

Dorset GA Group

Newsletter Summer 2022



https://dorsetgeologistsassociation.org/



Contents Welcome to the Summer Newsletter! Page 1: Editor's notes and My worry that we might have to skip an issue proved Symondsbury Geowalk unfounded so I'm pleased to bring this Summer edition to Pages 2-4: Symondsbury Geowalk you. Membership numbers are stable, despite losing some Pages 4-5: Book Review 1 long-term members to illness or re-location. Richard and Pages 5-7: The Hot Rocks Slot Chris have put together a very full programme of members' Page 7: Coombefield Quarry events so please support them. Alison has been working Pages 7-8: Lyme Regis Fossil Festival hard on the membership front and Geoff maintains a great Page 8: Retiring Chairman website for you all. So as you can see, we continue to Pages 8-10: Osmington Mills Field Trip function without a Chairperson but I hope that will not be Pages 10-11: Book Review 2 long-term. It is easy to let things just tick along but Page 11: West Bay Discovery Centre sometimes you need new ideas or a change of direction. Pages 11-12: Library offer Please consider filling one of the vacant Committee posts Page 12: Peter J. Bath and help to ensure that DGAG has a bright future. Enjoy Pages 12-13: Geowalks and field trips your summer and may it be filled with health and good Page 13: Where is it? experiences. Page 14: For your diary Kelvín

Sheila Alderman is our guide for the **Symondsbury Geowalk, Thursday 10th March 2022** Due to the dreadful weather forecast, this Geowalk was put back a week to ensure we did not get a soaking. The 10th March was clear and bright which was much more user friendly and ensured tremendous views.

Seven of us met at the estate carpark in Symondsbury and followed the **DIGS** "**Beneath our Feet**" **Geowalk**, ably led by Richard Hallett. For those of you who were unable to join us, I highly recommend these leaflets. Contact Alan Holiday on <u>alanholiday@btinternet.com</u>. They are still available at the highly discounted priced of £2.50 per pack. See the DIGS website for more information about Local Geological Sites in Dorset on <u>https://dorsetrigs.org</u> During the walk, we saw the effect of two east-west trending faults, the Bridport Fault to the south and the Symondsbury Fault to the north. This led to downward displacement (a graben). The rock exposures along the sides of a group of sunken lanes running away from the village have been

designated as Local Geological Sites (LGS) because they cut through the different sands of the Middle and Upper Lias, as well as through the Junction Bed (Beacon Limestone).

The group walked through the village past the church and headed up Shutes Lane which is a hollow way (sunken lane) created incrementally over many years by water and traffic. Here we saw an exposure of the Beacon Limestone which marks the junction between the Middle and Upper Lias of the Lower Jurassic.









Photo 1. (left) Beacon Limestone (Junction Bed) in Shute's Lane.

Photo 2. (right) Shute's Lane. We continued up the hollow way following the dip slope and saw the Thorncombe Sands. There was some discussion about the graffiti and sculptures in the sandstone, some of which seems to have proliferated during the pandemic lockdowns when more people were out walking as their daily exercise. We all agreed it is great to be able to go out and about more freely now.





Photo 3. and Photo 4. Rock Art/Graffiti in Thorncombe Sands.

In the sandstone banks of the lane there are calcareous concretions (doggers) which are formed early in the burial history of the sedimentary strata before diagenesis of the rock. The concretionary cement makes the rock harder and more resistant to weathering. It also shows the layers of the bedding more clearly than the surrounding sandstone. The cement in the doggers here is calcium carbonate with some iron content which causes the golden colour of the rock. We continued uphill to Quarr Cross where it became significantly more muddy showing a change underfoot in the underlying rock of Downcliff Clay. We then skirted Quarry Hill admiring the fantastic views and making out landmarks in the distance.





Photo 5. Dogger in Thorncombe Sands.

Photo 6. Quarr Cross.



Photo 7. and Photo 8. Views on the way up Quarry Hill. Langdon Hill in distance and change of slope in foreground.



Photo 8.



Photo 9. Quarry Hill

We also noted a change in slope that indicates the change from Bridport Sands to the overlying Inferior Oolite. At the top of Quarry Hill it was obvious why it was so named. The stone was used extensively locally as a building stone. There is no evidence of recent quarrying but there are some exposures of the Inferior Oolite.





Photos L- R. 10. and 11. Some fossil content in the Inferior Oolite in situ.

12. Dogger in the Bridport Sand Formation underlying the Inferior Oolite.





Photo 13. Bridport Sands in Quarr Lane.



Photo 15. Beacon Limestone in Mill Lane.



Photo 14. Colmers Hill which was originally capped with Inferior Oolite like Quarry Hill, meaning that the underlying sands were not eroded away.



After lunch we headed down from Quarry Hill towards Symondsbury into the Bridport Sands. We could not differentiate this with the naked eye from the Thorncombe Sands in Shute's Lane. At Quarr Cross, we retraced our steps back to Symondsbury and studied the building stones in the walls. The lower walls of the older buildings were built of Forest Marble probably from the quarries at Bothenhampton, Bridport. Forest Marble is highly fossiliferous and much more water-resistant than Beacon Limestone and Inferior Oolite.

We finished the day by looking at the Beacon Limestone at the top of Mill Lane and the Thorncombe Sands below. We had a brilliant walk and having a small number meant everyone contributed to the debate and discovery of the geology. Many thanks to Richard Hallett for arranging this first Geowalk

For more detail of the building stones see the Dorset Building Stone website entry:

https://www.dorsetbuildingstone.org/ symondsbury.html

Book Review by John Scott

A Guide to Fossil Collecting on the East Dorset Coast. By Steve Snowball and Craig Chivers. Siri Scientific Press 2021 ISBN 978-1-8381528-2-6 £18.99 + p & p. Siriscientificpress.co.uk

in Mill Lane.

This is the final book of the trilogy of guides to fossil collecting on the Dorset Coast. The previous two books cover the western and southern areas of the Dorset Coast.

The first two books were published with a gap of two years between them, the gap between books two and three being only one year. This was possibly due to the "Lockdown" giving people more time at home. Unfortunately, this shorter period shows in the new book. There are a few, minor, errors in the first two books. However, in the latest book, there is one error that I consider guite major, and several that are minor. These range from probable typographic mistakes to not using the up-to-date information on the Jurassic/Cretaceous boundary positioning.



Progressing through the book, it states on page 15 that the army ranges are to the east of Kimmeridge Bay whereas they are to the west. The Page 17 photograph looking west to Clavell Tower is actually looking east. There then follows a good section on the fossil collecting code explaining the categories of fossils covered. This is possibly the clearest explanation of the code that I have read.

The Jurassic/Cretaceous boundary causes some difficulty, partly as the international committee that is responsible for defining the accurate biostratigraphically-dated boundary has not yet completed its work.

However, one of the references cited in the bibliography (Cope 2014) is quite clear that the boundary is within a few metres of the base of the Purbeckian strata. The book on page 42 states that the middle Purbeck strata starts in the upper Jurassic and the Cinder Bed is the base of the Cretaceous at 136Ma. This date is within Wealden times, the Cretaceous starts at 145Ma. On page 67 this is stated correctly.

On page 50 there is a commonly made mistake, which is even printed in Jurassic Coast Trust literature. Handfast Point and Old Harry Rocks are not the true end of the Jurassic Coast World Heritage Site. This is actually the last exposure of Chalk in the cliffs at the southern end of Studland Bay (I know I am being pedantic with this common, minor thing).

Page 53 contains a major mistake! This page lists the zonal Ammonites of the Upper Kimmeridgian, listing 8 zones, 7 of which are labelled with the genus *Pavlovia*, 1 *Virgatopavlovia* (correctly named) and 5 *Pectinatites*. The next page has the correct zonation. This is taken from the Geologists Association guide 22 - Geology of the Dorset Coast. (Cope 2014) There then follows a good, concise explanation of zone fossils.

Within the rest of the book there are a few mistakes within the details.

Page 63, 3 species of Pliosaur all appear to have the same picture.

Page 72, The ages of the Upper Greensand are stated as 94-113Ma. These are Albian strata of 113-100.5Ma, 94-113 is Aptian (Lower Greensand). A typo states the Upper Greensand suffers from good exposure!

Page 75, Eocene Barton Group Formation; Boscombe Sands, Barton Clay, Chama Sands, Becton Sand. The book states that only the latter 2 crop out in Dorset. This should be the former 2. They are listed correctly on page 184.

Page 91, "The Fossil Forest is late Jurassic around 135Ma." should be 145Ma., 135Ma. is well into the Cretaceous (Valanginian, which is within Wealden strata). The fossil soil of the forest horizon is used at the moment as the informal, local base of the Cretaceous at 145Ma. Page 123, mention of "Fresh Steps" near Chapmans Pool should be "Freshwater Steps".

Page 133, "Trevor Haysom" should be "Treleven Haysom".

Page 164, the photograph caption states that the fossil teeth are Jurassic but they are Lower Cretaceous. A few of the photographs are a little dark for me and some are a little fuzzy e.g. page184.

Despite these shortcomings, it is a good book, showing what can be found and where. I do not regret buying it, but it could have been better with a little more care.

THE HOT ROCK SLOT

ANDESITES

Andesites are volcanic rocks intermediate in character between basalts and rhyolites. Very few andesites are found outside island-arc and continental margin environments, and they take their name from the Andes in South America where they are very abundant. The magmatic processes at plate margins that give rise to andesites and their associated rocks have been of fundamental importance to the evolution of the Earth as they are responsible for the formation and accumulation of continental crust.

Definition and characteristics:

Andesites and diorites (their intrusive equivalents) are defined as intermediate rocks, which means that they have bulk SiO₂ contents in the range 52–66 weight percent. As a rule, andesites do not contain olivine, quartz or alkali feldspar; their mineralogy is dominated by pyroxenes (augite and/or orthopyroxene) (Fig. 1), hornblende (Figs. 2 and 3), plagioclase feldspar and



Fig. 1 Photomicrograph of andesite containing phenocrysts of pyroxene (grey with cleavage), plagioclase (colourless) in glass. Mount Asama, Japan. Plain polarised light. Width of image: 2 mm. Photo: G. Droop.

magnetite, all of which may be present as phenocrysts in porphyritic varieties. The groundmass is either glassy (Fig. 1) or a very fine-grained aggregate of the same minerals.



Fig. 2 Photomicrograph showing zoned hornblende phenocrysts in andesite from the Czech Republic. Plain polarised light. Width of image: 2 mm. Photo: G. Droop.

Plagioclases typically have intermediate compositions (i.e. Ca/(Na+Ca) values in the range 0.3-0.6), and pyroxene and hornblende compositions have moderately high Mg/Fe ratios. In hand specimen, andesites tend to be grey in colour (Fig. 3), i.e. paler than basalts and darker than rhyolites.

Origins of andesite:

Although some unusual varieties occur as differentiates of basalt at constructive plate margins (e.g. in lceland), the vast majority of andesites occur in association with subduction zones. It is now generally accepted that andesites

do not form by partial melting of the down-going slab itself. Instead, dehydration of the metasediments, metabasalts and serpentinised ultramafic rocks of the slab generates aqueous fluid which rises into the hanging-wall mantle wedge where it fluxes partial melting of peridotite. Laboratory experiments have



Fig. 3 Hand specimen of andesite with hornblende and plagioclase phenocrysts. Kärnten, Austria. Squares are 1cm across. Photo: G. Droop.



Fig. 4 Photomicrograph of boninite from Japan, consisting of orthopyroxene in glass. Width of image: 2 mm. Photo: G. Droop.

shown that the primary magmas produced are hydrous, oxidised, high-alumina basalts or basaltic andesites. Such compositions are seldom represented by rocks at the Earth's surface, but rare high-magnesian andesites called 'boninites' (Fig. 4) may be examples. At depth, given time, such primary magmas would crystallise olivine, pyroxene(s), plagioclase and magnetite and evolve towards true andesites. The crystallisation of magnetite ($Fe^{2+}Fe^{3+}_2O_4$), which is facilitated by the oxidising conditions of the hydrous magma, is thought to be the reason why the Fe/(Fe+Mg) ratios of the melt and other crystallising minerals are kept relatively low during fractionation.

Andesitic volcanoes:



Fig. 5 Mount Ngaurahoe, New Zealand, a typical stratovolcano. Photo: W.J. Wadsworth.

Andesites in the UK:

Volcanoes that erupt andesitic magma tend to be built of alternating lava flows and pyroclastic material. Such composite volcanoes are known as **stratovolcanoes**. Because andesitic magmas have higher silica contents than basalts they are more viscous so don't tend to flow as far; consequently, stratovolcanoes tend to be steeper-sided than basaltic shield volcanoes (Fig. 5). The higher viscosity of andesitic magmas also means that gas (mostly H_2O in this case) escapes less easily from the silicate liquid once the bubbles (vesicles) have nucleated, resulting in a more violent style of eruption, and a greater tendency to produce **tephra** i.e. pyroclastic fall deposits (ash, lapilli and bombs).

Most British andesites formed as a result of the **closure of the lapetus Ocean** in the Lower Palaeozoic. In England, the best places to see and sample them are in the subduction-related volcanic centres of North Wales and the Lake District (both of which were situated on the northern margin of Avalonia prior to ocean closure).

In the Lake District, andesites dominate in the lower 2.5 km of the Borrowdale Volcanic Group which is of Middle to Late Ordovician age; primitive basaltic andesites occur in the Eycott Group volcanics of similar age. In North Wales, Early Ordovician andesites form a minor part of the Rhobell Volcanic Complex in Snowdonia.

Scottish andesite volcanism was associated with the Caledonian Orogeny which marked the closure of lapetus and collision of Laurentia and Avalonia in the Silurian and Devonian. Several volcanic successions of this age are known: these are the 'Old Red Sandstone' (ORS) volcanics of Glen Coe, Ben Nevis and the Lorne Plateau in western Highlands, Esha Ness in Shetland, and the Fife, Sidlaw, Ochil and Pentland Hills of the Midland Valley. Some of these volcanics are associated with underlying 'Newer Granite' plutonic complexes of similar age and are presumably genetically related to them. The Cheviot volcanic/plutonic complex in northern England is also one of this set. Andesites are well represented in the Lorne, Esha Ness and Cheviot lavas and the lower part of the Glen Coe complex. Unfortunately, most of these rocks have suffered extensive secondary alteration.

In detail, the origin of these ORS volcanics is still controversial, mainly because subduction of lapetus beneath Laurentia had virtually ceased by the time they were erupted. Alternative models invoke either (i) magmatism related to the rise of hot asthenosphere caused by break-off or delamination of the subducting slab of lapetus oceanic lithosphere, or (ii) initiation of northward subduction of the Rheic oceanic lithosphere beneath Avalonia. *Giles Droop*

Alan Holiday reports on Coombefield Quarry, Portland.

Recently I have been in communication with Mariko Whyte, DWT Conservation Officer (Planning & SNCI) about a planning application from Stone Firms to convert the northern section of Coombefield Quarry (north of Southwell) into a site for the disposal of inert waste. On visiting the site early in January, I found access was difficult despite a footpath passing through the area between the northern and southern quarries. I contacted Stone Firms to ask if a visit was possible and they put me in touch with their consultant Nick Dunn (Environmental Consultant, Land & Mineral Management). He sent me information on the planned changes and fortunately this includes the retention of an exposure of the Lower Purbeck Beds in the north-west corner of



the site where a 'cave' has been found with roosting bats arrowed in the picture below. During my visit with Nick Dunn in early February, we didn't have time to look at the exposure in detail, but I am planning to return in the near future to get a better appreciation of what the exposure has to offer. Knowing that dinosaur footprints have been found nearby in the past (those stored at Suckthumb Quarry and later removed to Portland Port) I am hoping to find more of the same! I think they originally came from Coombefield although I am open to correction. Each exposure is useful as there are spatial differences due to facies variation and

changes in environmental conditions when the sediments were deposited. I have planning documents which I can forward to anyone interest if you email me (alanholiday@btinternet.com).

Alan Holiday also sent this summary of this year's Lyme Regis Fossil Festival

DGAG and DIGS had a presence at the Lyme Regis Fossil festival on 30th April and 1st May. We had a gazebo near the Marine Theatre. Saturday went well as the weather was fine and there was a steady flow of visitors, especially families with children. I used my display of pictures of the landslip at Redcliff (Bowleaze Cove, Preston) which created a lot of interest. Visitors were also interested in the conservation work that the DIGS group does but, unfortunately, we didn't manage to sign up any new members.



The DGAG and DIGS section at the Lyme Regis Fossil Festival

We did manage to sell some of the DIGS walks leaflets. I still have plenty of these especially the one that covers the Purbeck area, £2.50 set, a bargain.

Most of the interest was in the nearby marquee which housed Bristol University Palaeobiology, Charmouth Heritage Coast Centre, Dinosaur Isle (Isle of Wight), The Etches Collection, the Geologists' Association and the Jurassic Coast Trust. This was particularly the case of the Sunday when the weather deteriorated, and it rained all day. The marquee did better as visitors could see a lot without going out into the rain. It was so slow on Sunday that we gave up at 3 p.m., along with some of the other

contributors who had gazebos.

Presentation to our retiring Chairman, by Kelvin Huff

Most members will know that Alan stood down at the 2022 A.G.M. after 15 years in the post. Alan has been a brilliant Chairman, always leading from the front. He has been very generous with his time, effort, enthusiasm and commitment over all that time. He has always been very willing to share his vast knowledge, explaining things patiently and clearly on numerous field trips. Generations of geologists have much to thank him for. That almost certainly includes some members reading this now.

The plan was to make a presentation to Alan at the A.G.M. but that sadly went online in the wake of another Covid peak. He must have thought us very ungrateful! If you are reading this Bob Chandler, I am still expecting your 'tribute slides' to be shown at some point, I haven't forgotten! I am sure that members will like to know a presentation was finally made to Alan at a DGAG lecture on behalf of the DGAG membership. This consisted of a set of Jurassic-themed coins, a cheque and a card signed by some members.

As you can see from this issue, Alan hasn't exactly retired from DGAG, as he is still on the Committee and contributing! He does however, leave a void yet to be filled. Several potential candidates were approached but the post remains vacant. Maybe you are reading this and thinking, I could



Alan receives his presentation from Alison Neil, DGAG Treasurer and Membership Secretary

probably do that. How about joining the Committee and easing yourself in? We are a friendly bunch and you'll have a lot of support and guidance. Do let me know if you can help.

Anthony Brook provided this report on the field trip to Osmington Mills 14th May 2022

Party Leader: Richard Hallett

Participants: Mimi Spencer, Alan Driscole, Michael Amirtash, Richard Barrett & Anthony Brook We began by studying the strata to the west.

At Redcliff Point, the Oxford Clay is faulted against the Corallian but forms the core of the Ham Cliff anticline before being overlain by the Corallian and in the foreground Kimmeridge Clay (see *Picture 1 on next page).*

Mudflows of the Kimmeridgian have brought it to the foreshore overlying unconformably the in situ strata. Richard pointed out how difficult this would be to interpret in a drill core.



We crossed a large boulder field of Upper Greensand caused by an old landslip. Various trace fossils in these calcareous, glauconitic sandstones were observed until again exposures of the Kimmeridgian were encountered. Evidence for the Ringstead Coral were found by Alan below Black Head.

The uppermost units of the Corallian—Sandsfoot Grit, Clavellata Beds and the Nodular Rubble of the Osmington Oolite were studied with hand lenses.



These strata show evidence for marine regression and then transgression. The sequence is oolitic sediments being deposited in shallow water with strong currents, then lagoonal deposits, followed by more high energy deposits again.

Returning to Osmington Mills, we stayed on the beach for lunch before studying the sequence to the east.

The lowest beds of the Corallian, the Nothe Grit and Nothe Clay, were poorly exposed. The overlying Bencliff Grit has large calcareous concretions (doggers) that display the same cross-bedding as in the surrounding sands.



At the top of the grits an erosional surface could be seen as we passed into the Osmington Oolite. The individual beds were examined and discussed, with the discovery of a very large block of the *Chlamys qualicosta* bed which had been lifted by the sea and overturned, exposing the oysters.

The bed above was supposed to be a pisolite with large ooids up to 10mm, but what was observed had ooids no greater than a couple of mm. Above this, the Middle White Oolite was extensively burrowed and several different forms were identified.



8. Ringstead Coral Bed



7. Bioturbated Osmington Oolite

Before finishing, Alan showed us a small exposure of the Ringstead Coral Bed.

Refreshment was taken before returning home!



Book review by *Richard Barrett*: Notes From Deep Time by Helen Gordon

First published in 2021, this 'popular science' book has now become available in paperback. The author is no geologist, but is a novelist, previous editor of Granta magazine and now teaches creative writing. She's married to an earth scientist, and perhaps feeling 'if you can't beat 'em., etc' decided to find out what this geology stuff is all about.

The book consists of a series of long essays on various topics of geological interest exploring the general theme of what we'd call geological time. To give you a taste, some of the topics covered are stratigraphy, plate tectonics, glaciology, volcanology, palaeontology, building stone and the Anthropocene. Each piece describes her visits to various localities associated with the particular topic, and interviews with experts in the particular field.

Don't let the 'popular science' pigeon-hole put you off - there is a lot of good geology in here, and she lets the experts do most of the



explaining. The experts don't hold back, either, pointing out where they disagree with their peers (as one who's read 'The Human Planet', I found the conflicting views on Lewis and Maslin's Holocene vs. Anthropocene argument very interesting). She has guided field trips to, amongst other places, Siccar Point, the Chilterns and Downs, Lyme Regis (during the filming of Ammonite!), the California fault zone, the Cleveland-Lloyd dinosaur quarry in Utah, Campi Flegrei in Italy and a rather forbidding nuclear waste disposal site in Finland.

As well as geology, this book is also as much about the geologists she meets. There are wry comments on dress code, collecting habits, 'hard rock'/'soft rock' and the thick-skinnedness required of students of building stone.

As you'd expect from her background, the book is very well written. It is fully cross-referenced, and there's a well-chosen 'Further Reading' list.

Superficially, this book might seem to cover similar ground to Robert Macfarlane's 'Underland', but the style is easier and more engaging, and is in no way self-absorbed. The author's joy as she discovers the meaning of deep time is infectious. Moments of self-reflection are left to the final chapter, where she reviews her explorations and learning, and admits to a new way of thinking about the world. It is a very positive ending. As an admitted layman, I thoroughly

enjoyed reading this book, and whilst it may not be 'top drawer' for geology books aimed at those such as me - that's currently occupied by all the Fortey's, I'd say - it is a very good addition to the genre. I feel it would make an excellent holiday read, for amateur and professional alike.

Helen Gordon: Notes From Deep Time. Published by Profile Books 2022 in paperback. 322pp. ± 9.99

Alan Holiday briefs us on the West Bay Discovery Centre.



I visited the West Bay Discovery Centre in connection with a recent grant by the Curry Fund towards the publication of a leaflet entitled 'Discover the geology of West Bay'. These will be available free of charge to visitors at the Centre. The Curry Fund grant enabled the printing of the leaflet and allowing it to be free of charge and it will be available in the

next couple of weeks (end of May). I was very impressed by the display entitled "Buried in Time" at the

Centre which shows what the environment was like 180 Ma. The high-quality fossils have been provided by Bob Chandler, Peter Langham and David Sole. The display will be in place until October 31st. I do recommend a visit to the Centre which is free, unlike the parking cost of £3 for 2 hours! The Centre is the result of the efforts of John West (and his team), who I was surprised to find was an ex-student of mine from Weymouth Grammar School days!



The fossil trio!

Mike Le Bas: Geology library

Mike Le Bas is disposing of his library and would like to see the books end up in good homes. He is open to offers for any title. If you are interested please contact Mike directly at m.lebas@btinternet.com (01258 454515) Any books wanted would have to be collected from Mike's home.

BGS Memoirs (most unfaded, GSA memoirs as new)

1. Mem Geological Survey UK: Tertiary Igneous Rocks Skye, by Harker, Clough. 1904, 26 Chaps, Map, Spine repaired, barely faded. 481pp. annotations.

2. Mem Geological Survey Scotland: Geology of Ardnamurchan, NW Mull Coll, by Richey & Thomas, et al. 1930, Near perfect condition, 26 Chaps, 3 Appx, 393pp, Map, papers in sleeve. His copy given to me (MJLB)

3. Report on the Geology of Londonderry, (Tyrone, Fermanagh). J. Portlock 1843, 13 Chaps, many plates, col. maps, sections, 784pp, fair condition, spine repaired

4. Chapters Geology Scotland, Peach, Horne, 1930, col maps sections, 224pp, barely worn.

5. Mem Geological Survey Scotland: Pre-Tertiary Geology Mull, Loch Aline, Oban, by Lee et.al, 1925, 18 Chaps, 140pp, new cover

 Mem Geological Survey Scotland: Tertiary Geology Mull, Loch Aline, Oban, by Bailey et.al, 1924, 38 Chaps, 445pp, spine repaired, faded. Richey's copy (signed, who gave it to me (MJLB)
Mem Geological Survey England: Geology of Fenland, by Skertchly. 1877, 20 Chaps, col folding map, sections, faded, 335pp

8. Technical Report BGS, WA93/4 Geology Precambrian rocks, Quarries NW Nuneaton. Carney, Pharaoh, 1933, 6 chaps, clip-bound, 61pp.

9. Stillwater Ig. Complex, Montana. Hess, 1960. Geol. Soc. Amer. Mem 80, 9 chaps, 230pp. 10. Metamorphic Reactions, Facies. Fyfe, Turner, Verhoogen. 1959 Geol. Soc. Amer. Mem 73, 7 chaps, 259pp,

11. Structural Conversions, Crystal Systems, Geology. Eitel 1958, Geol. Soc. Amer. Special Paper 66, 14 chaps, 183pp

12. Origin Granite Experimental Studies System Ab.Or. SiO2.H2.O Tuttle, Bowen. 1958 Geol. Soc. Amer. Mem 74, 20 chaps, 153ppcontd. on p.12 13.Selected Petrogenic Relations Plagioclase. Emmons et.al, 1953 Geol. Soc. Amer. Mem 52, 9 chaps 142pp

14.Petrograph, Praktikum, 1 Gesteinbildende, (Uni-and Bi-axial optic axes). Reinisch. 1901 136pp in German, Harker's copy, as new

15. Petrograph, Praktikum, 2 Gesteine (Textures and rock types). Reinisch. 1904 180pp German, as new.

Peter J. Bath 1940-2022

Peter's formative years were in the South West. He was a keen cyclist and then motor cyclist, interested in exploring the countryside, waterways and topography through travel and study and photography. He was a very active, practical person of the highest integrity who improved his skills and experience through reading, mentoring and doing.



Pete in full flow at Wimborne Minster, Nov. 2021.

He qualified as a Secondary School Geography Teacher in 1960 from St. Luke's College, Exeter and started his career in London where he married in 1963. He enrolled in further education at the London School of Economics and upon graduation was offered a Meerschaum scholarship to further his education at Ohio State University, Columbus U.S.A., where he achieved an M.A. in International Politics. His first job was with an international consultancy in New York. However, he soon moved to work for a publishing firm called Holt Rinehardt and Winston on Madison Avenue. After three years, when his family had grown to three - he was shipped off to Johannesburg, South Africa, to set up a franchise for them. This eventually became Peter's own publishing business but in 1976, when the family had become four, he decided it was time to repatriate to the U.K., so the children could get to know their relatives better.

At this point, Peter undertook the renovation and extension of two derelict cottages as he returned to teaching Geography at St. Aldhelm's

school in Sherborne, where he ultimately became Head of Department. He also set up a Canoe College on Sherborne Lake to train local school children to undertake adventures on the sea. He later qualified as an Instructor and Examiner for the British Canoe Union. It was on sea canoeing expeditions that Peter's interest in the coastline's rock formations that his ultimate passion for Geology was sparked. He nurtured his interest through DGAG, OUGS, DIGS and Bristol University. Latterly, Peter had seen an opportunity to enhance the information available to visitors of the many historical stone buildings in the local area. He was collaborating with his geology friends to produce visitor's geological explanatory handbooks when he was sadly taken from us.

Patrícía Bath.

Editor's note: Pete taught himself how to make rock thin sections, many of which feature on the DBS website, and with others, pioneered the use of loupe photography. He is a massive loss to the DBS group, who will miss his friendship, advice and knowledge. Shortly before his death, I assured Pete that we would do our best to ensure the various guides he was working on are completed. *Kelvín*

Geowalks with Richard

These are a walk first and foremost, not geology field trips, there is even no need to bring a hand lens or notebook but a stout pair of walking shoes/boots are required. It's an opportunity to get outside, socialise and exercise and (re-) discover some geology along the way. The walks are based on those compiled and published by Dorset's Important Geological / Geomorphological Sites Group (DIGS). The walks are detailed in the '*Beneath Your Feet*' leaflets and available for purchase in advance from Alan Holiday or on the day. There are five walking leaflets in each pack, with information and geological points of interest along the route.

Walk 4. Saturday 18th June. West Dorset. Abbotsbury Area (10km) Walk 5. Thursday 7th July. West Dorset. Golden Cap & Hardown Hill (7km) Walk 6. Saturday 6th August. West Dorset. Hardy Monument-Portesham Farm-Corton (8km) Walk 7. Thursday 1st September. West Dorset. Burton Bradstock-Wanderwell (8km) Walk 8. Saturday 6th October. Purbeck. Agglestone-Studland-Ballard Down (11km) Walk 9. Saturday 5th November. Purbeck. The Chalk Ridge: Corfe Castle to Ulwell (13km) All walks meet at 10:15am. There is a £2 contribution for DGAG funds. Please email <u>richard.rh.hallett@outlook.com</u> to book a place.

Field Meetings

Kimmeridge Day - Sunday 17th July

Guided tour of The Etches Collection, led by Chris Webb. 11am-noon.

Field Meeting to Kimmeridge Bay, led by Richard Hallett. 1pm-4pm.

This day is split into two parts and you may participate in either or both. The tour of The Etches Collection will be given by Chris who is an volunteer guide at The Collection. There is an entry fee of £6.50 per person. Even if you have visited before, please consider visiting again to support The Collection and learn something new. The afternoon field meeting will start at Gaulter's Gap car park in Kimmeridge Bay at 1pm. There is a parking charge of £5 and field meeting contribution of £2.

Residential Weekend (Saturday 10th – Sunday 11th September)

A two day field trip (Saturday and Sunday) with an option for a few hours geology in Minehead on Friday, led by John Scott. (Friday - not part of the field trip proper, a scouting trip to look for some Devonian slumped bedding that may be present to the west of Minehead. Anyone on the field trip is welcome to join John).

Saturday 10th September

Kilve Pill: View the wave-cut platform and discuss the overall structure of the area with effects of the Variscan and Alpine orogenies.

Kilve Beach: Examine the lower Jurassic strata and tectonic events that have deformed them. Jurassic "Mud volcanoes".

Lilstock: Fault gouge and recent sedimentation of flowstone and storm beach.

Sunday 11th September

Watchet Beach: Mercia Mudstone and Blue Anchor Formation, with deformation structures. Blue Anchor Bay: Triassic Mercia Mudstone and Penarth Group mudstone. Discussion of the palaeoenvironments.

St Audrie's Bay: Faulting and Upper Triassic to Lower Jurassic transition, candidate type section. **Accommodation**

The proposed accommodation is the Premier Inn, Minehead. **Participants should arrange their own accommodation.** Block booking reservations have not been made.

Parking and Driving:Car parking charges apply at most/all locations. Many of the roads are narrow and single track. **Reserve a Place** Please email <u>richard.rh.hallett@outlook.com</u>

Where is it?

In the last newsletter the photograph was taken in the Thorncombe Sands hollow way at Shutes Lanes, Symondsbury. Richard has supplied this image for this issue's challenge.





North Somerset coast



Image for Where is it? No.3

| DGAG Field Trips and allied events 2022 | DIGS (Dorset's Important Geological Sites) | |
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| N.B. All events and field trips are subject to current Covid rules and restrictions For the monthly GeoWalks see page 13 Field Trips Sunday 17 th July (afternoon). Kimmeridge Clay Formation - Kimmeridge Bay led by Richard Hallett Limit: 15 participants. | The group welcomes anyone wishing to help with conservation work on Local Geological Sites. Please contact Alan Holiday if you are interested. Working parties go out on both weekdays and weekends. https://dorsetrigs.org/ alanholiday@btinternet.com | |
| Register: Email <u>richard.rh.hallett@outlook.com</u> Fee: £2 (on the day). Meeting time, location and information will be forwarded upon registration. | Wessex OUGS events Daytrips: Please contact Tom Mintern- Fountain on: <u>wessexdaytrips@ougs.org</u> to book a place. £2.50 day trip charge. | |
| Lectures Chris Webb is organising a monthly series of lectures at the Dorset Museum at 7 p.m. June 23rd (speaker and topic tbc) July 21st (speaker and topic tbc) August (no lecture - Museum venue unavailable) September 22nd - Martin Gledhill - Geology of NZ | June 10th -12th The Geology of the Glamorgan Heritage Coastline July 3rd Weald and Downland Museum August 11th Sidmouth and Budleigh Salterton September 15th –18th 2023 Geology of the Antrim Coast Contact Sue Graham for residential trips at wessexweek@ougs.org | |
| places are limited. cwebb48578@aol.com | Can we help answer your geological questions? | |
| The weekend residential field meeting this year is cheduled for Friday 9th to Sunday 11th September . We hall visit the North Somerset coast and be led by John Scott. Register an expression of interest to attend with Richard Hallett. Details on page 13. | Either post them on our website's contact form or send them, maybe including photos, to me at the email below. <i>Kelvin</i> | |
| Dorset Building Stones Group . We are currently working on guides to Athelhampton, Wimborne Minster, Blandford, Sherborne, Christchurch (Constable's House) and a Dorset Building Stone Atlas. Contact Kelvin Huff if you'd like to get involved with producing any of these guides. | Autumn Newsletter is: Monday, 3rd October <u>Committee news:</u> We need a Chairperson, DBS Liaison and someone to handle Sales. <i>Kelvin</i> | |

| DGAG Committee Members | | | |
|--|-----------------|--------------|--------------------------------|
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