

# Seahorses in the Poole Area

Good news! Although sightings of the summer migrant seahorses in Studland Bay have fallen away since the boom year of 2008, it seems that seahorses in the Poole area in general are thriving. In September 2015 while net fishing in Poole Harbour, Poole-based fisherman Michael Bailey accidentally caught a spiny seahorse which measured 34 cm long, believed to be the largest seahorse of any species ever recorded. Michael has long experience of finding seahorses clinging to his nets -

“On average we catch perhaps **20 or 30 seahorses a year** – catching seahorses while we’re netting for mullet. The seahorses we do catch are perhaps towards the larger end of the scale, towards the 30 cm stage,” he said on a You Tube video at <https://m.youtube.com/watch?v=oVJmA6WTwW4> . He then explains that they are used to spotting seahorses as they haul in the net, and manage to free the tail's grip from the net and return them to the water unharmed. Larger ones are measured and photographed before release, and all catches are reported to the Seahorse Trust.

A Bournemouth Echo report of the record specimen goes on to say

“Using sonar the fishermen find shoals of mullet and he said four to five miles out to sea, where there were features on the sea floor where weed grew, seemed to also be a good place for seahorses.

"We do see quite a lot, it's quite surprising. They are quite cute," added Michael, who has been fishing more than 30-years."

([http://www.bournemouthecho.co.uk/news/13787624.Pictures\\_World\\_s\\_largest\\_seahorse\\_found\\_off\\_Dorset\\_coast/?ref=trn](http://www.bournemouthecho.co.uk/news/13787624.Pictures_World_s_largest_seahorse_found_off_Dorset_coast/?ref=trn) )

A Seahorse Trust publication in 2012 had earlier reported the presence of seahorses in Poole Harbour at twelve different locations, at some of which there had been multiple sightings.

(<http://www.theseahorsetrust.org/userfiles/PDF/Seahorses%20in%20Poole%20Harbour%20in%20Dorset.pdf> ).

So it seems that seahorses are regularly found in a number of locations around and off the coast in the Poole area, of which Studland Bay is just one. With water depths of 15+ metres and no shelter, the site 4 to 5 miles offshore would not have any eelgrass, of course.

The numbers which are seen in Studland Bay do fluctuate. Variations in predation and weather are possible explanations. Another might lie in the complex tidal flow patterns outside Poole Harbour - seahorses are very weak swimmers and at the mercy of tides. A modelling study by HR Wallingford (see video at <https://www.youtube.com/watch?v=17ezKfP0a34> ) which models the the flow of Manilla clam larvae over 14 days shows the flow outward from the Harbour during the spring tide part of the cycle is predominantly southward, including Studland Bay, while it is largely eastward during the neap tides part of the cycle. See figures 1 and 2 respectively, which are screencaps of the simulation. The dots represent larvae from different parts of the Harbour. The flow patterns are best seen on the video, however, where they are quite compelling.

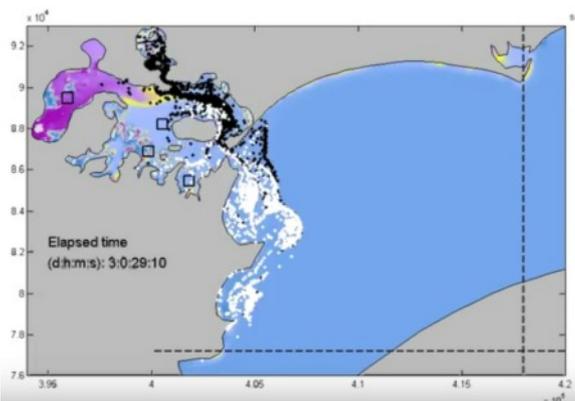
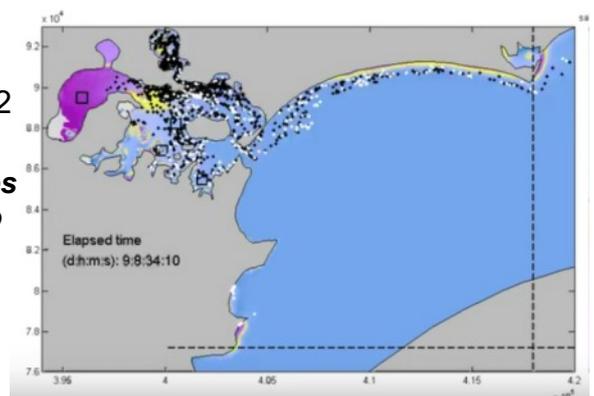


Fig.1

Fig.2

**Click on the maps  
to see the video**



(Full reference to study: Herbert, R.J., Willis, J., Jones, E. , Ross, K., Hübner, R., Humphreys, J., Jensen, A. and Baugh, J.V. Invasion in tidal zones on complex coastlines modelling larvae of the non-native clam *ruditape philippinarum* in the UK, *Journal of Biogeography* (2012) 39, 585–599 <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2699.2011.02626.x/abstract>)

## Part 2, April 2016:

An article in the Bournemouth Echo dated 8<sup>th</sup> April 2016 reports the same fisherman, Michael Bailey, finding 53 short-snouted seahorses in his nets in Poole Bay over a 3-day period.

He said: "We fish for flat fish using static nets and hope sole swim into them ..... Occasionally you might get the odd seahorse snagged in the nets by their tails and you come along the next day and free them and put them back.

In a good year you would get about 20 of them like that but I found 53 in a three-day period. That is really exceptional. That is just a pin prick, there must be tens of thousands of them in Poole Bay."

([http://www.bournemouthecho.co.uk/news/14412726.Short\\_snouted\\_seahorses\\_population\\_may\\_be\\_healthier\\_than\\_thought\\_fisherman\\_s\\_catch\\_shows/](http://www.bournemouthecho.co.uk/news/14412726.Short_snouted_seahorses_population_may_be_healthier_than_thought_fisherman_s_catch_shows/) )

We (BORG) suggest that this remarkable find illustrates the great volatility of seahorse populations: occasionally there are lots of seahorses, then they dwindle.

A document by the OSPAR Commission (an international body charged with protecting the marine environment of the N.E. Atlantic) states:

***“There is however much anecdotal evidence for massive changes in seahorse population size over the short term. A signature for this boom and bust type phenomenon is also seen in seahorse genetic data (Woodall, 2009). ..... There is no overall trend evident across the OSPAR Maritime Area, as some populations appear to be increasing and some decreasing. Populations seem to be dynamic with massive fluctuations between years.”*** (Document may be accessed from

<http://jncc.defra.gov.uk/page-5658> )

So fluctuations in seahorse numbers are to be expected. Taking an historical perspective of reported sightings in Studland Bay since the first recent report in 2004, a very small number of sightings in the Bay each year is the norm. The years 2008 and 2010 must be regarded as the exceptions, boom years when higher numbers were present. Also 2009 and 2010 had exceptionally high numbers of divers searching for seahorses (details at <http://boatownersresponse.org.uk/Studland-Seahorse-Population.pdf> ).

To talk of a “colony” being “wiped out” is fantasy, it was just a natural fluctuation in numbers of this species of fish which move temporarily into or through the Bay each summer. There never was a “colony” (is there such a thing as a colony of fish anyway?).

The recent find was in 45ft depth of water, suggesting it was 3 or 4 miles offshore in Poole Bay, and we understand that they were short-snouted seahorses. The sheer numbers suggest that they must have been bred in the locality, because seahorses are slow and weak swimmers at the mercy of tidal flows, and tides tend to disperse rather than aggregate. It is highly unlikely that they moved together from any distance, and much more likely that they hatched in the vicinity.

While the Seahorse Trust resolutely and incomprehensibly refuses to publish sightings held in its Secret Seahorse Database, we do understand that the offshore Poole Bay sightings are of short-snouted seahorses, *Hippocampus hippocampus*, while as noted above, the sightings of the spiny or long-snouted seahorse, *Hippocampus guttulatus*, have been inshore, within Poole Harbour or Studland Bay, where there have also been sightings of the short-snouted species.

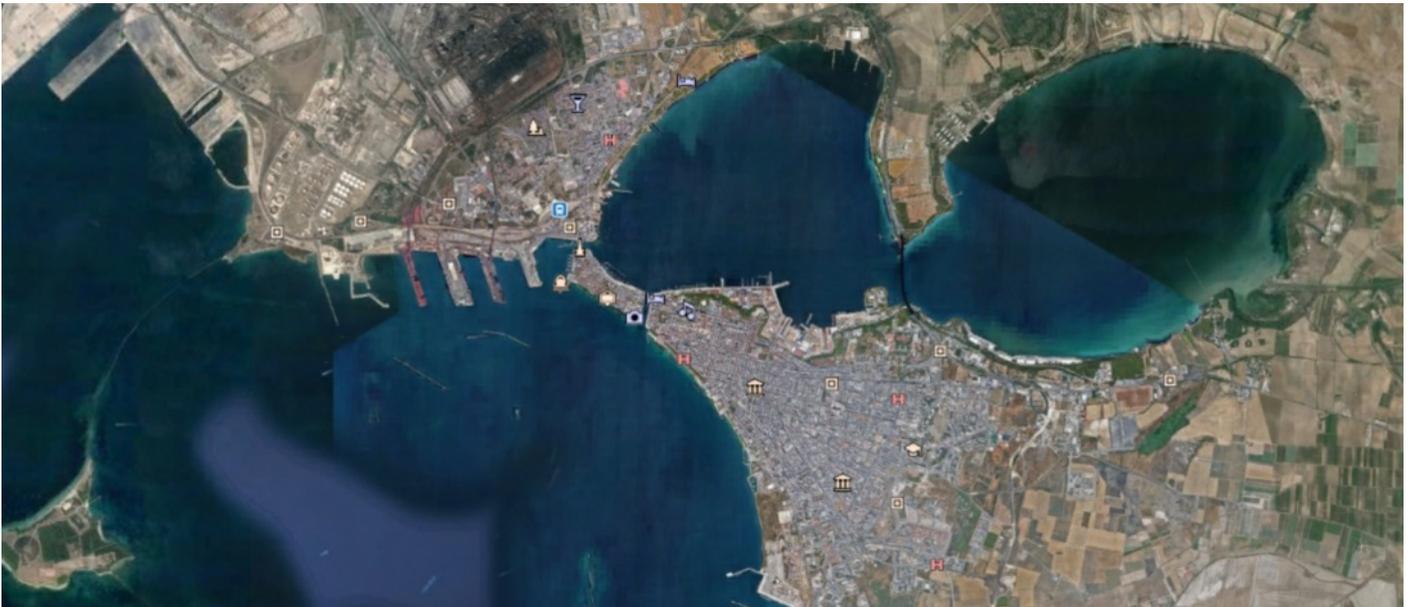
It seems possible, as a working hypothesis, that the true centre of the local spiny seahorse population is within Poole Harbour, and that some of that population spills out each year, sometimes ending up in Studland Bay. This is consistent with the discussion in the first part of this article, and also fits with observations in the wider scientific literature, which report major

populations of spiny seahorses in enclosed or semi-enclosed marine areas. The best known is the Ria Formosa in Portugal, which has a far greater population of spiny seahorses than the Poole area: they even run tourist trips to go snorkelling with the seahorses. The lagoon is an enclosed marine area, just as Poole Harbour is.



**Fig. 3** Google Earth image of Ria Formosa, Portugal. Area covered, from left to right, 20 km

Another reported spiny seahorse hot-spot is the Mar Piccolo di Taranto in the instep of the “boot” of Italy: see [this link](#). The two enclosed lagoons are about 8.5 km long in total, and are connected to a semi-enclosed marine basin, the seahorse nursery area being in the smaller west lagoon, in the middle of the picture, the whole set-up having distinct analogies to Poole Harbour and Studland Bay:



**Fig. 4** Google Earth image of Mar Piccolo di Taranto, Puglia, Italy

So we conclude that such evidence as is available suggests that the short-snouted seahorse is fairly widely spread across Poole Bay and Poole Harbour, while the spiny seahorse favours more sheltered areas. Poole Harbour would seem a likely breeding and nursery area for spiny seahorses, and some of the population migrates outward from the Harbour in summer, where they are sometimes encountered (and perhaps breed) in Studland Bay. Unfortunately for purposes of study, the waters of the Harbour are usually opaque and muddy, making it difficult to find the seahorses - which is bad for naturalists, but good for seahorses (less easily found by predators).

The possibility of breeding in the Harbour and migration into Studland Bay was recognised in a 2012 Seahorse Trust publication by Garrick-Maidment, referenced on p1 above, who wrote of “the possibility that some of the seahorses in Poole harbour aid the recruitment of new genetic material into the Studland site”.

A Bing aerial view map of Poole Harbour and part of Studland Bay is reproduced below, and the yellow squares represent Garrick-Maidments “proven seahorse sightings in Poole Harbour, some squares represent multiple sightings”. (ref. on p1). Note the sightings are mainly in the northern part of the Harbour where access from the land is easier: the shortage of sightings in the southern sector may simply reflect difficulty of access. The Harbour measures about 8km from west to east.

The yellow triangles represent our guesses at positions of sightings in Studland Bay, some represent multiple sightings.



Based on the evidence in this article, including the tidal flows on p1 and the analogous topographies of the well-studied spiny seahorse habitats at Ria Formosa and Mar Piccolo di Taranto, we consider it most likely that the primary spiny seahorse habitat in the Poole area is the sheltered environment within Poole Harbour, from which seahorses may spill out in varying numbers and with varying rates of survival into the more open sea, including Studland Bay, which could perhaps be considered an occasional satellite habitat for the species. The short-snouted seahorse seems to be more widely distributed, both within Poole Harbour and further out in Poole Bay, where they are quite widespread, according to fisherman Michael Bailey, and other sources of which we are aware.

We are grateful to those who have published this information, which we believe allows an improved understanding of the distribution of seahorses in the Poole area.

*Michael Simons*

*May 2016*