Explanations of each column in the four sheets of Sperm\_measurements.xlsx

Sheet 1: Individual cells - Accession nr

5 columns, 1170 rows (without header)

A: Accession number: Accession number for the sperm sample

B: Head: Sperm head length for the individual sperm cell

C: Midpiece: Sperm midpiece length for the individual sperm cell

D: Tail: Sperm tail length for the individual sperm cell

E: Total length: Total sperm length (head + midpiece + tail) for the individual sperm cell

Sheet 2: Individual cells - Journal nr

5 columns, 1740 rows (without header)

A: Journal number: Journal number for the sperm sample

B: Head: Sperm head length for the individual sperm cell

C: Midpiece: Sperm midpiece length for the individual sperm cell

D: Tail: Sperm tail length for the individual sperm cell

E: Total length: Total sperm length (head + midpiece + tail) for the individual sperm cell

## Please note that Sheet 1 and Sheet 2 are not overlapping, at least not fully

Sheet 3: Sperm morphology

18 columns, 134 rows (without header)

Missing data is marked as "null"

A: Accession number: Accession number for the sperm sample

B: Journal number: Journal number for the sperm sample.

C: date Year-month-day of sperm measurement

D: Full accession number: Full accession number for the sperm sample

E: Taxon name: Scientific name of the species studied

F: band number: Band number of the individual male. Note that some males have repeated sperm measurements

G: Coll no: Collection number is constructed as BCxx \_ sample number, where xx is either 13 for 2013, 14 for 2014 or 15 for 2015

H: Sample no: Sample number of the sperm sample

I: Sex: Sex of individual (all are male)

J: Age: Age of the male sampled. 2K are second year males, 3K+ are third year or older. Note that two males are marked as 2K+, as the distinction between 2K and 3K+ was not noted

K: Colour Code: Combination of the three colour rings and the metal ring (x) for each individual male.

L: Country: Sampling country (all are sampled in Norway)

M: Locality: Sampling site (all are sampled in Øvre Heimdalen)

N: Item Type: Type of sample (all are sperm samples)

O: Head: Average sperm head length for the sample.

P: Midpiece: Average sperm midpiece length for the sample.

Q: Tail: Average sperm tail length for the sample.

R: Total length: Average sperm total length for the sample.

Sheet 4: Sperm motility

23 columns, 140 rows (without header)

Missing data is marked as "null"

A: Year: Year sampled

B: Band no.: Band number of the individual male. Note that some males have repeated measurements

C: Rec No: Recording number of the sperm sample

D: Sam No: Sample number of the sperm sample.

E: Species: Common name of the species studied

F: Locality: Sample site

G: Color bands: Combination of the three colour rings and the metal ring (x) for each individual male.

H: nest: Nest number associated with the male.

I: Sex: Sex of individual. m = male.

J: Age: Age of the male sampled. 2K are second year males, 3K+ are third year or older. Note that two males are marked as 2K+, as the distinction between 2K and 3K+ was not noted

K: Date: Day/month/year of sperm measurement

L: Tarsus: Tarsus length (mm) of male.

M: Mass: Body mass (g) of male.

N: Wing: Wing length (mm) of male.

O: Red band: Width (mm) of red band on the throat patch of the male.

P: vap: Average path velocity (VAP) of sperm sample.

Q: vsl: Straight line velocity (VSL) of sperm sample.

R: vcl: Curvilinear velocity (VCL) of sperm sample

S: n good motile tracks: Number of good motile tracks in sperm sample

T: n static: Number of static cells in sperm sample

U: n motile: Number of motile cells in sperm sample

V: total n: Total number of cells in sperm sample

W: in an experiment? yes/no