it occurs as loose fragments in the soils or hillside debris. Some of the pieces are a foot or more in diameter although most are much smaller.

The Indians used the jasper for their arrow and spear heads but do not seem to have quarried it at any place in Northampton County. A few miles to the south near Durham Furnace in Bucks County and near Limeport, Vera Cruz and Maunie in Lehigh County there are extensive diggings where they evidently obtained large supplies.

**CHALCEDONY** (SiO$_2$)

In several places in the Saucon Valley there are large masses of dense white to gray chalcedony, particularly on the hillside a short distance northeast of Lost (Hellertown) Cave; occasional loose fragments occur east and southeast of Hellertown.

A variety of chalcedony known as prase has been reported to occur in the gneiss near Redington. It is translucent and has a dull leek-green color. The exact locality is unknown.

**OPAL** (SiO$_2$)

Some opal has been noted in association with chalcedony.

**FLINT** (basanite, hornstone, chert) (SiO$_2$)

The dark-colored cryptocrystalline varieties of silica, although described as possessing somewhat different properties, are not here differentiated. Specimens of each type and gradations from one to another can be picked up in the fields or along the streams throughout the areas underlain by limestones. The source of the flint is in the Cambrian and Ordovician dolomitic limestones where, in places, it is fairly abundant. All these limestones are rather high in their silica content and the silica has, in part, been segregated by underground circulating waters into lenses or nodules of irregular shape. Many specimens show by their characteristics that they are replacements of the limestone. Along Catasauqua Creek about one mile north of Catasauqua, specimens of *Cryptosōn proliferum* now composed of flint have been found. The lenses are commonly more or less parallel to the bedding planes and range in thickness up to several inches. Occasional masses are several feet in diameter.

The flint in the soils is the residual, relatively insoluble material left behind when the enclosing dolomitic limestones were removed by solution.

The Indians used the black flint of the region for their arrowheads, many of which have been collected all through the county.

**CUPRITE** (Cu$_2$O)

Small quantities of cuprite have been found at Chestnut Hill.