

postulated from its occurrence there, has accordingly been a wrong inference. Brögger has argued that it migrated from America. It was abundant in the Crag seas, and occurs in derivative fragments in the Drift beds, but it does not occur in the estuarine deposits or raised beaches, proving that after the period of the Crag it became extinct in Europe and has since been reintroduced. He regarded the cause of its extinction as a mystery, since the group of estuarine shells with which it is found has lived continuously in Europe since later Crag times.

In the course of his paper the author gave some interesting information on the changes known to have taken place in the Baltic, which at one time was a freshwater lake; afterwards it became freely open to the North Sea, and possessed an abundance of marine shells, with *Ostrea* and *Balani*, of large size. Lastly, so restricted became its supply of salt water, and so largely affected by the fresh waters of the great rivers which flow into it, that its marine fauna had gradually been killed off, or had become so dwarfed and malformed as to be hardly recognizable.¹

CORRESPONDENCE.

THE USE OF THE TERM 'LATERITE'.

SIR,—Since writing to you on the use of the term *laterite*, two papers have appeared that illustrate the confusion surrounding the name at the present day. One of these is Mr. Mennell's "Note on Rhodesian Laterite" (*GEOL. MAG.*, August, 1909), and I shall be glad if you will permit a few further remarks in connexion with it.

Mr. Mennell agrees with Dr. Maclaren in considering that an essential condition to the formation of laterite is the alternation of perfectly distinct wet and dry seasons; in fact, Mr. Mennell says that this is the essential condition. Now, although throughout the Federated Malay States the rock called 'laterite' by engineers is, as far as I am aware, ironstone deposited in weathered rocks, there is in the State of Malacca an occurrence of rock that agrees with Dr. Francis Buchanan's definition of laterite; and in that it can be dressed with an axe, and hardens on exposure to the atmosphere, has proved of great utility in buildings, as can be seen in the old Portuguese church that crowns the hill in Malacca Town. This Malacca rock would, I believe, be accepted by all as laterite, and carries with it the idea of 'brick', on which the name was founded.

When Dr. Maclaren's paper appeared in 1906 I was struck by his remark on the necessity of alternating wet and dry seasons, since my impression was that no such alternation exists in Malacca; and when I saw the point emphasized by Mr. Mennell, I wrote to the Medical Officer in Malacca asking for the figures of monthly rainfall for any

¹ See H. H. Howorth, "The Recent Geological History of the Baltic": *GEOL. MAG.*, 1905, pp. 311, 337, 407, 454, 550.

three consecutive years, and received figures for 1906, 1907, and 1908, as follows :—

	1906.	1907.	1908.
	Inches.	Inches.	Inches.
January	3·12	2·57	2·27
February	4·19	1·99	3·62
March	4·63	3·53	3·48
April	6·65	5·55	5·53
May	6·61	7·30	4·23
June	6·71	6·57	3·49
July	6·42	6·32	4·22
August	10·82	4·92	9·12
September	5·97	5·65	10·75
October	10·60	9·32	6·69
November	3·81	8·35	6·86
December	11·03	9·28	4·66

I think it will puzzle anyone to find evidence in the above for alternating and perfectly distinct wet and dry seasons. Mr. Kilroe doubts the necessity of tropical conditions for the formation of laterite, and as there is no reason whatever for supposing that the Malacca laterite was formed under conditions of rainfall differing from those that obtain now, it appears that alternating wet and dry seasons are not necessary either.

J. B. SCRIVENOR.

GEOLOGICAL DEPARTMENT, KUALA LUMPUR,
 BATU GAJAH, FEDERATED MALAY STATES.
 October, 1909.

OBITUARY.

CARL GOTTSCHÉ, PH.D.

BORN 1855.

DIED OCTOBER 11, 1909.

WE regret to record the death of Professor Dr. Carl Gottsche, Director of the Mineralogical-Geological Institute at Hamburg. Born at Altona in Schleswig-Holstein, he early gave attention to geology, and in 1875 described a boulder of sandy limestone found at Eimsbüttel near Hamburg, which contained *Paludina lenta*, *Planorbis euomphalus*, and *Unio Solanderi*, characteristic of the Headon Beds. In 1878 he published papers on the Miocene Mollusca of Reinbeck, and on some Jurassic fossils from the Argentine Cordilleras; and in 1883 he issued a little work, *Die sedimentäre Geschiebe der Provinz Schleswig-Holstein*, which was published at Yokohama. At that date Dr. Gottsche was engaged in a geological study of Korea, and in addition to other papers on the results of his work, he communicated to the Berlin Academy in 1886 a Geological Sketch of Korea, with the first geological map that had been made of the country.¹ Dr. Gottsche attended the London meeting of the International Geological Congress in 1888, and was also present at the British Association meeting at Bath in the same year. Those who attended some of the geological excursions in the west country will remember his keen interest and buoyant spirits in the field; and all will lament his decease at the age of 54. H. B. W.

¹ Dr. Gottsche obtained a recent specimen of *Pleurotomaria Beyrichii* at Enoshima, Japan, described by H. Woodward, *Geol. Mag.*, 1885, pp. 433-9, Pl. XI, Fig. 1.