An evaluation of automated and manual methods for detecting Southern right whale (*Eubalaena australis*) contact calls

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How was this study born?

Vocal behaviour of Southern right whales off Brazil

Diel pattern analysis --> hours of continuous recordings

Automated detection

Our Study

Study aim

Evaluate methods for detecting SRW contact calls

Contact calls

Target in different PAM situations

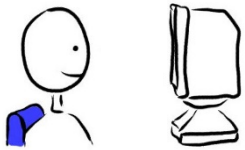
The evaluation

proportion of true detections

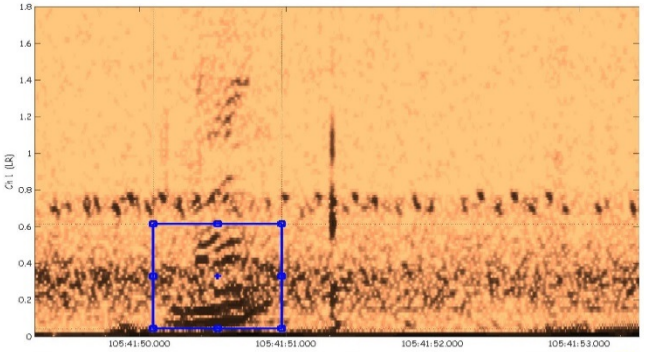
43hs of recordings subjected to 3 detection methods

Methods for detecting contact calls

Manual

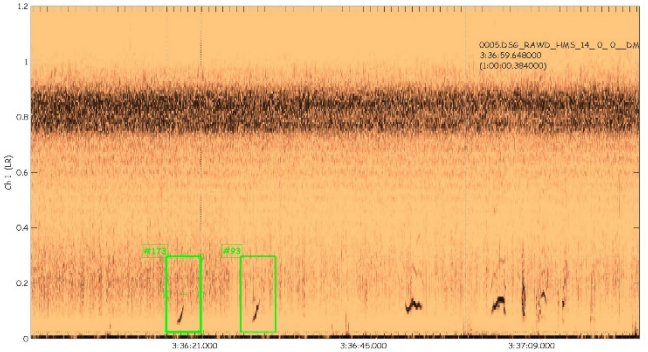


Time demanding!



Automated

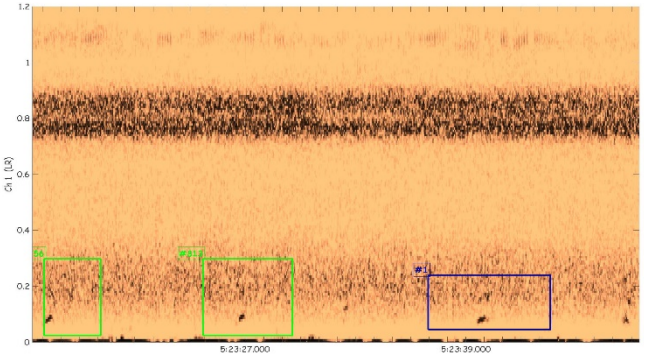
Urazghildiiev, I. R. and C. W. Clark. 2006.
Urazghildiiev, I., C. W. Clark, T. P. Krein and S. E. Parks. 2009.



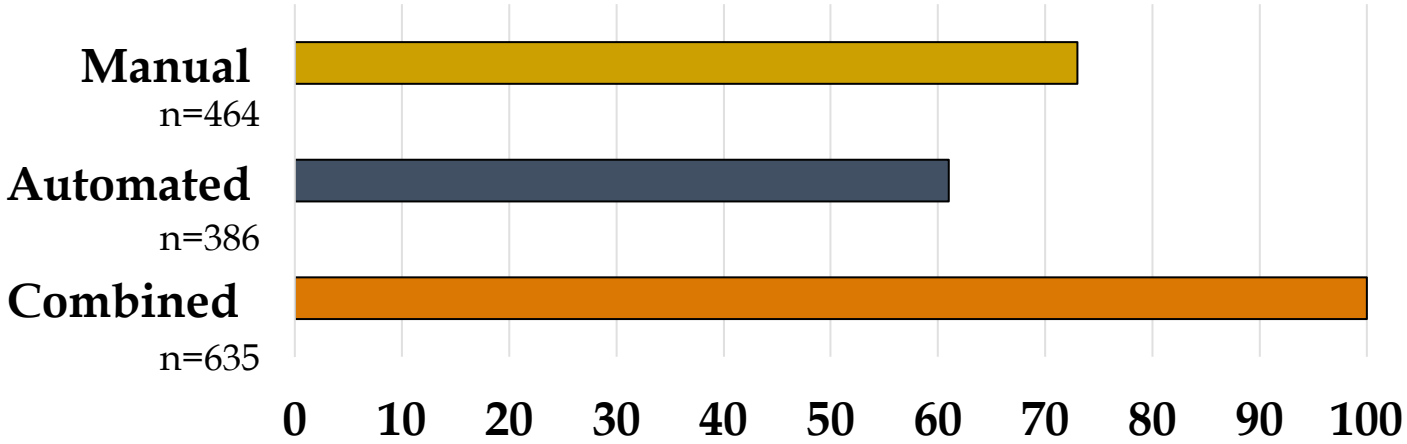
Combined

Automated
+
Manual

Rocha, L. H. S., L. S. Ferreira, B. C. Paula, F. H. G. Rodrigues and R. S. Sousa-Lima. 2015.



Detectors´ performance and conclusion



* Relative percentage where 100% = 635 true upcall detections

Manual method: 73% --> missed mostly masked calls

Automated NARW detector: 61%(386) --> missed call within sequence and faint calls. False positives (119) mostly noise.

Combined method: most effective. Should be used when the aim is to detected as much calls as possible.

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THANK YOU

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