



# Southwest Florida Frog Monitoring Network

10 years of change in the frog  
community of the Estero Bay  
Watershed

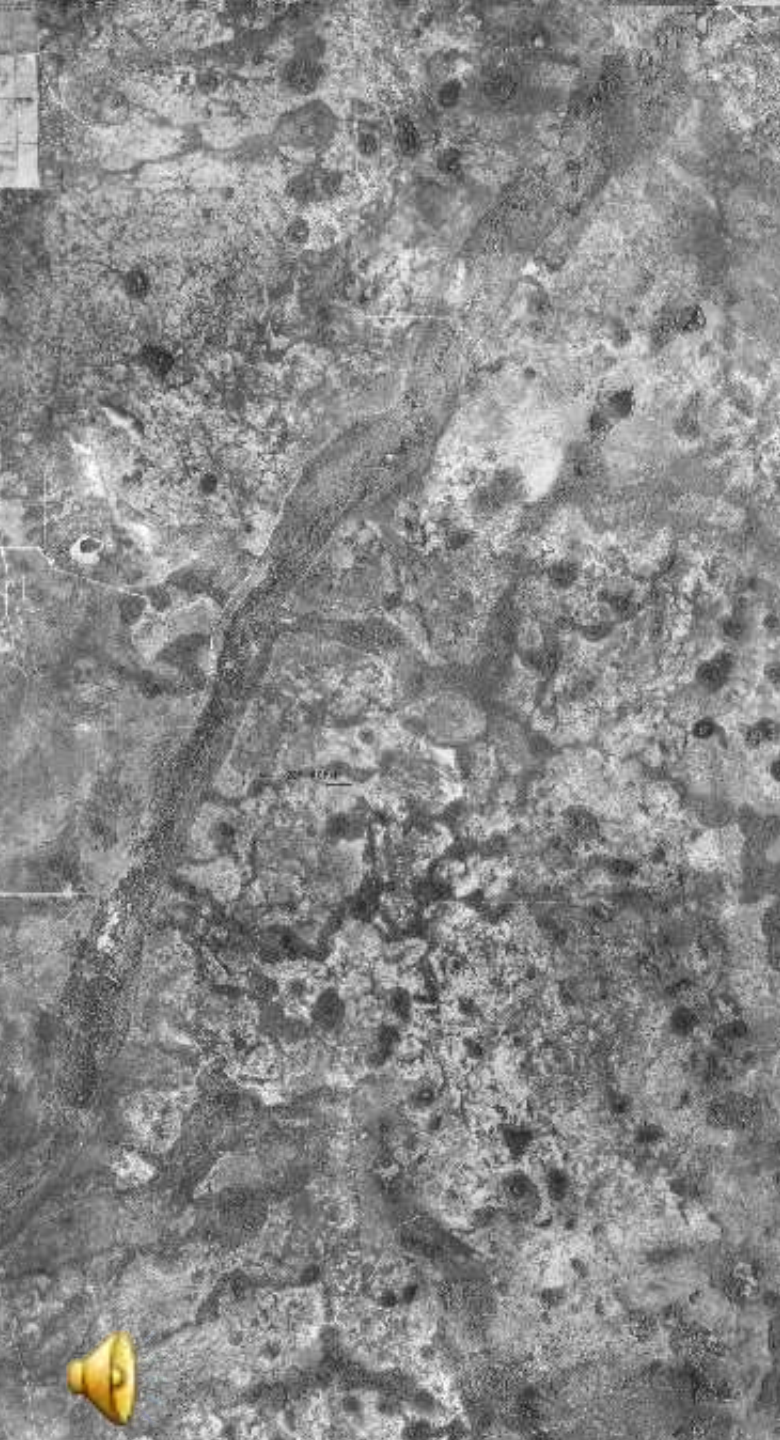
Win Everham and John Cassani  
Florida Gulf Coast University and

Lee County Water Hyacinth Control District



# Frogs – canaries in the coal mine





# Frog Watch – Southwest Florida Amphibian Monitoring Network

- started in 2000
- John Cassani and Ellen Lindblad
- over 100 volunteers
- supported by Charlotte Harbor National Estuary Program
- Frog Watch <http://frogwatch.net/>
- North American Amphibian Monitoring Program <http://www.pwrc.usgs.gov/naamp/>

# Protocol

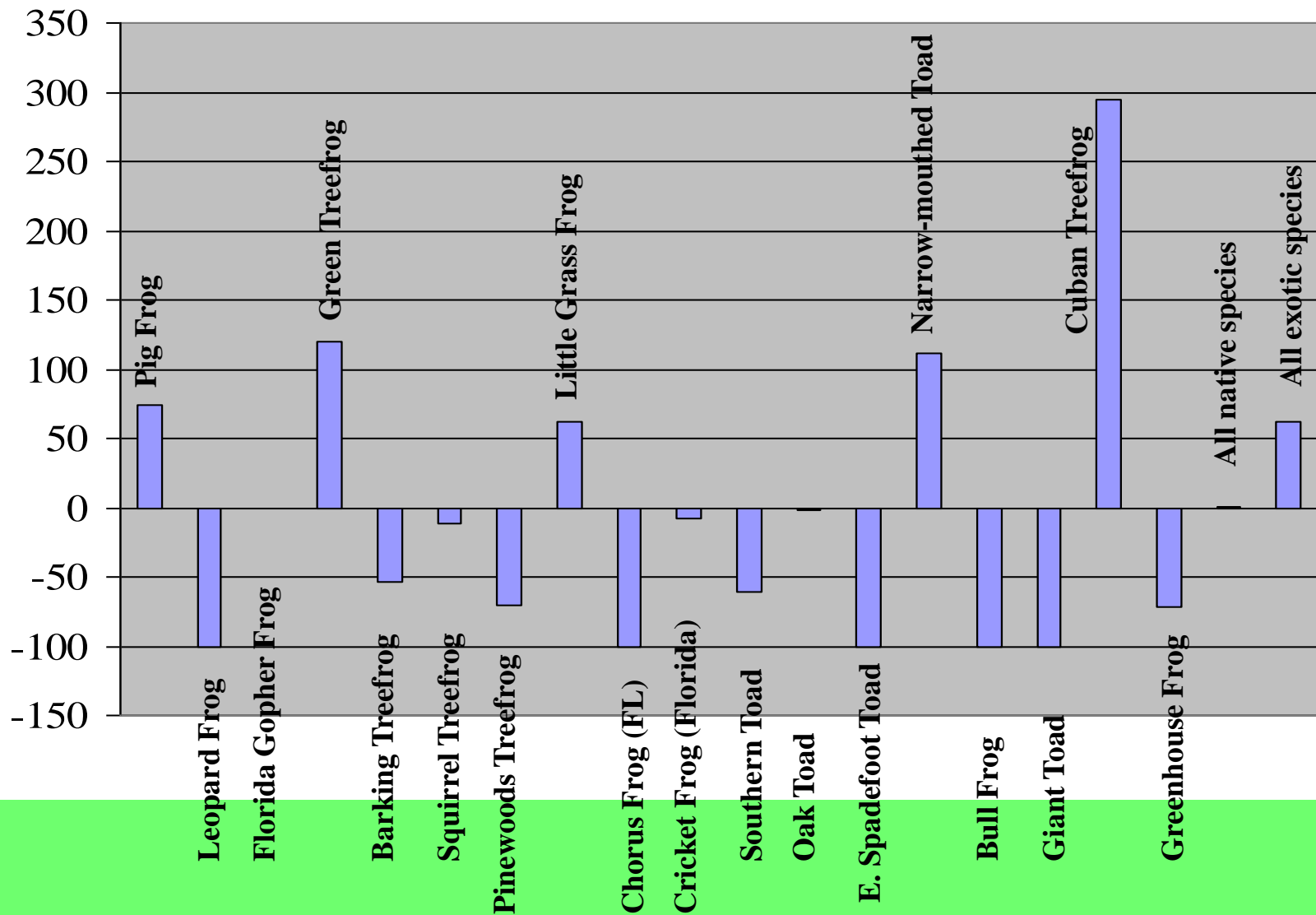
- sampling
- route
- environmental factors
- calls



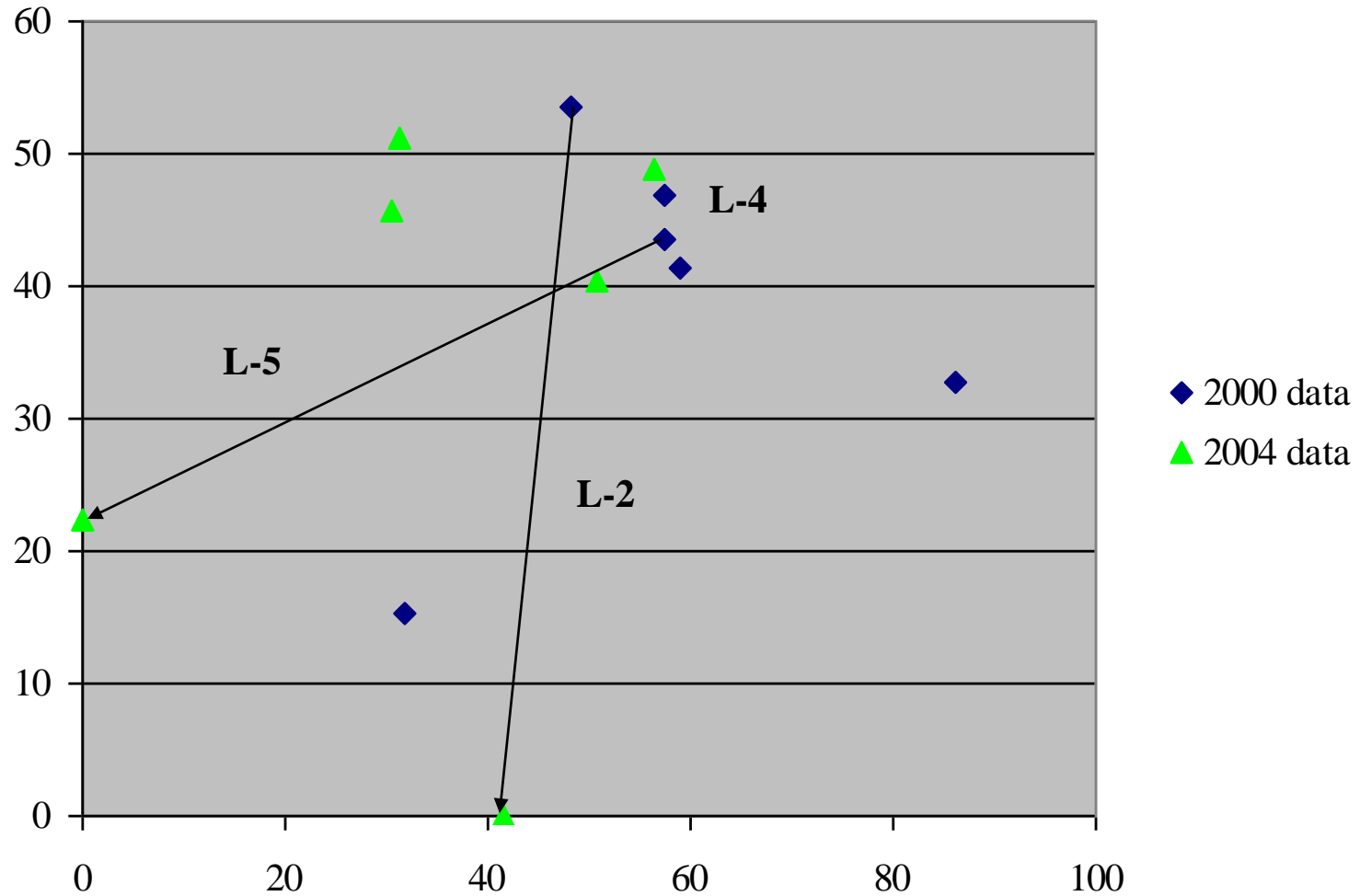
# Percent change in average call intensity

2000 and 2004

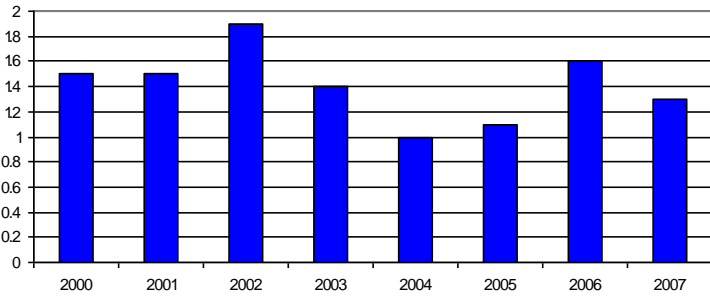
Routes CH-1, L-2, L-4, L-5, L-6, L-7



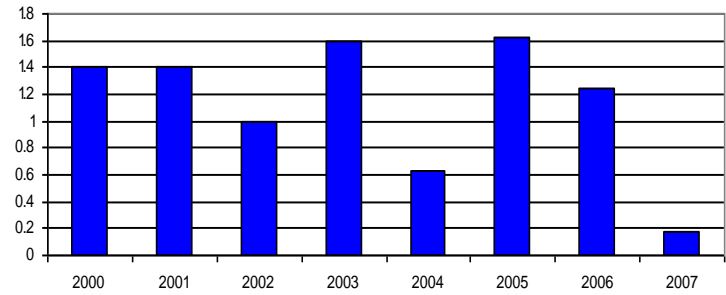
# Polar Ordination of 2000 and 2004 data



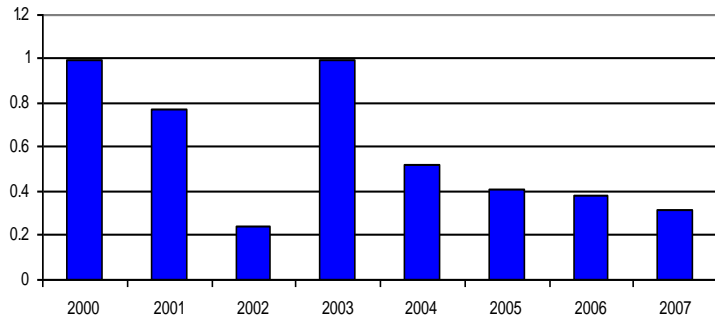
**Squirrel TF Relative Abundance 8 routes**



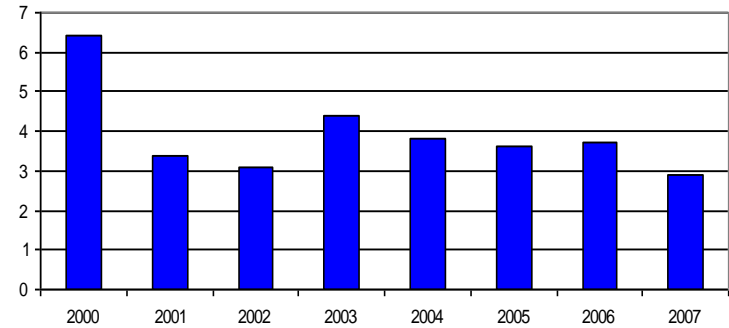
**Pinewoods TF Relative Abundance at 8 routes**



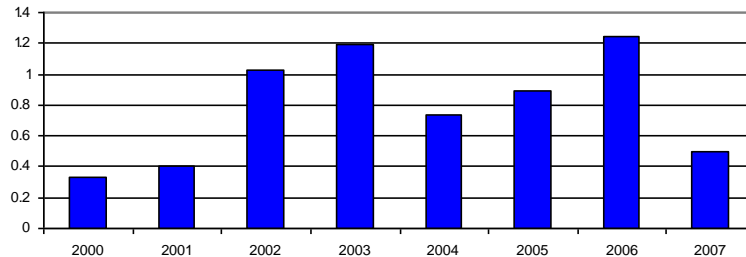
**Barking TF Relative Abundance at 8 routes**



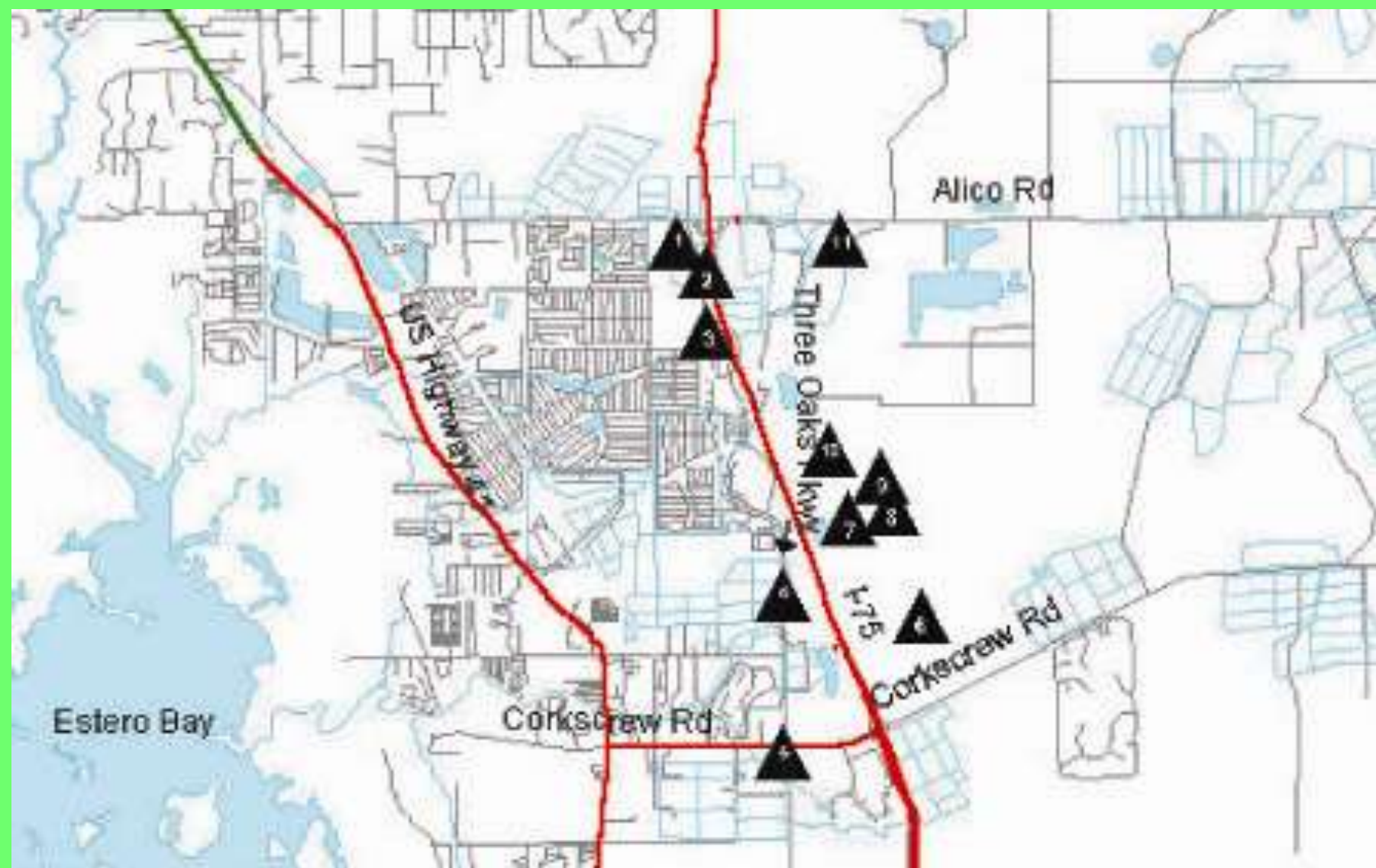
**Green TF Relative Abundance 8 Routes**



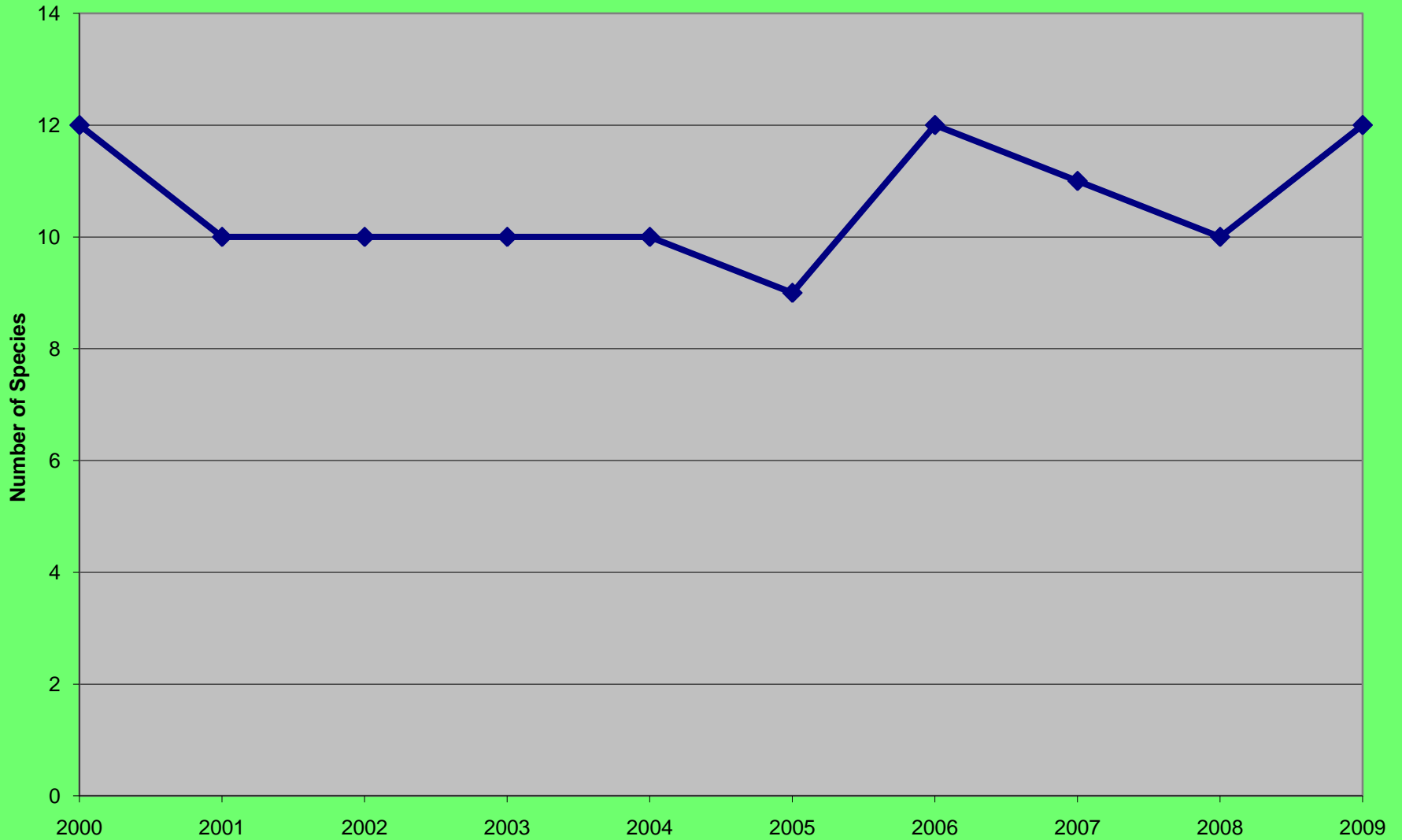
**Cuban TF Relative Abundance 8 routes**



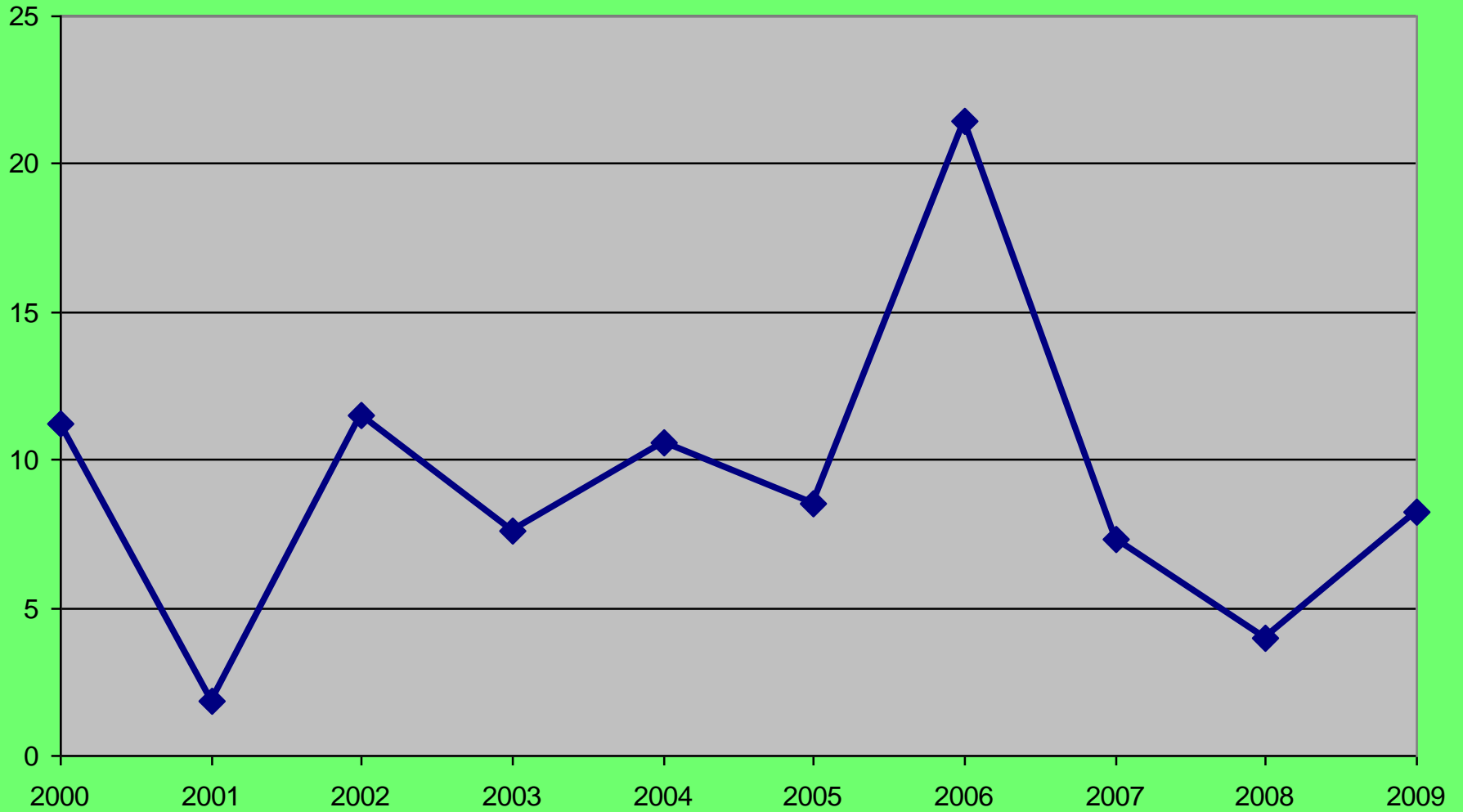




## Species Richness Route 7

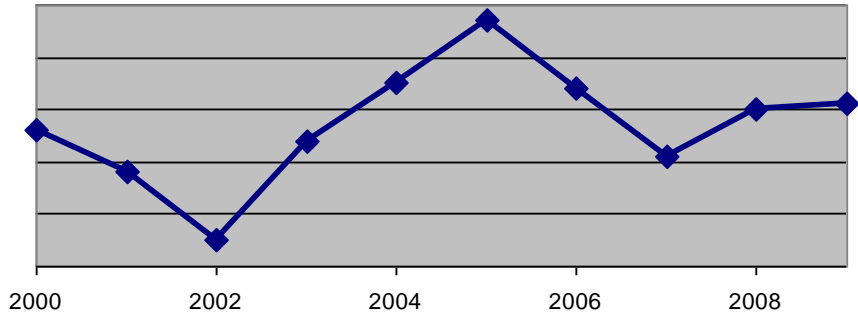


## Percent of total relative abundance due to exotics

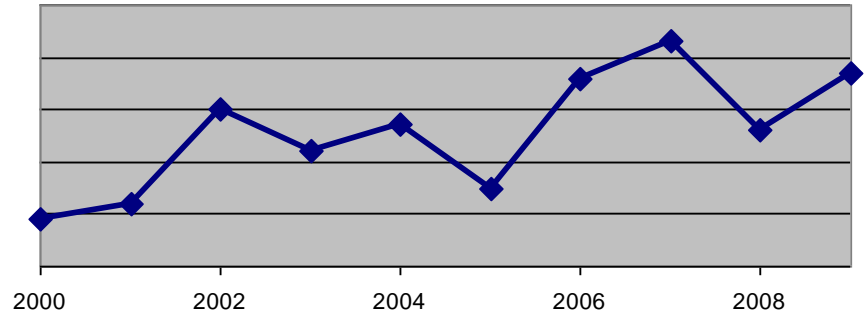


# Route 7 2000 - 2009

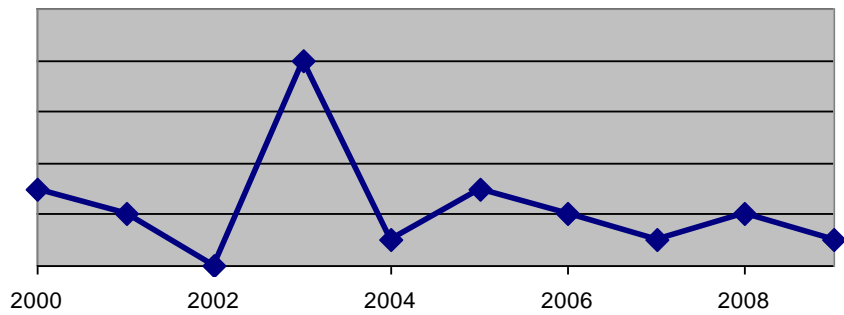
## Cricket Frog



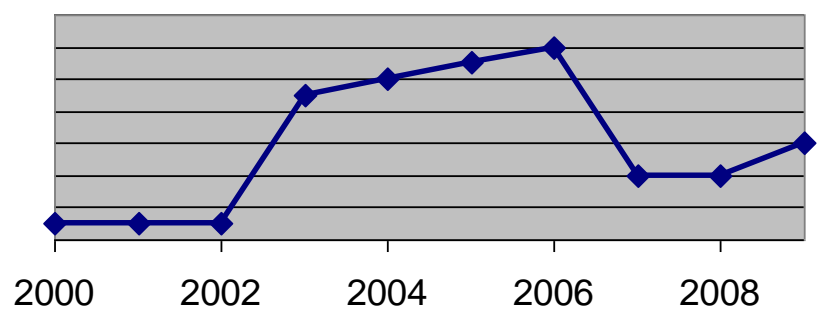
## Oak Toad



## Barking Treefrog



## Cuban Treefrog



# Summary

- Frog populations fluctuate
- Overall frog populations are doing OK
- BUT we are documenting loss of species from some place on the Indscape
- Developing a site decreases the frog community
- Increase in exotic frogs
- Need for on-going monitoring
- Need for volunteer help

# Frog Call Quiz



Click here



# Frog Call Quiz



Oak Toad



Click here



# Frog Call Quiz



Oak Toad



Cricket Frog



Click here





# Frog Call Quiz



Oak Toad



Cricket Frog



Cuban Treefrog



Click here



# Frog Call Quiz



Oak Toad



Cricket Frog



Cuban Treefrog



Squirrel Treefrog



Click here

# Frog Call Quiz



Oak Toad



Cricket Frog



Cuban Treefrog



Squirrel Treefrog



Narrow-mouthed Frog