

### Isle Royale Population Study

**Background:** Isle Royale is a small island (45 miles long by 9 miles wide) located in Lake Superior. In roughly 1949, due to a thick ice pack on Lake Superior, timber wolves crossed the ice pack and began to live on Isle Royale. In 1958, one of the longest wolf/moose interaction studies began. Far more information can be found at: [www.isleroyalewolf.org](http://www.isleroyalewolf.org) (click on learn about the project) or [www.wolf.org](http://www.wolf.org).

**Procedure:** You will use the population data to graph the interaction between wolf populations and moose populations at Isle Royale. Put both these lines on the same graph; use a different color for wolves and moose. Make sure to note the y-axis location for each!!

**Data:**

Year	Wolves	Moose
1968	22	1042
1969	17	1268
1970	18	1295
1971	20	1439
1972	23	1493
1973	24	1435
1974	31	1467
1975	41	1355
1976	44	1282
1977	34	1143
1978	40	1001
1979	43	1028
1980	50	910
1981	30	863
1982	14	872
1983	23	932
1984	24	1038
1985	22	1115
1986	20	1192
1987	16	1268
1988	12	1335
1989	12	1397
1990	15	1216
1991	12	1313
1992	12	1590
1993	13	1879
1994	17	1770
1995	16	2422
1996	22	1163
1997	24	500
1998	14	699
1999	25	750
2000	29	850
2001	19	900
2002	17	1100
2003	19	900
2004	29	700
2005	30	500



Now this is the Law of the Jungle – as old and as true as the sky;  
 And the Wolf that shall keep it may prosper, but the Wolf that shall break it must die.  
 As the creeper that girdles the tree-trunk the Law runneth forward and back –  
**For the strength of the Pack is the Wolf, and the strength of the Wolf is the Pack.**

From The Law of the Jungle by Rudyard Kipling

**Questions:**

<http://www.isleroyalewolf.org/essays/essays/home.html> these essays might help you answer these questions

1. How much of a time lag does there appear to be between a moose peak and a wolf peak?
2. During what year was there a large wolf die off? Hypothesize what might have been the cause of this dieoff.
3. During what year was there a huge moose die off? Hypothesize what might have been the cause of this dieoff.
4. What was the true cause of the wolf die off after 1980?
5. What was the true cause of the moose die off in 1996?
6. Using what you've learned about the wolves and moose of Isle Royale, give an example of top-down and bottom-up population control.
7. Other than their food source, what other factors contribute to the limitation of moose population?
8. Hypothesize and defend your opinion about what will happen to the wolves of Isle Royale in the next 10 years.