

Morphometric multivariate analyses reveal population structuring of *Pennahia aneus* (Perciformes: Sciaenidae) in Malaysian waters

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Table S1. Confusion matrix of the classification accuracy percentage for *P. aneus* morphometrics from peninsular Malaysia and Borneo

Actual group	Predicted group membership				Total	% accurate classification
	Celebes Sea	Straits of Malacca	South China Sea	Sulu Sea		
Celebes Sea	0	12	0	0	12	0.00
Straits of Malacca	1	54	6	0	61	88.85
South China Sea	0	5	37	0	42	88.09
Sulu Sea	0	12	0	0	12	0.00
Total					127	71.65

Table S2. Summary of morphometrics (Mean $\pm$ S.D.) of *P. aneus* populations from peninsular Malaysia and Borneo

Marine Region	N	TL	SL	SnL	HL	ED	BD	CPD	DD	Dpec	Dpel	DA
Strait of Malacca	203	203.77 $\pm$ 22.72	174.22 $\pm$ 18.85	13.56 $\pm$ 2.49	58.32 $\pm$ 6.24	16.22 $\pm$ 1.94	56.38 $\pm$ 7.77	17.30 $\pm$ 2.76	60.77 $\pm$ 6.91	57.26 $\pm$ 6.40	60.40 $\pm$ 6.77	124.08 $\pm$ 13.35
South China Sea	140	224.16 $\pm$ 18.16	191.09 $\pm$ 13.50	18.82 $\pm$ 2.08	65.27 $\pm$ 3.96	21.76 $\pm$ 1.68	64.87 $\pm$ 5.20	22.35 $\pm$ 1.99	68.53 $\pm$ 4.10	64.49 $\pm$ 3.93	67.16 $\pm$ 4.82	133.50 $\pm$ 9.57
Sulu Sea	40	214.66 $\pm$ 18.11	184.62 $\pm$ 13.49	14.03 $\pm$ 1.48	60.85 $\pm$ 3.79	17.60 $\pm$ 1.21	61.28 $\pm$ 5.12	18.38 $\pm$ 1.49	64.58 $\pm$ 4.89	60.64 $\pm$ 3.74	63.65 $\pm$ 4.73	129.88 $\pm$ 9.59
Celebes Sea	40	215.17 $\pm$ 18.09	184.65 $\pm$ 13.46	14.20 $\pm$ 1.28	61.00 $\pm$ 3.74	17.87 $\pm$ 1.06	61.27 $\pm$ 5.06	18.25 $\pm$ 1.24	64.68 $\pm$ 4.84	60.43 $\pm$ 3.67	63.45 $\pm$ 4.67	129.81 $\pm$ 9.55
Total	423											

Note: S.D. = standard deviation

N = number of samples, TL = total length, SL = standard length, SnL = snout length, HL = head length, ED = eye diameter, BD = body depth
CPD = caudal peduncle depth, DD = distance of first dorsal fin, Dpec = distance of pectoral fin, Dpel = distance of pelvic fin, DA = distance of anal fin

Table S3. Pearson's correlation of all adjusted morphometrics with the standard length (SL) of *P. aneus* populations from peninsular Malaysia and Borneo

	Pearson	Sig. (2-tailed)	95% Confidence Intervals (2-tailed) ^a	
	Correlation		Lower	Upper
TL_adj - SnL_adj	.343	<.001	.257	.425
TL_adj - HL_adj	.273	<.001	.183	.359
TL_adj - ED_adj	.032	.509	-.063	.127
TL_adj - BD_adj	-.210	<.001	-.299	-.117
TL_adj - CPD_adj	.327	<.001	.239	.410
TL_adj - DD_adj	.019	.701	-.077	.114
TL_adj - Dpec_adj	.049	.313	-.046	.144
TL_adj - Dpel_adj	.281	<.001	.191	.367
TL_adj - DA_adj	.276	<.001	.186	.362
TL_adj - SL	.005	.921	-.091	.100
SnL_adj - HL_adj	.655	<.001	.596	.706
SnL_adj - ED_adj	.806	<.001	.769	.837
SnL_adj - BD_adj	.112	.021	.017	.205
SnL_adj - CPD_adj	.785	<.001	.745	.819
SnL_adj - DD_adj	.352	<.001	.266	.433
SnL_adj - Dpec_adj	.479	<.001	.402	.549
SnL_adj - Dpel_adj	.390	<.001	.306	.467
SnL_adj - DA_adj	.196	<.001	.102	.286
SnL_adj - SL	.008	.868	-.087	.103
HL_adj - ED_adj	.579	<.001	.512	.639
HL_adj - BD_adj	.236	<.001	.144	.324
HL_adj - CPD_adj	.626	<.001	.564	.680
HL_adj - DD_adj	.225	<.001	.133	.314

HL_adj - Dpec_adj	.471	<.001	.394	.542
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Table S2.
(Continued)

	Pearson's correlation	Sig. (two- tailed)	95% Confidence interval (two- tailed) ^a	
			Lower	Upper
HL_adj - Dpel_adj	.284	<.001	.194	.370
HL_adj - DA_adj	.159	.001	.065	.251
HL_adj - SL	-.017	.721	-.113	.078
ED_adj - BD_adj	.386	<.001	.302	.464
ED_adj - CPD_adj	.777	<.001	.736	.812
ED_adj - DD_adj	.410	<.001	.328	.486
ED_adj - Dpec_adj	.526	<.001	.453	.592
ED_adj - Dpel_adj	.275	<.001	.185	.361
ED_adj - DA_adj	-.029	.559	-.124	.067
ED_adj - SL	.010	.839	-.086	.105
BD_adj - CPD_adj	.266	<.001	.175	.352
BD_adj - DD_adj	.094	.053	-.001	.188
BD_adj - Dpec_adj	.272	<.001	.181	.358
BD_adj - Dpel_adj	.033	.498	-.062	.128
BD_adj - DA_adj	-.175	<.001	-.266	-.081
BD_adj - SL	-.015	.758	-.110	.080
CPD_adj - DD_adj	.314	<.001	.226	.398
CPD_adj - Dpec_adj	.507	<.001	.432	.574
CPD_adj - Dpel_adj	.302	<.001	.213	.386

CPD_adj - DA_adj	.100	.040	.005	.194
CPD_adj - SL	-.027	.585	-.122	.069
DD_adj - Dpec_adj	.766	<.001	.723	.803
DD_adj - Dpel_adj	.747	<.001	.701	.786
DD_adj - DA_adj	.516	<.001	.442	.582
DD_adj - SL	-.010	.833	-.105	.085
Dpec_adj - Dpel_adj	.744	<.001	.698	.784
Dpec_adj - DA_adj	.520	<.001	.447	.586
Dpec_adj - SL	-.027	.575	-.122	.068
Dpel_adj - DA_adj	.746	<.001	.701	.786
Dpel_adj - SL	-.028	.565	-.123	.067
DA_adj - SL	-.014	.777	-.109	.082

a. Estimation is based on Fisher's r-to-z transformation.
