

Ringling of the Aquatic Warbler in Europe – does the historical ringling data provide estimate for population dynamics?

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Ringling

- **birds are ringed to mark them individually;**
- **initial purpose of ringling was to clarify wintering grounds of birds;**

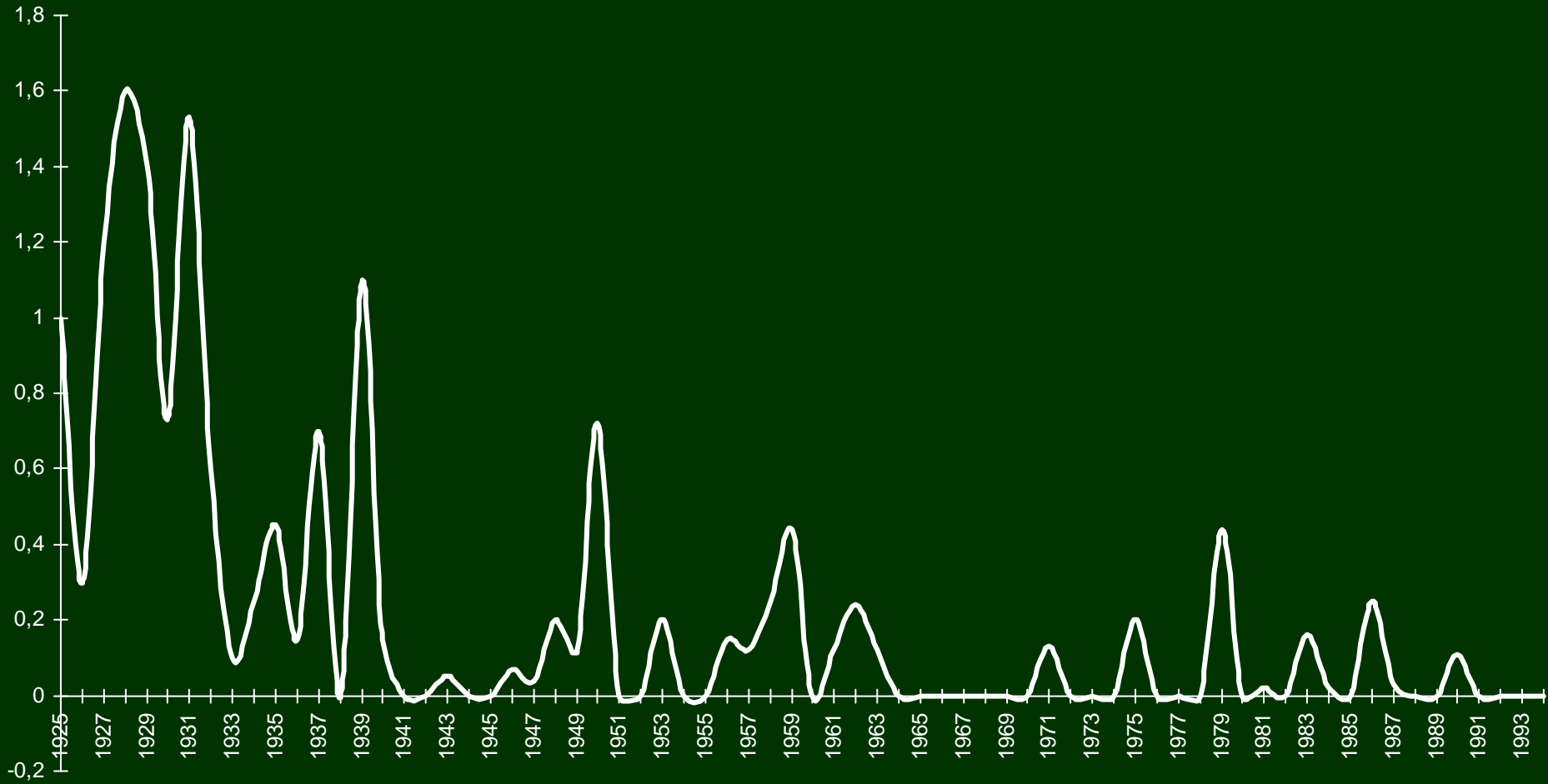
Ringling Data

- recoveries (wintering and stopover sites, natal and breeding philopatry and dispersal);
- survival estimates;
- phenology (breeding and migration);
- other data

Other use of Ringing Data

- byproduct of ringing data is the number of ringed birds, what might indicate population trend (e.g. for Corncrake, Keiřs et al. 2007);
- it is unprecise by various reasons – **WHY IS IT WORTH TO CONSIDER?**
 - for many species it is the only **QUANTITATIVE source of historic population numbers** (including estimate of historic nest success e.g. for Roller in Latvia);

CORNCRAKE index in Europe by ringing data 1925–1994 (Keišs et al. 2007)



Ringling Data

- **quantitative data on bird numbers in most of European countries since beginning of 20th century;**
- **collected for different purposes, thus history of bird ringing in each country has to be known;**
- **might be used with caution**

Assumption for assessment of population trend

- This study is based on an assumption that birds were captured randomly – bird ringer were using every opportunity to ring any bird, he (or she) encountered, but no specific search for specific species (e.g. Aquatic Warbler, Corncrake etc.) were done. Thus probability of encountering of a specific species is higher when there are more birds of this species around
- thus periods and countries, where this assumption is not true **MUST** be excluded

- **data can be used only for periods with no restrictions to capture Aquatic Warblers**
- **use of tape lures has to be taken into account (probably data not useful for trend estimate)**
- **thus periods and countries, where restrictions and tape luring occurred, MUST be excluded**

- **data source – annual published reports of the bird ringing by the ringing schemes**

Bulgaria n=10
1976–1983 (except 1984, when 185 birds are reported);

Czechoslovakia n=77
1934–1942; 1947–1948; 1951–1952; 1964–1980;

Croatia n=90
1947–1975; 1983–1985; 1990–2001;

Denmark n=20
untill 2007;

Hiddensee n=40
1975–1999;

Hungary n=43
1909–1932; 1951 – 2007;

Latvia n=30
1925–2009;

Morocco n=7
1978–1984;

Portugal n=26
1976–1983;

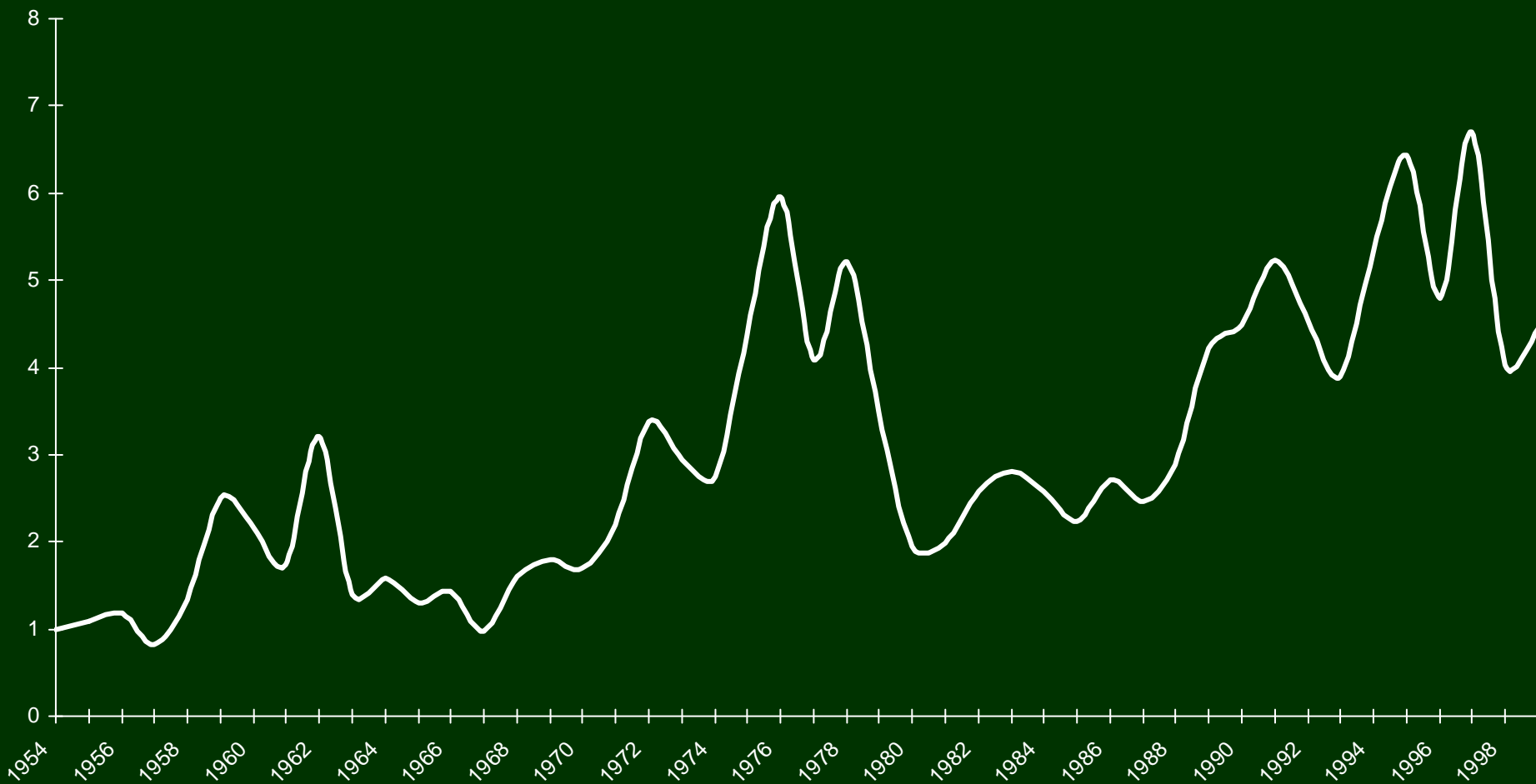
Radolfzell n=199
1957–1976;

Slovenia n=13
1975–1984;

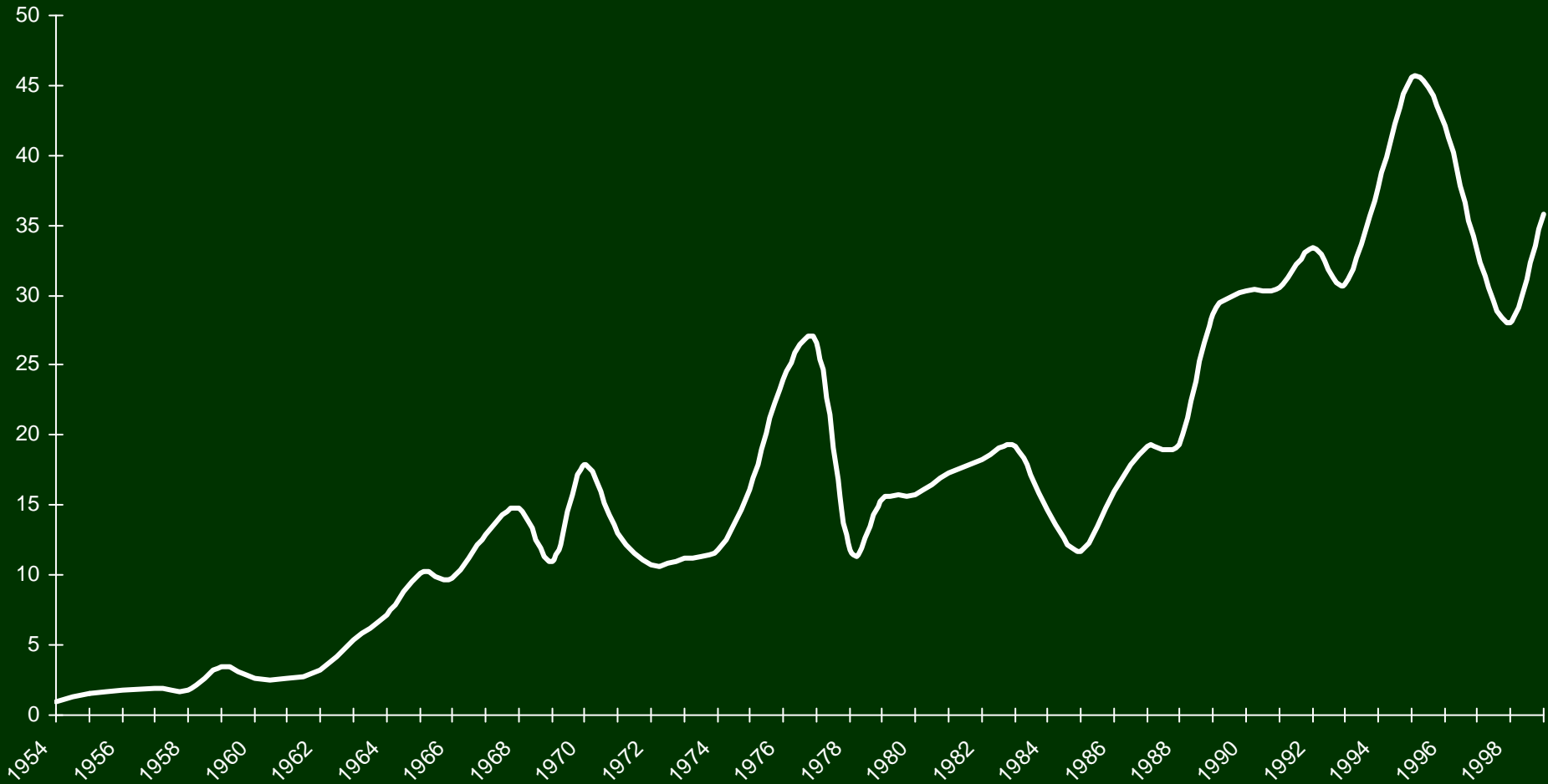
Switzerland n=20
1975–2007;

UK&Ireland n=604
1954–1971; 1975–1999

Aquatic Warbler index in Europe by ringing data 1954–1999



Sedge Warbler index in Europe by ringing data 1954–1999



Discussion

Advantages of the ringing data:

- long time period of quantitative data

Disadvantages:

- ringing places are not stationary within country (ringing scheme);
- area covered by some ringing schemes have changed due to border changes in I and II World War
- changes of the behaviour of ringers over time is impossible to quantify

Further development

Complete dataset on annual numbers of ringed pulli and adults by all Ringing schemes

– input of national AWCT members is essential;

Other *Acrocephalus* species must be used for comparison

All recoveries collected – might require purchase of data from EURING?

Analyses of all recovery information;

More of ringing at breeding sites has to be done before next Africa expedition

Acknowledgements

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