

1,000 feet were clear, it seemed desirable to go deeper, as no one could tell how soon the Palæozoic rocks would be reached; but surely if it is to be recommenced *de novo*, it would be better to select another site. We already know from the boring nearly all we care to know—that we are not there on the axis of Palæozoic rocks, but in a basin.

The Kimmeridge clay, which is 240 feet thick at Marquise, becomes thicker in a south-westerly direction to 360 feet near Boulogne, and now we know that it reaches some 660 feet at a point six times the distance in a direction W.N.W., which thickening is continued to its outcrop under St. Alban's Head, though it thins again to the west. The coral rag which occurs in the Boulonnais is here gone through; it sets in again near Weymouth, and since this is followed in the former locality by 385 feet of Oxford clay and Lower Oolitic rocks, we may expect at least 600 feet of them at Netherfield before we reach Palæozoic rocks, which will be almost certainly lower than the coal.

The facts so far ascertained by the boring prove, therefore, as much as we could wish to know, except the age of the Palæozoic rock when met with, if that could be discovered from the small core. They show that the spot is to the south of the axis we are seeking, and the thickening of the Kimmeridge clay would tend to throw that axis some considerable distance to the north.

No such Jurassic beds occur at London, Harwich, or Calais; but the Cretaceous beds directly overlie the Palæozoic. The conditions on one side and on the other are therefore very different. To the north the Palæozoic rocks are spread out not so far from the surface, and on this side only have the coal measures been proved; to the south they are scooped, or dip, into a hollow, in the midst of which is the Netherfield boring, and which hollowing out would have removed all coal-bearing strata, even if originally there.

This verification of what might have been argued from facts already known has been given us by the Sub-Wealden boring; what more can it do? It has proved that our interest is in localities further to the north, as Messrs. Godwin Austen and Prestwich supposed it to be. Doubtless no better locality, *near Brighton*, could have been chosen; but if what is essentially another boring is to be made, why not select a locality from which some fresh information might be obtained? A bore at Folkestone would probably pass through little or none of the Jurassic series; but the best place for a new experiment would be somewhere in the neighbourhood of Goring, which would be on the line both of Mr. Godwin Austen's and Mr. Prestwich's supposed range of coal-fields, and would afford a crucial test whether the Palæozoic rocks are really continuous between London and Frome at an accessible depth; and this is what we most want to know.

If a new boring is put down at the same place, it would be well to have a third for some small depth, in order to obtain the dip by a comparison of corresponding beds.

Jan. 25

J. F. BLAKE

The Rhinoceros in New Guinea

I AM quite of your opinion that the occurrence of a rhinoceros in New Guinea is *very seriously* to be doubted (see NATURE, vol. xi. p. 248), but I beg leave to mention a report of a *very large quadruped* in New Guinea, which I got from the Papuans of the south coast of the Geelvinks Bay. When trying to cross the country from there to the south coast, opposite the Aru Islands, —in which I did not succeed, but only saw the sea-shore at a great distance from the height of a mountain chain (I afterwards succeeded in crossing the continent of New Guinea from the Geelvinks Bay more to the north, over to the Maclure Gulf),—and when hunting wild pigs along with the Papuans, they told me, without my questioning them, of a *very large pig*, as they called it, fixing its height on the stem of a tree at more than six feet. I could not get any other information from them, except that the beast was very rare, but they were quite precise in their assertion. I promised heaps of glass pearls and knives to him who would bring me something of that large animal, but none did. I cannot suppose, so far as my experience goes, that the Papuans are remarkably prone to lies; notwithstanding I seriously doubted the existence of such a large "pig;" and as the sons of that country are very superstitious, and see ghosts and absurd phenomena everywhere, I may just mention as an example, that when I shot, on the same hunting party, a specimen of *Xanthomelus aureus*, that most brilliant gold-orange Bird of Paradise, they said they could not kill this bird, because it would lighten and thunder when they did. I booked that report as an

efflux of their lively imagination, though not without discussing in my diary the possibility and significance of the occurrence of a large quadruped in New Guinea.

It is true this statement does not strongly support Lieut. Smith's *aperçu*, but the one gains a grain by the other; I mean, the probability of the existence of a large quadruped in New Guinea increases a shadow.

The other "fact" mentioned by Mr. Walker (*l.c.*), concerning the skins of a brilliant red Bird of Paradise, which were obtained on the north-east coast, is an interesting *fact* indeed, because it appears to confirm M. d'Alberty's discovery of *Paradisæa raggiana* on the south coast. It would be most valuable to compare the skins of the red Bird of Paradise from the north-east and the south coast, or at least those from the first with the coloured figure given by Mr. Elliot in his Monograph of the *Paradisæidæ*, to become sure of their identity. At all events, if Von Rosenberg maintains (see Noll's "Zoologischer Garten," January 1875), that *P. raggiana* is an "artificial" skin, his assertion is strongly to be repudiated. "Similar frauds" he pretends to have seen in New Guinea, an assertion which is the bolder and the more inconsiderate, as he has not had under his eyes d'Alberty's skins.

A. B. MEYER

Dresden, Feb. 1

I WAS no doubt wrong in speaking of the occurrence of the rhinoceros in Papua as a fact without the qualification "if confirmed;" but I wrote in a hurry.

From the details supplied by Mr. Smith, which I annex, I think there is at least a very strong probability that there is a rhinoceros in Papua, and the object of my letter will have been attained if it causes explorers on the north coast of that island to look after it, and at the same time places Mr. Smith's name on record as the discoverer of its indications.

"1. The heap of dung first seen, which was quite fresh (not having apparently been dropped more than half an hour), was so large that it excited Mr. Smith's curiosity, and he called Captain Moresby to see it. Neither of them knew to what animal to assign it. Quantities of dry dung were afterwards seen.

"2. Shortly afterwards, the *Basileus* being at or near Singapore, Capt. Moresby and Mr. Smith paid a visit to the Rajah of Johore, who had a rhinoceros in confinement. Mr. Smith at once observed and pointed out to Capt. Moresby (who agreed with him) the strong resemblance between the dung of this animal and that they had seen in Papua.

"Seeing there is no animal known in Papua bigger than a pig; seeing also that Mr. Wallace has pointed out the African affinities of many of the animals in the islands he associates with Papua; seeing also that the Sumatran rhinoceros approaches the African in having two horns and no shields or folds in its hide, why should there not be a rhinoceros in Papua approaching still nearer to the African type, or furnishing an additional piece of evidence in favour of Mr. Wallace's hypothesis of a submerged continent connecting New Guinea, &c., with Africa?"

Chester, Feb. 1

ALFRED O. WALKER

Geology and the Arctic Expedition

IN the last number of NATURE, p. 253, it is stated that the appointment of a botanist and zoologist has been recommended by the Royal Society, but it does not appear that anything is being done for geology.

It may be deemed by some an erroneous view of the matter, but I am quite disposed to believe that if the necessary arrangements can be made, geology is more likely to derive important results from this expedition than any other branch of science.

We are continually having additions to the long series of papers on the Glacial Period, but the still more remarkable *warm period* in the extreme north is altogether neglected; no one seems capable of even suggesting a probable explanation. It is quite evident, in the first place, that we want more facts, and there will probably never be a better opportunity of obtaining them than in the course of the new expedition. Carefully conducted researches would probably reveal the existence of a still further extension than has hitherto been suspected of the fossiliferous Miocene beds which have already yielded such valuable results.

Even now, it can hardly be doubted, that just before the advent of the cold period, a magnificent flora, which would require at least as much light and warmth as we now enjoy in England, was flourishing in luxuriance as far north as the 78th parallel. The contemporaneous fauna may now be discovered, and