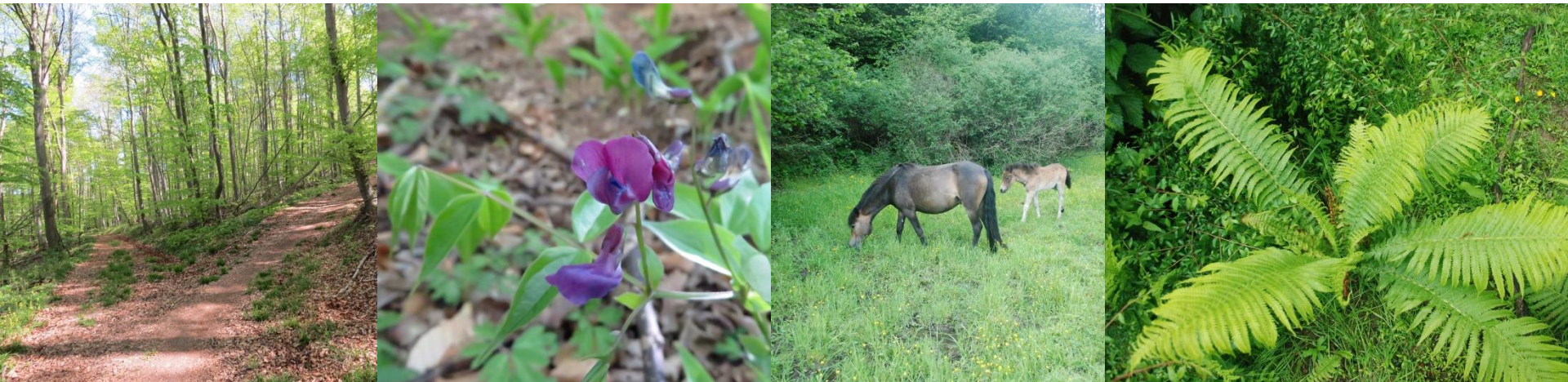


# Botanical self-study excursions using audio files

Prof. E. Bergmeier, L. Demant, F. Goedecke (presenter), F. Goral, S. Utermann



***Teaching during the pandemic***

- Limitations 2020/21 - hygiene, social distance, group size
- easily accessible location
- need for a simple universal teaching format using media

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- large datasets for whole-day excursions
- exclusion of students without modern devices

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### **What about video?**

- distraction from observations in the field
  - large datasets for whole-day excursions
  - exclusion of students without modern devices
- audio files and additional documents as download in Stud-IP

***Preparation of materials (1<sup>st</sup> excursion to Westerberg 2020)***

in the field (1day):

(planned) recording of audios  
collection of ideas concerning stations and tasks  
photos of plant species  
gps-track  
documentation of crossroads and turns

in the office (3 days):

recording of audio files using standard build-in laptop microphone  
basic audio cutting using audacity (freeware)  
preparation of pdf (tour description, observation tasks, stations)  
gpx/kml -files

upload of files to data section in Stud-ip

→ wait for field protocols

## ***Preparation of materials (2<sup>nd</sup> excursion to Westerberg 2021)***

~~in the field (1 day):~~

~~(planned) recording of audios~~

~~collection of ideas concerning stations and tasks~~

~~photos of plant species~~

~~gps-track~~

~~documentation of crossroads and turns~~

~~in the office (3 days):~~

~~recording of audio files using standard build-in laptop microphone~~

~~simple audio cutting using audacity~~

~~preparation of pdf (tour description, observation tasks, stations)~~

~~gpx/kml files~~

rename files, correct minor mistakes,

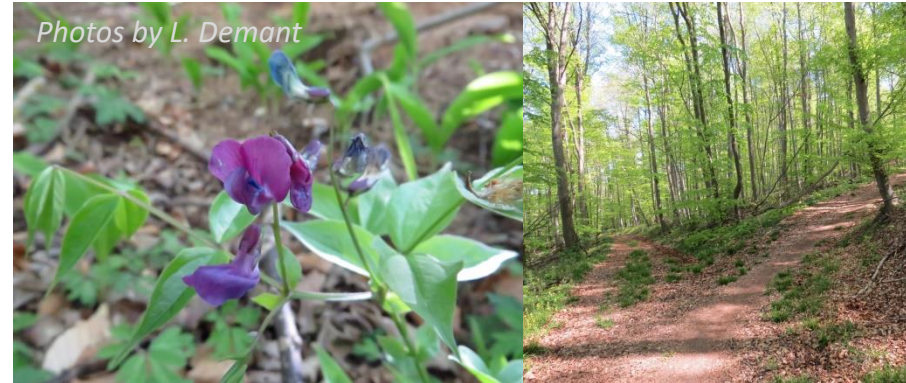
upload of files to data section in Stud-ip

→ wait for field protocols



## ***Examples***

- 1. Westerberg: spring geophytes in forests (May)**  
*L. Demant/F. Goedecke*



- 2. Solling: wood pasture project (June/July)**  
*Prof. E. Bergmeier/F. Goedecke/S. Utermann*  
*guests:*  
*J. Thiery (NLF), H. Schwerdtfeger (Naturpark),*  
*Exmoor Ponys*



- 3. Walkenried: pond vegetation (July/August)**  
*F. Goedecke/F. Goral*



## ***Accessibility and student interest***

Year	Location and topic	Access of location	Access of students		
			Stud-IP	(estimated downloads) Field protocols	
2020	Westerberg spring geophytes in forests	bike/car		80	53
	Solling wood pasture project	train+bike/car	<b>95</b>	27 + 8 real life	39
2021	Westerberg spring geophytes in forests	bike/car		40	26*
	Solling wood pasture project	train + bike/car	<b>76</b>	54	6*
	Walkenried pond vegetation	train/ car		52 German ver. 27 English ver.	3*

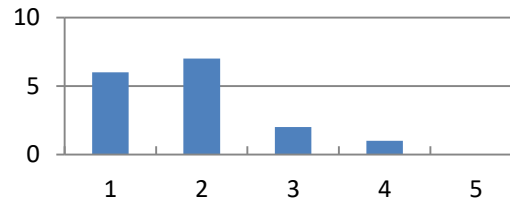
<sup>1</sup>participants in small guided group

\* option to hand in until end of term (September)



## ***Feedback (16 participants, 6 B.Sc., 10 M.Sc., selection of 18 questions, lime survey)***

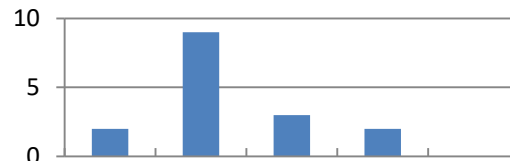
**General evaluation** of the format:



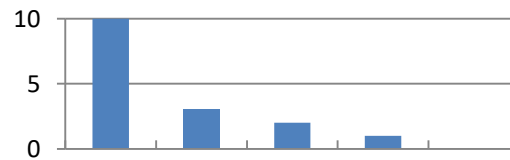
Evaluation (1 = good, 5 = bad)

**Media used:**

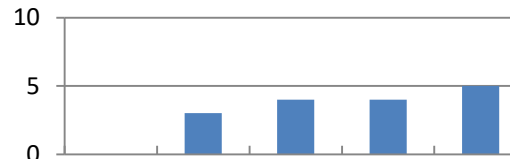
Preference for audio excursion (as is):



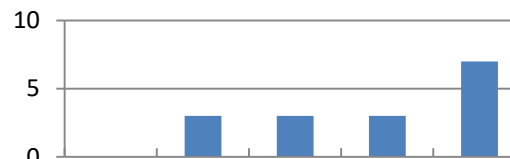
Preference for excursion in presence:



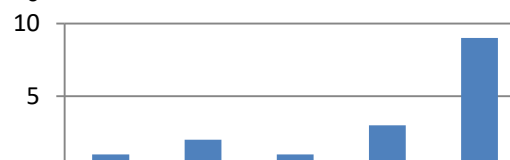
Preference for excursion with videos:



Preference for video at home:



Preference for powerpoint with audio at home:



Evaluation (1 = agree, 5 = disagree)

## *Improvements*

- combination of field-based and indoor recordings
- pre-excursion with small group of students (Solling, see photo)
- integration of expert audios (Naturpark, forest service)
  
- using several speakers
- recording of audio files using professional equipment
- professional audio cutting and mastering (S. Utermann)
  
- reduction of observation tasks
- integration of student ideas (Solling)
- predominant use of open questions
  
- recording of bilingual material



## *Pros and cons*

- good accessibility (more participants)
- good feedback on media use
- advantage on narrow pathways
- repeating in following years
- individual walking speed
- individual „deepening“ of knowledge
- additional lecturers /original material
- less distraction (compared to video)
- no need for a special app/audio playback, supplemets could be printed
- additional work for preparation
- no questions/ few via mail
- mistakes in species identification
- more work in checking and commenting protocols
- potential misunderstandings when unclear material is used -> need for intensive preparation
- several files (compared to presentations/apps)
- no proof of attendance
- (illegal) sharing of material
- no need to apply lecturers in future

**Thank you for listening!**  
**Thanks to all colleagues and guest for their support!**  
**Thanks to all who got involved in new ways of learning!**



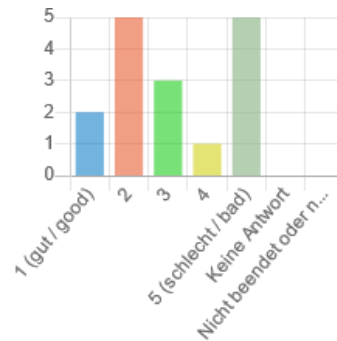
### ***Comments by participants (unshortened, translated\*)***

1. "The protocol needs with me unfortunately clearly more place than 5-6 pages I do not know whether I was simply very thorough or did something wrong."
2. "In itself, I found the implementation of the excursion within the scope of possibilities so well done. However, considering the low credit number and since you have to do 2 excursions, I think the editing of the assignments and the protocol is a bit too extensive. I thought it was really cool that we could do a "real" field trip through the audio files etc. :)"
3. "Thanks a lot for this elaboration. It's nice to get some practice in your studies despite the pandemic!!!"
4. "there is a lot of preparation behind it, you can tell and it also motivates yourself. It's generally a bit difficult to know what exactly is expected of you and how if you don't have a direct contact person and a bit frustrating in the field, as some questions often remain unanswered."
5. "I think it's a very good and innovative idea and a really good substitute for face-to-face field trips! I would say that my learning success was also higher than in presence, at least in terms of identification. You could deal with the plants more intensively and didn't switch off at some point, because the lecturer presented plants one after the other. Of course, the background information on the area and possible questions were a bit more unclear than in presence, but the podcasts covered everything important. I found the assignments exciting, especially the mapping. Through the tasks and the formulation of these in the protocol, I learned a lot. I really enjoyed the format and if you like to spend a day in the forest anyway, it is just right to get a little guidance. Thank you very much for your effort and investment in these field trips, even though they are only a very small part of the modules. In times of online teaching, this was really refreshing :) Keep up the good work, although hopefully next year it won't be absolutely necessary."
6. "The problem with the self excursions is that people who don't have a good knowledge of the species have difficulties finding them and at least knowing what they look like. Otherwise, the self excursions are very good and you could follow the routes well."

\* ***with [www.DeepL.com/Translator](http://www.DeepL.com/Translator) (free version)***

**Feedback** (16 participants, 6 B.Sc., 10 M.Sc., selection of 18 questions)

**Heterogeneity of knowledge** - How do you evaluate your expertise in plant identification?



audio quality  
speed of speaking  
Amount additional material -  
Quality of material -  
Amount of audio files –

good  
good  
just right  
just right  
just right

Intellectual demand of tasks

mixed: half as too much, half as just right