for the last three years is uniformly remarkable for the absence of centrospheres, whether it be in an egg undergoing its first cleavage or through intermediate stages up to a 30 mm embryo. What might be considered to be centrosomes, however, are frequently present, but these have in every case proved to be aggregates of mitochondria located at or near the poles of the spindle, particularly during anaphase. As cell-division by mitosis is so universal, it would seem that these assumed dynamic centers might be in other animals, as in Amblystoma, merely the result of vortical currents causing temporary aggregation of mitochondria. Fixatives containing acid, such as Bouin's or Zenker's fluids, do *not* ordinarily *completely* dissolve mitochondria, so that their use could easily give rise to a "central body" contained in a "centrosphere"; or acid staining or destaining could give the same appearance. The controversy concerning the character of central bodies might well be ended, therefore, if the technique required for mitochondria were employed in the preparation of the material to be observed.

HERBERT G. COAR
DARTMOUTH MEDICAL SCHOOL

## FRESH-WATER MEDUSAE

*Craspedacusta ryderi* Potts appeared in Swissvale, Allegheny County, Pennsylvania, on or near August 8 of this year. They were found living in a reservoir of the Union Switch and Signal Company. The reservoir is fed from the city water supply and is approximately fifteen by twenty-two feet and is fourteen feet deep. The bottom is bare of any growth, but the walls are covered with algae. On October 1 they were still reported present.

The only explanation for the presence of these animals is that the Hydroid form must have been brought in on fish. These were brought from Lake Erie. There is hardly any chance that they arrived through the city water supply due to the heavy chlorine content. From all available literature it seems that this is the fifth record of the occurrence of fresh-water medusae in the United States, and, for that matter, in the western hemisphere.

STANLEY T. BROOKS
CARNEGIE MUSEUM,
PITTSBURGH, PENNSYLVANIA

# SPECIAL CORRESPONDENCE

## NEW ENGLAND INTERCOLLEGIATE GEOLOGICAL EXCURSION

THE twenty-eighth annual New England Intercollegiate Geological Excursion was held in the vicinity of Providence and Newport, Rhode Island, on October 14 and 15, 1932. The department of geology of Brown University (Charles W. Brown, chairman) had charge of the arrangements.

The group assembled at Faunce Hall, Brown University at noon on Friday. After lunch President Barbour, of the university, spoke a few words of welcome. They then journeyed eastward by automobile to the east bank of the Seekonk River, where varved clays were exposed, overlain by cross-bedded, aeolian sands. Two other glacial localities were later visited in succession along Highway No. 6, an esker situated approximately a mile southeast of the village of Seekonk, and a rock-core exposed by a steam shovel in a gravel pit two miles west of Swansea.

Having crossed the Taunton River, the party journeyed southward from Fall River and stopped first at the water tower, a mile or so from the center of the city. Here is exposed the Fall River granite, probably a much faulted variety of the Dedham granodiorite. Following Route No. 138 they turned aside to an exposure on the bay-shore, one and one half miles southwest of North Tiverton. The Pondville conglomerate was found to have a deceptive contact with the Dedham granodiorite. Elsewhere it is known that a weathered arkose from the granodiorite rests unconformably on the igneous rock, but here the arkose is very slightly developed and the granodiorite might be thought to be intrustive into the Pondville conglomerate.

The next stop was made on the shore of the Sakonnet River, a half mile south of Tiverton. The basal arkose, underlying the Pondville conglomerate, was well exposed and included thin seams of slate. The slaty cleavage, developed at an angle to the true bedding, allowed the structural geologist to detect certain indications of the direction of forces which folded and metamorphosed these rocks. Salt water has corroded the feldspars of the arkose and produced a porous sponge of quartz. A brief visit was made to the Portsmouth "coal" mine, at which place beautiful specimens of graphite were collected.

The party found its way at twilight to the Army and Navy Y. M. C. A., where it made its headquarters for the night. During the evening a business session was held in the assembly hall, after which members of the department of geology at Brown University spoke briefly. Dr. C. C. Branson defended the proposition that the Pondville conglomerate rested unconformably on the Fall River granite, Mr. J. S. Beach discussed the thickness of the Rhode Island Carboniferous series,