

of the cephalons. On the left are placed the generic characteristics which connect *P. saratogensis* and *P. armatus*. In working out of the indices, the length of the cephalon was measured from the middle of the neck furrow to the anterior extremity, the length of the glabella being measured from the middle of the neck furrow to the anterior edge. The index in each case was derived by dividing the smaller by the larger measurement and multiplying the resultant by 1,000 to make it a whole number. It was hoped that by making careful measurements (within 0.25 of a mm.) that the indices would afford valuable criteria for the classification, but unfortunately the results do not appear to be decisive, probably because of the lack of sufficient working material. Nineteen specimens representing the total available material of *P. saratogensis*, were measured and their indices calculated. The average index proved to be 70 but a careful inspection of the individual indices showed this figure to be too low. Fourteen of the indices range between 75 and 80; only two fall below 70, while two others are as high as 85. The figures seem to show that further collecting would raise the average considerably. It is also important to note that measurements taken on *P. saratogensis* figured by Weller (6) as representative specimens from New Jersey show an index of 80. The writer has therefore made a conservative estimate of 75 as the index for *P. saratogensis*. So far as can be determined at present the index does not vary between the forms with smooth and those with furrowed glabella. Eleven specimens of *A. ceticephalus* were measured and their average index proves to be 63. This average was shown to be practically identical with that calculated from measurements made on Barrande's figures. The writer was forced to calculate the index for *P. armatus* from the original drawing by Billings. So far only one cranidium of this species is known, and its high index (88) may not be entirely indicative of the average for the species. All the evidence seems to show that the indices of *P. armatus* and *P. saratogensis* are very similar and dissimilar from that of *A. ceticephalus*. In addition, *P. saratogensis* and *P. armatus* have the following characteristics in common, which in turn are dissimilar from those of *A. ceticephalus*:

1. Greater convexity of the cephalon.
2. Eyes close to the glabella.
3. Cephalon never upturned at the anterior margin.
4. Facial sutures carried well forward.
5. Opposite portions of the circum-glabellar furrow nearly parallel and converging only slightly forward.

The writer therefore believes in the validity of Raymond's new genus.