

Supplementary Material
**Hormones and Fitness: Evidence for trade-offs in glucocorticoid
regulation across contexts**

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Supplementary Figures:

Figure S1: Scatterplot of the relationship between baseline corticosterone and the acute stress-induced increase in corticosterone in incubating female tree swallows. The dotted box shows the portion of the distribution illustrated by the surface plot of glucocorticoids and reproductive success (Figure 1).

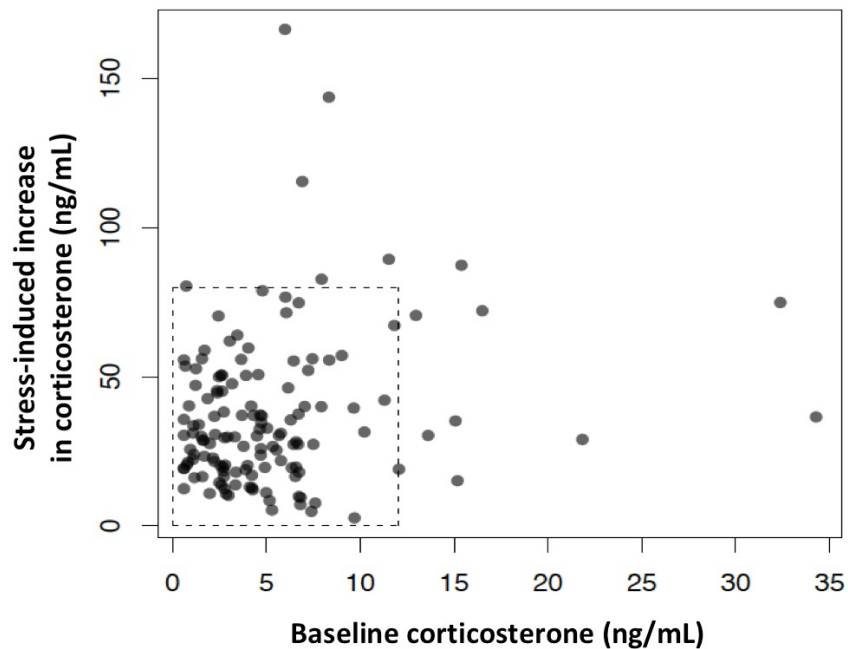
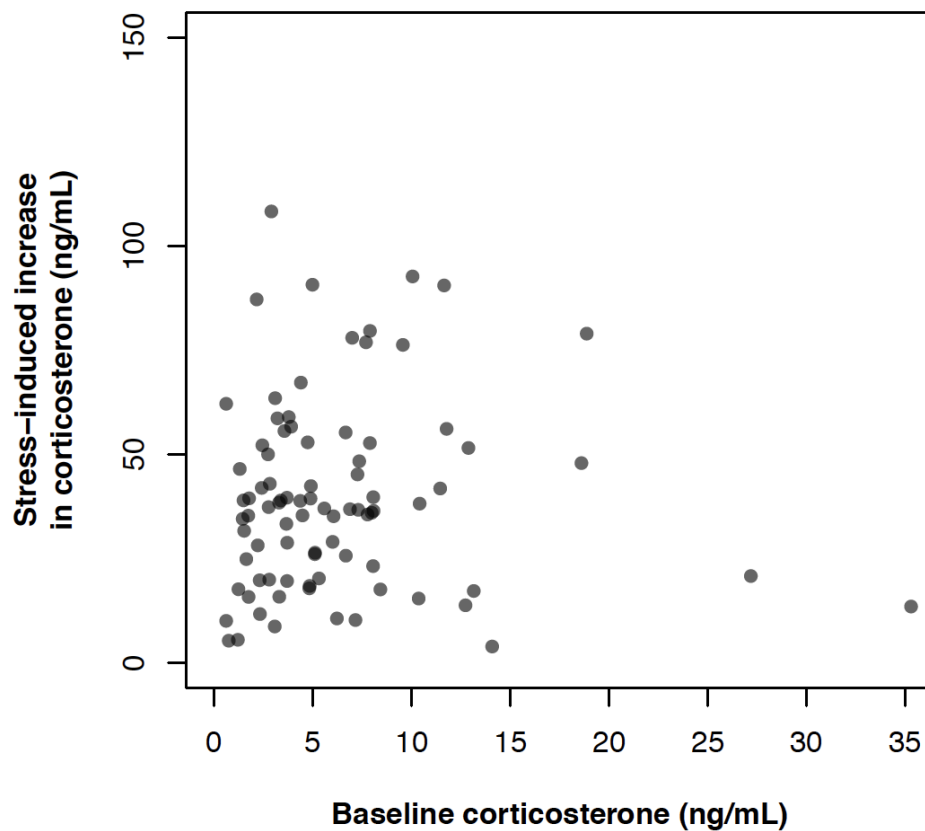


Figure S2: Scatterplot of the relationship between baseline corticosterone and the acute stress-induced increase in corticosterone in provisioning male tree swallows.



Supplementary Tables: Variables are abbreviated as follows in all tables: “Date”=Clutch initiation date, “Condition”=Scaled body mass index, “Temp”=Daily mean temperature throughout the incubation period (for model sets that use incubation period data) or nestling provisioning period (for model sets that use nestling provisioning period data), “Base”=Baseline corticosterone, “Stress”=The acute stress-induced increase in corticosterone or circulating stress-induced corticosterone levels (specified for each table). More detail on each of these measures is provided in the methods section.

Table S1: Candidate models of clutch size in female tree swallows.

Clutch size in incubating females. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Date	610.47	-302.16	3	0.00	1.00	0.15
<i>Null model (intercept only)</i>	<i>611.34</i>	<i>-303.63</i>	<i>2</i>	<i>0.87</i>	<i>0.65</i>	<i>0.10</i>
Temp + Date	612.17	-301.96	4	1.71	0.43	0.06
Base + Date	612.30	-302.02	4	1.83	0.40	0.06

Condition + Date	612.55	-302.15	4	2.09	0.35	0.05
Stress + Date	612.57	-302.16	4	2.10	0.35	0.05
Base	612.72	-303.29	3	2.25	0.32	0.05
Condition	613.03	-303.44	3	2.56	0.28	0.04
Temp	613.15	-303.50	3	2.69	0.26	0.04
Stress	613.31	-303.58	3	2.84	0.24	0.04
Age	613.40	-303.63	3	2.93	0.23	0.03
Year + Date	614.09	-301.86	5	3.63	0.16	0.02
Base + Condition	614.37	-303.06	4	3.90	0.14	0.02
Base + Stress + Date	614.42	-302.02	5	3.96	0.14	0.02
Base + Temp	614.69	-303.22	4	4.22	0.12	0.02
Year	614.79	-303.27	4	4.32	0.12	0.02
Base + Stress	614.80	-303.27	4	4.33	0.11	0.02
Base + Age	614.82	-303.28	4	4.35	0.11	0.02
Stress + Condition	614.94	-303.35	4	4.48	0.11	0.02
Condition + Temp	614.95	-303.35	4	4.49	0.11	0.02
Condition + Age	615.13	-303.44	4	4.66	0.10	0.01
Stress + Temp	615.22	-303.48	4	4.75	0.09	0.01
Age + Temp	615.25	-303.50	4	4.79	0.09	0.01
Stress + Age	615.39	-303.57	4	4.92	0.09	0.01
Base + Stress + Base*Stress + Date	616.37	-301.92	6	5.90	0.05	0.01
Base + Stress + Condition	616.42	-303.02	5	5.96	0.05	0.01
Condition + Year	616.45	-303.03	5	5.98	0.05	0.01
Base + Year	616.45	-303.03	5	5.98	0.05	0.01
Base + Stress + Base*Stress	616.64	-303.13	5	6.17	0.05	0.01
Base + Temp + Base*Temp	616.65	-303.13	5	6.18	0.05	0.01
Base + Stress + Temp	616.81	-303.22	5	6.34	0.04	0.01
Stress + Year	616.88	-303.25	5	6.42	0.04	0.01
Age + Year	616.92	-303.27	5	6.45	0.04	0.01
Base + Stress + Age	616.92	-303.27	5	6.46	0.04	0.01
Stress + Temp + Stress*Temp	617.35	-303.48	5	6.88	0.03	0.00
Base + Stress + Base*Stress + Condition	618.19	-302.83	6	7.73	0.02	0.00
Base + Stress + Year	618.60	-303.03	6	8.13	0.02	0.00
Base + Stress + Base*Stress + Temp	618.66	-303.06	6	8.19	0.02	0.00
Base + Stress + Temp + Base*Temp	618.79	-303.13	6	8.33	0.02	0.00
Base + Stress + Base*Stress + Age	618.79	-303.13	6	8.33	0.02	0.00
Base + Stress + Temp + Stress*Temp	618.96	-303.21	6	8.49	0.01	0.00
Base + Stress + Base*Stress + Year	620.56	-302.92	7	10.09	0.01	0.00
Base + Year + Base*Year	620.64	-302.96	7	10.18	0.01	0.00
Base + Stress + Base*Stress + Temp + Base*Temp	620.83	-303.06	7	10.37	0.01	0.00
Base + Stress + Base*Stress + Temp + Stress*Temp	620.83	-303.06	7	10.37	0.01	0.00
Stress + Year + Stress*Year	621.07	-303.18	7	10.60	0.00	0.00
Base + Stress + Year + Base*Year	622.85	-302.96	8	12.38	0.00	0.00
Base + Stress + Year + Stress*Year	622.87	-302.97	8	12.41	0.00	0.00
Base + Stress + Base*Stress + Year + Base*Year	624.79	-302.81	9	14.32	0.00	0.00
Base + Stress + Base*Stress + Year + Stress*Year	624.82	-302.83	9	14.35	0.00	0.00

Clutch size in incubating females. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Date	620.87	-307.36	3	0.00	1.00	0.22
Base + Date	622.77	-307.26	4	1.89	0.39	0.09
Temp + Date	622.97	-307.36	4	2.09	0.35	0.08
Condition + Date	622.97	-307.36	4	2.10	0.35	0.08
Stress + Date	622.97	-307.36	4	2.10	0.35	0.08
<i>Null model (intercept only)</i>	623.55	-309.74	2	2.68	0.26	0.06
Year + Date	624.22	-306.92	5	3.34	0.19	0.04
Temp	624.73	-309.29	3	3.85	0.15	0.03
Base + Stress + Date	624.89	-307.26	5	4.02	0.13	0.03
Base	624.94	-309.39	3	4.06	0.13	0.03
Condition	625.21	-309.53	3	4.34	0.11	0.03
Stress	625.53	-309.69	3	4.66	0.10	0.02
Age	625.59	-309.72	3	4.71	0.09	0.02
Condition + Temp	626.39	-309.07	4	5.52	0.06	0.01
Base + Temp	626.44	-309.10	4	5.57	0.06	0.01
Base + Condition	626.55	-309.15	4	5.68	0.06	0.01
Year	626.61	-309.18	4	5.74	0.06	0.01
Age + Temp	626.82	-309.29	4	5.95	0.05	0.01
Stress + Temp	626.83	-309.29	4	5.95	0.05	0.01
Base + Stress + Base*Stress + Date	626.84	-307.16	6	5.97	0.05	0.01
Base + Stress	627.01	-309.38	4	6.14	0.05	0.01
Base + Age	627.02	-309.39	4	6.15	0.05	0.01
Stress + Condition	627.11	-309.43	4	6.24	0.04	0.01
Condition + Age	627.30	-309.52	4	6.42	0.04	0.01
Stress + Age	627.57	-309.66	4	6.70	0.04	0.01
Condition + Year	628.17	-308.90	5	7.30	0.03	0.01
Base + Year	628.33	-308.98	5	7.46	0.02	0.01
Base + Temp + Base*Temp	628.51	-309.07	5	7.64	0.02	0.00
Base + Stress + Temp	628.55	-309.09	5	7.68	0.02	0.00
Base + Stress + Condition	628.59	-309.11	5	7.72	0.02	0.00
Stress + Year	628.73	-309.18	5	7.85	0.02	0.00
Age + Year	628.74	-309.18	5	7.86	0.02	0.00
Base + Stress + Base*Stress	628.87	-309.25	5	8.00	0.02	0.00
Stress + Temp + Stress*Temp	628.95	-309.29	5	8.08	0.02	0.00
Base + Stress + Age	629.12	-309.37	5	8.24	0.02	0.00
Base + Stress + Base*Stress + Condition	630.37	-308.92	6	9.50	0.01	0.00
Base + Stress + Base*Stress + Temp	630.45	-308.96	6	9.58	0.01	0.00
Base + Stress + Year	630.48	-308.98	6	9.61	0.01	0.00
Base + Stress + Temp + Base*Temp	630.66	-309.07	6	9.78	0.01	0.00
Base + Stress + Temp + Stress*Temp	630.70	-309.09	6	9.83	0.01	0.00
Base + Stress + Base*Stress + Age	631.01	-309.24	6	10.14	0.01	0.00

Base + Year + Base*Year	632.17	-308.73	7	11.29	0.00	0.00
Base + Stress + Base*Stress + Temp + Base*Temp	632.48	-308.89	7	11.61	0.00	0.00
Base + Stress + Base*Stress + Year	632.49	-308.89	7	11.62	0.00	0.00
Base + Stress + Base*Stress + Temp + Stress*Temp	632.63	-308.96	7	11.75	0.00	0.00
Stress + Year + Stress*Year	632.85	-309.07	7	11.97	0.00	0.00
Base + Stress + Year + Base*Year	634.37	-308.73	8	13.50	0.00	0.00
Base + Stress + Year + Stress*Year	634.69	-308.89	8	13.81	0.00	0.00
Base + Stress + Base*Stress + Year + Base*Year	636.30	-308.57	9	15.42	0.00	0.00
Base + Stress + Base*Stress + Year + Stress*Year	636.68	-308.76	9	15.80	0.00	0.00

Table S2: Candidate models of reproductive success.

Reproductive success in incubating females. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Base + Year + Base*Year	702.46	-343.87	7	0.00	1.00	0.38
Base + Stress + Base*Stress + Year + Base*Year	702.51	-341.67	9	0.05	0.98	0.37
Base + Stress + Year + Base*Year	704.21	-343.64	8	1.76	0.42	0.16
Base + Stress + Base*Stress + Year	707.74	-346.51	7	5.28	0.07	0.03
Base + Year	708.42	-349.02	5	5.96	0.05	0.02
Base + Stress + Year	710.25	-348.86	6	7.79	0.02	0.01
Base + Stress + Base*Stress + Temp + Stress*Temp	711.20	-348.24	7	8.74	0.01	0.00
Base + Stress + Base*Stress	711.38	-350.50	5	8.92	0.01	0.00
Base + Stress + Base*Stress + Year + Stress*Year	711.96	-346.40	9	9.50	0.01	0.00
Base + Stress + Base*Stress + Date	712.08	-349.77	6	9.63	0.01	0.00
Base + Stress + Base*Stress + Age	712.77	-350.12	6	10.31	0.01	0.00
Base + Stress + Base*Stress + Temp + Base*Temp	712.84	-349.06	7	10.38	0.01	0.00
Base + Stress + Base*Stress + Temp	713.07	-350.27	6	10.62	0.00	0.00
Base + Stress + Base*Stress + Condition	713.31	-350.39	6	10.85	0.00	0.00
Base	713.32	-353.58	3	10.86	0.00	0.00
Base + Stress + Year + Stress*Year	714.18	-348.63	8	11.72	0.00	0.00
Base + Date	714.44	-353.09	4	11.98	0.00	0.00
Base + Age	714.61	-353.18	4	12.15	0.00	0.00
Year	714.67	-353.21	4	12.21	0.00	0.00
Base + Condition	714.86	-353.30	4	12.40	0.00	0.00
Base + Stress	714.90	-353.32	4	12.44	0.00	0.00
Base + Temp	715.00	-353.37	4	12.54	0.00	0.00
Year + Date	715.35	-352.49	5	12.89	0.00	0.00
Base + Stress + Date	715.88	-352.75	5	13.42	0.00	0.00
Condition + Year	716.01	-352.81	5	13.55	0.00	0.00
Base + Stress + Temp + Stress*Temp	716.05	-351.76	6	13.59	0.00	0.00
Base + Temp + Base*Temp	716.32	-352.97	5	13.86	0.00	0.00
Base + Stress + Temp	716.36	-352.99	5	13.90	0.00	0.00
Base + Stress + Age	716.37	-353.00	5	13.91	0.00	0.00

Age + Year	716.39	-353.00	5	13.93	0.00	0.00
Stress + Year	716.59	-353.10	5	14.13	0.00	0.00
Base + Stress + Condition	716.63	-353.13	5	14.18	0.00	0.00
Base + Stress + Temp + Base*Temp	717.70	-352.58	6	15.24	0.00	0.00
<i>Null model (intercept only)</i>	<i>720.04</i>	<i>-357.98</i>	<i>2</i>	<i>17.58</i>	<i>0.00</i>	<i>0.00</i>
Stress + Year + Stress*Year	720.75	-353.02	7	18.29	0.00	0.00
Condition	721.42	-357.63	3	18.96	0.00	0.00
Stress	721.67	-357.76	3	19.21	0.00	0.00
Age	721.88	-357.86	3	19.42	0.00	0.00
Date	721.91	-357.88	3	19.46	0.00	0.00
Temp	722.07	-357.96	3	19.61	0.00	0.00
Stress + Temp + Stress*Temp	723.08	-356.35	5	20.62	0.00	0.00
Stress + Condition	723.24	-357.49	4	20.78	0.00	0.00
Condition + Age	723.38	-357.56	4	20.92	0.00	0.00
Condition + Date	723.47	-357.61	4	21.02	0.00	0.00
Stress + Date	723.51	-357.63	4	21.05	0.00	0.00
Condition + Temp	723.52	-357.63	4	21.06	0.00	0.00
Stress + Age	723.61	-357.68	4	21.15	0.00	0.00
Stress + Temp	723.63	-357.69	4	21.18	0.00	0.00
Age + Temp	723.96	-357.86	4	21.51	0.00	0.00
Temp + Date	724.01	-357.88	4	21.55	0.00	0.00

Reproductive success in incubating females. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Base + Year + Base*Year	702.46	-343.87	7	0.00	1.00	0.44
Base + Stress + Base*Stress + Year + Base*Year	703.10	-341.97	9	0.64	0.73	0.32
Base + Stress + Year + Base*Year	704.21	-343.64	8	1.76	0.42	0.18
Base + Year	708.42	-349.02	5	5.96	0.05	0.02
Base + Stress + Year	710.25	-348.86	6	7.79	0.02	0.01
Base + Stress + Base*Stress + Year	711.22	-348.25	7	8.76	0.01	0.01
Base	713.32	-353.58	3	10.86	0.00	0.00
Base + Stress + Year + Stress*Year	713.61	-348.34	8	11.15	0.00	0.00
Base + Date	714.44	-353.09	4	11.98	0.00	0.00
Base + Age	714.61	-353.18	4	12.15	0.00	0.00
Year	714.67	-353.21	4	12.21	0.00	0.00
Base + Stress + Base*Stress + Year + Stress*Year	714.79	-347.81	9	12.33	0.00	0.00
Base + Condition	714.86	-353.30	4	12.40	0.00	0.00
Base + Stress	714.90	-353.32	4	12.44	0.00	0.00
Base + Temp	715.00	-353.37	4	12.54	0.00	0.00
Year + Date	715.35	-352.49	5	12.89	0.00	0.00
Base + Stress + Base*Stress + Temp + Stress*Temp	715.66	-350.47	7	13.20	0.00	0.00
Base + Stress + Temp + Stress*Temp	715.67	-351.57	6	13.21	0.00	0.00
Base + Stress + Base*Stress + Temp + Base*Temp	715.68	-350.48	7	13.22	0.00	0.00
Stress + Year	715.77	-352.69	5	13.31	0.00	0.00
Base + Stress + Base*Stress	715.84	-352.73	5	13.38	0.00	0.00

Base + Stress + Date	715.88	-352.75	5	13.42	0.00	0.00
Condition + Year	716.01	-352.81	5	13.55	0.00	0.00
Base + Temp + Base*Temp	716.32	-352.97	5	13.86	0.00	0.00
Base + Stress + Temp	716.36	-352.99	5	13.90	0.00	0.00
Base + Stress + Age	716.37	-353.00	5	13.91	0.00	0.00
Age + Year	716.39	-353.00	5	13.93	0.00	0.00
Base + Stress + Condition	716.63	-353.13	5	14.18	0.00	0.00
Base + Stress + Base*Stress + Date	716.70	-352.08	6	14.24	0.00	0.00
Base + Stress + Base*Stress + Age	717.18	-352.32	6	14.72	0.00	0.00
Base + Stress + Base*Stress + Temp	717.40	-352.43	6	14.94	0.00	0.00
Base + Stress + Base*Stress + Condition	717.65	-352.56	6	15.19	0.00	0.00
Base + Stress + Temp + Base*Temp	717.70	-352.58	6	15.24	0.00	0.00
Stress + Year + Stress*Year	719.04	-352.16	7	16.58	0.00	0.00
<i>Null model (intercept only)</i>	<i>720.04</i>	<i>-357.98</i>	<i>2</i>	<i>17.58</i>	<i>0.00</i>	<i>0.00</i>
Stress	720.55	-357.20	3	18.10	0.00	0.00
Stress + Temp + Stress*Temp	720.86	-355.24	5	18.40	0.00	0.00
Condition	721.42	-357.63	3	18.96	0.00	0.00
Age	721.88	-357.86	3	19.42	0.00	0.00
Date	721.91	-357.88	3	19.46	0.00	0.00
Temp	722.07	-357.96	3	19.61	0.00	0.00
Stress + Condition	722.27	-357.01	4	19.82	0.00	0.00
Stress + Date	722.28	-357.01	4	19.82	0.00	0.00
Stress + Temp	722.37	-357.06	4	19.91	0.00	0.00
Stress + Age	722.53	-357.14	4	20.07	0.00	0.00
Condition + Age	723.38	-357.56	4	20.92	0.00	0.00
Condition + Date	723.47	-357.61	4	21.02	0.00	0.00
Condition + Temp	723.52	-357.63	4	21.06	0.00	0.00
Age + Temp	723.96	-357.86	4	21.51	0.00	0.00
Temp + Date	724.01	-357.88	4	21.55	0.00	0.00

Reproductive success in provisioning females. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Base + Stress + Base*Stress + Year + Base*Year	592.50	-286.55	9	0.00	1.00	0.65
Base + Stress + Base*Stress + Year	594.66	-289.90	7	2.16	0.34	0.22
Base + Stress + Base*Stress + Year + Stress*Year	598.27	-289.43	9	5.77	0.06	0.04
Year	599.68	-295.69	4	7.19	0.03	0.02
Year + Date	601.24	-295.39	5	8.75	0.01	0.01
Base + Stress + Base*Stress + Temp + Base*Temp	601.38	-293.26	7	8.89	0.01	0.01
Base + Year	601.40	-295.47	5	8.91	0.01	0.01
Condition + Year	601.58	-295.56	5	9.08	0.01	0.01
Stress + Year	601.80	-295.67	5	9.31	0.01	0.01
Age + Year	601.82	-295.68	5	9.32	0.01	0.01
Base + Temp + Base*Temp	602.37	-295.96	5	9.88	0.01	0.00
Base + Stress + Base*Stress + Temp	602.87	-295.12	6	10.38	0.01	0.00
Base + Stress + Base*Stress	602.93	-296.24	5	10.44	0.01	0.00

Base + Year + Base*Year	603.51	-294.32	7	11.01	0.00	0.00
Base + Stress + Year	603.57	-295.46	6	11.07	0.00	0.00
Base + Stress + Base*Stress + Temp + Stress*Temp	603.97	-294.56	7	11.48	0.00	0.00
Base + Stress + Temp + Base*Temp	604.23	-295.79	6	11.73	0.00	0.00
Base + Stress + Base*Stress + Condition	604.73	-296.04	6	12.23	0.00	0.00
Base + Stress + Base*Stress + Age	605.02	-296.19	6	12.52	0.00	0.00
Base + Stress + Base*Stress + Date	605.11	-296.23	6	12.61	0.00	0.00
Temp	605.42	-299.62	3	12.93	0.00	0.00
Stress + Year + Stress*Year	605.64	-295.39	7	13.15	0.00	0.00
Base + Stress + Year + Base*Year	605.69	-294.29	8	13.20	0.00	0.00
<i>Null model (intercept only)</i>	<i>605.80</i>	<i>-300.85</i>	<i>2</i>	<i>13.30</i>	<i>0.00</i>	<i>0.00</i>
Temp + Date	605.87	-298.78	4	13.37	0.00	0.00
Stress + Temp	607.27	-299.48	4	14.77	0.00	0.00
Stress	607.45	-300.63	3	14.95	0.00	0.00
Age + Temp	607.46	-299.58	4	14.97	0.00	0.00
Base + Temp	607.48	-299.59	4	14.98	0.00	0.00
Condition + Temp	607.50	-299.60	4	15.01	0.00	0.00
Base + Stress + Year + Stress*Year	607.55	-295.22	8	15.05	0.00	0.00
Stress + Temp + Stress*Temp	607.75	-298.65	5	15.26	0.00	0.00
Condition	607.77	-300.80	3	15.28	0.00	0.00
Age	607.77	-300.80	3	15.28	0.00	0.00
Date	607.86	-300.84	3	15.36	0.00	0.00
Base	607.88	-300.85	3	15.38	0.00	0.00
Stress + Condition	609.31	-300.51	4	16.82	0.00	0.00
Base + Stress + Temp	609.37	-299.46	5	16.87	0.00	0.00
Stress + Age	609.38	-300.54	4	16.89	0.00	0.00
Stress + Date	609.54	-300.62	4	17.04	0.00	0.00
Base + Stress	609.56	-300.63	4	17.06	0.00	0.00
Condition + Age	609.82	-300.76	4	17.32	0.00	0.00
Base + Condition	609.87	-300.78	4	17.37	0.00	0.00
Condition + Date	609.89	-300.79	4	17.39	0.00	0.00
Base + Stress + Temp + Stress*Temp	609.89	-298.62	6	17.39	0.00	0.00
Base + Age	609.89	-300.79	4	17.39	0.00	0.00
Base + Date	609.97	-300.84	4	17.48	0.00	0.00
Base + Stress + Condition	611.40	-300.47	5	18.91	0.00	0.00
Base + Stress + Age	611.53	-300.54	5	19.03	0.00	0.00
Base + Stress + Date	611.68	-300.61	5	19.19	0.00	0.00

Reproductive success in provisioning females. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Base + Stress + Base*Stress + Year	590.99	-288.06	7	0.00	1.00	0.60
Base + Stress + Base*Stress + Year + Base*Year	593.78	-287.19	9	2.79	0.25	0.15
Base + Stress + Base*Stress + Year + Stress*Year	595.02	-287.81	9	4.03	0.13	0.08
Base + Stress + Base*Stress + Temp + Base*Temp	595.17	-290.15	7	4.18	0.12	0.07
Base + Stress + Base*Stress + Temp	597.85	-292.60	6	6.86	0.03	0.02

Base + Stress + Base*Stress + Temp + Stress*Temp	598.63	-291.89	7	7.64	0.02	0.01
Base + Stress + Base*Stress	598.89	-294.22	5	7.90	0.02	0.01
Year	599.68	-295.69	4	8.69	0.01	0.01
Base + Stress + Base*Stress + Condition	600.79	-294.08	6	9.80	0.01	0.00
Base + Stress + Base*Stress + Date	600.90	-294.13	6	9.91	0.01	0.00
Base + Stress + Base*Stress + Age	601.06	-294.21	6	10.07	0.01	0.00
Year + Date	601.24	-295.39	5	10.25	0.01	0.00
Base + Year	601.40	-295.47	5	10.41	0.01	0.00
Condition + Year	601.58	-295.56	5	10.59	0.01	0.00
Age + Year	601.82	-295.68	5	10.83	0.00	0.00
Stress + Year	601.83	-295.69	5	10.85	0.00	0.00
Base + Temp + Base*Temp	602.37	-295.96	5	11.38	0.00	0.00
Base + Year + Base*Year	603.51	-294.32	7	12.52	0.00	0.00
Base + Stress + Year	603.57	-295.46	6	12.58	0.00	0.00
Base + Stress + Temp + Base*Temp	604.23	-295.79	6	13.24	0.00	0.00
Temp	605.42	-299.62	3	14.43	0.00	0.00
Stress + Year + Stress*Year	605.64	-295.39	7	14.65	0.00	0.00
Base + Stress + Year + Base*Year	605.69	-294.29	8	14.70	0.00	0.00
<i>Null model (intercept only)</i>	605.80	-300.85	2	14.81	0.00	0.00
Temp + Date	605.87	-298.78	4	14.88	0.00	0.00
Stress + Temp + Stress*Temp	606.39	-297.97	5	15.40	0.00	0.00
Stress + Temp	607.32	-299.51	4	16.34	0.00	0.00
Stress	607.44	-300.63	3	16.45	0.00	0.00
Base + Stress + Year + Stress*Year	607.46	-295.17	8	16.47	0.00	0.00
Age + Temp	607.46	-299.58	4	16.47	0.00	0.00
Base + Temp	607.48	-299.59	4	16.49	0.00	0.00
Condition + Temp	607.50	-299.60	4	16.51	0.00	0.00
Condition	607.77	-300.80	3	16.79	0.00	0.00
Age	607.77	-300.80	3	16.79	0.00	0.00
Date	607.86	-300.84	3	16.87	0.00	0.00
Base	607.88	-300.85	3	16.89	0.00	0.00
Base + Stress + Temp + Stress*Temp	608.40	-297.88	6	17.41	0.00	0.00
Stress + Condition	609.26	-300.48	4	18.27	0.00	0.00
Base + Stress + Temp	609.37	-299.46	5	18.38	0.00	0.00
Stress + Age	609.37	-300.54	4	18.38	0.00	0.00
Stress + Date	609.53	-300.61	4	18.54	0.00	0.00
Base + Stress	609.56	-300.63	4	18.57	0.00	0.00
Condition + Age	609.82	-300.76	4	18.83	0.00	0.00
Base + Condition	609.87	-300.78	4	18.88	0.00	0.00
Condition + Date	609.89	-300.79	4	18.90	0.00	0.00
Base + Age	609.89	-300.79	4	18.90	0.00	0.00
Base + Date	609.97	-300.84	4	18.98	0.00	0.00
Base + Stress + Condition	611.40	-300.47	5	20.41	0.00	0.00
Base + Stress + Age	611.53	-300.54	5	20.54	0.00	0.00
Base + Stress + Date	611.68	-300.61	5	20.69	0.00	0.00

Reproductive success and seasonal change in females. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Base + Year	502.88	-246.17	5	0.00	1.00	0.37
Base + Stress + Year	504.73	-245.98	6	1.84	0.40	0.15
Base + Stress + Base*Stress + Year	506.46	-245.71	7	3.58	0.17	0.06
Base + Year + Base*Year	506.48	-245.72	7	3.60	0.17	0.06
Year	506.53	-249.08	4	3.65	0.16	0.06
Condition + Year	506.56	-248.01	5	3.68	0.16	0.06
Base + Stress + Year + Base*Year	508.12	-245.39	8	5.24	0.07	0.03
Year + Date	508.61	-249.03	5	5.73	0.06	0.02
Stress + Year	508.71	-249.08	5	5.83	0.05	0.02
Age + Year	508.71	-249.08	5	5.83	0.05	0.02
Base + Stress + Year + Stress*Year	508.78	-245.72	8	5.90	0.05	0.02
Base	509.45	-251.62	3	6.57	0.04	0.01
Base + Temp	509.69	-250.67	4	6.81	0.03	0.01
Base + Stress + Base*Stress + Year + Base*Year	510.04	-245.17	9	7.16	0.03	0.01
Base + Stress + Base*Stress + Year + Stress*Year	510.70	-245.50	9	7.82	0.02	0.01
Base + Condition	511.21	-251.43	4	8.33	0.02	0.01
Base + Temp + Base*Temp	511.37	-250.41	5	8.49	0.01	0.01
Base + Stress	511.41	-251.52	4	8.53	0.01	0.01
Base + Date	511.45	-251.55	4	8.57	0.01	0.01
Base + Age	511.57	-251.60	4	8.68	0.01	0.00
Base + Stress + Base*Stress	511.59	-250.52	5	8.71	0.01	0.00
Base + Stress + Temp	511.76	-250.61	5	8.88	0.01	0.00
<i>Null model (intercept only)</i>	<i>511.78</i>	<i>-253.84</i>	<i>2</i>	<i>8.90</i>	<i>0.01</i>	<i>0.00</i>
Temp	511.81	-252.80	3	8.93	0.01	0.00
Base + Stress + Base*Stress + Temp	512.55	-249.89	6	9.66	0.01	0.00
Condition	512.91	-253.35	3	10.03	0.01	0.00
Condition + Temp	513.07	-252.35	4	10.19	0.01	0.00
Stress + Year + Stress*Year	513.13	-249.05	7	10.25	0.01	0.00
Base + Stress + Temp + Base*Temp	513.33	-250.28	6	10.44	0.01	0.00
Base + Stress + Condition	513.34	-251.40	5	10.46	0.01	0.00
Base + Stress + Date	513.49	-251.47	5	10.61	0.00	0.00
Temp + Date	513.54	-252.59	4	10.66	0.00	0.00
Base + Stress + Age	513.55	-251.50	5	10.67	0.00	0.00
Date	513.57	-253.68	3	10.68	0.00	0.00
Base + Stress + Base*Stress + Condition	513.58	-250.40	6	10.70	0.00	0.00
Base + Stress + Base*Stress + Date	513.75	-250.49	6	10.86	0.00	0.00
Base + Stress + Base*Stress + Age	513.79	-250.51	6	10.90	0.00	0.00
Age	513.80	-253.79	3	10.92	0.00	0.00
Stress	513.88	-253.83	3	11.00	0.00	0.00
Base + Stress + Temp + Stress*Temp	513.90	-250.56	6	11.02	0.00	0.00
Age + Temp	513.92	-252.78	4	11.03	0.00	0.00
Stress + Temp	513.94	-252.79	4	11.06	0.00	0.00
Base + Stress + Base*Stress + Temp + Stress*Temp	514.65	-249.81	7	11.77	0.00	0.00

Base + Stress + Base*Stress + Temp + Base*Temp	514.73	-249.85	7	11.85	0.00	0.00
Condition + Date	514.79	-253.21	4	11.91	0.00	0.00
Stress + Condition	514.93	-253.29	4	12.05	0.00	0.00
Condition + Age	515.00	-253.32	4	12.12	0.00	0.00
Stress + Date	515.69	-253.67	4	12.81	0.00	0.00
Stress + Age	515.95	-253.79	4	13.06	0.00	0.00
Stress + Temp + Stress*Temp	515.97	-252.71	5	13.09	0.00	0.00

Reproductive success and seasonal change in females. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Base + Year	502.88	-246.17	5	0.00	1.00	0.38
Base + Stress + Year	504.73	-245.98	6	1.84	0.40	0.15
Base + Year + Base*Year	506.48	-245.72	7	3.60	0.17	0.06
Year	506.53	-249.08	4	3.65	0.16	0.06
Condition + Year	506.56	-248.01	5	3.68	0.16	0.06
Base + Stress + Base*Stress + Year	506.94	-245.95	7	4.06	0.13	0.05
Base + Stress + Year + Base*Year	508.12	-245.39	8	5.24	0.07	0.03
Stress + Year	508.36	-248.91	5	5.48	0.06	0.02
Base + Stress + Year + Stress*Year	508.53	-245.59	8	5.65	0.06	0.02
Year + Date	508.61	-249.03	5	5.73	0.06	0.02
Age + Year	508.71	-249.08	5	5.83	0.05	0.02
Base	509.45	-251.62	3	6.57	0.04	0.01
Base + Temp	509.69	-250.67	4	6.81	0.03	0.01
Base + Stress + Base*Stress + Year + Base*Year	510.47	-245.39	9	7.59	0.02	0.01
Base + Stress + Base*Stress + Year + Stress*Year	510.88	-245.59	9	8.00	0.02	0.01
Base + Condition	511.21	-251.43	4	8.33	0.02	0.01
Base + Temp + Base*Temp	511.37	-250.41	5	8.49	0.01	0.01
Base + Stress	511.41	-251.52	4	8.53	0.01	0.01
Base + Date	511.45	-251.55	4	8.57	0.01	0.01
Base + Age	511.57	-251.60	4	8.68	0.01	0.00
Base + Stress + Temp	511.76	-250.61	5	8.88	0.01	0.00
<i>Null model (intercept only)</i>	<i>511.78</i>	<i>-253.84</i>	<i>2</i>	<i>8.90</i>	<i>0.01</i>	<i>0.00</i>
Temp	511.81	-252.80	3	8.93	0.01	0.00
Stress + Year + Stress*Year	512.79	-248.88	7	9.91	0.01	0.00
Condition	512.91	-253.35	3	10.03	0.01	0.00
Base + Stress + Base*Stress	512.92	-251.19	5	10.03	0.01	0.00
Condition + Temp	513.07	-252.35	4	10.19	0.01	0.00
Base + Stress + Temp + Base*Temp	513.33	-250.28	6	10.44	0.01	0.00
Base + Stress + Condition	513.34	-251.40	5	10.46	0.01	0.00
Base + Stress + Date	513.49	-251.47	5	10.61	0.00	0.00
Temp + Date	513.54	-252.59	4	10.66	0.00	0.00
Base + Stress + Age	513.55	-251.50	5	10.67	0.00	0.00
Date	513.57	-253.68	3	10.68	0.00	0.00
Base + Stress + Base*Stress + Temp	513.58	-250.41	6	10.70	0.00	0.00
Stress	513.73	-253.76	3	10.85	0.00	0.00

Base + Stress + Temp + Stress*Temp	513.75	-250.49	6	10.87	0.00	0.00
Age	513.80	-253.79	3	10.92	0.00	0.00
Stress + Temp	513.85	-252.75	4	10.97	0.00	0.00
Age + Temp	513.92	-252.78	4	11.03	0.00	0.00
Condition + Date	514.79	-253.21	4	11.91	0.00	0.00
Base + Stress + Base*Stress + Condition	514.90	-251.07	6	12.02	0.00	0.00
Condition + Age	515.00	-253.32	4	12.12	0.00	0.00
Base + Stress + Base*Stress + Date	515.05	-251.14	6	12.17	0.00	0.00
Stress + Condition	515.05	-253.34	4	12.17	0.00	0.00
Base + Stress + Base*Stress + Age	515.09	-251.16	6	12.21	0.00	0.00
Base + Stress + Base*Stress + Temp + Base*Temp	515.49	-250.23	7	12.61	0.00	0.00
Stress + Date	515.61	-253.63	4	12.73	0.00	0.00
Base + Stress + Base*Stress + Temp + Stress*Temp	515.66	-250.31	7	12.78	0.00	0.00
Stress + Age	515.79	-253.71	4	12.91	0.00	0.00
Stress + Temp + Stress*Temp	516.03	-252.74	5	13.15	0.00	0.00

Male reproductive success. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Year	357.62	-174.57	4	0.00	1.00	0.19
Stress + Year	358.76	-174.00	5	1.13	0.57	0.11
Year + Date	359.39	-174.32	5	1.76	0.41	0.08
Condition + Year	359.60	-174.42	5	1.97	0.37	0.07
Base + Year	359.64	-174.45	5	2.02	0.36	0.07
Age + Year	359.85	-174.55	5	2.22	0.33	0.06
Base + Year + Base*Year	360.27	-172.42	7	2.64	0.27	0.05
Base + Stress + Year	360.96	-173.95	6	3.33	0.19	0.04
Stress + Year + Stress*Year	361.03	-172.80	7	3.41	0.18	0.04
Base + Temp + Base*Temp	361.04	-175.15	5	3.42	0.18	0.04
Base + Stress + Temp + Base*Temp	361.56	-174.25	6	3.93	0.14	0.03
Stress	361.81	-177.76	3	4.18	0.12	0.02
Base + Stress + Year + Base*Year	362.10	-172.12	8	4.48	0.11	0.02
Stress + Temp	362.82	-177.16	4	5.20	0.07	0.01
Base + Stress + Base*Stress + Year	362.87	-173.72	7	5.25	0.07	0.01
Base + Stress + Year + Stress*Year	363.43	-172.78	8	5.80	0.05	0.01
Stress + Date	363.62	-177.56	4	5.99	0.05	0.01
Stress + Age	363.74	-177.62	4	6.11	0.05	0.01
Base + Stress + Base*Stress + Temp + Base*Temp	363.81	-174.18	7	6.18	0.05	0.01
Stress + Condition	363.86	-177.68	4	6.24	0.04	0.01
Temp	363.96	-178.83	3	6.34	0.04	0.01
<i>Null model (intercept only)</i>	364.00	-179.93	2	6.37	0.04	0.01
Base + Stress	364.00	-177.76	4	6.38	0.04	0.01
Base + Stress + Base*Stress + Year + Base*Year	364.35	-171.99	9	6.72	0.03	0.01
Stress + Temp + Stress*Temp	364.60	-176.93	5	6.98	0.03	0.01
Base + Stress + Temp	364.98	-177.12	5	7.36	0.03	0.00
Base + Stress + Base*Stress + Year + Stress*Year	365.27	-172.45	9	7.64	0.02	0.00

Temp + Date	365.40	-178.45	4	7.78	0.02	0.00
Base + Stress + Base*Stress	365.47	-177.36	5	7.85	0.02	0.00
Date	365.58	-179.64	3	7.95	0.02	0.00
Base + Temp	365.80	-178.66	4	8.18	0.02	0.00
Base + Stress + Date	365.85	-177.55	5	8.23	0.02	0.00
Base + Stress + Age	365.98	-177.62	5	8.36	0.02	0.00
Age	366.00	-179.85	3	8.38	0.02	0.00
Condition + Temp	366.05	-178.78	4	8.42	0.01	0.00
Base	366.08	-179.89	3	8.45	0.01	0.00
Condition	366.09	-179.90	3	8.47	0.01	0.00
Base + Stress + Condition	366.12	-177.68	5	8.50	0.01	0.00
Age + Temp	366.16	-178.83	4	8.53	0.01	0.00
Base + Stress + Temp + Stress*Temp	366.77	-176.86	6	9.15	0.01	0.00
Base + Stress + Base*Stress + Temp	366.84	-176.89	6	9.22	0.01	0.00
Base + Stress + Base*Stress + Age	367.43	-177.18	6	9.81	0.01	0.00
Base + Stress + Base*Stress + Date	367.49	-177.22	6	9.87	0.01	0.00
Base + Stress + Base*Stress + Condition	367.58	-177.26	6	9.96	0.01	0.00
Base + Date	367.63	-179.57	4	10.01	0.01	0.00
Condition + Date	367.74	-179.62	4	10.12	0.01	0.00
Condition + Age	368.03	-179.77	4	10.41	0.01	0.00
Base + Age	368.11	-179.81	4	10.48	0.01	0.00
Base + Condition	368.24	-179.87	4	10.61	0.00	0.00
Base + Stress + Base*Stress + Temp + Stress*Temp	368.92	-176.74	7	11.30	0.00	0.00

Male reproductive success. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	AICc	LL	K	Δ AICc	RelLik	Weight
Year	357.62	-174.57	4	0.00	1.00	0.20
Stress + Year	359.03	-174.14	5	1.41	0.50	0.10
Year + Date	359.39	-174.32	5	1.76	0.41	0.08
Condition + Year	359.60	-174.42	5	1.97	0.37	0.08
Base + Year	359.64	-174.45	5	2.02	0.36	0.07
Age + Year	359.85	-174.55	5	2.22	0.33	0.07
Base + Year + Base*Year	360.27	-172.42	7	2.64	0.27	0.05
Base + Stress + Year	360.96	-173.95	6	3.33	0.19	0.04
Base + Temp + Base*Temp	361.04	-175.15	5	3.42	0.18	0.04
Base + Stress + Temp + Base*Temp	361.56	-174.25	6	3.93	0.14	0.03
Base + Stress + Year + Base*Year	362.10	-172.12	8	4.48	0.11	0.02
Stress	362.17	-177.94	3	4.54	0.10	0.02
Stress + Year + Stress*Year	362.45	-173.51	7	4.82	0.09	0.02
Base + Stress + Base*Stress + Year	362.82	-173.69	7	5.20	0.07	0.02
Stress + Temp	363.35	-177.43	4	5.72	0.06	0.01
Base + Stress + Base*Stress + Temp + Base*Temp	363.91	-174.24	7	6.29	0.04	0.01
Temp	363.96	-178.83	3	6.34	0.04	0.01
<i>Null model (intercept only)</i>	364.00	-179.93	2	6.37	0.04	0.01
Base + Stress	364.00	-177.76	4	6.38	0.04	0.01

Stress + Date	364.06	-177.79	4	6.44	0.04	0.01
Stress + Age	364.17	-177.84	4	6.55	0.04	0.01
Stress + Temp + Stress*Temp	364.19	-176.72	5	6.56	0.04	0.01
Stress + Condition	364.19	-177.85	4	6.56	0.04	0.01
Base + Stress + Base*Stress + Year + Base*Year	364.59	-172.11	9	6.96	0.03	0.01
Base + Stress + Year + Stress*Year	364.59	-173.36	8	6.97	0.03	0.01
Base + Stress + Temp	364.98	-177.12	5	7.36	0.03	0.01
Base + Stress + Base*Stress	365.35	-177.30	5	7.73	0.02	0.00
Temp + Date	365.40	-178.45	4	7.78	0.02	0.00
Date	365.58	-179.64	3	7.95	0.02	0.00
Base + Stress + Temp + Stress*Temp	365.65	-176.29	6	8.02	0.02	0.00
Base + Temp	365.80	-178.66	4	8.18	0.02	0.00
Base + Stress + Date	365.85	-177.55	5	8.23	0.02	0.00
Base + Stress + Age	365.98	-177.62	5	8.36	0.02	0.00
Age	366.00	-179.85	3	8.38	0.02	0.00
Base + Stress + Base*Stress + Year + Stress*Year	366.04	-172.84	9	8.42	0.01	0.00
Condition + Temp	366.05	-178.78	4	8.42	0.01	0.00
Base	366.08	-179.89	3	8.45	0.01	0.00
Condition	366.09	-179.90	3	8.47	0.01	0.00
Base + Stress + Condition	366.12	-177.68	5	8.50	0.01	0.00
Age + Temp	366.16	-178.83	4	8.53	0.01	0.00
Base + Stress + Base*Stress + Temp	366.65	-176.79	6	9.02	0.01	0.00
Base + Stress + Base*Stress + Date	367.32	-177.13	6	9.70	0.01	0.00
Base + Stress + Base*Stress + Age	367.35	-177.14	6	9.72	0.01	0.00
Base + Stress + Base*Stress + Condition	367.49	-177.22	6	9.87	0.01	0.00
Base + Date	367.63	-179.57	4	10.01	0.01	0.00
Condition + Date	367.74	-179.62	4	10.12	0.01	0.00
Base + Stress + Base*Stress + Temp + Stress*Temp	367.88	-176.22	7	10.25	0.01	0.00
Condition + Age	368.03	-179.77	4	10.41	0.01	0.00
Base + Age	368.11	-179.81	4	10.48	0.01	0.00
Base + Condition	368.24	-179.87	4	10.61	0.00	0.00

Table S3: Best fit models of reproductive success among candidate model sets that include circulating stress-induced corticosterone as a measure of the stress response. Estimates are from GLMs with a Poisson distribution and log link function. All models include identity as a random effect.

Parameter	Estimate $\pm$ SE	z value	P
Incubation 1: AICc: 701.7, $n=164$			
Intercept	0.884 $\pm$ 0.174	5.073	< 0.001
Baseline cort	0.032 $\pm$ 0.037	0.858	0.391
Year (2013)	0.141 $\pm$ 0.233	0.607	0.544
(2014)	0.097 $\pm$ 0.235	0.410	0.682
Year*Base (2013)	-0.117 $\pm$ 0.046	-2.521	0.012
(2014)	-0.028 $\pm$ 0.044	-0.651	0.515
Incubation 2: AICc: 701.9, $n=164$			
Intercept	1.088 $\pm$ 0.201	5.413	< 0.001
Baseline cort	0.006 $\pm$ 0.040	0.158	0.875
Stress response	-0.005 $\pm$ 0.003	-1.802	0.072
Base*Stress	0.001 $\pm$ 0.000	1.789	0.074
Year (2013)	0.215 $\pm$ 0.236	0.914	0.361
(2014)	0.169 $\pm$ 0.237	0.713	0.476
Year*Base (2013)	-0.131 $\pm$ 0.048	-2.743	0.006
(2014)	-0.043 $\pm$ 0.045	-0.954	0.340
Provisioning: AICc: 590.1, $n=138$			
Intercept	0.634 $\pm$ 0.204	3.107	0.002
Baseline cort	0.106 $\pm$ 0.028	3.715	< 0.001
Stress response	0.015 $\pm$ 0.005	3.110	0.002
Base*Stress	-0.002 $\pm$ 0.001	-3.498	< 0.001
Year (2013)	-0.397 $\pm$ 0.136	-2.919	0.004
(2014)	0.030 $\pm$ 0.128	0.235	0.814

Table S4: Models of survival probability in female tree swallows.

Survival probability in incubating females. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	QAICc	Δ QAICc	Weight	RelLik	K	QDev
<i>Intercept</i>	145.23	0.00	0.08	1.00	1	143.21
Base	146.06	0.82	0.05	0.66	2	141.99
Cond	146.26	1.03	0.05	0.60	2	142.20
Temp	146.32	1.08	0.04	0.58	2	142.25
Stress	146.49	1.25	0.04	0.54	2	142.42
Age	146.50	1.26	0.04	0.53	2	142.43
Base + Temp	146.62	1.38	0.04	0.50	3	140.49
Date	146.84	1.61	0.03	0.45	2	142.78
Base + Age	146.92	1.68	0.03	0.43	3	140.79
Stress + Temp	147.06	1.83	0.03	0.40	3	140.93
Base + Temp + Base*Temp	147.06	1.83	0.03	0.40	4	138.85
Base + Stress + Temp	147.14	1.91	0.03	0.39	4	138.92
Base + Cond	147.19	1.95	0.03	0.38	3	141.06
Base + Date	147.24	2.01	0.03	0.37	3	141.11
Base + Stress	147.28	2.04	0.03	0.36	3	141.15
Cond + Temp	147.68	2.44	0.02	0.29	3	141.55
Cond + Age	147.70	2.46	0.02	0.29	3	141.57
Stress + Cond	147.70	2.47	0.02	0.29	3	141.57
Base + Stress + Temp + Base*Temp	147.72	2.49	0.02	0.29	5	137.40
Stress + Date	147.88	2.65	0.02	0.27	3	141.75
Stress + Age	147.93	2.69	0.02	0.26	3	141.80
Age + Temp	147.96	2.73	0.02	0.26	3	141.83
Base + Stress + Date	148.10	2.87	0.02	0.24	4	139.88
Cond + Date	148.19	2.95	0.02	0.23	3	142.06
Base + Stress + Base*Stress + Temp	148.26	3.03	0.02	0.22	5	137.94
Age + Date	148.30	3.06	0.02	0.22	3	142.17
Base + Stress + Age	148.35	3.12	0.02	0.21	4	140.14
Date + Temp	148.38	3.15	0.02	0.21	3	142.25
Base + Stress + Base*Stress	148.40	3.17	0.02	0.21	4	140.18
Year	148.47	3.23	0.02	0.20	3	142.34
Base + Stress + Cond	148.62	3.38	0.01	0.18	4	140.40
Base + Year	148.94	3.70	0.01	0.16	4	140.72
Stress + Temp + Stress*Temp	148.98	3.75	0.01	0.15	4	140.76
Base + Stress + Temp + Stress*Temp	149.08	3.84	0.01	0.15	5	138.75
Base + Stress + Base*Stress + Date	149.09	3.86	0.01	0.15	5	138.76
Base + Stress + Base*Stress + Age	149.35	4.12	0.01	0.13	5	139.02
Base + Stress + Base*Stress + Temp + Base*Temp	149.38	4.14	0.01	0.13	6	136.92
Cond + Year	149.43	4.20	0.01	0.12	4	141.22
Stress + Year	149.61	4.37	0.01	0.11	4	141.39
Base + Stress + Base*Stress + Cond	149.88	4.64	0.01	0.10	5	139.55

Age + Year	149.95	4.72	0.01	0.09	4	141.74
Base + Stress + Year	149.97	4.74	0.01	0.09	5	139.64
Base + Stress + Base*Stress + Temp + Stress*Temp	150.04	4.80	0.01	0.09	6	137.58
Date + Year	150.14	4.90	0.01	0.09	4	141.92
Base + Stress + Base*Stress + Year	150.96	5.72	0.00	0.06	6	138.49
Base + Year + Base*Year	152.93	7.70	0.00	0.02	6	140.47
Stress + Year + Stress*Year	153.53	8.29	0.00	0.02	6	141.07
Base + Stress + Year + Base*Year	153.92	8.68	0.00	0.01	7	139.30
Base + Stress + Year + Stress*Year	153.92	8.68	0.00	0.01	7	139.30
Base + Stress + Base*Stress + Year + Base*Year	155.01	9.78	0.00	0.01	8	138.21
Base + Stress + Base*Stress + Year + Stress*Year	155.13	9.89	0.00	0.01	8	138.33

Survival probability in incubating females. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	QAICc	Δ QAICc	Weight	RelLik	K	QDev
<i>Intercept</i>	145.23	0.00	0.07	1.00	1	143.21
Stress	146.01	0.77	0.05	0.68	2	141.94
Base	146.06	0.82	0.05	0.66	2	141.99
Stress + Temp	146.25	1.02	0.04	0.60	3	140.12
Cond	146.26	1.03	0.04	0.60	2	142.20
Temp	146.32	1.08	0.04	0.58	2	142.25
Age	146.50	1.26	0.04	0.53	2	142.43
Base + Temp	146.62	1.38	0.04	0.50	3	140.49
Date	146.84	1.61	0.03	0.45	2	142.78
Base + Age	146.92	1.68	0.03	0.43	3	140.79
Base + Temp + Base*Temp	147.06	1.83	0.03	0.40	4	138.85
Base + Stress + Temp	147.14	1.91	0.03	0.39	4	138.92
Base + Cond	147.19	1.95	0.03	0.38	3	141.06
Stress + Date	147.21	1.98	0.03	0.37	3	141.08
Base + Date	147.24	2.01	0.03	0.37	3	141.11
Base + Stress	147.28	2.04	0.03	0.36	3	141.15
Stress + Cond	147.29	2.05	0.03	0.36	3	141.16
Stress + Age	147.43	2.19	0.02	0.33	3	141.30
Cond + Temp	147.68	2.44	0.02	0.29	3	141.55
Cond + Age	147.70	2.46	0.02	0.29	3	141.57
Base + Stress + Temp + Base*Temp	147.72	2.49	0.02	0.29	5	137.40
Age + Temp	147.96	2.73	0.02	0.26	3	141.83
Base + Stress + Date	148.10	2.87	0.02	0.24	4	139.88
Cond + Date	148.19	2.95	0.02	0.23	3	142.06
Stress + Temp + Stress*Temp	148.27	3.04	0.02	0.22	4	140.05
Age + Date	148.30	3.06	0.02	0.22	3	142.17
Base + Stress + Age	148.35	3.12	0.02	0.21	4	140.14
Date + Temp	148.38	3.15	0.02	0.21	3	142.25
Year	148.47	3.23	0.01	0.20	3	142.34
Base + Stress + Cond	148.62	3.38	0.01	0.18	4	140.40

Base + Year	148.94	3.70	0.01	0.16	4	140.72
Stress + Year	148.99	3.76	0.01	0.15	4	140.77
Base + Stress + Base*Stress + Temp	149.02	3.79	0.01	0.15	5	138.70
Base + Stress + Base*Stress	149.14	3.90	0.01	0.14	4	140.92
Base + Stress + Temp + Stress*Temp	149.23	3.99	0.01	0.14	5	138.90
Cond + Year	149.43	4.20	0.01	0.12	4	141.22
Base + Stress + Base*Stress + Temp + Base*Temp	149.61	4.38	0.01	0.11	6	137.15
Base + Stress + Base*Stress + Date	149.86	4.63	0.01	0.10	5	139.53
Age + Year	149.95	4.72	0.01	0.09	4	141.74
Base + Stress + Year	149.97	4.74	0.01	0.09	5	139.64
Base + Stress + Base*Stress + Age	150.11	4.88	0.01	0.09	5	139.78
Date + Year	150.14	4.90	0.01	0.09	4	141.92
Base + Stress + Base*Stress + Cond	150.53	5.30	0.01	0.07	5	140.20
Base + Stress + Base*Stress + Temp + Stress*Temp	151.08	5.85	0.00	0.05	6	138.62
Base + Stress + Base*Stress + Year	151.75	6.51	0.00	0.04	6	139.29
Stress + Year + Stress*Year	152.83	7.60	0.00	0.02	6	140.37
Base + Year + Base*Year	152.93	7.70	0.00	0.02	6	140.47
Base + Stress + Year + Stress*Year	153.84	8.61	0.00	0.01	7	139.22
Base + Stress + Year + Base*Year	153.92	8.68	0.00	0.01	7	139.30
Base + Stress + Base*Stress + Year + Base*Year	155.60	10.36	0.00	0.01	8	138.80
Base + Stress + Base*Stress + Year + Stress*Year	155.73	10.50	0.00	0.01	8	138.93

Survival probability in provisioning females. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	QAICc	Δ QAICc	Weight	RelLik	K	QDev
Stress	214.48	0.00	0.08	1.00	2	210.41
Stress + Cond	214.73	0.25	0.07	0.88	3	208.58
Cond	214.93	0.45	0.07	0.80	2	210.85
Stress + Age	215.22	0.74	0.06	0.69	3	209.07
Cond + Age	215.28	0.80	0.05	0.67	3	209.13
Age	215.39	0.91	0.05	0.63	2	211.32
<i>Intercept</i>	215.40	0.92	0.05	0.63	1	213.38
Stress + Date	216.33	1.85	0.03	0.40	3	210.18
Base + Stress	216.37	1.89	0.03	0.39	3	210.22
Cond + Date	216.37	1.89	0.03	0.39	3	210.22
Stress + Temp	216.49	2.01	0.03	0.37	3	210.34
Cond + Temp	216.66	2.18	0.03	0.34	3	210.51
Base + Stress + Cond	216.81	2.33	0.03	0.31	4	208.55
Date + Age	216.98	2.50	0.02	0.29	3	210.83
Base + Cond	217.00	2.52	0.02	0.28	3	210.85
Base + Stress + Age	217.07	2.59	0.02	0.27	4	208.82
Stress + Year	217.17	2.69	0.02	0.26	4	208.92
Temp + Age	217.22	2.74	0.02	0.25	3	211.07
Date	217.24	2.76	0.02	0.25	2	213.17

Base + Age	217.25	2.77	0.02	0.25	3	211.10
Base	217.32	2.84	0.02	0.24	2	213.24
Temp	217.36	2.88	0.02	0.24	2	213.28
Cond + Year	217.62	3.14	0.02	0.21	4	209.37
Base + Stress + Base*Stress	217.98	3.50	0.01	0.17	4	209.72
Stress + Temp + Stress*Temp	218.01	3.53	0.01	0.17	4	209.76
Base + Stress + Date	218.29	3.81	0.01	0.15	4	210.04
Base + Stress + Temp	218.45	3.97	0.01	0.14	4	210.19
Year	218.49	4.01	0.01	0.13	3	212.34
Base + Stress + Base*Stress + Cond	218.68	4.20	0.01	0.12	5	208.29
Base + Stress + Year	218.86	4.38	0.01	0.11	5	208.47
Base + Stress + Base*Stress + Age	218.87	4.39	0.01	0.11	5	208.49
Age + Year	218.92	4.44	0.01	0.11	4	210.67
Base + Date	219.22	4.74	0.01	0.09	3	213.07
Temp + Date	219.32	4.84	0.01	0.09	3	213.17
Base + Temp	219.34	4.86	0.01	0.09	3	213.19
Stress + Year + Stress*Year	219.75	5.27	0.01	0.07	6	207.21
Base + Stress + Base*Stress + Date	219.82	5.34	0.01	0.07	5	209.44
Base + Stress + Temp + Stress*Temp	220.04	5.56	0.01	0.06	5	209.66
Stress + Year + Stress*Year	220.14	5.66	0.00	0.06	6	207.61
Base + Year	220.30	5.82	0.00	0.05	4	212.04
Date + Year	220.36	5.88	0.00	0.05	4	212.11
Base + Stress + Base*Stress + Year	220.50	6.01	0.00	0.05	6	207.96
Base + Stress + Temp + Base*Temp	220.57	6.09	0.00	0.05	5	210.19
Base + Stress + Year + Base*Year	221.19	6.71	0.00	0.03	7	206.47
Base + Stress + Year + Stress*Year	221.42	6.94	0.00	0.03	7	206.70
Base + Temp + Base*Temp	221.43	6.95	0.00	0.03	4	213.18
Base + Stress + Base*Stress + Temp + Stress*Temp	221.46	6.98	0.00	0.03	6	208.92
Base + Stress + Base*Stress + Temp + Base*Temp	222.05	7.57	0.00	0.02	6	209.52
Base + Year + Base*Year	222.43	7.95	0.00	0.02	6	209.90
Base + Stress + Base*Stress + Year + Stress*Year	222.75	8.27	0.00	0.02	8	205.81
Base + Stress + Base*Stress + Year + Base*Year	222.88	8.40	0.00	0.02	8	205.95

Survival probability in provisioning females. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	QAICc	Δ QAICc	Weight	RelLik	K	QDev
Stress	214.29	0.00	0.08	1.00	2	210.22
Stress + Cond	214.75	0.46	0.07	0.79	3	208.60
Cond	214.93	0.64	0.06	0.73	2	210.85
Stress + Age	214.98	0.69	0.06	0.71	3	208.83
Cond + Age	215.28	0.99	0.05	0.61	3	209.13
Age	215.39	1.10	0.05	0.58	2	211.32
<i>Intercept</i>	215.40	1.11	0.05	0.57	1	213.38
Stress + Date	216.20	1.90	0.03	0.39	3	210.04

Stress + Temp	216.35	2.05	0.03	0.36	3	210.19
Base + Stress	216.37	2.08	0.03	0.35	3	210.22
Cond + Date	216.37	2.08	0.03	0.35	3	210.22
Cond + Temp	216.66	2.37	0.03	0.31	3	210.51
Stress + Year	216.76	2.47	0.02	0.29	4	208.51
Base + Stress + Cond	216.81	2.52	0.02	0.28	4	208.55
Base + Stress + Base*Stress	216.82	2.53	0.02	0.28	4	208.56
Date + Age	216.98	2.69	0.02	0.26	3	210.83
Base + Cond	217.00	2.71	0.02	0.26	3	210.85
Base + Stress + Age	217.07	2.78	0.02	0.25	4	208.82
Temp + Age	217.22	2.93	0.02	0.23	3	211.07
Date	217.24	2.95	0.02	0.23	2	213.17
Base + Age	217.25	2.96	0.02	0.23	3	211.10
Base	217.32	3.02	0.02	0.22	2	213.24
Temp	217.36	3.07	0.02	0.22	2	213.28
Cond + Year	217.62	3.33	0.02	0.19	4	209.37
Base + Stress + Base*Stress + Cond	217.79	3.49	0.01	0.17	5	207.40
Stress + Temp + Stress*Temp	217.95	3.66	0.01	0.16	4	209.70
Base + Stress + Base*Stress + Age	218.01	3.71	0.01	0.16	5	207.62
Base + Stress + Date	218.29	4.00	0.01	0.14	4	210.04
Base + Stress + Temp	218.45	4.15	0.01	0.13	4	210.19
Year	218.49	4.20	0.01	0.12	3	212.34
Base + Stress + Base*Stress + Date	218.72	4.43	0.01	0.11	5	208.34
Base + Stress + Year	218.86	4.56	0.01	0.10	5	208.47
Base + Stress + Base*Stress + Temp	218.92	4.63	0.01	0.10	5	208.54
Age + Year	218.92	4.63	0.01	0.10	4	210.67
Base + Date	219.22	4.93	0.01	0.08	3	213.07
Base + Stress + Base*Stress + Year	219.26	4.97	0.01	0.08	6	206.72
Temp + Date	219.32	5.03	0.01	0.08	3	213.17
Base + Temp	219.34	5.05	0.01	0.08	3	213.19
Base + Stress + Base*Stress + Temp + Stress*Temp	219.79	5.50	0.01	0.06	6	207.25
Base + Stress + Temp + Stress*Temp	220.06	5.77	0.00	0.06	5	209.68
Stress + Year + Stress*Year	220.14	5.85	0.00	0.05	6	207.61
Base + Year	220.30	6.01	0.00	0.05	4	212.04
Date + Year	220.36	6.07	0.00	0.05	4	212.11
Base + Stress + Base*Stress + Temp + Base*Temp	220.52	6.23	0.00	0.04	6	207.98
Base + Stress + Temp + Base*Temp	220.57	6.28	0.00	0.04	5	210.19
Base + Stress + Year + Base*Year	221.19	6.90	0.00	0.03	7	206.47
Base + Temp + Base*Temp	221.43	7.14	0.00	0.03	4	213.18
Base + Stress + Base*Stress + Year + Base*Year	221.53	7.24	0.00	0.03	8	204.60
Base + Stress + Year + Stress*Year	222.29	8.00	0.00	0.02	7	207.57
Base + Stress + Base*Stress + Year + Stress*Year	222.34	8.05	0.00	0.02	8	205.41
Base + Year + Base*Year	222.43	8.14	0.00	0.02	6	209.90

Survival probability and seasonal change. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	QAICc	Δ QAICc	Weight	RelLik	K	QDev
<i>Intercept</i>	181.53	0.00	0.11	1.00	1	179.50
Cond	181.82	0.30	0.09	0.86	2	177.74
Age	183.07	1.54	0.05	0.46	2	178.98
Base	183.19	1.66	0.05	0.44	2	179.10
Date	183.41	1.89	0.04	0.39	2	179.32
Cond + Age	183.47	1.94	0.04	0.38	3	177.29
Stress	183.57	2.04	0.04	0.36	2	179.48
Cond + Date	183.58	2.05	0.04	0.36	3	177.40
Temp	183.58	2.06	0.04	0.36	2	179.50
Stress + Cond	183.71	2.18	0.04	0.34	3	177.53
Base + Cond	183.83	2.30	0.03	0.32	3	177.65
Cond + Temp	183.87	2.35	0.03	0.31	3	177.70
Year	184.02	2.49	0.03	0.29	3	177.84
Cond + Year	184.43	2.91	0.03	0.23	4	176.14
Base + Age	184.68	3.16	0.02	0.21	3	178.51
Base + Date	185.03	3.50	0.02	0.17	3	178.85
Age + Date	185.06	3.54	0.02	0.17	3	178.89
Stress + Age	185.14	3.61	0.02	0.16	3	178.96
Age + Temp	185.15	3.63	0.02	0.16	3	178.98
Base + Temp	185.27	3.75	0.02	0.15	3	179.10
Base + Stress	185.28	3.75	0.02	0.15	3	179.10
Temp + Date	185.35	3.83	0.02	0.15	3	179.18
Stress + Date	185.50	3.97	0.01	0.14	3	179.32
Base + Stress + Base*Stress	185.66	4.13	0.01	0.13	4	177.36
Stress + Temp	185.66	4.13	0.01	0.13	3	179.48
Base + Year	185.71	4.19	0.01	0.12	4	177.42
Base + Stress + Cond	185.80	4.27	0.01	0.12	4	177.50
Age + Year	185.88	4.35	0.01	0.11	4	177.58
Date + Year	186.00	4.47	0.01	0.11	4	177.71
Stress + Year	186.13	4.60	0.01	0.10	4	177.84
Base + Stress + Base*Stress + Cond	186.38	4.85	0.01	0.09	5	175.94
Base + Stress + Age	186.80	5.28	0.01	0.07	4	178.51
Base + Stress + Base*Stress + Age	187.13	5.61	0.01	0.06	5	176.69
Base + Stress + Date	187.14	5.61	0.01	0.06	4	178.84
Base + Year + Base*Year	187.15	5.63	0.01	0.06	6	174.53
Base + Temp + Base*Temp	187.34	5.82	0.01	0.05	4	179.05
Base + Stress + Temp	187.39	5.87	0.01	0.05	4	179.10
Base + Stress + Base*Stress + Date	187.52	5.99	0.01	0.05	5	177.08
Stress + Temp + Stress*Temp	187.52	6.00	0.01	0.05	4	179.23
Base + Stress + Base*Stress + Temp	187.74	6.21	0.00	0.04	5	177.29
Base + Stress + Base*Stress + Year	187.78	6.25	0.00	0.04	6	175.15
Base + Stress + Year	187.86	6.34	0.00	0.04	5	177.42

Stress + Year + Stress*Year	188.09	6.57	0.00	0.04	6	175.47
Base + Stress + Year + Base*Year	189.20	7.67	0.00	0.02	7	174.36
Base + Stress + Temp + Stress*Temp	189.42	7.90	0.00	0.02	5	178.98
Base + Stress + Temp + Base*Temp	189.49	7.96	0.00	0.02	5	179.04
Base + Stress + Base*Stress + Temp + Base*Temp	189.50	7.98	0.00	0.02	6	176.88
Base + Stress + Base*Stress + Year + Stress*Year	189.64	8.11	0.00	0.02	8	172.55
Base + Stress + Base*Stress + Temp + Stress*Temp	189.75	8.23	0.00	0.02	6	177.13
Base + Stress + Base*Stress + Year + Base*Year	189.79	8.26	0.00	0.02	8	172.70
Base + Stress + Year + Stress*Year	190.24	8.72	0.00	0.01	7	175.40

Survival probability and seasonal change. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	QAICc	Δ QAICc	Weight	RelLik	K	QDev
<i>Intercept</i>	181.53	0.00	0.11	1.00	1	179.50
Cond	181.82	0.30	0.09	0.86	2	177.74
Age	183.07	1.54	0.05	0.46	2	178.98
Base	183.19	1.66	0.05	0.44	2	179.10
Date	183.41	1.89	0.04	0.39	2	179.32
Cond + Age	183.47	1.94	0.04	0.38	3	177.29
Cond + Date	183.58	2.05	0.04	0.36	3	177.40
Temp	183.58	2.06	0.04	0.36	2	179.50
Stress	183.58	2.06	0.04	0.36	2	179.50
Stress + Cond	183.75	2.23	0.04	0.33	3	177.58
Base + Cond	183.83	2.30	0.03	0.32	3	177.65
Cond + Temp	183.87	2.35	0.03	0.31	3	177.70
Year	184.02	2.49	0.03	0.29	3	177.84
Cond + Year	184.43	2.91	0.03	0.23	4	176.14
Base + Age	184.68	3.16	0.02	0.21	3	178.51
Base + Date	185.03	3.50	0.02	0.17	3	178.85
Age + Date	185.06	3.54	0.02	0.17	3	178.89
Age + Temp	185.15	3.63	0.02	0.16	3	178.98
Stress + Age	185.15	3.63	0.02	0.16	3	178.98
Base + Temp	185.27	3.75	0.02	0.15	3	179.10
Base + Stress	185.28	3.75	0.02	0.15	3	179.10
Temp + Date	185.35	3.83	0.02	0.15	3	179.18
Stress + Date	185.48	3.96	0.02	0.14	3	179.31
Stress + Temp	185.67	4.14	0.01	0.13	3	179.49
Base + Year	185.71	4.19	0.01	0.12	4	177.42
Base + Stress + Base*Stress	185.77	4.25	0.01	0.12	4	177.48
Base + Stress + Cond	185.80	4.27	0.01	0.12	4	177.50
Age + Year	185.88	4.35	0.01	0.11	4	177.58
Date + Year	186.00	4.47	0.01	0.11	4	177.71
Stress + Year	186.13	4.60	0.01	0.10	4	177.83

Base + Stress + Base*Stress + Cond	186.46	4.93	0.01	0.09	5	176.01
Base + Stress + Age	186.80	5.28	0.01	0.07	4	178.51
Base + Stress + Date	187.14	5.61	0.01	0.06	4	178.84
Base + Year + Base*Year	187.15	5.63	0.01	0.06	6	174.53
Base + Temp + Base*Temp	187.34	5.82	0.01	0.05	4	179.05
Base + Stress + Temp	187.39	5.87	0.01	0.05	4	179.10
Base + Stress + Base*Stress + Age	187.47	5.94	0.01	0.05	5	177.02
Stress + Temp + Stress*Temp	187.60	6.08	0.01	0.05	4	179.31
Base + Stress + Base*Stress + Date	187.70	6.17	0.00	0.05	5	177.25
Base + Stress + Year	187.86	6.34	0.00	0.04	5	177.42
Base + Stress + Base*Stress + Temp	187.89	6.36	0.00	0.04	5	177.44
Base + Stress + Base*Stress + Year	188.16	6.63	0.00	0.04	6	175.53
Stress + Year + Stress*Year	188.43	6.91	0.00	0.03	6	175.81
Base + Stress + Year + Base*Year	189.20	7.67	0.00	0.02	7	174.36
Base + Stress + Temp + Stress*Temp	189.45	7.92	0.00	0.02	5	179.00
Base + Stress + Temp + Base*Temp	189.49	7.96	0.00	0.02	5	179.04
Base + Stress + Base*Stress + Temp + Stress*Temp	189.67	8.15	0.00	0.02	6	177.05
Base + Stress + Base*Stress + Temp + Base*Temp	189.84	8.31	0.00	0.02	6	177.21
Base + Stress + Base*Stress + Year + Base*Year	190.02	8.50	0.00	0.01	8	172.93
Base + Stress + Base*Stress + Year + Stress*Year	190.28	8.76	0.00	0.01	8	173.19
Base + Stress + Year + Stress*Year	190.45	8.92	0.00	0.01	7	175.61

Survival probability in provisioning males. Candidate models use the stress-induced increase in corticosterone as a measure of the stress response.

Models	QAICc	Δ QAICc	Weight	RelLik	K	QDev
<i>Intercept</i>	158.94	0.00	0.08	1.00	2	154.82
Cond	159.28	0.34	0.07	0.84	3	153.04
Temp	159.68	0.74	0.06	0.69	3	153.43
Cond + Date	160.06	1.12	0.05	0.57	4	151.65
Date	160.10	1.16	0.04	0.56	3	153.85
Cond + Temp	160.22	1.28	0.04	0.53	4	151.81
Stress + Cond	160.39	1.45	0.04	0.48	4	151.98
Cond + Age	160.44	1.50	0.04	0.47	4	152.03
Stress	160.47	1.52	0.04	0.47	3	154.22
Base	160.50	1.56	0.04	0.46	3	154.25
Year	160.71	1.77	0.03	0.41	4	152.30
Stress + Temp	160.78	1.84	0.03	0.40	4	152.37
Cond + Year	160.83	1.89	0.03	0.39	5	150.20
Age	160.96	2.02	0.03	0.37	3	154.71
Base + Cond	161.09	2.15	0.03	0.34	4	152.68
Base + Temp	161.53	2.58	0.02	0.27	4	153.11
Stress + Date	161.53	2.59	0.02	0.27	4	153.12
Age + Temp	161.54	2.60	0.02	0.27	4	153.13
Stress + Temp + Stress*Temp	161.69	2.75	0.02	0.25	5	151.06

Base + Date	161.78	2.84	0.02	0.24	4	153.37
Temp + Date	161.84	2.90	0.02	0.24	4	153.42
Age + Date	162.09	3.15	0.02	0.21	4	153.68
Base + Stress	162.10	3.16	0.02	0.21	4	153.69
Stress + Year	162.13	3.19	0.02	0.20	5	151.51
Base + Stress + Cond	162.30	3.36	0.01	0.19	5	151.68
Base + Year	162.36	3.42	0.01	0.18	5	151.74
Base + Temp + Base*Temp	162.43	3.49	0.01	0.17	5	151.81
Base + Age	162.51	3.57	0.01	0.17	4	154.10
Stress + Age	162.53	3.59	0.01	0.17	4	154.12
Year + Date	162.55	3.61	0.01	0.16	5	151.92
Age + Year	162.65	3.71	0.01	0.16	5	152.03
Base + Stress + Temp	162.74	3.80	0.01	0.15	5	152.12
Base + Stress + Temp + Base*Temp	163.18	4.24	0.01	0.12	6	150.29
Base + Stress + Date	163.30	4.36	0.01	0.11	5	152.68
Base + Stress + Temp + Stress*Temp	163.84	4.90	0.01	0.09	6	150.95
Base + Stress + Year	163.90	4.96	0.01	0.08	6	151.01
Base + Stress + Age	164.17	5.23	0.01	0.07	5	153.55
Base + Stress + Base*Stress	164.31	5.37	0.01	0.07	5	153.68
Base + Stress + Base*Stress + Temp + Base*Temp	164.48	5.54	0.01	0.06	7	149.29
Base + Stress + Base*Stress + Cond	164.56	5.62	0.00	0.06	6	151.68
Base + Year + Base*Year	164.82	5.88	0.00	0.05	7	149.63
Base + Stress + Base*Stress + Temp	164.95	6.01	0.00	0.05	6	152.07
Base + Stress + Base*Stress + Date	165.55	6.61	0.00	0.04	6	152.67
Base + Stress + Base*Stress + Temp + Stress*Temp	165.77	6.83	0.00	0.03	7	150.58
Stress + Year + Stress*Year	165.82	6.88	0.00	0.03	7	150.63
Base + Stress + Year + Base*Year	166.17	7.23	0.00	0.03	8	148.62
Base + Stress + Base*Stress + Year	166.19	7.25	0.00	0.03	7	151.00
Base + Stress + Base*Stress + Age	166.43	7.49	0.00	0.02	6	153.55
Base + Stress + Base*Stress + Year + Base*Year	167.05	8.10	0.00	0.02	9	147.09
Base + Stress + Year + Stress*Year	167.70	8.76	0.00	0.01	8	150.15
Base + Stress + Base*Stress + Year + Stress*Year	170.10	11.16	0.00	0.00	9	150.15

Survival probability in provisioning males. Candidate models use circulating stress-induced corticosterone as a measure of the stress response.

Models	QAICc	Δ QAICc	Weight	RelLik	K	QDev
<i>Intercept</i>	158.94	0.00	0.08	1.00	2	154.82
Cond	159.28	0.34	0.07	0.84	3	153.04
Temp	159.68	0.74	0.06	0.69	3	153.43
Cond + Date	160.06	1.12	0.05	0.57	4	151.65
Date	160.10	1.16	0.05	0.56	3	153.85
Cond + Temp	160.22	1.28	0.04	0.53	4	151.81
Cond + Age	160.44	1.50	0.04	0.47	4	152.03
Base	160.50	1.56	0.04	0.46	3	154.25

Stress + Cond	160.71	1.76	0.03	0.41	4	152.29
Year	160.71	1.77	0.03	0.41	4	152.30
Stress	160.74	1.80	0.03	0.41	3	154.49
Cond + Year	160.83	1.89	0.03	0.39	5	150.20
Age	160.96	2.02	0.03	0.37	3	154.71
Stress + Temp	161.08	2.14	0.03	0.34	4	152.67
Base + Cond	161.09	2.15	0.03	0.34	4	152.68
Stress + Temp + Stress*Temp	161.43	2.49	0.02	0.29	5	150.80
Base + Temp	161.53	2.58	0.02	0.27	4	153.11
Age + Temp	161.54	2.60	0.02	0.27	4	153.13
Base + Date	161.78	2.84	0.02	0.24	4	153.37
Stress + Date	161.82	2.88	0.02	0.24	4	153.41
Temp + Date	161.84	2.90	0.02	0.24	4	153.42
Age + Date	162.09	3.15	0.02	0.21	4	153.68
Base + Stress	162.10	3.16	0.02	0.21	4	153.69
Base + Stress + Cond	162.30	3.36	0.02	0.19	5	151.68
Base + Year	162.36	3.42	0.01	0.18	5	151.74
Base + Temp + Base*Temp	162.43	3.49	0.01	0.17	5	151.81
Stress + Year	162.46	3.52	0.01	0.17	5	151.83
Base + Age	162.51	3.57	0.01	0.17	4	154.10
Year + Date	162.55	3.61	0.01	0.16	5	151.92
Age + Year	162.65	3.71	0.01	0.16	5	152.03
Base + Stress + Temp	162.74	3.80	0.01	0.15	5	152.12
Stress + Age	162.81	3.87	0.01	0.14	4	154.40
Base + Stress + Temp + Base*Temp	163.18	4.24	0.01	0.12	6	150.29
Base + Stress + Date	163.30	4.36	0.01	0.11	5	152.68
Base + Stress + Temp + Stress*Temp	163.33	4.39	0.01	0.11	6	150.45
Base + Stress + Year	163.90	4.96	0.01	0.08	6	151.01
Base + Stress + Age	164.17	5.23	0.01	0.07	5	153.55
Base + Stress + Base*Stress	164.27	5.33	0.01	0.07	5	153.64
Base + Stress + Base*Stress + Cond	164.51	5.57	0.01	0.06	6	151.63
Base + Stress + Base*Stress + Temp + Base*Temp	164.71	5.77	0.00	0.06	7	149.52
Base + Stress + Base*Stress + Temp + Stress*Temp	164.80	5.86	0.00	0.05	7	149.61
Base + Year + Base*Year	164.82	5.88	0.00	0.05	7	149.63
Base + Stress + Base*Stress + Temp	164.84	5.90	0.00	0.05	6	151.96
Base + Stress + Base*Stress + Date	165.47	6.53	0.00	0.04	6	152.59
Base + Stress + Base*Stress + Year	166.09	7.15	0.00	0.03	7	150.89
Base + Stress + Year + Base*Year	166.17	7.23	0.00	0.03	8	148.62
Stress + Year + Stress*Year	166.23	7.29	0.00	0.03	7	151.04
Base + Stress + Base*Stress + Age	166.36	7.42	0.00	0.02	6	153.47
Base + Stress + Base*Stress + Year + Base*Year	167.35	8.41	0.00	0.01	9	147.40
Base + Stress + Year + Stress*Year	167.79	8.85	0.00	0.01	8	150.24
Base + Stress + Base*Stress + Year + Stress*Year	170.13	11.19	0.00	0.00	9	150.17

Table S5: Parameter estimates for models of survival probability in provisioning female tree swallows.

Models use the stress-induced increase in corticosterone as a measure of the stress response.

Ranked Model	$\beta \pm SE$		
	Stress	Condition	Age
1. Stress	-0.013 $\pm$ 0.008		
2. Stress + Condition	-0.012 $\pm$ 0.008	0.12 $\pm$ 0.09	
3. Condition		0.14 $\pm$ 0.09	
4. Stress + Age	-0.011 $\pm$ 0.008		0.12 $\pm$ 0.11
5. Condition + Age		0.13 $\pm$ 0.09	0.14 $\pm$ 0.11
6. Age			0.15 $\pm$ 0.11

Models use circulating stress-induced corticosterone as a measure of the stress response.

Model	$\beta \pm SE$		
	Stress	Condition	Age
1. Stress	-0.013 $\pm$ 0.008		
2. Stress + Condition	-0.012 $\pm$ 0.008	0.12 $\pm$ 0.09	
3. Condition		0.14 $\pm$ 0.09	
4. Stress + Age	-0.012 $\pm$ 0.008		0.13 $\pm$ 0.11
5. Condition + Age		0.13 $\pm$ 0.09	0.14 $\pm$ 0.11
6. Age			0.15 $\pm$ 0.11