

The Great Seahorse Deception

The Boatowners' Response Group deplores the **sensationalist scare tactics** which have lead to such rubbish as *"Britain's largest colony of precious seahorses has been wiped out after their habitat was destroyed by boat anchors"* – a **multiple lie** which appears on a number of websites.

A Daily Telegraph article of 16th July 2013 says "**Neil Garrick-Maidment, director of Seahorse Trust, said the destruction of habitat by all the pleasure boats has wiped out the colony.**" (<http://www.telegraph.co.uk/earth/earthnews/10183387/UK-Seahorses-in-danger-of-being-wiped-out.html>)

A similar story was published by the Daily Mail on the same date, and versions of this deceitful story have appeared on over 40 websites worldwide!

So what is the truth?

Seahorse numbers

Seahorses are summer visitors to Studland Bay – they are not seen there in the winter months – and the numbers seen vary widely. The number of sightings reported by the Seahorse Trust (SHT) vary between different reports, but figures from a recent SHT paper, updated from their Autumn 2013 Newsletter, with diving hours spent from other SHT sources, are:

Year	Total sightings (incl. repeats)	Individuals sighted	Diving hours
2008	58	40	?
2009	34		265
2010	66		365
2011	13		51
2012	19	7	?
2013 (to early Sept.)	7	4	?

Seahorses are well camouflaged and hard to see amongst the vegetation, and SHT figures show an average diving time of between **4 and 8 hours** to spot a **single** seahorse. So the number seen will depend on the diving hours spent looking for them. The numbers in the table bear this out. Far fewer were seen in 2011 compared to 2010, but far fewer hours were spent looking for them. If you reduce the number seen in 2010 in proportion to the reduction in diving hours, you would expect to see 9, which is pretty close to the number observed (13). In other words, any "reduction" in numbers in 2011 is simply explained by a reduction in diving time!

So a variation in sightings from year to year is meaningless unless the variation in diving hours is taken into account. To be taken seriously, the SHT needs to disclose these figures.

We know that the seahorses were unusually late in coming into Studland Bay in 2013, after a cold winter and very cold spring / early summer, but how many diving hours were put in after they had arrived? If their claims of low numbers are to mean anything, they must disclose this. Even so, 7 sightings, 4 individuals, with possibly more to come during September, may be low, but it is not a wipe-out. And well-known underwater photographer Steve Trehwella reported that he and his wife saw a seahorse at Studland in the week before the "wiped out" story broke.

And what do they mean by "wiped out"? There is no stable colony as such, just varying numbers of seahorses which come and go during the summer months, although some tagged individuals have been recorded as staying put for between 4 and 16 weeks. The SHT's own figures show

varying (small) numbers during the summer months. If there were a regular migration into the Bay, to form a summer colony, there would be a steady build-up of numbers in late spring / early summer, a sustained peak population for some weeks, then a decrease as they migrated away again. The figures just do not show this. The seahorses apparently come and go, some stay, and no-one yet knows why.

Habitat is Intact

“Habitat destroyed” (not attributed) ; *“destruction of habitat by all the pleasure boats”* (Garrick-Maidment)

These statements are completely untrue. Despite concerns about the cold winter and spring, and potentially damaging easterly winds, it is agreed by people who have dived, including conservationists, and by observers on boats, that the eelgrass this year (2013) is healthy and of similar extent to recent years.

“Fragmentation”

To the bitter disappointment of those obsessed with the notion that leisure boat anchoring is destroying the eelgrass habitat, the detailed 2012 Seastar Survey report found “no consistent evidence of boat anchoring impacting the seagrass habitat at Studland Bay”, and to their even greater disappointment, the 2013 MAIA report found that for the years 1953, 1972, 1985, 1990, 1997 and 2008, during which boats have continued to anchor at Studland, the extent of dense eelgrass was increasing, and the greatest extent was in the most recent year studied, 2008.

What could they do about this? Well, they found a new bogeyman when the MAIA report discussed the possibility of “fragmentation” of the eelgrass beds. Perhaps the eelgrass habitat is being destroyed by “fragmentation”?

There are three fatal flaws to their fragmentation claims.

Firstly, the MAIA report states on p.61 “Of all the years analysed, 1953 appears to be the most fragmented landscape **and 2008 the least.**” Further, some complicated image analysis in the report attempted to measure the degree of fragmentation through five different analytical metrics: of these, four showed 2008 to be the least fragmented of the six years studied. Just one showed the exact opposite, that 2008 was the most fragmented, and of course the obsessive anchor-banners have latched on to this. However, we believe the reason this single “core area” metric was out of line with the other four arises from problems or errors in the complex (and unvalidated) chain of computation used.

Secondly, there is no evidence whatsoever that “fragmentation” has increased since 2008, which was a year of good numbers of seahorses. The eelgrass is easily seen from boats or by divers, if it had suddenly become “fragmented” since 2008, people would have noticed and reported it. After all, Studland Bay is under continuing close scrutiny at the moment. To blame lower seahorse numbers on “fragmentation” is a wild and irresponsible act of pure speculation about something that has not happened.

Thirdly, there is no evidence that “fragmentation” would deter seahorses anyway. See our article [“Seahorses like moorings”](#), and also [“Evidence Summary 2012”](#), for discussions of this point, which point to evidence showing that the spiny seahorse seems to favour a habitat in dense vegetation but next to more open water, including an OSPAR article which states that spiny seahorses seem to “prefer staying close to the edge of seagrass beds leaving large areas unoccupied”.

In a Nutshell:

The seahorses in Studland Bay have **NOT** been wiped out

The eelgrass habitat has **NOT** been destroyed

The eelgrass habitat has **NOT** suffered observable deterioration since 2008

The low number of sightings in 2013 mean little without knowing the number of dive hours spent looking for seahorses in the Bay

There **HAS** been a campaign of misinformation and distortion by some people, an unethical campaign which degrades the reputation and future credibility of those responsible for the disinformation.

Sources:

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<http://www.theseahorsetrust.org/studland-tagging-project.aspx> (and included links)

<http://www.theseahorsetrust.org/userfiles/Temperature%20and%20day%20length%20related%20seasonal%20movement%20of%20seahorses%20at%20South%20Beach%20in%20Studland%20Bay%20in%20Dorset..pdf>

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