CORUNDUM HILL (FRANKLIN), MACON COUNTY, NORTH CAROLINA

SAMUEL G. GORDON, *Academy of Natural Sciences of Philadelphia*

Visitors to the Vaux and Bement collections cannot have failed to notice the many fine ruby corundum crystals labeled Franklin, Macon County, North Carolina. Their source, the Cullasaja mine, was perhaps the most celebrated American corundum locality. This mine is to be numbered among those whose productiveness is of the past; inspiring the lament, that while new mineral localities are being discovered to take the place of the old ones, they are in such lands as Greenland or Africa—beyond the peregrinations of most mineralogists.

The Cullasaja mine is situated on a spur of the Cowee mountains, about one mile east of the place marked Cullasaja on the Cowee quadrangle, on the Cullasaja or Sugartown fork of the Little Tennessee River. The mines are about eight miles southeast of Franklin, the county-seat, and twenty miles distant from Sylva, the nearest railroad point to the north, on the Southern Railway. To one coming in from this direction, the opportunity is presented of seeing the well-known Webster dunite and websterite mass. An auto-bus service has been established between Sylva and Franklin.

Corundum Hill is a mass of dunite, exposed over an area of about ten acres, forming an intrusive body in mica schist. Large open cuts and rather barren dumps offer mute testimony of extensive operations in the past. Some of the more recent workings were by means of tunnels, while washing of the soil proved a profitable source of corundum. During the recent war, the mine had a new lease of life, and the writer was able to secure some well formed corundum crystals about the mill and one of the upper shafts.

Altho there were a number of more or less irregular corundum veins in the interior of the dunite mass, most of the open cuts follow the course of the "Big Vein" which was situated along the southern contact of dunite and gneiss.

Large boulders of dunite first meet the visitor's eye upon arriving at the locality, whi e the dumps yield attractive masses of broad-bladed, brownish anthophyllite, some talc, cullsageeite (a brown vermiculite), black tourmaline, and chlorite. About

the upper shafts, corundum crystals may be found in boulders of disintegrating chlorite.

Aside from being a source of fine corundum crystals (a single one in the Shepard Collection at Amherst weighs 312 pounds), the deposit excited the attention of many early geologists, and its interest from a genetic point of view has not abated.

The corundum and peridotites of North Carolina have been described in detail in the admirable monograph of Pratt and Lewis.[1] The corundum veins consisted largely of chlorite and corundum, or locally of corundum-bearing plagioclase. In passing from an interior vein to the dunite, the following zones were encountered: 1. green chlorites; 2. grayish enstatite or anthophyllite, more probably the latter; 3. fibrous talc; 4. weathered dunite; and 5. normal dunite. Similar zones were found in the border veins.

Pratt and Lewis regarded the corundum deposits as magmatic segregations. However ingenious their theory, it may be regarded as untenable. The present writer[2] believes them to represent pegmatites intruded within or along the contact of the peridotite, and to owe their peculiar mineralogical composition to the reaction which occurred between the pegmatite solutions and the dunite, whereby the pegmatite was depleted of most of its silica, which was used in the formation of the chlorites and the minerals of the contact zones.

THE GEM MOUNTS OF THE AMERICAN MUSEUM OF NATURAL HISTORY

HERBERT P. WHITLOCK, *American Museum of Natural History*

In the course of planning the installation of the Tiffany-Morgan Collection of gem stones, in the new Morgan Memorial Hall of the American Museum of Natural History, the problem of the effective display of cut gem stones was presented for solution.

In the former installation of this Collection the familiar type of wire mount, clamping the girdle of the stone, and terminating

[1] Joseph Hyde Pratt and J. Volney Lewis: Corundum and the peridotites of North Carolina. *N. C. Geol. Survey*, **1**, 1905.

[2] Desilicated granitic pegmatites. *Proc. Acad. Nat. Sci. Phila.*, 169–192, **1921.**