
Mouth width	28	10.7	28	11.0	23	9.1	24	9.6	24	9.6	28	11.3
Distance between the 1st pair of gill slits	67	25.7	65	25.6	59	23.2	60	24.0	60	24.0	64	25.9
Distance between the 5th pair of gill slits	49	18.8	49	19.3	42	16.5	47	18.8	45	18.0	46	18.6
Brachial basket length	41	15.7	42	16.5	37	14.6	38	15.2	38	15.2	40	16.2
Pelvic fin length	57	21.8	59	23.2	51	20.1	59	23.6	57	22.8	53	21.5
Pelvic fin width	148	56.7	156	61.4	150	59.1	101	40.4	92	36.8	144	58.3
Clasper external length	30	11.5	46	18.1	10	3.9	16	6.4	26	10.4	-	-
Clasper internal length	50	19.2	77	30.3	30	11.8	29	11.6	32	12.8	-	-
Tail length	172	65.9	195	76.8	262	103.1	209	83.6	180	72.0	209	84.6
Tail width	31	11.9	29	11.4	27	10.6	27	10.8	26	10.4	24	9.7
Precloacal length	217	83.1	221	87.0	210	82.7	207	82.8	208	83.2	204	82.6
Axilla of the pelvic fin	28	10.7	22	8.7	21	8.3	20	8.0	15	6.0	28	11.3
Sting length	54	20.7	60	23.6	58	22.8	40	16.0	42	16.8	60	24.3



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH uncat 39	F juvenile	MNHN 1988-808	F juvenile	IAvH uncat 37	M juvenile	IAvH 11884	F juvenile	IAvH uncat 43	M juvenile	IAvH uncat 38	F juvenile
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	246	100.0	245	100.0	244	100.0	242	100.0	234	100.0	234	100.0
Interocular distance	38	15.4	47	19.2	39	16.0	40	16.5	39	16.7	38	16.2
Interspiracular distance	57	23.2	61	24.9	52	21.3	53	21.9	52	22.2	48	20.5
Eye length	9	3.7	10	4.1	9	3.7	8	3.3	9	3.8	8	3.4
Spiracle length	22	8.9	25	10.2	19	7.8	21	8.7	20	8.5	22	9.4
Preorbital length	60	24.4	60	24.5	64	26.2	54	22.3	62	26.5	53	22.6
Prenasal length	45	18.3	42	17.1	37	15.2	36	14.9	42	17.9	33	14.1
Preoral length	62	25.2	60	24.5	58	23.8	53	21.9	62	26.5	51	21.8
Internasal distance	19	7.7	21	8.6	20	8.2	18	7.4	20	8.5	19	8.1
Mouth width	26	10.6	26	10.6	28	11.5	24	9.9	25	10.7	24	10.3
Distance between the 1st pair of gill slits	63	25.6	70	28.6	67	27.5	66	27.3	62	26.5	58	24.8
Distance between the 5th pair of gill slits	45	18.3	53	21.6	46	18.9	47	19.4	44	18.8	45	19.2
Brachial basket length	42	17.1	43	17.6	39	16.0	41	16.9	41	17.5	37	15.8
Pelvic fin length	65	26.4	60	24.5	52	21.3	58	24.0	57	24.4	62	26.5
Pelvic fin width	136	55.3	146	59.6	132	54.1	140	57.9	147	62.8	122	52.1
Clasper external length	-	-	-	-	36	14.8	-	-	33	14.1	-	-
Clasper internal length	-	-	-	-	59	24.2	-	-	55	23.5	-	-
Tail length	188	76.4	215	87.8	220	90.2	-	-	218	93.2	177	75.6
Tail width	28	11.4	30	12.2	26	10.7	32	13.2	25	10.7	24	10.3
Precloacal length	218	88.6	227	92.7	217	88.9	213	88.0	213	91.0	188	80.3
Axilla of the pelvic fin	29	11.8	30	12.2	12	4.9	30	12.4	21	9.0	28	12.0
Sting length	65	26.4	47	19.2	60	24.6	-	-	54	23.1	57	24.4



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH uncat 13	M juvenile	INPA 37445b	F juvenile	NMW 78655	M juvenile	IAvH uncat 42	F juvenile	IAvH uncat 16	M juvenile	IAvH uncat 29	M juvenile
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	226	100.0	222	100.0	215	100.0	211	100.0	206	100.0	206	100.0
Interocular distance	36	15.9	32	14.4	33	15.3	33	15.6	31	15.0	29	14.1
Interspiracular distance	50	22.1	51	23.0	47	21.9	44	20.9	46	22.3	44	21.4
Eye length	10	4.4	11	5.0	9	4.2	8	3.8	8	3.9	10	4.9
Spiracle length	18	8.0	18	8.1	19	8.8	19	9.0	17	8.3	18	8.7
Preorbital length	53	23.5	54	24.3	54	25.1	54	25.6	53	25.7	52	25.2
Prenasal length	37	16.4	33	14.9	35	16.3	29	13.7	33	16.0	35	17.0
Preoral length	53	23.5	49	22.1	49	22.8	45	21.3	48	23.3	48	23.3
Internasal distance	18	8.0	18	8.1	17	7.9	17	8.1	17	8.3	16	7.8
Mouth width	21	9.3	26	11.7	23	10.7	23	10.9	22	10.7	20	9.7
Distance between the 1st pair of gill slits	58	25.7	-	-	53	24.7	52	24.6	51	24.8	50	24.3
Distance between the 5th pair of gill slits	43	19.0	-	-	49	22.8	37	17.5	41	19.9	37	18.0
Brachial basket length	36	15.9	-	-	34	15.8	32	15.2	32	15.5	31	15.0
Pelvic fin length	63	27.9	58	26.1	53	24.7	52	24.6	52	25.2	53	25.7
Pelvic fin width	92	40.7	136	61.3	133	61.9	121	57.3	97	47.1	104	50.5
Clasper external length	14	6.2	39	17.6	10	4.7	-	-	12	5.8	10	4.9
Clasper internal length	26	11.5	58	26.1	25	11.6	-	-	28	13.6	22	10.7
Tail length	191	84.5	185	83.3	181	84.2	160	75.8	168	81.6	165	80.1
Tail width	25	11.1	27	12.2	22	10.2	22	10.4	22	10.7	19	9.2
Precloacal length	195	86.3	190	85.6	182	84.7	174	82.5	174	84.5	173	84.0
Axilla of the pelvic fin	22	9.7	17	7.7	23	10.7	22	10.4	21	10.2	14	6.8
Sting length	45	19.9	60	27.0	45	20.9	50	23.7	47	22.8	39	18.9



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH uncat 9	F juvenile	IAvH uncat 17	M juvenile	ZMB 4662	F juvenile	NMW 87239	F juvenile	IAvH uncat 28	M juvenile	MNHN 1988-807	M juvenile
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	203	100.0	200	100.0	199	100.0	198	100.0	197	100.0	196	100.0
Interocular distance	32	15.8	34	17.0	25	12.6	34	17.2	30	15.2	35	17.9
Interspiracular distance	44	21.7	45	22.5	33	16.6	43	21.7	45	22.8	50	25.5
Eye length	8	3.9	9	4.5	6	3.0	8	4.0	9	4.6	8	4.1
Spiracle length	13	6.4	18	9.0	16	8.0	16	8.1	18	9.1	19	9.7
Preorbital length	52	25.6	49	24.5	52	26.1	44	22.2	47	23.9	48	24.5
Prenasal length	34	16.7	34	17.0	35	17.6	28	14.1	32	16.2	37	18.9
Preoral length	48	23.6	47	23.5	45	22.6	41	20.7	45	22.8	51	26.0
Internasal distance	15	7.4	16	8.0	-	-	16	8.1	15	7.6	18	9.2
Mouth width	22	10.8	22	11.0	-	-	20	10.1	21	10.7	21	10.7
Distance between the 1st pair of gill slits	48	23.6	49	24.5	48	24.1	49	24.7	47	23.9	54	27.6
Distance between the 5th pair of gill slits	37	18.2	38	19.0	37	18.6	37	18.7	37	18.8	40	20.4
Brachial basket length	31	15.3	32	16.0	28	14.1	30	15.2	29	14.7	34	17.3
Pelvic fin length	40	19.7	47	23.5	57	28.6	39	19.7	52	26.4	42	21.4
Pelvic fin width	98	48.3	110	55.0	98	49.2	110	55.6	90	45.7	115	58.7
Clasper external length	-	-	10	5.0	-	-	-	-	10	5.1	10	5.1
Clasper internal length	-	-	22	11.0	-	-	-	-	20	10.2	24	12.2
Tail length	154	75.9	141	70.5	162	81.4	158	79.8	162	82.2	182	92.9
Tail width	20	9.9	16	8.0	20	10.1	20	10.1	17	8.6	25	12.8
Precloacal length	169	83.3	170	85.0	166	83.4	153	77.3	163	82.7	179	91.3
Axilla of the pelvic fin	18	8.9	16	8.0	22	11.1	14	7.1	14	7.1	16	8.2
Sting length	40	19.7	48	24.0	36	18.1	45	22.7	42	21.3	45	23.0



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	IAvH uncat 4	M juvenile	INPA 37448	M juvenile	IAvH uncat 15	M juvenile	BMNH 1892. 12.19.1-2	F juvenile	BMNH 1935. 6.4.4	F juvenile	IAvH uncat 25	M juvenile
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	194	100.0	193	100.0	188	100.0	182	100.0	181	100.0	180	100.0
Interocular distance	31	16.0	27	14.0	30	16.0	28	15.4	26	14.4	28	15.6
Interspiracular distance	44	22.7	46	23.8	41	21.8	37	20.3	41	22.7	40	22.2
Eye length	8	4.1	9	4.7	8	4.3	7	3.8	8	4.4	8	4.4
Spiracle length	18	9.3	18	9.3	16	8.5	14	7.7	14	7.7	15	8.3
Preorbital length	49	25.3	49	25.4	46	24.5	41	22.5	37	20.4	46	25.6
Prenasal length	33	17.0	30	15.5	30	16.0	29	15.9	27	14.9	29	16.1
Preoral length	46	23.7	45	23.3	45	23.9	38	20.9	38	21.0	43	23.9
Internasal distance	16	8.2	16	8.3	16	8.5	15	8.2	14	7.7	14	7.8
Mouth width	21	10.8	19	9.8	23	12.2	14	7.7	16	8.8	19	10.6
Distance between the 1st pair of gill slits	47	24.2	49	25.4	49	26.1	47	25.8	45	24.9	45	25.0
Distance between the 5th pair of gill slits	37	19.1	39	20.2	37	19.7	34	18.7	33	18.2	34	18.9
Brachial basket length	30	15.5	30	15.5	29	15.4	28	15.4	29	16.0	27	15.0
Pelvic fin length	53	27.3	44	22.8	46	24.5	35	19.2	33	18.2	45	25.0
Pelvic fin width	106	54.6	113	58.5	117	62.2	100	54.9	96	53.0	97	53.9
Clasper external length	10	5.2	9	4.7	8	4.3	-	-	-	-	8	4.4
Clasper internal length	20	10.3	21	10.9	21	11.2	-	-	-	-	17	9.4
Tail length	155	79.9	168	87.0	141	75.0	173	95.1	135	74.6	140	77.8
Tail width	17	8.8	24	12.4	17	9.0	22	12.1	20	11.0	14	7.8
Precloacal length	167	86.1	166	86.0	158	84.0	145	79.7	148	81.8	152	84.4
Axilla of the pelvic fin	14	7.2	19	9.8	14	7.4	19	10.4	27	14.9	12	6.7
Sting length	48	24.7	44	22.8	38	20.2	42	23.1	39	21.5	40	22.2



TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	INPA 37445a	F juvenile	IAvH uncat 10	F juvenile	IAvH uncat 45	M juvenile	IAvH uncat 26	F juvenile	ZMB 12497	M juvenile	MNHN 1988- 1957	F juvenile
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	177	100.0	177	100.0	176	100.0	172	100.0	171	100.0	170	100.0
Interocular distance	25	14.1	28	15.8	27	15.3	24	14.0	26	15.2	27	15.9
Interspiracular distance	38	21.5	39	22.0	41	23.3	39	22.7	42	24.6	42	24.7
Eye length	8	4.5	8	4.5	8	4.5	9	5.2	7	4.1	7	4.1
Spiracle length	16	9.0	15	8.5	13	7.4	18	10.5	19	11.1	15	8.8
Preorbital length	44	24.9	45	25.4	46	26.1	38	22.1	45	26.3	43	25.3
Prenasal length	29	16.4	32	18.1	26	14.8	27	15.7	31	18.1	27	15.9
Preoral length	40	22.6	44	24.9	41	23.3	38	22.1	43	25.1	39	22.9
Internasal distance	13	7.3	14	7.9	15	8.5	13	7.6	16	9.4	13	7.6
Mouth width	18	10.2	18	10.2	17	9.7	17	9.9	20	11.7	15	8.8
Distance between the 1st pair of gill slits	43	24.3	45	25.4	41	23.3	41	23.8	48	28.1	42	24.7
Distance between the 5th pair of gill slits	33	18.6	32	18.1	35	19.9	31	18.0	34	19.9	31	18.2
Brachial basket length	27	15.3	28	15.8	27	15.3	25	14.5	30	17.5	28	16.5
Pelvic fin length	41	23.2	45	25.4	44	25.0	40	23.3	42	24.6	33	19.4
Pelvic fin width	99	55.9	73	41.2	106	60.2	72	41.9	90	52.6	98	57.6
Clasper external length	-	-	-	-	9	5.1	-	-	8	4.7	-	-
Clasper internal length	-	-	-	-	20	11.4	-	-	17	9.9	-	-
Tail length	155	87.6	125	70.6	149	84.7	117	68.0	143	83.6	137	80.6
Tail width	19	10.7	19	10.7	19	10.8	14	8.1	19	11.1	17	10.0
Precloacal length	150	84.7	153	86.4	147	83.5	140	81.4	157	91.8	138	81.2
Axilla of the pelvic fin	15	8.5	17	9.6	14	8.0	14	8.1	15	8.8	15	8.8
Sting length	44	24.9	33	18.6	45	25.6	39	22.7	47	27.5	39	22.9

TABLE S1 | (Continued)

<i>Potamotrygon motoro</i>	ZMH 4197b	M juvenile	ZMH 123458a	F juvenile	IAvH uncat 27	F juvenile	IAvH uncat 32	F juvenile	IAvH uncat 31	F juvenile	ICN 4383	M juvenile	ICN 12209	M juvenile
	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW	mm	%DW
Disc width	170	100.0	166	100.0	165	100.0	162	100.0	158	100.0	139	100.0	106	100.0
Interocular distance	29	17.1	29	17.5	26	15.8	26	16.0	26	16.5	21	15.1	18	17.0
Interspiracular distance	37	21.8	35	21.1	38	23.0	36	22.2	36	22.8	32	23.0	26	24.5
Eye length	8	4.7	8	4.8	8	4.8	8	4.9	8	5.1	7	5.0	7	6.6
Spiracle length	14	8.2	12	7.2	14	8.5	14	8.6	14	8.9	12	8.6	10	9.4
Preorbital length	45	26.5	42	25.3	39	23.6	22	-	41	25.9	32	23.0	28	26.4
Prenasal length	31	18.2	29	17.5	26	15.8	25	15.4	27	17.1	22	15.8	17	16.0
Preoral length	41	24.1	40	24.1	38	23.0	36	22.2	37	23.4	31	22.3	25	23.6
Internasal distance	12	7.1	12	7.2	13	7.9	12	7.4	13	8.2	10	7.2	9	8.5
Mouth width	16	9.4	15	9.0	17	10.3	17	10.5	18	11.4	12	8.6	11	10.4
Distance between the 1st pair of gill slits	41	24.1	41	24.7	41	24.8	37	22.8	39	24.7	36	25.9	28	26.4
Distance between the 5th pair of gill slits	30	17.6	30	18.1	29	17.6	29	17.9	30	19.0	27	19.4	20	18.9
Brachial basket length	24	14.1	25	15.1	26	15.8	23	14.2	24	15.2	22	15.8	17	16.0
Pelvic fin length	32	18.8	39	23.5	46	27.9	38	23.5	43	27.2	32	23.0	26	24.5
Pelvic fin width	81	47.6	89	53.6	72	43.6	80	49.4	76	48.1	77	55.4	52	49.1
Clasper external length	7	4.1	-	-	-	-	-	-	-	-	6	4.3	4	3.8
Clasper internal length	16	9.4	-	-	-	-	-	-	-	-	13	9.4	10	9.4
Tail length	114	67.1	134	80.7	127	77.0	144	88.9	110	69.6	124	89.2	96	90.6
Tail width	12	7.1	15	9.0	18	10.9	8	-	14	8.9	14	10.1	9	8.5
Precloacal length	137	80.6	143	86.1	136	82.4	136	84.0	136	86.1	120	86.3	92	86.8
Axilla of the pelvic fin	16	9.4	15	9.0	17	10.3	12	7.4	16	10.1	11	7.9	8	7.5
Sting length	42	24.7	31	18.7	34	20.6	28	17.3	35	22.2	31	22.3	26	24.5

TABLE S2 | Minimum, maximum, and standard deviation (SD) of each morphometric measurement in the sampled specimens.

Variable	Variable (in Portuguese)	SD	Minimum	Maximum
logDW	logLD	0.1610250382336894	2.025.305.865	2.751.279.104
logIOD	logDIO	0.16181443560036904	1.255.272.505	1.908.485.019
logIED	logDIE	0.161925352706004	1.414.973.348	2.089.905.111
logEL	logCO	0.09978663352191591	0.698970004	1.176.091.259
logSL	logCE	0.16502614649858183	0.954242509	1.672.097.858
logPOrbitalL	logCPORB	0.15960364572878166	1.447.158.031	211.058.971
logPNasalL	logCPN	0.15821632554331616	1.230.448.921	1.875.061.263
logPOralL	logCPORAL	0.16406435102186528	1.397.940.009	2.041.392.685
logIND	logDINasal	0.17179009894506236	0.954242509	1.681.241.237
logMW	logLB	0.18664890269461387	1.041.392.685	1.806.179.974
logD1stG	log1FB	0.17596296233301867	1.447.158.031	2.187.520.721
logD5thG	log5FB	0.18175507807202118	1.301.029.996	20.453.229.787.866.500
logBBL	logCcesta	0.17553694721499954	1.204.119.983	1.986.771.734
logPFW	logLNP	0.16316163911006729	1.380.211.242	2.136.720.567
logPFL	logCANP	0.1699014337905314	17.634.279.935.629.300	24.771.212.547.196.600
logCEL	logCEC	0.43577700762470434	0.602059991	1.919.078.092
logCIL	logCIC	0.35520222545385355	1.0	2.198.657.087
logTL	logCC	0.14265934874274186	1.982.271.233	258.546.073
logTW	logLC	0.1891492568571683	0.9542425094393249	1.763.427.994
logPCloacalL	logFC	0.17107716594364636	1.963.787.827	2.631.443.769
logAPF	logAX	0.19801874917462403	0.903089987	172.427.587
logSL	logCE	0.14606746173175492	1.361.727.836	1.973.127.854

TABLE S3 | Summary of the statistics for regressions of traits vs. disc width (DW) of measurements that did not reach the significance threshold after Bonferroni correction for multiple comparisons, comparing the sexes. n- number of analyzed specimens, b- slope, r²- determination coefficient. The p values were obtained from SMA (standardized major axis) analyses, table showing both original p values and p values adjusted after a Bonferroni correction for multiple comparisons.

Trait	n	Female		Male		p	p (Bonferroni)
		b	r ²	b	r ²		
Total Length	83	1.016	0.962	0.908	0.976	0.013	0.293
Disc Length	91	1.060	0.989	1.005	0.995	0.017	0.402
Branchial Basket Length	90	1.151	0.976	1.064	0.980	0.025	0.580
Tail Length	81	1.036	0.870	0.859	0.898	0.030	0.687
Precloacal Length	86	1.127	0.978	1.046	0.984	0.033	0.751
Interspiracular Distance	91	1.074	0.961	0.980	0.969	0.039	0.903
Distance between the 5th pair of gill slits	90	1.175	0.971	1.105	0.978	0.100	1.000
Tail Width	89	1.286	0.928	1.166	0.940	0.110	1.000
Axilla of the Pelvic Fin	89	1.357	0.863	1.185	0.884	0.115	1.000
Internasal Distance	90	1.124	0.944	1.039	0.969	0.129	1.000
Spiracle Length	91	1.099	0.909	1.000	0.947	0.146	1.000
Sting Width	77	1.336	0.738	1.119	0.781	0.149	1.000
Distance between cloaca and sting	81	1.252	0.918	1.146	0.942	0.184	1.000
Sting Length	73	1.031	0.795	0.945	0.856	0.422	1.000
Preoral Length	91	1.036	0.941	1.009	0.968	0.609	1.000
Mouth Width	90	1.175	0.958	1.147	0.959	0.610	1.000
Pelvic Fin Length	90	0.986	0.820	1.023	0.948	0.667	1.000
Prenasal Length	91	0.959	0.893	0.984	0.948	0.711	1.000
Preorbital Length	91	0.994	0.949	0.986	0.973	0.865	1.000
Eye Length	91	0.605	0.586	0.614	0.807	0.913	1.000

TABLE S4 | Summary of the statistics for regressions of traits vs. disc width (DW) of measurements that did not reach the significance threshold after Bonferroni correction for multiple comparisons, comparing the developmental stages. n- number of analyzed specimens, *b*- slope, *r*²- determination coefficient. The *p* values were obtained from SMA (standardized major axis) analyses, table showing both original *p* values and *p* values adjusted after a Bonferroni correction for multiple comparisons.

Trait	n	Juvenile		Adult		<i>p</i>	<i>p</i> (Bonferroni)
		<i>b</i>	<i>r</i> ²	<i>b</i>	<i>r</i> ²		
Interspiracular Distance	91	0.901	0.899	1.094	0.879	0.008	0.194
Sting Width	77	1.307	0.567	1.958	0.441	0.021	0.476
Tail Width	89	1.369	0.853	1.086	0.730	0.025	0.578
Distance between the 1st pair of gill slits	90	1.023	0.946	1.165	0.909	0.030	0.691
Internasal Distance	90	1.008	0.901	1.179	0.836	0.051	1.000
Preorbital Length	91	1.010	0.935	1.158	0.859	0.055	1.000
Preoral Length	91	1.003	0.937	1.166	0.788	0.069	1.000
Distance between the 5th pair of gill slits	90	1.063	0.951	1.174	0.867	0.140	1.000
Total Length	83	0.946	0.934	1.059	0.861	0.140	1.000
Prenasal Length	91	1.030	0.882	1.186	0.716	0.157	1.000
Mouth Width	90	1.141	0.904	1.276	0.817	0.175	1.000
Disc Length	91	1.009	0.983	1.051	0.965	0.246	1.000
Pelvic Fin Length	90	1.124	0.816	1.256	0.788	0.256	1.000
Spiracle Length	91	1.007	0.807	1.113	0.789	0.305	1.000
Eye Length	91	0.696	0.449	0.812	0.359	0.355	1.000
Pelvic Fin Width	90	1.095	0.901	1.007	0.728	0.383	1.000
Branchial Basket Length	90	1.068	0.951	1.118	0.882	0.473	1.000
Precloacal Length	86	1.028	0.973	1.065	0.855	0.607	1.000
Sting Length	73	1.071	0.663	1.165	0.464	0.635	1.000
Axilla of the Pelvic Fin	89	1.652	0.753	1.563	0.502	0.684	1.000
Tail Length	81	1.014	0.776	1.068	0.589	0.702	1.000
Distance between cloaca and sting	81	1.213	0.875	1.167	0.636	0.748	1.000
Interocular Distance	91	1.015	0.890	1.024	0.787	0.921	1.000

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