



# Bird Survey as an indication of environmental integrity in preservation areas

## Summary

- Introduction;
- Objective;
- Materials and Methods;
- Results and Discussion; and
- Conclusion.



## Introduction

- Bird Survey is already used in Brazil as an efficient environmental quality index.

### **Local Bird Surveys (close to Holambra Field Station):**

- Jacutinga, Holambra, Paulínia, Jaguariúna, Santo Antônio de Posse, Mogi Mirim e Itapira- 163 bird species. (BIODINÂMICA, 2006);
- Mata de Santa Genebra, em Campinas - 134 bird species (ALEIXO e VIELLIARD, 1995);
- Fazenda Barreiro Rico, Anhembi/SP -198 bird species. (ANTUNES, 2007)



## Objective

Assess the possibility of a small farm, with intensive use of agricultural fertilizers and pesticides, maintaining a wildlife conservation area, using Bird Surveys as an environmental index.



## Material and Methods

### HOLAMBRA FIELD STATION



## Material and Methods

### Bird Surveys

**2003** Aug/2002 - Apr/2003 – 21 days of observation;

**2005** Jan - Jun/2005 – 11 days of observation;

**2010** Apr - Aug/2010 – 12 days of observation;

**2013** Jul - Oct/2013 – 8 days of observation.



## Material and Methods

Birds were classified to species level.

The frequency was classified as:

- **0** absent – could not be found in the year of the survey;
- **1** rare – recorded only once;
- **3** not frequent – recorded once to three times;
- **5** frequent – recorded more than three times; and
- **10** very frequent – recorded many times and also in large amount.



## Results and discussion

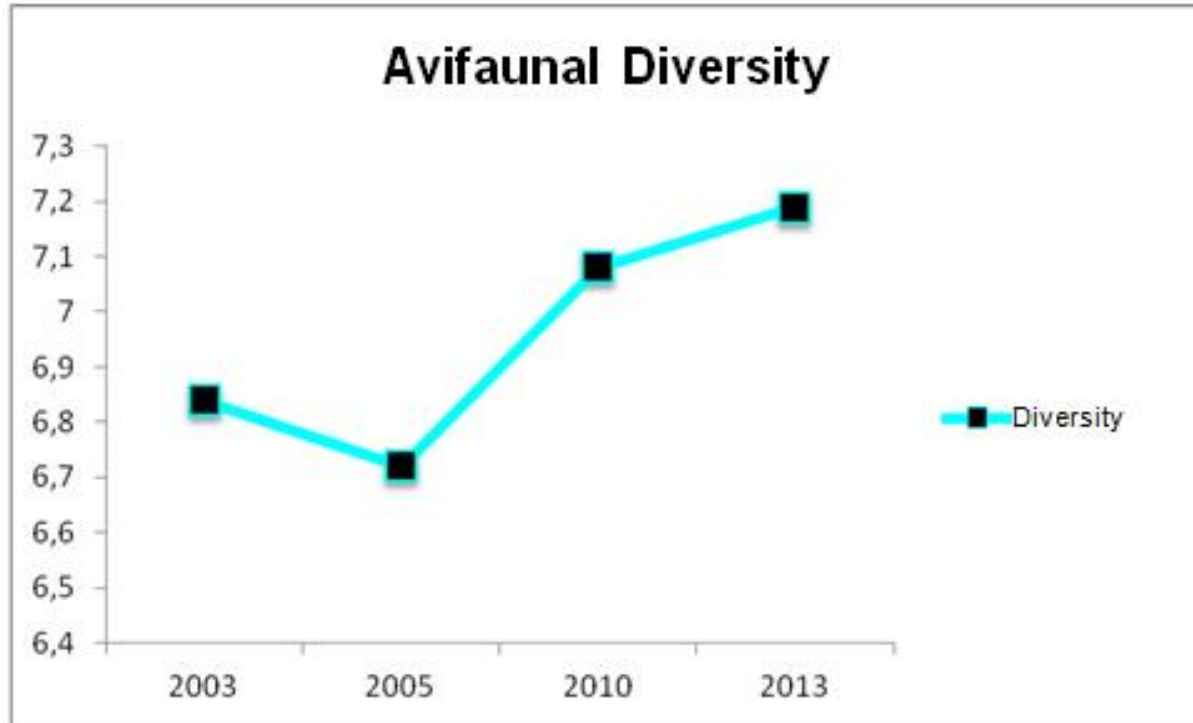
21 orders;  
48 families;  
173 species.

Comparison of species richness on Bird Surveys in 2003, 2005, 2010 e 2013.  
Source: Santiago, 2013.





## Results and discussion



Comparison of diversity on Bird Surveys in 2003, 2005, 2010 e 2013.



## Conclusion

These data demonstrate:

- a trend of increasing diversity and species richness over the years.
- activities of the Agricultural Experimental Field are not impacting the birds and;
- careful maintenance of the conservation area and its surroundings can contribute to the conservation of local biodiversity.



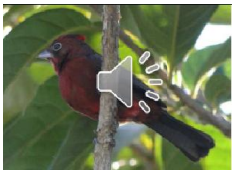
## More information...

<http://bibliotecadigital.fgv.br/dspace/handle/10438/11472>



## THANK YOU!!

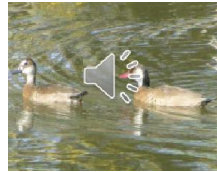
*Lanio cucullatus*  
Tico-tico-rei



*Caracara plancus*  
Carcará



*Amazonetta brasiliensis*  
Marreca-pé-vermelho



*Amazilia fimbriata*  
Beija-flor-de-garganta-verde



*Hydropsalis parvulus*  
Bacurau-chintã



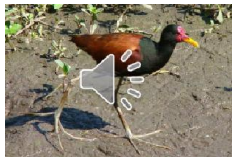
*Cariama cristata*  
Seriema



*Cathartes aura*  
Urubu-de-cabeça-vermelha



*Jacana jacana*  
Jaçanã



*Mycteria americana*  
Cabeça-seca



*Columbina talpacoti*  
Rolinha-caldo-de-feijão



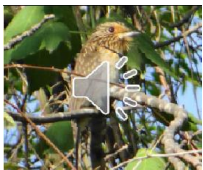
*Megasceryle torquata*  
Martim-pescador-grande



*Guira guira*  
Anu-branco



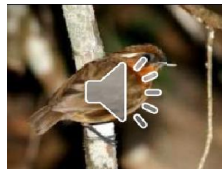
*Malacoptila striata*  
Barbudo-rajado



*Pardirallus nigricans*  
Saracura-sanã



*Conopophaga lineata*  
Chupa-dente



*Cyanocorax cristatellus*  
Gralha-do-campo



*Celeus flavescens*  
Pica-pau-galego



*Elaenia chiriquensis*  
Chibum



