ONTOGENY OF "REST AT SURFACE" IN BOTTLENOSE DOLPHIN CALVES DURING THE FIRST YEAR OF LIFE

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INTRODUCTION

Tursiops truncatus **newborns immediately after the birth place themselves alongside the mother in echelon position, in order to receive protection and, dragged in the mother wave, save and recover energies. However, bottlenose dolphins are well known to perform another reposing behaviour defined as "REST AT SURFACE" and characterized by a motionless staying on water surface keeping the blowhole exposed in air.**

The aim of this study was to monitor the ontogeny of this behaviour in ***Tursiops truncatus*** **calves during the first year of life.**

METHODS

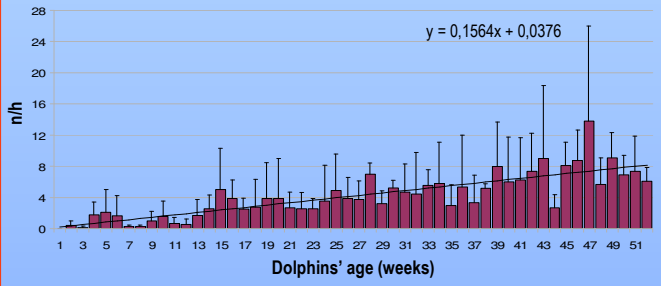
Subjects were four calves (two males and two females) born in different periods (1995, 1997, 2003 and 2007) at the Rimini Delfinario (Italy).

Behavioural data were systematically collected during the first 52 weeks after each birth in a total of 1288 sessions lasting 30 minutes each (total 644 hours). The software Observer 5.0 (Noldus) was applied to assess the frequency and the duration of every rest at surface bout.

LUNA	BLUE	ROCCO	LAPO
Female	Female	Male	Male
12 May 1995	29 Jun 1997	27 Sep 2003	28 Jul 2007

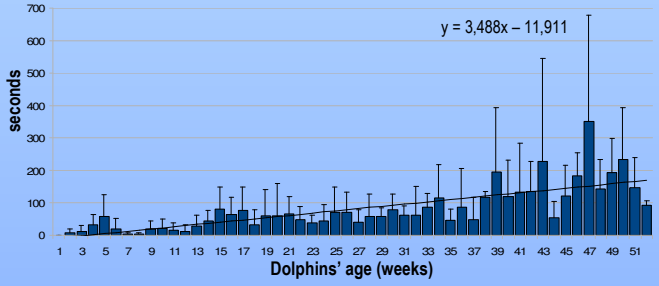
RESULTS

FIGURE 1: HOURLY FREQUENCY OF REST



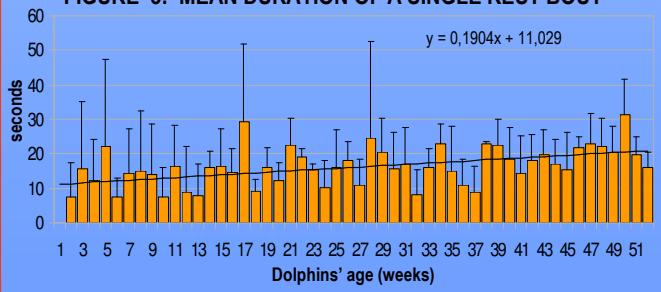
While the two females revealed the ability to perform the rest at surface at an age of two weeks, the studied males seemed less precocious and did it only from the second month. However, a progressive increase of rest frequencies through the year characterized all the calves. In particular, if during the first six months of life they were used to rest from zero to 5 times per hour, in the second semester they showed quite doubled values.

FIGURE 2: HOURLY DURATION OF REST



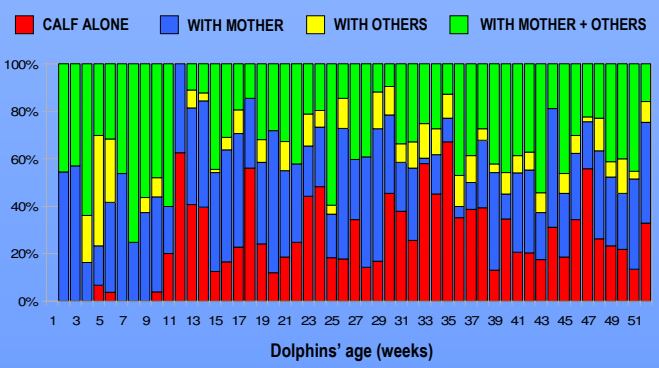
At the same manner, even for the duration of rest per hour, a gradual increase with growth was clearly observed.

FIGURE 3: MEAN DURATION OF A SINGLE REST BOUT



Moreover, as well as total duration, also the single rest bout was relatively growing in length during the year. However, the pause generally never lasted more than 30 seconds.

FIGURE 4: SOCIAL ASSOCIATIONS DURING THE REST



From another point of view, the results pointed out some social features of rest at surface behaviour, revealing how the newborns never stopped alone in this position at least during all the first month of life.

CONCLUSION

In summary, bottlenose dolphin infants soon after the birth appeared to find resting at surface very difficult, but the development of physical competence gradually enabled them to recover energies even with this strategy.

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