



# Blüemli

a citizen science project

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# Agenda

- ✿ Research Questions
- ✿ Project Definition & Planning
- ✿ Promotion
- ✿ Data Collection
- ✿ Questionnaire and Analysis
- ✿ Project Evaluation
- ✿ Conclusion



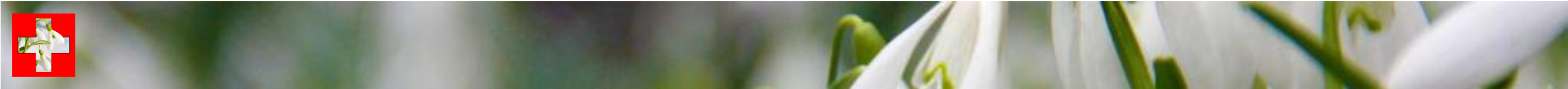
# Research Questions

- ❁ How does the beginning of the flowering period of the spring flowers snowdrop, primrose and wild garlic vary spatially within Switzerland?



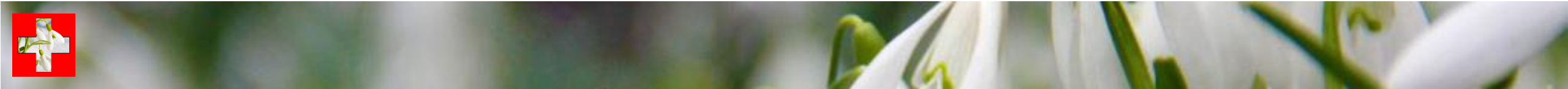
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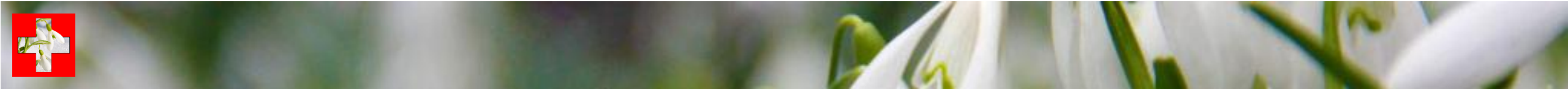
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- ❁ How does the beginning of the flowering period of the spring flowers snowdrop, primrose and wild garlic vary spatially within Switzerland?
- ❁ How do we motivate different target audiences to participate in a citizen science project?



# Project Definition & Planning

- ✿ Which flowers?
  - ✿ Commonly known
  - ✿ Easy to recognise
  - ✿ Flowering period in spring
  
- ✿ Which target groups?
  - ✿ Family and friends
  - ✿ Further acquaintances
  - ✿ «Strangers» who are interested in nature
  
- ✿ How to collect data?
  - ✿ Webpage/App
  - ✿ Questionnaire





# Promotion



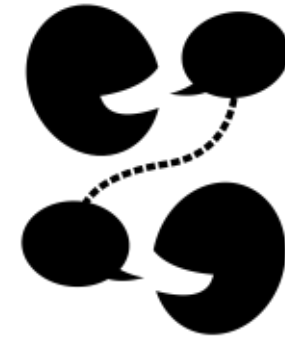
Flyers/posters



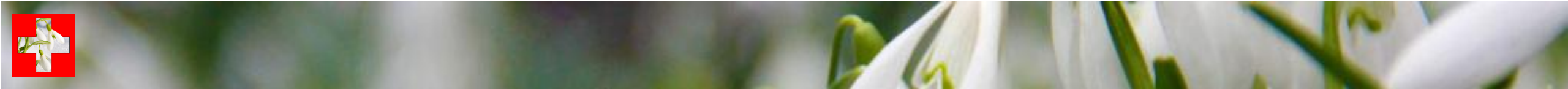
Email



Social Media



Word of mouth



# Data Collection

\* [Blüemli webpage](#)

\* Collection phase



16.01.17 -  
05.05.17



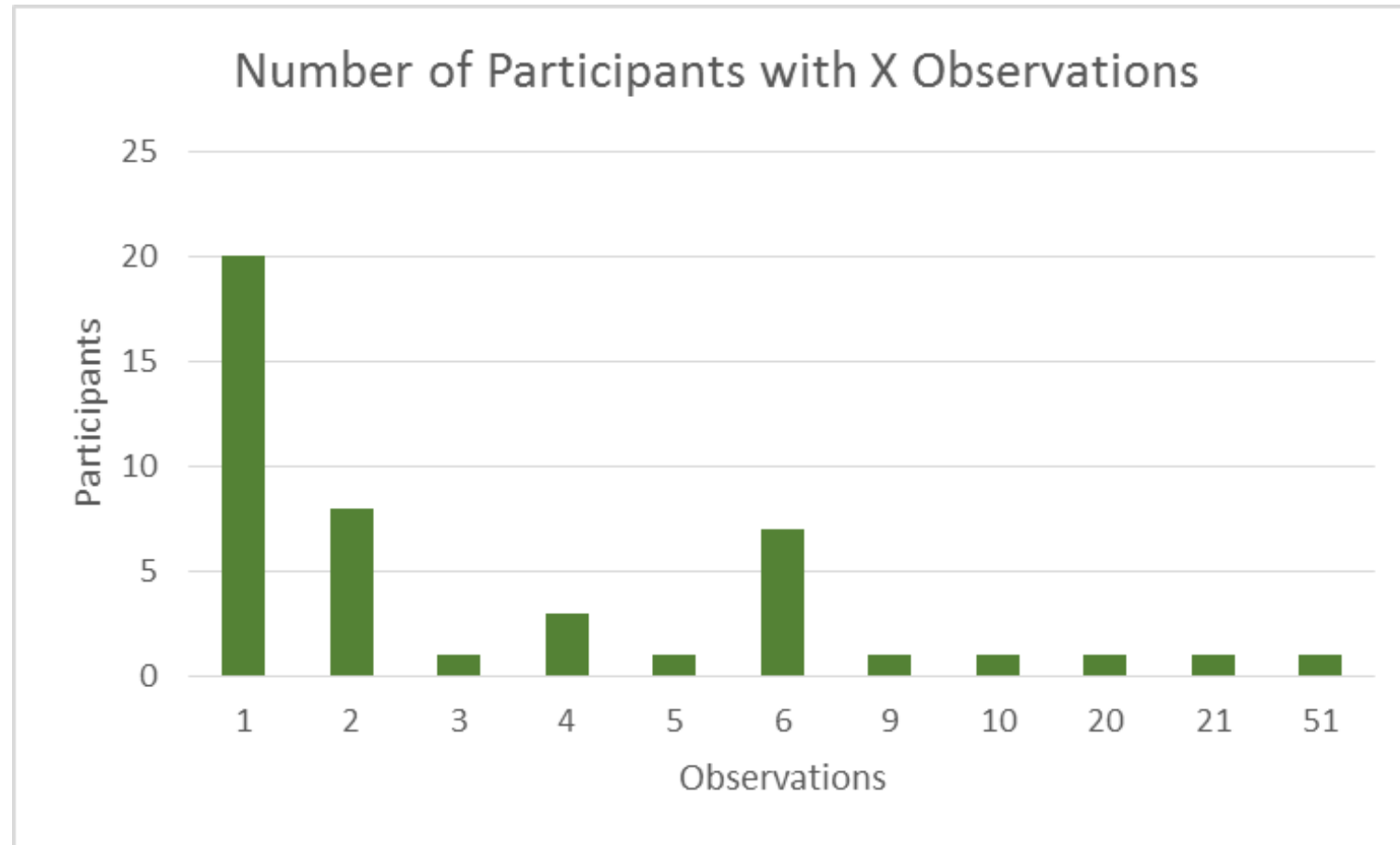
209 observations



45 participants

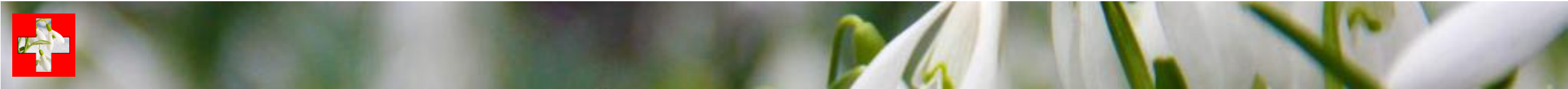


# Data Collection



# Data Collection

✿ Submitted observations



# Data Collection

✿ [Final map](#)



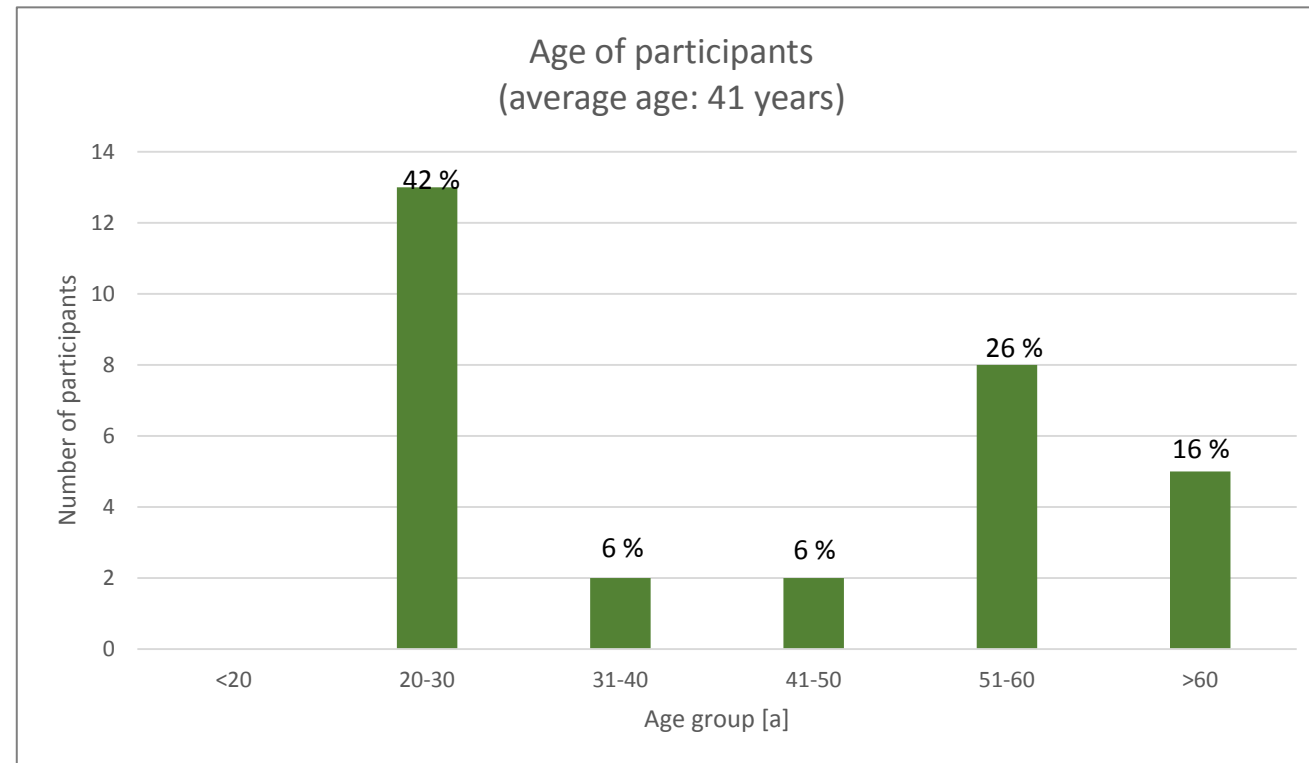
# Questionnaire and Analysis

- ✿ Response rate of 69 % (31 out of 45 participants)
- ✿ Reward: bags of seeds
- ✿ Questions
  - ✿ Demographic information
  - ✿ How the participants got to know us
  - ✿ Most effective promotion strategy
  - ✿ Motivation for participation



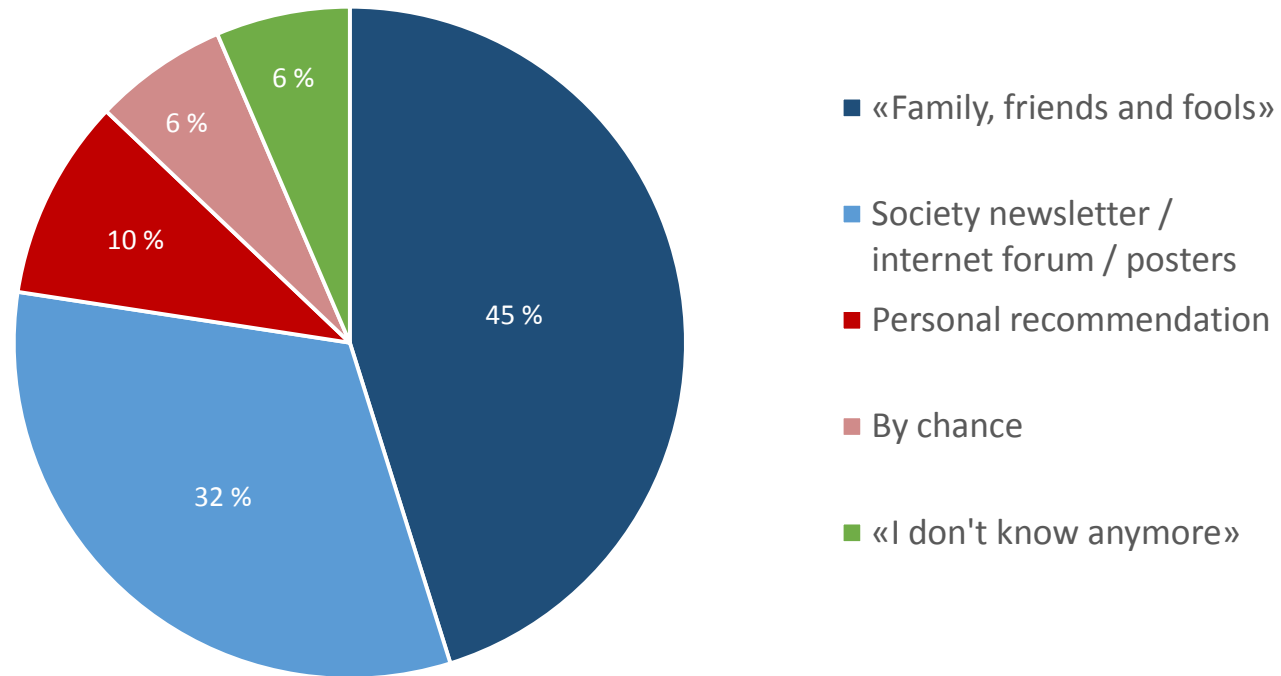
# Questionnaire and Analysis

## \* Demographic information



# Questionnaire and Analysis

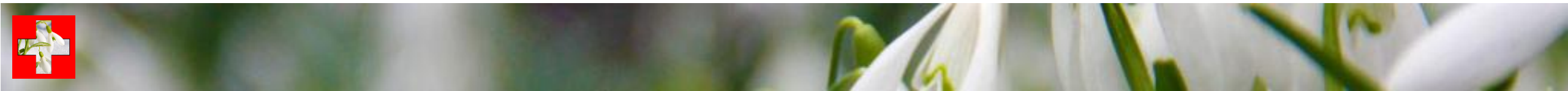
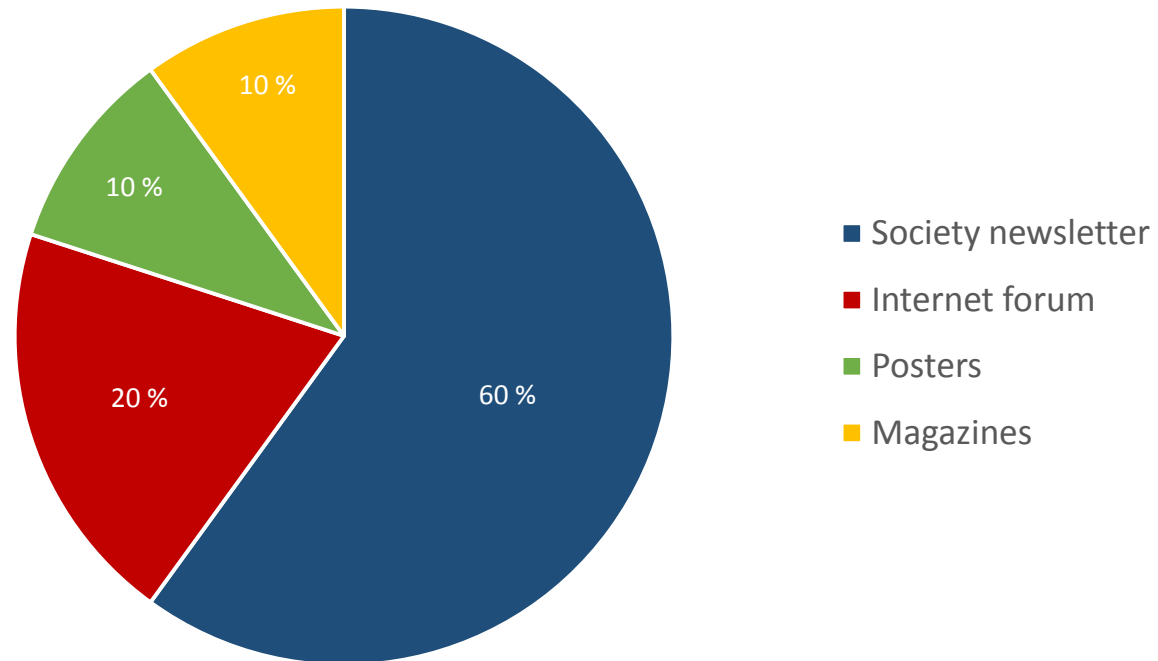
✿ How the participants got to know us





# Questionnaire and Analysis

✿ Most effective promotion strategy



# Questionnaire and Analysis

- ✿ Motivation for participation
  - ✿ «If I can help, why not» 84 %
  - ✿ Personal gain 15 %
  - ✿ Contribution to scientific research 71 %
  - ✿ Interest in the topic 50 %

→ **Altruistic participants** (Rotman et al., 2012)



# Project Evaluation

- ✿ Consideration of additional factors for the choice of flowers
- ✿ Good feedback by participants during the project and direct implementation of certain advice
- ✿ Implementation of more promotion methods focussing on strangers  
→ dividing strangers interested in nature into more detailed subgroups
- ✿ The project was implemented in German → the French and Italian speaking parts of Switzerland were not considered



# Project Evaluation

809 *Primula acaulis* (L.) L.  
Fam. Primulaceae

## Schaftlose Primel

Primevère vulgaire  
Primula comune, Primavera

5–15 cm hoch, **ohne entwickelten Stengel**. Blätter in grundständiger Rosette, lang verkehrt-eiförmig, allmählich in einen undeutlichen, geflügelten Stiel verschmälert, bis 15 cm lang, unregelmässig fein gezähnt, ± kahl. **Blüten einzeln auf langen, dünnen Stielen**, hellgelb, gegen den Schlund orange-gelb, Durchmesser bis 3 cm, **mit ausgebreiteten, ausgerandeten Zipfeln**.

3–4. Lichte Wälder, Baumgärten, Gebüsche, kollin-montan.  
CH (fehlt im Engadin), 19+2%. In Ausbreitung.



Westeuropäisch-mediterran.  
W. 333-342-h. 2n=22.  
*P. vulgaris* Huds.  
Stengellose Schlüsselblume.  
(2034)

810 *Primula elátior* (L.) L.  
Fam. Primulaceae

## Wald-Schlüsselblume

Primevère élevée  
Primula maggiore

10–25 cm hoch. Blätter in grundständiger Rosette, eiförmig, Spreite plötzlich in den allmählich schmaler geflügelten Stiel zusammengezogen, runzelig, beidseits kurz behaart, fein und unregelmässig gezähnt. Blüten in vielblütiger, einseitiger Dolde. **Krone hellgelb**, gegen den Schlund nur wenig dunkler. **Kelch nicht aufgeblasen, kantig**. Kronsäum weit trichterförmig, mit wenig ausgerandeten Zipfeln. Kapsel 10–15 mm lang, **deutlich länger als der Kelch**.

3–5. Feuchte Wiesen, Wälder, Gebüsche, kollin-subalpin(-alpin). CH, 67+2%.



Mitteleuropäisch.  
W. 333-233-h.  
2n=22.  
Hohe Schlüsselblume.  
(2036)



Lauber & Wagner, 1998



# Conclusion

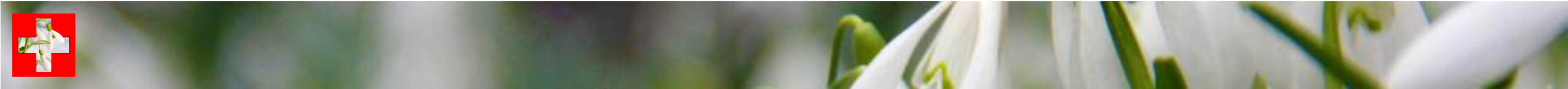
- ✿ Map is rather an indication of when people joined the project than the flowering
- ✿ The beginning of the flowering seasons is visible
- ✿ Most Participants were «family, friends and fools»
- ✿ Apart from word of mouth promotion, the newsletters were the most effective promotion strategy
- ✿ About half of the users have a University background → helping in general and helping to pursue science are the two most named motivation factors



# Questions?



Thank you!



# References

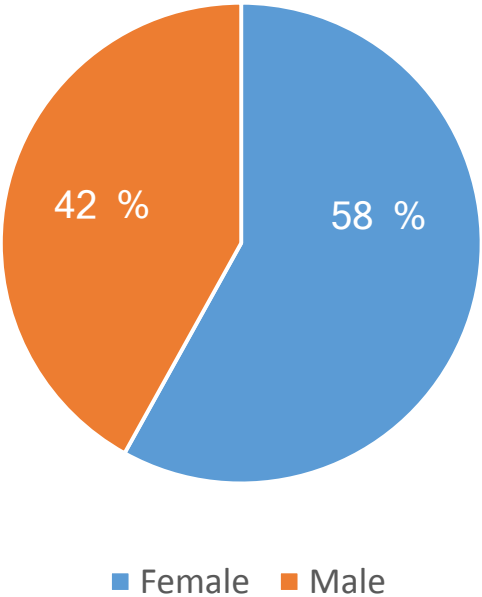
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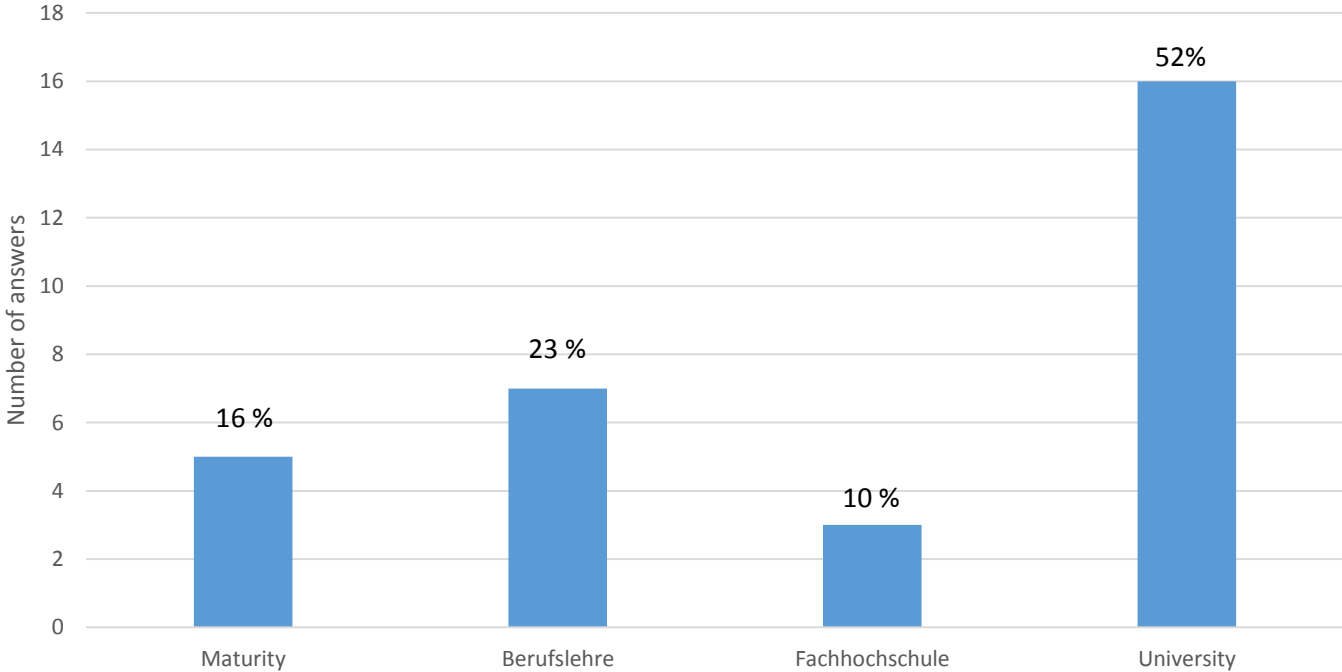


# Appendix

Sex of participants



Highest Educational Degree of Participants



# Appendix

## Origin of participants

ZH	17
BS & BL	4
AG	4
SG	2
GR	1
TI	1
SH	1
AR	1

