

The Editor of the *Complete Farmer* says: "Obstacles to the work sometimes fall out from the light contexture of the soil, which does not unfrequently give way to the destruction of the chalk drawer. To the farmer it may be of consequence to consider the nature of his land ere he embarks on the scheme of husbandry; as, if from the circumstances above mentioned, he may have reason to think his pit will not stand firm, it would be a matter of prudence to desist from any further thoughts of sinking a perpendicular pit, and change the mode of operation by bringing his chalk from an uncallored pit or (open working), but where it can be obtained at a moderate expense, and with a tolerable certainty of success, *the preceding method is certainly the most eligible.*"

The writer does not wish to occupy more space by "hammering a driven nail." It must surely be apparent to all those of logical mind who have read and explored both sides of the question that no mystery exists with respect to the "dene holes" in Essex. The whole class of these excavations have their origin and inception of design in the very ancient custom of "bell pit" mining. It might be argued, not unfairly, that the same system of working, identical in general design, may have been made use of for other purposes than for chalk quarries merely; that is, assuming that further evidence exists of their having been so used, which, however, remains to be discovered with respect to the Essex "dene holes."

The writer thinks we may safely say that where such collateral evidence does *not* exist, and pits of this description are discovered from which the chalk has been removed and carried away, that the balance of probability in favour of their having been merely chalk-pits is overwhelming.

DESCRIPTION OF PLATE XI.

Modern Dene Holes and their makers at work in the "Purbecks" of Brightling, Sussex. Picture shows four pits in all stages of working and completion.

IV.—ON A NEW SPECIES OF BRACHYUROUS CRUSTACEAN FROM THE CHERT BEDS (UPPER GREENSAND), BAYCLIFFE, NEAR MAIDEN BRADLEY, WILTS.

By HENRY WOODWARD, LL.D., F.R.S., F.G.S., etc.

HAVING, in March last, received from Mr. Jukes-Browne, F.G.S., of the Geological Survey, a small carapace of a crab obtained by Mr. J. Scanes, of The School House, Maiden Bradley, from a quarry in the Chert Beds of Baycliffe, near Maiden Bradley, Wilts, I endeavoured to identify it with some species of Cretaceous *Necrocarcinus* already described, but without success. I am therefore reluctantly compelled to refer it to a new species. The specimen is rather imperfect, which renders the task of determining its characters the more unsatisfactory.

The carapace appears to have been nearly equilateral (31 mm. long and 30 mm. broad); the right side is, however, imperfect, and the edge of the posterior border is also wanting. The surface is tumid,

and the centre is divided by a mesial furrow, and transversely by a well-marked cross-furrow ending in a notch upon the lateral border (*a, a*). The metagastric lobe is marked by two triangular-shaped swellings on either side of the mesial furrow, with their convex borders directed outwards and their points downwards; at the point of each swelling is a round pore, one being placed on either side of the mesial line: a transverse furrow divides the metagastric swelling from two others, marking the urogastric prominence. These have an indented, V-shaped furrow dividing them in the centre. Behind the gastric region is a lesser single median prominence marking the cardiac region, having two small subcentral puncta on it. On either side, occupying about one-third of the breadth of the lateral border of the carapace, is placed the branchial region. This is marked by a reniform swelling, and is divided from the hepatic region on the latero-anterior margin by a deep rounded notch (*a, a*), and by the great median transverse furrow which here crosses the carapace from side to side. The hepatic region is smooth and not elevated; the margin is marked by a single spine on the latero-anterior border, indicating the outer angle of the orbit. The rostrum is blunt and has a broad furrow down the centre, dividing the frontal region into two raised prominences.

The general surface of the carapace is smooth and devoid of tubercles and rugosities, and it is not quite certain in its present state of mineralization whether the outer layer may not have been removed. In any case, the divisions of the carapace are so distinct as to render it capable of determination, and in its present condition this form of *Necrocarcinus* may conveniently bear the trivial name of *N. glaber*.



Necrocarcinus glaber, sp. nov. Twice nat. size.

From the Greensand Chert Beds, Baycliffe, near Maiden Bradley, Wilts.

Since the above was written Mr. Scanes has sent up another broken specimen, identical with the above, and in the same condition, so that we may justly conclude that they show the actual surface of the carapace. Mr. Scanes has kindly presented the specimen here figured to the British Museum (Natural History), to be preserved in the Geological Department.