

Readme: Descriptive data for USN Research Data Archive

Dataset generated by [Charlotte Holmstad Arnesen]

GENERAL INFORMATION

TITLE FOR THE DATASET

- Data for Arnesen et al. 2019. Canines (*Canis lupus familiaris*) as biodefectors for conservation work: can they discriminate rock ptarmigan (*Lagopus muta*) from the willow grouse (*L. lagopus*) in a yes/no task?

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DATE(S) OF DATA COLLECTION

- 20150501 - 20191031

GEOGRAPHIC LOCATION(S) OF DATA COLLECTION

Sample_site	LONGITUDE	LATITUDE
1	9,598665742	60,48520048
2	9,182525595	59,80688595
3	9,291964	60,34900324
7	9,191617338	60,75866938
8	9,844166093	61,08756806
12	12,37238796	62,14722229
14	10,69974657	62,1600647
25	12,32862752	62,62655662
27	13,0769925	61,16316783
28	13,82518574	62,97276117
29	8,236356611	59,28167411
30	7,141854488	59,50082744
37	8,097066788	59,6204233
39	10,05389324	61,39398003
40	10,27733357	61,65086123

41 11,48320263 61,60224663
42 12,84447466 61,96552259
43 12,74051541 61,54281739
44 13,24331729 62,00531231
45 13,51351133 62,2893959
46 14,00826616 62,42475952
47 13,96460263 62,52085475
48 12,89087098 63,13850145
50 9,971013583 62,93876888
52 7,79063219 59,99154436

LANGUAGE
- English.

FILE INFORMATION

FOR EACH FILENAME

Samples

- No
- No
- File creation: 20160901, updates: 20191031

Final experiment

- No
- No
- File creation: 20180301, updates: 20191031

Training, all dogs

- No
- No
- File creation: 20161001, updates: 20191031

SHARING

ALL UPLOADED DATASETS HAVE THEIR OWN CITE AND SHARING SECCTION IN USN
RESEARD DATA ARCHIVE

-If your data require different citation methods than the traditional
citation methods, please specify.

METHODOLOGY

DESCRIBE THE PROCESS OF COLLECTING AND GENERATING YOUR DATA

Samples

- Faecal pellets from the ptarmigans were collected in the field for the genetic study and directly placed in plastic jars (Nalgene, 15 x 38 mm or 30 x 43 mm, Thermo ScientificTM, Norway). Later they were taken out of the jars for seven days to dry and cross-contamination of the pellets was avoided by separating them by species and only interacting with them using sterilised equipment. Time from sampling in the field to when the drying process was initiated ranged from five hours to two weeks. The dry pellets were then inserted into new jars filled with silica gel (Sodium silicate, VWR, BDH Polabo, 28087.361, Norway) and a precision wipe (Kimberly-Clark TM, Professional 05511, Norway) to separate the gel from the pellets. The pellets were then stored in a fridge (4°C), and storing time varied from time sampled (spring 2015 to spring 2016) to the time they were added in this study's sample collection (October 2016). For this study, the ptarmigan pellets were weighed (AND Electronic balance FA-200, AC adapter DC 12V 0.3A, China) and placed in glass vials with teflon lids (57 x 27.5 mm, Qorpak®, Pennsylvania, USA) with a mean weight of 0.7 grams (SD ± 0.078). Each sample was handled with a new pair of disposable gloves and sterilised tweezers. They were stored in a freezer (- 20°C) until they were used in either training or experiments. Collection of faecal pellets from black grouse and western capercaillie was independent from the ptarmigans and was carried out between October and December 2016. They were collected throughout four lowland, forest areas in Telemark and Buskerud county, Norway. None of the ptarmigans had been reported as present in those areas. The pellets were then dried for seven days for later

insertion into glass vials and then immediately stored in the freezer (-20°C).

- Microsoft Excel 2016 MSO

Final experiment & Training, all dogs

- Since the table platform presents the dogs with four scent options in each lineup, one target scent and three control scents were always present. Therefore, a dog can respond to a sample in four different ways: 1) a true positive (TP) response, the dog lies down in front of the target scent, 2) a false positive (FP) response, the dog lies down in front of a control scent, 3) a true negative (TN) response, the dog correctly rejects control scents and 4) a false negative (FN) response, the dog falsely rejects a target scent. Three parameters were calculated to evaluate all dogs from the four possible responses: sensitivity, specificity and accuracy: calculation of sensitivity: $TP / (TP + FN)$, calculation of specificity: $TN / (TN + FP)$ and calculation of accuracy: $(TP + TN) / (TP + FP + TN + FN)$.
- Microsoft Excel 2016 MSO