

# Snakelocks Anemone Shrimps, *Periclimenes sagittifer*, Swanage Pier, Dorset, 2008

## Introduction

A snakelocks anemone shrimp, *Periclimenes sagittifer*, was observed under Swanage Pier, in Dorset, on 22nd September 2007. This was the first recorded sighting of the species on the UK mainland coast. The species is present in greatest numbers on the southwest, Atlantic coast of Portugal and was known previously to extend as far north as the Channel Islands. In 2002, *P.sagittifer*



*Periclimenes sagittifer* in green anemone MD

was recorded for the first time in the Azores and it is possible this species is extending its range. *P.sagittifer* has a symbiotic relationship with the snakelocks anemone, *Anemonia viridis*, and is most commonly observed within the anemones. The shrimp is largely transparent and measures 2-3cm in length. However, it does have some clearly distinguishable features, such as pinky-white stripes on the abdomen (one is “v” shaped) and blue and white striped pincers. No further sightings of the snakelocks anemone shrimp around the UK mainland coast had been reported since the first sighting in 2007 until 12<sup>th</sup> October 2008, when 14 of the shrimps were seen, again beneath Swanage Pier. A brief count a few days later by Lin Baldock estimated 12% of the anemones contained a shrimp. A survey was organised quickly, to count the population under the pier at that time. Five divers took part in the survey on 25<sup>th</sup> October 2008.

## Methods

Each diver swam along Swanage Pier checking all the snakelocks anemones seen in a 2m belt transect. Divers followed the lines of the pier stanchions (which occur on the edges and down the centre of the pier) as a guide to one edge of each transect and used their arm span to estimate the width of the transect. This ensured no diver would count the same anemones/shrimp as another. For each snakelocks anemone, divers recorded the following information:

- anemone colour;
- anemone size - measurement of base diameter (small: <3cm, medium: 3-5cm, or large: >5cm);
- depth;
- type and number of anemone occupants (shrimps, crabs or other animals).

Some transects were carried out outside the pier stanchions, and others directly beneath the pier. The divers began surveying at the land end of the pier and surveyed along the length of the pier covering approximately two thirds of its length.

## Results

### *Anemone occupancy*

In total, 371 snakelocks anemones were counted. Snakelocks anemone shrimps were found in 28 anemones (7.5% of anemones). No more than one shrimp was found in each anemone. Two anemones containing a shrimp also contained an *Inachus* sp. spider crab. 11% of anemones had an occupant other than an anemone shrimp. These included: *Inachus* sp. and *Macropodia* sp. spider crabs, shore crabs, sea scorpions, squat lobsters and another shrimp species.



### *Anemone preference*

Of all the anemones surveyed, 47% were green in colour (see first image), 47% were brown/putty coloured and 6% were greeny-orange or other. 39% of shrimp were found in brown/putty anemones and 61% in green anemones. 49% of all the anemones were described as small, 50% as medium and 1% as large. 50% of the shrimp were found in small anemones and 50% in medium anemones.

### *Position under pier*

There were no significant differences in shrimp occupancy of anemones (a) beneath and just outside of the pier, or (b) at different ends of the pier.

Of 150 anemones surveyed outside the pier, 9 anemones (6%) contained *P.sagittifer* whereas of the 221 anemones surveyed beneath the pier 19 anemones (8.6%) contained *P.sagittifer*. Three divers participated in the first dive covering the 'land end' of the pier. 110 anemones were surveyed and 9.1% contained *P.sagittifer*. Five divers participated in the second dive covering the middle section of the pier. 261 anemones were surveyed and 6.9% contained *P.sagittifer*. The surveys were conducted between 2.3m and 3.6m depth. All shrimp-occupied anemones were found between 3.0m and 3.4m depth.

## Follow-up

Some follow-up dives by Seasearch divers found reduced numbers of *P.sagittifer* after the survey, with only two shrimps being seen on a dive in November, and none in December. After being observed in the autumn, the shrimps seem to have moved out of the anemones as winter approached, perhaps to a more sheltered location. The authors are planning to continue shrimp surveys at Swanage in 2009.

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