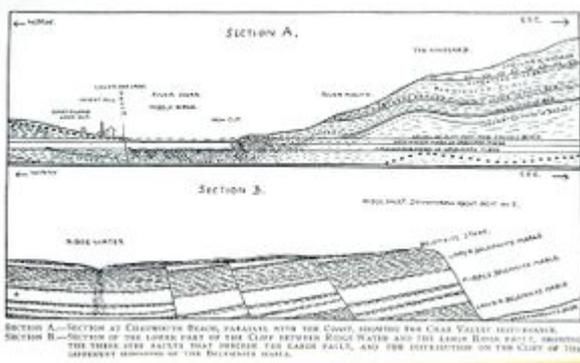


# Whitsuntide Excursion to Lyme Regis and Charmouth, Friday, May 29th, to Wednesday, June 3rd, 1914 - Geologists' Association excursion

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Section A.-Section at Charmouth Beach, parallel with the coast, showing the Char Valley Disturbance. Section B.-Section of the lower part of the cliff between ridge water and the large ridge fault, showing the three step faults that precede the large fault, and

the distribution on the cliff of the different horizons of the Belemnite Marls.

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## Link to Album and Photograph index

**To view photograph album:**

[Geologists' Association Carreck Archive. The T W Reader geological photographs long excursions 1914. Part 2](#)

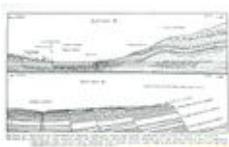
**To view detailed index of photographs taken on this excursion:**

[T W Reader geological photographs, long excursions 1914. Part 2 - index, GA 'Carreck Archive'](#)

## Geologists' Association Circular No. 166. Session 1913-1914 p. 7-11



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**Whitsuntide Excursion to Lyme Regis and Charmouth,  
Friday, May 29th, to Wednesday, June 3rd. 1914  
(Transcribed from: GA Circular No. 166. Session 1913-1914  
p. 7-11)**

**DIRECTORS:** W. D. LANG, M.A., F.G.S., and THE PRESIDENT.

**EXCURSION SECRETARY:** A. H. WILLIAMS, 13, Derwent Villas, Whetstone, N.

**RAILWAY ARRANGEMENTS.**—Special tickets, price 16/10. If an insufficient number of members apply for these, vouchers will be issued. Country members requiring vouchers should write to Mr. Leighton (see special note on p. 2). Leave Waterloo on Friday May 29th, 1.0 p m. train, due Lyme Regis, 6.10 p.m.

**HOTEL ARRANGEMENTS.**—Bow House, Lyme Regis. Terms; 6/- per day.

Those attending excursion should apply for accommodation at once, and advise Mr. Williams, at same time enclosing stamped addressed envelope.

The principle object of this excursion will be the detailed examination of the cliffs about two miles on each side of Charmouth; the limited distribution of fossils and the local details of the bedding will be examined and discussed, and plenty of time allowed for collecting. A coloured geological map of the area has been drawn by Mr. Lang on the large scale of 25 inches to a mile, and this will be subsequently published by the Association together with a descriptive paper. Advance copies of the map (in four sheets) can be had a few days beforehand by members taking part in the excursion, price 1/6 the set. Postage 1d. Apply to Mr. Leighton.

The following general hints may be useful. Much of the work will be on clay slopes which may be very muddy; and on undercliffs where stout boots should be worn in case of adders. In overgrown places, especially on Stonebarrow (Fairy Dell), it is important to consider adders when stepping among the bracken or grasping herbage in scrambling up a bank. A gardening trowel with a wide blade will be found useful; and for filmy fossils, a chip-basket with several idamp (but not too wet) layers of cloth is recommended. The fossils can be laid flat between the layers of cloth, and so carried home, to be then cleaned and treated with silica-solution or other hardening substance. For work on the reefs between the tide-marks, sand shoes over bare feet are best.

## Saturday, May 30th.

**DIRECTOR:** W. D. LANG.

Breakfast 8 a.m. Start 9.30 a.m. Embark in boats from the eastern jetty under Gun Cliff, Lyme, and proceed eastwards at about mile from shore. Observe the general easterly dip of the Lias and the approximately horizontal Cretaceous beds truncating the Lias at about 300 ft.; the occasional reversals of the easterly dip, the most important of which is the Lyme syncline that gives place to the Church Cliffs anticline; this is followed by the Cockpits syncline (hardly noticeable on the cliffs), and the Black Ven anticline; the three clay precipices of Black Ven, capped, from below upwards, by the *birchi*-bed, the Coinstone and the Belemnite Stone, respectively. Other horizons and spots of interest on Black Ven may be observed. On passing Charmouth Beach, signs of the Char Valley disturbance may be seen in the undulating beds of Lias with a general westerly dip at the western end of Stonebarrow Cliff. The undulations become steeper, and, finally, the beds are contorted as the fault (situated at about Lower Sea Lane) is approached. The details, however, cannot be seen except at close quarters. The undulations culminate in the Stonebarrow anticline, east of which there is a gradually flattening, easterly dip as far as Ridgewater, where the dip reverses in a syncline, and the beds rise, with interruptions by three step-faults, dipping westwards until the cliff temporarily ends in the big Ridge fault.

The general physiography of Stonebarrow Cliff may be well seen from a boat, namely (1) the seaward cliff, consisting of Lias from the *brooki*-clays to the Belemnite Stone; (2) the Undercliff of Fairy Dell (Cain's Folly of the Ordnance Survey), consisting of Lias from the Belemnite Stone to the *margaritatus*-marls, and of Cretaceous beds of the zone of *Hoplites interruptus*, much obscured by slips and overgrowth; and (3) the landward cliff of Cretaceous sands of the *Mortoniceras rostratum* zone, capped with Cretaceous and post-Cretaceous drift.

If the sea permits, land at Westhay Water and examine the section in the gully from the top of the Lower Belemnite Marls to the Red Band of the Green Ammonite Beds. Collecting may be done here. Walk westwards and see if the *armatus*-limestone is exposed as a long ledge on the beach. It is full of large spiny *Deroceras*, but is very hard, and difficult to collect from. Re-embark and row back to Charmouth beach, close to the shore, noting the various Lias beds in Stonebarrow Cliff. Land at Charmouth beach, dismiss boats and lunch.

After lunch, examine what foreshore is exposed (low neap-tide at about 4.30) at Mouth Rocks, and thence westwards, identifying the various beds as shown on Maps 1 and 2, and collecting from the reefs and cliff-base. Warning: stones frequently fall from the Church Cliffs and it is dangerous to stand directly beneath the vertical cliff-face.

It is hoped that the limestones of Black Ven will be examined and the origin of the Lias limestone of this district discussed.

## Sunday, May 31st. No Official Programme.

In the afternoon the President will conduct an informal excursion along the shore westward as far as the fault at Pinhay Bay.

## Monday, June 1st.

**DIRECTOR:** W. D. LANG.

Breakfast at 8 a.m. Start by the Bridport 'bus, driving as far as Newland's Bridge, Charmouth, at the bottom of Stonebarrow Lane. Meet director at the top of Stonebarrow Lane. From a gate observe the vale of Marshwood (i.e., Char Valley) surrounded by flat-topped hills, and the Wootton Valley to which Charmouth village rather belongs, cut off by the Catherston-Coneygar spur (sec A. J. Jukes-Browne on the vale of Marshwood). Turn seawards along the pine- and beech-wood, and reach the cliff at about the 250-ft. contour. Climb down, and examine sections in the Green Ammonite Beds, identifying the Lower Limestone, the Red Band, the Upper Limestone, and the lowest of the Three Tiers. Fossils from the five feet of clay below the lowest Tier are urgently needed. From the gap in the pine-wood overlook Fairy Dell. Descend into the Dell and examine three sections in the Gault (sections *h*, *i* and *j*, on Map 3.), the first showing Beds 2 and 3, the second Bed 1, and the third from the top of Bed 2 upwards. A full exposure of these sections cannot be guaranteed owing to their liability to founder from year to year. Bed 3 yields Gault fossils of the *interruptus*-zone. If practicable, cross a piece of the Dell and examine the foundered remains of what was a fine section in the Three Tiers. Return, either by descending to the beach by a big gully (? = Breakneck Gully of Day and the Survey Memoirs), or by the cliff top—in any case examining the beds by the way, and (if there is time) the *brooki*-shales by the river mouth, crumpled into violent folds as they approach the fault in the valley.

## Tuesday, June 2nd.

**DIRECTOR:** THE PRESIDENT.

Breakfast 8 a.m. Train 9.28 a.m. for Combe Pyne, fare 3d. (?) Walk to Rousdon and Dowlands Cliffs, good exposure of *T. gracilis* Chalk. Then westward along top of cliff to the great Bindon Landslip of 1839. Descend the inland cliff and examine slipped chalk masses (*I?*. *cuvieri* and *T. gracilis* zones). Then eastward through the landslip to Charton Bay, where see section of Rhaetic Beds.

About a mile farther east is the Great Cleft, a recently formed fissure which affords a section of Upper Greensand Cenomanian Limestone and Chalk of *R. cuvieri* and *T. gracilis* zones.

Thence to Pinhay Cliff and Chapel Rock (by kind permission of W. Alihusen, Esq.) where a splendidly weathered section of Chalk of the zones of *T. gracilis*, *H. planus* and *M. cor-testudinarium* is exposed. Chapel Rock is a lofty detached mass which has slipped from the main face of Pinhay Cliff.

Walk on through The Warren, a picturesque undercliff with inland cliffs of Upper Greensand, capped by chalk but inaccessible (Ware Cliffs), and continue by field-paths to Lyme.

Total walking distance about nine miles. Dinner 7.30 p.m.

## Wednesday, June 3rd.

**DIRECTOR:** W. D. LANG.

Breakfast at 8 a.m. Start by the Bridport 'bus, driving as far as Newland's Bridge Charmouth. Walk up Stonebarrow Lane, as on Monday, and meet director in the gap in the pine-wood above Fairy Dell. Proceed along the top of the inland cliff and descend into the Dell (if it is in a fit state) a little east of the summit, and traverse it until some undescribed Gault sections (Map 3, *k, l, m, n,*) are reached that show the junction with the Lias. The Pebble Bed at the base of the Gault is very well developed. Beds 1 and 2 are very unfossiliferous (three *interruptus*-zone fossils have been found here in Bed 1 and one in Bed 2), and Bed 3 in which *interruptus*. zone fossils are abundant.

Return to lunch at Charmouth and back to Lyme in time to catch the 3.55 p.m. train to London, due Waterloo 8.7 p.m.

Should Fairy Dell be seen on Monday to be impossible, meet director as above and proceed to the Ridge fault and examine the succession of Beds between here and Golden Cap, in particular identifying and collecting from the subdivisions of the Green Ammonite Beds.

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