





## Maternal androgens in black-headed gull (Larus ridibundus) eggs

Eising, C.M; Eikenaar, C.; Schwabl, H; Groothuis, A.G.G.

Published in: Proceedings of the Royal Society of London. Series B, Biological Sciences

DOI: 10.1098/rspb.2001.1594

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version Publisher's PDF, also known as Version of record

Publication date: 2001

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA): Eising, C. M., Eikenaar, C., Schwabl, H., & Groothuis, A. G. G. (2001). Maternal androgens in black-headed gull (Larus ridibundus) eggs: Consequences for chick development. *Proceedings of the Royal* Society of London. Series B, Biological Sciences, 268(1469), 839-846. https://doi.org/10.1098/rspb.2001.1594

Copyright Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: https://www.rug.nl/library/open-access/self-archiving-pure/taverneamendment.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

These are electronic appendices to the paper by Eising *et al.* 2001 Maternal androgens in black-headed gull (*Larus ridibunduc*) eggs: consequences for chick development. *Proc. R. Soc. Lond.* B **268**, 839–846.

Electronic appendices are referred with the text. However, no attempt has been made to impose a uniform editorial style on the electronic appendices.

ELECTRONIC APPENDICES MS YOLK ANDROGENS AND CHICK DEVELOPMENT

Appendix A

Sample sizes for body mass in three chick nests.

Age	A Oil	B Oil	C Oil	ΑH	BH	C H
0	4	1	4	4	2	12
1	4	12	17	4	18	18
2	11	17	8	20	18	14
3	17	12	11	16	16	14
4	11	11 5	2	11	14	10
5	10	5	6	11	6	5
6	7	5	2	7	8 3	6
7	3	2	4	4		5
8	2 5	3	1	4	6	5
9		3	3	5	3	3
10	2	4	3	3	6	3
11	4	4	4	5	1	2
12	2	4	3	2	2	1
13	5	4	4	2	2	3
14	4	3	3	2 2 2 3	4	4
15	4	2 5	4	3	3	3
16	5	5	3	3	3	2
17	3	3	5	2 2 2 2 2 3	2	1
18	5	6	4	2	3	3
19	4	2 4	3	2	3	2 3
20	4		2	2	4	
21	3	2 2	4	2	3	3
22	1	2	2	3	1	3
23	4	3	3	3	3	2
24	3	3	1	4	2	2
25	3	2	3	1	1	1
26		1	1	2	2	1
27	4	3	2	2 1	2	1
28	1	1	1		3	1
29	1	1	1	2	2 2	1
30	2	3	1	1	2	1
31	1	1	2	2		
32	1	1	2	1		
33				1	2	1

Sample sizes for leg length in three chick nests.

Age	A Oil	B Oil	C Oil	ΑH	ΒH	СН
0		1	4		2	12
1	4	12	19	4	18	19
2	12	18	8	20	19	14
3	19	13	11	17	15	10
4	12	11	2	14	10	7
5	10	6	7	11	6	6
6	8	5	1	8	8	7
7	3	1	3	4	4	4
8	2	3	1	5	6	5
9	3	1	3	4	2	3
10	2	4	3	3	6	3
11	4	3	2	5	1	2
12	1	3	2	2	2	1
13	5	3	1	2	2	2
14	2		1	1	3	2
15	1		1	2	1	2
16	2	1	1	1	1	1
17				1	1	1
18	1					1
19				1	1	2
20				1		3

## ELECTRONIC APPENDICES MS YOLK ANDROGENS AND CHICK DEVELOPMENT

# Appendix B

Output of the hierarchical linear model for body mass of three chick nests.

Null model		Estimate	SE	Р
Fixed Random Deviance	Constant Variance nest level Variance chick level Variance individual level	82.679 3689.786 0 7349.045	2.356 202.351 0 0	0.000
Basic model				
Fixed	Constant Age Age <sup>2</sup> Variance nest level Variance chick level Variance individual level	15.140 8.463 0.068 365.07 0	1.719 0.501 0.026 20.021 0 0	0.000 0.000 0.009
Deviance		5810.744	-	
Final model				
Fixed	Constant Age Age <sup>2</sup> Treatment Hatching order Treatment* order Variance nest level	14.716 8.155 0.083 2.105 -10.503 10.249 330.509	1.856 0.481 0.025 1.424 1.273 1.751 18.125	$\begin{array}{c} 0.000\\ 0.000\\ 0.001\\ 0.139\\ 0.000\\ 0.000\\ \end{array}$
	Variance chick level Variance individual level	0 0	0 0	
Deviance		5744.615		

Null model		Estimate	SE	Р
Fixed	Constant	5.357	0.036	0.000
Random	Variance nest level	0.452	0.131	
	Variance chick level	0	0	
	Variance individual level	0.236	0.125	
Deviance		1321.726		
Basic model				
Fixed	Constant	4.3180	0.041	0.000
	Age	0.2430	0.016	0.000
	Age <sup>2</sup>	-0.003	0.001	0.003
	Variance nest level	0	0	
	Variance chick level	0	0	
	Variance individual level	0.139	0.008	
Deviance		466.117		
Final model				
Fixed	Constant	4.365	0.043	0.000
	Age	0.222	0.016	0.000
	Age <sup>2</sup>	-0.001	0.001	0.317
	Treatment	-0.007	0.031	0.825
	Hatching order	-0.217	0.029	0.000
	Treatment* order	0.185	0.038	0.000
Random	Variance nest level	0	0	
	Variance chick level	0	0	
Deviance	Variance individual level	0.126	0.008	
Deviance		412.229		

Output of the hierarchical linear model for leg length of three chick nests.