

**EUROPEAN CETACEAN SOCIETY ANNUAL CONFERENCE  
Kolmården, Sweden – 28-31 March 2004**

(1) Contact surname:	AZZALI
(2) Contact e-mail:	<a href="mailto:massimo.azzali@an.ismar.cnr.it">massimo.azzali@an.ismar.cnr.it</a>
(3) Authors' names:	Azzali, M.(1), Caccioli, C. (1), Catacchio, S., (1), San Juan Rodriguez, J. (2) and Tizzi, R (2-3)
(4) Authors' addresses:	(1) Marine Research Institute – Fishery Section - National Research Council, Largo Fiera della Pesca, 60125 Ancona, Italy (2) Delfinario Rimini, Lungomare Tintori 2 – 47900 Rimini, Italy (3) Associazione Oceanomare, Via delle Gondole 109 – 00121 Roma, Italy
(5) Abstract title:	ACOUSTIC REACTION OF DOLPHINS TO DIFFERENT KINDS OF ECHOLOCATION SIGNALS
(6) Abstract:	This study investigates how <i>Tursiops truncatus</i> acoustically react to sonar signals of three classes of dolphins - A) adult males, B) adult females and C) young - belonging both to its own community and to an unknown community. The signals were recorded from free swimming dolphins at Palablu and Rimini delphinaria using a Brüel&Kjær hydrophone (type 8105). Later the clicks of each dolphin were extracted and six sets of data ( <i>active stimuli</i> ) were stored on a magnetic tape. Each set contained the sonar signals of a class of dolphins belonging to either Rimini or Palablu community. A set was 12min long and was formed by six blocks of clicks alternated with six silence blocks. The experiments were conducted in Rimini Delfinario playing back the six sets of data and recording the acoustic responses of the subjects. Each experimental session was formed by three phases: in the first phase ( <i>pre-stimulus</i> ) the hydrophone and the projector were lowered in the pool and presented for 15min to the subjects; in the second phase ( <i>stimulus</i> ) a set of acoustic data was played back for 12min; in the third phase ( <i>post-stimulus</i> ) the apparatus remained in the pool for further 10min. Only the adult male responded to the active stimuli with sonar signals in all the sessions, while the other animals (a pregnant female and two young) remained silent. The number of signals emitted by the male during the second and third phase was higher when the stimuli of its own community were played back, independently from the class of dolphins. However the similarity measure among the responses of the subject split the signals into two clusters, and one outlier: responses to females (first cluster), responses to young dolphins and to its own signals (second cluster) and responses to the dominant male of Palablu (outlier).
(7) Word count:	299
(8) Presentation type:	Poster
(9) Keyword 1:	Acoustics
(10) Keyword 2:	
(11) Keyword 3:	
(12) Keyword 4:	
(13) Student award :	NO
(14) Grant request:	NO
(15) File name:	Azzali.rft