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FIELD GUIDE TO FOSSIL COLLECTING AT EASTBOURNE IN EAST SUSSEX

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Only a comparatively short distance from the busy Sussex seaside town of Eastbourne lies this marvellous Chalk location, which extends all the way along the coast to Beachy Head. The site is well known to collectors of Chalk fossils and the cliffs provide plenty of fresh material in which to find them. It's a safe enough site but you will need to take care with small children. It will be prudent to stay clear of the base of the cliffs.

Wear strong shoes or boots, as the rocks do get covered in slippery seaweed. For this location you'll also need some tools; a good geological hammer and a rock chisel are essential and so are safety goggles for eye protection. Fossils cannot be removed from the Chalk rock without these basic tools. A strong bolster chisel and a smaller, narrower one are ideal. Choose the hammer carefully and don't be tempted to borrow an old hammer from grandfather's tool shed! A decent brick hammer will suffice but ensure that the shaft is not tubular steel.as these invariably break and the head goes flying! You'll need newspaper to wrap your finds in and a strong bag or rucksack for transporting them back to the car.

The Cretaceous Chalk at Eastbourne is highly fossiliferous and considered to be one of the best Chalk sites in the UK and the cliffs reveal a marine environment, which a dates to 86 million years ago. The Chalk here is packed with ammonites, echinoids, brachiopods, bivalves and crinoids, so you should come away with some finds. Fossils at Eastbourne are mostly found lying on the foreshore in the fallen rocks or as flint moulds. However, they can also be found in the cliff face, but it is inadvisable to hammer these out for safety reasons.

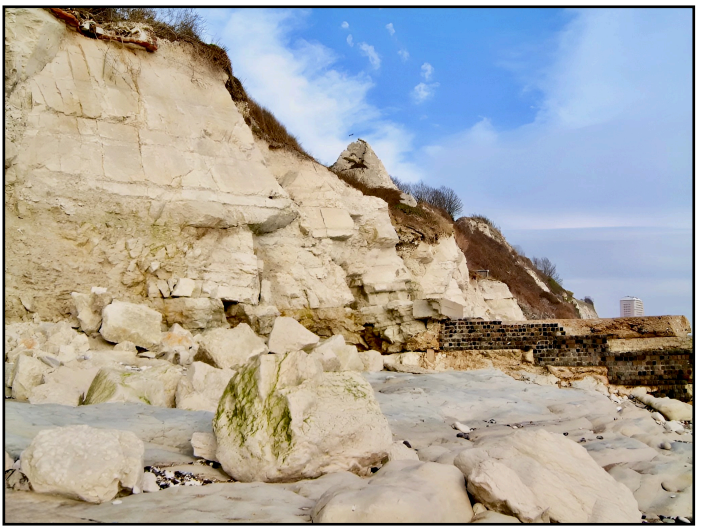
Park along King Edward's Parade, Holywell, Eastbourne BN20 7XB where the parking is free and then, on foot, follow the various paths down towards the beach.There are toilet facilities here.

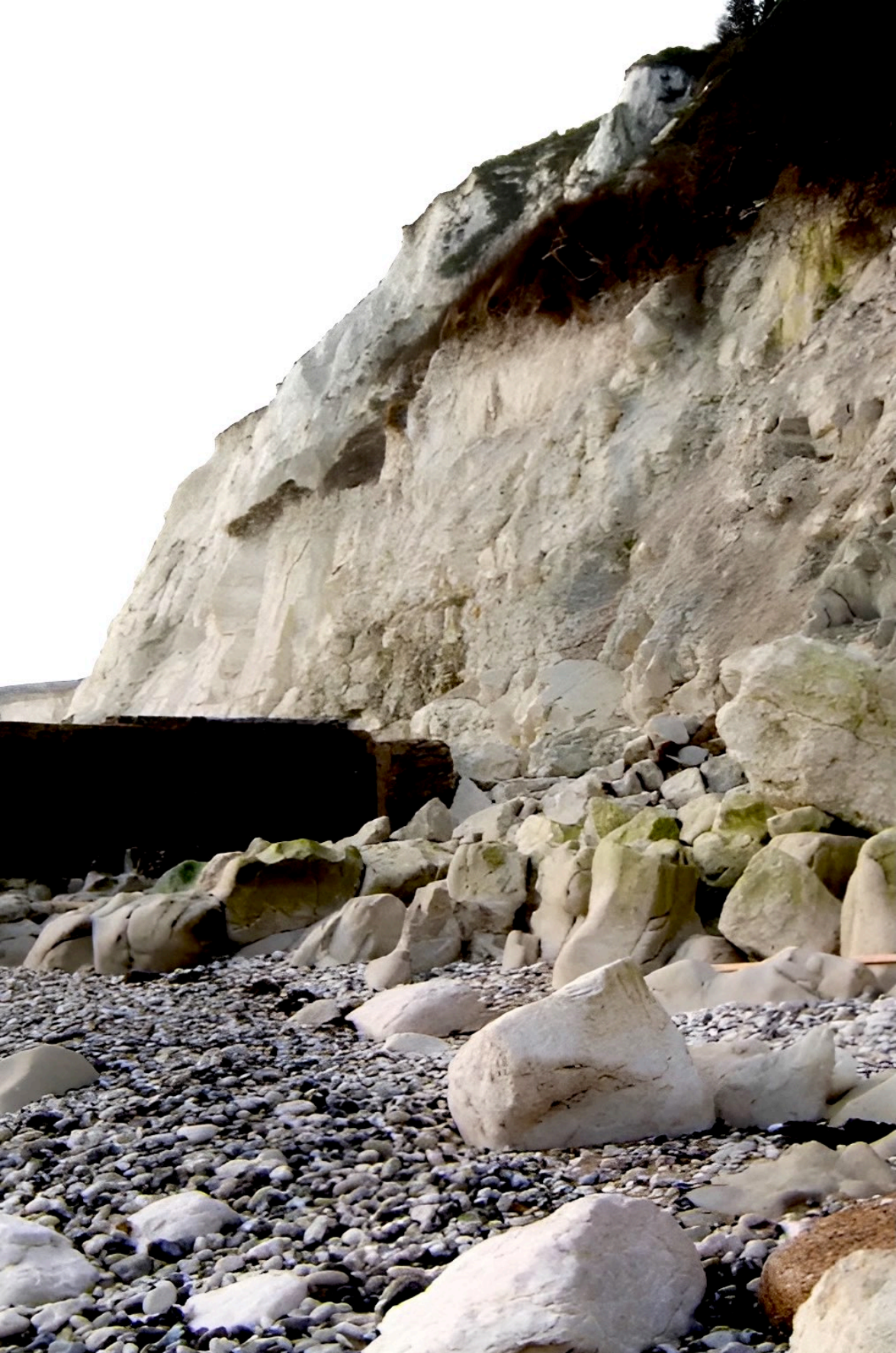
GEOLOGY

The geology here is quite complex, with various beds of Chalk, from a number of formations, making up the cliff section. At the base is the West Melbury Marly Chalk Formation, which is immediately overlain by the Zig Zag Chalk Formation, itself topped by the Holywell Chalk Formation, the New Pit Chalk Formation and the Lewes Modular Chalk Formation at the top,

Although at first sight chalk sediments appear to be remarkably uniform in character, enough variation exists for a lithostratigraphical classification to be built up. Beds and bands can be seen and identified and the presence, or lack of, flint is one such marker.

The West Melbury Marly Chalk Formation of the Grey Chalk Subgroup (formerly the Lower Chalk) is highly fossiliferous and rich in both ammonites.(such as *Mantelliceras) and* echinoids (*Sternotaxis, Micraster and Echinocorys)* which can often be found on the beach, either as specimens that have washed out of their matrix or as flint casts.
The crinoid *Marsupites* and the small sponge *Porosphaera* are also found, along with various corals and bivalves.





The cliffs at Eastbourne and onward to Beachy Head are part of a sequence of cliffs that extend a further 4.5 miles to Cuckmere Haven in the northwest, and encompass the famous cliffs at Seven Sisters. The rocks at Eastbourne span 17 million years of deposition, between 103-86 million years ago, and record the transition from shallow, near-shore conditions to deeper water. The rocks dip to the west, so a walk towards Beachy Beds will allow examination of rocks at the top of the section at Eastbourne, as they gradually meet beach level.

The most productive (and safest) place to search for fossils is on the foreshore at low-tide. Chalk boulders and flint nodules are scattered along the entire section, providing a constant supply of fossils.

Both the beach platform and cliffs are assigned SSSI (Site of Special Scientific Interest} status, which requires visitors avoid damaging (including hammering) the area. From a fossil collecting perspective this means it's not permitted to extract specimens that are in situ. Collecting must be directed towards the loose boulders and pebbles on the foreshore, which does not limi the number of fossils to be found in the slightest..

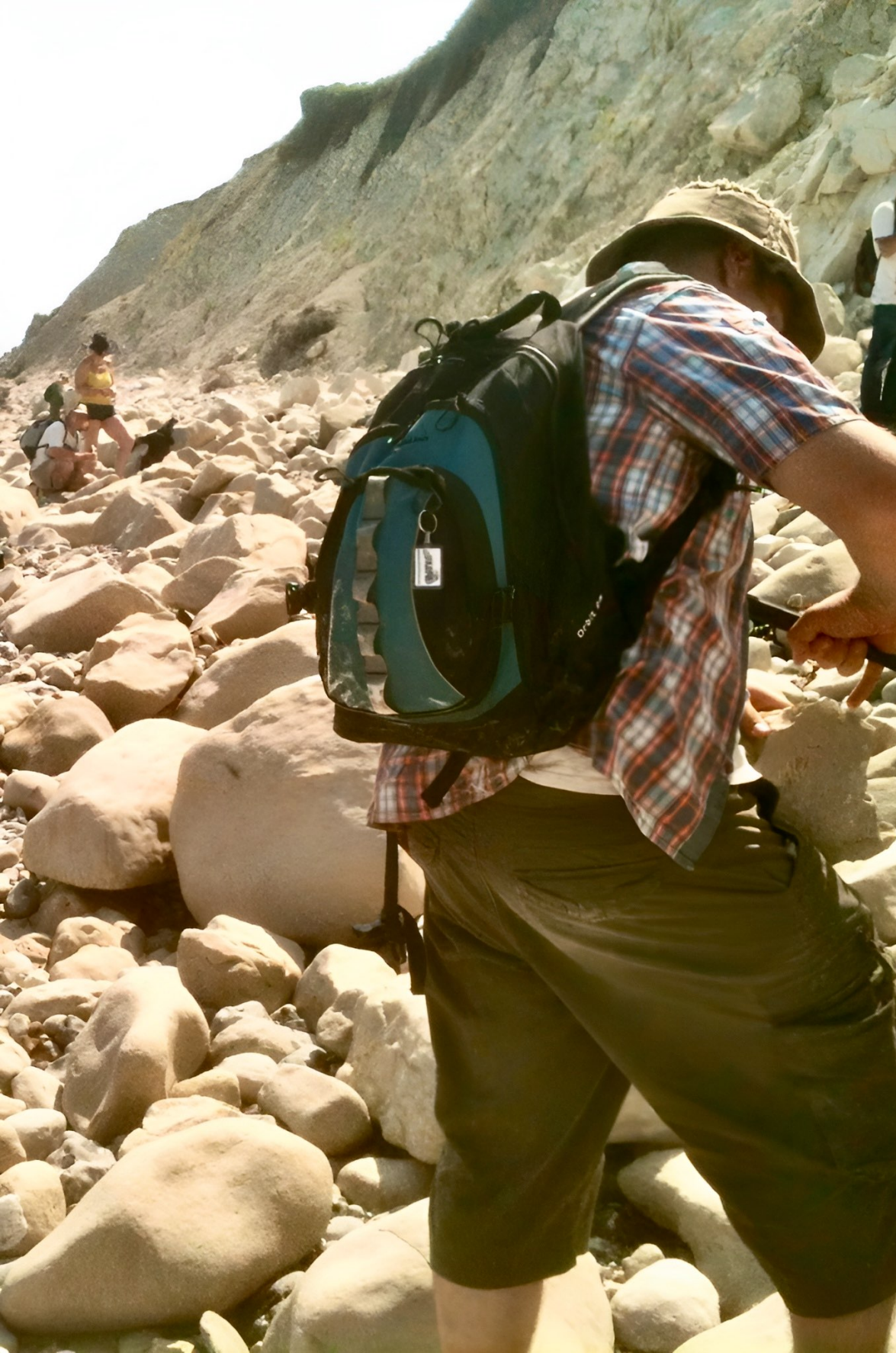
Micraster sp.
Echinoid

Consuls sp.
Echinoid

Sponge

Sponge in flint

Schloebachia varians
ammonite



The quantity of fossils obtained from the foreshore beneath Stonebarrow is staggering. Here are a good representative sample of those that you are most likely to find.

Acanthoceras rhotomagense

Schloebachia varians

Mantelliceras mantelli

Spondylus spinosum
Bivalve

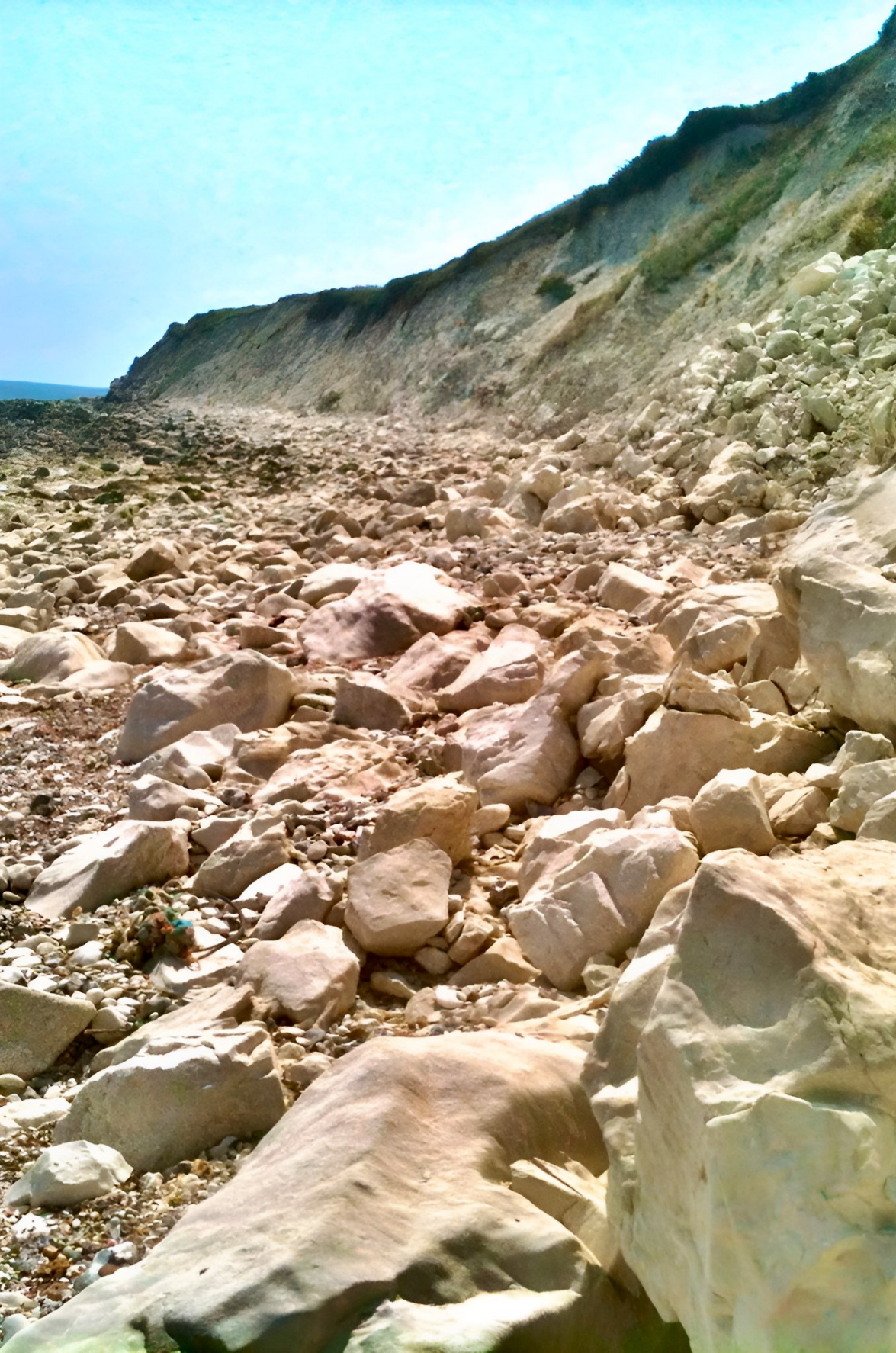
Sponge

Inoceramus sp.
Bivalve

Echinocorys scutata
Flint echinoid

Micraster sp.
Flint echinoid

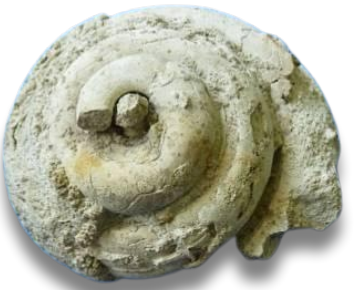
M***aruspites testudinariu***
Crinoid



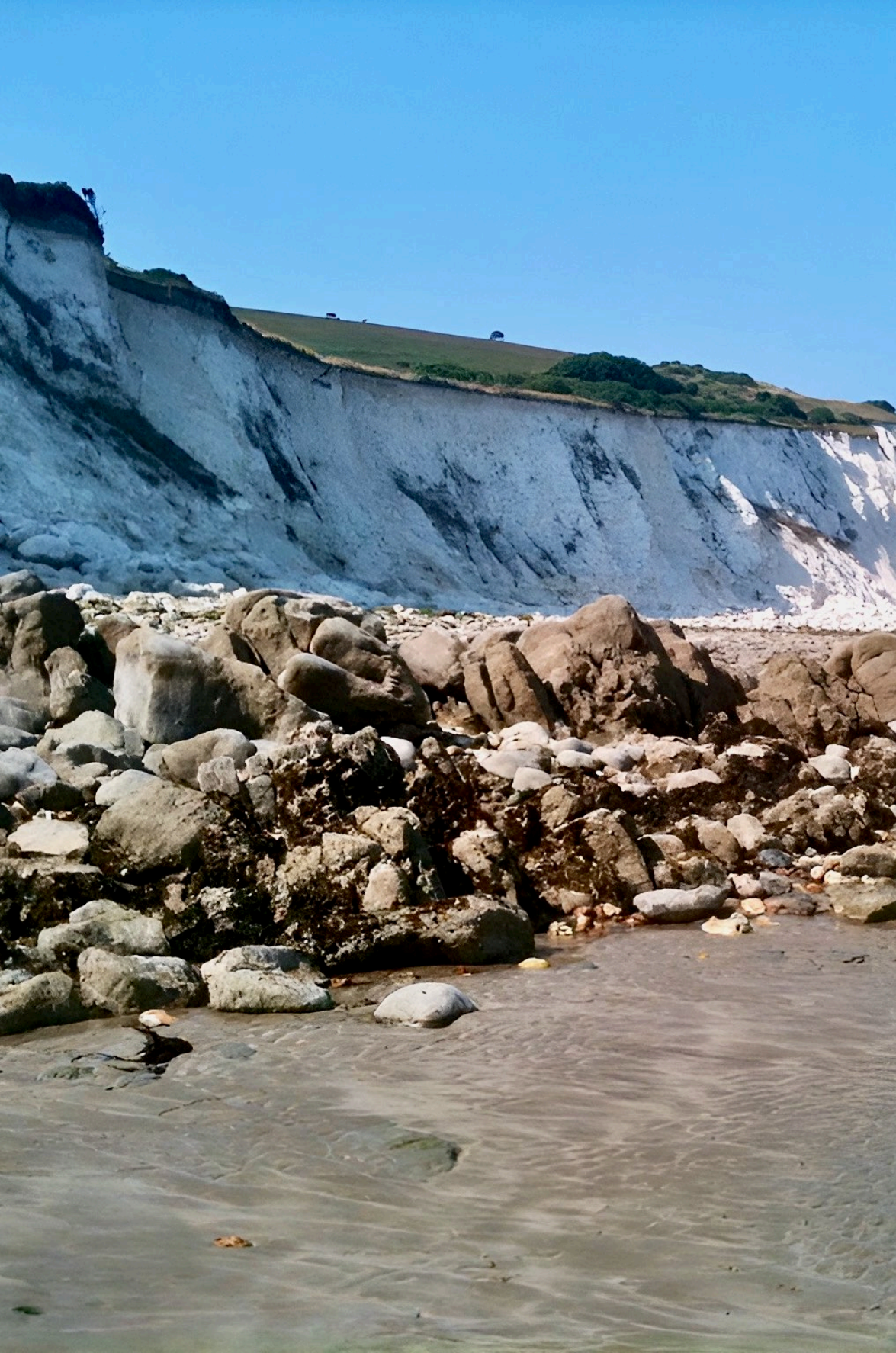
Mytiloides labiatus
Bivalve

Sternotaxis planus
Echinoid in flint

Sternotaxis planus
Echinoid



Bathrotomaria sp.
Gastropod



Acanthoceras rhotomagense

Porosphaera globularis
Sponge

***Pectan* sp.**
Bivalve

CLEANING & STORING YOUR FINDS

Cleaning & preservation
To the vast majority of amateur collectors visiting Eastbourne, the Chalk fossils collected will, generally speaking, require a minimum amount of cleaning. Save from removing any unwanted chalk still attached to the fossil (it might not be necessary to remove every piece of the matrix) no further coating is necessary. If handled with care and stored in a safe, dry place most fossils will be stable in the long-term.

Do not be tempted to varnish your fossils as this can leave an unsightly surface coating when dry.

Storage
Storage is a matter of preference and small boxes of card or plastic are probably a good place to start (See https://earthlines.com**).** Most importantly, your specimens need a label. A fossil collection will be worthless if you do not, at least, record where you found the fossil, even if you don't know the fossil names - you can always name them at a later time. A simple label like this example will be useful.

Name: Micraster echinoid in flint
Location: Eastbourne, East Sussex
Geology: Grey Chalk Sub group
Age: Cretaceous, Cenomanian Stage
Date found: June 2025

DISCLAIMER

This downloadable PDF is one of a series of general guides to fossil collecting localities and not an extensive manual for health and safety when visiting such sites.

Furthermore, because potential hazards may change over time, prior to undertaking any fossil collecting activities, you need to make yourself aware of any RISKS, DANGERS, HAZARDS and LEGAL IMPLICATIONS associated with visiting and collecting fossils at any particular site.

UK Fossils, authors or any associated parties cannot be held responsible for your failure to do so, nor any consequences thereof.

Enjoy your fossil collecting safely and responsibly.