



## **35th Annual Symposium of European Association for Aquatic Mammals**



Hosted by

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### **Return no later than 08 January 2007 to:**

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Presentation: Poster

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Audiovisual requirements: No

### **ABSTRACT:**

#### **AGGRESSIVITY AND SOCIAL BALANCE IN A CAPTIVE *TURSIOPS TRUNCATUS* COMMUNITY**

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Social systems in which animals are structured according to ranks, such as the bottlenose dolphin ones, usually find in aggressive interactions a means for determining social balance and hierarchies. The aim of this study was to quantitatively investigate, according to the age and sex of the animals, intra-communal agonistic behaviours, in particular, pointing out: a) quality and distribution of the

displays, b) features of the agonistic sessions and c) dominance relationships among individuals. Five subjects (adults: 1,1; young: 2,1) were focally observed at the Rimini Delfinario (Italy) from April to October 2005, through a total of 780 systematic observations lasting 15 minutes each (total 195 hours, i.e. 39 hours/animal). A specific behavioural catalogue and Observer (Noldus) were applied to measure the frequency and duration of seven conflictual behaviours, *a priori* chosen for the study. As for active assaults, beside a general low intensity level of aggressiveness and a frequency range included within 2.01 and 13.98 events/hour (respectively registered in adults and young), the results showed that male aggressions were usually twice as frequent as female ones, while the young surpass adults up to seven times. In all classes, "chasing" (always > 30%) was the preferred action, but similar values were reached by females also in "tail hitting". Moreover, aggressive behaviours seemed to occur in distinctive agonistic sessions, lasting between 57.0 (in adults) and 149.8 (in young) seconds and including up to 4 offensive displays each. Again, from the observation of winner/loser dyadic interactions, a predominance of the pair composed by the adult female and her still unweaned calf emerged over all the rest of the group. In the end, even in the typically cooperative bottlenose dolphin societies, intra-communal aggressiveness reveals to a certain level to be absolutely functional for group relationships and coordination, as well as, from an evolutionistic point of view, crucial for species conservation.