

be at Horsey Staithe. Looking north-eastwards an astonishing spectacle met the eye. To the left there was a summer scene of woods and cottages clustered round Horsey Hall and Horsey Church, where a slight elevation of the ground had left an island during the advance of the sea. In front, the sea's retreat had left a red desert towards which the gale raced during the forenoon and early afternoon when the local land breeze reinforced it, a region later to be haunted by the melancholy piping of redshanks and the anxious cries of a cloud of lesser terns and ringed plover, when there came the calm of the evening before the setting in of the prevailing south-east breeze. This red desert, so recently part of the North Sea, ended in an imposing greyish-yellow barrier where the sand dunes were being rebuilt with the aid of a crane fed by a hastily constructed light railway.

During the worst of the gales, that of June 20, smoke was seen, rising apparently from one end of the barrier itself. What could be burning up there on that barren sand? In a few moments the mystery was solved; a steamer appeared, its funnel visible almost down to deck level. This was no mirage, but evidence that it was high tide and that if the gale were to veer to north-west the scouring undertow would soon resume its work of destruction. But the people of the village showed no signs of fear even during the height of the gale, for they retain unspoiled, many of them, the hardy spirit of the men who used to set out from Denmark in mid-winter for Iceland or Greenland in open boats and often arrived at their destination. To the Londoner or 'foreigner' as he is termed by the Broadsmen,

Horsey Staithe did not seem to be a place in which to linger on that June morning.

Leaving the ruined bird sanctuary on the southern side of Horsey Mere to one's left and taking a path which leads past sledge-covered shallows, where the bittern can still be found, to Waxham Cut, the scene began to change. An arm of the red desert on the right presented a more than wintry landscape; the nearer trees were rust red and more gaunt than trees in their winter sleep, but on the banks of the Cut bright green sedge was springing up. On the calmer days earlier in the month, reed buntings were to be seen as usual, and many swallow-tail butterflies.

The old farm-house by the bridge, where so many bird lovers have gathered during the past five years, luckily escaped the flood with a few scars only. Some of the trees had sucked up the brackish water and assumed the rust red of the neighbouring plain, but others were in their summer green. From this point to Waxham village and Palling, the countryside had its usual summer appearance, apart from the effects of the drought of the previous four months. Only the presence of workmen strengthening and renewing the dunes at Palling gave a hint as to where the next assault of the sea might be expected, while the large and now rarely used parish church at Waxham was a reminder that the sea's advance has in the course of centuries swallowed up miles of once-prosperous countryside.

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Points from Foregoing Letters

PHOTOGRAPHS showing the interference pattern of light scattered by thermal agitation (elastic weights) in a clear crystal of gypsum are submitted by Sir C. V. Raman and C. S. Venkateswaran. The displacement of the three components into which the incidental radiation is split indicates, according to Brillouin's formula, acoustic wave velocities of 3,350, 2,050 and 1,100 m. per sec.

A hundredfold increase in the ionization at an equivalent height of 125 km., slightly higher than the normal *E* region, which occurred on October 1, 1937, at 0927 G.M.T., is ascribed by R. Naismith and W. J. G. Beynon to a bright solar eruption the appearance of which was reported by the Greenwich Observatory at practically the same time.

Dr. A. Sofian has measured the effective cross-section for collisions of fast neutrons with atomic nuclei. The sticking probability appears to be less than unity, at least for heavy nuclei.

From the persistence and rate of decrease in intensity of the band spectrum of helium gas (at 25 mm. mercury pressure), Dr. S. P. McCallum and M. S. Wills infer that either the helium molecules formed in the electric discharge have a life of the order of 1/600 sec. or, more probably, they are formed after interruption of the discharge by the collision of a metastable atom with a neutral atom.

A photographic study of the relations between the magnitude of the mosaic structure of crystals and the intensity of X-ray reflection shows, according to Prof. V. Dolejšek, M. Jahoda, J. Ježek and M. Rozsival, that the case of specially selected crystals

of calcium sulphate, sodium chloride and zinc sulphide, the product of the exposure and the magnitude of the ideal mosaic is constant.

Using an electrolytic reduction technique W. E. Campbell and U. B. Thomas show that films 30–60 Å. thick, as oxide, are formed on copper during abrasion by French emery, whether carried out in air, under benzene, or under water.

Commenting on Ratcliffe and Kownacki's suggestion to utilize slowly moving ions in place of electrons in a thermionic tube, in order to decrease the frequency at which inertia effects become appreciable, Dr. J. S. McPetrie refers to an alternative method in which a magnetic field of suitable magnitude is applied to the valve in the direction of the electrode axis.

A table giving the mobility and other properties of kaolin clays of known particle size, and graphs showing the effect of pH and valency of cations upon the yield value of aqueous suspensions of such clays, are submitted by G. Broughton and R. S. Hand.

A method of rapidly estimating within about fifteen per cent the number of small organisms, seeds, etc., in samples, by comparison with a photographic scale of equal size dots or objects, of known density, is described by Prof. A. C. Hardy.

A reinvestigation of the spectrum of tetrachlorethylene, C_2Cl_4 , using a potential function of the type employed by Manneback and Verleysen, leads J. Duchesne to a value of 8×10^5 for the C—C force constant instead of 6.25×10^5 , so that the frequencies can be correlated with a force field in which the C—C constant has its normal double bond value.