**Supplementary Material**

M-Count: an application that uses machine learning object detection and color thresholding to count settled mussel larvae

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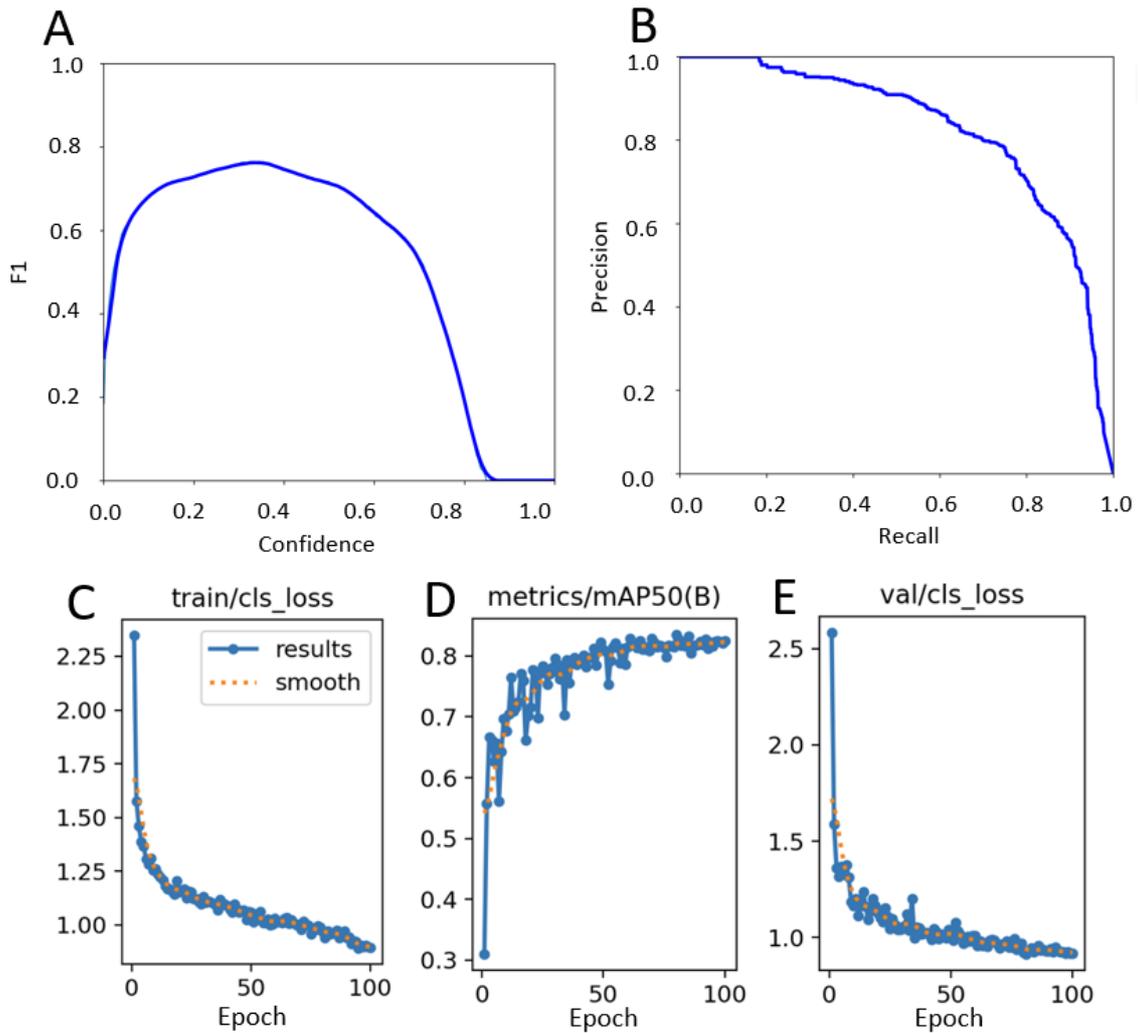
Supplemental Figure 1: Summary of machine learning training evaluation. A) F1-confidence curve. B) Precision-recall curve. C) Classification loss curve during the training phase. D) Mean average precision at an intersection over union (IoU) of 0.50 (Best value). E) Classification loss during the validation phase.
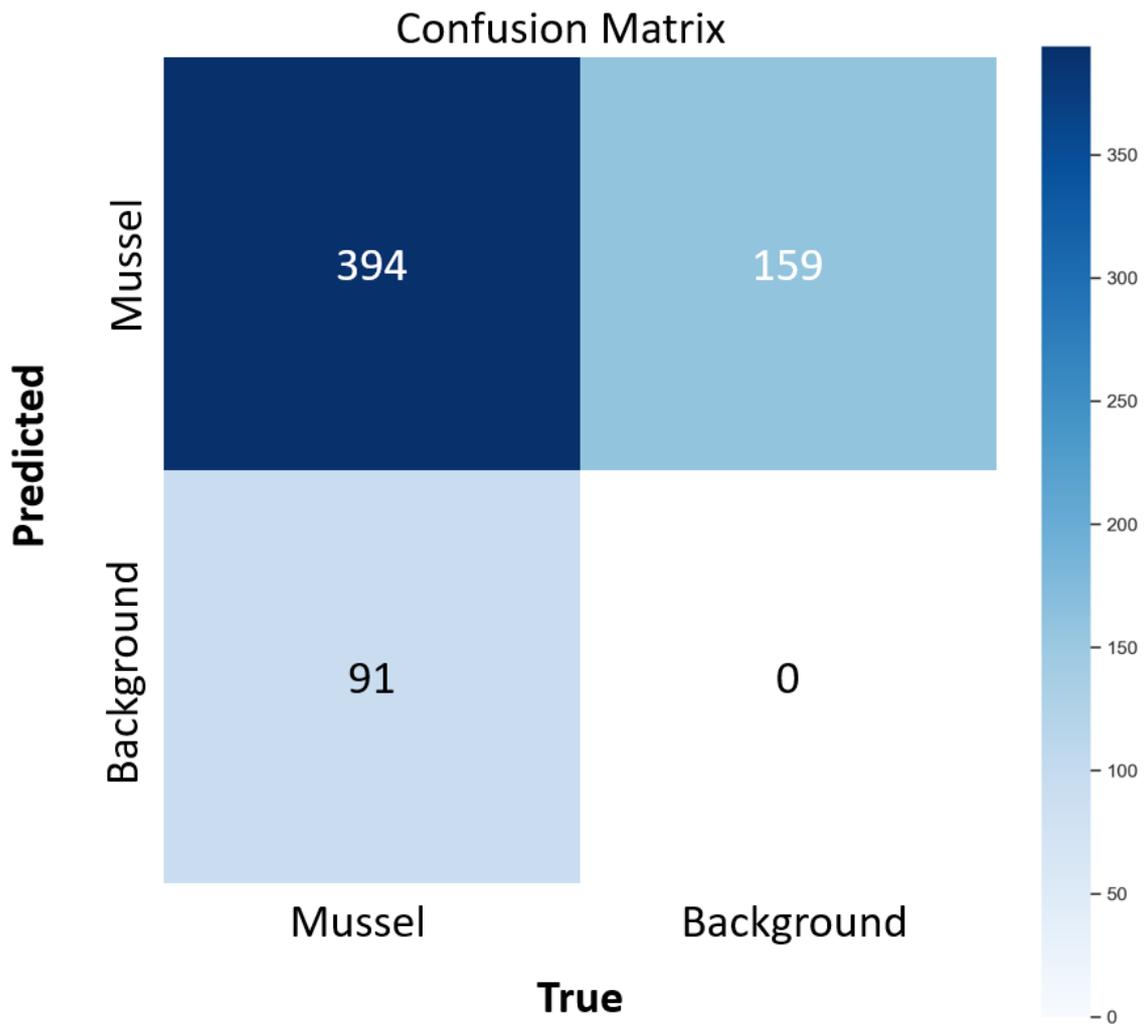
Supplemental Figure 2: Confusion matrix obtained from the validation process of the YOLOv8 machine learning model using annotated images of mussel larvae.
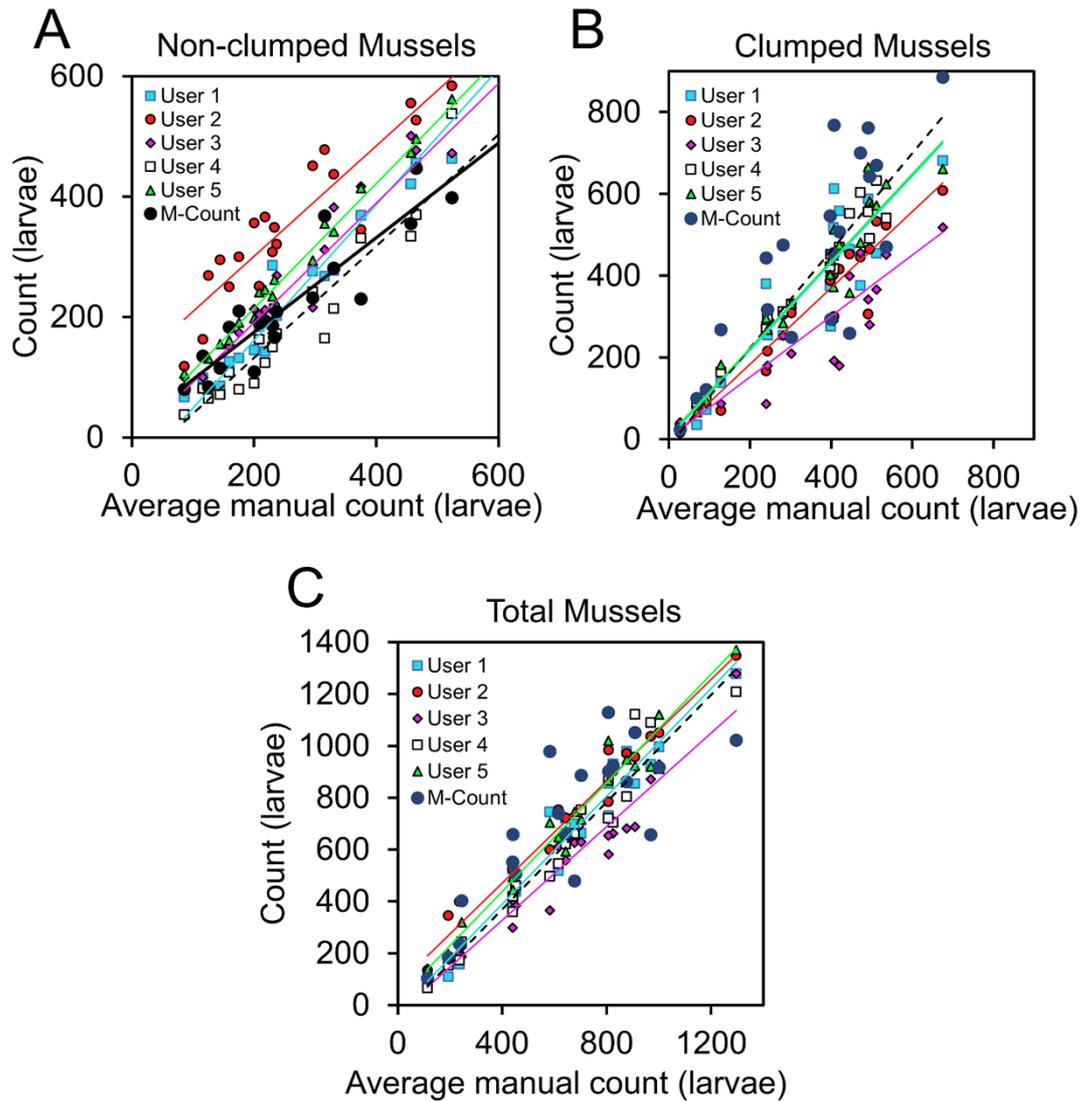
Supplemental Figure 3: Individual human user mussel counts and the M-Count mussel count are plotted against the average mussel count (averaged across all human users). The data is separated into: A) The non-clumped mussel data set. B) The clumped mussel data set. C) The total mussel data set includes both non-clumped and clumped mussels. On each graph, the data points for each user are fitted with a line of best fit; the coefficient of determination, R^2, for each user is shown in Supplemental Table 1.

	R^2 Value		
	Non-clumped	Clumped	Total
User 1	0.9738	0.8207	0.9508
User 2	0.923	0.915	0.9629
User 3	0.961	0.7713	0.9387
User 4	0.951	0.9527	0.9389
User 5	0.9946	0.9188	0.9673
M-Count	0.9208	0.6956	0.6877

Supplemental Table 1: The coefficients of determination, R^2, for each user from Supplemental Figure 1 are listed.