

to the diameter of the shell, was found loose, about a mile north of the light house at the southern end of the peninsula. Its horizon appears to have been the cherty Richmond. It differs from the Trenton species named in having the septa relatively even more distant, the ratio mentioned above varying from 5 to 8 in 10. The siphuncle apparently was narrow and cylindrical, probably not exceeding a millimeter and a half in diameter where the width of the shell is 15 millimeters.

A species of *Amphilichas* and one of *Chasmops* occur in the cherty Richmond. The fragment of the first (Figs. 27, A, B), as far as preserved, cannot be distinguished from the type of *Amphilichas cucullus* (Meek and Worthen), described from the Kimmswick limestone, in Alexander county, Illinois, (Geo. Surv. Illinois, vol. III, 1868, pl. 1, figs. 6 a, b, c). This type is numbered 12021 in the Worthen collection in the University of Illinois, and was examined through the courtesy of Prof. T. E. Savage. The axial and lateral lobes of the glabella, the occipital segment, and as much of the fixed cheeks as remains, present the same appearance in the Richmond specimen and in the Kimmswick type from all points of view. Although at first sight the Richmond specimen appears to be much more abundantly tuberculated, a close examination of the Kimmswick type indicates the presence of similar tubercles or granules, but those of the Richmond specimen are much more prominent, at least in their present state of preservation. Two figures of the Kimmswick type (Figs. 26 A, B) are here presented. The first presents the left side of the type of the cephalon, and the second illustrates the anterior, so placed as to have the top of the axial lobe parallel with the line of vision.

The associated specimen of *Chasmops*, mentioned above, consists of a fragment presenting the middle and lateral lobes of the glabella and the occipital segment. This is sufficient to indicate the generic reference. In the illustration here presented (Fig. 32), a faint outline of the probable course of the movable cheeks and genal spines is presented, but this part is not preserved in the specimen at hand. For purposes of comparison, several illustrations of *Chasmops breviceps* (Hall) Figs. 31 A, B, C, from the upper part of the Richmond, at Richmond, Indiana, are here presented. The original specimens were collected hereby Mr. John Misener. The only specimens collected by myself were obtained near the top of the Liberty member of the Richmond, along Cowen creek, in Clinton county, Ohio. Here they were associated with *Xenocrinus baeri* (Meek), *Gyroceras baeri* (Meek and Worthen), *Gomphoceras eos* Hall and Whitfield, *Ceraurus miseneri* Foerste, typical pygidia of *Amphilichas harrisi* (Miller), accompanied by a fragment of a glabella (Figs. 28 A, B) bearing the same kind of pustulose ornamentation as the aforesaid pygidia. In this fragment, the strong downward curvature of the anterior part of the