

Geographic variation of *Moenkhausia bonita* (Characiformes: Characidae) in the rio de la Plata basin, with distributional comments on *M. intermedia*

James Anyelo Vanegas-Ríos, Ricardo Britzke and Juan Marcos Mirande

Neotropical Ichthyology

Supplementary material

S3. List of loadings produced by PCA and DCA of the adjusted morphometric and meristic data. Values in bold indicate those loadings that are most heavily affecting the axes.

Variables	PCA				DCA		
	PC 1	PC 2	PC 3	PC 4	CA1	CA2	CA3
Measurements:							
Standard length (mm)	0.179	0.029	0.181	0.046	0.009	-0.006	-0.007
Depth at dorsal-fin origin	0.166	-0.121	0.140	0.118	0.000	-0.007	-0.003
Snout to dorsal-fin origin	0.207	0.063	0.137	0.040	0.011	-0.005	-0.004
Snout to pectoral-fin origin	0.138	0.122	0.002	-0.111	0.010	0.001	-0.008
Snout to pelvic-fin origin	0.165	0.096	0.131	0.097	0.010	-0.003	-0.001
Snout to anal-fin origin	0.210	0.103	0.185	0.070	0.014	-0.006	-0.002
Dorsal-fin to caudal-fin base	0.226	-0.091	0.231	0.068	0.007	-0.011	-0.009
Dorsal-fin length	0.189	-0.230	-0.050	-0.087	0.003	-0.013	-0.003
Pectoral-fin length	0.131	-0.237	-0.168	-0.161	0.003	-0.009	-0.005
Pelvic-fin length	0.085	-0.368	-0.513	-0.360	-0.004	-0.007	-0.002
Anal-fin lobe length	-0.157	-0.179	-0.487	0.701	-0.008	0.003	0.016
Caudal peduncle depth	0.038	-0.102	0.298	0.328	-0.003	-0.007	0.004
Caudal peduncle length	-0.749	-0.285	0.358	-0.215	-0.029	0.012	0.019
Head length	0.064	0.107	0.000	-0.077	0.002	0.000	-0.008
Snout length	-0.161	0.643	-0.261	-0.149	0.005	0.020	0.005
Horizontal eye length	0.005	0.151	-0.029	-0.169	-0.002	0.006	-0.009
Least interorbital width	0.152	0.080	-0.024	-0.216	0.004	0.001	-0.011
Upper jaw length	-0.236	0.339	-0.082	0.200	-0.006	0.017	0.008
Counts:							
Lateral line scales	0.510	0.129	0.185	-0.128	-0.006	-0.048	0.044
Scales below the lateral line	-0.215	0.582	0.035	-0.480	0.031	-0.004	-0.004
Circumpeduncular scales	-0.504	-0.140	0.154	0.408	0.007	0.096	0.026
Branched anal-fin rays	-0.018	0.371	0.664	0.290	0.014	0.009	0.029
Maxillary teeth	-0.405	0.149	-0.278	0.332	0.051	0.173	-0.076
Teeth in the outer premaxillary row	0.439	-0.273	0.052	0.394	-0.021	-0.023	0.064
Gill rakers on the first gill arch:							
On the upper limb	0.213	0.545	-0.029	0.444	0.006	-0.021	0.030
On the lower limb	0.195	0.306	-0.647	0.202	0.003	-0.035	0.039