General calculation of inter-moulting periods of the biggest 14 flight feathers

Average period between two replacements:
    18   months

Maximal period between two replacements:
    27   months

Minimal period between two replacements:
    5   months

Number of observations:
    51   periods

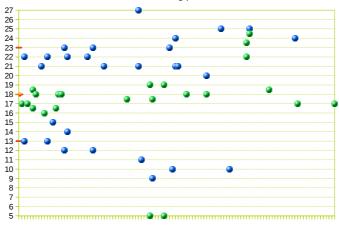**Standard deviation:**
    5,1   months

Share of periods longer than the average:
    49   %

Share of periods equal to the average:
    10   %

Share of periods shorter than the average:
    41   %

observed inter-moulting periods, months

● single between certainly observed replacements

● averaged between two observed replacements presumably not in a row

→ general average

Calculation without averages

Average period between two replacements:
    19   months

Maximal period between two replacements:
    27   months

Minimal period between two replacements:
    9   months

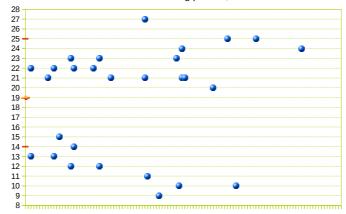**Number of observations:**
    28   periods

Standard deviation:
    5,5   months

Share of periods longer than the average:
    64   %

Share of periods equal to the average:
    0   %

Share of periods shorter than the average:
    36   %

observed inter-moulting periods, months

Determined condition of feathers in the following tables:

uncertain	just present	moulting	new	damaged	new damaged	old
?	=	m	n	d	nd	o

B11

bird: B11 ♂		biggest left primaries							biggest right primaries							periods between replacements, months																average for bird
year	month	10	9	8	7	6	5	4	4	5	6	7	8	9	10	10	9	8	7	6	5	4	4	5	6	7	8	9	10			bird
2007	1																22								21		22		15		observed	17
	2																13										13				observed	
	3																													observed	
	4																													observed	
	5																													observed	
	6																													observed	
	7	=	=	=	=	=	m	=	=	=	m	=	=	=	=		17		17	18,5	18				50/?				16,5	averaged	
	8																	16,5							16					averaged	
	9																													averaged	
	10																													averaged	
	11																													averaged	
	12																													averaged	
2008	1–12																														
2009	8	=	=	=	=	m	=	=	=	m	=	=	=	=	=																
2010	8	=	=	m	=	=	m	=	m	=	=	m	=	=	=																
2011	4	=	=	=	=	=	=	=	=	o	=	=	=	=	=																
	5	=	=	=	=	=	=	m	=	m	=	=	m	=	=																
	7	=	m	=	=	=	=	n	=	n	=	=	m	=	m																
	8	=	n	=	m	=	=	=	=	=	=	=	n	=	m																
	9	=	=	=	m	=	=	=	=	=	m	=	=	=	n																
2012	4	=	n	=	n	o	n	=	=	=	n	o	=	=	=																
	6	=	n	m	n	o	n	=	n	=	=	m	=	=	=																
2013	4	=	=	=	n	=	=	=	=	=	=	=	=	o	=																
	5	m	=	=	=	=	m	=	=	=	=	=	=	m	=																
	7	=	=	m	=	=	=	=	=	=	=	m	=	=	=																
	9	=	=	m	=	=	=	=	=	=	=	m	=	=	=																
2014	5	=	m	=	=	=	=	m	=	=	m	=	=	=	m																
	6	=	m	=	=	=	=	=	=	=	m	=	=	=	m																
	7	=	m	=	m	=	=	n	=	=	m	=	=	=	m																
	8	=	=	=	m	=	=	=	=	=	=	=	=	m	=																

A11

bird: A11 ♀		biggest left primaries							biggest right primaries							periods between replacements, months																average for bird
year	month	10	9	8	7	6	5	4	4	5	6	7	8	9	10	10	9	8	7	6	5	4	4	5	6	7	8	9	10		bird
2010	1																	23	22							22		23			18
	2																	12	14									12			
	3																													observed	
	4																														
	5																														
	6																														
	7															18	18														
	8	=	?	?	?	?	?	?	?	?	?	?	?	?	=															averaged	
	9																														
	10																														
	11																														
	12																														
2011	1																														
	2																														
	3	=	=	=	=	=	=	=	=	=	=	o	=	=	=																
	4	=	=	=	=	=	=	=	=	=	=	o	=	=	=																
	5	=	=	=	=	=	=	=	=	=	=	=	=	=	=																
	6																														
	7	m	m	=	m	=	=	=	=	=	=	m	=	m	m																
	8	n	n	m	n	=	o	=	=	o	=	n	=	m	m																
	9	n	n	n	n	=	o	=	=	o	=	n	=	n	n																
	10																														
	11																														
	12																														
2012	1																														
	2																														
	3																														
	4	=	=	=	d	o	n	=	=	n	=	=	=	=	=																
	5																														
	6	=	=	=	d	m	=	m	=	n	m	=	m	=	=																
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	11																														
	12																														
2013	1																														
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	3																														
	4	=	=	=	d	=	=	=	=	=	=	d	=	=	=																
	5	=	=	=	m	=	=	=	=	=	=	m	=	=	=																
	6																														
	7	=	=	m	n	=	o	=	=	o	=	n	=	m	=																
	8																														
	9	=	=	=	=	=	m	=	=	m	=	=	=	=	=																
	10																														
	11																														
	12																														
2014	1																														
	2																														
	3																														
	4																														
	5																														
	6																														
	7	m	=	m	m	=	d	=	=	=	=	=	=	m	=																
	8	m	=	m	n	o	d	=	=	=	=	=	=	m	=																
	9																														
	10																														
	11																														
	12																														

K11

bird: K11 ♂		biggest left primaries							biggest right primaries							periods between replacements, months															average for
year	month	10	9	8	7	6	5	4	4	5	6	7	8	9	10	10	9	8	7	6	5	4	4	5	6	7	8	9	10		bird
2010	1																	21												observed	19
	2																														
	3																														
	4																														
	5																														
	6																														
	7																									17,5					
	8	=	=	=	=	=	=	=	=	o	=	m	=	=	=															averaged	
	9																														
	10																														
	11																														
	12																														
2011	1																														
	2																														
	3																														
	4																														
	5																														
	6																														
	7	=	=	=	=	=	=	=	=	=	=	=	=	=	=																
	8																														
	9																														
	10																														
	11																														
	12																														
2012	1																														
	2																														
	3																														
	4	=	=	=	=	=	=	=	=	=	=	=	=	=	=																
	5	=	=	m	=	=	m	=	=	m	=	=	m	=	=																
	6	=	=	m	=	=	m	=	=	m	=	=	m	=	=																
	7	=	=	m	=	=	n	=	=	n	=	=	m	=	=																
	8																														
	9																														
	10																														
	11																														
	12																														
2013	1																														
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	4	=	=	=	=	n	=	=	=	=	n	=	=	=	=																
	5	m	=	=	=	=	=	m	m	=	=	=	=	=	=																
	6	m	=	=	m	=	=	m	m	=	=	=	=	=	m																
	7	n	=	=	m	=	=	n	n	=	=	m	=	=	n																
	8	=	=	=	n	=	=	n	n	=	=	m	=	=																	
	9	n	=	=	n	=	=	n	n	=	=	m	=	=	n																
	10																														
	11																														
	12																														
2014	1																														
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	6	=	m	=	=	m	=	=	=	=	m	=	=	m	=																
	7	=	m	=	=	m	=	=	=	=	m	=	=	m	=																
	8	=	=	=	=	=	=	=	=	=	=	=	=	=	=																
	9																														
	10																														
	11																														
	12																														

L11

bird: L11 ♀		biggest left primaries							biggest right primaries							periods between replacements, months														average for bird
year	month	10	9	8	7	6	5	4	4	5	6	7	8	9	10	10	9	8	7	6	5	4	4	5	6	7	8	9	10	
2010	1															21	11				9						23	10	21	16
	2															27													24	
	3																													
	4																													
	5																													
	6																													
	7																			19	17,5				19					
	8	m	=	=	=	=	m	=	=	=	=	=	=	=	m					5					5					
	9																													
	10																													
	11																													
	12																													
2011	1																													
	2																													
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	7	=	=	m	o	=	=	=	m	=	=	=	m	d	=															
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	10																													
	11																													
	12																													
2012	1																													
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	3																													
	4	=	=	=	=	=	=	=	=	=	d	=	=	n	=															
	5	m	=	=	=	m	=	=	=	=	d	=	=	=	m															
	6																													
	7	=	=	=	=	m	=	=	=	=	m	o	=	=	m															
	8																													
	9																													
	10																													
	11																													
	12																													
2013	1																													
	2																													
	3																													
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	5	=	=	d	=	d	=	=	=	o	=	=	=	=	=															
	6	=	m	=	=	d	=	=	=	=	m	d	=	m	=															
	7	=	n	d	=	d	m	n	=	n	d	=	n	m	=															
	8	=	=	d	=	d	m	=	=	n	d	=	n	m	=															
	9	=	=	d	=	d	n	=	=	n	d	=	n	m	=															
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	12																													
2014	1																													
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	6																													
	7	=	m	=	=	m	n	=	=	=	m	=	=	m	m															
	8	m	=	=	=	m	=	=	=	=	m	=	=	=	m															
	9																													
	10																													
	11																													
	12																													

observed / averaged

G11

bird: G11 ♂		biggest left primaries							biggest right primaries							periods between replacements, months															average for bird
year	month	10	9	8	7	6	5	4	4	5	6	7	8	9	10	10	9	8	7	6	5	4	4	5	6	7	8	9	10		bird
2009	1															21										20				observed	19
	2																														
	3																														
	4																														
	5																														
	6																														
	7																		18							18					
	8	=	=	=	=	n	=	=	=	=	=	m	=	=	=															averaged	
	9																														
	10																														
	11																														
	12																														
2010	1																														
	2																														
	3																														
	4																														
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	12																														
2011	1																														
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	7	=	=	d	n	=	=	=	=	=	=	=	n	=	=																
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2013	1																														
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2014	1																														
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	8																														
	9																														
	10																														
	11																														
	12																														

F11

bird: F11 ♀		biggest left primaries							biggest right primaries							periods between replacements, months															average for bird
year	month	10	9	8	7	6	5	4	4	5	6	7	8	9	10	10	9	8	7	6	5	4	4	5	6	7	8	9	10		bird
2006	1																25		10							25				observed	22
	2																														
	3																														
	4																														
	5																														
	6																														
	7	=	m	=	=	=	n	=	=	m	=	=	m	=	=											23,5	24,5				
	8																									22				averaged	
	9																														
	10																														
	11																														
	12																														
2007	1																														
	2–12																														
2008	1–7																														
	8	=	m	=	=	=	=	?	?	=	?	?	m	=	=																
	9–12																														
2009	1–7																														
	8	=	=	o	=	n	o	o	n	o	o	m	=	=	=																
	9–12																														
2010	1–12																														
2011	1–8																														
	9	=	=	o	=	n	=	o	=	d	=	=	=	=	=																
	10–12																														
2012	1–4																														
	5	=	=	=	=	=	d	n	=	n	o	=	=	=	=																
	6–8																														
	9	=	=	=	=	=	=	=	m	=	n	=	m	=	=																
	10–12																														
2013	1–4																														
	5	=	n	n	n	o	o	o	=	o	=	o	=	=	=																
	6																														
	7	=	=	=	=	m	o	o	=	o	=	m	=	=	=																
	8–12																														

F11

2014															
	1														
	2														
	3														
	4														
	5	=	=	=	=	m	=	=	=	=	m	=	=	=	=
	6	=	=	=	=	m	=	=	=	m	=	=	=	=	
	7														
	8														
	9														
	10														
	11														
	12														

D11

bird: D11 ♂		biggest left primaries							biggest right primaries							periods between replacements, months															average for bird
year	month	10	9	8	7	6	5	4	4	5	6	7	8	9	10	10	9	8	7	6	5	4	4	5	6	7	8	9	10		
2010	1																												24		21
	2																													observed	
	3																														
	4																														
	5	=	=	=	=	m	=	=	=	=	=	=	=	=	=																
	6																														
	7																			18,5											
	8																													averaged	
	9																														
	10																														
	11																														
	12																														
2011	1																														
	2																														
	3																														
	4																														
	5	=	=	n	=	=	m	=	=	=	=	=	d	n	m																
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2012	1																														
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	7																														
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	10																														
	11																														
	12																														
2013	1																														
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	4	=	=	=	n	o	=	=	=	=	=	=	=	=	=																
	5	m	=	=	=	=	=	=	=	=	=	=	=	=	m																
	6	n	=	=	=	m	=	=	=	=	m	=	=	=	m																
	7																														
	8																														
	9																														
	10																														
	11																														
	12																														

A13

bird: A13 ♀		biggest left primaries							biggest right primaries							periods between replacements, months															average for bird
year	month	10	9	8	7	6	5	4	4	5	6	7	8	9	10	10	9	8	7	6	5	4	4	5	6	7	8	9	10		17
2010	1																													observed	
	2																														
	3																														
	4																														
	5																														
	6																														
	7	m	=	=	=	m	=	=	=	=	m	=	=	=	m	17													17		
	8																													averaged	
	9																														
	10																														
	11																														
	12																														
2011	1																														
	2																														
	3																														
	4																														
	5																														
	6																														
	7																														
	8																														
	9																														
	10																														
	11																														
	12																														
2012	1																														
	2																														
	3																														
	4																														
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	6																														
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	8																														
	9																														
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	11																														
	12																														
2013	1																														
	2																														
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	4	=	=	=	=	=	o	o	o	o	=	=	=	=	=																
	5	m	=	=	=	=	o	?	?	o	=	=	=	=	m																
	6	m	=	=	=	=	m	m	m	m	=	=	=	=	m																
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