



**FIGURE S4** | Representation of species and sites in the multivariate morphological space using the first two Principal Component axes. PC1: negatively related to Oral gape position (Mo/Bd), Pectoral fin vertical position (Pfi/Bd), Relative maxillary length (Jl/Hd), Relative eye size (Ed/Hd), and positively related to Body lateral shape (Hd/Bd), Pectoral fin size (Pfl/Bl), and Caudal peduncle throttling (Cfd/Cpd). PC2: negatively related to Relative eye size (Ed/Hd), Pectoral fin size (Pfl/Bl), and negatively related to Body elongation (Bl/Bd), Vertical eye position (Eh/Bd), Maximum body length (MBI) and Body lateral shape (Hd/Bd). See Tab. S3 for further details on PCA loadings.



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