Table S1. Description of variables used in call type and event Random Forest models. Classifier models include whistle detector (DW), burst pulse detector (BP), echolocation click detector (EC), and event classifier.

Variable code	Variable name	Detector type	Units	Explanation
DURATION	Duration	DW/BP	Seconds	Duration of the whistle
FREQABSSLOPEMEAN	Absolute slope	DW/BP	Hz/second	Mean absolute value of the slope
FREQBEG	Beginning frequency	DW/BP	Hz	Beginning frequency
FREQBEGDWN	Negative beginning sweep	DW/BP	Binary	1 = beginning slope is negative, 0 = beginning slope is positive
FREQBEGENDRATIO	Beginning-ending ratio	DW/BP	None	Beginning frequency/end frequency
FREQBEGSWEEP	Beginning sweep	DW/BP	Category	Slope of the beginning sweep (1 = positive, −1 = negative, 0 = zero)
FREQBEGUP	Positive beginning sweep	DW/BP	Binary	1 = beginning slope is positive, 0 = beginning slope is negative
FREQCENTER	Center frequency	DW/BP	Hz	[minimum frequency + (maximum frequency − minimum frequency)]/2
FREQCOFM	Coefficient of frequency modulation	DW/BP	None	Take 20 frequency measurements equally spaced in time, then subtract each frequency value from the one before it. COFM is the sum of the absolute values of these differences, all divided by 10,000
FREQEND	Ending frequency	DW/BP	Hz	Ending frequency
FREQENDDWN	Negative ending sweep	DW/BP	Binary	1 = ending slope is negative, 0 = ending slope is positive
FREQENDSWEEP	Ending sweep	DW/BP	Category	Slope of the ending sweep (1 = positive, −1 = negative, = 0 zero)
FREQENDUP	Positive ending sweep	DW/BP	Binary	1 = ending slope is positive, 0 = ending slope is negative
FREQMAX	Maximum frequency	DW/BP	Hz	Maximum frequency
FREQMAXMINRATIO	Maximum-minimum ratio	DW/BP	None	Maximum frequency/minimum frequency
FREQMEAN	Mean frequency	DW/BP	Hz	Mean frequency
FREQMEDIAN	Median frequency	DW/BP	Hz	Median frequency
FREQMIN	Minimum frequency	DW/BP	Hz	Minimum frequency
FREQNEGSLOPEMEAN	Negative slope	DW/BP	Hz/second	Mean negative slope
FREQNUMSTEPS	Number of steps	DW/BP	None	10% or greater increase or decrease in frequency over two contour points
FREQPOSSLOPEMEAN	Positive slope	DW/BP	Hz/second	Mean positive slope
FREQQUARTER1	First quarter frequency	DW/BP	Hz	Frequency at one-quarter of the duration
FREQQUARTER2	Half frequency	DW/BP	Hz	Frequency at one-half of the duration
FREQQUARTER3	Third quarter frequency	DW/BP	Hz	Frequency at three-quarters of the duration

FREQRANGE	Frequency range	DW/BP	Hz	Maximum frequency – minimum frequency
FREQRELBW	Relative bandwidth	DW/BP	Hz	Relative bandwidth: (maximum frequency – minimum frequency)/center frequency
FREQSLOPEMEAN	Mean slope	DW/BP	Hz/second	Overall mean slope
FREQSLOPERATIO	Positive-negative slope ratio	DW/BP	None	Mean positive slope/mean negative slope
FREQSPREAD	Frequency spread	DW/BP	Hz	Difference between the 75th and the 25th percentiles of the frequency
FREQSTDDEV	Standard deviation of the frequency	DW/BP	Hz	Standard deviation of the frequency
FREQSTEPDOWN	Steps down	DW/BP	None	Number of steps that have decreasing frequency
FREQSTEPUP	Steps up	DW/BP	None	Number of steps that have increasing frequency
FREQSWEEPDWNPERCENT	Percent negative	DW/BP	None	Percent of the whistle that has a negative slope
FREQSWEEPFLATPERCENT	Percent flat	DW/BP	None	Percent of the whistle that has zero slope
FREQSWEEPUPPERCENT	Percent positive	DW/BP	None	Percent of the whistle that has a positive slope
INFLDUR	Inflection points/duration	DW/BP	None	Number of inflection points/duration
INFLMAXDELTA	Maximum delta	DW/BP	Seconds	Maximum time between inflection points
INFLMAXMINDELTA	Maximum-minimum delta ratio	DW/BP	None	Maximum delta/minimum delta
INFLMEANDELTA	Mean delta	DW/BP	Seconds	Mean time between inflection points
INFLMEDIANDELTA	Median delta	DW/BP	Seconds	Median of the time between inflection points
INFLMINDELTA	Minimum delta	DW/BP	Seconds	Minimum time between inflection points
INFLSTDDEVDELTA	Standard deviation delta	DW/BP	Seconds	Standard deviation of the time between inflection points
NUMINFLECTIONS	Number of inflection points	DW/BP	None	Changes from positive to negative or negative to positive slope
NUMSWEEPSDWNFLAT	Negative-flat slope	DW/BP	None	Number of times the slope changes from negative to zero
NUMSWEEPSDWNUP	Negative-positive slope	DW/BP	None	Number of inflection points that change from negative slope to positive slope
NUMSWEEPSFLATDWN	Flat-negative slope	DW/BP	None	Number of times the slope changes from zero to negative
NUMSWEEPSFLATUP	Flat-positive slope	DW/BP	None	Number of times the slope changes from zero to positive
NUMSWEEPSUPDWN	Positive-negative slope	DW/BP	None	Number of inflection points that change from positive slope to negative slope
NUMSWEEPSUPFLAT	Positive-flat slope	DW/BP	None	Number of times the slope changes from positive to zero
STEPDUR	Steps/duration	DW/BP	None	Number of steps/duration
delta.FREQBEG	Delta Beginning Frequency	BP	Hz	Difference between the beginning frequency of one detection and the next successive detection
delta.FREQCENTER	Delta Center Frequency	BP	Hz	Difference between the center frequency of one detection and the next successive detection

BW10DB	−10 dB bandwidth	EC	Hz	
BW10DBHIGH	−10 dB bandwidth upper limit	EC	Hz	
BW10DBLOW	−10 dB bandwidth lower limit	EC	Hz	
BW3DB	−3 dB bandwidth	EC	Hz	
BW3DBHIGH	−3 dB bandwidth upper limit	EC	Hz	
BW3DBLOW	−3 dB bandwidth lower limit	EC	Hz	
FREQPEAK	Peak Frequency	EC	Hz	
NCROSSINGS	Number of Zero Crossing	EC	None	
SWEEPRATE	Sweep Rate	EC	kHz/ms	Sweep rate of the zero crossings
DURATION	Duration	EC	Seconds	Duration of the click