II.—ON THE OCCURRENCE OF A NEW FORM OF *DISCINOCARIS* IN THE GRAPTOLITIC BEDS OF THE "COLONIE HAIDINGER" IN BOHEMIA.

By Professor OTTAMAR NOVÁK.

IN the Quart. Journ. Geol. Soc., vol. xxxvi. 1880, p. 617, Mr. John E. Marr mentions having examined three specimens of a Phyllopodiform Crustacean discovered by Mr. Martin Dusch in the strata of "Colonie Haidinger," situated not far from the village of Gross-chuchle, south of Prague.

The specimens were then identified with *Discinocaris Browniana*, H. Woodw., figured and described in the same Journal, vol. xxii. 1866, p. 503, pl. 25, figs. 4, 5, and 7. They are also mentioned by Dr. H. Woodward and Prof. T. Rupert Jones in the Third Report of the Committee on the Fossil Phyllopoda of the Palæozoic Rocks, 1885, p. 2, under Mr. Marr's specific determination.

Having worked for some time past on a revision of the fossil Phyllopoda occurring in the Palæozoic rocks of Bohemia, I examined the three specimens in Mr. Dusch's collection, besides two others collected by myself in the same beds some years ago.

The following figure and description give sufficient evidence of the characters of the fossil in question.

Discinocaris Duschiana, Novák. Nat. size.

In the Geological Museum of the Bohemian University at Prague.

Description.—The shield flattened, oval in outline, without any median suture, but truncated in front by a nuchal notch, leaving a broad re-entrant angle, with rather concave sides and with an apex reaching about one-third of the shield's original length. Width of the nuchal notch precisely one-sixth of the entire circumference. Surface finely striated; the striæ disposed excentrically round about the apex of the frontal notch. The triangular frontal piece wanting in all five specimens under examination. The shield, if complete, would be about 22 mm. long, 19 mm. broad. The total length from the apex of the notch to the posterior margin being 15 mm.; slope of nuchal suture about 45°.

The superficies of the shield seems to have been originally somewhat convex, but appears to have been flattened by forcible compression, as indicated by the radiate fissures in our Woodcut.

It is evident that the carapace just described represents a new form of *Discinocaris*, for which I propose the specific appellation of *D. Duschiana*, after Mr. Dusch, who first drew attention to the fossil.

Discinocaris Browniana, H. Woodw., differs from the Bohemian

species, firstly, by its circular outline; secondly, by the nuchal notch reaching backwards nearly to the centre of the carapace; thirdly, by the different slope of the nuchal suture.

The fauna of the "Colonie Haidinger" shows the same composition as the lowest Graptolitic horizon of stage E—e 1. The most common fossils of this "colony" being *Monograptus Becki*, Barr., and *Rastrites peregrinus*, Barr.

Having no sufficient materials, I will not discuss the question if the shields called *Discinocaris* should be regarded as opercula of Cephalopods or carapaces of Phyllopodiform Crustaceans; but it must be remarked that no trace of Cephalopods has yet been discovered in the "Colonie Haidinger."

III.—A NEW BRITISH PHONOLITE.

By FREDERICK H. HATCH, PH.D., F.G.S.

(By permission of the Director-General of the Geological Survey.)

IN working out, at the request of Sir Archibald Geikie, the petrography of the Lower Carboniferous Volcanic rocks in Had-dingtonshire (the results of which I propose shortly to publish), I have been led to examine the igneous material that builds up the isolated hills (*necks*), situated on the margin of the volcanic area of the Garlton Hills. Among these, the rock of Traprain Law especially attracted my attention. It is a close-grained, dark brown to grey rock. Some varieties have a glistening or greasy surface, and are speckled over with dark spots, while others show glancing cleavage surfaces of a clear glassy felspar (sanidine).

The stone is quarried at the foot of the hill. On examining the broken material in the quarry, I noticed a tendency to split into rather thin plates. This "platy fracture," taken in conjunction with the fact that the stone has a remarkably sonorous ring under the hammer, and gives a metallic clink when small fragments are rattled together, might perhaps have suggested its real nature. But it was not until I had studied a series of thin sections that the true character of the rock became apparent. Microscopic examination shows that the rock is a *trachytic phonolite*, and thus adds another to the sparsely developed nepheline-rocks of the British Isles.

As I intend to describe this occurrence more fully elsewhere, I will confine myself in this place to a brief description. The rock bears no resemblance to the well-known phonolite of the Wolf Rock, described by Mr. Allport in 1871. It differs from that rock in the absence of members of the hauyn-nosean group, and by an inferior development of nepheline.

Instead of occurring in clearly discernible crystals, as in the Cornish rock, the nepheline of the Traprain Law phonolite is confined to small colourless to cloudy patches, or is interstitially wedged in between the felspar-lathes of the ground-mass. The satisfactory identification of nepheline when thus developed is the source of much trouble and vexation of spirit. Taking refuge in micro-chemical methods, I found that a drop of hydrochloric acid,