**Table S1:** Acoustic terms and definitions for gibbon song

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| **Term** | **Definition** |
| Note | Any single continuous sound of any distinct frequency or frequency modulation that  may be produced during inhalation or exhalation |
| Phrase | A single vocal activity consisting of a larger or looser collection of notes and elements.  These parts may be produced together or separately. Females exhibit a readily recognisable phrase known as the great call. Males produce phrases in the form of multi-modulation phrase of the male call or coda vocalization. |
| Great call | The most stereotyped and easily identifiable phrase of the gibbon song produced by adult females |
| Male call | Vocal pattern in southern yellow-cheeked gibbons consisting of staccato tones and a multi-modulation phrase. |
| Modulation frequency | A note characteristic produced by the male wherein each modulation frequency includes a steep decrease in frequency followed by a steep increase. |
| Coda vocalization | A phrase used by the male as a response to a female great call; the male emits the phrase at or near the end of said call. Coda vocalization always occurs directly following the female great call. |
| Great call sequence | Combination of the female great call and the corresponding successive coda of the male |
| Song | A series of notes, generally of >1 type, uttered in  succession and so related as to form a recognizable sequence or pattern in time (Thorpe,1961). |
| Solo song | Song bout produced by a single individual (male or female) |
| Duet song | Song bout in which both sexes produce loud sounds and exhibit vigorous movements in an interactive manner (i.e., engaging in a mutually cooperative and coordinated display) |