

## A NOTE ON THE STATUS OF INDIGENOUS SPECIES OF SEA HORSE

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The status of the two indigenous species of sea horse, the British sea horse (spiny sea horse) (*Hippocampus ramulosus*) and the European sea horse (short snouted sea horse) (*Hippocampus hippocampus*) are not exactly known. The British Sea Horse Survey has been set out to identify sites and populations around the British Isles.

The native British sea horses *Hippocampus ramulosus* Leach and *Hippocampus hippocampus* Linnaeus are thought to be facing an uncertain future but not from collecting as in tropical species used in the Chinese medicine trade, but from direct interference with their habitat. It was therefore proposed that a survey be carried out to find the extent of their ranges and populations and whether they required protection under the Wildlife and Countryside Act.

In the description of the two species for the survey it was decided to use size and presence or absence of appendages on the dorsal region to identify species. Relative snout to head ratios were not used as it was felt that this had to be discouraged as it would have meant handling the animals and the subsequent stress involved was not acceptable to an animal that is easily stressed.

Both British species are known to inhabit eel grass beds during the warmer summer months of the year but they are also both found at some depth during the cooler winter months amongst boulders, rocks and gravel areas and do not seem to migrate as was originally thought.

The spiny sea horse (*Hippocampus ramulosus*) is the larger of the two species of sea horse inhabiting the seas around the British Isles. It obtains an adult size of up to 180 mm (male and female). Like all sea horses it has the ability to change its colour to match its surroundings but is usually found with a dark green or olive-brown coloration. The name *ramulosus* (having many small branches) is a direct reference to the mane of appendages running from the top of the head down the dorsal region of the back, stopping at the juncture of the trunk and tail region. Unlike other sea horses where the appendages may be grown and discarded, in the spiny sea horse they are always present to a greater or lesser extent. Usually getting less prominent as the animal gets older (Garrick-Maidment, 1997).

As with all the Syngnathidae it is the male which conceives internally in his brood pouch and nurtures the young until parturition, when between 50 and 300 young are born as perfect miniature sea horses. There is no parental care and the fry are completely independent. Within 23 d the male has conceived again and will parturite in 28 days.

The second of the two species is the European or short snouted sea horse (*Hippocampus hippocampus*) and is the smaller sea horse, up to 80 mm fully grown (males and females). Although having the potential, like all sea horse species, to grow appendages on the body for camouflage the author has never identified any on the animals examined. The colour variations are greater than in the spiny sea horse, with colours ranging from pink to black being recorded. Parturition time is shorter in this species (~20–21 d) and the number of young produced is also significantly smaller, between 50 and 100.

In 1995 before the survey there were ten records mainly in southern Britain (predominantly Cornwall) and the Channel Islands from 1899. The records in 1996 confirmed by the author numbered 18, ranging from the Shetland Islands (confirmed by the Natural History Museum, London) in Scotland down to southern England, Ireland and Wales, but the biggest concentration was in the Channel Islands. During 1997 this pattern continued with the largest

number of records in the Channel Islands, repeated again in 1998. Although the evidence is inconclusive the most interesting observation to come from all these records is that the two species have completely different ranges with *H. hippocampus* coming from the Channel Islands and *H. ramulosus* from mainland Britain, Ireland, Scotland and Wales.

There was some suggestion that these two species are transient but it is suggested that due to their poor swimming ability and the lack of assisting currents it would not be possible for them to be transient to the continental coastline during the winter months as was proposed by other researchers (Vincent, 1997) but instead they overwinter in deeper water and 'disappear' from shallower waters. The advantage of inhabiting deeper water in winter months is that they avoid the potentially disastrous effects of living in shallow water during the severe winter storms, and they have been found to depths of 252 feet.

The fry of temperate species appear to retain some of the characteristics of the sea horses nearest cousins, the pipefish. They tend to swim in a more horizontal manner with the head stretched forward and the tail held out behind them, as opposed to tropical species where the upright manner of swimming with the tail curled is adopted. As well as in *H. hippocampus* and *H. ramulosus* this behaviour has also been observed in *H. abdominalis* and *H. breviceps* both of which are from the cooler temperate waters of Southern Australia.

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#### REFERENCES

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