

Frog and Toad Survey 1996

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Abstract

The number of frog survey routes decreased to 95 in 1996 from a record number 100 in 1995. The number of sites with Wood Frog, Spring Peeper, Eastern Gray Tree Frog, American Toad, Mink Frog, Green Frog, and Bull Frog present were at or above their long-term averages.

Introduction

The Wisconsin Department of Natural Resources (WDNR) has coordinated a volunteer frog and toad survey since 1984. The survey arose from concerns about declines in populations of some frog species and was endorsed and expanded by the WDNR Surveys committee in 1990. Wisconsin has 12 anuran species. One species (Blanchard's cricket frog) is endangered and 2 species (bullfrog and pickerel frog) are included on the Natural Heritage working list as "special concern". In general, anurans are considered to be good indicator species for the habitats where they are found.

Methods

Survey routes are distributed statewide, with a goal of 2 survey routes in each county of Wisconsin. Survey routes consist of 10 sites which are monitored 3 times yearly, 8-30 April, 20 May - 5 June, and 1-15 July. Surveys are started at dusk on evenings with wind velocities of less than 8 miles per hour. Water temperature is recorded at each stop where possible. The presence or absence of each frog species is determined at each site by their song. The abundance of each species is ranked by the number individuals calling. Stops with species calling in which individuals can be counted has the abundance ranked as 1. When calls of individuals can be distinguished but there is some overlapping of calls the abundance is ranked as 2. When calls are constant, continuous and overlapping (full chorus) the abundance is ranked as 3. At the end of the survey period, these data sheet are returned to research and the data are entered into the DNRVAX computer. The data are analyzed using the Statistical Analysis System (SAS). The calling index for each species was summed to provide an index to the route population each year. These route populations are regressed on time to create a species population trend.

Results

The number of observers in 1996 was 102. This was an increase from the 1995 level of 95. The number of survey routes run decreased, from a record 100 in 1995 to 95 in 1996 (Fig. 1). The number of routes run in each county is still well below our goal of 2 (Fig. 2).

Wetlands remained at or above their normal levels for 1996. Of the 12 anuran species, 7 showed a decrease in percent occurrence in 1996. These were the Wood Frog, Cope's Gray Tree Frog, Eastern Gray Tree Frog, American Toad, Leopard Frog, Pickerel Frog, and Mink Frog (Fig. 3). All other frog species were above the previous year's levels. Population trends, based on the call index, for each anuran species can be reviewed in Figure 3.

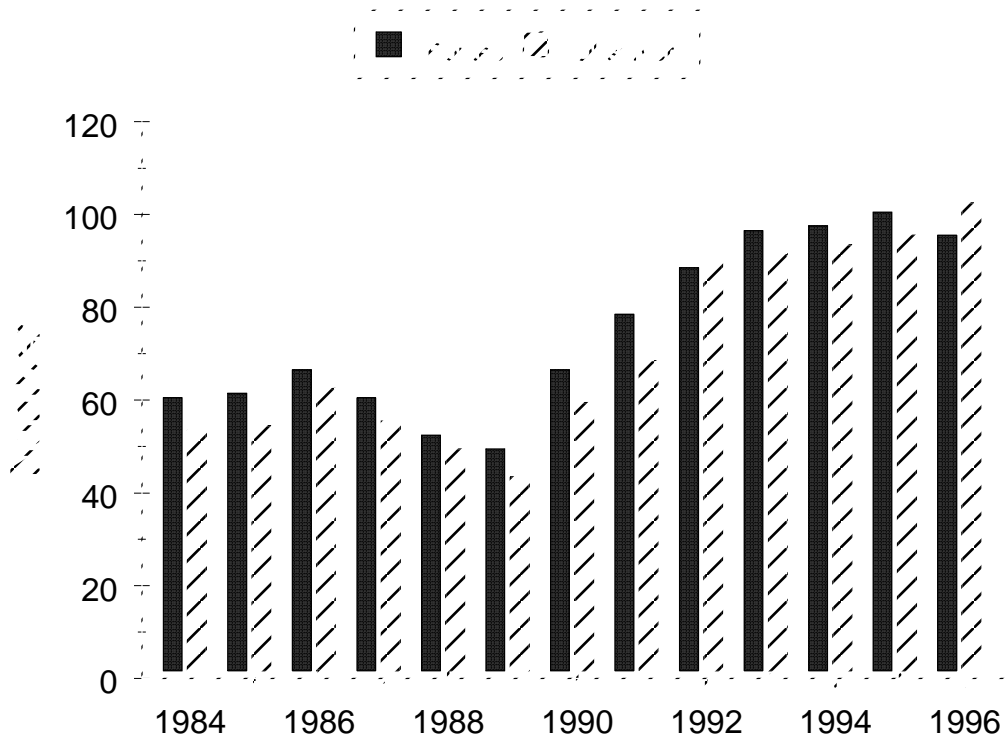


Figure 1. The number of observers and frog routes completed, 1984-96.

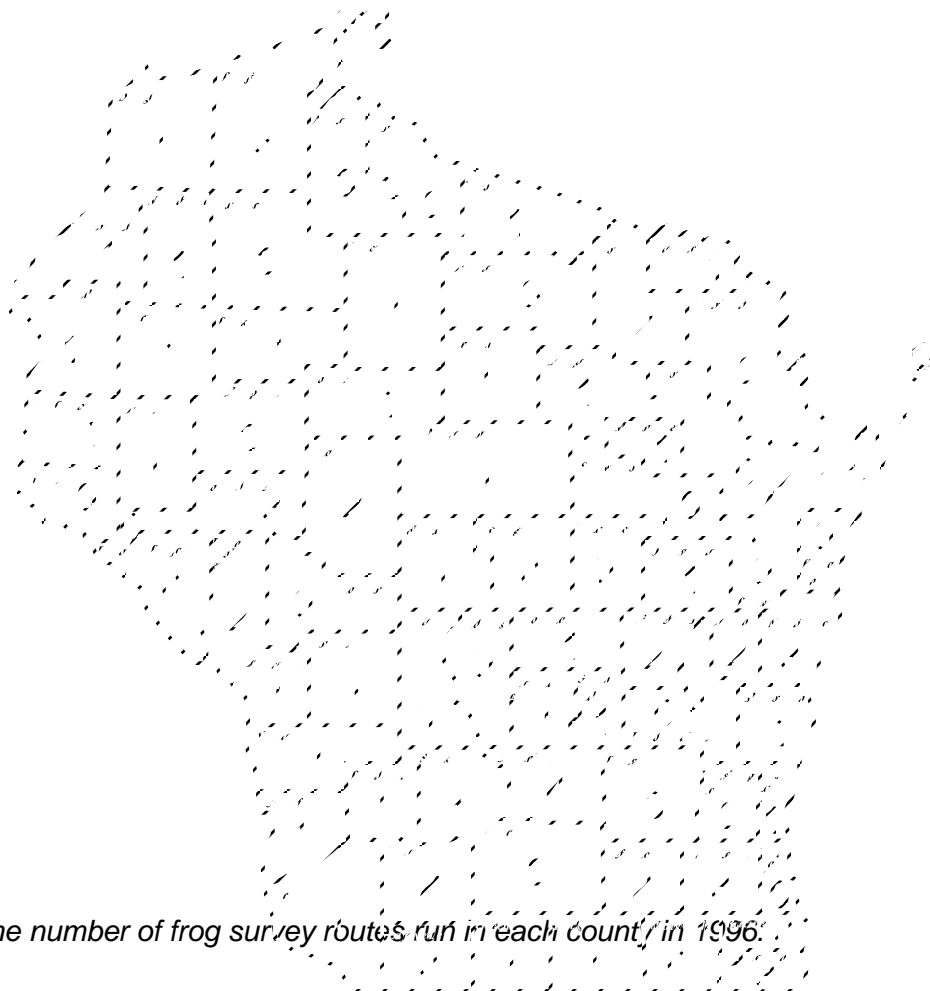
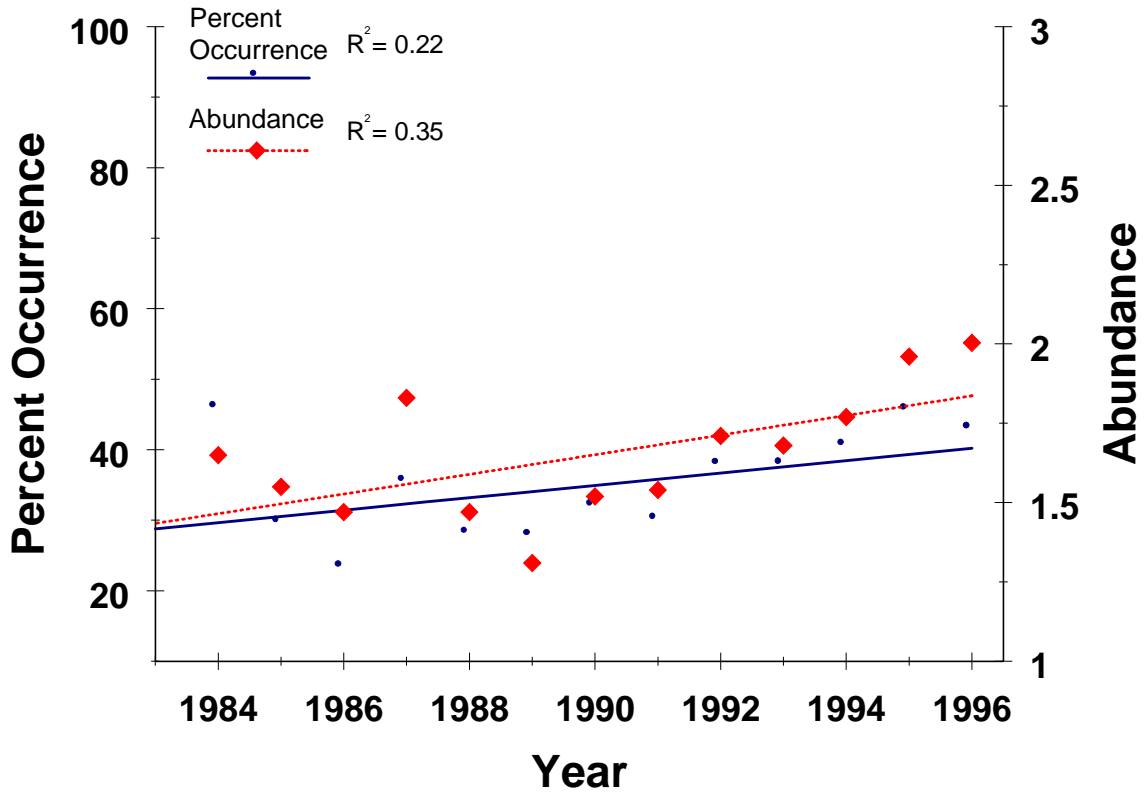


Figure 2. The number of frog survey routes run in each county in 1996.

Wood Frog Population Trends



Spring Peeper Population Trends

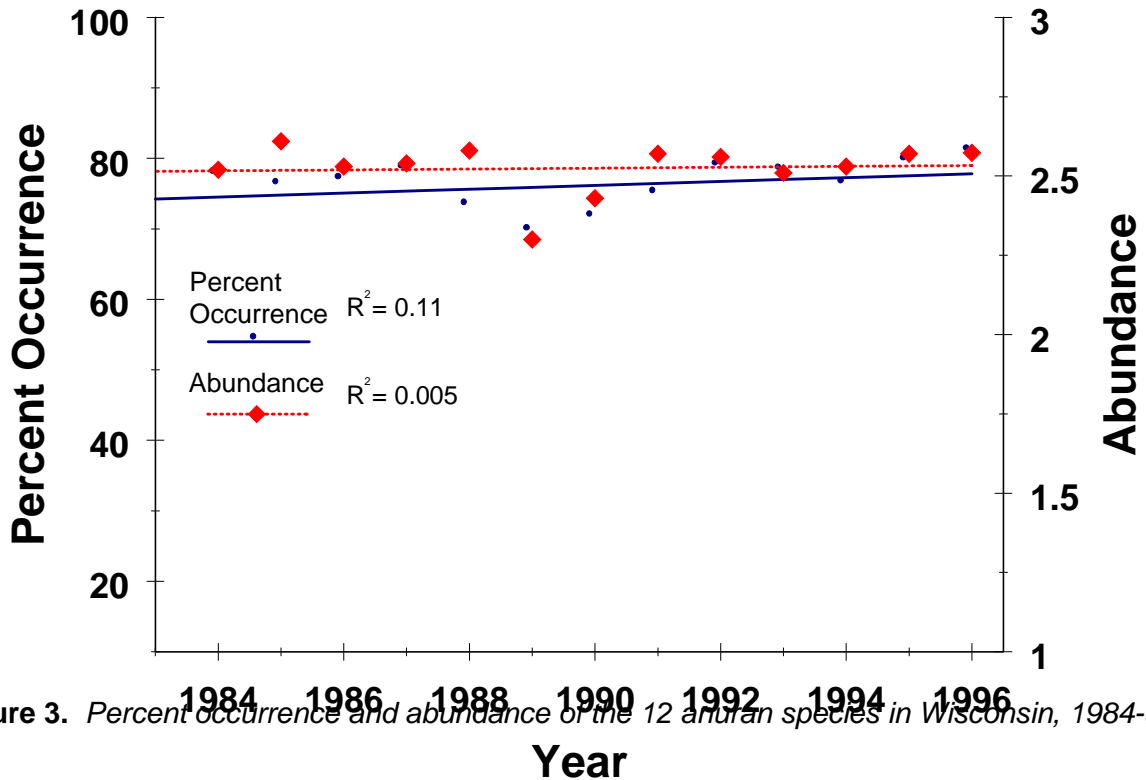
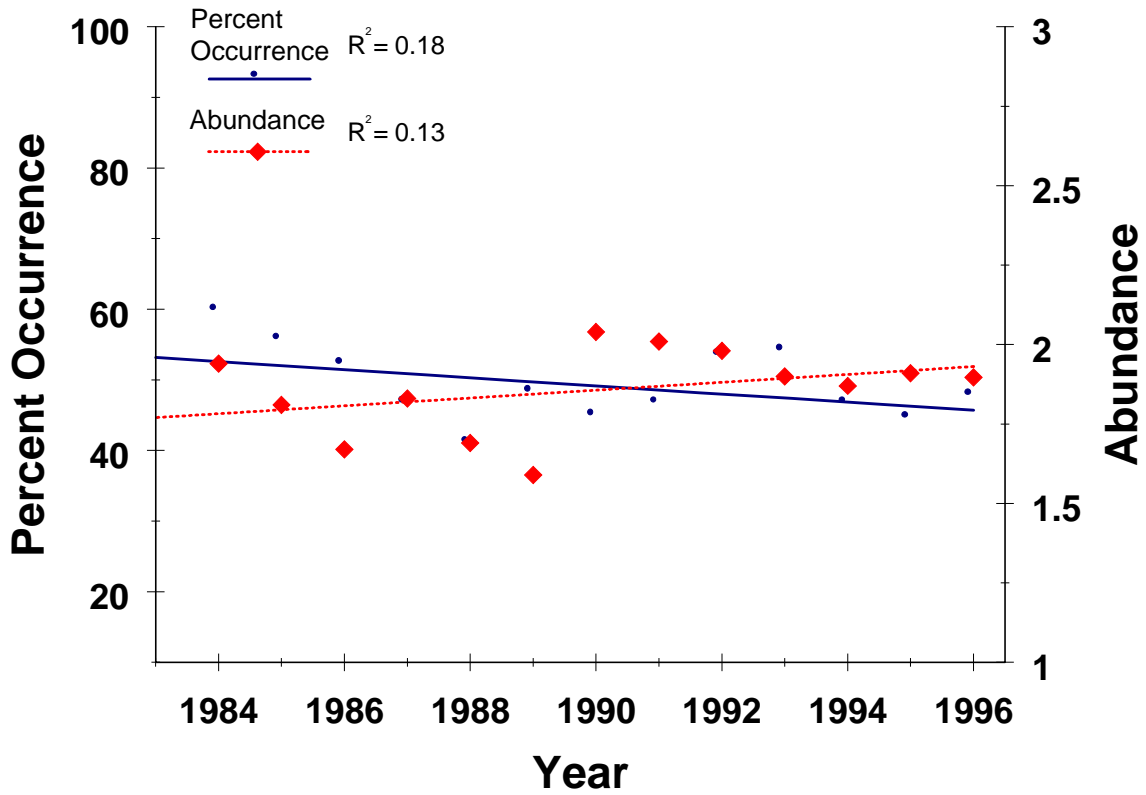


Figure 3. Percent occurrence and abundance of the 12 anuran species in Wisconsin, 1984-96.

Chorus Frog Population Trends



Cope's Gray Tree Frog Population Trends

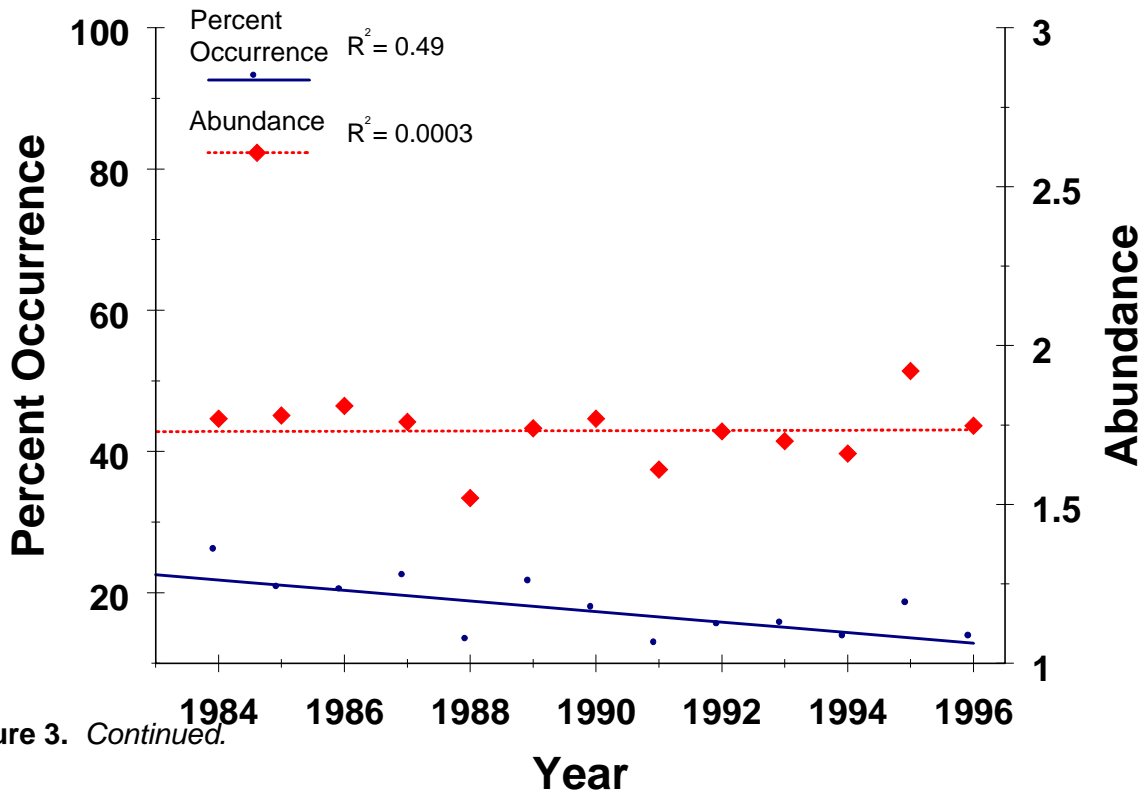
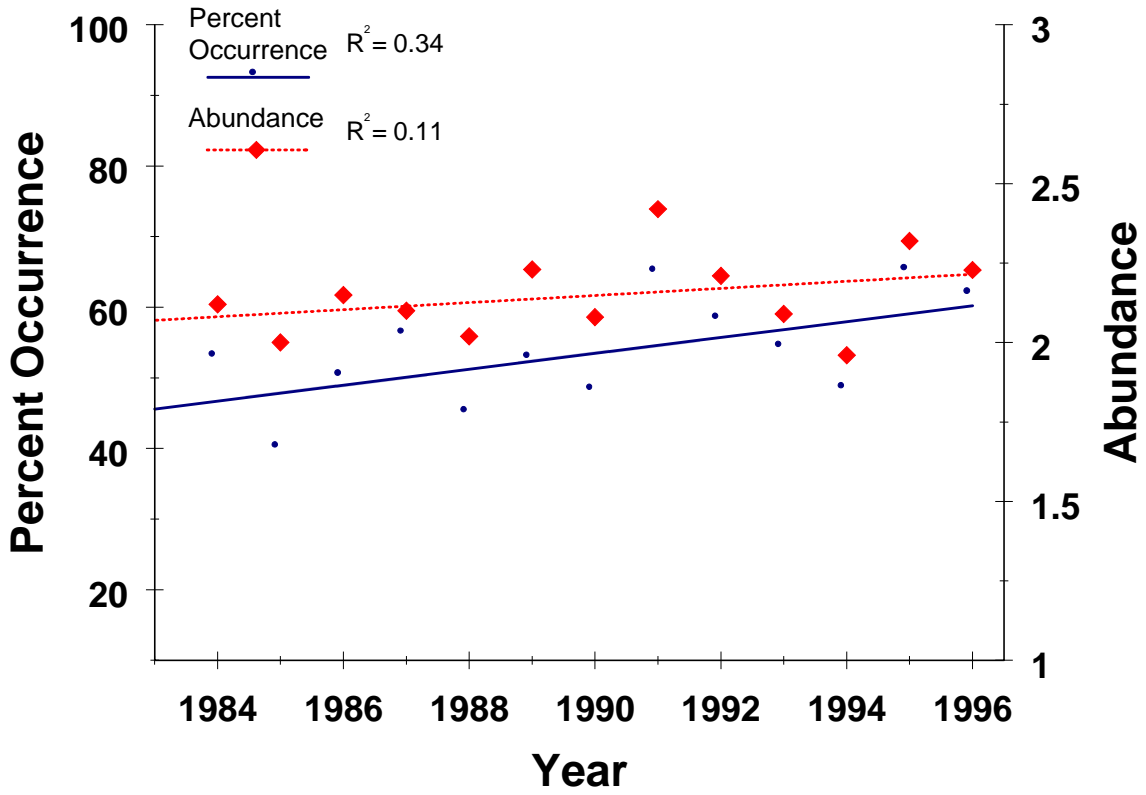


Figure 3. *Continued.*

Eastern Gray Tree Frog Population Trends



American Toad Population Trends

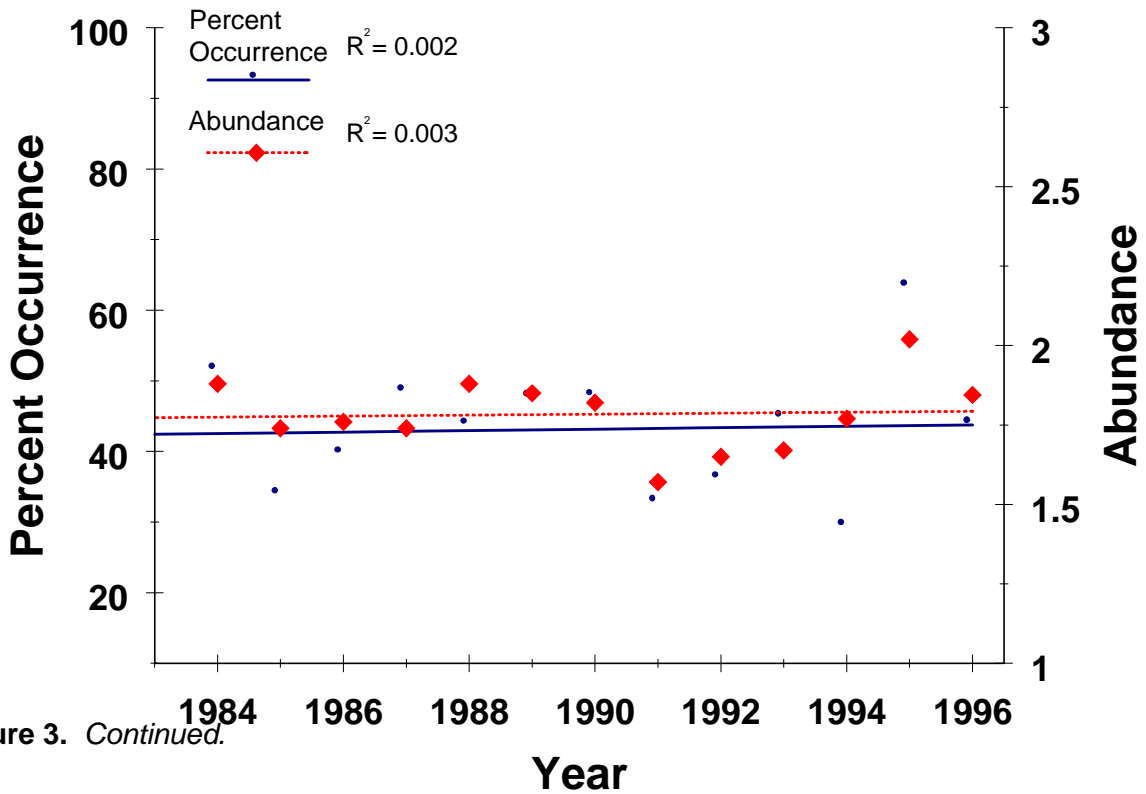
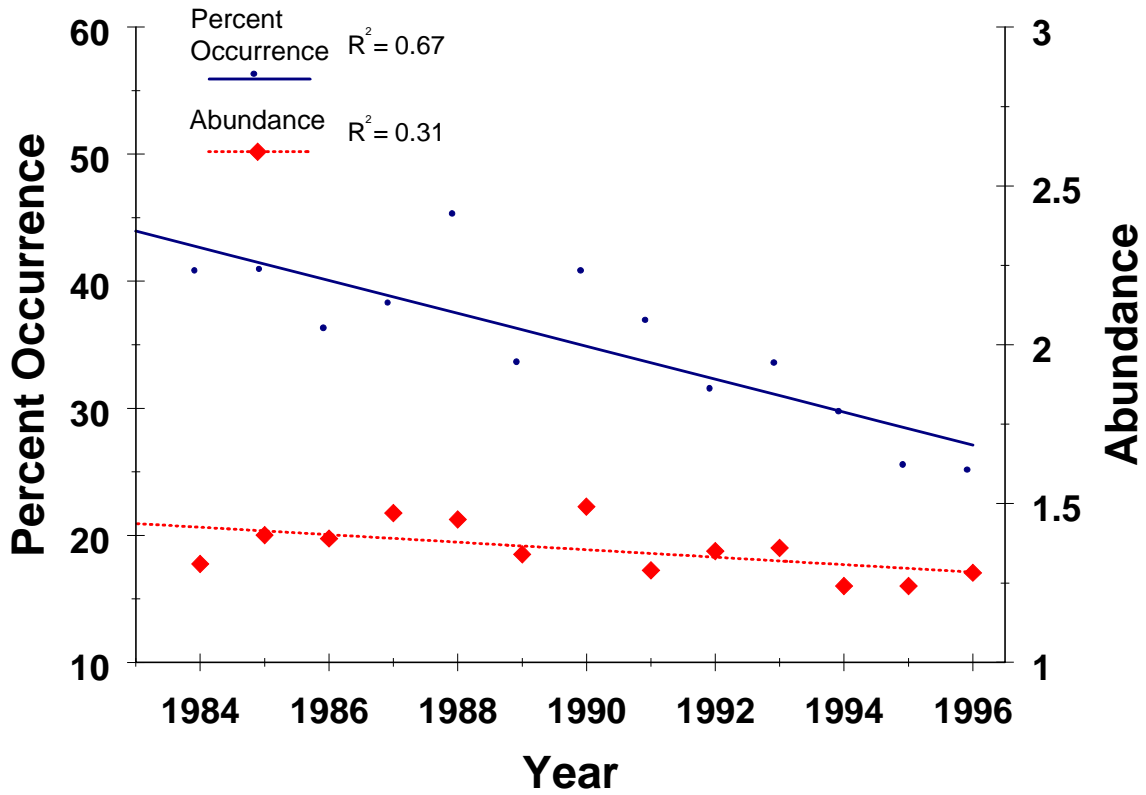


Figure 3. *Continued.*

Leopard Frog Population Trends



Pickereel Frog Population Trends

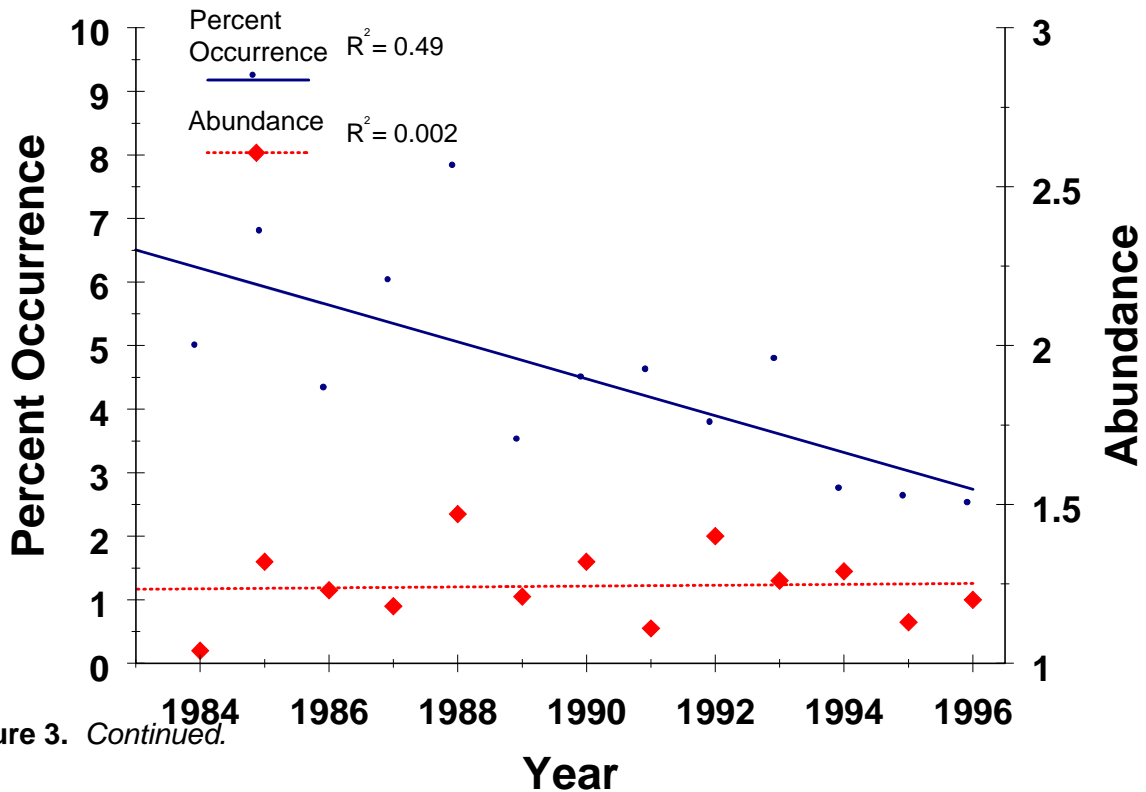
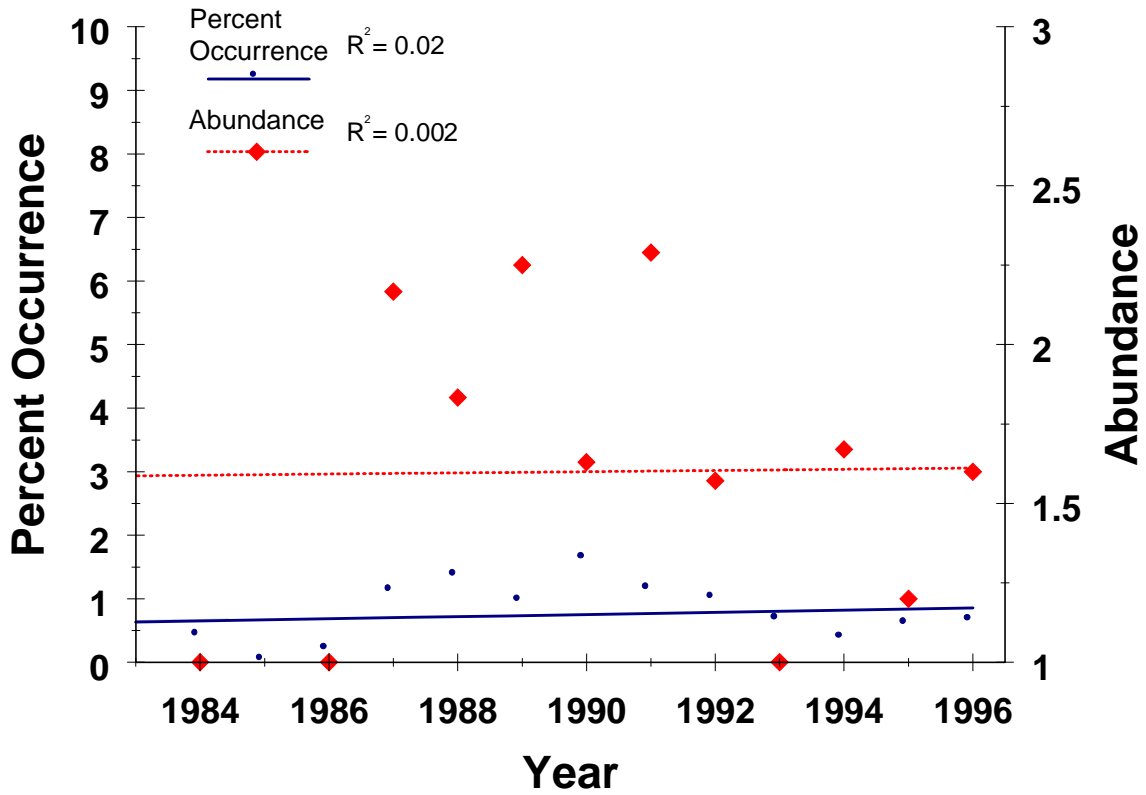


Figure 3. *Continued.*

Cricket Frog Population Trends



Mink Frog Population Trends

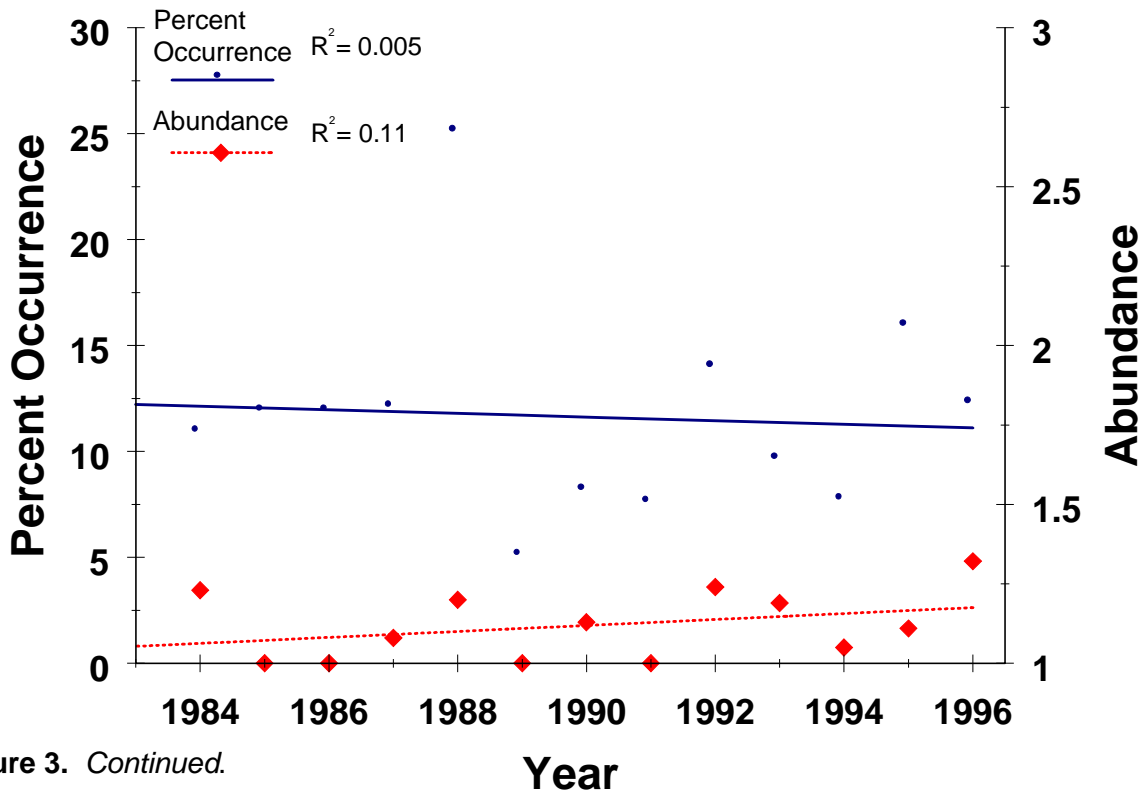
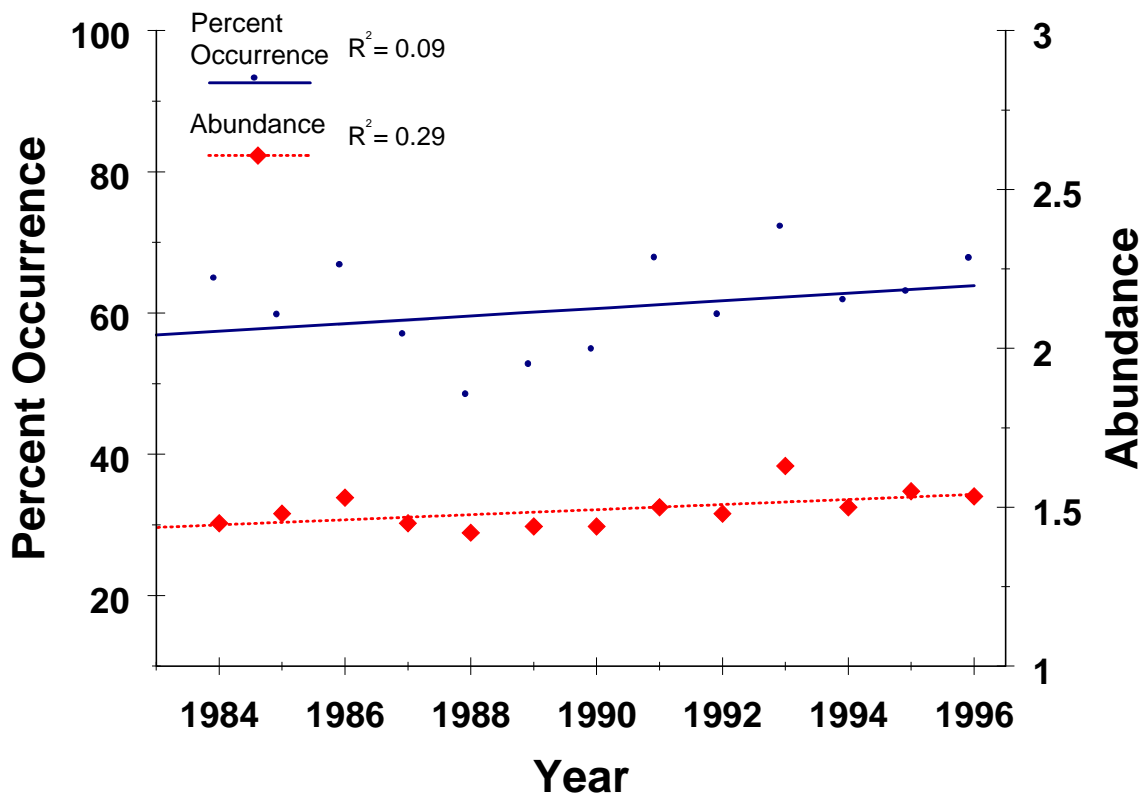


Figure 3. Continued.

Green Frog Population Trends



Bull Frog Population Trends

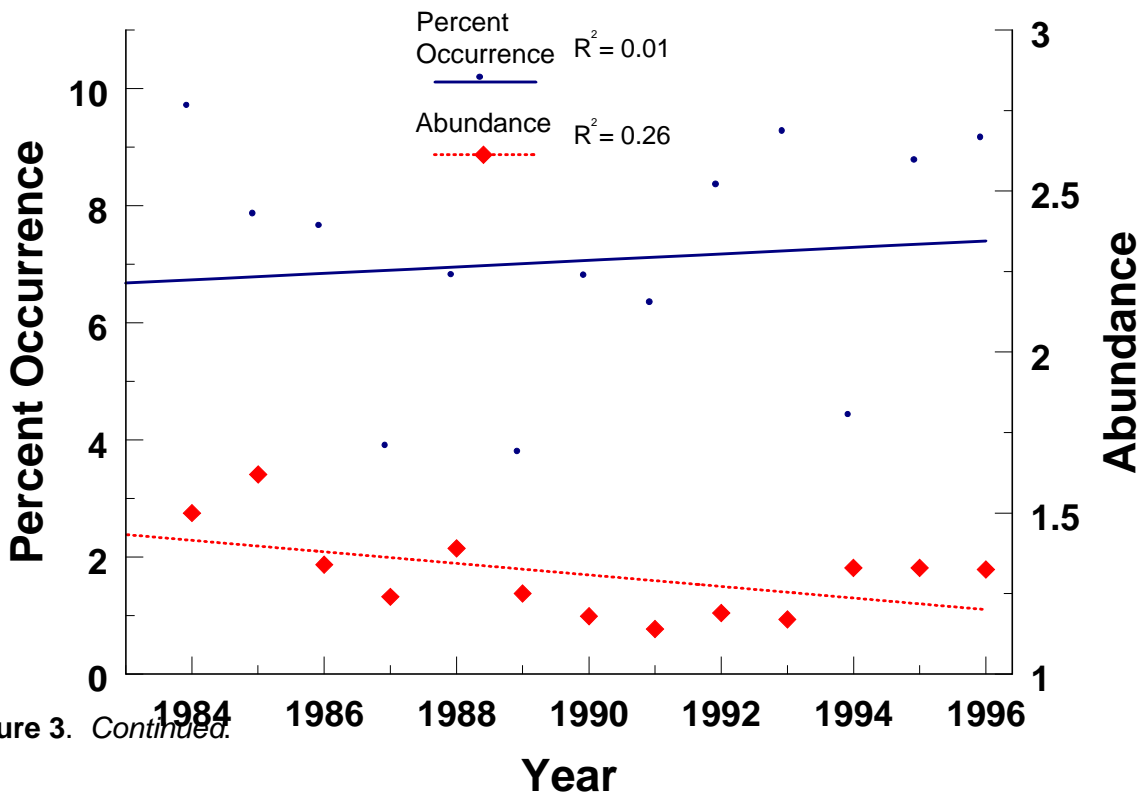


Figure 3. *Continued.*