Survey of deer ticks in Schmeeckle Reserve harboring the Lyme disease bacteria

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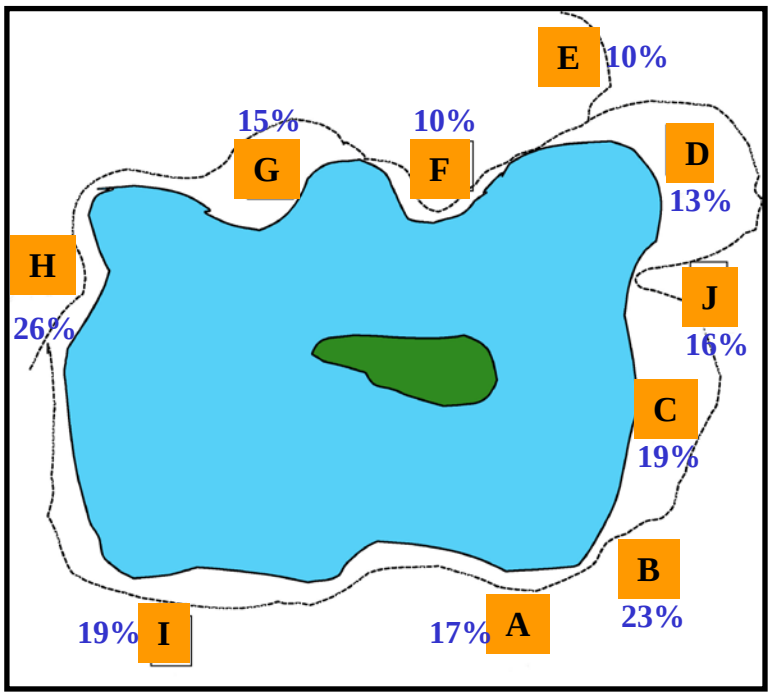
In October of 2007, 12 students and I collected 142 deer ticks in 1.25 hours from the trail that goes around Lake Joanis. We divided the trail into 10 sections and found ticks in every section. We also found ticks harboring the Lyme disease causing agent (*Borrelia burgdorferi* spirochete bacteria) in every section as well. Overall, 31 out of 142 deer ticks (22%) harbored the pathogen.

Here are the results of my Lyme disease/tick survey over the past several years.

The values are # of ticks harboring the Lyme disease pathogen (*Borrelia burgdorferi*) divided by the total # ticks collected from each site. You'll notice the dramatic increase in tick abundance and the spread of Lyme disease around Lake Jonas.

Site	2000	2001	2002	2003	2004	2005	2006	2007	Total
A	0/2	0/1	0/2	1/10	3/9	3/15	0/2	5/29	12/70
B	0/1	0/1	0/2	0/0	3/6	1/9	0/0	2/7	6/26
C	0/2	0/1	0/2	0/0	0/6	3/21	4/12	6/26	13/70
D	0/5	0/1	0/0	1/4	2/18	1/5	0/0	2/15	6/48
E	0/1	0/0	0/4	0/0	0/4	0/4	0/0	2/8	2/21
F	1/10	0/1	0/4	1/4	0/9	1/8	0/1	1/3	4/40
G	1/15	0/1	0/8	0/1	5/16	0/8	1/2	2/8	9/59
H	1/13	1/1	3/10	1/2	7/22	0/4	1/2	4/16	18/70
I	0/5	0/0	0/4	0/0	7/19	0/8	0/0	1/7	8/43
J	0/27	0/1	0/0	0/0	0/0	0/3	0/1	9/23	9/55
Total	3/81	1/8	3/36	4/21	27/109	9/85	6/20	34/142	87/502
%	3.7	12.5	8.3	19.0	24.8	10.6	30.0	23.9	17.3

Average *Borrelia burgdorferi* infection rates in deer ticks



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