

This supplemental material supports
the 1973 PhD dissertation of Walter D. Graul entitled:

“Breeding adaptations of the mountain plover: (*Charadrius montanus*)”

A copy of the dissertation and other documents may be found in the
University of Minnesota’s Digital Conservancy
in the [Mountain Plover Research collection](http://hdl.handle.net/11299/169740)
at <http://hdl.handle.net/11299/169740>

Attentive Period ON

Time	Daylight - 7am	7-10	10-12	12-2	2-4	4-6	6-dark
Egg-laying		(1)	III (3)	IIII (8)	IIII (7)	III (3)	
1 st week		IIIIII (13)	IIIIIIII (14)	IIIIII (12)	IIIIII (10)	IIII (4)	IIII (5)
2 nd week		IIIIII (16)	IIIIIIII (14)	IIIIII (10)	IIIIII (14)	IIII (10)	II (2)
3 rd week		IIIIII (11)	IIIIII (11)	IIII (5)	IIIIII (14)	IIII (6)	
last week (from 21 st day on)		IIIIIIII (29)	IIIIIIII (28)	IIIIII (17)	IIIIII (12)	II (2)	I (1)
OFF							
Egg-laying	II (2)	IIII (5)	IIII (6)	IIII (3)	IIII (4)	IIII (5)	IIII (3)
1 st week	IIII (3)	IIIIIIII (18)	IIIIIIII (17)	IIIIII (10)	IIIIII (15)	IIIIII (16)	IIII (6)
2 nd week		IIIIIIII (22)	IIIIIIII (13)	IIII (7)	IIIIII (10)	IIIIII (10)	
3 rd week		IIIIIIII (24)	IIIIIIII (20)	IIII (4)	IIII (5)	IIII (5)	
last week (from 21 st day on)		IIIIIIII (45)	IIIIIIII (31)	IIIIII (11)	IIII (3)	I (1)	
OFF							
Nests		IIIIIIII (19)	IIIIIIII (18)	IIIIII (4)	IIII (5)	IIII (3)	I (1)
		IIIIII (10)	IIII (5)	IIII (3)	IIII (2)	I (1)	

based on
Nests: 59
hatched
found incomplete,
didn't hatch

1969

quit recording once chick hatched
calculate hatching separate

57

$$\begin{array}{r} 322 \\ 58 \\ 66 \\ 47 \\ 89 \\ 57 \\ \hline 339 \end{array}$$

$$\begin{array}{r} 130 \\ 126 \\ 62 \\ 58 \\ 91 \\ 21 \\ \hline 388 \end{array}$$

$$\begin{array}{r} 339 \\ 388 \\ \hline 727 \end{array}$$

42.3%

Egg-laying - 22 on, 30 off - based on 52

31.6%

1st week - 58 on, 126 off - based on 184

51.6%

2nd week - 66 on, 62 off - based on 128

44.8%

3rd week - 47 on, 58 off - based on 105

49.4%

4th week - 89 on, 91 off - based on 180

Unknowns - 57 on, 21 off - based on 78

46.6%

overall totals - 339 on, 388 off

1969

178.00
57.73
578 | 57.73
2240
2340
100

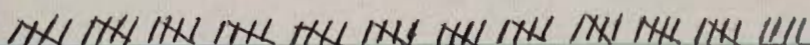
'ons' may be slightly high, since recorded when found first - then, so chance of being off.

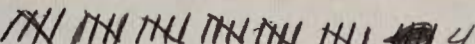
daylight - 7am	-	off 5
7-10 am	-	89 on, 126 off (41.4%)
10-12 am	-	88 on, 92 off (48.8%)
12-2 pm	-	63 on, 38 off (62.4%)
2-4 pm	-	62 on, 39 off (61.4%)
4-6 pm	-	28 on, 35 off (42.5%)
6-dark	-	9 on, 9 off (50%)

Attentive period at time of hatching - ~~check in case~~ ^{last 24 hours}

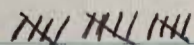
59
26
93


1969

on -  (59) = (63.5%)

off -  (34)

1971

on -  15 = (83.4%)

off -  3

59
37
96

overall - ~~on~~ on $\frac{59}{74}$, off 32

(66.7%) for 1969 & 1971 seasons

1971

overall total - 104 on, 76 off $\approx 57.8\%$

laying - on 20, off 30 $\approx 40\%$

1st week - on 31, off 23 $\approx 56.4\%$

2nd week - on 10, off 6 $\approx 62.5\%$

3rd week - on 10, off 1 $\approx 91\%$

4th week - on 21, off 12 $\approx 63.7\%$

Unknowns - on 12, off 4 $\approx 75\%$

Daylight - 7am - on 2

7-10 am - on 10, off 19 $\approx 34.5\%$

10-12 am - on 20, off 16 $\approx 55.6\%$

12-2 - on 20, off 6 $\approx 77\%$

2-4 - on 25, off 10 $\approx 71.5\%$

4-6 - on 14, off 13 $\approx 51.9\%$

6-dark - on 13, off 10 $\approx 56.6\%$

Attention Period - 1971

ON

Time	Daylight - 7am	7-10	10-12	12-2	2-4	4-6	6-dark
egg laying		●	(6)	(8)	(6)		
1st week	(1)	(3)	(5)	● (3)	(4)	(7)	(8)
2nd week		(2)	(3)	' (1)		(2)	(2)
3rd week		' (1)	(3)	' (1)	(4)	' (1)	
last week	(1)	(4)	(3)	(5)	(5)	' (1)	(2)
OFF laying		(4)	 (5)	(6)	(6)	(6)	(3)
1st week		(7)	(3)		(2)	(7)	(4)
2nd week			(2)	' (1)	' (1)	' (1)	(2)
3rd week					' (1)		
last week	●	(5)	(5)	' (1)		' (1)	' (1)
Unknown	ON			(2)	(6)	(3)	' (1)
nests	off	(3)	' (1)	↓			