

NOTICES OF MEMOIRS.

I.—ON *PALÆMON EXUL*, A NEW CRUSTACEAN FROM THE POLIRSCHIEFER OF KUTSCHLIN, NEAR BILLIN, IN BOHEMIA. By Professor Dr. ANTON FRIC.

THE thorax is eight mm. long, and three mm. broad; the mesial line of the front part shows a high crest, which bears six spines, pointing towards the rostrum. On each side of the crest are situated what appear to be the eyes; the facettes of which, however, cannot be identified. The inner antennæ have a three-jointed basal-portion; only two of the whips (Geissel) are preserved. These are of the length of the thorax, the outer one being considerably stronger than the inner one. Of the third whip (Geissel), which true *Palæmons* do not possess, Dr. Fric can only detect a rudiment. The outer antennæ have a large scale at their base, which covers about ten joints of the antennæ. The whip is much stronger than those of the inner antennæ. The first pair of legs is small. The second is the strongest, and bears small chelæ, and projects five mm. beyond the margin of the thorax. The third and fourth pairs are weak; the fifth of double the strength and size of the previous one. The abdominal segments agree exactly in outline with those of *Palæmon*; as also do the five-leaved tail-fin.

The discovery of this exquisite marine crustacean in a freshwater deposit is very remarkable. After the upheaval of continents small basins of saltwater sometimes remain inland, which after a time lose their salt; in consequence of which the marine animals living therein either die out or become naturalized in the freshwater. So we find the genera *Idothæa*, *Sphæroma*, and *Gammarus*, in the rivers and lakes of Tuscany, and *Mysis* in the lakes of Sweden. Also the Adelsberg caves have their blind *Palæmon*—*Troglocharis Schmidtii*. It is interesting to know that the recently-discovered Crustacean from Ob. Nowall, near Waltsh, resembles more a marine millipede than a land millipede.

II.—ON THE AGRICULTURAL GEOLOGY OF THE WEALD. By W. TOPLEY, F.G.S. FROM THE JOURN. ROYAL AGRIC. SOC., VOL. VIII. 1872.

THE Wealds of Kent, Surrey, and Sussex, with their border-lands of hill and vale, have such special interest for the geologist that we welcome every good addition to our knowledge of this portion of England and every aid to the advancement of that knowledge. Mr. Topley, especially addressing agriculturists in this pamphlet, gives accurate geological information in text, tables, and coloured map, which will be fully appreciated by geologists. We already possess, as an important aid in study, the somewhat smaller, but beautifully perfect, map constructed by Mr. W. Whitaker for the

"Report of the Medical Officer of the Privy Council," 1868; and now some very useful and accurate Geological Models of the South-east of England, by Messrs. Topley and Jordan, are published by Stanford, of Charing Cross; and these, with the Maps and Sections of the Geological Survey, enable the student to master most of the difficulties and complications that affect this classic area, which indeed becomes more and more an object of interest on account of the boring exploration through its lower stages in progress at the present time.

T. R. J.

III.—LEONHARD UND GEINITZ'S NEUES JAHRBUCH. Jahrgang 1872.  
Hefte 3-6.

THESE four numbers contain, besides several instructive mineralogical and petrographical memoirs, some of which are in continuation of papers enumerated in our last notice of the "Jahrbuch" (see Vol. IX., pp. 560-562), three geological papers of considerable interest. The old schistose rocks of a part of the Erzgebirge, between Blankenstein and Grund, are described by Dr. Mietzsch (pp. 561-572). Interpreted according to the modern theory of metamorphic rocks, these old limestones, clay-slates, siliceous schists, quartzites, and gneiss, are becoming better understood, but call for more labour yet. Dr. Jentzsch (pp. 449-480) treats in detail of the alluvial and diluvial deposits near Dresden, drawing conclusions as to the order of events and successive changes associated with the formation of these loams, sands, and gravels, with their far-derived and "erratic" contents.

Dr. C. W. Gümbel describes (pp. 241-260) and illustrates (plates vi. and vii.) two of the most interesting among the Foraminifera that have ancient fossil representatives and yet exist at the present day.

One of these Dr. Gümbel carefully characterizes as *Nummulina Jurassica*; found in a Jurassic limestone of the zone of *Ammonites tenuilobatus*, especially in the siliceous Sponge-limestone, which in France follows on the marly main *tenuilobatus*-beds, and is there more strongly marked by *Am. dentatus*. His specimens are siliceous, and in considerable numbers from Schafflohe, near Amberg.

The other Foraminifera under notice, and of large size, too, are *Orbitulites præcursor* and *O. circumvoluta*, from the grey limestone, with *Megalodus pumilus* (Rotzo beds), of the Alpine Lias, near Roveredo.

*Orbitulites* was not previously known to be of older date than the Upper Chalk; and though *Nummulina* is quoted from the Oolite, and even from the Carboniferous Limestone, exact information is still wanting. Dr. Gümbel clears up some obscurities about supposed Cretaceous Nummulites (such as *Alveolina Fraasi*, formerly thought to be a Nummulite), and has thus added much in this branch of palæontology.

T. R. J.