Additional Newsletter—

Medway Fossil and Mineral society—28th March 2020

So, what did I order? **Baryte on a bed of green Calcite, with Cement-stone flan case. Fresh off the beach, Isle of Sheppey**. How's yer teeth? Oh, sorry, they are on the beach as well…….Keep looking. Oh of course, no more than one person can look at whatever you find….!

The object of this exercise is to try and maintain some continuity during the current crisis—crisis, well, if this isn't then I don't know what is. When Gary mentioned the need to talk to James as to whether the Road show should go ahead at all –I think that was as recent as the beginning of March—I thought he was going a bit over the top. He cited the likely problem of a Covid 19 positive kid coughing at him from across a table, while he persuaded the customer that the piece of flint was not really a dinosaur bone! And now, here we are.

So by continuity I mean avoiding the possibility that someone might begin to think we don't need our weekly gatherings. I can't replicate anything approaching, what Brian has described as "Good entertainment at 33p an hour". And we do have some notable contributors to that reality—if not this page! Perhaps that is just the cyber content. Is this the real thing? Is this just fantasy?.

As I write this I have a contribution from Gary—lesson. Flint can fool you but can also deliver. Then there is Trevor's 'E-Type' Echinoid. I remembered Dr Bob Stokes, who came to the rescue and provided a diagnosis. There should be more *Micraster rostratus* all along the Thanet Coast. Then I will do my best to adlib a little. What I don't have I can't tell of ….

During this lockdown, I am in the position of being solitary—as normal. One of the strange things is that I really don't know what day of the week it is—They all merge into a strange Sunday. (Nick– Editor)

FOSSIL FISH IN FLINT (From Gary Woodall)

Back in 2008 the local papers were full of the story of a fossil fish preserved in a flint nodule that had been sitting on someone's rockery. Here is an extract from one of the articles at the time:

Something Fishy on the Rockery

Amazing Cretaceous Bony fish Preserved in Flint

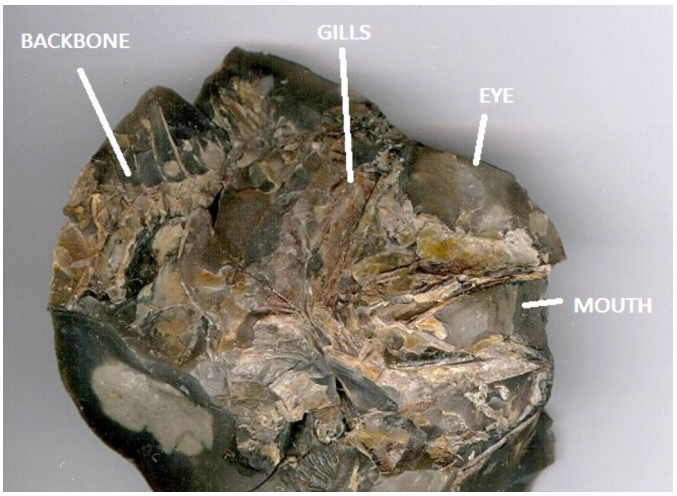
For a local Kent resident, the habit of picking up unusual objects, to place in his rockery at home, has enabled scientists to get to grips with a rare example of a fossilised Cretaceous fish.

The stone-shaped fish head was spotted by Peter Parvin and his wife whilst they beach –combed on a caravan holiday to Pevensey, in East Sussex, in 1993. Found among the pebbles as the tide was going out, Mr Parvin thought nothing of his find, simply placing it amongst the other curiosities he had collected in this rockery. However, a chance conversation, in a pub, with a volunteer from Maidstone Museum, led to him bringing this rare, ancient relic to the museum for closer examination.

Well I was fortunate to see the actual specimen in Maidstone museum. If you look carefully you can see an eye and a mouth of the fish. But there is no real structure and it is in fact a splendid example of a flint nodule that looks like something interesting. At every roadshow I always have a few flints that the person believes are claws or bones of some creature.

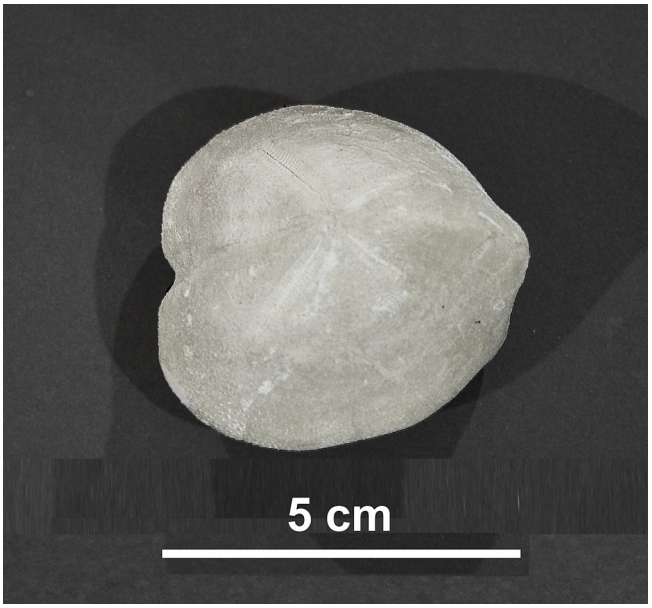
But fossil fish can be found in flint though they are amazingly rare. When I was in my early teens I was collecting from the local ploughed field where I used to pick up sea-urchins and other fossils from the clay-with -flints deposit. I would break open any big flints and occasionally find something interesting inside. On one memorable occasion I broke open a flint that was a strange orange colour with various brown-orange mark-ings on the surface and very strange scale like markings on the inside. I wasn't sure what it was so carefully col-lected all the pieces and took them home.

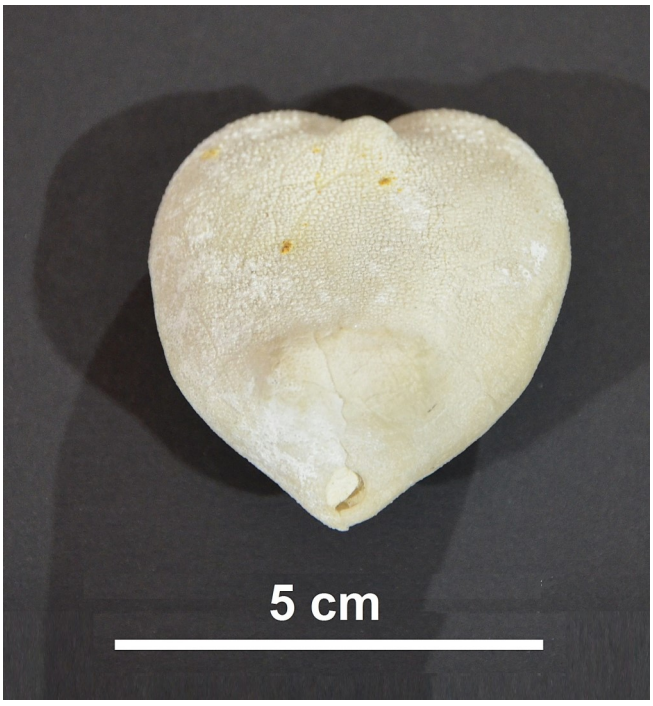
Anyway I looked carefully at the pieces at home and began to think it was possibly fish like, but I had no clue that such things could be found in flint. It sat around for a few years until I had to go to London for an interview at City Polytechnic. So I took the fossil with me and went to the Natural History museum after. In those days you didn't need an appointment as after knocking on the palaeontology office door some of the curators came down to look at my fossil. To my delight they confirmed it was a fish and pointed out the mouth, eye, backbone and gills.



They said that it was called *Hoplopteryx* and, whilst was not uncommon preserved in chalk, they had never seen one preserved in flint and it was very rare indeed. So this became, and still is, one of my bests finds with a prime position in one of my display cabinets. The flint 'fish' that was the subject of the newspaper article would probably be best displayed back on the rockery!!

Trevor Wright's E-Type Echinoid (nick)





Thou shalt not covet thy neighbour's echinoid. This, highly coveted, specimen was found by Trevor on the wave-cut platform at Pegwell. It was not damaged in any way (Echinoids on that coast often are) So the questions were as to what species it was. I remembered Dr Bob Stokes, whom I first met on a visit to Kingston Polytechnic (Feb 5th 1986) - who got me elected into the GA. He was teaching phD students. His speciality was Chalk Stratigraphy, and the Evolution of *Micraster* and *Epiaster*. So, I submitted these photos to him.

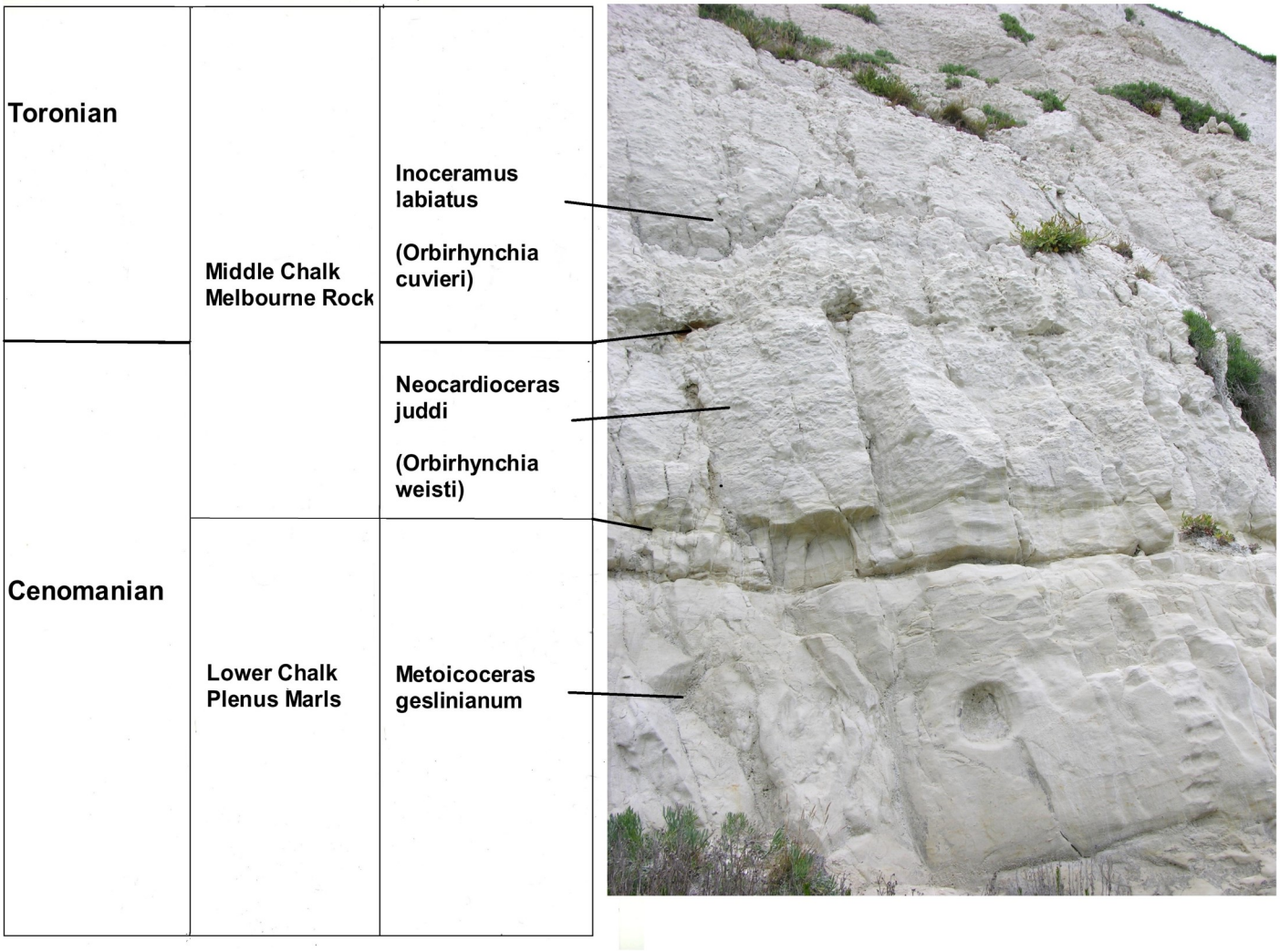
His reply was quick. **This is *Micraster rostratus***. (Mantell —1822). While the long upslope on the anterior side is typical, the main diagnostic feature is the high distal dome, with the steep slope on the posterior side over-hanging the periproct (anus). It is restricted to the Anglo-Paris Basin, so is not found in the Yorkshire-German Basin.

For some time, some authors tended to treat it as a sub-species of *Micraster Coranguinum (rostratus*) but the species status is now well-established. The species is found in the *socialis* zone, which includes that wave-cut platform. It also means that you are most likely to find these on the north coast of Thanet—the Minnis Bay to Margate section, as well as Pegwell.

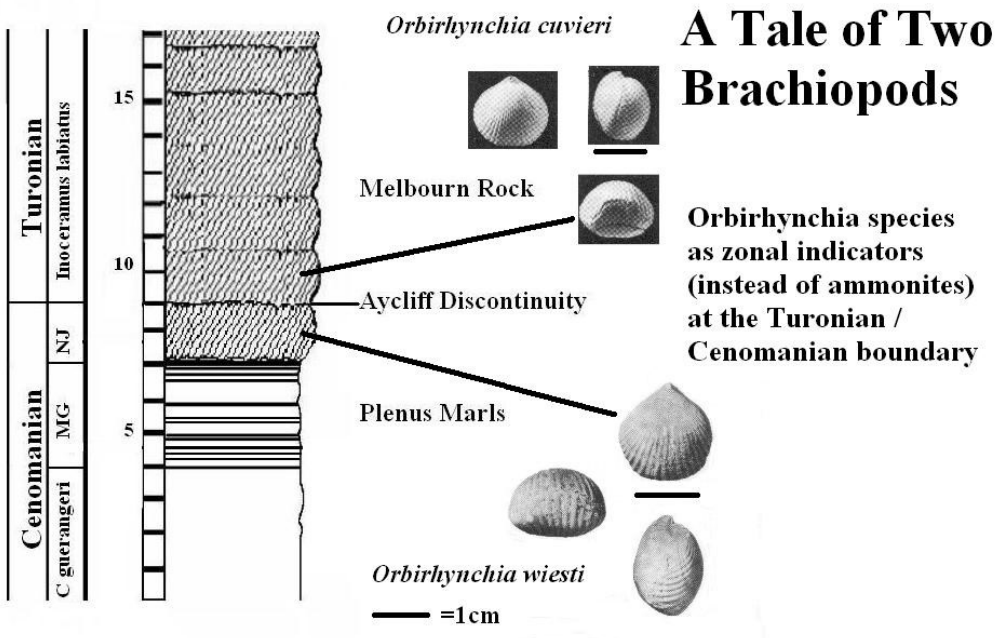
The Cenomanian-Turonian junction of the Chalk

Is there a fossil marker—other than ammonites?

There are not many places where you can see this now. The perfect place was at Peters Pit, but that is now gone. There is a place at Folkestone Warren, which is right up close. The problem in stratigraphy is that the rock types do not always coincide with the fossil content. In other words, the lithostratigraphy does not always coincide with the biostratigraphy. Geology would be simpler but maybe less interesting. In this case the litho-stratographic marker is the junction of the Plenus Marls (Lower Chalk) and the Melbourne Rock (Middle Chalk). But the base of the Turonian is about one metre into the Melbourne Rock. There is a break at that point—which I have referred to elsewhere as the Aycliffe Disconformity. But that is not official. There is a photo and diagram on the next page—so I think we will go there now..



The photograph is a section of the slipped cliff at Folkestone Warren. The diagram should help to explain. The diagram below states that it is a tale of two brachiopods. *Orbirhynchia cuvieri* and *Orbirhynchia weisti* are quite similar in appearance but from my experience there tends to be a greater occurrence of *O weisti* below the 'Aycliffe discontinuity' and a greater occurrence of *O cuvieri* above the discontinuity. But I cannot say that there is an abrupt cut off. My collection is not big enough at this point to rule that out or confirm. I do, however, feel that the relative abundance of each species either side of the discontinuity is valid. In Devon, the Pinnacles Limestone (*M geslinianum*) directly precedes the Melbourne Rock but it is difficult to see the stratigraphy in the lowest beds. I have several examples of *O, wiesti* recorded from the Melbourne Rock at Seaton, which might indicate that the Pinnacles Limestone is (there at least) confined as the local equivalent of the *Plenus* Marls.



And finally, I give you **Reculver**. Havn't seen it much latterly. The memories are of childhood. That rocky beach. The sand martins in that low cliff. Those flat boulders at the base of the cliff, rise as you go eastward into the anticline. If you wanted a good sandy beach—two magic words—MINNIS BAY. There used to be a caravan park at Reculver and 1954 was the first year I recall a real holiday. I mean, we were right poor. We had to move to different shoe box several times. We took along a radio which was just about portable—had a battery the size of two house bricks.

Much of the higher beds below the London Clay are still visible at Oldhaven, although the pile of igneous rocks has hidden many of the key beds, but a walk to the east brings on lower beds—a lot of Oldhaven and Woolwich material on the beach, the beds rising in the cliff. The flat boulders of the Thanetian come on at this point and are dominant by the time you reach Reculver. Between the boulders just east of Oldhaven is the *Cuneatus* Bed, which contains a rich microfauna as well as the name fossil. This occurs near the top of the Thanetian. Further along boulders of the *Regulbiensis* bed can be found on the beach.

Well, I think I'll wind this up. Hope to see Reculver again without being asked why I'm there! Hope to have another publication late April. But hope to have your news and not just mine. In the mean time Chris Darmon has come through with April Extra.

nick