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Are there fewer small mammals since the outbreak of West Nile virus? An invitation to more thorough testing.

The first West Nile virus outbreak in the U.S. was recorded in birds in 1999. West Nile virus has been known to affect humans, dogs, cats, horses, bats, a single chipmunk, a single skunk, a single squirrel, and a single domestic rabbit since 2001 (CDC 2003). It is not clear whether West Nile virus affects other small mammals such as mice, voles, and shrews. If West Nile virus is affecting other small mammals, there should be fewer small mammals caught in the same locations now (after West Nile was introduced) than in 1999 (before West Nile was introduced). In 2003, we decided to live-trap for small mammals at two natural areas in the Chicago region: Woodworth Prairie in Glenview, IL and G.A.R. Woods in River Forest, IL. We chose these sites because they had also been trapped in 1999, prior to the outbreak of West Nile virus. We used Sherman model #SNA live traps baited with oats and peanut butter. The traps were laid 15 ft. apart in grids. We combined our trapping results with results from other scientists (Pergams et al. 2003; Pergams and Nyberg *In review*; Pergams et al. *In review*; A. Ruszaj *Unpublished data*) that had trapped in 1999 and 2003 at the same sites using the same methods. The combined results were 44 animals [*Peromyscus leucopus* ($N = 31$), *Microtus pennsylvanicus* (8), *Blarina brevicauda* (2), *Mus musculus* (2), and *Tamias striatus* (1)] in 219 traps in 1999, and 3 animals [*Microtus pennsylvanicus* (2) and *Mus musculus* (1)] in 213 traps in 2003 (Table 1). Trap success at the same locations was 20% before West Nile virus, and 1% after West Nile virus hit the Chicago area especially hard in 2002. Trapping in 2003 was earlier in the season than in 1999, and this may possibly explain a difference this great, but we do not think it likely. Anecdotally, in another area that was a center of West Nile virus in 2002 (the Syracuse, NY area) we observed that *Peromyscus leucopus* have gone from being abundant in woodpiles and bird houses that were checked in spring 2001 and 2002, to being apparently absent from those same sites in spring 2003. We do not, of course, think these results are sufficient to prove West Nile virus is affecting *Peromyscus* or other small mammals. Instead, we offer these results as an invitation to other researchers to perform more thorough trapping, presumably combined with testing for West Nile virus antibodies.

Literature Cited

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Table 1.
 Combined trapping results from 1999 and 2003.

date	location	traps	catches	%
12-Sep-1999	Woodworth	84	24	29%
15-Jun-1999	G.A.R. Woods	135	20	15%
	totals	219	44	20%
27-Mar-2003	Woodworth	48	2	4%
17-Apr-2003	Woodworth	43	0	0%
08-May-2003	G.A.R. Woods	40	0	0%
16-May-2003	Woodworth	82	1	1%
	totals	213	3	1%