

**Supplementary material**

**Appendix 1.** Sampling data for the 12 rock wrens included in this study

Bird ID	Recording dates	Recording sessions	Songs recorded	Song types	GPS North	GPS west
LB-006	6/11-6/14, 2013	2	1410	53	40.560856	-105.1645
LB-007	6/17-6/18, 2013	2	1782	60	40.56868	-105.1714
NW-006	5/28-6/18, 2013	3	1738	73	40.511399	-105.1636
SORM-1	5/3-5/28, 2014	5	2077	117	40.959667	-105.1732
NW-033	6/22-6/29, 2014	5	928	81	40.562176	-105.1689
NW-038	6/27-6/29, 2014	2	2105	72	40.560179	-105.1754
NW-041	6/30-7/1, 2014	2	1839	78	40.474513	-105.1465
NW-045	7/2, 2014	1	1914	62	40.60904	-105.171
NW-046	7/4-7/19, 2014	3	1456	83	40.60782	-105.1691
NW-048	7/7-7/8, 2014	2	1851	82	40.789662	-105.2274
NW-049	7/8-7/11, 2014	2	1341	64	40.77332	-105.3657
NW-051	7/23-7/28, 2014	3	935	97	40.602191	-105.1684