By Mr. A. SMITH WOODWARD, Prismatic Laterite from Tideswell Dale, Derbyshire, &c.

By Mr. B. B. WOODWARD, F.G.S., Section of *Eozöon* and Photographs from Vesuvius and Ischia.

During the *Conversazione* the following addresses were given with lantern-illustrations by Mr. George Smith :—

“On Foraminifera, Recent and Fossil,” by Prof. T. Rupert Jones, F.R.S.

“On some points in connection with Volcanic action,” by F. W. Rudler, Esq., F.G.S.

ADDRESS ON FORAMINIFERA.

By T. RUPERT JONES, F.R.S., Hon. Mem. Geol. Assoc.

With the figure of a living *Polystomella* on the screen, the nature of its “pseudopodia” and of its sarcodic body was explained, as illustrative of the morphology of the *Rhizopoda* in general, so far as their soft parts are concerned. The characteristics of *Foraminifera* were then pointed out, as marked (I.) by a *Calcareous* investment of the sarcode, whether in one segment or many. This coating or test is known to vary among the numerous members of the group, both as to constitution and form, or “make up.” Instead of being simply calcareous, (II.) it is often very *arenaceous*, with the sand-grains in some cases small and neatly impacted; and in others coarse and rough on the surface. It may also (III.) be almost destitute of mineral matter, soft and impressionable (chitinous?).

The calcareous tests may be (1) either homogeneous, opaque, and white (*Porcellanea*), or (2) somewhat glassy (*Vitrea* or *Hyalina*), subtranslucent, and yet perforated by innumerable tubules, through which the pseudopodia reach the surface, and by larger tubes in the substance of the shell, which connect different parts of the test or shell, when formed of overlapping whorls. Both of these kinds of shells may be more or less arenaceous.

The *Porcellanea* were illustrated by numerous figures of *Spiroloculina*, *Quinqueloculina*, *Biloculina*, *Hauerina*, *Fabularia*, and *Orbitolites* on the screen. The *Arenacea* had for examples *Lituolæ*, of several subgenera, with the many new arenaceous species discovered and described by H. B. Brady, F.R.S., who has so beauti-

fully illustrated the Foraminifera collected in the "Challenger" and other Expeditions, described in his masterly Report for the "Challenger" Monographs.

The *Hyalina* were well typified by a large series of *Lagenæ*, copied on the screen from one of H. B. Brady's plates. *Globigerina*, *Hastigerina*, *Polystomella*, *Tinoporus*, *Operculina*, *Nummulites*, and *Culcarina* followed. The structure of the shells of the last two was briefly described; and the next following figure, of parts of *Eozoön*, was explained and elucidated by reference to these last. The glauconitic infilling of *Eozoön* was illustrated by analogous casts of *Operculina*, *Orbitoides*, *Nummulites*, *Amplistegina*, *Nodosaria*, *Vaginulina*, and *Textularia*, from different, fossil and recent, sea-beds.

ON CERTAIN POINTS IN VOLCANIC PHENOMENA.

BY F. W. RUDLER, F.G.S.

This was an address descriptive of a series of lantern-slides which were exhibited on the screen by Mr. Geo. Smith. Some of the slides had been kindly lent by Mr. J. H. H. Teall. The speaker dwelt on the prominent part which elastic fluids play in all volcanic phenomena. Some of these fluids, such as free hydrogen and hydrogen sulphide, are combustible, and therefore contribute directly to the luminosity of the effluent vapours; but the appearances suggestive of flames are generally due, not so much to the self-luminosity of any of these bodies as to light reflected from the glowing interior of the volcanic vent. Ejected matter in a liquid and solid state also aids, by its incandescence, in producing luminous phenomena. Steam is of all volcanic products the most abundant. The characteristic shape of the cloud-cap, or "stone-pine appendage" of Vesuvius, was illustrated by views; while other slides exhibited some of the surface-characteristics of lava currents. Rapidly solidifying on the exterior, the extruded matter may assume a scoriform crust, and exhibit a variety of superficial irregularities. The chilled crust in some instances affects the form of coils of tarred rope. The origin of the conical form of the typical volcanic hill was explained as resulting from