**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* OVERALL INFORMATION ON YOUR THESIS \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

Enrollment: (Bachelor / Master / PhD / other)

*PhD*

Topic of overall thesis:

Climate-mediated plant-bumblebee-antagonist interactions

Short topic <=15 characters:

*climate effects*

Project: (if bachelor/master, also enter who supervised you)

*FORKAST-sequel*

Year:

*2012*

First name:

*Katharina*

Last name:

*Kallnik*

Contact: (personal email still valid after departure)

*K.Kallnik@gmx.de*

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* SPECIFIC INFORMATION (per uploaded dataset) \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

Data type you are now uploading: (Dataset / Dataset + Manuscript / Manuscript / Bachelor thesis / Master thesis / Doctoral thesis / GIS)

*Dataset*

Topic and methodology of data type: (broad topic of dataset + small text describing how you obtained the data. If applicable, provide the sources of external databases/GIS-maps you used.)

*Effects of elevation on bumblebee phenology on community-, species- and individual-level.*

*We sampled bumblebees on 22 study sites (60 x 60 m) on mountain pastures that covered an elevational gradient in the Berchtesgaden National Park (Germany) in weekly surveys during the vegetation period.*

*Queens were individually marked and the location of (re)capture was recorded via GPS-devices.*

Short name of data or manuscript (< 15 characters; same as file and folder names):

*field-data\_bumblebees*

Data format:

*Excel files*

Data start time:

*22/03/20012*

Data end time:

*18/09/2012*

Keywords: (minimum 5; Important keywords are main response and explanatory variables, services and processes, biotope)

*elevation, altitude, Alps, alpine, mountain, climate, temperature, timing, phenology, bumblebee, pollination, social insect, mark-recapture, distribution, abundance, diversity*

Taxa:

*bumblebees (Bombus spp.)*

*foraging plants (diverse spp.)*

Reference (in abbreviated form):

**IF DATASET: LIST VARIABLES (list all data files with their name and the variables they contain. Include geographical coordinates of sites. One description per file)**

Name of data file 1: (as in folder)

*field-data\_bumblebees\_2012\_raw data*

Variable description: (explain all variables, abbreviations and units used in this data table)

|  |  |  |
| --- | --- | --- |
| **Name** | **Units** | **Description** |
| year |  | sampling year |
| date |  | sampling date |
| dayofyear |  | sampling day of year |
| weather |  | weather conditions during trapping interval |
| temperature | degree C | air temperature in degree C measured on study sites at the beginning of trapping intervals |
| site\_name |  | name of study sites; letters represent the transect, numbers the elevation (from 1=low to 5/7=high) |
| site\_elevation | metres a.s.l. | mean elevation of sites in m a.s.l. |
| site\_eleclass |  | elevational class of study sites ranging from **0**=lowest to **5**=highest |
| trapping\_locality |  | bumblebee individuals were sampled **outside** resp**. inside** the ( 60 x 60 m) study sitesduring trapping interval  **0** = no bumblebee individuals were sampled during trapping interval |
| stage\_overall |  | bumblebees were sampled during surveys **1-34**  **0** = bumblebees were sampled beyond weekly surveys |
| stage\_mean\_doy |  | mean day of year per stage calculated from earliest and latest doy/stage |
| stage\_interval |  | 50 –minute **time interval** spent on study sites sampling bumblebees during weekly surveys  **0** = bumblebees were sampled beyond weekly surveys |
| trapping\_interval |  | **time interval** (with or without interruptions) spent on study sites per day sampling bumblebees |
| trapping\_time |  | **time** (rounded to full 5 minute-intervals) bumblebee individuals were sampled  **0** = no bumblebee individuals were sampled during trapping interval |
| bumb\_species |  | short form of bumblebee species name -> see “field-data\_plants\_bumblebees\_abbreviations” for full names  **0** = no bumblebee individuals were sampled during trapping interval |
| caste |  | caste of bumblebee individuals sampled  **q** = (spring) queen, **w** = worker, **m** = male, **yq** = young (autumn) queen  **0** = no bumblebee individuals were sampled during trapping interval |
| activity |  | activity of bumblebees sampled  **fly** = flying over study site  **for** = foraging on study site  **nest** = (queens) looking for nesting sites  **sit** = sitting idle on study site |
| forage\_plant |  | short form of plant species name where bumblebees were foraging-> see “field-data\_plants\_bumblebees\_abbreviations” for full names  **0** = (foraging) bumblebee individuals were not sampled |
| pollen |  | bumblebee queens and workers sampled flying, foraging or sitting were carrying **pollen** or **nopollen**  **0** = bumblebee individuals were not sampled/do not collect pollen (males, cuckoo bumblebee) |
| pollen\_colour |  | colour of pollen pellets carried by bumblebee queens and workers  **0** = bumblebee individuals (carrying pollen) were not sampled |
| sample\_number |  | identification number of bumblebee individuals killed; allocation in chronological order (date – observer K trapping time – observer J trapping time) |
| size | milimetre | intertegular distance (= shortest linear distance measured between the bee's wing tegulae across its thoracic dorsum) as a proxy for the size of bumblebee individuals killed (and dissected)  **0** = no intertegular distance was measured (yet) |
| mark |  | mark of bumblebee individuals sampled  **nom** = we did not mark (worker, males, some queens),  **nm** = we newly marked (most queens),  **m**/**mm**/ **mmm**/**mmmm** = we recaptured already marked queens  **0** = no bumblebee individuals were sampled during trapping interval |
| mark\_number |  | number written on the mark (1-100)  **0** = bumblebee individuals were not sampled/marked |
| mark\_colour |  | abbreviation of colour and patterns on the mark  **0** = bumblebee individuals were not sampled/marked |
| track\_number |  | sampling location data of (marked) bumblebee queens is saved under this number in the GPS-device  **0** = bumblebee individuals were not sampled/marked  **NA** = track number is not available |
| track\_x-coordinate | m | northing of sampling location (Gauss-Krueger-coordinates) in m.  **0** = bumblebee individuals were not sampled/marked  **NA** = coordinates are not available |
| track\_y-coordinate | m | easting of sampling location (Gauss-Krueger-coordinates) in m.  **0** = bumblebee individuals were not sampled/marked  **NA** = coordinates are not available |
| track\_elevation | m.a.s.l. | elevation of sampling location (Gauss-Krueger-coordinates) in m.a.s.l.  **0** = bumblebee individuals were not sampled/marked  **NA** = coordinates are not available |
| observer |  | bumblebee individual was sampled by **K** = Katharina Kallnik (PhD student) or **J** = Johanna Sieger (Master student) |

Comments or additional methodology:

*Sampling location data of bumblebee queens is not (yet) included completely in this exel-file (->empty cells).*

*Data recorded by K.Kallnik is saved in gpx-files (see folder K.Kallnik\_GIS-data\_2012) and has to be exported to exel.*

*Data recorded by J.Sieger is trapped in a defect GPS-device and the (digitalized) handwritten records (see J.Sieger\_GIS-data\_2012.pdf) have to be typed in (the exel-file).*