



## HERE COME THE 'SUPERTIDES'

As we all know, the tide comes in and goes out twice a day. How far it comes in, and how far it goes out again, however, varies a great deal. This subject has been explored in three articles in Bosham Life, which may be downloaded from the Bosham Life website: [boshamlife.co.uk](http://boshamlife.co.uk).

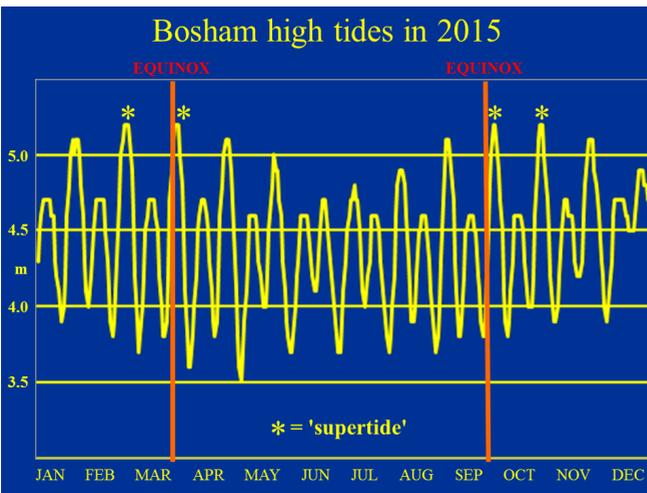
- October 2009: Why are there two tides a day, instead of just one?
- December 2009: Why aren't all tides the same height?
- February 2010: What controls the timings of high and low tides?

But they do not cover a topic which the popular press has dubbed 'supertides'.

### The highest tides are seen:

- 1) ...when the sun, moon and earth are (roughly) in a straight line, which occurs twice a month, at full moon and new moon.
- 2) ...when the sun is over the equator, which occurs twice a year, at the spring equinox in March and the autumn equinox in September.
- 3) ...when the moon is also over the equator. The position of the moon varies between 5° above the equator and 5° below it, over the course of a year.
- 4) ...when the earth, in its elliptical orbit, is closest to the sun. The distance between the earth and the sun varies by about 3% over the course of a year, the distance being shortest around January.
- 5) ...when the moon, which also has an elliptical orbit, is closest to the earth. The distance between the moon and the earth varies by about 11%, over the course of 18 years.

Since these five influences on the height of the tides vary at different rates, for most of the time one or two of them will be high, and one or two will be low, and the resulting tides will be in the 'normal' range. However, if several of these influences coincide, the



combined effect produces especially high tides. This occurs about every 18 years, and is happening in 2015. Higher than normal tides can be expected on the following dates: 20-22 February, 20-23 March, 28-30 September and 27-29 October.

So, can we expect to see flooding in Bosham on those dates? The answer is 'no, not necessarily'. The predicted high tides on those dates are only a few inches higher than on many other days throughout the year. It is only when these high tides are combined with two other factors—low air pressure and strong onshore winds—that we are likely to experience flooding. So keep your fingers crossed!

*Mike Whittle*