

Lulworth Cove is the most remarkable of these singular bays, the names of the others will be found in the pages before referred to.

From the east of Worthbarrow, the last of these coves in that direction, the Purbeck and Portland beds form a ridge of hills extending longitudinally from west to east across the Isle of Portland, ranging parallel to the vertical chalk ridge, (from which they are separated by a valley occupied by the intermediate sands), about a quarter of a mile broad at the west, and a mile at the east end near Swanage; the strata being here thicker and also less inclined, and therefore filling a greater space. A section of the cliffs formed by the termination of the ridge in this direction, is seen in the Plate of Sections, fig. 5, extending to Durlstone head. The Portland beds occupy all the southern coast of Purbeck, with the exception of an interval of about five miles from St. Adhelm's head to Kimmeridge bay; where the Kimmeridge clay emerges from beneath them, and forms the cliffs already described in treating of the chemical and external characters of that formation.

For a further description of this very interesting district, we refer the reader to Mr. Webster's most excellent letters in Sir Henry Englefield's Description of the Isle of Wight. The personal observations of the present writer may serve as a further confirmation of their perfect accuracy.

The argillaceo-calcareous beds underlying the iron sand at Sandown bay in the Isle of Wight, mentioned before in page 157, and those underlying the iron sand of the Weald in Sussex (see page 148), must probably be referred to a part of the Purbeck series.

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(e) *Height of hills.* Brill hill on the borders of Buckinghamshire and Oxfordshire, exhibits probably the highest point attained by any of these formations; the Portland beds are there near the summit, which has only a very thin cap of iron sand. In Shotover hill, where the cap of iron sand is thicker, they range about 50 feet below the summit, which is 559 feet above the sea. In Berkshire and North Wilts, they are confined to low ground; in the denudation of the valley of the Nadder, however, the surface is raised, and the Purbeck beds there acquire some elevation at Lady Down. Near Upway in Dorsetshire, they are near the foot of the chalk escarpment, but still at some height above the sea. The height of the Isle of Portland is about 300 feet; and that of the ridge of Purbeck and Portland stone, traversing the Isle of Thanet, about the same.