



Seahorse Tagging Project at Studland Bay in Dorset

Introduction

The Seahorse Trust has been surveying British Seahorses since 1994 through its British Seahorse Survey and in early 2008 we achieved the full named protection of both native species under the Wildlife and Countryside Act (1981 schedule 5). This monumental break through took six years to obtain and it also included the protection of the habitat Seahorses are found in, which was a major bonus to the legislation.

The British Seahorse Survey would not be possible without the community involvement we receive through the hundreds of sightings per annum from divers, fishermen and the general public. It is this very community involvement that made it possible to get the two species; the Short Snouted Seahorse (*Hippocampus hippocampus*) and the Spiny Seahorse (*H. guttulatus*) protected under the wildlife and Countryside Act as named species and has meant that hundreds of people have given up their time and energy to go out looking for Seahorses and reporting them into us. This amazing influx of information has allowed us to build up a picture of the unique lives these two species we have in our coastal waters.



Spiny Seahorse
(*Hippocampus guttulatus*)



Short Snouted Seahorse
(*Hippocampus hippocampus*)

Ongoing research

The British Seahorse Survey was set up in 1994 and is the longest running continuous survey of its kind in the world; it's this longevity that has allowed us to gain a greater insight into the world of two of the British Isles most enigmatic fish species.

Through its research work the trust has been monitoring a number of sites around the UK, one of which is in Studland Bay in Dorset which has turned out to be a site of International importance. Our coordinators for Dorset Steve Trehwella and Julie Hatcher discovered Seahorses on the site in 2005 and since then we have made a number of amazing discoveries about British Seahorses and particularly this site.

Despite the longevity of the survey and the amount of knowledge we have already gained we need to know more about these very elusive animals and their secretive lives and Studland Bay gives us a unique opportunity to do this.

Tagging and monitoring the Seahorses

It is vital to learn more about Seahorses and their ecology in the wild so that we can put management plans into place for their protection and to preserve the habitat they live in, which is under imminent threat from development and overuse; to do this we need to identify individual Seahorses over long periods of time which is quite difficult to do underwater

Over several years in conjunction with aquaria around the UK we have learned to tag Seahorses with a small 'floy' tag that is non intrusive and does not affect the lives of the seahorses.

We propose to tag the Seahorses at Studland Bay so that we are able to identify individual Seahorses. During the tagging process we will take notes of measurements, identifying marks, GPS location, sex and photographs to allow us to build up a database of individuals on the site, all of which will be updated as and when these individuals are spotted and recorded again.

It is aimed that we try to dive at least once a week on the site every week throughout the year to gather ongoing data and information allowing us to know more about the unique residents of the bay and by diving throughout the year we will begin to understand a great deal more about their seasonal movements, ecology and habits.

These dives will allow us to check on existing tagged Seahorses and to tag new ones, as part of this tagging process the exact location of each animal will be taken by GPS ascertaining if they do in fact set up territories which has been previously thought.

The tagging project is expected to be ongoing for a number of years (a minimum of three), although each years data will be invaluable to the work of The British Seahorse Survey and like the survey this will allow us to build a greater picture of what is going on in the wild; as Studland is very unique in having a large population of Seahorses and it is easily accessible for diving it is ideal for doing this sort of research.

We are hoping that the study of the Seahorses in Studland will be ongoing and will include the local community in helping us with our work; this we hope will instil local pride in this very special area.

The data we gather will allow us to put together with interested parties such as Natural England, The National Trust, a large number of concerned individuals and Dorset Wildlife Trust a management plan which will include public information schemes seagrass bed regeneration plans and offset areas.

Studland Bay in Dorset

Since discovering the Seahorses at Studland Bay in Dorset the site has proven to be internationally important and on every dive it throws up some amazing surprises. The bay has a very large concentration of Seahorses; over 40 in 2008 alone and this intensity of numbers has made it a site of international importance, nowhere else in the British Isles or indeed for that matter in the world; except the Rio Formosa in Portugal is there this concentration of Seahorses.

But the bay is under major threat of damage due the large number of pleasure craft that use it, particularly during the summer months.

Due to the large numbers of pleasure craft that use it the seagrass meadow is being destroyed by anchor damage and anchor chain erosion and endless amounts of litter and rubbish being dumped onto it, we need to gather as much data as we can in as short a time as possible to allow us to put together with our conservation partners a management plan.

Studland bay as well as being a unique site for Seahorses is made up of a large Seagrass meadow that has a number of species resident in it and is a major nursery site for commercial species such as Bass and Mullet.

Habitat protection

Seagrass meadows are a crucial undersea habitat and one that takes a long time to establish but a very short time to destroy and once it has gone it is very difficult for it to recover or to be re-established.

The erosion of the Seagrass meadow will have a negative impact on the area, not only will it destabilise the seabed leading to scouring of the seabed and consequently coastal erosion but it will also be a lose of this important nursery area for commercial species, leading to further loses in fish stocks and lose of employment in the local fishing industry.

Seagrass meadows are also vital for other reasons as well as a nursery area and stabilising the seabed it also locks up CO2 helping to alleviate global warming which makes Seagrass beds as valuable as Rain Forests.

Volunteers

The British Seahorse Survey and more importantly the protection of both British Seahorses would not be possible without the help and devotion of volunteers, not just divers but fishermen and members of the public out walking on beaches and rockpooling and crabbing as well.

This involvement of the public has not only allowed us to survey a much larger area but we have also received from the public more information than could have been achieved by just doing an in house survey.

We plan to use volunteers further in the Tagging project; they will be taught and trained to survey the area with us, how to measure and photograph the Seahorses and also as time goes on trained to tag the Seahorses.

Without them this project would not be as successful as we envisage and we estimate to have on average 3 volunteers a week working with us

PADI speciality in Seahorses

As part of the survey work we hope to include volunteer divers and at present there is a speciality course being talked about by PADI Aware and Lucy Woodall who is studying the genetics of European Seahorses, so as part of the work we also hope to be able to train divers in this course which in turn will allow them to go and study Seahorses on our projects under our guidance elsewhere.

Licensing

Under the Wildlife and Countryside Act (1981) schedule 5 to be able to work with Seahorses or indeed photograph them in the wild you must have a license issued by DEFRA. Licenses are already held by The Seahorse Trust and Steve Trehwella. Julie Hatcher and John Newman are agents of the trust and come under our license, these

licenses have been issued to allow us to work with Seahorses in captivity and in the wild and allows us to monitor and mark the Seahorses as appropriate.

Working in partnership

Our policy is to work in partnership with others; indeed the motto of the trust is 'working in partnership with nature' and the Studland project is no different. We will be working in partnership with Southampton and Bournemouth Universities, Hampshire and Dorset Wildlife Trusts, Crown Estates and Natural England plus many individuals and volunteers.

Reporting results

It is important that the work we undertake at Studland is available to others so we will be writing a series of reports yearly and an indepth document after three years of surveying, this will compile all the data we have gathered and the results we get from this. As the survey progresses beyond the three years we will continue to do a yearly report and every three years this will be gathered with previous reports into a larger more indepth publication and will be included the more general British Seahorse Survey Reports. These reports and publications will be available not only on our websites as downloads but also on disc and in paper form; although to keep costs down and reduce reliance on paper we will be encouraging interested parties to have the reports electronically.

Contact details

Neil Garrick-Maidment

Director

The Seahorse Trust

Reg. office: 36 Greatwood terrace
Topsham
Devon.
EX3 0EB

e-mail: neil.seahorses@tesco.net

Tel: Day 01392 875930

websites: www.theseahorsetrust.co.uk
www.britishseahorsesurvey.org

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