INTRODUCTION

The behaviour of a solitary male bottlenose dolphin (*Tursiops truncatus*) nicknamed “Filippo” was regularly observed in 1999 near Manfredonia, Italy (southern Adriatic Sea). The dolphin - first reported in the area around 1996 – became increasingly “sociable” towards humans, and by November 1997 started to interact regularly with our species. From spring 1998 Filippo settled in the harbour of Manfredonia, where he can be predictably sighted since.

MATERIALS AND METHODS

Observations were opportunistically conducted from the wharf or from small boats, based on a 3-min behavioural sampling routine. No interaction whatsoever occurred between the dolphin and the observer. Behavioural data were collected from January to September 1999 for a total of 113 h 30 min. A total of 103 h 27 min of observation were conducted while Filippo was in the port, where he seemed to spend most of the day, and particularly the afternoon, from fall to spring. Another 10 h 33 min focused on the behaviour in open waters, in the harbour’s proximity, where the dolphin usually moved following boats or trying to interact with humans (including swimmers and professional scuba-divers). The dolphin seemed to “reside” within a range of 10 km of coastline, and was never observed or reported farther away or offshore.

Five behavioural states were defined for the purpose of this study: Resting, Milling, Feeding, Interacting/Feeding and Interacting. These behavioural states were defined *a posteriori*, based on standardised behavioural variables and events. Consistent behavioural states resulted in a combination of three basic variables: movement pattern (letargic, regular or frantic), occurrence of a target at surface (boats, swimmers, floating objects, people interacting with the dolphin from a boat), and occurrence of events suggestive of feeding behaviours. As obvious feeding at surface was observed on rare occasions, we considered as feeding-related behaviours including mud on rostrum (Rossback and Herzing, 1997), tailstock dives, flukes-up dives, and surface rushes (Shane 1990, Bearzi et al. 1999).

RESULTS

The behaviour in and out of the port differed significantly ($\chi^2=769.2$, df=5, p<0.001).

Resting was the most frequent behaviour (78.5%) in the port, and it was never observed out of the port. Conversely, interacting with boats and humans was relatively unfrequent (16%) in the port, while it was the most frequent behaviour (65.9%) out of the port. Feeding and Interacting/Feeding totalled 27.0% of the time spent out of the port, and 1.3% in the port.

Overall, “playful” interactions accounted for 20.5% of the total observation time, while “feeding-related behaviour” (i.e., Feeding and Interacting/Feeding) totalled 3.7%.
Close proximity to a “target” was recorded during 94.3% of the total observation time, as shown in Fig. 2. Boats represented by far the favourite target. Resting in close contact to a moored boat was the most typical behaviour (71.1% of the time). Moving boats were chosen as target 20.6% of the time, while interactions with people on a boat (e.g., petting the dolphin), human swimmers or floating objects were occasional (1.1%, 0.8%, and 0.7%, respectively).

CONCLUSIONS

Overall, the dolphin seemed to spend a remarkable proportion of his time budget resting and interacting with humans and boats. Activities suggestive of foraging were comparatively rare. The remarkable proportion of time spent either resting or interacting with humans and boats, as compared to foraging, may reflect ease of finding prey in Filippo’s bizarre “critical habitat”. However, the behavioural budget may change farther away from the port or at night, stressing that the study area must be further extended to match the whole dolphin movement range.

As shown in Fig. 2, Filippo spent a very high proportion of his time spent in close proximity to a “target” (particularly a large speedboat consistently used by Filippo during Resting). This may indicate the need for some sort of “social surrogate” (Lockyer 1990).

Interactions with boats and humans may represent a threat if unregulated, due to the dolphin’s “reckless” behaviour. Interactions with people may habituate the dolphin to inappropriate behaviours including begging for food. Moreover, interactions with swimmers may be harmful to the latter. As Filippo offers remarkable opportunities for public awareness and education initiatives, and a valuable subject for ongoing studies focusing on behaviour, genetics and toxicology, management measures must be taken to prevent damage to both the dolphin and people. Waiting for appropriate national legislation, a “code of conduct” to regulate interactions with humans was disseminated in collaboration with local Authorities.

ACKNOWLEDGEMENTS

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REFERENCES


**Table 1.** Observation time (min) during 1999.

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**Fig. 1.** Total behavioural budget.

**Fig. 2.** Dolphin target.