

ReadMe - V_rodents_cameratraps_lemming_blocks_pilot

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1 Protocol

Camera trapping of small mammals has been conducted using the COAT protocol 'Protocol camera trapping of small mammals pilot study'.

2 Description of the dataset

The dataset includes three files and all files are saved as ;-separated txt-files:

- One file with data on presence or absence of small mammals and image quality (`_classification_2015.txt`)
- One file with metadata for each image (`_metadata_2015.txt`)
- One coordinate file with coordinates of all sites (`_coordinates.txt`)

2.1 V_rodents_cameratraps_lemming_blocks_pilot_image_classification_2015.txt

This file contains presence (1) or absence (0) of the following small mammal species:

```
[1] "cricetidae = Unknown vole"
[2] "lem_lem = Lemmus lemmus (Norwegian lemming)"
[3] "mic_oec = Microtus oeconomus (Tundra vole)"
[4] "mus_erm = Mustela erminea (Stoat)"
[5] "mus_niv = Mustela nivalis (Least weasel)"
[6] "myo_ruf = Myodes rufocanus (Grey-sided vole)"
[7] "sor_sp = Sorex sp (Shrew)"
```

In addition, the file contains information about the image quality. If it was not possible to recognize whether there is an animal on the image, the image was scored as bad quality by giving the value 1. Presence of snow, water and ice was recorded by giving values between 0 and 3:

Snow:

0 = No snow

1 = From the first snowflakes up to snow layer lower than entrance height, light infiltration on midday

2 = Snow outside higher than both entrances, no light penetration at all

3 = Trap filled with snow, at least one entrance covered from inside

Water:

0 = No water

1 = Some drops or humidity inside the trap up to shallow puddle not fully covering the trap ground

2 = Water level higher and covering the whole trap ground but not deep (max. half the entrance height)

3 = Water almost as high or higher than entrance height, (almost) no crossing possible

Ice: 0 = No ice

1 = Some ice, maximum thin layers

2 = More ice, thicker ice that could block areas

Example of the first rows of the classification file:

```
sn_region sn_locality sn_section sn_site t_date t_time
1 varanger komagdalen kjoltindan f1_1 2014-09-15 11:06:12
2 varanger komagdalen kjoltindan f1_1 2014-09-15 11:06:12
3 varanger komagdalen kjoltindan f1_1 2014-09-15 11:06:12
v_image_name v_class_id v_presence_manual v_observer_manual
1 f1_1_2014-09-15_0001.JPG myo_ruf 0 jm
2 f1_1_2014-09-15_0001.JPG mus_niv 0 jm
3 f1_1_2014-09-15_0001.JPG mus_erm 0 jm
v_comment
1 NA
2 NA
3 NA
```

Description of the columns included in the classification file:

Column name	Description	Possible values
sn_region	Study region	varanger
sn_locality	Locality (within region)	komagdalen
sn_section	Section (within locality)	kjoltindan, gargas, komagdalen_midtre, ryggfjellet
sn_site	Unique Site ID	e.g. f1_1, f1_5, f2_4, f3_3, f4_4
t_date	Date when the image was taken	YYYY-MM-DD
t_time	Time when the image was taken	HH:MM:SS
v_image_name	Image name	e.g. f1_1_2014-09-15_0001.JPG, f4_1_2014-10-23_0028.JPG
v_class_id	Class ID (species or image quality)	myo_ruf, mus_niv, mus_erm, lem_lem, bad_quality, sor_sp, mic_oec, cricetidae, ice, snow, water
v_presence_manual	Presence of small mammal species and image quality	0, NA, 1, 2, 3
v_observer_manual	Initials of the person who classified the images	e.g. es (Eeva Soininen)
v_comment	Comments	[character]

2.2 V_rodents_cameratraps_lemming_blocks_pilot_image_metadata_2015.txt

This file contains metadata for each image.

Example of the first rows of the metadata file:

```

  sn_region sn_locality sn_section sn_site    t_date    t_time
1  varanger  komagdalen kjoltindan    f1_1 2014-09-15 11:06:12
2  varanger  komagdalen kjoltindan    f1_1 2014-09-15 11:06:13
3  varanger  komagdalen kjoltindan    f1_1 2014-09-15 11:08:37
      v_image_name v_image_name_original v_trigger_mode v_sequence
1 f1_1_2014-09-15_0001.JPG             IMG_0001.JPG  motion_sensor      1
2 f1_1_2014-09-15_0002.JPG             IMG_0002.JPG  motion_sensor      2
3 f1_1_2014-09-15_0003.JPG             IMG_0003.JPG  motion_sensor      1
      v_temperature v_comment
1              7      NA
2              7      NA
3              7      NA

```

Description of the columns included in the metadata file:

Column name	Description	Possible values
sn_region	Study region	varanger
sn_locality	Locality (within region)	komagdalen
sn_section	Section (within locality)	kjoltindan, gargas, komagdalen_midtre, ryggfjellet
sn_site	Unique Site ID	e.g. f1_1, f1_5, f2_4, f3_3, f4_4
t_date	Date when the image was taken	YYYY-MM-DD
t_time	Time when the image was taken	HH:MM:SS
v_image_name	Image name	e.g. f1_1_2014-09-15_0001.JPG, f4_1_2014-10-23_0028.JPG
v_image_name_original	Original image given by the camera	e.g. IMG_0001.JPG, IMG_0020.JPG
v_trigger_mode	Motion sensor or timelapse image	motion_sensor, timelapse
v_sequence	0 = timelapse, 1 = motion sensor image 1, 2 = motion sensor image 2 ...	1, 2, 0, 3
v_temperature	Temperature in the camera box in °C	[numeric]
v_comment	Comments	[character]

2.3 V_rodents_cameratraps_lemming_blocks_pilot_coordinates.txt

This file contains the coordinates of all sites included in the study design. Coordinates are given in decimal degrees and UTM 33 (WGS 84).

Example of the first rows of coordinate files:

	sn_site	e_dd	n_dd	e_utm33	n_utm33
1	f1_1	29.82510	70.33044	1052098	7870446
2	f1_2	29.81472	70.32942	1051746	7870241
3	f1_3	29.80607	70.33003	1051413	7870228