

culty when he wrote: "Care is to be taken that intraformational breccias are not to be confounded with intraformational conglomerates. The former have a wide geographic distribution, and owe their origin to local disturbances within the beds affected, without pre-supposing elevation above sea level and erosion." As will be pointed out later, limestone breccias can be formed under other than truly tectonic conditions. It may seem strange at first to consider a mud-cracked limestone as a brecciated rock, and yet viewed in cross section, or at right angles to the bedding plane, the hand specimen or field section will often show a characteristic brecciated structure. It is, therefore, proposed in the present classification to introduce two new terms, *glomerate* and *phenoclast*, in describing all those rocks (*glomerate*) which are of sedimentary origin, coarse, or psephitic in texture, whether or not their "show" constituents (*phenoclasts*) give signs of attrition and transportation.

**GLOMERATE**, according to the Century Dictionary, means "collected into a spherical form or mass." It is an old English word and rarely used. Conglomerate, in its ordinary sense, is also defined as "collected or clustered together," the shape of the materials forming the cluster being undefined; while the geological term "conglomerate" is defined as "a rock made up of the *rounded and water-worn debris* of previously existing rocks, etc.." (the italics are the writer's). It is proposed to use the term *glomerate* in a geological sense to mean any sedimentary or clastic rock made up of roughly graded debris formed within itself or from pre-existing rocks. Such a term would cover breccias, conglomerates and certain other rocks of doubtful origin, and its need will be more obvious further on in this paper. Nauman, in his "Geognosie," proposed the term *Psephite*, but it has never been widely adopted, and probably never will be, although it is a useful and descriptive word in petrology and geology. Nauman defined psephite structure thus: "Die Fragmente, aus welchen die klastischen Gesteine bestehen, sind entweder gross, so dass sie als formliche Gesteinstucke erscheinen, welche theils *eckig* theils *abgerundet* sein koennen. In diesem Falle lasst die structure als psephite-structure bezeichnen, weil sich die betreffenden Gestein als Agregate grossere oder kleinen Steinen darstellen" (p. 446. The italics are the writer's.)

**PHENOCLAST**.—There is as great a need for a term to express the order or size of the constituents in a sedimentary rock as there is for the term *phenocryst*, which designates a large crystal in the ground mass of a crystalline rock. Phenoclast, from *pheno*: show; and *clast*: clastic, broken piece or fragment,