

READ ME

This README_file_RL-MFB-FP.docx file was generated on 2022-03-04 by Roxane Lassis

GENERAL INFORMATION

1. Title of Dataset: Dataset used for "Breeding migrations by bighorn sheep males are driven by mating opportunities"

2. Author Information

A. Principal Investigator Contact Information

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3. Date of data collection: 2000-2005

4. Geographic location of data collection: Sheep River Provincial Park, Alberta, Canada,

5. Information about funding sources that supported the collection of the data: Challenge Grant in Biodiversity financed through the Alberta Conservation Association and the University of Alberta to F.P., Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery grant to M.F.-B and NSERC scholarship to F.P.

SHARING/ACCESS INFORMATION

1. Licenses/restrictions placed on the data: None

2. Links to publications that cite or use the data:

Pelletier, F., and Festa-Bianchet, M. 2004. Effects of body mass, age, dominance and parasite load on foraging time of bighorn rams, *Ovis canadensis*. *Behav. Ecol. Sociobiol.* **56**(6): 546–551. doi:10.1007/s00265-004-0820-7.

Pelletier, F. 2005. Foraging time of rutting bighorn rams varies with individual behavior, not mating tactic. *Behav. Ecol.* **16**(1): 280–285. Oxford Academic. doi:10.1093/BEHECO/ARH162.

Pelletier, F., and Festa-Bianchet, M. 2006. Sexual selection and social rank in bighorn rams. *Anim. Behav.* **71**(3): 649–655. doi:10.1016/j.anbehav.2005.07.008.

3. Was data derived from another source? No

DATA & FILE OVERVIEW

1. File List:

Files of data collected in 2000-2005 from marked known-age bighorn sheep in the Sheep River Provincial Park, Alberta, Canada, gathering populational information, individual features and daily presence-absence of marked males during mating seasons.

AnnualStatus_SheepRiver_2000-2005.xlsx

Yearly individual features in terms of identification, age, social rank and survival of marked males in 2000-2005 in the Sheep River Provincial Park, Alberta, Canada.

Observations_SheepRiver_2000-2005.xlsx

Daily presence-absence of marked males during mating seasons of marked males in 2000-2005 in the Sheep River Provincial Park, Alberta, Canada. Number "1" referring to an observation of presence.

RutSummary_SheepRiver_2000-2005.xlsx

Populational information in terms of female estrus dates, number of females by age and by estrus status during mating seasons of marked bighorn sheep in 2000-2005 in the Sheep River Provincial Park, Alberta, Canada.

2. Relationship between files: unique identification of male identity, "ID" column, in files "AnnualStatus_SheepRiver_2000-2005.xlsx" and "Observations_SheepRiver_2000-2005.xlsx".

3. Additional related data collected that was not included in the current data package: populational pedigree, individual information gathering mainly mass, horn length, reproductive status, parasite load, mating and foraging behavior

4. Are there multiple versions of the dataset? No

METHODOLOGICAL INFORMATION

1. Description of methods used for collection/generation of data:

From Methods of related publication: "Since 1981, more than 90% of the sheep were captured using drugs delivered by a dart gun or a corral trap baited with salt, and marked with unique combinations of ear tags (Festa-Bianchet and Jorgenson 1985; Festa-Bianchet 1986b; Hogg and Forbes 1997). [...] Between 2000 and 2005, most days from mid-September to mid-December, two to five observers searched the Park on foot to locate groups of sheep and monitor their behaviour (Pelletier and Festa-Bianchet 2004, 2006; Pelletier et al. 2006). During daily searches, identities of all individuals seen were recorded."

2. Methods for processing the data: The submitted data were generated from the collected data through conversion of field notebooks and tables into excel files.

3. Instrument- or software-specific information needed to interpret the data: R version 4.0.5 (R Development Core Team, 2021).

4. People involved with sample collection, processing, analysis and/or submission: All field work assistants, students and volunteers, Jack Hogg, Fanie Pelletier, Marco Festa-Bianchet and Roxane Lassis.

DATA-SPECIFIC INFORMATION FOR: "AnnualStatus_SheepRiver_2000-2005.xlsx"

1. Number of variables: 13 variables

2. Number of cases/rows: 201 rows

3. Variable List:

ID: individual identification

ID_SPECIFIC: historical individual identification of previously unmarked individuals

YEAR: year

SEX: sex

AGE: age (in years)

RANK: social rank (values from 0 to annual number of males)

STD_RANK: social rank was standardized annually by the total number of rams (values in [0, 1])

INCLUSIVE_STD_RANK: standardized social rank with yearling males included

ORIGIN: unmarked (UNMK), immigrants (IM), absence of value for resident males

FATE: died (DIED), absence of value for non-observed mortality

DEATH_CAUSE: cougar (COUGAR), unknown (UNKN), poached (POACHED)

LAST_SEEN_ALIVE: date of last observation while individual was alive

DATE_DEATH_REPORT: date of death report

DATA-SPECIFIC INFORMATION FOR: "Observations_SheepRiver_2000-2005.xlsx"

1. Number of variables: variables by sheet depending on annual number of observation days

2. Number of cases/rows: variables by sheet depending on annual number of males observed

3. Variable List:

ID: individual identification

DATES: dates (format dd/mm/yyyy) of observation days

4. Specialized formats or other abbreviations used:

The file gathers 6 sheets for annual presence/absence data between 2000-2005. Number "1" refers to an observation of presence and absence of data refers to an absence of observation. Individual identification in first column matches ID variables in file "AnnualStatus_SheepRiver_2000-2005.xlsx".

DATA-SPECIFIC INFORMATION FOR: "RutSummary_SheepRiver_2000-2005.xlsx"

1. Number of variables: 9

2. Number of cases/rows: 6

3. Variable List:

YEAR: year

DATE_FIRST_ESTRUS: annual date of first observed estrus (format dd/mm/yyyy)

DATE_LAST_ESTRUS: annual date of last observed estrus (format dd/mm/yyyy)

NB_FEMALES_FALL: annual number of censused females in fall

NB_FEMALES_FALL_2+: annual number of censused females in fall aged 2 years or older

NB_FEMALES_RUT: annual number of females observed in estrus

NB_FEMALES_RUT_2+: annual number of females observed in estrus aged 2 years or older

NB_ESTRUS: annual number of observed estrus

NB_ESTRUS_2+: annual number of observed estrus in females aged 2 years or older