

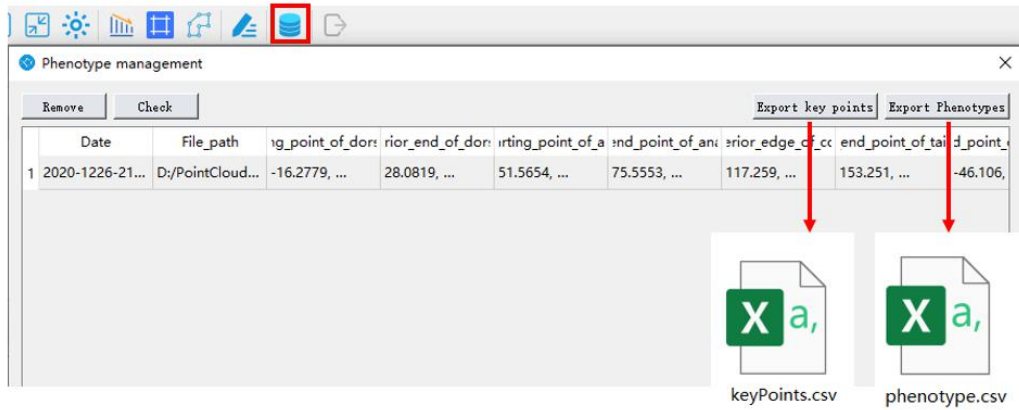
## Supplementary Tables and Figures

**Supplementary Table S1. Pearson correlation coefficients ( $r$ ) between calculated and measured phenotypes. Labels in parentheses are key points in Figure 6.**

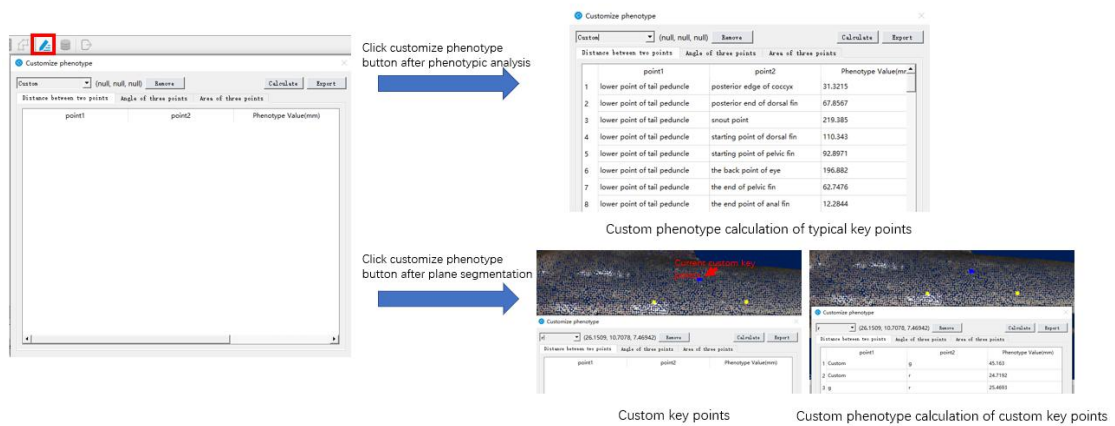
Morphological phenotype	Correlation coefficient ( $r$ )
Full length (SV)	0.9998
Body length (SU)	0.9983
Head length (ST)	0.9833
Body height (WY)	0.9913
Caudal peduncle height (OL)	0.9899
Caudal peduncle length (ZU)	0.9836
Dorsal snout distance (SX)	0.9936
Snout length (AB)	0.9716
Eye diameter (BC)	0.9545
Head behind eye length (CD)	0.9795
Anal ventral distance (HJ)	0.9801
Dorsal length (QP)	0.9514
Pectoral length (EF)	0.9602
Ventral length (HI)	0.9425
Anal length (JK)	0.9625
Tail length (UV)	0.9651
Dorsal tail distance (XU)	0.9850



**Supplementary Figure S1. Data acquisition via non-contact fish scanning using GScan. Mark points were labeled on a yellow board as background. Point cloud was transferred directly to 3DPhenoFish for analysis.**



**Supplementary Figure S2. Phenotype data management and download for data sharing.**



**Supplementary Figure S3. Key point adjustment and customized phenotype definition.**