Stenella coeruleoalba (Striped Dolphin)

Family: Delphinidae (Oceanic Dolphins and Killer Whales)
Order: Cetacea (Whales and Dolphins)
Class: Mammalia (Mammals)

Fig. 1. Striped dolphin, *Stenella coeruleoalba.*

[http://www.imgneed.com/image/stenella-coeruleoalba/stenella-coeruleoalba-reino downloaded 5 November 2015]

TRAITS. *Stenella coeruleoalba* has a spindle shaped body with a long beak, falcate (sickle-shaped) dorsal fin and long slim flippers. There are blue and white stripes on the flanks and a distinct appearance in the colour of the underside of blue, white or pink (Wikipedia, 2015), giving the alternative name of blue-white dolphin. Two black stripes extend from a ring around the eye, one which continues onto the flipper, widening to the size of the flipper (Fig. 1). The other divides into a short lower section that before the flipper, and an upper section that thickens as it spans the flanks and curves into the underbelly where it stops before the tail base (Archer and Perrin, 1999). The striped dolphin shows sexual dimorphism (Bishop, 2014). In males the distance between the genital slit and the anus is greater while in females the distance between the umbilicus and the anus is greater. The distance between the genital slit and the median notch of the flukes is longer in males (Carlini et al., 2014).

ECOLOGY. The striped dolphin is known to inhabit tropical or warm shores. There are numerous documented sights of the striped dolphin in the western and eastern Pacific along the coast of Japan and North America. It has been seen in the North and South Atlantic oceans; extensively along the

coast of South America, the Caribbean Sea and the Gulf of Mexico, and eastern seaboard of North America, and in the Mediterranean Sea (Archer and Perrin, 1999). Figure 2 shows a diagrammatic representation of the distribution of *Stenella coeruleoalba* (Bishop, 2014). Based on the von Bertalanffy growth curve, physical maturity in males is achieved at about 21 years old and in females at 18 years old. The maximum lengths from the growth curve was 2.3m in males and 2.2m in females. Birth lengths were estimated to be 1.1-1.2m. Sexual maturity is achieved before physical maturity in striped dolphins. The males reach sexual maturity at 8-12 years, and a sexually mature male striped dolphin has a mean testis length of 8-10 cm. Females are sexually mature at 7-8 years, and the ovulation rate was 0.32 per year (Bishop, 2014). The mating season for the striped dolphin in the Pacific is in winter and early in the summer, but it is in the fall season in the Mediterranean range. The gestation time is 12-13 months while the nursing time occurs for about 16 months. Female *Stenella coeruleoalba* usually have a calving interval of 4 years, and rest for a 2-6 month interval between lactation and the next mating season.

FEEDING BEHAVIOUR. The striped dolphin is known to feed primarily on bony fish and squid. A stomach content analysis on a striped dolphin in 2013 obtained from of the cost of South Africa revealed that most of the prey consumed had luminous organs suggesting that the prey consumed had deep water habitat. This suggested that the striped dolphin habitat is not close to shore but rather in waters at least 200m deep (Archer and Perrin, 1999). *Stenella coeruleoalba* do not undergo large scale seasonal migration but they do move in response to the changes of environments and availability of prey. During winter and summer there is a change in the distribution of the species (Miyazaki et al., 1974); the striped dolphin is found closer to the shore in summer. This is not considered large scale migration since the species is spread over a large range and territory. The summer movement correlates with the seasonal formation of the thermocline (separation between deep cold and warm surface water in the sea). *Stenella coeruleoalba* gathers along the shallow thermocline because it acts as a barrier to the rapid escape of squid and fish.

SOCIAL ORGANIZATION. Off the south east coast of South Africa the school structure was estimated to be between four and several hundred animals but most groups contained about 100 dolphins with mean of 75 individuals per group. In Angolan waters the school sizes were much smaller with an average of 59 individuals per group. Off the coast of Japan however the social structure was much larger with a group mean of about 415 individuals. In the Japanese waters it was also seen that during the period from 5:00-9:00 p.m. the school sizes were much larger suggesting that schools merge for feeding at night and split into separate groups during the day. In the Mediterranean Sea the group size ranged from 1-300 individuals. *Stenella coereoalba* has been seen in mixed structures in the Mediterranean with *Delphinus delphis*, the short beaked common dolphin, and *Grampus griseus*, Risso's dolphin (Ross, 1984). An interesting social structure is that there may be separate groups of breeding dolphins and non-breeding dolphins (Dolphin's World, 2014). Dolphins which are just a few years old and considered juveniles are separated into a pod of their own, but have very close interactions with the non-breeding striped dolphins. When the non-breeding dolphins are ready to breed they move into the breeding pods, and the once-juvenile dolphins become the non-breeding dolphins.

COMMUNICATION. The striped dolphin execute a move known as roto-tailing which is exclusive to them (MarineBio Conservation Society, 2013). The roto-tail is a process of leaping very high out of the water and while out the water they rapidly rotate the tail midair. The striped

dolphin is a very active species. They communicate with a variety of whistles and clicking sounds (Lammers et al., 2003).

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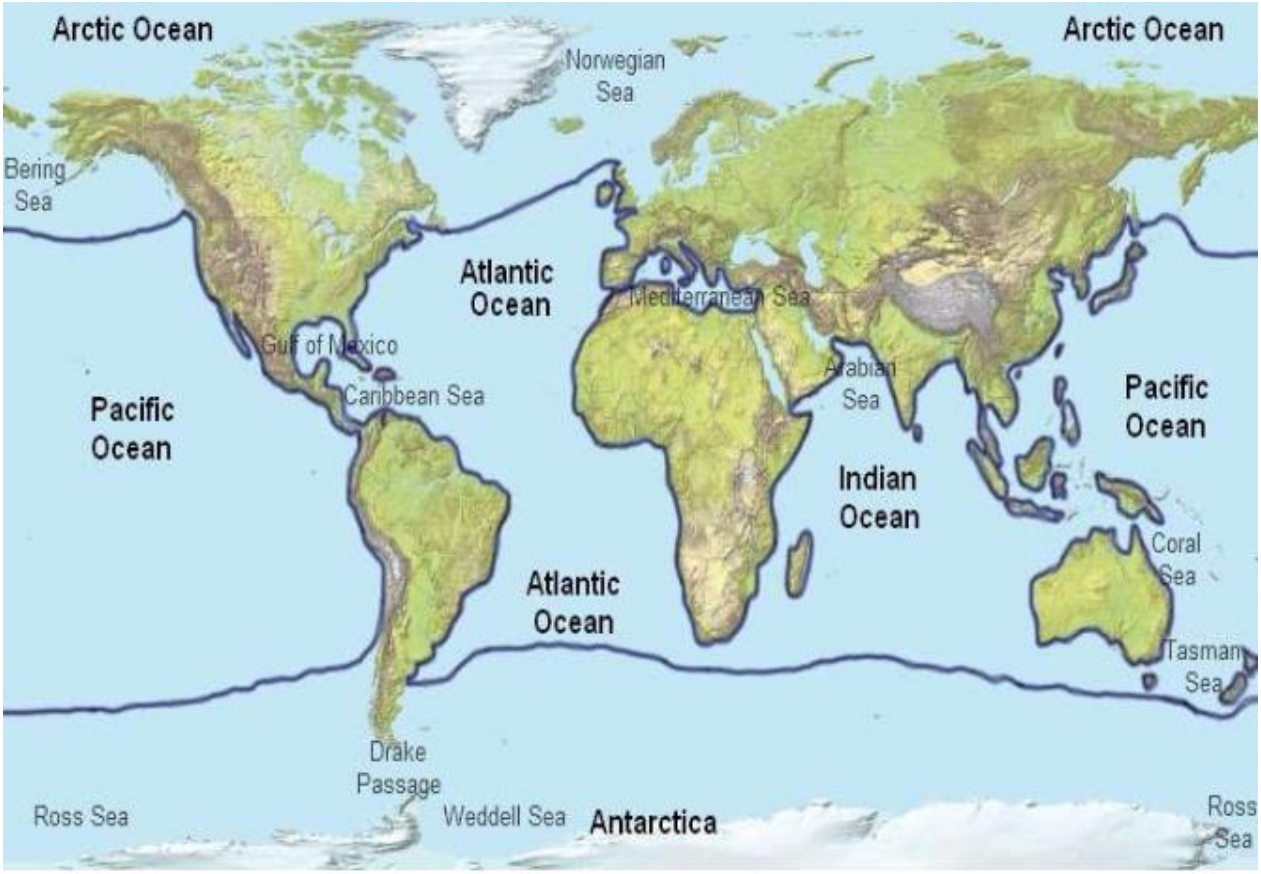

Fig. 2. The worldwide distribution of *Stenella coeruleoalba*; the blue lines represent the boundary.

[http://contentpro.seals.ac.za/iii/cpro/itemId=1011600, downloaded 7 November 2015]