

Genetic origin and salinity history influence reproductive success of Atlantic herring

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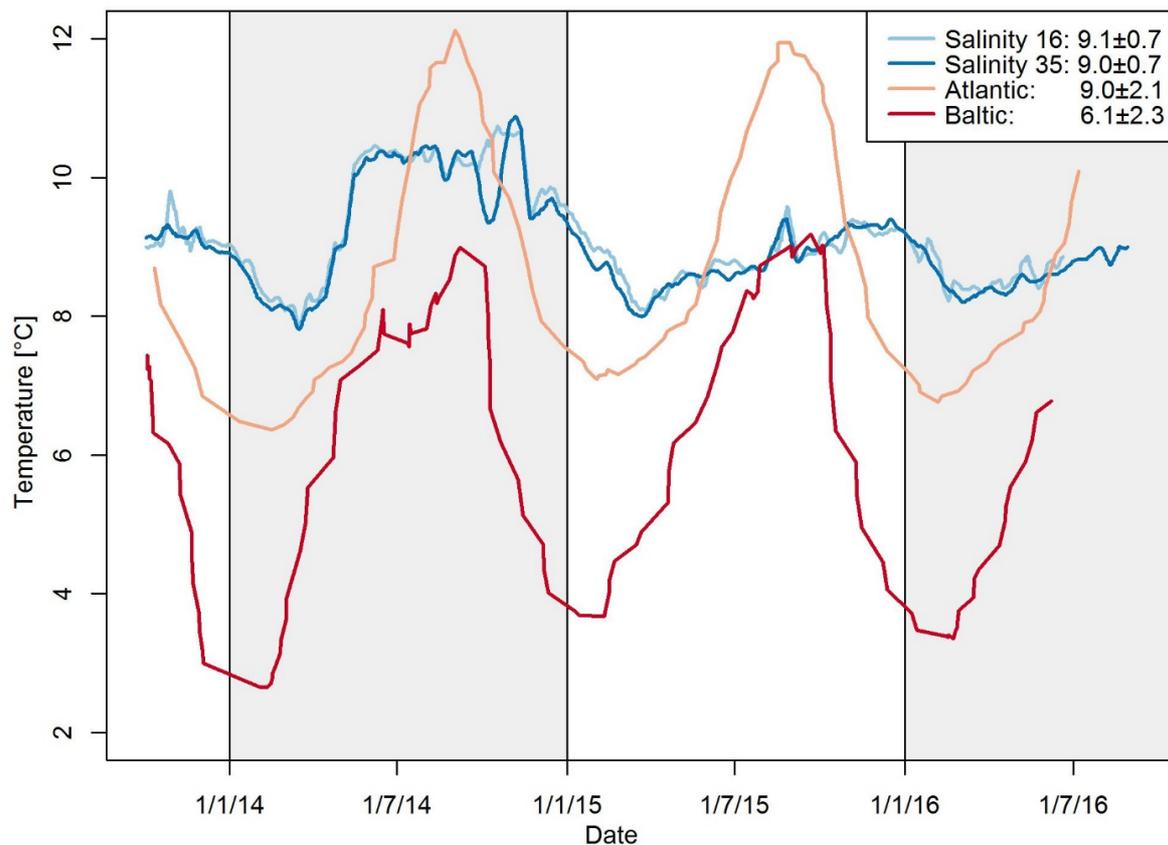


Figure S1. Daily ambient water temperatures of Atlantic purebred and Atlantic/Baltic hybrids reared at either 16 psu (light blue) or 35 psu (dark blue). Water temperatures of the Atlantic (light red) were measured at stationary hydrographic stations in Ytre Utsira and Sognesjøen (<http://www.imr.no/forskning/forskningsdata/stasjoner/>). Daily temperatures were combined for both stations and averaged for depths from 20-120 meters. Water temperatures of the Baltic (dark red) were extracted from <https://sharkweb.smhi.se/> and restricted to the area 16-23° E and 56.5-62° N. Daily temperatures were combined for all stations within the area and average for depths from 20-50 meters. Means±SD are given in the legend and lines represent running means.

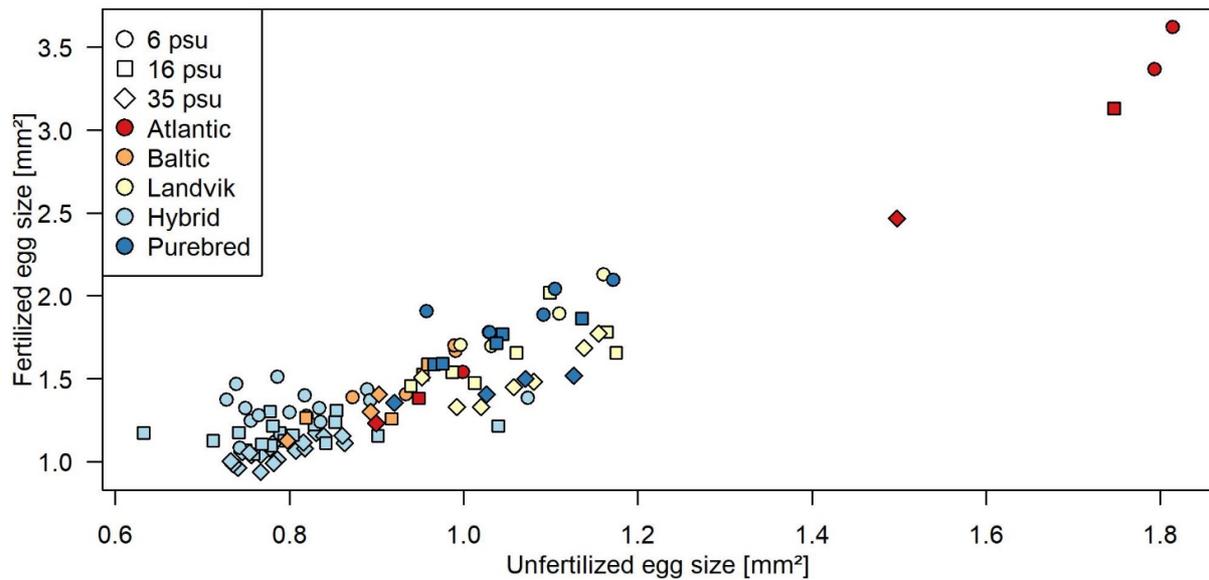


Figure S2. Correlation between size (area) of unfertilized and fertilized eggs of females with different genetic origins incubation at three different salinities (6, 16 and 35 psu).

Table S1. Mean daily temperatures and standard deviation (SD) for each experiment (Exp) during the incubation of eggs from fertilization until the day of hatching at three different salinities.

Exp	6 psu		16 psu		35 psu	
	Mean	SD	Mean	SD	Mean	SD
1	8.07	0.46	8.24	0.44	8.25	0.15
2	10.15	0.08	10.21	0.07	9.95	0.07
3	8.96	0.18	9.05	0.04	8.87	0.03
4	9.06	0.26	8.98	0.15	8.88	0.03
5	9.20	0.44	9.04	0.19	9.02	0.06

Table S2. Total numbers per sample of F1-herring reared under common garden conditions their entire life at either 16 or 35 psu. The ratio between Atlantic/Baltic hybrids and Atlantic purebreds are given per salinity treatment and sample. The initial ratio was 2:1. p-values indicate statistical results of binomial tests using the 2:1 as expected ratio.

Days post hatching	Salinity 16 psu				Salinity 35 psu			
	Hybrid	Purebred	Ratio	p-value	Hybrid	Purebred	Ratio	p-value
187	85	14	6.1	<0.001	69	30	2.3	0.59
297	36	4	9.0	<0.01	31	19	1.6	0.55
482					76	37	2.1	1.00
524					56	34	1.6	0.37
531					17	8	2.1	1.00
618	27	3	9.0	<0.01	16	14	1.1	0.13
702					21	15	1.4	0.29
861	11	1	11.0	0.07	19	12	1.6	0.57
960	7	1	7.0	0.28	23	9	2.6	0.58
1055					16	14	1.1	0.13
1079					31	8	3.9	0.12
1098	33	5	6.6	<0.01	38	14	2.7	0.38
1106	23	8	2.9	0.45	18	12	1.5	0.44
1120	17	4	4.3	0.25	16	14	1.1	0.13
Total	239	40	6.0	<0.001	524	256	2.0	0.79

Table S3. Mean and standard deviation (SD) of fertilization rate of each combination (Comb) at different fertilization/incubation salinities (6, 16 and 35 psu) separated by crosses (female x male genetic) for experiment (Exp) 1 and 2. Within each experiment the female and male number used for the combinations are given. N represents the total number of plates per salinity. * Combinations used for producing the F1-hybrids and F1-purebreds.

Exp	Cross (female x male)	Comb	N	Salinity					
				6 psu		16 psu		35 psu	
				Mean	SD	Mean	SD	Mean	SD
1	Atlantic x Atlantic	All	4	28.7	27.6	31.1	33.8	30.1	33.3
	1x1	1	1	18.5		6.3		2.2	
	2x2	2	1	67.4		78.6		75.0	
	3x3	3	1	2.7		7.6		7.7	
	4x4	4*	1	26.2		32.0		35.6	
	Atlantic x Baltic	All	4	12.0	15.7	18.6	35.6	18.5	34.1
	1x1	1	1	3.6		0.0		0.9	
	2x2	2	1	7.1		1.3		2.4	
	3x3	3	1	2.1		1.1		0.8	
	4x4	4*	1	35.3		71.9		69.7	
	Baltic x Baltic	All	4	15.7	14.3	19.7	19.1	14.3	15.6
	1x1	1	1	3.7		3.0		2.8	
	2x2	2	1	24.8		32.1		21.7	
	3x3	3	1	14.3		16.9		7.1	
	4x4	4	1	35.0		45.5		38.2	
	Baltic x Atlantic	All	4	33.3	26.8	29.2	21.9	35.2	25.0
	1x1	1	1	26.8		42.6		38.3	
	2x2	2	1	67.1		54.2		70.0	
	3x3	3	1	53.7		36.4		37.9	
	4x4	4	1	17.4		10.3		30.0	
2.1	Landvik x Landvik	All	4	90.1	1.9	89.6	1.6	83.5	6.8
	1x1	1	2	91.4	0.7	90.7	7.8	78.7	5.2
	2x2	2	2	88.8	3.6	88.4	0.6	88.3	6.0
2.2	Landvik x Landvik	All	10	6.9	5.2	53.5	13.2	28.5	29.9
	3x3	1	2	10.0	9.0	66.5	4.1	11.1	9.0
	4x4	2	2	6.9	3.7	62.7	10.0	10.0	1.0
	5x5	3	2	0.0	0.0	37.4	13.3	49.2	1.1
	6x6	4	2	3.9	1.9	59.6	6.4	70.8	3.6
	7x7	5	2	13.4	7.9	41.2	9.1	1.5	2.2

Table S4. Mean and standard deviation (SD) of fertilization rate of each combination (Comb) at different fertilization/incubation salinities (6, 16 and 35 psu) separated by crosses (female x male salinity) for experiment (Exp) 3-5. Within each experiment the female and male genetics (H = hybrid, P = purebred) and fish number used for the combinations (in brackets) are given. N represents the total number of plates per salinity. * Based on 1 plate. # Based on 15 plates. § Female was overripe yielding poor subsequent survival of eggs and was thus removed from the analysis.

Exp	Salinity	Cross (female x male)	Comb	N	Salinity					
					6 psu		16 psu		35 psu	
					Mean	SD	Mean	SD	Mean	SD
3	35 psu x 35 psu		All	12	97.5		99.3	0.6	94.2	2.9
		H x H (1x1)	1	3	-		99.7	0.4	92.4	1.9
		H x P (2x2)	2	3	-		98.9	0.9	97.8	2.2
		H x H (3x3)	3	3	-		99.7	0.6	93.5	3.4
		H x H (4x4)	4	3	-		99.5	0.8	90.9	2.1
		H x P (5x5)	5	3	97.5*		98.4	0.6	96.4	3.6
	16 psu x 16 psu		All	12	96.6#	4.2	93.6	6.2	22.0	33.7
		H x H (6x6)	1	3	97.5	1.3	92.7	1.6	15.8	1.5
		H x H (7x7)	2	3	98.7	1.2	98.3	1.7	0.8	0.7
		H x H (8x8)	3	3	98.1	2.1	98.3	0.2	71.4	4.9
		H x H (9x9)	4	3	89.1	2.8	85.2	0.2	0.0	0.0
	H x H (10x10)	5	3	99.6	0.8	-		-		
4	35 psu x 35 psu		All	9	92.9	6.3	90.7	11.3	72.5	15.7
		H x P (1x1)	1	3	88.2	1.3	78.1	3.7	88.0	3.0
		P x H (2x2)	2	3	90.4	2.7	94.6	2.8	56.7	7.0
		H x H (3x3)	3	3	100.0	0.0	99.6	0.7	72.8	2.2
	16 psu x 16 psu		All	15	97.1	3.6	96.7	5.5	4.9	4.0
		H x P (4x4)	1	3	98.4	0.9	100.0	0.0	5.5	2.7
		H x H (5x5)	2	3	99.4	0.6	99.5	0.4	10.0	3.8
		H x H (6x6)	3	3	99.8	0.3	99.2	0.7	2.1	2.2
		H x H (7x7)	4	3	90.9	1.2	87.0	5.2	0.0	0.0
		H x H (8x8)	5	3	98.7	1.1	97.8	1.3	0.3	0.5
	5	35 psu x 16 psu		All	15	24.5	32.8	88.8	5.2	1.5
		P x H (1x6)	1	3	70.7	4.0	93.3	2.5	1.9	0.7
		H x H (2x7)	2	3	47.9	1.9	91.2	1.2	1.4	1.0
		P x H (3x8)	3	3	1.9	2.8	92.9	4.1	3.7	1.2
		P x H (4x9)	4	3	2.0	3.5	84.5	5.4	0.3	0.5
		P x H (5x10)	5	3	0.0	0.0	82.1	4.5	0.0	0.0
35 psu x 35 psu		All	15	33.4	44.4	93.7	2.1	51.7	42.8	
		P x P (1x1)	1	3	80.4	4.3	91.3	0.9	94.3	2.9
		H x P (2x2)	2	3	83.7	3.4	91.5	1.8	77.1	4.2
		P x H (3x3)	3	3	1.9	1.7	94.8	1.9	9.8	0.5
		P x H (4x4)	4	3	0.0	0.0	95.3	1.1	1.3	2.3
		P x P (5x5)	5	3	1.0	1.1	95.5	0.9	75.8	2.5
16 psu x 16 psu		All	15	12.5	11.7	67.7	32.7	2.1	2.8	
		H x H (6x6)	1	3	27.4	8.9	42.8	0.3	6.2	3.1
		H x H (7x7)	2	3	21.9	5.9	92.9	3.0	4.0	0.3
		H x H (8x8)	3	3	3.7	1.6	88.7	1.8	0.0	0.0
		H x H (9x9)§	4	3	9.4	1.3	22.7	4.2	0.4	0.6
		H x H (10x10)	5	3	0.2	0.3	91.5	2.2	0.0	0.0
16 psu x 35 psu		All	15	27.0	22.8	67.0	31.2	46.0	42.1	
		H x P (6x1)	1	3	37.0	9.0	59.4	3.0	58.0	2.8
		H x P (7x2)	2	3	61.4	3.8	94.7	0.8	94.4	1.8
	H x H (8x3)	3	3	4.4	3.4	74.9	3.8	3.9	1.3	
	H x H (9x4)§	4	3	21.8	8.9	16.9	3.2	0.4	0.3	
	H x P (10x5)	5	3	10.6	3.0	89.2	1.5	73.3	6.5	

Table S5. Mean, standard deviation (SD) and coefficient of variation (CV) of unfertilized egg sizes of each female number (No, corresponds with Table S3) separated by female genetic for experiment (Exp) 1 and 2. No significant differences between egg sizes fertilized/incubated at different salinities (6, 16 and 35) occurred and were therefore combined. Total length (cm) for each female is given. N represents the total number of measured unfertilized eggs. * Female used for producing the F1-hybrids and F1-purebreds. Posterior Tukey-HSD test results of all pair-wise comparisons between female of the same genetic group are indicated by letters. Females which do not share a common letter are significantly different to each other with “a” corresponding to the smallest value.

Exp	Genetic	No	Length	N	Egg area (mm ²)			
					Mean	SD	CV	Tukey
1	Atlantic	All		4	1.335	0.426	31.9	
		1	31.5	35	1.710	0.088	5.1	b
		2	37.0	58	1.698	0.179	10.5	b
		3	35.0	90	0.981	0.068	6.9	a
	4*	30.5	88	0.952	0.075	7.9	a	
	Baltic	All		4	0.911	0.056	6.1	
		1	20.5	51	0.923	0.077	8.3	b
		2	22.5	63	0.948	0.074	7.8	c
3		22.0	58	0.944	0.058	6.1	c	
	4	21.5	86	0.828	0.071	8.6	a	
2.1	Landvik	All		7	1.071	0.074	6.9	
		1	29.8	19	1.144	0.088	7.7	cd
		2	25.9	14	1.013	0.100	9.9	ab
2.2		3	29.2	86	1.034	0.072	7.0	b
		4	27.4	108	0.997	0.058	5.8	a
		5	26.1	69	1.100	0.078	7.1	c
		6	30.2	61	1.189	0.084	7.1	d
		7	29.9	59	1.022	0.087	8.5	ab

Table S6. Mean, standard deviation (SD) and coefficient of variation (CV) of unfertilized egg sizes of each female number (No, corresponds with Table S4) separated by female salinity origin for experiment (Exp) 3 and 4. No significant differences between egg sizes fertilized at different salinities (6, 16 and 35) occurred and were therefore combined. Genetics (H = hybrid, P = purebred) and total length (cm) for each female are given. N represents the total number of measured unfertilized eggs. Posterior Tukey-HSD test results of all pair-wise comparisons between female of the same salinity origin are indicated by letters. Females which do not share a common letter are significantly different to each other with “a” corresponding to the smallest value.

Exp	Origin	No	Length	N	Egg area (mm ²)			Tukey
					Mean	SD	CV	
3		All H		9	0.820	0.033	4.0	
		All P		0	-			
	35 psu	All H		5	0.823	0.028	3.4	
		All P		0	-			
	H	1	23.5	17	0.863	0.043	5.0	a
	H	2	23.5	7	0.808	0.074	9.2	a
	H	3	23.2	15	0.796	0.101	12.7	a
	H	4	22.3	14	0.841	0.050	5.9	a
	H	5	23.8	10	0.809	0.058	7.2	a
	16 psu	All H		4	0.816	0.042	5.1	
		All P		0	-			
	H	6	23.9	53	0.820	0.038	4.6	b
	H	7	23.6	47	0.869	0.058	6.7	c
	H	8	22.7	43	0.767	0.064	8.3	a
	H	9	23.7	66	0.809	0.057	7.0	b
H	10	24.8	0	-				
4		All H		7	0.769	0.027	3.5	
		All P		1	1.023			
	35 psu	All H		2	0.747	0.001	0.1	
		All P		1	1.023			
	H	1	25.2	74	0.748	0.055	7.4	a
	P	2	26.2	58	1.023	0.073	7.1	b
	H	3	22.4	44	0.746	0.049	6.6	a
	16 psu	All H		5	0.778	0.027	3.5	
		All P		0	-			
	H	4	23.9	50	0.797	0.049	6.1	cd
	H	5	25.1	46	0.737	0.036	4.9	a
	H	6	24.4	46	0.776	0.034	4.4	bc
	H	7	24.9	82	0.806	0.062	7.7	d
H	8	22.1	103	0.772	0.044	5.7	b	

Table S7. Mean, standard deviation (SD) and coefficient of variation (CV) of unfertilized egg sizes of each female number (No, corresponds with Table S4) separated by female salinity origin for experiment (Exp) 5. No significant differences between egg sizes fertilized at different salinities (6, 16 and 35) occurred and were therefore combined. Genetics (H = hybrid, P = purebred) and total length (cm) for each female are given. N represents the total number of measured unfertilized eggs. Posterior Tukey-HSD test results of all pair-wise comparisons between female of the same salinity origin are indicated by letters. Females which do not share a common letter are significantly different to each other with “a” corresponding to the smallest value.

Exp	Origin	No	Length	N	Egg area (mm ²)			Tukey
					Mean	SD	CV	
5		All H		6	0.759	0.019	2.5	
		All P		4	1.059	0.087	8.2	
	35 psu	All H		1	0.767			
		All P		4	1.059	0.087	8.2	
P		1	26.3	118	0.941	0.084	8.9	b
H		2	24.3	137	0.767	0.053	6.9	a
P		3	26.0	200	1.084	0.067	6.2	d
P		4	25.3	210	1.062	0.061	5.7	c
P		5	26.4	187	1.149	0.063	5.5	e
	16 psu	All H		5	0.747	0.002	0.3	
		All P		0	-			
H		6	23.3	248	0.724	0.043	5.9	a
H		7	25.8	132	0.774	0.054	7.0	c
H		8	22.2	232	0.774	0.038	4.9	c
H		9	24.6	249	0.758	0.038	5.0	b
H		10	24.5	215	0.756	0.035	4.6	b

Table S8. Mean, standard deviation (SD) and coefficient of variation (CV) of fertilized egg sizes of each female number (No, corresponds with Table S3) at different fertilization/incubation salinities (6, 16 and 35 psu) separated by female genetic origin for experiment (Exp) 1 and 2. N represents the total number of measured fertilized eggs. * Female used for producing the F1-hybrids and F1-purebreds. # No measurement due to technical problems.

Exp	Genetic	No	Egg area (mm ²) per salinity												
			6 psu				16 psu				35 psu				
			N	Mean	SD	CV	N	Mean	SD	CV	N	Mean	SD	CV	
1	Atlantic	All	3	2.843	1.135	39.9	2	2.257	1.236	54.8	2	1.850	0.873	47.2	
		1	4	3.366	0.106	3.1	0	-			0	-			
		2	19	3.621	0.111	3.1	9	3.130	0.097	3.1	10	2.468	0.088	3.6	
		3 [#]	-				-				-				
		4*	28	1.541	0.088	5.7	30	1.383	0.070	5.1	32	1.233	0.071	5.7	
	Baltic	All	4	1.541	0.166	10.7	4	1.409	0.172	12.2	3	1.278	0.142	11.1	
		1	11	1.408	0.060	4.2	12	1.259	0.087	6.9	0	-			
		2	26	1.669	0.058	3.5	11	1.525	0.031	2.0	26	1.301	0.069	5.3	
		3	15	1.700	0.042	2.5	9	1.587	0.087	5.5	7	1.407	0.074	5.3	
		4	16	1.388	0.110	7.9	14	1.264	0.054	4.3	23	1.125	0.050	4.5	
2.1	Landvik	All	5	1.840	0.179	9.7	7	1.656	0.197	11.9	7	1.509	0.168	11.1	
		1	34	2.128	0.118	5.5	30	2.020	0.087	4.3	38	1.773	0.062	3.5	
		2	41	1.780	0.084	4.7	38	1.657	0.120	7.2	39	1.509	0.079	5.3	
		2.2	3	5	1.697	0.056	3.3	27	1.458	0.086	5.9	14	1.449	0.096	6.6
			4	5	1.705	0.077	4.5	36	1.474	0.083	5.6	8	1.331	0.117	8.8
			5	0	-			25	1.656	0.076	4.6	16	1.483	0.083	5.6
			6	0	-			34	1.783	0.089	5.0	33	1.687	0.107	6.4
7	3	1.892	0.123	6.5	15	1.542	0.115	7.5	1	1.329					

Table S9. Mean, standard deviation (SD) and coefficient of variation (CV) of fertilized egg sizes of each female number (No, corresponds with Table S4) at different fertilization salinities (6, 16 and 35 psu) separated by female genetic and salinity (6, 16 and 35 psu) for experiment (Exp) 3 and 4. Genetics (H = hybrid, P = purebred) for each female are given. N represents the total number of measured fertilized eggs. Summary of missing combinations not shown.

Exp	Origin	No	Egg area (mm ²) per salinity											
			6 psu				16psu				35 psu			
			N	Mean	SD	CV	N	Mean	SD	CV	N	Mean	SD	CV
3		All H	6	1.406	0.083	5.9	9	1.225	0.054	4.4	8	1.113	0.048	4.3
		All P	-				-				-			
	35	All H	1				5	1.238	0.067	5.4	5	1.118	0.046	4.1
	psu			1.341										
		All P	-				-				-			
	H	1	-				45	1.229	0.041	3.4	45	1.113	0.052	4.6
	H	2	-				45	1.303	0.036	2.8	30	1.173	0.040	3.4
	H	3	-				45	1.173	0.050	4.3	45	1.066	0.041	3.9
	H	4	-				45	1.310	0.040	3.1	45	1.156	0.036	3.1
	H	5	15	1.341	0.037	2.7	45	1.175	0.043	3.7	45	1.080	0.040	3.7
	16	All H												
	psu		5	1.419	0.085	6.0	4	1.209	0.036	3.0	3	1.104	0.060	5.4
		All P	-				-				-			
	H	6	45	1.398	0.056	4.0	45	1.239	0.047	3.8	33	1.115	0.058	5.2
	H	7	45	1.384	0.046	3.3	45	1.216	0.051	4.2	2	1.157	0.062	5.3
	H	8	45	1.324	0.055	4.2	45	1.157	0.040	3.5	45	1.040	0.053	5.1
H	9	42	1.437	0.063	4.4	45	1.226	0.049	4.0	0	-			
H	10	45	1.553	0.055	3.5	-				-				
4		All H	7	1.295	0.048	3.7	7	1.127	0.039	3.5	6	1.024	0.044	4.3
		All P	1	1.782			1	1.588			1	1.406		
	35	All H												
	psu		2	1.269	0.033	2.6	2	1.110	0.057	5.1	2	1.010	0.065	6.4
		All P	1	1.782			1	1.588			1	1.406		
	H	1	45	1.246	0.053	4.3	45	1.070	0.040	3.8	45	0.964	0.043	4.4
	P	2	45	1.782	0.080	4.5	45	1.588	0.065	4.1	45	1.406	0.075	5.3
	H	3	45	1.293	0.046	3.6	45	1.151	0.071	6.1	45	1.057	0.041	3.9
	16	All H												
	psu		5	1.305	0.052	4.0	5	1.134	0.036	3.2	4	1.030	0.041	4.0
		All P	-				-				-			
	H	4	45	1.370	0.039	2.9	45	1.165	0.071	6.1	12	1.014	0.036	3.6
	H	5	45	1.299	0.047	3.6	45	1.089	0.034	3.1	21	0.985	0.037	3.7
	H	6	45	1.343	0.046	3.4	45	1.175	0.072	6.1	5	1.081	0.039	3.6
	H	7	45	1.240	0.049	3.9	45	1.112	0.045	4.0	0	-		
	H	8	45	1.274	0.043	3.4	90	1.127	0.061	5.4	40	1.041	0.046	4.4

Table S10. Mean, standard deviation (SD) and coefficient of variation (CV) of fertilized egg sizes of each combination (Comb (female x male), corresponds with Table S4) at different fertilization salinities (6, 16 and 35 psu) separated by crosses (female x male salinity origin) for experiment 5. Genetics (H = hybrid, P = purebred) for each combination are given. N represents the total number of measured fertilized eggs. Summary of missing combinations not shown.

Cross	Comb	Egg area (mm ²) per salinity												
		6 psu				16psu				35 psu				
		N	Mean	SD	CV	N	Mean	SD	CV	N	Mean	SD	CV	
	H x H	8	1.356	0.097	7.2	8	1.119	0.044	3.9	4	1.010	0.043	4.3	
	H x P	4	1.351	0.188	13.9	4	1.139	0.083	7.3	4	1.032	0.074	7.2	
	P x H	4	1.968	0.108	5.5	6	1.740	0.093	5.3	2	1.412	0.122	8.7	
	P x P	2	2.003	0.130	6.5	2	1.721	0.189	11.0	2	1.439	0.112	7.7	
35 x 16	H x H	1	1.471			1	1.194			1	1.065			
	P x H	3	1.971	0.132	6.7	4	1.746	0.118	6.8	1	1.326			
P x H	1x6	45	1.906	0.083	4.3	45	1.598	0.055	3.4	8	1.326	0.095	7.1	
H x H	2x7	45	1.471	0.064	4.4	45	1.194	0.049	4.1	3	1.065	0.072	6.8	
P x H	3x8	5	2.124	0.031	1.5	44	1.795	0.073	4.0	0	-			
P x H	4x9	4	1.885	0.052	2.8	45	1.716	0.069	4.0	0	-			
P x H	5x10	0	-			45	1.875	0.069	3.7	0	-			
35 x 35	H x P	1	1.464			1	1.236			1	1.112			
	P x H	1	1.958			2	1.729	0.022	1.3	1	1.499			
	P x P	2	2.003	0.130	6.5	2	1.721	0.189	11.0	2	1.439	0.112	7.7	
P x P	1x1	45	1.910	0.064	3.4	45	1.587	0.072	4.5	44	1.361	0.056	4.1	
H x P	2x2	45	1.464	0.066	4.5	45	1.236	0.043	3.5	45	1.112	0.038	3.4	
P x H	3x3	5	1.958	0.242	12.3	45	1.745	0.076	4.4	17	1.499	0.048	3.2	
P x H	4x4	0	-			45	1.714	0.073	4.3	0	-			
P x P	5x5	3	2.095	0.132	6.3	45	1.854	0.082	4.4	45	1.518	0.068	4.5	
16 x 16	H x H	5	1.349	0.109	8.1	5	1.115	0.039	3.5	2	0.993	0.041	4.1	
	H x H	6x6	45	1.377	0.067	4.9	45	1.136	0.052	4.6	20	0.964	0.036	3.8
	H x H	7x7	45	1.528	0.057	3.7	45	1.158	0.044	3.8	6	1.022	0.108	10.6
	H x H	8x8	20	1.271	0.080	6.3	45	1.103	0.038	3.4	0	-		
	H x H	9x9	32	1.301	0.071	5.5	45	1.123	0.051	4.6	0	-		
	H x H	10x10	1	1.269			45	1.054	0.038	3.6	0	-		
16 x 35	H x H	2	1.314	0.038	2.9	2	1.091	0.004	0.3	1	0.990			
	H x P	3	1.313	0.211	16.1	3	1.107	0.065	5.8	3	1.005	0.062	6.2	
H x P	6x1	44	1.367	0.116	8.5	45	1.120	0.070	6.3	45	1.020	0.043	4.2	
H x P	7x2	45	1.492	0.084	5.6	45	1.164	0.046	4.0	45	1.059	0.042	3.9	
H x H	8x3	20	1.287	0.037	2.9	45	1.093	0.034	3.1	16	0.990	0.051	5.1	
H x H	9x4	45	1.340	0.058	4.3	40	1.088	0.063	5.8	0	-			
H x P	10x5	41	1.080	0.054	5.0	45	1.037	0.036	3.5	45	0.937	0.032	3.4	