

# Short introduction about the German glow-worm survey

by René Spierling



*Lampyris noctiluca*;  
female  
picture by D. Weiß  
(<http://www2.uni-jena.de/chemie/institute/oc/weiss>)



*Lamprohiza splendula*;  
female  
picture by D. Weiß  
(<http://www2.uni-jena.de/chemie/institute/oc/weiss>)

# Contents:

- 1.0 Introduction
- 2.0 German Glow-worm Survey
- 3.0 Distribution of Lampyridae in Germany

# 1.1 Who did it?:

Biology student from Germany

Firefly related activities:

- Running a survey attempt for Germany
- Breeding *Lampyris sardiniae*

## 2.1 Where, since when and how?:

[www.lampyridae.de.vu](http://www.lampyridae.de.vu)

Lampyridae; Deutschland; Verbreitungsuntersuchung

(<http://www.geocities.com/millenpopille/glow>)

Started in the year 2000

## 2.1 Where, since when and how?:

A survey form can be copied/downloaded from the website...

Some of the question there are:

What species? (Did they glow during flight?)

What type of site and how is it managed?

Open water nearby?

Chemical treatment?

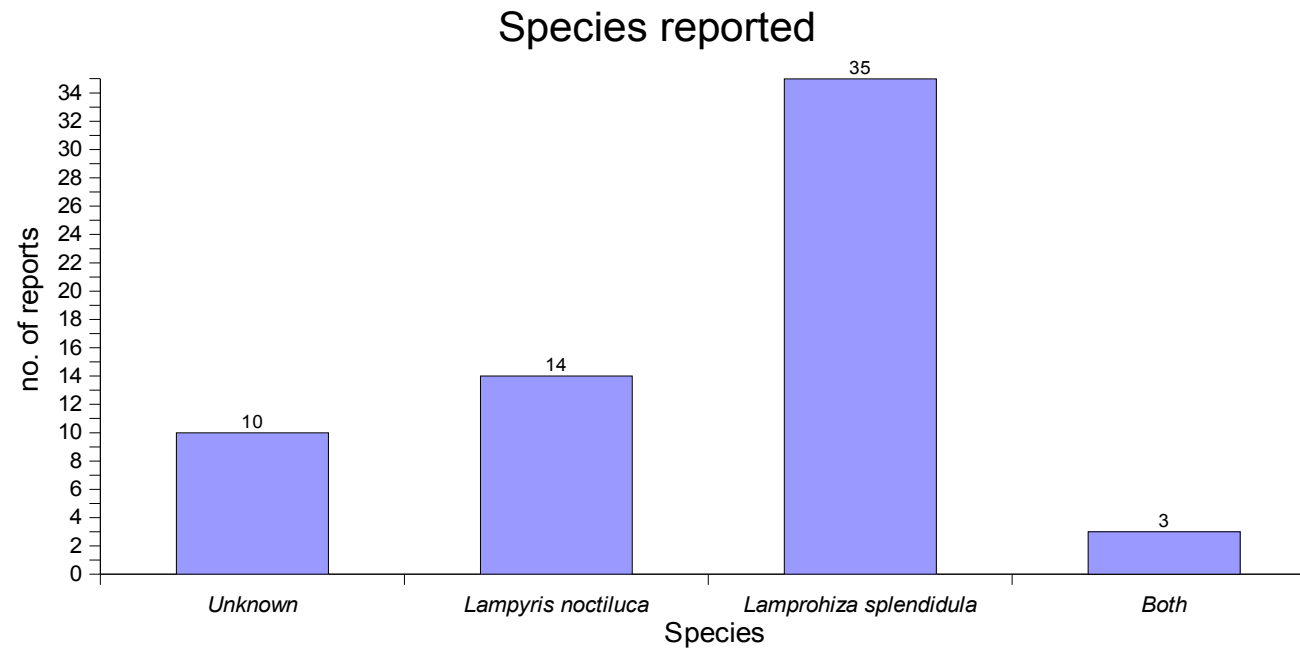
Artificial light at night nearby?

Where were the Fireflies?

## 2.2 Feedback:

Reported sites:

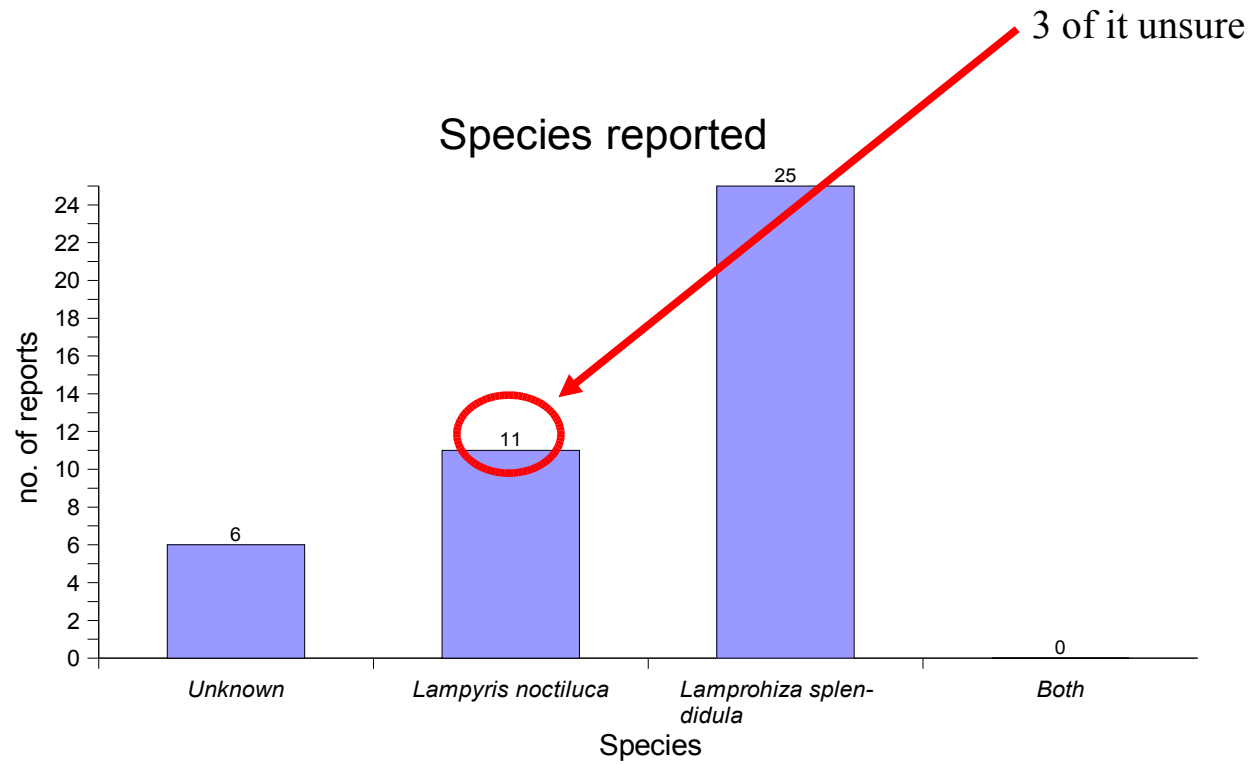
2000 - 2004: 62



## 2.2 Feedback:

Reported sites:

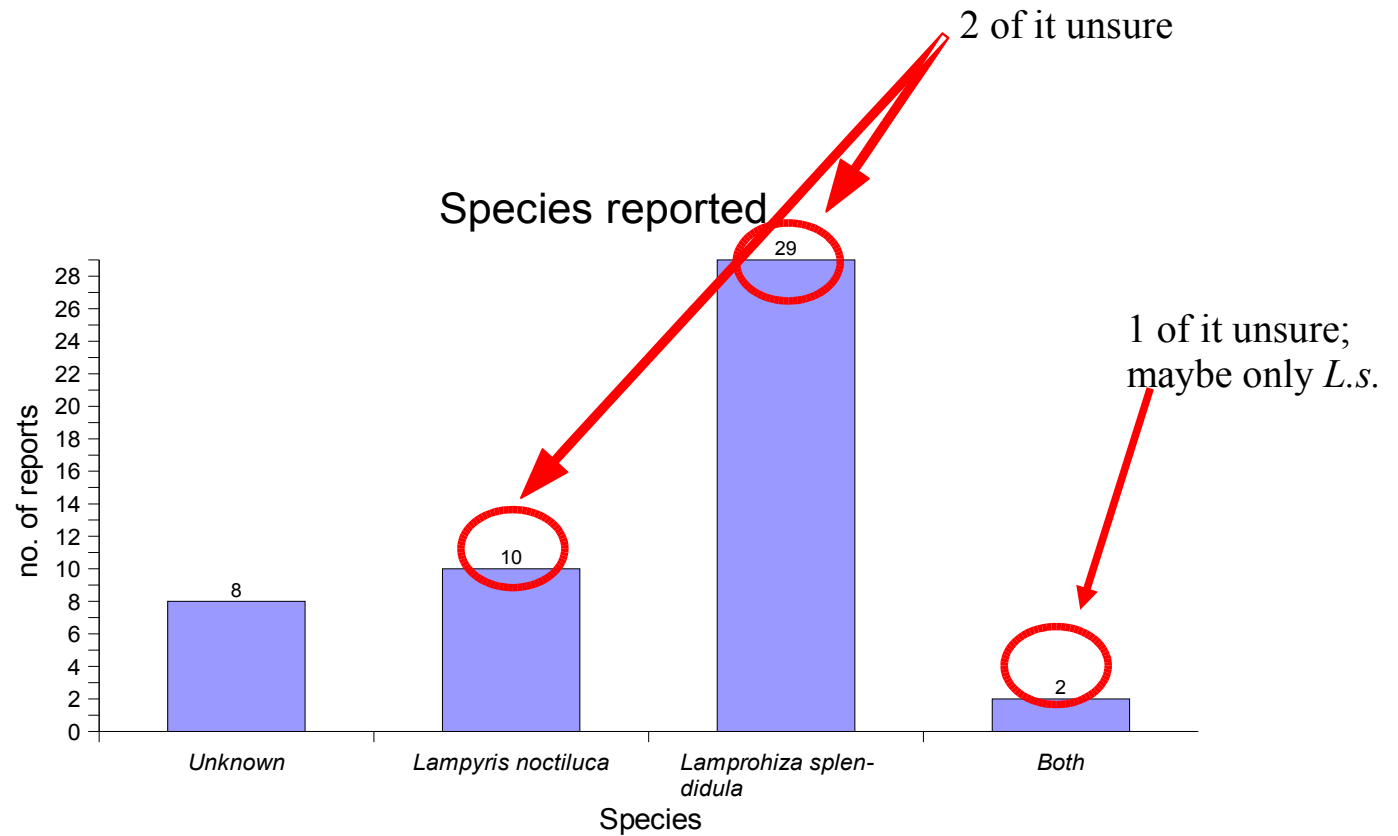
2005: 42



## 2.2 Feedback:

Reported sites:

2006: 49



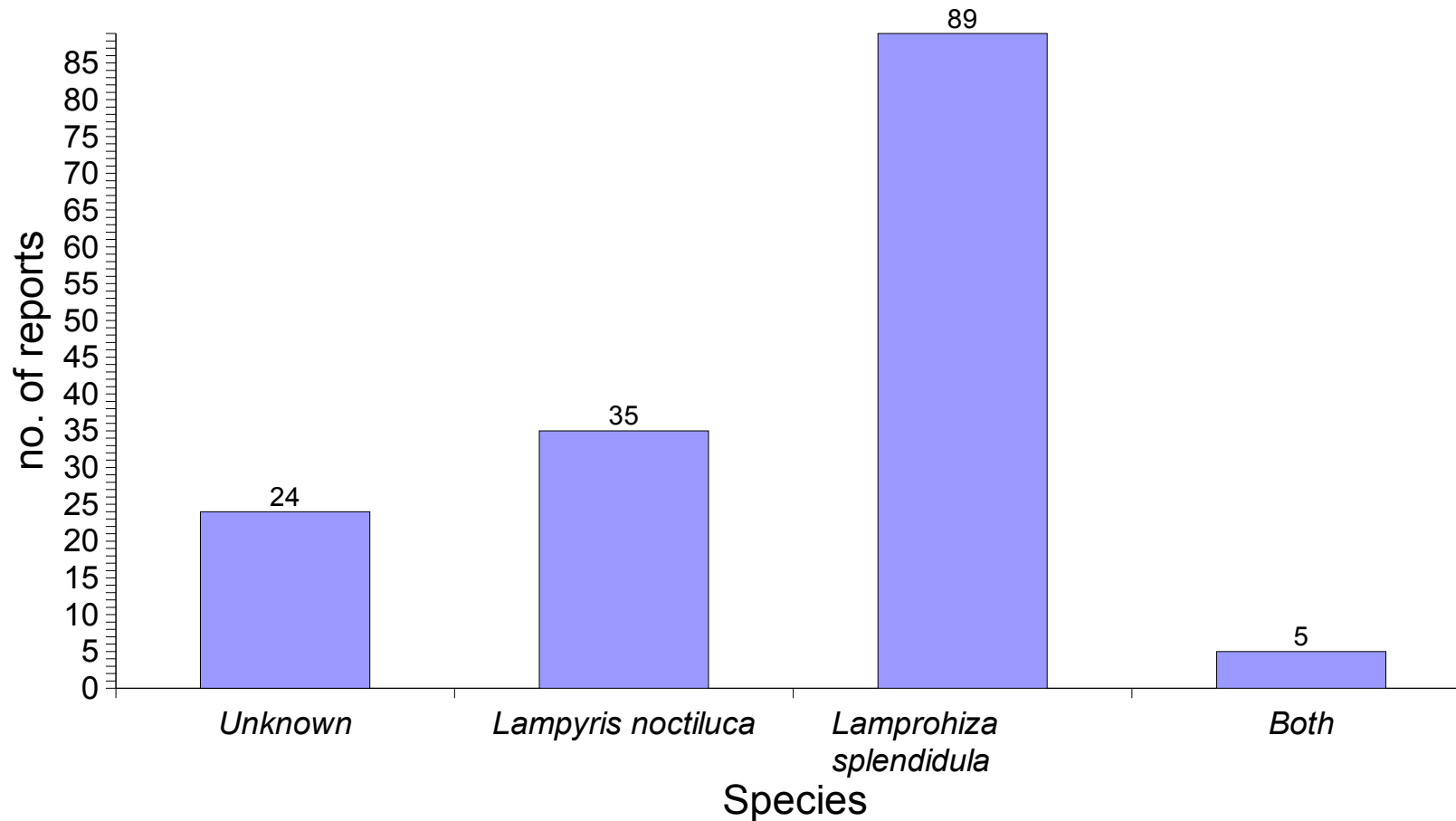


## 2.2 Feedback:

Reported sites:

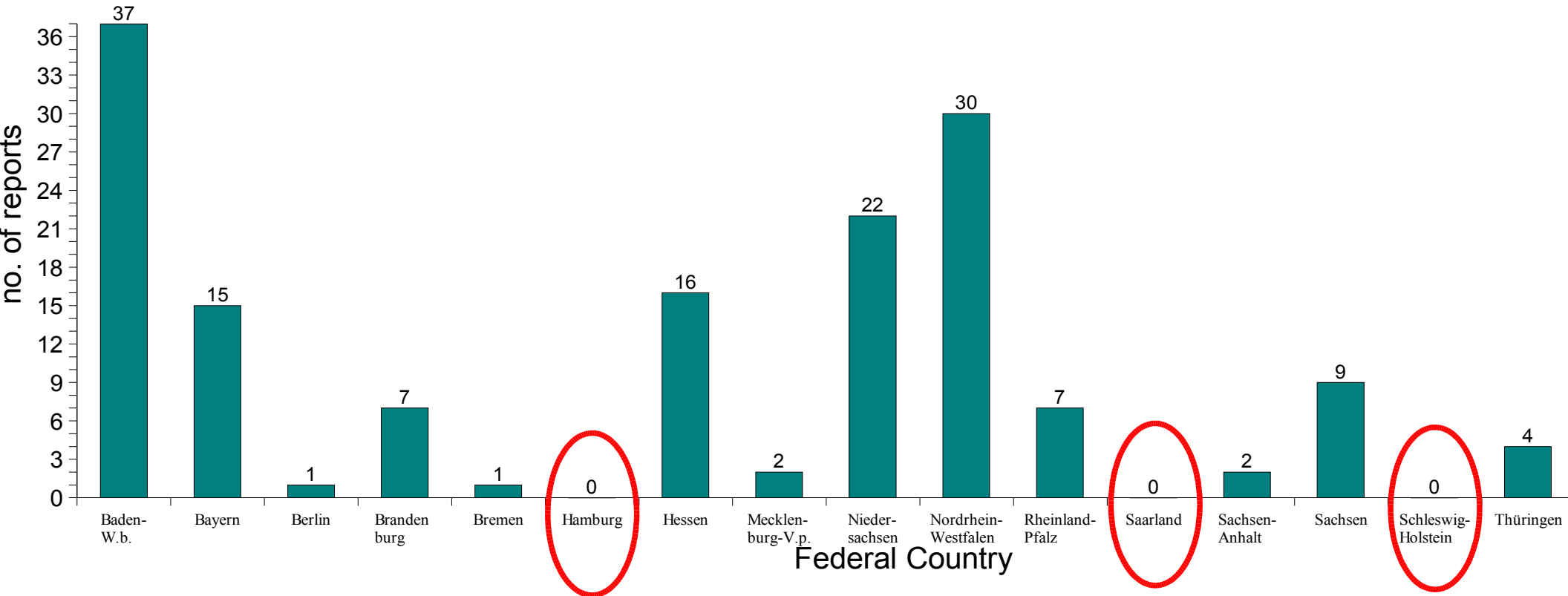
Total (2000 - 2006): 153

### Species reported



# 2.2 Feedback:

Federal Country of reports  
2000 - 2006

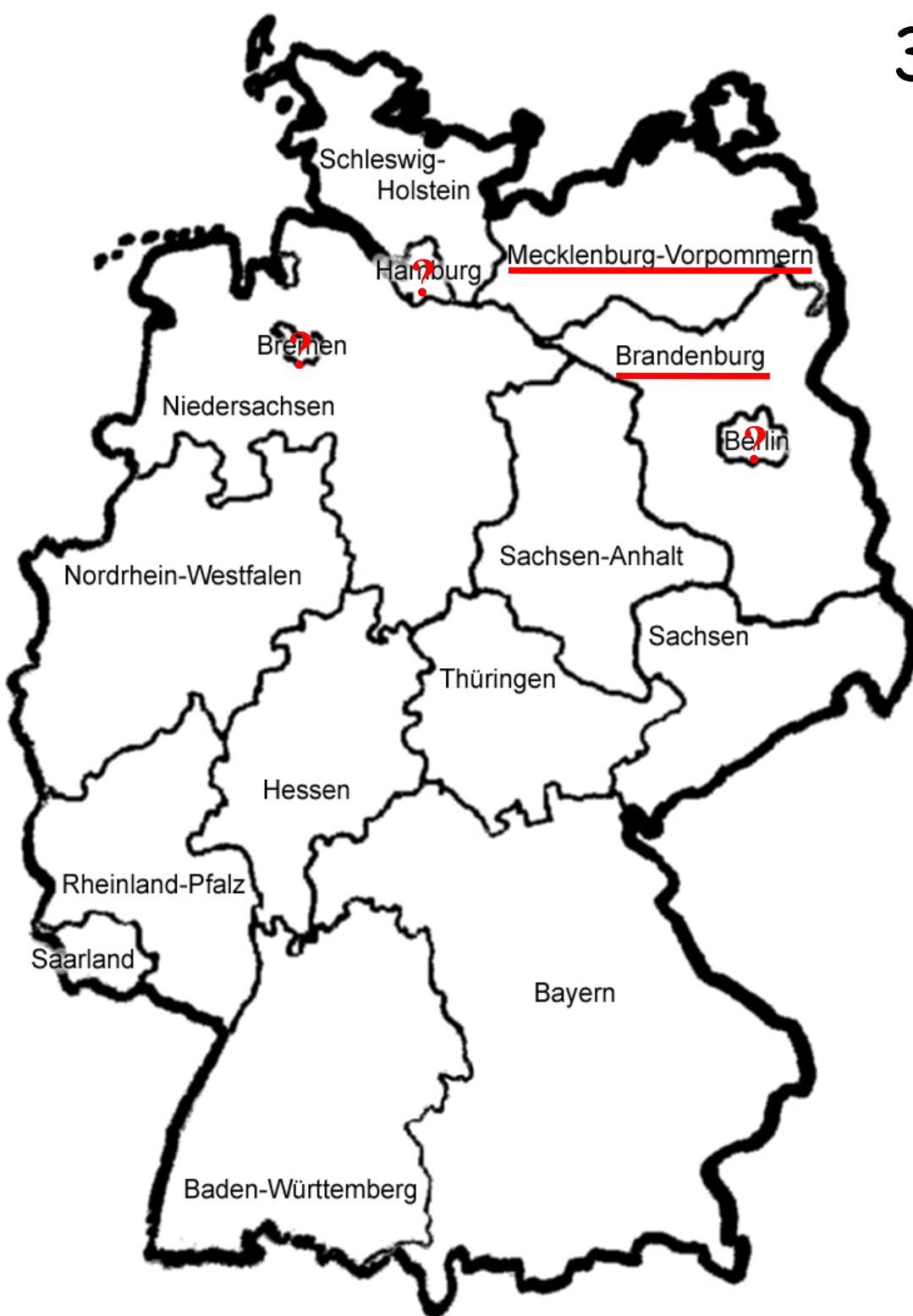


## 2.3 Problems:

- Reports very heterogeneous
  - Species determination problematic (e.g. *Lamprohiza splendidula* could hide sympatric *Lampyrus noctiluca* if only “glowing in flight“-trait is used)
- Non-lampyrid fireflies/glow-worms?  
(e.g. *Microscolex phosphoreus* (Oligocheata);  
*Scolioplanes crassipes*, *Geophilus carpophagus* (Myriapoda),  
*Ceroplatus testaceus* (Diptera))
  - Heavy bias in the collected data
- How to separate sites?

=> Only qualitative (if any) conclusions possible

### 3.1 Distribution according to KÖHLER & AHRENS (1999):



All 3 species found in every\*  
federal country after 1950,

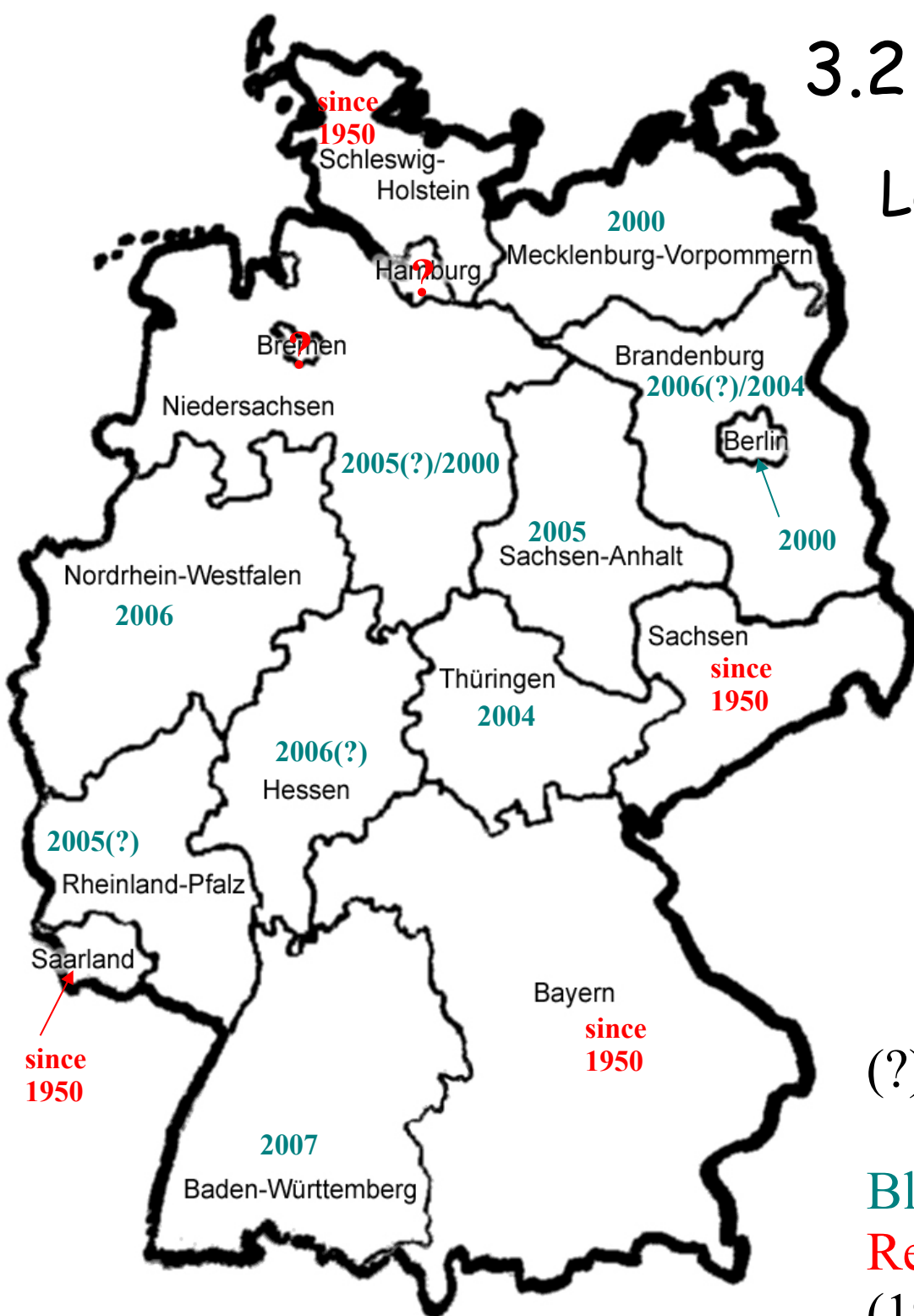
except

*Lamprohiza splendidula* in **Mecklenburg-Vorpommern** only before 1900  
and in **Brandenburg** only before 1950

and *Phosphaenus hemipterus* also in in  
**Brandenburg** only before 1950

\* not explicitly stated for the city states

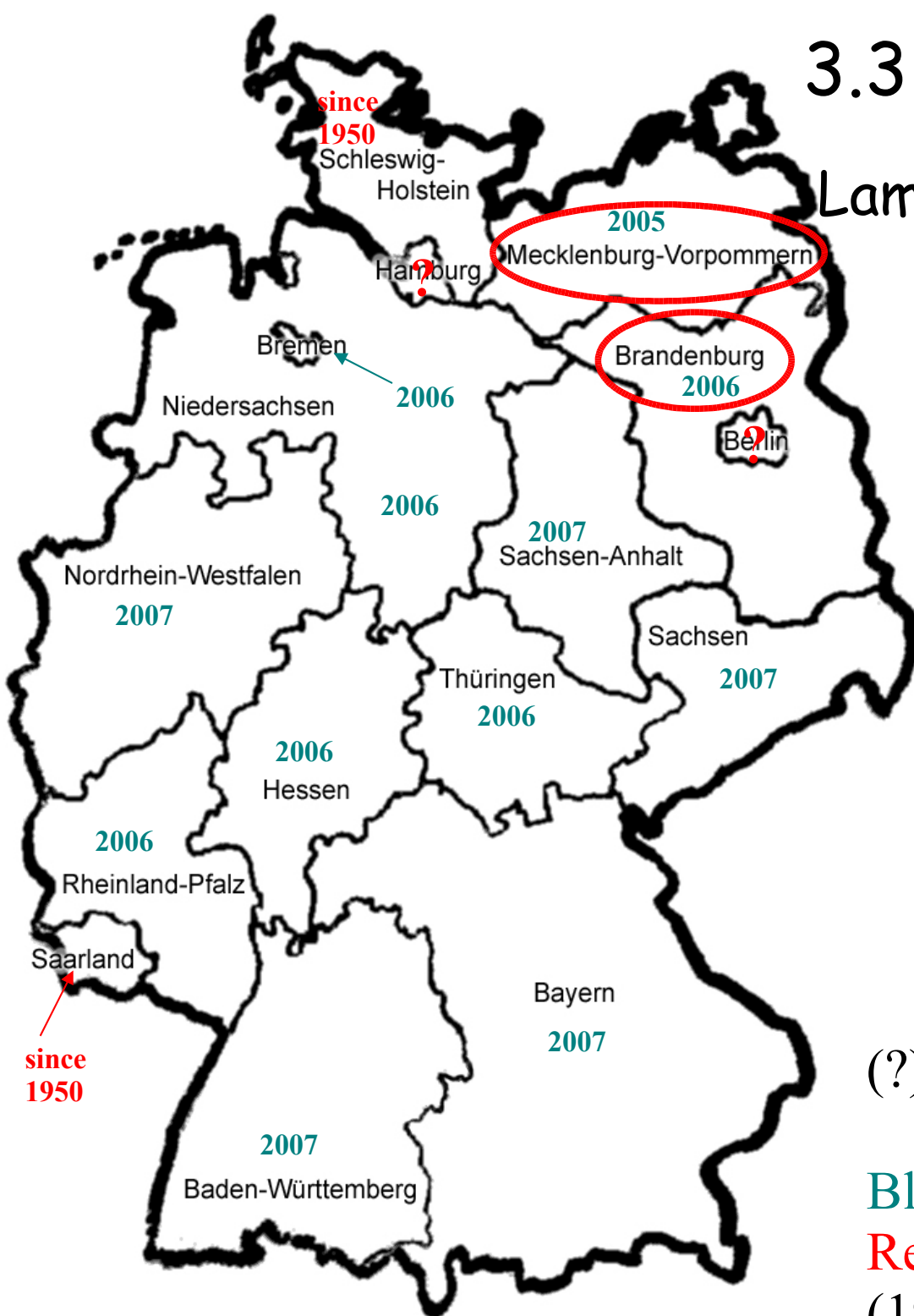
## 3.2 A more recent Distribution of *Lampyris noctiluca* (L., 1758):



(?) = Unsure species determination

Bluegreen = Most recent data from GGS  
Red = Data from KÖHLER & AHRENS (1999)

### 3.3 A more recent Distribution of *Lamprohiza splendidula* (L., 1767):



(?) = Unsure species determination

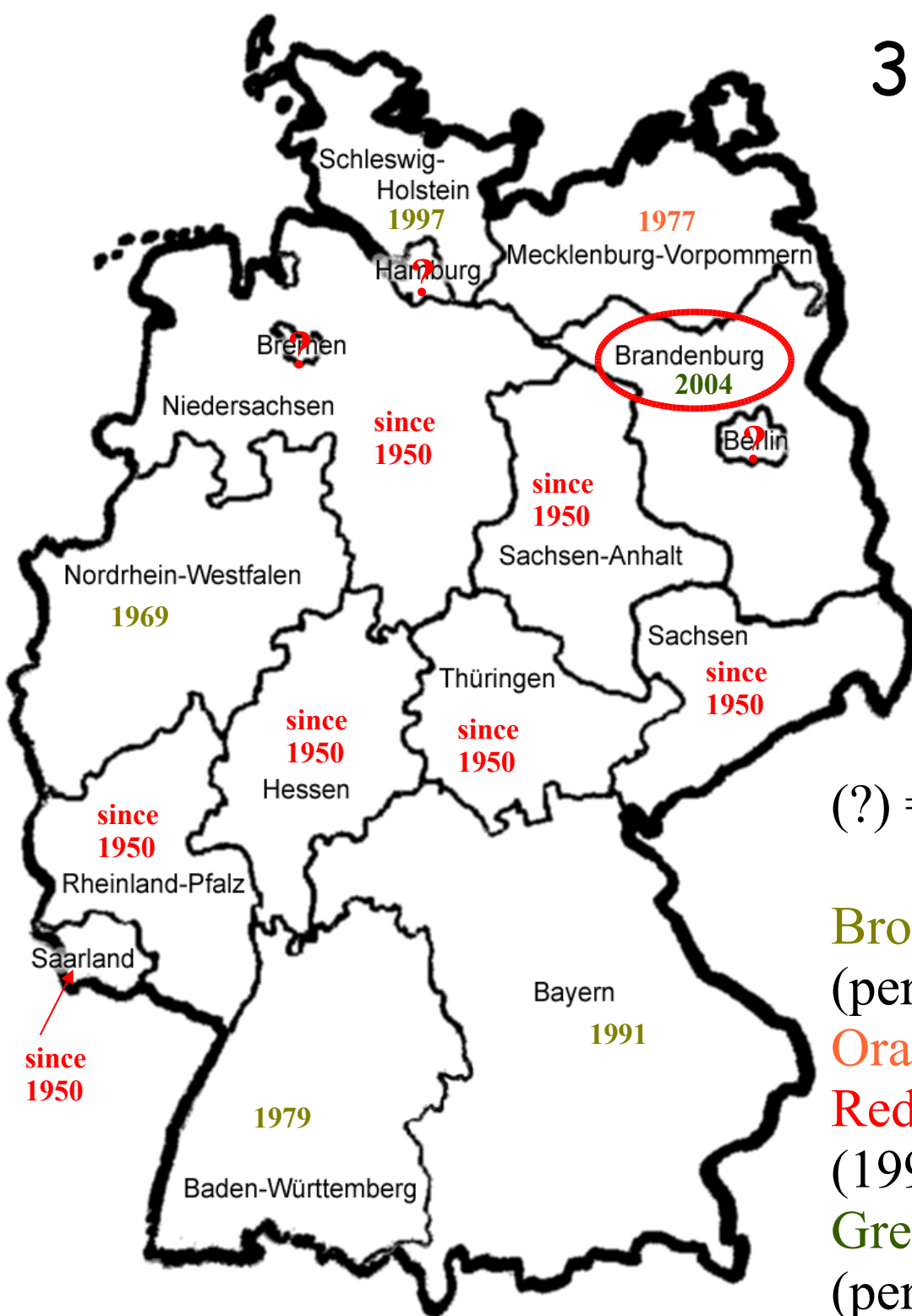
Bluegreen = Most recent data from GGS

Red = Data from KÖHLER & AHRENS (1999)

## 3.4 A more recent Distribution of *Phosphaenus hemipterus*

(Goeze, 1777):

Listed as category 3 “endangered” in the “Rote Liste der Tiere Deutschlands“



(?) = Unsure species determination

**Brown** = Most recent data from TOLASCH (pers. com.)

**Orange** = Data from MEßNER (1979)

**Red** = Data from KÖHLER & AHRENS (1999)

**Green** = Most recent data from KÖHLER (pers. com.)

# Conclusion:

“Success”: *Lamprohiza splendidula* “rediscovered” in Mecklenburg-Vorpommern and Brandenburg...

What else was it good for? -> A potential help for choosing sites for further studies (e.g. “real” surveys)...

To do list: A deeper look at the literature, “Advertisement“ (then maybe a more organized and quantitative approach is possible), ...



# Sources:

KÖHLER & AHRENS (1999) “Verzeichnis der Käfer Deutschlands” as a download of <http://www.koleopterologie.de/verzeichnis-der-kaefer-deutschlands/konzept/startseite.html> (actual download via [http://docserver.bis.uni-oldenburg.de/publikationen/extern/campus\\_access/2005/col99.zip](http://docserver.bis.uni-oldenburg.de/publikationen/extern/campus_access/2005/col99.zip))

“Rote Liste Deutschland der Tiere Deutschlands” downloaded from <http://www.bfn.de/fileadmin/MDB/documents/RoteListeTiere.pdf>

LANGE (2003): Bemerkenswerter Fund des Leuchtkäfers *Lamprohiza splendidula* (LINNAEUS, 1767) in Mecklenburg-Vorpommern (Col., Lampyridae). *Entomologische Nachrichten und Berichte*, Bd. 47, H. 1, S. 50

MEßNER (1979): *Phosphaenus hemipterus* Goeze und *Lampyris noctiluca* Geoffr. (Col., Lampyridae) im Naturschutzgebiet "Galenbecker See". *Naturschutzarbeiten Mecklenburg Vorpommern*. Bd. 22, S. 106-113

KÖHLER pers. com.

TOLASCH pers. com.

