

**NORTH CAROLINA**  
**DEPARTMENT OF CONSERVATION AND DEVELOPMENT**  
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**DIVISION OF MINERAL RESOURCES**  
**JASPER L. STUCKEY, STATE GEOLOGIST**

---

*Information Circular 16*

**MINERAL LOCALITIES OF**  
**NORTH CAROLINA**

**BY**

**JAMES F. CONLEY**



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MINERAL LOCALITIES OF NORTH CAROLINA

By

James F. Conley

\* \* \* \* \*

INTRODUCTION

Purpose and Scope

North Carolina contains rocks ranging in age from the ancient Precambrian to the youngest Pleistocene and Recent formations. These rocks contain one of the largest assemblages of minerals identified to date in any state in the Union. Some of these minerals are prized as semi-precious and precious gem stones, while others are cabinet specimens and valuable ores.

With no more equipment than a hammer and cold chisel, many persons in the State have amassed collections which some museums would be proud to display. Other people who prefer cut stones have bought and made lapidary equipment at little initial cost and, using local rocks and minerals, have polished them into handsome costume jewelry. Others who desire the ultimate in the lapidary art have mastered the difficult task of faceting stones, and many specimens of high quality have been prepared.

Beacuse of the recent interest in mineral collecting and gem cutting which has developed in the State, this publication has been prepared as a guide to the mineral localities of North Carolina and is designed to aid collectors and other interested persons in finding the minerals of the State. Some of the localities are famous old mines which have been closed for years, some are present day mines, while others are mineral collecting localities only. Many of the gold, feldspar, and mica deposits have been omitted purposely because most of them are well

covered by the literature. The few of these deposits which are mentioned, are in reference to other minerals which occur in them.

The localities are presented in annotated form, by counties, with a brief description of the minerals which occur in each deposit. No attempt is made to explain the mode of geologic origin of the deposits, because this would be beyond the scope of this publication.

In many cases the descriptions are accompanied by county highway maps with the localities lettered on the maps. Due to the short time allotted to this project, it was impossible to field-check many of the localities and the author had to rely on information supplied by collectors. Generally speaking, the deposits are located with a fair degree of accuracy and most of the minerals found at each deposit are included in the description.

#### Acknowledgments

Many of the publications of the Department of Conservation and Development, Division of Mineral Resources, were consulted in the preparation of this paper as were in the old North Carolina Geological Survey and Geological and Economic Survey papers. Especially helpful were the economic papers prepared by Joseph Hyde Pratt and many of the bulletins of this Division. "The Minerals and Mineral Localities of North Carolina," by F.A. Genth and W.C. Kerr was also a great aid, as were several publications of the United States Geological Survey.

Thanks are extended to the staff of the Department of Conservation and Development, Division of Mineral Resources, for information on localities as well as aid in preparing this publication.

The author is grateful to Mr. Harry T. Davis, Director of the State Museum, Raleigh, for supplying museum specimen material from which photo-

graphs were taken as illustrations for this publication, and to the North Carolina Department of Conservation and Development, Division of Advertising, for making these photographs.

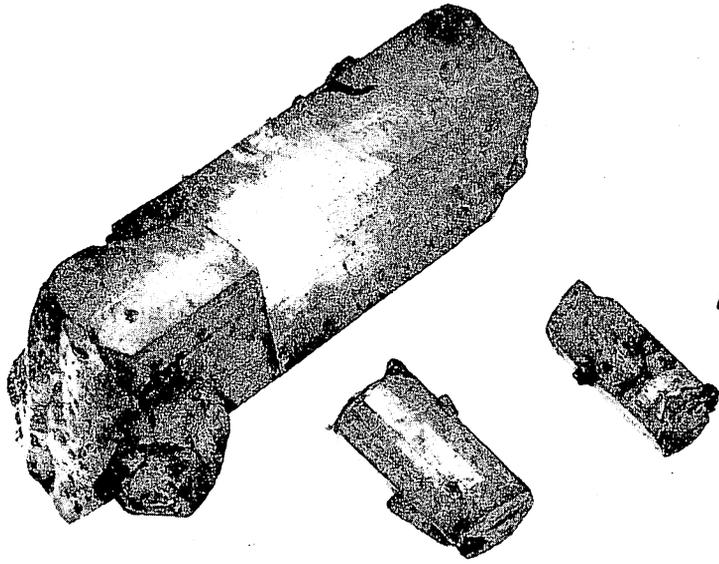
Acknowledgment is made to the mineral dealers, mine operators, curators of the several museums of the State, and the many private collectors, too numerous to mention, who gave freely of their knowledge of the mineral localities of the State.

### Mineral Collecting in North Carolina

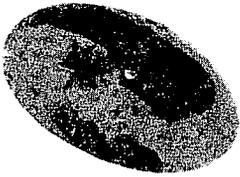
Probably the first miners and mineral collectors of the State were Indians who mined mica from western North Carolina and traded it with the surrounding tribes. Such old mine workings were recognized by the early settlers, who mistakingly thought the Indians had been mining silver. Two mines which contained ancient workings are the Baird mine in Macon County and the Sink Hole mine in Mitchell County (Smith, 1876, pp. 441-443 and Sterrett, 1923, p. 250). Galena, pyrite and quartz crystals are sometimes found in Indian burials indicating that they prized and collected certain minerals.

The early miners and promoters of the mining industry were also interested in mineral collecting. Such men as General Thomas L. Clingman, J.A.D. Stephenson, W.E. Hidden, Dr. G.F. Kunz, and others had extensive collections.

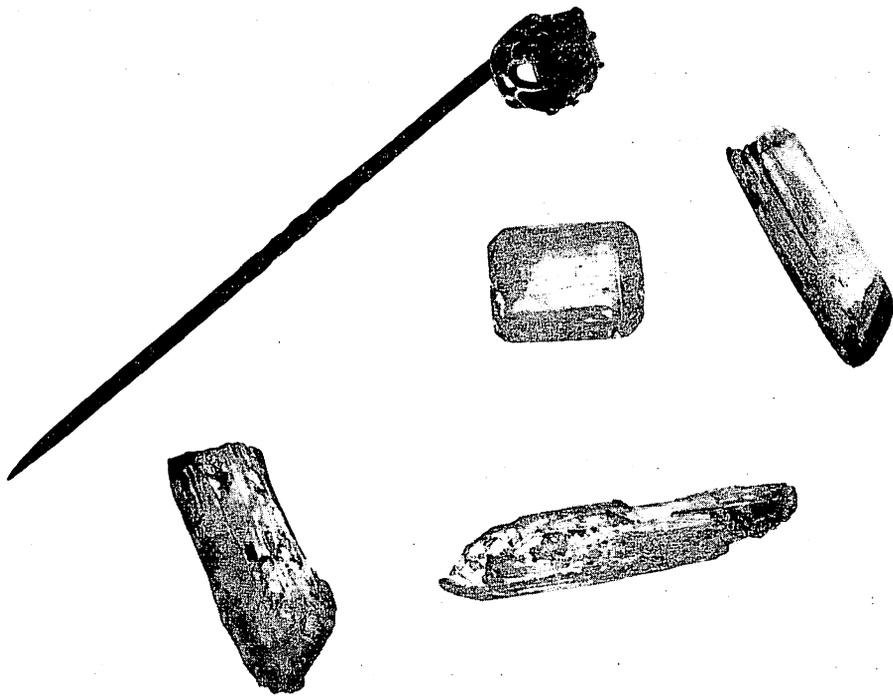
From this early group, mineral collecting has grown to its present proportions. Mr. B.H. Colburn of Asheville organized the first mineral club in the State in the middle 1920's. At the present time, the State contains three active clubs and the private collectors probably number in the hundreds. The variety of minerals to be found in North Carolina has attracted hundreds of collectors from out of State and has



**A. EMERALD CRYSTALS,  
ALEXANDER COUNTY**



**B. EMERALD IN MATRIX,  
MITCHELL COUNTY**



**C. HIDDENITE CRYSTALS AND  
CUT STONES, ALEXANDER  
COUNTY**

aided the tourist industry in the western part of the State. Local gem cutters have found a ready market for jewelry which they make and sell to North Carolina visitors.

### Where to Collect

The best place to look for mineral specimens is in working mines and old mine dumps. Railroad and highway cuts sometimes contain good mineral specimens, as do stream banks, gullies, and stream beds. Freshly plowed fields have disclosed remarkable specimens of minerals which are resistant to weathering.

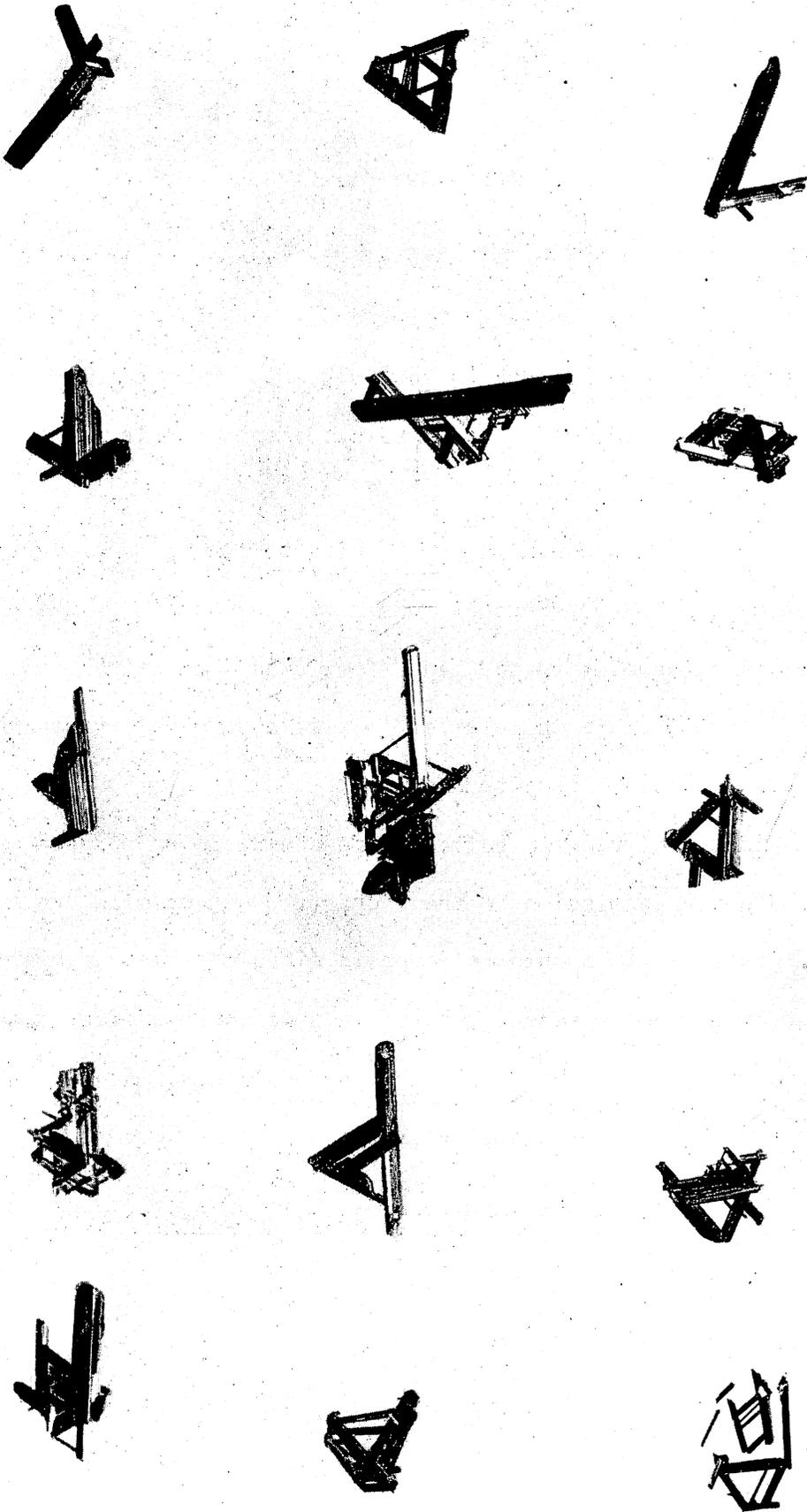
The localities described in this publication are places where minerals have been found. Some of them have been almost obliterated by the agents; time, vegetation and man. Specimens from such localities may be difficult to find, while other localities are well preserved and specimens are relatively easy to obtain.

Almost any place a collector goes will be on private property and he should have the permission of the property owner or mine operator to enter the locality. It should be borne in mind that many property owners do not appreciate people entering their land without permission. Some farmers have suffered destruction of crops and broken fences at the hands of trespassers and have closed their lands to the public.

## THE MINERAL LOCALITIES OF NORTH CAROLINA BY COUNTIES

### Alamance County

Pyrophyllite: Pyrophyllite occurs in Alamance County at the Snow Camp mine located 3.3 miles southeast of the village of Snow Camp. This deposit can be reached by following the paved road south out of the village for one mile and turning east on a secondary road for approxi-



RETICULATED RUTILE CRYSTALS

*Ellis Mine, Alexander County*

mately 2.3 miles. The mine lies north of the road on the side of a wooded hill, 0.2 of a mile above the road.

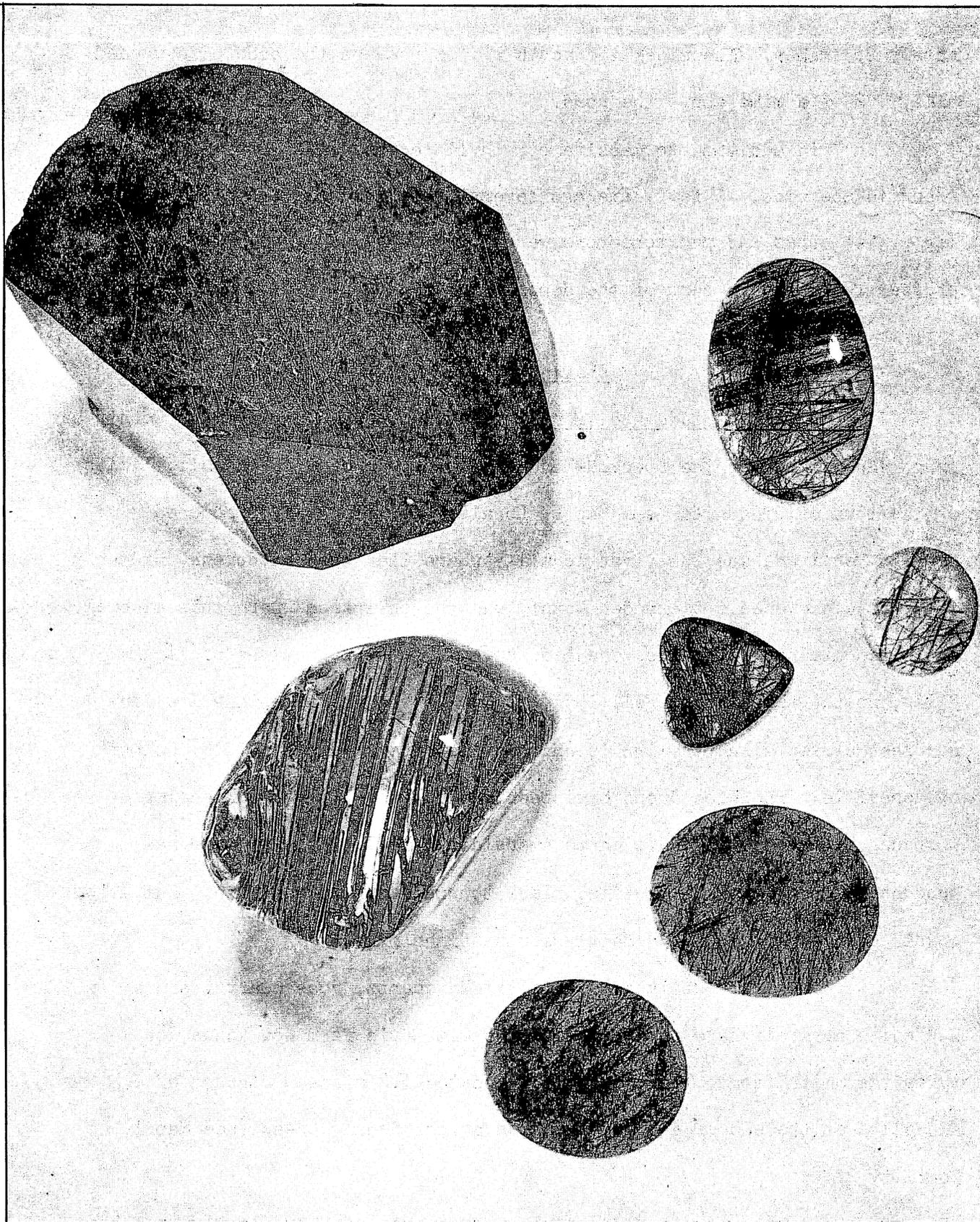
In addition to massive pyrophyllite; sericite, pyrite, and chert occur in the mine. A few years ago several clear quartz crystals enclosing pyrite cubes and pyritohedrons were found in a quartz vein which crosses the southern part of the deposit.

#### Alexander County

Emerald, Hiddenite, and Associated Minerals: Alexander County has long been famous for the Emerald-Hiddenite mine, located in the city limits of the town of Hiddenite (see Map 1, Locality 1). This mine produced emerald beryl and was the first locality where the green spodumene, hiddenite, was discovered. Alexander County was the only area where this mineral could be obtained until its recent discovery in the pegmatites of Black Hills, South Dakota (Schlegel, 1957, p. 226). The Emerald-Hiddenite mine has been closed since the 1920's and was last operated by Mr. B.H. Colburn of Asheville. The mine dumps have been opened recently for collecting purposes at a fee. In addition to emerald and hiddenite, the mine has produced quartz crystals, rutile, black tourmaline, and monazite. Rutilated quartz occurs in the area directly south of the mine.

Emerald, rutilated quartz, smoky quartz, rose quartz, and a few hiddenite crystals have been found on the Old Revis farm now known locally as the Smith farm. The property is located 1.2 miles northeast of Hiddenite at the end of a secondary road across Greasy Creek (see Map 1, Locality 2).

Emerald, aquamarine beryl, rose quartz, and rutile crystals have been recovered from the Ellis mine (Pratt, 1908, pp. 70-73). The mine is



**RUTILATED QUARTZ**  
*Alexander County*

located 0.5 of a mile north of the Hiddenite School in the bottom of a small stream valley (see Map 1, Locality 3).

Rutile and Rutilated Quartz: Rutilated quartz occurs in several areas in the eastern part of the county. Rutilated quartz crystals have been found on the Tom Sharpe farm, approximately two miles northeast of Hiddenite on the road to Smith's Store (see Map 1, Locality 4) (Mr. A.H. DeVier, Taylorsville, Personal Communication).

Rutilated quartz can be found as float in the fields of the Kever place two miles southeast of Taylorsville on a gravel road which turns east off the road to Payne's Store. The area is situated north of this secondary road, approximately 0.2 of a mile from the intersection with the Payne's Store road (see Map 1, Locality 5). Rutilated quartz can also be found 0.6 of a mile northeast of this area on this same secondary road on the property of Mrs. Ranson Payne (see Map 1, Locality 6).

Rutile and rutilated quartz occur on the farm of Mr. George Lackey on the road to Smith's Store, four miles north of Stony Point (see Map 1, Locality 7). The locality is situated behind the Lackey home, and just north of a barn on the property.

Rutilated and smoky quartz crystals occur 3.2 miles north of Hiddenite, between the South Yadkin River and one of its tributaries, as well as, 0.4 of a mile south of this area, between the South Yadkin River and the road to Hiddenite (see Map 1, Locality 8).

Rutile, Xenotime, and Monazite: Water worn rutile, xenotime, and monazite crystals are found in the stream which flows southeast of Stony Point at the old Milholand's Mill site (Genth and Kerr, 1885, p. 96) (see Map 1, Locality 9).

Smoky Quartz, Goethite, and Graphite: Massive veins of smoky



quartz can be seen in the road cut south of Emerald-Hiddenite mine at Hiddenite (see Map 1, Locality 10). Goethite and limonite occur as float on the Isenhour farm on the hillside behind Mr. Isenhour's tenant house, 0.7 of a mile northeast of Payne's Store (see Map 1, Locality 11). Graphite veins are found on Barrett Mountain, 5.3 miles southwest of Taylorsville (see Map 1, Locality 12).

#### Alleghany County

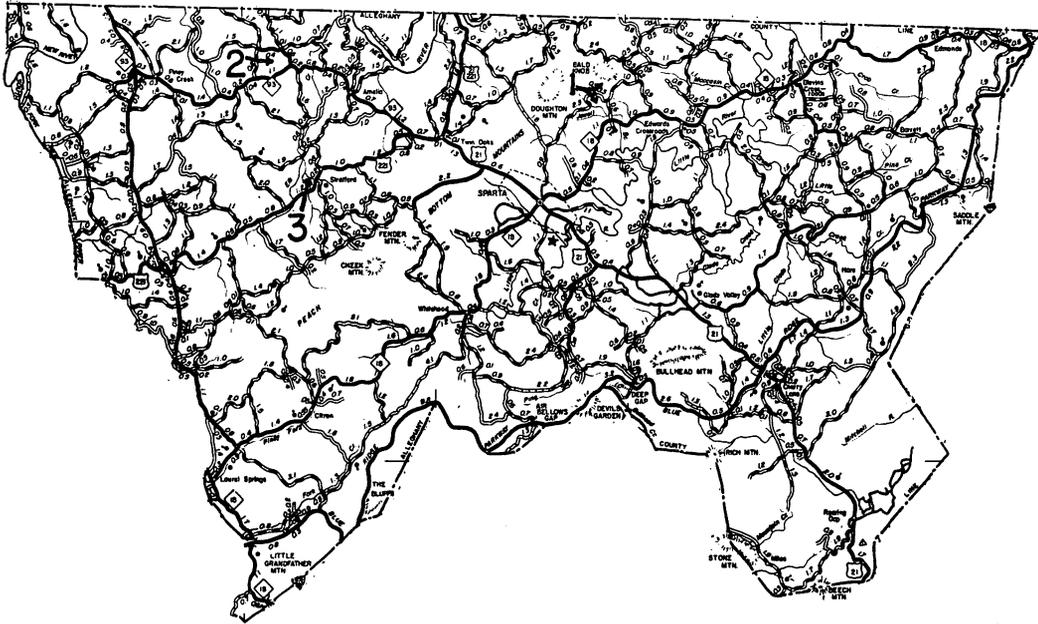
Manganese: A manganese deposit occurs in Alleghany County in the region south of Bald Knob, four miles north of Sparta. Several mine shafts have been sunk on a small hill, known as Crouse Knob, south of Bald Knob. The minerals found in this deposit include alleghanyite, spessartite, tephroite, and galaxite. The area can be reached by taking highway N.C. 18 northeast of Sparta for 2.9 miles and turning west on a secondary road which forks at 0.6 of a mile. The mine lies on the west fork of this road 0.3 of a mile from the road fork. The mine dumps can be seen on both sides of the road at this point (see Map 2, Locality 1).

Barite: Barite veins lie north of highway N.C. 93, 2.3 miles northwest of Amelia (see Map 2, Locality 2).

Copper: The Maxwell copper mine, also known as the Peach Bottom mine, is located west of Stratford in the area between the village and Elk Creek (see Map 2, Locality 3). The ore veins carry the minerals pyrite, chalcopyrite, galena, malachite, cuprite, sphalerite, and molybdenite.

#### Ashe County

Copper: Ore Knob mine, located in east central Ashe County on highway N.C. 88, north of the village of Ore Knob, has recently been reopened by Appalachian Sulphides, Inc. The minerals found during the

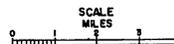


**LEGEND**

- 1. Manganese
- 2. Barite
- 3. Copper



**ALLEGHANY COUNTY**



first operation of this mine included chalcopyrite, pyrite, cuprite, native copper, arsenopyrite, and malachite. The mine is now being worked principally for chalcopyrite.

Mica and Beryl: The Duncan Mine, which lies 1.2 miles southwest of West Jefferson, was worked for mica but also produced some beryl. Little if any of the beryl was of gem quality but some of the crystals might make cabinet specimens.

Staurolite: Well formed staurolite crystals occur in muscovite-biotite gneiss in an area on the north side of the North Fork of the New River, approximately 0.5 miles east of Crumpler.

#### Avery County

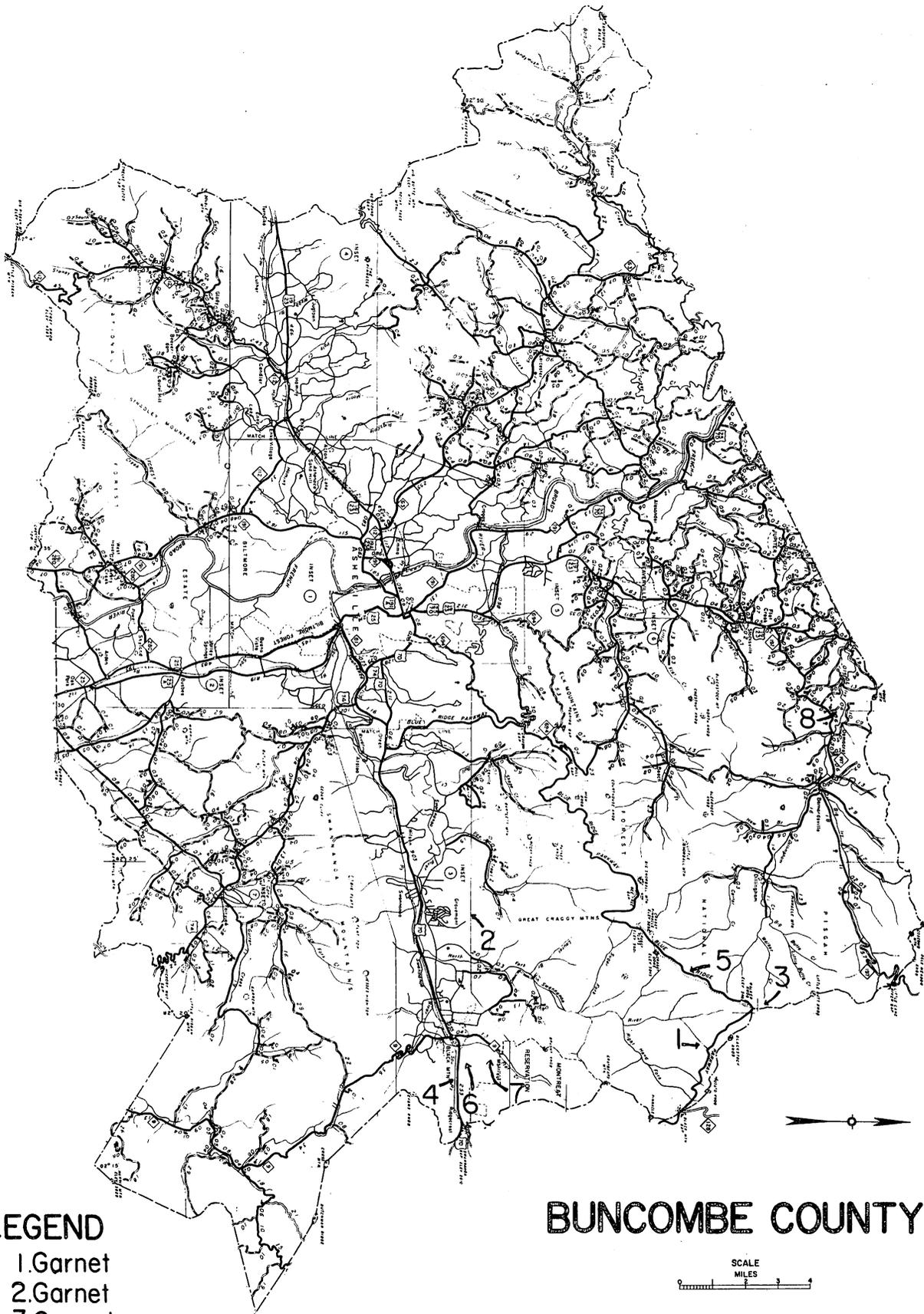
Iron and Epidote: The Cranberry Iron mine, located one mile southwest of the village of Cranberry, has produced magnetite with a gangue consisting of uralite, epidote, and garnet. Part of the old mine dumps were used as ballast in the construction of a now abandoned railroad to carry ore from the mine. Epidote, which was a part of the ballast of this railroad, has been found east of the mine and approximately 100 yards east of highway U.S. 19 E. This material takes a good polish and has been used extensively for making en cabochon cuts.

#### Buncombe County

Garnet: Garnet has been found in Buncombe County at Potato Gap, on the Blue Ridge Parkway, northeast of the Craggy Picnic Area (Mr. Charles D. Hare, Tryon, Personal Communication) (see Map 3, Locality 1). Garnet also occurs in an area extending from the east shore of Bee Tree Reservoir south to Grovemont (see Map 3, Locality 2).

Corundum: Pink corundum has been mined 0.5 of a mile north of the Blue Ridge Parkway at Balsam Gap (see Map 3, Locality 3). Corundum also occurs south of Swannanoa Gap at Ridgecrest (see Map 3, Locality 4).

Kyanite: Kyanite can be found at several localities in the county.



**LEGEND**

- 1. Garnet
- 2. Garnet
- 3. Corundum
- 4. Corundum
- 5. Kyanite
- 6. Kyanite
- 7. Kyanite & Sapphire
- 8. Moonstone (Goldsmith Mine)

**BUNCOMBE COUNTY**



A deep sapphire-blue variety occurs 100 yards northwest of the Blue Ridge Parkway, 1.4 miles southeast of Balsam Gap (see Map 3, Locality 5). Kyanite also is found at Lookout Mountain north of the town of Black Mountain (Mr. Claude Platz, Personal Communication) (see Map 3, Locality 6). A kyanite and sapphire corundum area lies northeast of Black Mountain and is located on the Levine property now being operated as the J.C. Dude Ranch (Mr. Claude Platz, Asheville, Personal Communication) (see Map 3, Locality 7).

Moonstone and Associated Minerals: The Goldsmith mine, located west of Democrat, contains moonstone, chalcedony, garnet, olivine, and vermiculite. The mine can be reached by taking highway N.C. 197 west out of Democrat for 0.6 of a mile and turning north on a dead-end secondary road for 0.2 of a mile (see Map 3, Locality 8). The mine is located in an open cut on the northeast side of the road bank (Mr. Robert A. Campbell, Asheville, Personal Communication).

#### Burke County

Corundum: The old Shoup's Ford area, located 1.6 miles northeast of Ramsey seems to have been lost from the modern list of localities (see Map 4, Locality 1). Genth and Kerr (1885, p. 99) mention the occurrence of beryl, garnet, corundum, gold, magnetite, ilmenite, kyanite, and tourmaline in this area. Pratt and Lewis (1905, p. 299) note that sillimanite envelopes the corundum found at this locality.

Itacolumite: Itacolumite or flexible sandstone, occurs as boulders weathered from the Erwin quartzite along highway (temporary) N.C. 105, 5.5 miles northwest of Bridgewater. Boulders of itacolumite can also be found on highway N.C. 126 on the north side of the road, 0.3 of a mile east of its junction with highway (temporary) N.C. 105 (see Map 4, Locality 2). The itacolumite in this area is generally inferior to the Stokes County

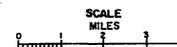
flexible sandstone.

Tourmaline: Black tourmaline crystals up to 1/2 inch in diameter have been found in a field southwest of Burke Chapel. The locality can be reached by taking an unpaved road south from Burke Chapel and turning right at 0.5 of a mile, on an unpaved road for approximately 0.6 of a mile (see Map 4, Locality 3). The field lies south of the road and can be seen from the road. Another area where tourmaline, as well as quartz crystals can be found is almost due north of this area, approximately 0.3 of a mile north of the road. Quartz and tourmaline crystals occur on the north side of highway N.C. 18, ten miles southeast of Morganton (see Map 4, Locality 4) (Mr. Adam Street, Valdese, Personal Communication).

Garnet: Garnet can be found weathering out of mica schist 0.3 of a mile north of High Peak, which lies 2.0 miles south of Drexel (see Map 4, Locality 5).

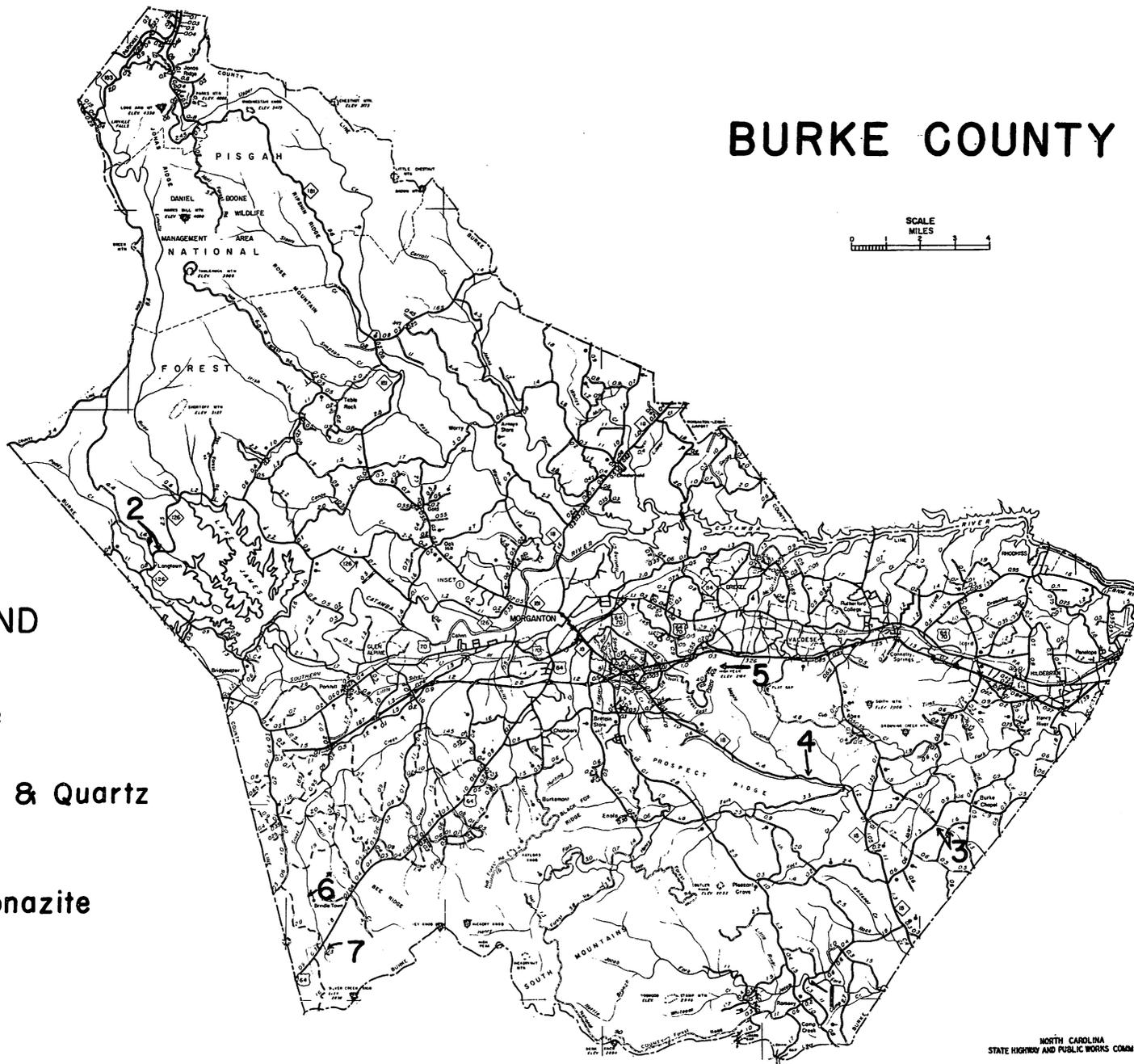
Gold, Monazite, and other Minerals: Brindletown Creek, Silver Creek, and Hall Creek in the Brindletown section carry gold and monazite. Genth and Kerr (1885, p. 98) describe the following list of minerals which have been identified in the sands of Brindletown Creek at the old J.C. Mills gold mine: Gold, tetradymite, brookite, smoky quartz, chromite, anatase, beryl, tourmaline, black and green pyrope, zircon, epidote, sillimanite, columbite, samarskite, xenotime, monazite, montanite, fergusonite, rutherfordite, talc, tremolite, magnetite, limonite, ilmenite, hematite, tellurium, asbestos, kyanite, cordundum, graphite, rutile and actinolite (see Map 4, Locality 6). A small diamond was found by Dr. F.M. Stephenson at the Brindletown Creek Ford in 1843, and another small diamond was discovered in the same vicinity by Professor G.W. Featherstonhaught (Kunz 1907, p. 6). Although there are several reports of diamond finds in this region recently, none of them have been confirmed.

# BURKE COUNTY



## LEGEND

1. Corundum
2. Itacolumite
3. Tourmaline
4. Tourmaline & Quartz crystals
5. Garnet
6. Gold & Monazite
7. Amethyst



Amethyst: Amethyst quartz occurs in Silver Creek south of Brindletown. This area can be reached by taking highway U.S. 64 south out of Brindletown for 1.8 miles and turning southeast for 0.2 of a mile on a dead end dirt road (see Map 4, Locality 7). The amethyst can be found in the creek bed at the bridge across the creek.

#### Cabarrus County

Minerals of the Cabarrus County Mines: Cabarrus County contains many old mines including such famous ones as: The Barnhard vein, near Gold Hill (Barnhardtite); Barringer's mine, four miles southeast of Gold Hill (gold and arsenopyrite); Cullen's mine (tetradymite, pyrite cubes, pseudomalachite, scheelite, malachite and azurite); McMakin's mine, southwest of Gold Hill (silver, argentite, galena, sphalerite, proustite, tetrahedrite (variety fibergite), pyrolusite, pyromorphite, barite, grossularite, rhodochrosite, and magnesite). These are a few of the many mines which have been operated in Cabarrus County (Genth & Kerr, 1885, pp. 99-100). Probably two of the more promising mines for collectors in the county are the Firness and the Phoenix mines.

The Firness mine has been recently investigated by the Carolina Tungsten Company. The minerals occurring at this site include scheelite, siderite, malachite, barite, pyrite, chalcopyrite, and epidote. The mine can be reached by taking highway U.S. 601 southeast out of Concord for 0.6 of a mile beyond its intersection with highway N.C. 49, and turning east on a paved road for 2.9 miles. The mine is located on the left fork of a woodsfarm road which enters the paved road at this point. The Phoenix mine, which carries a similar mineral assemblage, is located on the right fork of this farm road. This mine has not been operated in recent years.

#### Caldwell County

Pyrite: Pyrite crystals and massive epidote suitable for lapidary work are reported to occur in boulders blasted out in the construction of highway

N.C. 90, 1.7 miles north of Collettsville.

Sillimanite: Sillimanite occurs in a mica schist band which crosses southern Caldwell County in a northeast-southwest direction, and passes through the villages of Oak Hill, Hudson, Saw Mills, and Baton. The sillimanite content in this schist varies from a few fine needles to nodules of almost pure sillimanite. One of the better areas for collecting sillimanite is located 0.5 of a mile southwest of Dudley Shoals on the farm of Mr. Gather Teague. This area can be reached from Dudley Shoals by following the Cedar Valley road west for one mile and turning south on a secondary road for 0.5 of a mile. The deposit lies on the south side of the road. Several other deposits are described in this area by Hash and Van Horn (1951, pp. 12-18).

#### Catawba County

Beryl: The Bessie Hudson mine, located in southwestern Catawba County is situated east of highway N.C. 18, 0.9 of a mile east of the Burke-Catawba County line, in an area between two tributaries of Jacob Creek. The mine has produced beryl and, in the immediate vicinity of the mine, chalcopyrite and garnet have been found.

Soapstone: Soapstone occurs in southeastern Catawba County on South Creek, one mile northeast on highway N.C. 16, and also 2.3 miles southeast of Drums Crossroads. Soapstone can also be found on McLin Creek north of highway N.C. 10, two miles east of the Newton city limits.

Graphite: Graphite occurs in the southeastern part of the county in the area where highway N.C. 16 crosses the south fork of South Creek.

Corundum: Corundum is found seven miles north of Conover. This locality can be reached by taking highway N.C. 16 north out of Conover for 7.1 miles and turning east on a dirt road for 0.9 of a mile to a crossroad. The locality lies northeast of the crossroads.

Chatham County

Copper: The Phillips copper prospect in southwestern Chatham County has produced specimens of azurite and malachite. The prospect can be reached by following highway N.C. 22 southeast from Bennett for approximately 2.6 miles and turning east on a paved road for 1.9 miles to a crossroads. The site is located 100 yards north of this crossroads. Azurite and malachite, as well as jasper can be found at the Bear Creek prospect which lies east of the Phillips prospect. This area can most easily be reached by taking the paved road south-southeast from Harpers Crossroads for 2.2 miles and turning east on an unpaved road for approximately 0.6 of a mile. The deposit lies north of the road, between the road and Little Indian Creek.

Limonite: Limonite pseudomorphs after pyrite occur in the road cut of highway N.C. 87, approximately 1.6 miles north of Pittsboro.

Cherokee County

Ottrelite: Ottrelite (chloritoid) occurs in several places in Cherokee County, but one of the better localities is south of Marble, in the area where the road to Peachtree crosses the Valley River (Mr. Arthur Palmer, Marble, Personal Communication) (see Map 5, Locality 1).

Staurolite: Staurolite can be found 1.0 miles southeast of Marble adjacent to the south bank of the Valley River between Parson's Branch and Burnt Branch (see Map 5, Locality 2). Staurolite also occurs 1.3 miles north of Marble in the stream beds of Hyatt Creek and its tributaries, Fishermare Branch and Allmon Creek (Mr. Arthur Palmer, Marble, Personal Communication) (see Map 5, Locality 3).

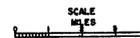
Garnet: Garnet has been found in the Little Snowbird section, 0.6 miles south-southeast of Marble, near the headwaters of Venegance Creek in Big Cove (see Map 4, Locality 4).



**LEGEND**

- 1. Ottrelite
- 2. Staurolite
- 3. Staurolite
- 4. Garnet
- 5. Sillimanite
- 6. Talc
- 7. Talc
- 8. Limonite
- 9. Limonite

**CHEROKEE COUNTY**



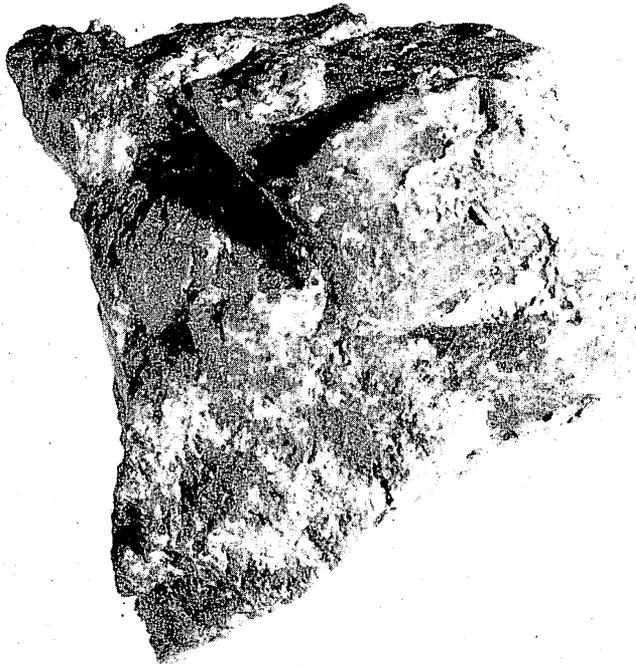
Sillimanite: Boulders containing sillimanite occur on the northwest side of highway U.S. 19, south of Marble below Tomotla Bottoms (Mr. Arthur Palmer, Marble, Personal Communication) (see Map 5, Locality 5).

Talc: Talc has been mined in the Murphy area since 1859. The two largest mines in the area are the Hitchcock Corporation mine located 1.5 miles north of Murphy (see Map 5, Locality 6) and the Metals and Minerals mine located approximately 4.2 miles southwest of Murphy on the north side of highway N.C. 60 (see Map 5, Locality 7). The predominate mineral at both operations is talc; but tremolite, sillimanite, and dravite (brown tourmaline) are associated with the talc of the Hitchcock Corporation mine.

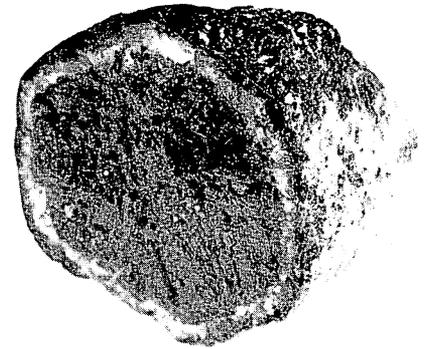
Limonite: Large limonite pseudomorphs after pyrite can be found east of highway U.S. 64, 0.6 of a mile southwest of the center of Murphy (see Map 5, Locality 8). Massive limonite ore occurs over a wide area in association with the marble beds of the Murphy Marble Belt (Kerr and Hanna 1887, p. 184). One of the areas, where iron ore was mined, is located near the end of a short dead-end dirt road which turns south off highway U.S. 64, 2.7 miles southwest of Murphy (see Map 4, Locality 9).

#### Clay County

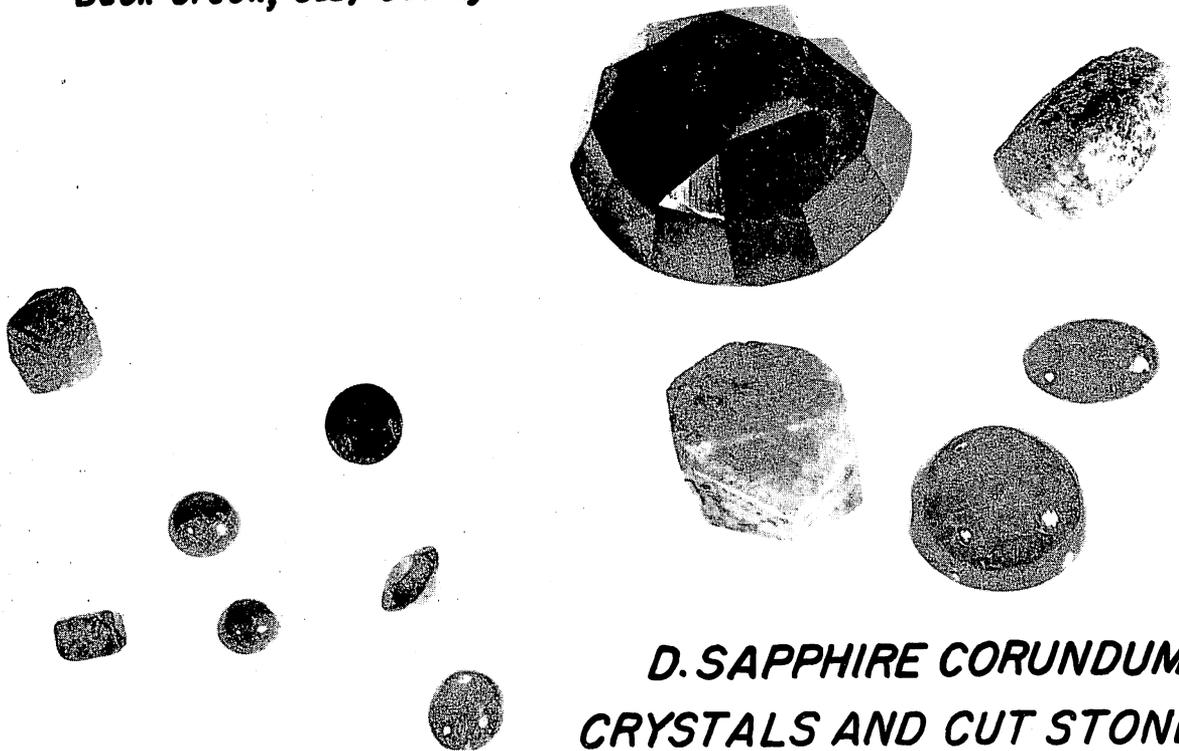
Corundum: Clay County contains a number of peridotite and dunite bodies which have produced commercial corundum. Probably the largest of these in the State is located on Buck Creek, north of Highway U.S. 64, (see Map 6, Locality 1). The corundum in the deposit varies from gray to pink and is associated with olivine anorthite, picrolite, spinel, zoisite, augite, and smaragdite (Hadley, 1949, pp. 114-118). Several shafts were sunk into the deposit including the Big Shaft, located east of



**A. PINK (RUBY) CORUNDUM**  
*Buck Creek, Clay County*



**B. CORUNDUM CRYSTAL**  
*Belts Bridge, Irdell County*



**C. RUBY CORUNDUM CRYSTALS**  
**AND CUT STONES**  
*Cowee Creek, Macon County*

**D. SAPPHIRE CORUNDUM**  
**CRYSTALS AND CUT STONES**  
*Macon County*

the U.S. Bureau of Mines buildings, 0.5 of a mile north of highway U.S. 64, and the Herbert mine, located 0.3 of a mile southwest of the Buck Creek Dude Ranch. Smaragdite and corundum occur on Corundum Knob, which lies approximately 0.5 of a mile west of the U.S. Bureau of Mines Station. Picrolite can be found at a culvert 300 yards beyond the Buck Creek Campgrounds.

Pink corundum in mica schist occurs on the farm of Mr. Wymer Burrell. This area lies 1.8 miles north of the village of Shooting Creek on highway U.S. 64, 0.2 of a mile above the Muskrat Road (see Map 6, Locality 2). It has also been found along the west shore of Lake Chatuge in the area north of Myers Chapel (see Map 6, Locality 3). The Behr corundum mine, which lies west of Elf School, is now covered by Lake Chatuge except at low water level. In recent years fine cabinet specimens have been collected from this mine when the lake level has been low.

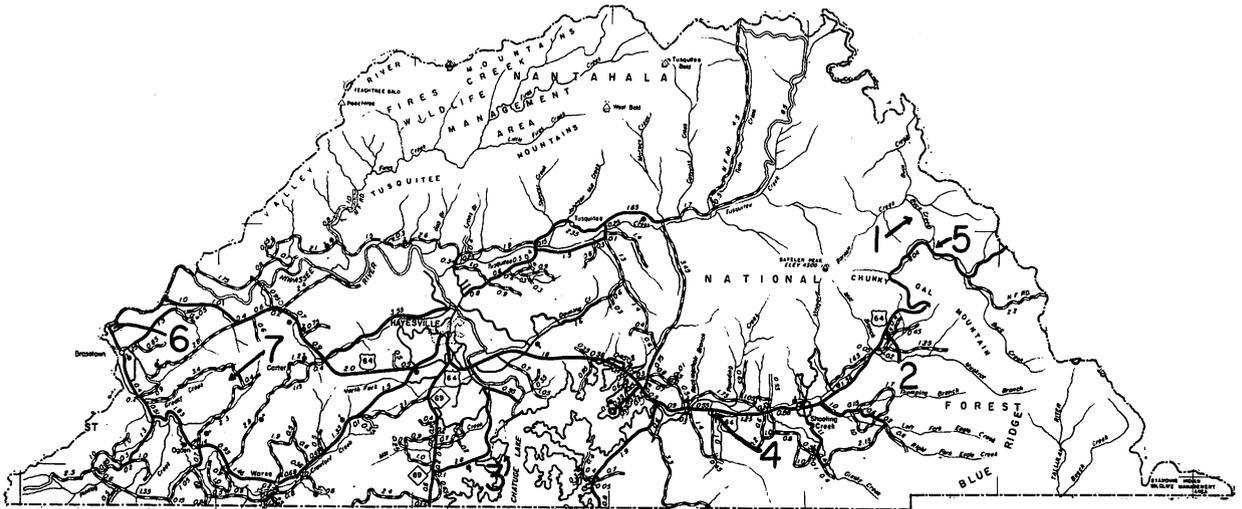
Rutile: Water-worn rutile crystals have been recovered from Shooting Creek west of the village of Shooting Creek in the Spring Hollow section (see Map 6, Locality 4).

Garnet: Almandite garnet occurs at Park Gap and in the stream bed of Little Buck Creek where it has washed down from its source (see Map 6, Locality 5). The garnet in this creek is so plentiful that it has been used as an abrasive by local lapidary men for tumbling stones. Garnet crystals are also reported to occur north of highway (old ) U.S. 64, 0.5 of a mile west of Brasstown (Mr. Herman Estes, Brasstown, Personal Communication) (see Map 6, Locality 6).

Staurolite: An area containing staurolite in mica schist lies east of Brasstown. The area can be reached by taking a secondary road north from Ogden School for 2.3 miles (see Map 6, Locality 7). The staurolite deposit lies to the southwest of the road at this point.

#### Cleveland County

Quartz: Keith and Sterrett (1931, map 3) show several quartz crystal localities in southern Cleveland County. One of these localities is situated

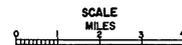


**LEGEND**

- 1. Buck Creek Corundum Deposit
- 2. Burrell Farm, Corundum
- 3. Corundum in Beach Sand
- 4. Rutile
- 5. Garnet
- 6. Garnet
- 7. Staurolite



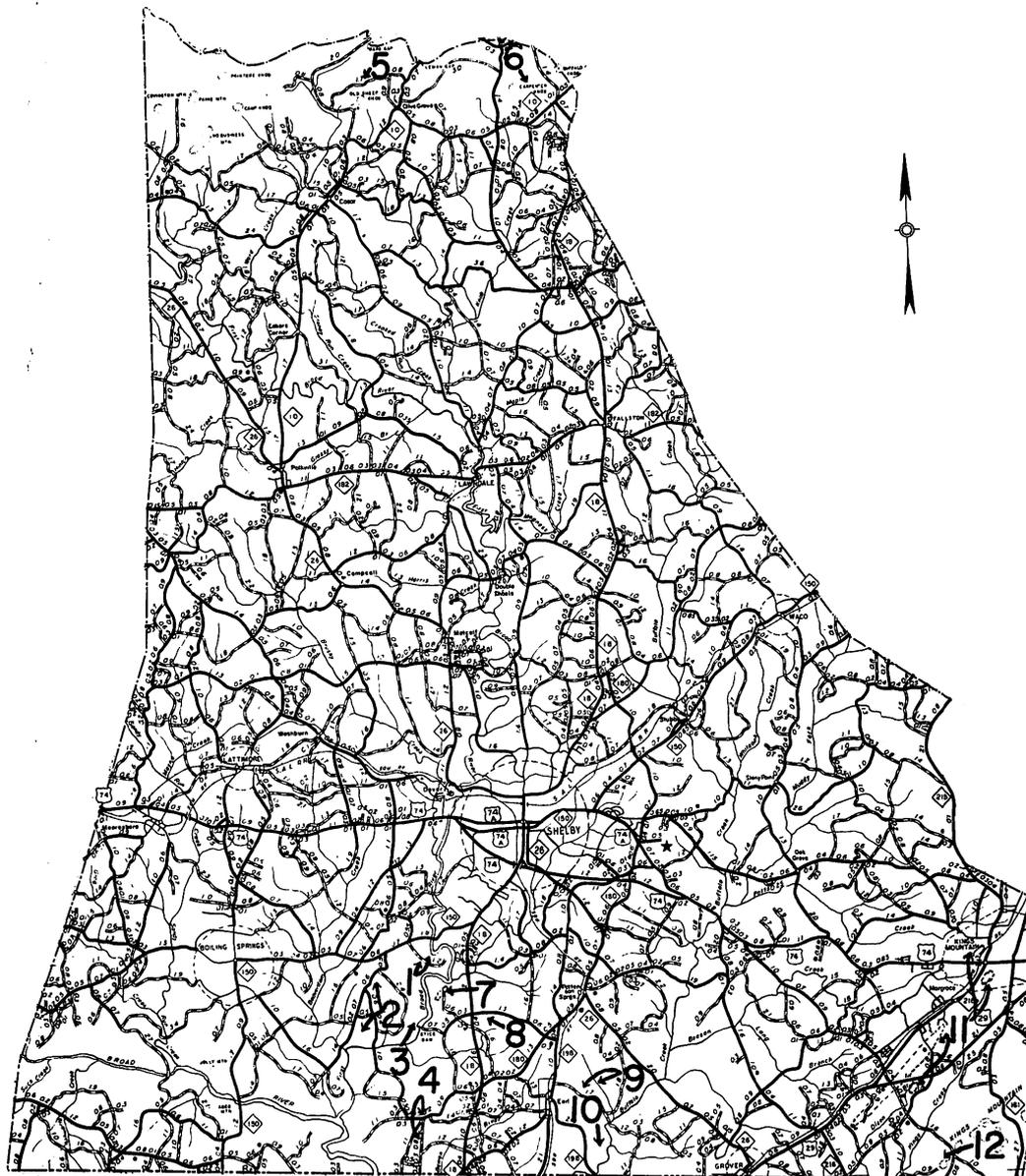
**CLAY COUNTY**



in a bend of Broad River, 4.4 miles south of Shelby. This area can be reached by taking highway N.C. 18-N.C. 150 south out of Shelby to where the highways divide and following highway N.C. 150, west for 1.8 miles to a crossroads and turning south on a dead-end secondary road for 0.4 of a mile. Quartz crystals occur in the fields both east and west of the road at this point (see Map 7, Locality 1). Another quartz crystal area can be reached by taking highway N.C. 150 for 0.7 of a mile beyond the above mentioned crossroads to Sharon Church and turning south on a paved road for 0.9 of a mile. The quartz crystal area lies 0.1 of a mile east of the road (see Map 7, Locality 2). A third locality lies 0.3 of a mile due north of the Stice Dam on Broad River (see Map 7, Locality 3).

Corundum: Grey and bronze corundum specimens occur as float in fields approximately four miles west of Earl (see Map 7, Locality 4). The corundum float is confined to a belt about 1.5 miles long and several hundred yards wide (Keith and Sterrett, 1931, p. 13). Corundum was mined at the turn of the century 0.5 of a mile north of Old Sheep Knob (see Map 7, Locality 5). The mine lies just north of an east-west trending secondary road. Black and gray corundum crystals enclosed by sillimanite schist can be found on the west bank of a farm road 0.3 of a mile northeast of Carpenters Knob (see Map 7, Locality 6). Pratt and Lewis (1905, p. 262) state that grayish blue, tapering corundum crystals have been found along a ridge leading northwest of Carpenters Knob (presumably the same locality).

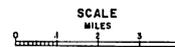
Beryl: Gem quality beryl has been mined in the region southwest of Shelby and emerald beryl has been recovered from the Plantation Emerald mine and the Turner mine (Keith and Sterrett, 1931, p. 12). The Plantation emerald mine is located six miles south of Shelby on a bend



## CLEVELAND COUNTY

### LEGEND

- |                    |                             |
|--------------------|-----------------------------|
| 1. Quartz Crystals | 7. Emerald                  |
| 2. Quartz Crystals | 8. Emerald                  |
| 3. Quartz Crystals | 9. Aquamarine Beryl         |
| 4. Corundum        | 10. Garnet                  |
| 5. Corundum        | 11. Cassiterite & Spodumene |
| 6. Corundum        | 12. Muscovite Crystals      |



of the Broad River, approximately one mile northeast of the Stice Dam (see Map 7, Locality 7). The Turner mine is located 1.5 miles due east of the Stice Dam and 0.2 of a mile east of highway N.C. 18 (see Map 7, Locality 8).

Aquamarine beryl occurs in pegmatite rock on a tributary of Buffalo Creek, 1.3 miles due east of Earl (see Map 7, Locality 9).

Garnet: Garnet can be found between Buffalo Creek and highway N.C. 198, 1.2 miles southeast of Earl (see Map 7, Locality 10).

Cassiterite and Spodumene: The Tin-Spodumene Belt crosses southeastern Cleveland County west of the Kings Mountain Range and east of highway U.S. 29. The cassiterite and spodumene dikes are concentrated in the area east of a line drawn between Park Grace School and Compact School and south of this in the area east of Dixon Creek (see Map 7, Locality 11). The minerals found in the pegmatites of the Tin-Spodumene Belt include amblygonite, apatite, beryl, cassiterite, chalcopyrite, columbite-tantalite, dufrenite, dumortierite, feldspar, garnet, holmquistite, lithophyllite, muscovite, pyrite, rutile, sphalerite, spodumene, titanite, tourmaline, halloysite, kaolinite, vivianite, and purpurite (Kesler, 1942, p. 255).

Muscovite Crystals: Muscovite mica crystals of unusual perfection occur on the D. Yates Brooks property approximately 1.6 miles northwest of Lattimore in southwestern Cleveland County. The mica crystals have been widely sold as collectors items.

#### Davidson County

Gold, Silver and Copper: Davidson County contains several famous gold, silver, and copper mines including Silver Hill, Silver Valley, the Emmons mine and Conrad Hill.

Silver Hill, located five miles southeast of Lexington on the east side of the Silver Hill Road, 0.5 of a mile north of the village of Silver Hill, has not been worked extensively since 1898. The mineral assemblage reported by Genth and Kerr (1885, p. 106) is as follows: native silver, argentite, argentiferous galena, sphalerite, chalcocite, melanconite, zoisite, orthoclase, calamine, pyromorphite, green, yellow brown, black and colorless wavellite; stolzite, anglesite, grossularite, chalcantite, calcite, cerussite, malachite, and scheelite.

The Silver Valley mine is situated six miles southeast of Lexington and occupies the western side of the Flat Swamp Creek valley (Pogue 1910, p. 104) north-northwest of the Silver Valley Crossroads. Genth and Kerr (1885, p. 106) record the following list of minerals which have been found at the mine: galena, sphalerite, and pyromorphite. Pogue (1919, p. 106) adds to this list the minerals chalcopyrite, pyrite carrying gold, and silver.

The Emmons mine lies twelve miles southeast of Lexington and about four miles north of Denton. The mine was worked primarily for copper and the chief ore mineral was chalcopyrite. The mine also produced sphalerite and gold. The gangue minerals were pyrite, siderite, chlorite, and calcite.

The Conrad Hill mine, situated six miles east of Lexington, was worked for the ore minerals chalcopyrite, auriferous pyrite, and malachite. These minerals were accompanied by a gangue of limonite, specular hematite, siderite and chlorite (Pogue, 1910, p. 112).

#### Davie County

Columbite and Autunite : Three pegmatites which contain columbite and autunite are located in northeastern Davie County. Some of the columbite shows crystalline form. One of these localities can be reached by taking highway N.C. 801, east from Farmington for 2.0 miles and turning north on

an unpaved road for 0.4 of a mile. The mine lies approximately 0.4 of a mile east of this road on a farm road. The second locality is reached by continuing down this unpaved county road for an additional 0.8 of a mile and turning east on a dirt road for 1.4 miles to the second bridge. The deposit lies south of the bridge. The third locality lies 1.7 miles north-east of the second locality in a large meander of the Yadkin River.

#### Durham County

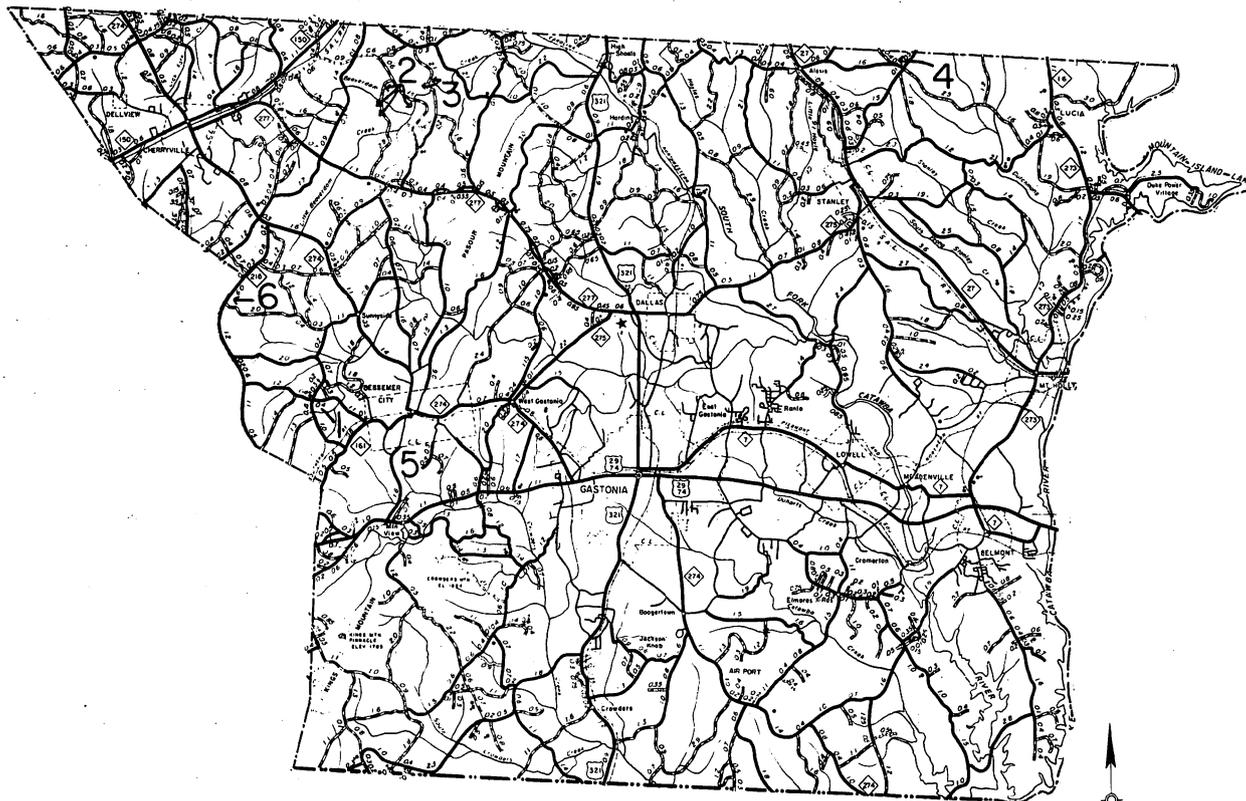
Petrified Wood: Petrified wood, or wood replaced by quartz, is found in many places in the Triassic rocks of Durham County. It can be found in the area one mile north of Weaver, along the Eno River. It also occurs west of the junction of highways U.S. 75 and N.C. 98, on the west side of Durham. It is found in the southern part of the county at Bethesda, just west of highway U.S. 70 and two miles northeast of Bethesda, on the Ferrell Farm (Mr. L.A. Allison, Durham, and Mr. J.A. Price, Durham, Personal Communication).

#### Franklin County

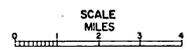
Amethyst Quartz: Amethyst quartz occurs on the Taylor property on highway N.C. 561, at Centerville in northeastern Franklin County. The property is located on the north side of the road a few tenths of a mile west of the Centerville cross-roads (Mr. J.A. Price, Durham, Personal Communication). The crystals from this locality, for the most part, have good color and seem to be of gem quality.

#### Gaston County

Cassiterite and Spodumene: The Tin-Spodumene Belt, previously mentioned as occurring in southeastern Cleveland County, extends northeast across Gaston County. A spodumene dike carrying clear light-green and yellow spodumene, colorless beryl, cassiterite, apatite, and feldspar is located on Long Creek, 2.3 miles east of Bessemer City and 0.2 of a mile southeast of Long Creek Church (see Map 8, Locality 1). Dikes carrying cassiterite occur in the area where Little Beaverdam Creek



# GASTON COUNTY



## LEGEND

- 1. Spodumene
- 2. Cassiterite
- 3. Cassiterite
- 4. Kyanite, Rutile, & Lazulite
- 5. Goethite
- 6. Beryl, Garnet, & Uraninite

flows into Beaverdam Creek (see Map 8, Locality 2). Cassiterite in greisen is found just south of a bridge across Beaverdam Creek, 0.8 of a mile west of where Little Beaverdam and Beaverdam Creeks join; as well as on a hill north of a bridge across Beaverdam Creek, 0.9 miles northeast of the intersection of the two creeks (see Map 8, Locality 3).

Kyanite, Rutile and Lazulite: Kyanite, rutile, and lazulite occur as float in the fields which lie 2.4 miles east of Alexis (see Map 8, Locality 4). This area is confined to a belt approximately 0.1 of a mile wide and approximately 0.7 of a mile long, extending from the Lincoln-Gaston county line almost to Stanley Creek.

Goethite: A goethite locality lies 0.8 of a mile almost due south of the center of Bessemer City in the area known as the Devils Workshop (Rev. Carl Mauney, Henrietta, Personal Communication) (see Map 8, Locality 5).

Beryl, Garnet and Uraninite: Beryl, garnet, and uraninite crystals have been removed from the Bess mine which lies just east of the Cleveland-Gaston County-line road, three miles south of Cherryville (see Map 8, Locality 6).

#### Granville County

Pyrophyllite: Pyrophyllite occurs in Granville County 1.5 miles south of Oak Hill and also 3.0 miles southeast of Oak Hill on Mountain Creek. Pyrophyllite is found on the crest and the northeastern slope of Bowling's Mountain, 2.7 miles west of Stem and approximately 5.0 miles northwest of Butner. The minerals found in this deposit are massive and radiating pyrophyllite, massive topaz, chert, andalusite, diaspore, malachite, ilmenite, hematite and sericite. Other deposits occur in the area of Long Mountain north of Bowling's Mountain.

Copper: Several abandoned copper mines and prospect pits are located in northwestern Granville County, including the Holloway mine and the Blue Wing mine. The Holloway mine, located two miles south and one mile west of Virgilina, was first opened in 1885, and operated intermittently until the early 1900's. The ore minerals of this mine were chalcocite, bornite, malachite, azurite, argentite, cuprite, native copper, and native silver. The ore was accompanied by a gangue of quartz, epidote, chlorite, hematite and pink orthoclase (Laney, 1917, pp. 114-121).

The Blue Wing mine is located 1.5 miles south of Virgilina and lies several hundred yards north of Blue Wing Church. This mine was also operated during the latter part of the nineteenth and early twentieth centuries. The ore minerals of the mine were bornite, chalcocite, azurite, malachite and argentite. They were accompanied by a gangue consisting of quartz, calcite, chlorite, epidote, and hematite (Laney, 1917, pp. 102-114).

A copper prospect containing malachite and specularite lies across the road from the Blue Wing Church and almost due south of the Blue Wing mine.

Molybdenite: Molybdenite filling fractures in granite can be found in a state highway quarry two miles east of Wilton. This quarry can be reached by taking highway N.C. 56 east out of Wilton for 2.6 miles, turning north on an unpaved county road for 0.4 of a mile to a bifurcation and taking the west fork of the road for 0.9 of a mile. The quarry is located on the southwest side of this road.

Lepidolite: Lepidolite float occurs in a field owned by Mr. C.V. Evans, two miles north of Pocomoke on the Granville-Franklin County line, just inside Granville County. Very minute crystals of rubellite are also

found at this locality.

#### Guilford County

Gold and Copper: Guilford County contains several abandoned gold mines which have produced a variety of minerals. The Gardner Hill mine, located eight miles southwest of Greensboro was worked for gold, bornite, chalcopryrite, chrysocolla, and malachite (Genth and Kerr, 1885, p. 109). The Fisher Hill mine, located five miles southwest of Greensboro, contained the minerals gold, pyrite, chalcopryrite, magnetite, hematite, ilmenite, limonite, pseudomalachite, and siderite (Genth and Kerr, 1885, p. 109). The McCullough (North State) mine, located two and one-fourth miles south of Jamestown, on the north side of highway U.S. 29, 0.5 of a mile northeast of Krivett Drive, produced the following minerals: native copper, cuprite in acicular crystals, pyrite, chalcopryrite, siderite and malachite.

Sagenite: Asbestos inclusions in green quartz has been found near Gibsonville (Kunz, 1907, p. 34). Dr. Kunz (1885, p. 725) states that a green stone found by Mr. James M. Smith of Gibsonville was pronounced by a local expert to be a genuine emerald containing several diamonds. The stone weighed nine ounces and was valued at several thousands of dollars. The owner supposedly refused one thousand dollars for it. Mr. Smith, not trusting the mail service, carried the stone to New York, where it was identified as a greenish quartz crystal containing liquid cavities that glistened in the sun, which led to the diamond theory. As five dollars was the best offer made, the stone was returned to North Carolina.

Iron: Iron ores have been mined at several places in Guilford County. One of the larger deposits is the Tuscarora iron mine. This deposit is located on the west side of highway N.C. 68, approximately one mile north of Friendship. The ores include magnetite and ilmenite.

Emery is referred to in the literature as occurring in association with some of the iron ores of the county. It is also reported to occur in an area seven miles northeast of Friendship on the old McCarvisten (or McCuistian) place (Murdock, 1947, p. 14).

#### Halifax County

Hematite: Specular hematite occurs in the Gaston Ore Banks in northwestern Halifax County. The deposit lies on the south side of Roanoke River approximately two miles north of Roanoke Rapids. The ore is granular for the most part and contains some magnetite.

Molybdenite: Molybdenite, in association with pyrite, chalcopyrite, and sericite, is found south of Brinkleyville on the Boy Scout-Jones properties in southwestern Halifax County (Broadhurst, 1955, p. 23). The area can be reached by taking highway N.C. 48 south of Brinkleyville for 2.0 miles, turning west on a paved road for 1.1 miles, and turning north on a dead-end secondary county road for 0.8 of a mile. The deposit is at the end of this secondary road. It occurs in veins enclosed by schists and volcanic rocks.

Gold, Lead and Zinc: Gold, lead and zinc ores are worked at the H. and H. Gold mine on the House property, which lies north of the paved road between Ringwood and Glenview, 1.7 miles west of Glenview. This mine is unique because it is the only gold mine presently in operation in the southeastern section of the United States.

#### Harnett County

Goethite: Goethite, magnetite crystals, and ilmenite in vein quartz occur on the property of Mr. D.N. Spence, Jr., in north-central Harnett County. This area lies along Hector Creek and can be reached by taking highway U.S. 401 north of Chalybeate for 1.7 miles and turning west on a dead-end clay surface county road. The collecting area lies

just west of the end of the road, between the road and Hector Creek.

#### Haywood County

Copper: Several copper prospects are located in Haywood County. One of the most extensive of these is the Redmond mine, located 0.4 of a mile north of the southern end of Waterville Lake. The ores of this mine include arsenopyrite, pyrite, and chalcopyrite, as well as some lead and zinc ores.

Corundum: Although there are several corundum localities in Haywood County, probably the two most interesting localities are the Edmondson property and the Presley mine. The J.H. Edmondson property at Retreat, on the Pigeon River, six miles southeast of Waynesville, contains small pegmatites accompanied by vermiculite carrying corundum associated with kyanite and garnet. The Presley mine, located four miles northwest of Canton, is situated in pegmatite material which cuts through dark green amphibolite country rock. Specimens of excellent color have been found at this locality (Pratt and Lewis, 1905, pp. 188-189 and p. 257).

#### Henderson County

Zircon and Other Rare Earth Minerals: The rare earth pegmatites in the area around Tuxedo were first mined by General Clingman in 1869. These deposits occur at the Freeman mine, 0.5 of a mile northeast of Tuxedo, the Jones mine 0.5 of a mile east of Tuxedo, and the Pace mine 1.8 miles southwest of Tuxedo (see Map 9, Locality 1). Rare earth pegmatites also occur on the Price farm three miles southwest of the Freeman mine, and the Davis farm, located four miles from the Green River Post Office, on the east side of the road to Greenville, by way of Poinsett Spring. The minerals which occur in these deposits (although not found in each deposit) include anatase, sphene, zircon, auralite, xenotime, polycrase, monazite, cyrtolite, apatite,

epidote, and reddish-brown garnet (Olsen, 1952, pp. 18-20).

Xanthitane was identified and named by Shephard from the Zirconia District (Shephard, 1856, p. 96), but later research proved the mineral to be anatase, an alteration product of sphene (Olsen, 1952, p. 20).

Agate: Agate-banded quartz is reported to occur in a horse lot which joins an apple orchard west of the road which circles the western extremity of Lake Summit, south of Tuxedo (see Map 9, Locality 2). The material consists of alternating bands of green, brown and yellow quartz (Mr. Gerald Medd, Arden, Personal Communication).

Epidote: Epidote veins occur in the gneisses composing the west bank of highway N.C. 9, 0.8 of a mile north of Bat Cave. Epidote disseminated through pink granite occurs in the high road banks of highway N.C. 9, 0.4 of a mile north of this area (see Map 9, Locality 3).

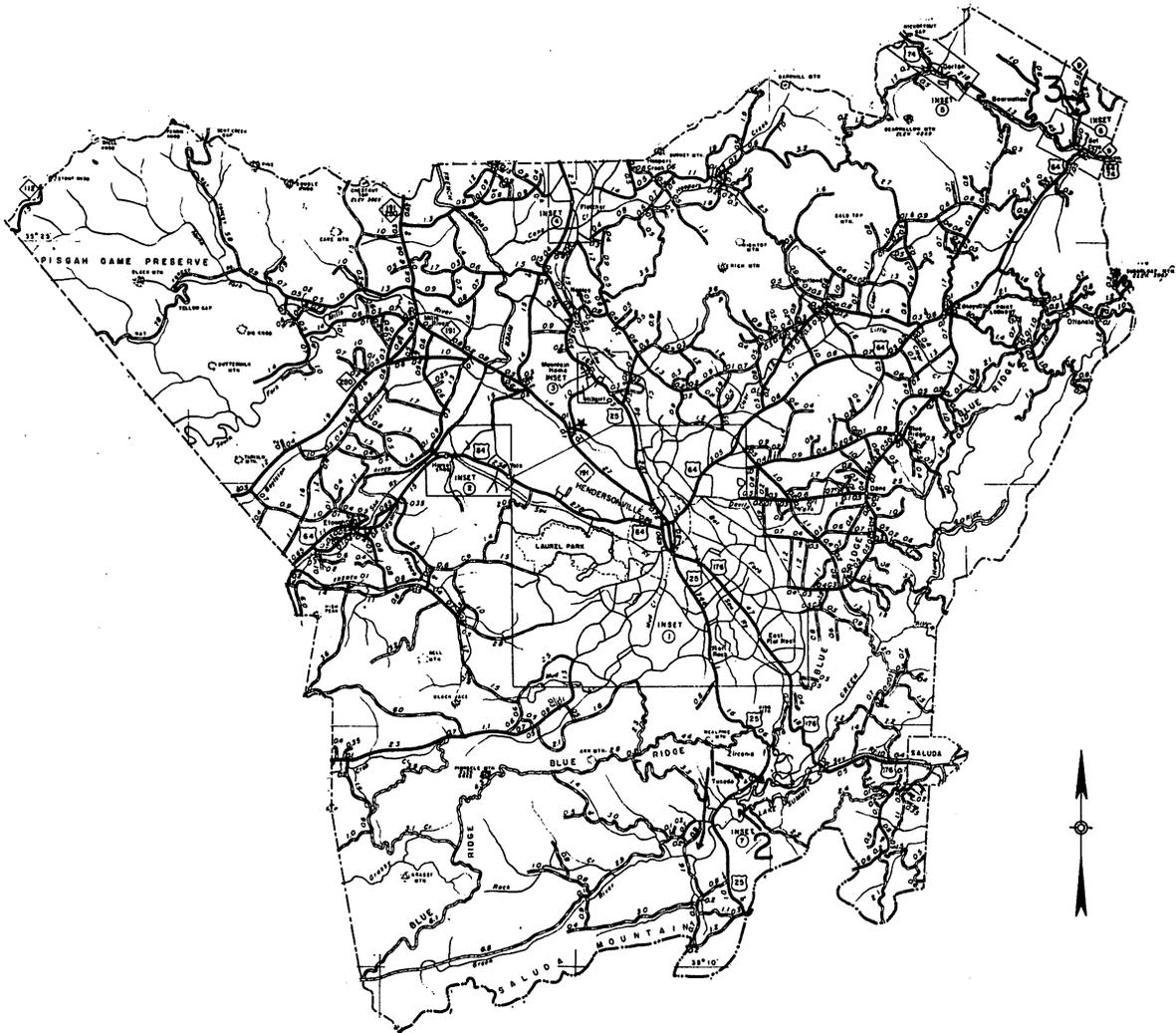
#### Iredell County

Corundum: Pratt and Lewis (1905, pl. 2) located eight occurrences of corundum in Iredell County. The Belts Bridge deposit, on the south bank of the South Yadkin River 4.8 miles south of Harmony and 2.8 miles southeast of Turnersburg, contains gray corundum crystals, many of them encased in margarite (see Map 10, Locality 1).

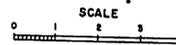
The Acme (Collins) mine, located west of Statesville, produced abrasive as well as gray astirated corundum (see Map 10, Locality 2). The old mine dumps are now destroyed because of the construction of the Klein Outdoor Theater over the deposit. Some corundum has been found recently in a small stream which flows behind the theater.

Rough corundum crystals occur 0.6 miles north of the Prison Camp located on highway U.S. 21, north of Statesville (see Map 10, Locality 3).

Zircon: Zircon occurs in an area approximately five miles west



# HENDERSON COUNTY



## LEGEND

- 1. Zircon & Other Rare Earth Minerals
- 2. Agate
- 3. Epidote

of Statesville in the vicinity of the old Statesville airport (see Map 10, Locality 4).

Amethyst: Amethyst quartz has been mined by an American gemstone company, 0.8 of a mile west-southwest of Amity Hill. The amethyst-bearing quartz veins occur on the Minor Lentz farm and the A.E. Brown property (see Map 10, Locality 5).

Sagenite: Mud and water inclusions in quartz crystals are found on the Campbell, Shoemaker, and Burton farms which lies west and southwest of Rhyne's store, on highway N.C. 115, 14 miles northwest of Statesville (see Map 10, Locality 6).

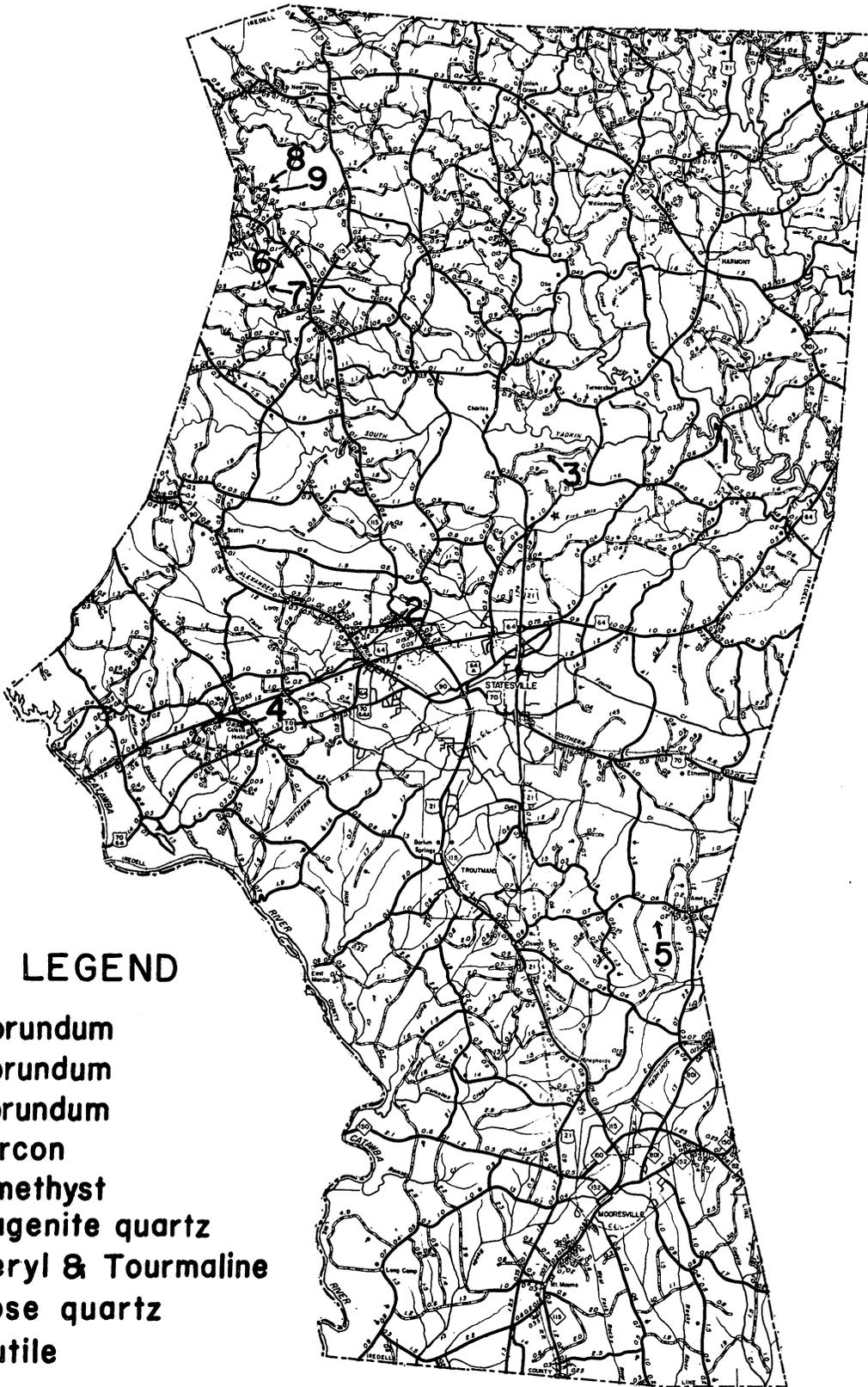
Beryl and Tourmaline: Green and golden beryl and black tourmaline are found on the Campbell farm in the area north of Snow Creek (see Map 10, Locality 7). Smoky quartz crystals occur as float in the fields one mile north of Snow Creek (Mr. William Campbell, Statesville, Personal Communication).

Rose Quartz: Massive dark rose quartz has been found approximately 0.4 of a mile north of Rhyne's Store on the property of Mr. John Duncan, on Fox Mountain (Mr. W.R. Rhyne, Personal Communication) (see Map 10, Locality 8).

Rutile: Rutile crystals occur as float on the old Jolly place in the general vicinity of Fox Mountain (see Map 10, Locality 9).

#### Jackson County

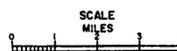
Ultramafic Minerals: The town of Webster in west central Jackson County is in part built on an ultramafic ring dike (see Map 11, Locality 1). This dike contains the minerals bronzite (enstatite), annabergite, mitchellite, opaline chalcedony, magnesite, greensih drusy quartz, talc, serpentine, geothite, chromite, chrysotile, chrysolite (olivine), diopside, tremolite, marmolite, anthophyllite, actinolite, garnierite and genthite.



**LEGEND**

- 1. Corundum
- 2. Corundum
- 3. Corundum
- 4. Zircon
- 5. Amethyst
- 6. Sagenite quartz
- 7. Beryl & Tourmaline
- 8. Rose quartz
- 9. Rutile

**IREDELL COUNTY**



The deposit also contains websterite which is an aggregate of diopside and bronzite.

Several peridotite bodies are located in northeastern Jackson County, two miles southwest of Balsam. The chief minerals of these peridotites are enstatite, chromite, talc, and olivine. The olivine is noteworthy because of the unusual large size of some of the crystals. Many of these crystals measure over five inches in diameter.

Corundum: Corundum in peridotite is found on the north side of highway U.S. 64 between Fairfield Lake and a tributary of Horsepasture River, 4.5 miles east of Cashiers (see Map 11, Locality 2). A peridotite body carrying corundum crosses highway U.S. 64, 0.1 of a mile east of this locality and extends northward toward Little Hogback Mountain. Sapphire corundum is reported to occur south of highway U.S. 64 on the Jackson-Transylvania county line (see Map 11, Locality 3). Sapphire and abrasive corundum was mined by the Sapphire Mining Company on the south shore of Sapphire Lake.

Garnet: Between 1900 and 1926, rhodolite garnet was mined for abrasives on Sugarloaf Mountain approximately one mile southwest of the village of Willets (see Map 11, Locality 4). The garnet occurs in a mica schist and ranges in size from one-sixteenth to one-fourth of an inch in diameter. (Broadhurst, 1955, p. 31).

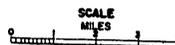
Pegmatite Minerals: The L.M. McCall feldspar and mica mine, which lies southeast of Pinhook Gap, produced the minerals cyrtolite, garnet, uraninite, pyrrhotite, oligoclase, quartz, muscovite, and biotite (see Map 11, Locality 5). Garnet, tourmaline, beryl and samarksite occur in an unnamed prospect southwest of Toxaway Mountain, just north of the Jackson-Transylvania county line, and about 0.3 of a mile northwest of highway U.S. 64 (see Map 11, Locality 6). Gem quality beryl has been

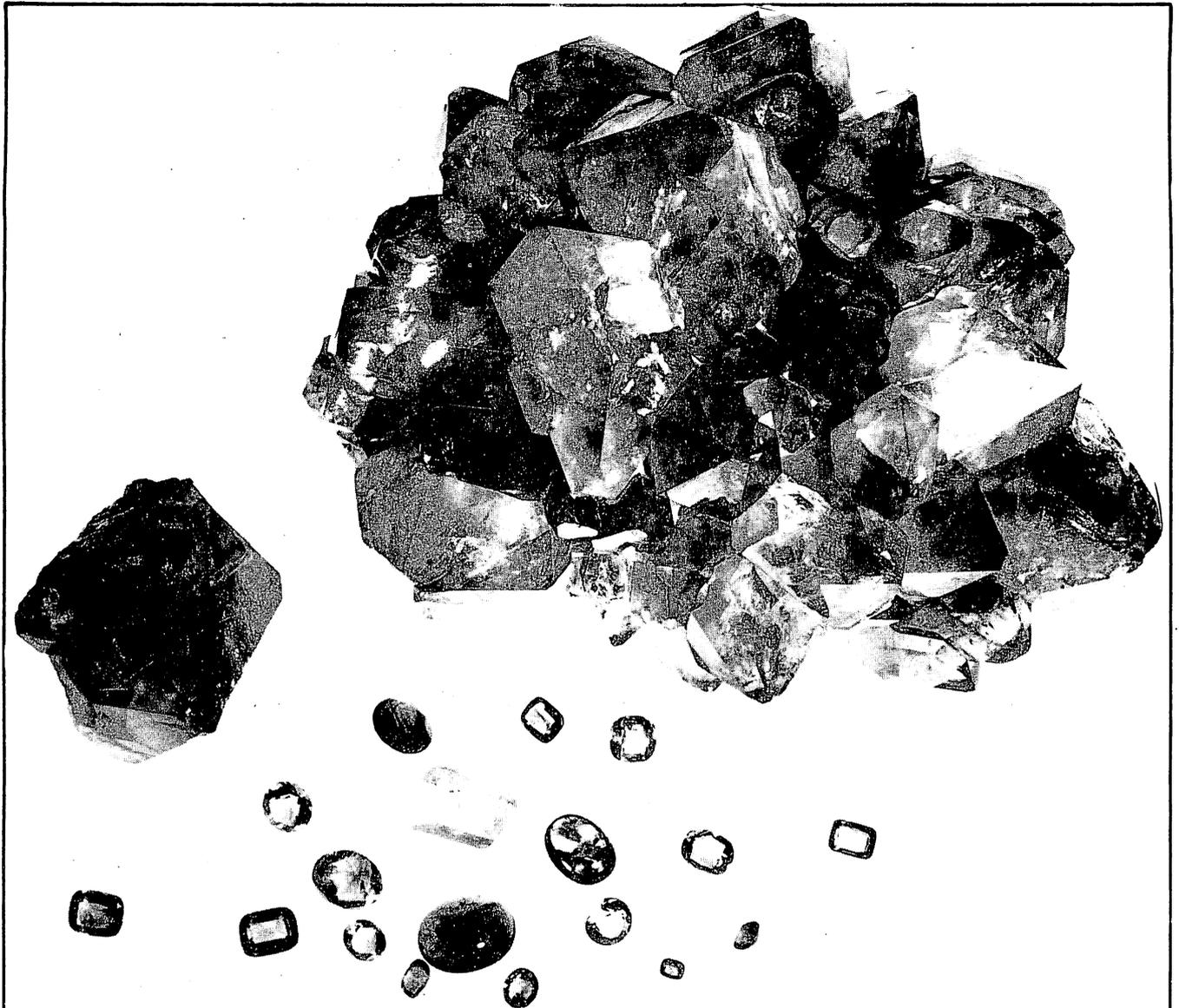


**LEGEND**

- 1. Websterite and other ultramafic minerals
- 2. Corundum
- 3. Sapphire
- 4. Garnet
- 5. Rare-earth minerals
- 6. Garnet, beryl & samarskite
- 7. Beryl

**JACKSON COUNTY**





*AMETHYST CRYSTALS AND CUT STONES*  
*Lincoln and Burke Counties*

reported from the Rice mine located approximately one mile south of Sapphire Lake on the Jackson-Transylvania county line. The Sheepcliff mine, on Sheepcliff Mountain, three miles north of Cashiers, was operated for beryl (see Map 11, Locality 7). The pegmatite is composed of microperthite, quartz, plagioclase, muscovite, beryl, garnet, and samarskite. The quartz found in the pegmatite is milky, smoky, gray, and rose in color. The beryl ranges in color from yellow to bluish-green (Olsen, 1952, pp. 12-13).

#### Lee County

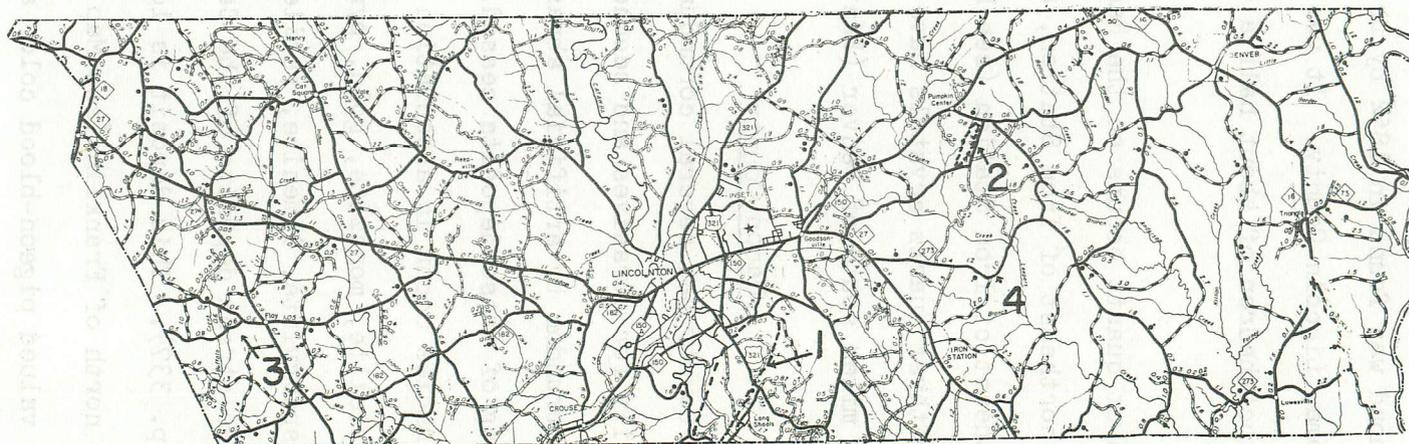
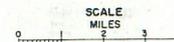
Chrysocolla: The Clegg mine, in northern Lee County, has recently attracted attention as a chrysocolla locality. The mine is situated off highway U.S. 1, 0.3 of a mile behind the Flat Creek Church. In addition to chrysocolla, the mine and its dumps contain malachite, azurite, chalcopyrite, pyrite and chalcocite.

#### Lincoln County

Spodumene: The Tin-Spodumene Belt enters Lincoln County from Cleveland County southeast of Laboratory. One of the largest known areas of cassiterite and spodumene-carrying dikes in the county is located east of highway U.S. 321 opposite the road to Laboratory (see Map 12, Locality 1). This area has been worked previously for tin, but now is one of the largest holdings of the Lithium Corporation of America.

Iron: Lincoln County contains considerable iron ore in the form of magnetite, limonite and hematite. The Big Ore Bank, located approximately one mile southeast of Pumpkin Center (see Map 12, Locality 2), was mined during the Revolutionary and Civil Wars (Kerr and Hanna, 1887, p. 155).

# LINCOLN COUNTY



## LEGEND

1. Cassiterite & Spodumene
2. Limonite & Hematite
3. Beryl
4. Amethyst

Beryl: Beryl has been produced at the Brown mine and the Carbine mine located 0.6 of a mile west of Flay (see Map 12, Locality 3).

Diamond: A diamond was found in 1852 by Dr. C.L. Hunter in gold washings near Cottage Home, Lincoln County. It was described as a transparent greenish-colored octahedron of about half a carat in weight (Kunz, 1907, pp. 6-7).

Amethyst: Amethyst quartz occurs on the Randleman farm (Jack Goodsen farm) located two miles northeast of Iron Station, and on the J.P. Lynch property, 1.7 miles northeast of Iron Station (see Map 12, Locality 4). Several colorless and amethyst quartz crystals have been discovered on the Mary Forney property 1.3 miles south of Denver (Pratt 1914, pp. 90-91).

#### Macon County

Corundum: Macon County has several corundum deposits which were originally worked primarily for abrasives and secondarily for gem stones. With the replacement of corundum by artificial abrasives soon after the turn of the century, the mining of these deposits ceased.

The Cowee Creek rubies occur in association with rhodolite garnet, sillimanite, staurolite, iolite, monazite, gold, pyrite, chalcopyrite, pyrrhotite, sphalerite, sperrylite, ilmenite, rutile, bronzite, hornblende, zircon, and kyanite in the stream deposits of the Caler Fork of Cowee Creek (Pratt and Lewis, 1905, p. 337). This deposit is located 1.9 miles east of West Mills and six miles north of Franklin (see Map 13, Locality 1). Some of the rubies are of the valued pigeon-blood color and are said to equal in color and brilliancy the Burma Rubies (Pratt and Lewis, 1905, p. 184). The Gibson, Holebrook and Shuler properties are open to collectors for a fee.

Corundum Hill, located 1.5 miles east of the village of Cullassaja (see Map 13, Locality 2) produced a large quantity of abrasive corundum as well as ruby, oriental emerald, oriental amethyst, and blue and yellow sapphire. The corundum in this deposit is associated with dunite, which also contains the minerals enstatite, olivine, serpentine, and chromite.

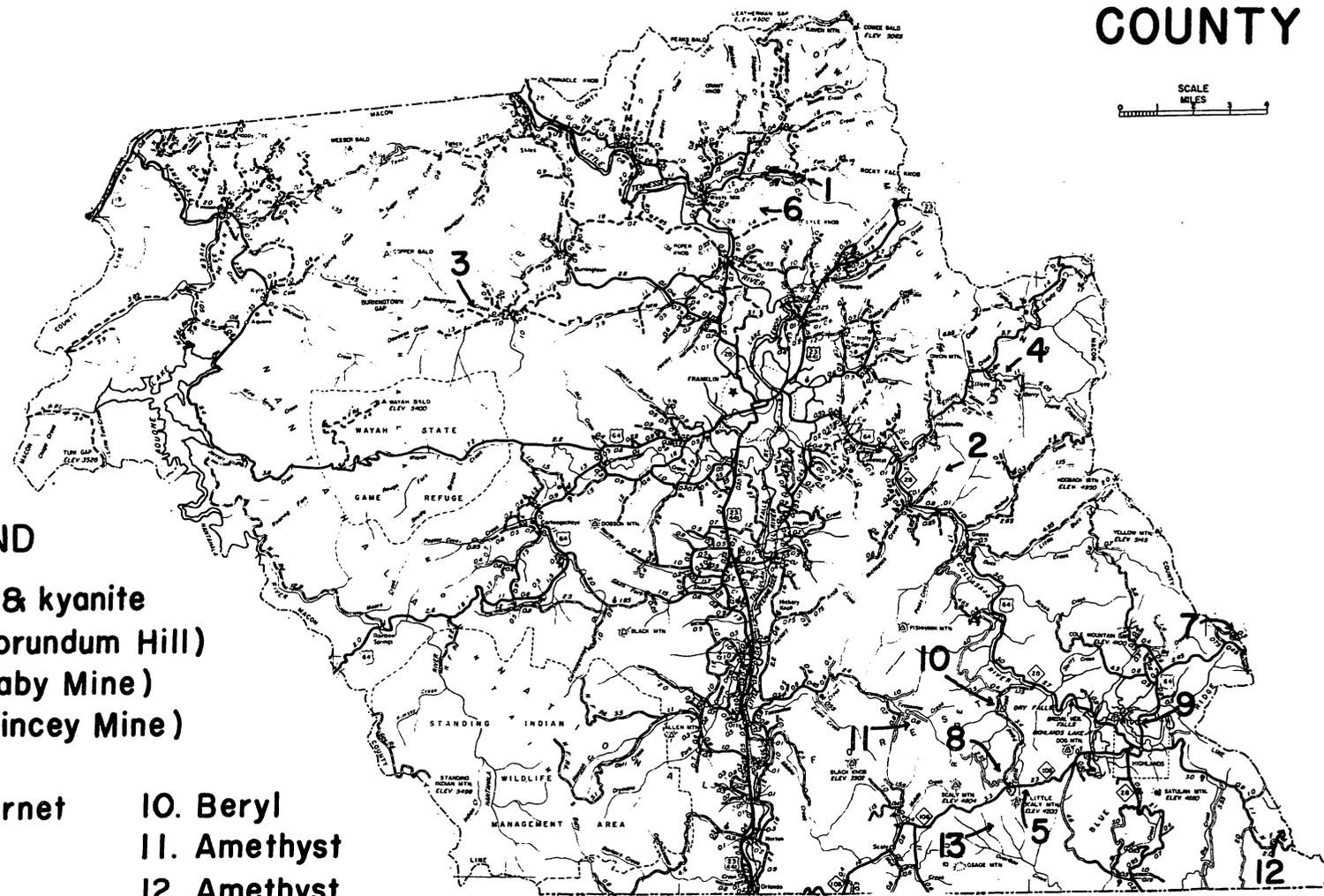
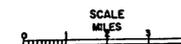
The Ruby mine, near Burningtown Creek, 3.2 miles southwest of Burningtown (see Map 13, Locality 3) contains well crystallized pink and purple corundum. The Mincey mine, located about 0.7 of a mile east of Ellijay and seven miles southeast of Franklin (see Map 13, Locality 4) has produced some bronze corundum which, when properly polished, shows asterism.

Corundum, in association with rutile, asbestos, and vermiculite, is reported in the vicinity of Bernette Lake in the Scaly Community, 5.5 miles southwest of Highlands (see Map 13, Locality 5).

Garnet: Garnet occurs in several localities in Macon County including the rhodolite deposit located near the summit of Mason's Mountain on its southern slope, two miles west-southwest of West's Mills and one mile south of Cowee Creek (see Map 13, Locality 6). Associated with the rhodolite garnet are the minerals: gedrite, hypersthene, and biotite (Henderson, 1931, pp. 563-568). Almandite garnet occurs in southeastern Macon County on the road to Whiteside Mountain, at the Macon-Jackson county line (see Map 13, Locality 7), and also in a region two miles southwest of Dry Falls (see Map 13, Locality 8).

Beryl and Tourmaline: Golden beryl and black tourmaline occur in pegmatite on highway U.S. 64-A, at the northern city limits of Highlands (see Map 13, Locality 9). A mine which has produced beryl is located on

# MAGON COUNTY



## LEGEND

- 1. Ruby, garnet & kyanite
- 2. Corundum (Corundum Hill)
- 3. Corundum (Raby Mine)
- 4. Corundum (Mincey Mine)
- 5. Corundum
- 6. Rhodolite garnet
- 7. Garnet
- 8. Garnet
- 9. Beryl
- 10. Beryl
- 11. Amethyst
- 12. Amethyst
- 13. Amethyst

a secondary road which turns south off highway U.S. 64, 0.5 of a mile west of Dry Falls (see Map 13, Locality 10). The mine lies west of this secondary road, approximately two miles south of its intersection with highway U.S. 64.

Amethyst: The Tessentee amethyst mine in the southeastern part of the county was originally operated by Tiffany and Company of New York. The mine is located on Tessentee Creek 3.5 miles east of Otto (see Map 13, Locality 11). The amethyst crystals are disseminated through kaolinite weathered from pegmatite, which evidently was intruded by the amethyst-bearing quartz vein. Kunz (1907, p. 32) states, "No finer amethysts have been discovered in this country and several thousand dollars worth of crystals were sold as the proceeds of the first development work."

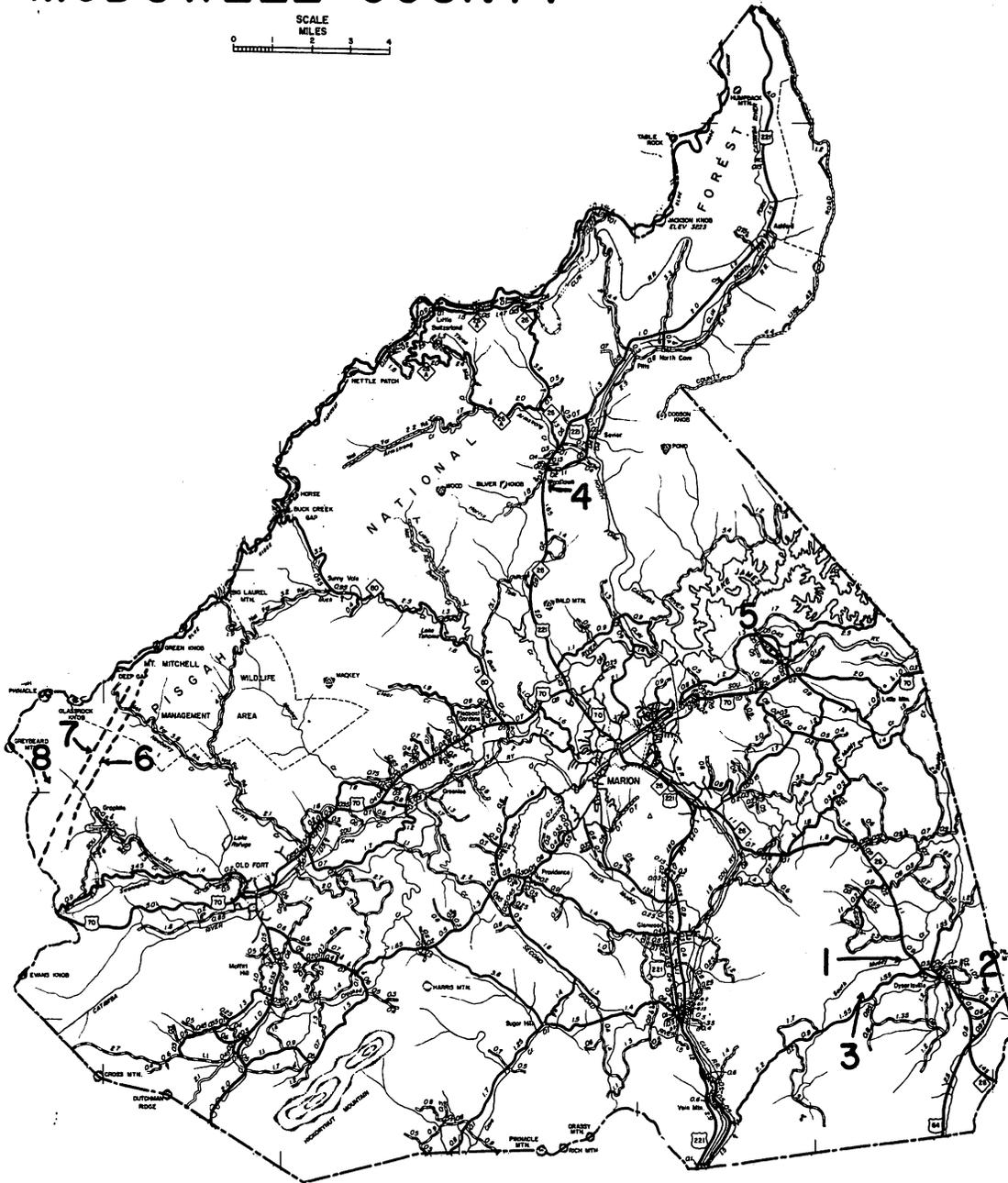
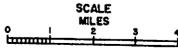
Amethyst has been reported from the Ammons mine, four and one-half miles southeast of Highlands (see Map 13, Locality 12) and the Waggoner mine, which lies south of highway N.C. 106, six miles southwest of Highlands, on Abes Creek (see Map 13, Locality 13).

#### Madison County

Allanite: Allanite occurs in at least three areas in Madison County. One of the areas is 0.5 of a mile south of Lemon Gap on East Fork Creek (see Map 15, Locality 1). Another area is near the headwaters of Paw Paw Creek, 2.9 miles west-southwest of Redmon (see Map 15, Locality 2). The third area is near Pine Creek Church on Little Pine Creek, 3.9 miles southwest of Redmon (see Map 15, Locality 3).

Barite: Barite has been mined on Spring Creek approximately 0.8 miles northeast of Bluff. The barite occurs in large crystals and crystalline masses in veins (Keith, 1904, p. 9). These barite veins trend in a northeast-southwest direction and pass through the village of Stackhouse where barite has also been mined extensively (see Map 15, Locality 4).

# McDOWELL COUNTY



## LEGEND

- |                      |                               |
|----------------------|-------------------------------|
| 1. Diamond           | 5. Quartz crystals            |
| 2. Zircon & Corundum | 6. Graphite                   |
| 3. Corundum          | 7. Kyanite                    |
| 4. Calcite & Quartz  | 8. Beryl, Garnet & Samarskite |



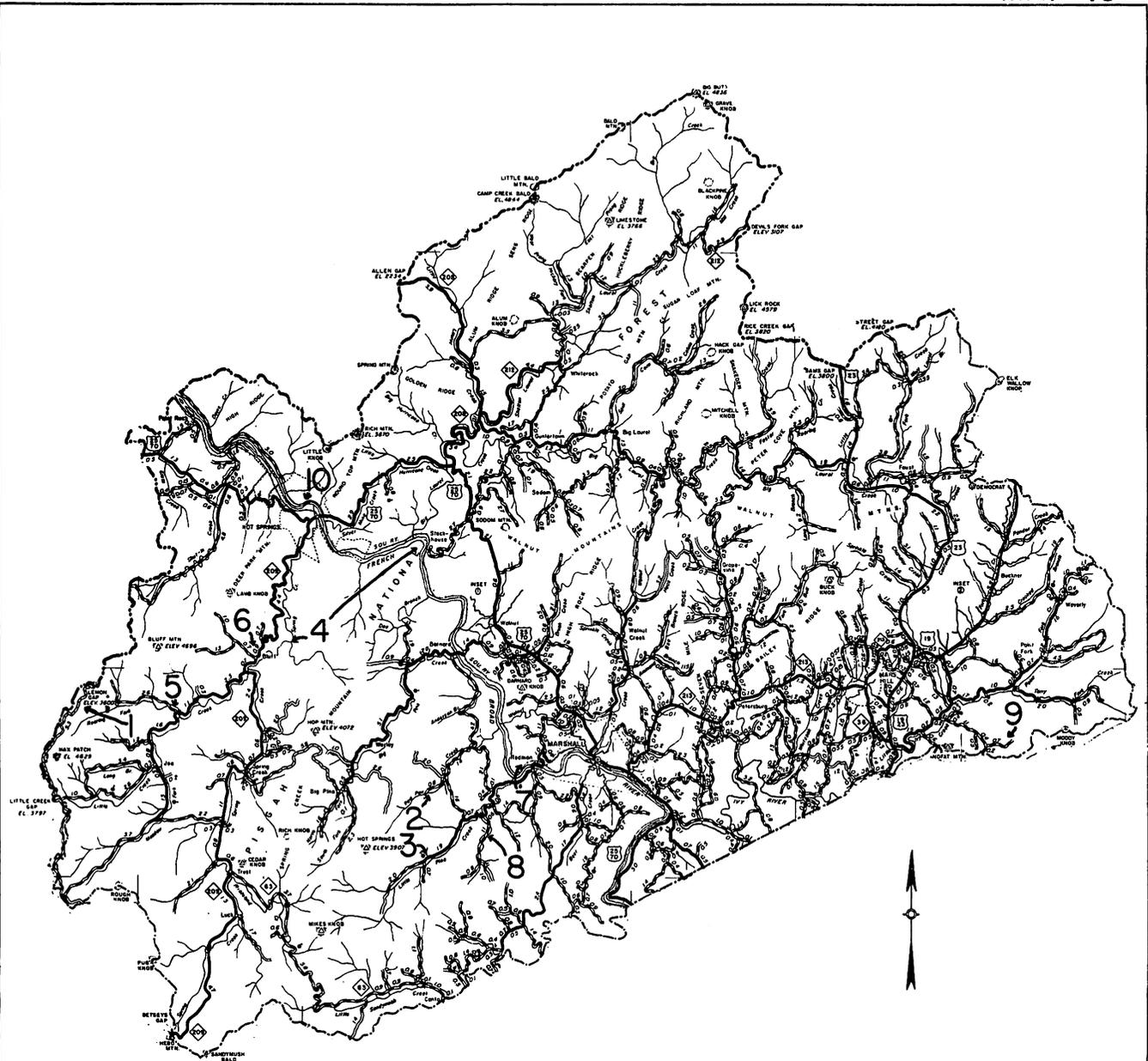
Unakite: Unakite, a granite composed of yellow-green epidote, pink feldspar, and quartz, is used as an ornamental stone. It is found as dikes which cut the country rock on Roaring Fork Creek, a short distance above its entrance into Meadow Fork; three miles southwest of Bluff (Watson, Laney, and Merrill, 1906, p. 172) (see Map 15, Locality 5). It is also reported to occur just north of Bluff (see Map 15, Locality 6).

Garnet: Garnet occurs just north of Redmon above the Southern Railway tracks (see Map 15, Locality 7) and also approximately two miles southwest of Redmon on Little Pine Creek (See Map 15, Locality 8). This latter locality is the Little Pine garnet mine. The variety of garnet found at both localities is almandite, and some gem quality material has been produced in each deposit.

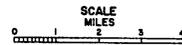
Monazite: Monazite crystals and massive monazite have been removed from a pegmatite on Bull Creek, 1.5 miles south of Petersburg.

Corundum and Ultramafic Minerals: Pink and white corundum, serpentine, olivine, chromite, and greenish-black spinel are found at the Carter mine north of Democrat. This mine, located on the headwaters of Holcombe Branch (see Map 15, Locality 9) can be reached by taking the secondary road north of Democrat for 1.7 miles to the first road turning east beyond the Pleasant Gap Methodist Church, and following this road east for 0.4 of a mile, to a lone barn on the north bank of the road. The old mine workings lie several hundred yards north of the barn on a small tributary to Holcombe Branch.

Jasperoid and Calcite: Jasperoid occurs on the north bank of the French Broad River 1200 feet northwest of the Montauqua Hotel in Hot Springs, in unaltered dolomite and limestone (see Map 15, Locality 10). Associated with the jasperoid are calcite crystals up to 1/2 inch in length (Oriol, 1950, p. 11).



# MADISON COUNTY



## LEGEND

- 1. Allanite
- 2. Allanite
- 3. Allanite
- 4. Barite
- 5. Unakite
- 6. Unakite
- 7. Garnet
- 8. Garnet
- 9. Corundum & Ultramafic Minerals
- 10. Jasperoid & Calcite

McDowell County

Diamond: The Dysartsville area in southeastern McDowell County was placer mined for gold before the Civil War and mining continued for some time afterwards. During these mining operations, three diamonds were found near the headwaters of South Muddy Creek in the vicinity of where highway N.C. 26 crosses the creek, 0.3 miles north of Dysartsville (see Map 14, Locality 1).

Zircon and Corundum: Zircon and corundum were discovered during gold placer mining in a small tributary of South Muddy Creek on the Mary Mills property, located approximately 1.2 miles southeast of Dysartsville, on the north side of highway N.C. 26 (see Map 14, Locality 2).

Corundum is found two miles southwest of Dysartsville, on the north side of a paved road which lies between Dysartsville and highway U.S. 221 (see Map 14, Locality 3). The corundum occurs as float in the fields around an old farmhouse in this vicinity.

Calcite and Quartz: Dog-tooth calcite crystals occur in the Shady dolomite at the Woodlawn limestone quarry at Woodlawn (see Map 14, Locality 4). Small quartz crystals, some of which contain phantoms, are found a few hundred yards north of the Woodlawn limestone quarry (Mr. Shields Flynn, Tryon, Personal Communication).

Quartz crystals were discovered at Nebo, in a field on the west side of highway N.C. 105, 1000 yards north of the Southern Railway tracks, in the center of the village (see Map 14, Locality 5) (Mr. Adam Street, Valdese, Personal Communication).

Graphite and Kyanite: A graphite band crosses the western edge of McDowell County from west of Laurel Knob to west of Graphiteville



**LEOPARDITE, Mecklenburg County**  
*A Leopard Carved from Leopardite, State Museum, Raleigh*

PHOTOGRAPH BY *J.W. Buchanan*

(see Map 14, Locality 6). West of this is located a kyanite band which parallels the graphite band, but extends further south and into Buncombe County, crossing highway U.S. 70 between Ridgecrest and Black Mountain (see Map 14, Locality 7). The graphite is disseminated through mica schist, but in places pure graphite is associated with vein quartz. The kyanite occurs in mica schist, but at some places in the region it seems to be the chief constituent of the rock. It varies in color from pale blue to almost sapphire blue.

Pegmatite Minerals: Beryl, garnet, samarskite, and columbite have been reported to occur in a pegmatite on the old Mount Mitchell toll road, near the McDowell-Buncombe county line (Map 14, Locality 8).

#### Mecklenburg County

Diamond: A white diamond crystal, one carat in weight, was discovered at Todds Branch, Mecklenburg County in 1852. This specimen was obtained by Dr. Andrews, of Charlotte, and placed in his collection. After this, the stone seems to have lost its identity. A second stone was found at this locality but unfortunately was destroyed by the finder who thought that due to its hardness, a diamond could not be broken (Kunz, 1907, p. 7).

Jasper: Brown jasper mixed with drusy quartz and limonite occurs at the northwest end of the recently constructed Idewilde School, located on Idewilde Street in Charlotte (Mr. Dewey Moose, Stony Point, Personal Communication).

Leopardite: Leopardite, a quartz porphyry containing pencils of manganese and iron, occurs on the corner of Belmont and Sigel Avenues in Charlotte, on the property of the Salvation Army Youth Center (Mr. Boyd Mattison, Chapel Hill, Personal Communication). It is also reported to occur 1.5 to 1.7 miles east of Charlotte at Belmont Springs. It has

been described as occurring in Lincoln County and in Montgomery County near the Steel mine (Watson, Laney, and Merrill, 1906, pp. 70-72).

#### Mitchell County

Pegmatite Minerals: The Spruce Pine Mining District is one of the chief mica and feldspar producers in the United States. A few of the more interesting of these deposits are described herein. (For a more complete listing of the mines of the district, see Olsen, 1944, part 2, pl. 2).

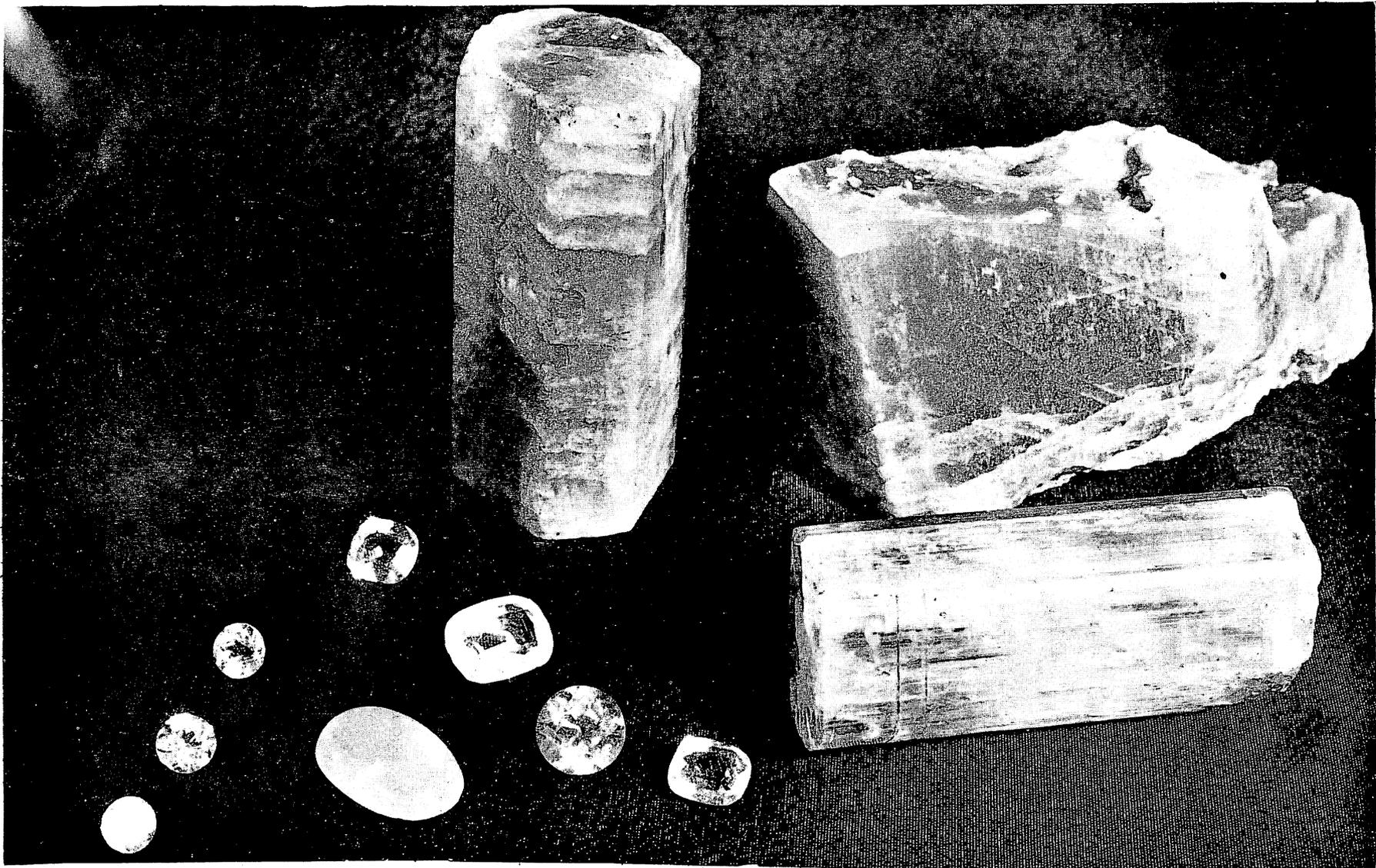
The Southers Branch Mine, located 1.7 miles northwest of Spruce Pine (see Map 16, Locality 1) contains the minerals; garnet, pink orthoclase, and hyalite in stalactitic forms over two inches in length. The mine can be reached by taking highway N.C. 26 west of the center of Spruce Pine for 1.4 miles and turning north on a dirt road which will dead end at the mine dumps, 0.6 of a mile from the highway.

The Hawk mine, located one mile north of Hawk, (see Map 16, locality 2) contains the minerals garnet, apatite, epidote, allanite, black tourmaline, pyrite, thulite, and glass-clear oligoclase.

Rare double-terminated epidote crystals and albite crystals occur in a pegmatite dike on the property of Mr. Clarence E. Wilson, 1.5 miles northeast of Bakersville (see Map 16, Locality 3).

Orthoclase feldspar which gives a sunstone sheen is found on the property of Benton McKinney which lies 0.5 of a mile east of highway N.C. 261, 2.4 miles northeast of Glen Ayre (see Map 16, Locality 4).

The Emerald mine on Crabtree Mountain, located 2.5 miles southwest of Spruce Pine and southeast of the Brush Creek Road (see Map 16, Locality 5), has produced a few emeralds large enough for cutting, but most of the crystals have been too small to be of value. The material from this mine is sometimes cut as an ornamental stone and sold as



**AQUAMARINE BERYL, CRYSTALS AND CUT STONES**  
*Mitchell and Yancey Counties*

emerald in matrix.

The Old 20 mine, located 5 miles southwest of Spruce Pine on the west side of the road to Little Switzerland (see Map 16, Locality 6), contains, in addition to feldspar and mica, the minerals beryl, apatite, hyalite, cyrtolite, uraninite, autunite, torbernite, and gummite.

The McKinney mine, located approximately 1.6 miles south of the Old 20 mine (see Map 16, Locality 7), contains the minerals samarksite, autunite, torbernite, columbite, hyalite, amazonite, bornite, covellite, chalcopyrite, malachite, sphalerite, massive beryl, feldspar, and mica.

The mine, located on English Know on the east side of the road from Spruce Pine to Ingalls, 0.4 of a mile from the Mitchell-Avery County line (see Map 16, Locality 8) has produced the minerals pitchblende, gummite, torbernite, samarksite, autunite, monazite, columbite, and cyrtolite.

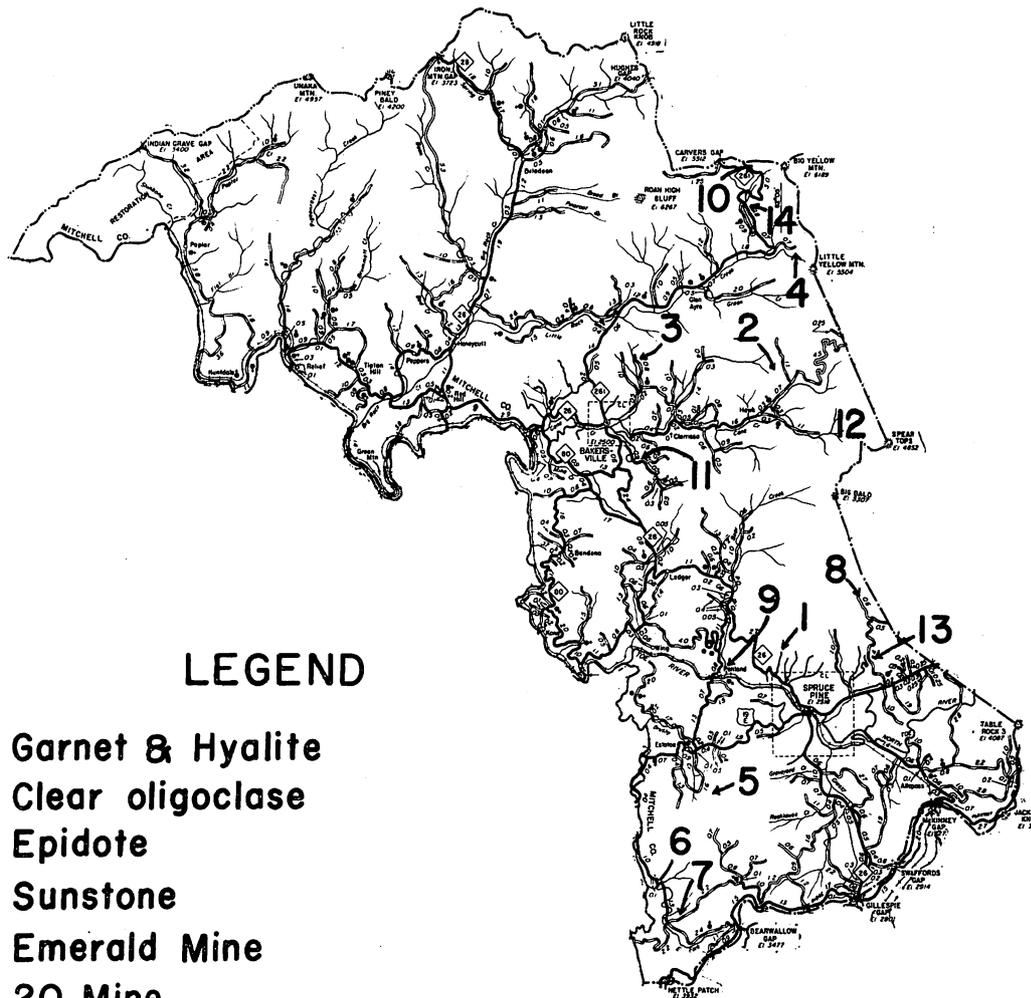
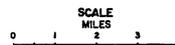
The Deer Park mine in the horseshoe bend of the North Toe River, 0.1 mile east of Penland (see Map 16, Locality 9), is located in pegmatite which carries the minerals feldspar, mica, thulite, hyalite, and monazite crystals.

Uranium minerals occur in the pegmatite across the road from the sign "Pete Crest Farm" on highway N.C. 261, 0.3 of a mile south of Cravers Gap (see Map 16, Locality 10).

Corundum: Corundum, described as ruby and sapphire, is reported on the Panel Farm, 1.2 miles southeast of Bakersville (see Map 16, Locality 11). Blue corundum associated with kyanite and tremolite is also reported to occur on the Dillinger farm 2.6 miles east of Hawk (see Map 16, Locality 12).

Actinolite and Talc: A deposit of actinolite and talc lies northeast of Spruce Pine on the road to Ingalls. The deposit occurs on the

# MITCHELL COUNTY



## LEGEND

1. Garnet & Hyalite
2. Clear oligoclase
3. Epidote
4. Sunstone
5. Emerald Mine
6. 20 Mine
7. McKinney Mine
8. Uranium & Rare earth minerals
9. Deer Park Mine
10. Uranium minerals
11. Corundum
12. Corundum
13. Actinolite
14. Unakite



east side of the road approximately one mile north of its junction with highway U.S. 19E (see Map 16, Locality 13).

Unakite: Unakite occurs on the Rex Peake property east of highway N.C. 261, three miles south of Carvers Gap (Mr. Roby Buchanan, Hawk, Personal Communication) (see Map 16, Locality 14). A poor quality unakite can be found on the north bank of the road to Roan High Peak, approximately 1.5 miles west of Carvers Gap (Mr. Clarence Wilson, Personal Communication).

#### Montgomery County

Gold, Silver and Copper: The Coggins mine, located 1.5 miles north-northeast of Eldorado, has produced gold and silver. In addition to these ores, the deposit contained the minerals quartz, pyrite, and chalcopyrite.

The Eldorado mine, located 1.5 miles south of the Coggins mine and east of the village of Eldorado, contains the minerals azurite, malachite, hydrozincite, and sphalerite.

#### Moore County

Pyrophyllite: Moore County contains several pyrophyllite deposits including the Glendon (Ward mine) deposit, located north of Glendon and the Standard Mineral Company deposit on Cabin Creek southwest of Robbins. These deposits carry, in addition to pyrophyllite, the minerals lazulite, ottrelite (chloritoid) ilmenite, specularite, and sericite. The Glendon deposit contains pyrite cubes and small crystals of fluorite.

Clear and Amethyst Quartz Crystals: Clear and amethyst quartz crystals occur on the property of Mr. Nesom Moore southwest of Robbins. The locality lies 0.4 of a mile southeast of where Dry Creek flows into Cabin Creek and 0.3 of a mile northwest of the Standard Mineral Company pyrophyllite deposit.

Copper: The copper prospect on the Haw Branch Road, 1.6 miles northeast of Glendon, has produced cabinet specimens of azurite, malachite, and calcite. This deposit can be reached by taking the paved road north from Glendon for 0.9 of a mile and turning east on the Haw Branch road for 1.3 miles. At this point, a logging road turns north. In a short distance, the logging road forks at a sawdust pile and the right fork leads to the old diggins, 1000 yards beyond the sawdust pile (Mr. L.A. Allison, Durham, Personal Communication).

#### Orange County

Pyrophyllite: Pyrophyllite occurs in Orange County five miles northeast of Hillsboro, and south of Hillsboro in the vicinity of where highway N.C. 86 crosses the Southern Railway tracks.

Radiating pyrophyllite crystals occur four miles due north of Teer on the north side of a secondary road on the Celine Sykes property, which lies north of the Jesse Sykes Long Meadow Dairy.

Barite: Barite has been mined south of Hillsboro on the property of Mr. J.B. Fawcett. The area can be reached by taking highway N.C. 86 south of Hillsboro for 4.1 miles and turning west on a gravel road for 1.4 miles.

#### Person County

Sagenite: Quartz crystals containing chlorite and hematite occur on the paved road between Surl and Mt. Tirzah in southeastern Person County. The locality is situated on the west side of the road, across from a Negro church, approximately 2.3 miles north of Mt. Tirzah (Mr. J.A. Price, Durham, Personal Communication).

Pyrite and Limonite: Pyrite crystals one inch in diameter occur in the road banks and in the surrounding country rocks on the paved road between Mt. Tirzah and Moriah, approximately one mile east of Mt. Tirzah.

Limonite pseudomorphs after pyrite are found on this same road approximately 0.3 of a mile west of Mt. Tirzah (Mr. J.A. Price, Durham, Personal Communication).

Pyrophyllite and Kyanite: Pyrophyllite and kyanite in radiating rosettes are found in association with vein quartz on the southern end of Hager's Mountain northwest of Longhurst. The locality can be reached by taking the paved road between Longhurst and Woodsdale north from Longhurst for 1.9 miles. The locality lies west of the road at this point, between the road and Marlowe Creek.

Malachite and Bornite: Malachite and bornite occur at the Durgy mine north of Allensville in the east-central part of the county. The locality can be reached by taking the stone surfaced road northeast from the Allensville crossroads for 0.3 of a mile and turning north on a secondary road for approximately one mile. The mine lies west of the road at this point, between the road and Maho Creek.

#### Randolph County

Hornblende and Epidote: Radiating hornblende, feldspar and epidote crystals occur in glomeroporphyry north of highway U.S. 64, six miles west of Asheboro. The locality can be reached by turning north from highway U.S. 64 on to a paved road at the Oak Grill and following this road for 1.2 miles to its intersection with the Asheboro road, turning west on the Asheboro road for 0.1 of a mile, then turning north on a gravel road. The material is located in an abandoned highway quarry on the east side of this secondary road 1.2 miles north of the Asheboro road.

Pyrophyllite and Associated Minerals: Pyrophyllite, ottrelite, diasporite, lazulite, andalusite, and pyrite occur at the Carolina pyrophyllite mine, 4.5 miles west of Staley.

Rutilated Quartz: Rutilated quartz is reported to occur on Pilot Mountain (Genth and Kerr, 1885, p. 121). Rutilated quartz is also found on the Phillips farm and the Vance Cox farm located approximately 1.3 miles north-northeast of Pilot Mountain.

Actinolite in Quartz: Olive-green crystals of actinolite in vein quartz occurs on the property of Mr. Walter Johnson, near Copper Hill. The locality is situated south of the road between Denton and Farmer and lies 4.2 miles west of Farmer. (Mr. Boyd Mattison, Chapel Hill, Personal Communication). This is one of the few areas where actinolite in vein quartz has been reported in the State.

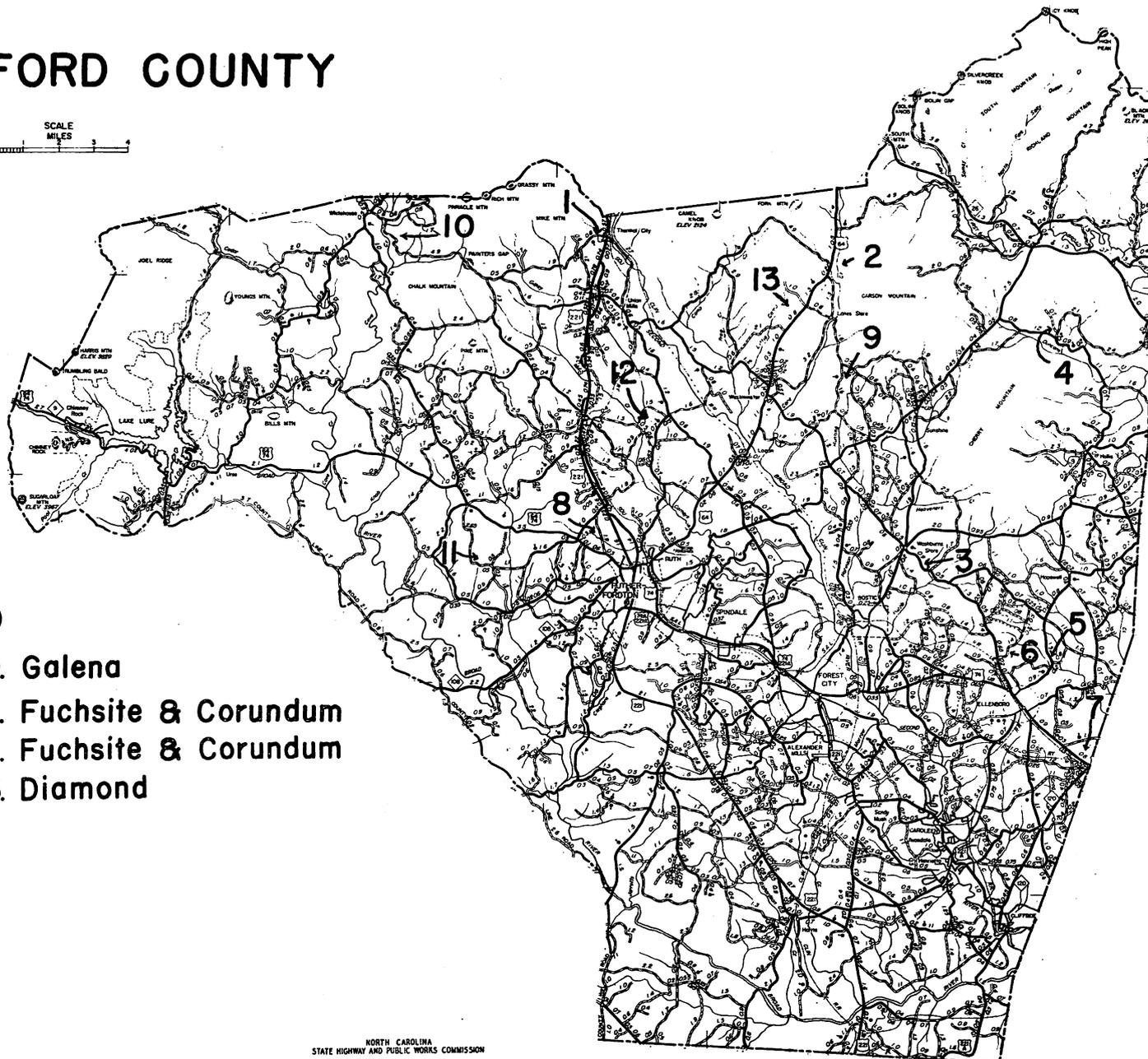
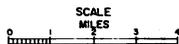
#### Rutherford County

Garnet: Garnet occurs in Stony Creek at Thermal City in the area between Stony Creek Methodist Church and highway U.S. 221 (see Map 17, Locality 1). Some rough crystals showing dodecahedral faces over 12 inches in diameter have been recovered from this area, but most of the garnet is massive.

Garnet in granite gneiss is found on Marlin's Knob, east of highway U.S. 64, four miles north of Westminister (see Map 17, Locality 2). Garnet also occurs on the paved road between Ellenboro and Westminister, 0.4 of a mile northwest of the Puzzle Creek Bridge (see Map 17, Locality 3).

Beryl and Quartz: Golden beryl and asteriated quartz have been mined on the Roy McFarland property on the Duncans Creek road, two miles east of the road to Sunshine (see Map 17, Locality 4). Beryl and rose quartz occur approximately one mile north of Ellenboro at the Dycus Mine (see Map 17, Locality 5). Beryl is also found on the Martin property (see Map 17, Locality 6), on the Fred Toney property (see Map 17, Locality 7) in the vicinity of the Dycus Mine, north of Ellenboro.

# RUTHERFORD COUNTY



## LEGEND

- |                    |                         |
|--------------------|-------------------------|
| 1. Garnet          | 10. Galena              |
| 2. Garnet          | 11. Fuchsite & Corundum |
| 3. Garnet          | 12. Fuchsite & Corundum |
| 4. Beryl           | 13. Diamond             |
| 5. Beryl           |                         |
| 6. Beryl           |                         |
| 7. Beryl           |                         |
| 8. Box quartz      |                         |
| 9. Quartz crystals |                         |

Box quartz, sometimes containing water inclusions, and blue-banded quartz, occur on the Callaham place (Old Walthrop place), in float and stream gravel of Hollands Creek, 0.6 of a mile northwest of the Rutherfordton city limits (see Map 17, Locality 8).

Milky quartz crystals are found at an old gold mine dump in the woods a few hundred yards behind the Sandy Level Church, 3.1 miles northwest of Sunshine (see Map 17, Locality 9).

Galena: A galena prospect pit is located on the east side of the Shingle Hollow Road, 0.8 miles northwest of the Welcome Home Church, approximately eight miles northwest of Gilkey (see Map 17, Locality 10). In addition to galena, the minerals pyrite, chalcopyrite, and bornite can be found at this locality.

Fuchsite and Corundum: A pegmatite carrying fuchsite and pink corundum is located on the west side of the Blacksmith Shop road, 1.4 miles south of the Green Hill Grade School (see Map 17, Locality 11). This deposit was originally worked by Wards Natural Science Establishment for specimen material. A mica schist composed of fuchsite sericite and lenticular masses of pink corundum was discovered by the author on the property of Mr. Rural Groves. The deposit lies several hundred yards south of the Oak Springs Baptist Church (see Map 17, Locality 12).

Diamond: In 1845, a diamond weighing  $1 \frac{1}{3}$  carats was found in the gold washings of the J.D. Twitty gold mine located on Cane Creek two miles south of the Rutherford-McDowell county line (see Map 17, Locality 13). A smaller stone was recovered from gold washings on the property of C. Leventhrope, and was acquired by Professor Charles U. Shepard (Kunz, 1907, p. 6).

Stokes County

Itacolumite: Itacolumite is found in Stokes County at Orchard Gap on highway N.C. 66 near the village of Gap and on Sauratown Mountain two miles southwest of Gap. It also occurs on Hanging Rock Mountain three miles southwest of Danbury.

Hematite, Lazulite and Quartz: Genth and Kerr (1885, p. 123) report hematite, chalcedony, hyalite, jasper, and amethyst as occurring at Coffee Gap.

Swain County

Pegmatite Minerals: Approximately 36 pegmatites are concentrated in a band striking northeast-southwest north of Bryson City and continuing from north of Deep Creek Church to North of Franklin Grove Church. These dikes contain the minerals feldspar, quartz, muscovite and biotite mica, garnet, pyrite, allanite, samarksite and magnetite.

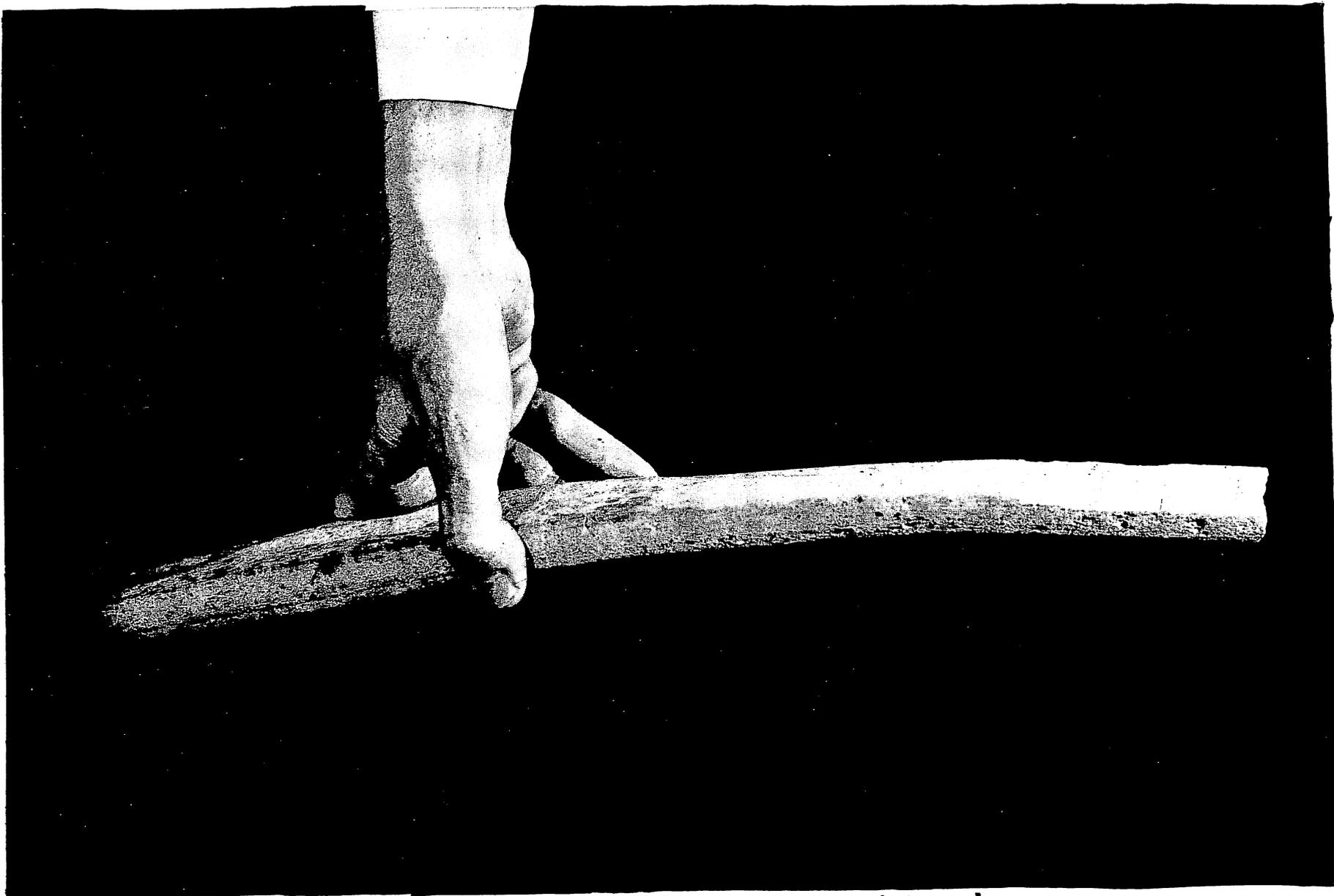
The Carson mines, located 2900 feet northwest of Deep Creek Church, have been worked for clay and feldspar. The south (or No. 4) pegmatite of this group contains graphite granite, biotite and muscovite mica, quartz, feldspar, pyrite and thulite (Cameron, 1951, p. 51).

The Cox No. 1 mine, located north of the Toot Hollow Branch, is mined for feldspar. It also contains garnet, biotite, pyrite, allanite, samarksite, and magnetite (Cameron, 1951, p. 82).

Kyanite: Kyanite and staurolite are found in graphite schist on the hillside north of the Deep Creek camp site 1.5 miles north of Bryson City.

Transylvania County

Quartz: Smoky quartz crystals have been found east of highway U.S. 276, above the Pink Beds recreation area, north of Looking Glass



**ITACOLUMITE (Flexible Sandstone)**  
**Stokes County**

Falls. The area can be reached from the recreation area by following the Carolina Power and Light Company high-tension line up the mountain for approximately one mile. The smoky quartz occurs in a vein which crosses a sharp bend of a now-abandoned road, (Mr. D.C. Dills, Brevard, North Carolina, Personal Communication) (see Map 18, Locality 1).

Quartz crystals occur northwest of Rosman. This area can be reached by taking the Balsam Grove Road north of Rosman for 0.9 of a mile and turning west on a secondary road which crosses the North Fork of the French Broad River. The quartz crystals occur on the south side of the road 0.2 of a mile west of the river, past a saw mill and down a hill toward a small stream which is a tributary to the North Fork of the French Broad River (see Map 18, Locality 2).

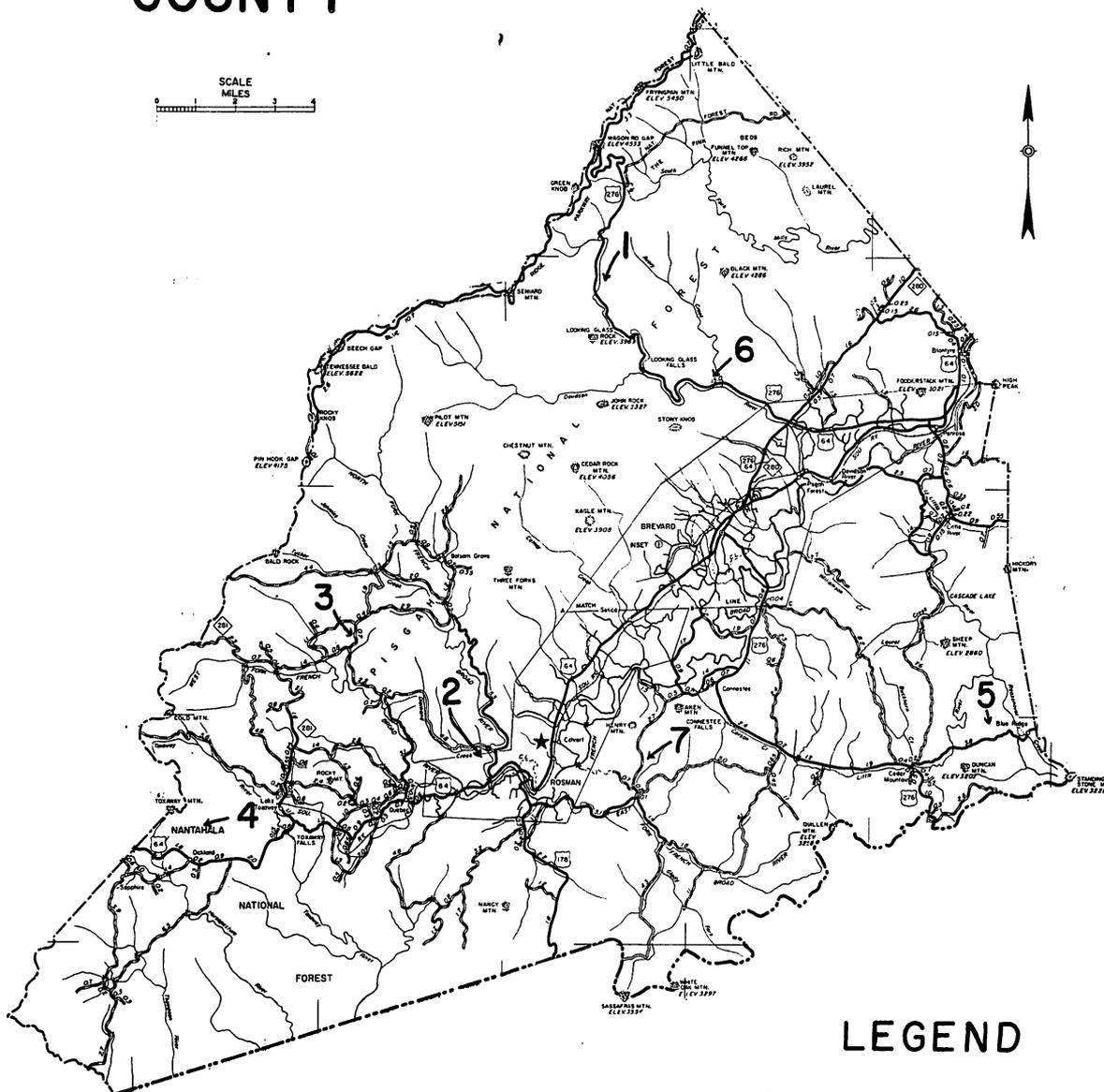
Double-terminated quartz crystals occur as float in a pasture on Raymond Hogsed property (Mr. D.C. Dills, Brevard, North Carolina, Personal Communication) on the west side of a secondary road, 2.2 miles west-southwest of Balsam Grove (see Map 18, Locality 3).

Corundum and Enstatite: Corundum and enstatite occur in dunite which crops out on the east slopes of the Great Hogback Mountain north of Oakland (see Map 18, Locality 4).

Pyrite and Garnet: Pyrite and garnet can be found in float up the Carolina Power and Light Company line, north of the road between the villages of Cedar Mountain and Blue Ridge (see Map 18, Locality 5). Garnet can also be found 2.3 miles south of Looking Glass Falls on the north bank of highway U.S. 276 in a grove of black pines (Mr. D.C. Dills, Brevard, North Carolina, Personal Communication ) (see Map 18, Locality 6).

Calcite: Dog-tooth calcite crystals occur north of the Girl Scout Camp east of Rosman near the farm of Mr. Porter Tinsley (see Map 18, Locality 7).

# TRANSYLVANIA COUNTY



## LEGEND

- 1. Smoky quartz
- 2. Quartz crystals
- 3. Quartz crystals
- 4. Corundum
- 5. Garnet
- 6. Garnet
- 7. Calcite



**RHODOLITE GARNET  
FRAGMENTS AND CUT STONES  
MACON COUNTY**

**ALMANDITE GARNET  
FRAGMENTS AND CUT STONES  
MADISON COUNTY**



COURTESY STATE MUSEUM, RALEIGH

PHOTOGRAPH BY *J.W. Buchanan*

**PLATE NO. 9**

Vance County

Minerals of the Hamme-Tungsten District: The Hamme-Tungsten district is located in the northeast part of the county, in the area lying between Big Island Creek and Little Island Creek. The tungsten ores occur in vein deposits. The chief ore is huebnerite but the veins also carry the minerals scheelite, pyrite, rhodochrosite, sphalerite, tetrahedrite, chalcopyrite, galena, apatite, fluorite, and sericite (White, 1945, pp. 97-110).

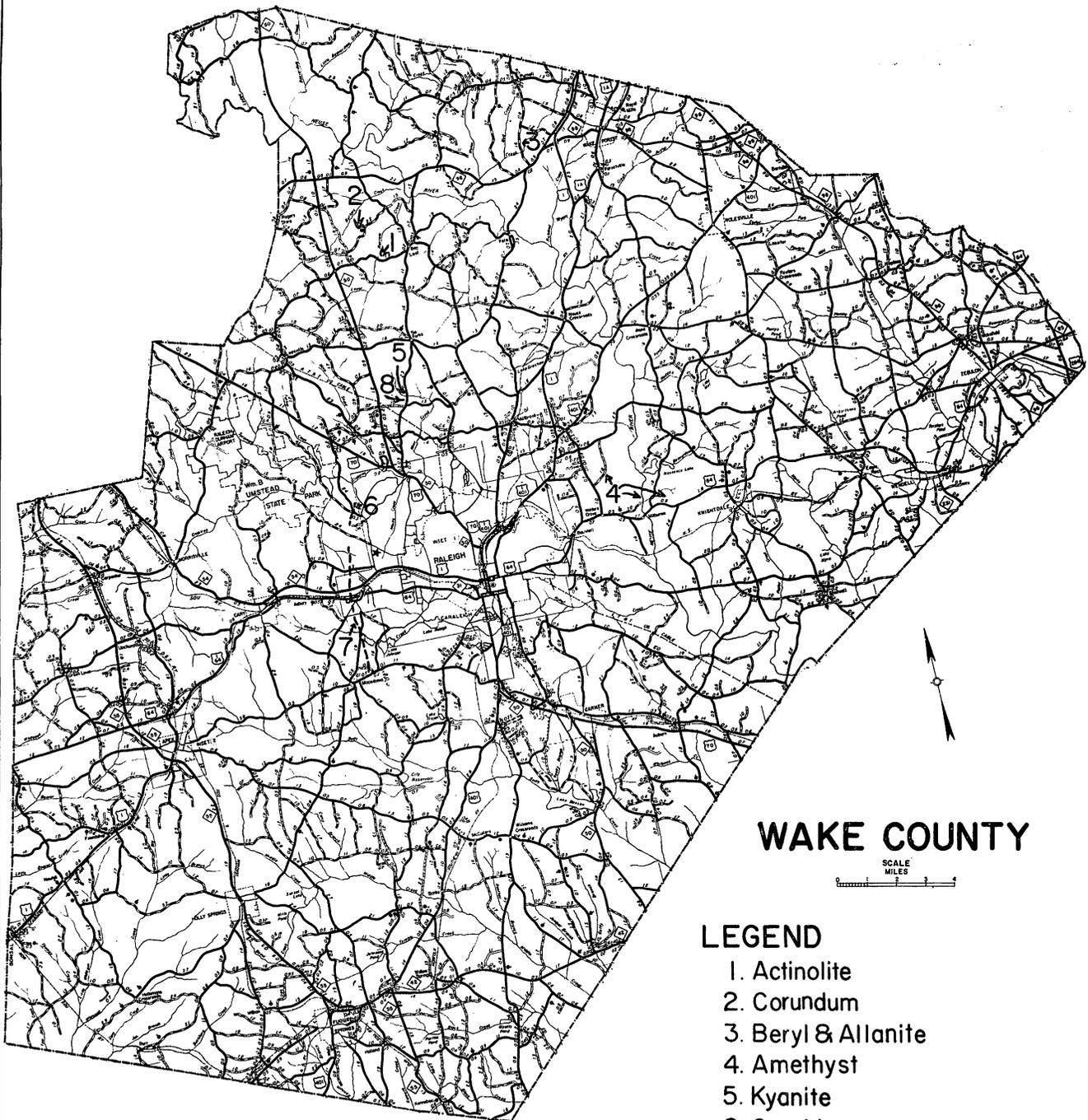
Hyalite: Hyalite opal occurs as crusts covering granitic gneiss on the banks of highway new U. S. 1 bypass, approximately one mile north of Kittrell. The hyalite is not easily detected except when exposed to ultraviolet light, under which it fluoresces a brilliant green color.

Rutile and Sillimanite: Rutile and sillimanite occur in phyllite gneiss northeast of Henderson. This area can be reached by taking highway U. S. 1 out of Henderson for 0.7 of a mile. At this point a paved road turns north and should be followed for 4.5 miles to the locality, which lies west of the road, between the road and the Kerr Reservoir.

Wake County

Soapstone and Actinolite: Several soapstone bodies carrying actinolite occur near Bayleaf in Wake County. These deposits are located on the road west of Bayleaf where Barton's Creek crosses the road (see Map 19, Locality 1), at the crossroads north of Bayleaf; in the large meander of the Neuse River northeast of Bayleaf; and where Buckhorn Creek enters Newlight Creek northeast of Bayleaf. Small corundum crystals have been found on the Powell place, between Newlight Creek and Water Fork, east of Purnell (Mr. Harry T. Davis, State Museum, Raleigh, Personal Communication). It is also reported to occur 1.9 miles northwest of Bayleaf (see Map 19, Locality 2).

Beryl and Allanite: Beryl and allanite occur in pegmatite on the Thompson farm 1.8 miles south of Purnell, between Horse Creek and a road which intersects highway N. C. 98 (see Map 19, Locality 3).



# WAKE COUNTY

SCALE  
MILES

## LEGEND

- 1. Actinolite
- 2. Corundum
- 3. Beryl & Allanite
- 4. Amethyst
- 5. Kyanite
- 6. Graphite
- 7. Graphite
- 8. Graphite

Amethyst: Amethyst occurs in the vicinity of Wilders Grove (see Map 19, Locality 4). One of the amethyst localities can be reached by taking highway U. S. 64 east from Wilders Grove for 0.5 of a mile and turning northeast on a dirt road which dead ends in 1.0 mile. The amethyst locality is between the end of the road and the Neuse River.

A second amethyst locality can be reached by taking the paved road north out of Wilders Grove for 1.0 mile and turning east on a secondary road for 0.7 of a mile. The area lies south of the road, down a dim path. A third area where amethyst has been found can be reached by taking highway U. S. 64 west from Wilders Grove for approximately 2.4 miles. The area lies several hundred yards north of the road at this point.

Kyanite: Kyanite occurs on a new road cut north of Raleigh, on Mine Creek (see Map 19, Locality 5). This area can be reached by taking the paved road which turns north off highway U. S. 70 west, just north of Crabtree Creek bridge. The kyanite lies 3.6 miles up this road.

Graphite: One, and in places, two bands of graphite cross central Wake County, west of Raleigh. One of these bands starts near Macedonia and extends northward, crossing highway U. S. No. 1 near Meredith College (see Map 19, Localities 6 and 7). Another band is encountered near the State Fairgrounds and is traceable northward almost to Six Forks. This vein has been mined for graphite, off highway U. S. 70, northwest of Raleigh, in the vicinity of Mine Creek (see Map 19, Locality 8).

#### Warren County

Amethyst, Staurolite and Lepidolite: Amethyst occurs in Warren County a few hundred yards west of the road intersection at Inez. It can also be found in float east of highway N. C. 58, 2.3 miles south of



QUARTZ CRYSTALS AND CUT STONES

COURTESY STATE MUSEUM, RALEIGH

PHOTOGRAPH BY *J.W. Buchanan*

PLATE NO. 10

Inez, on the Fowler farm.

Staurolite and lepidolite occur as float in the fields of the Fowler farm. The lepidolite is a vein type occurrence and can be found as float in several cultivated fields north of Maple Branch (Broadhurst 1956, p. 10).

#### Watauga County

Copper: The locality within a radius of three miles of Elk Knob, eight miles north of Boone has been worked for copper. The main copper ores mined in this area are chalcopyrite, azurite, and malachite accompanied by pyrite.

#### Wilkes County

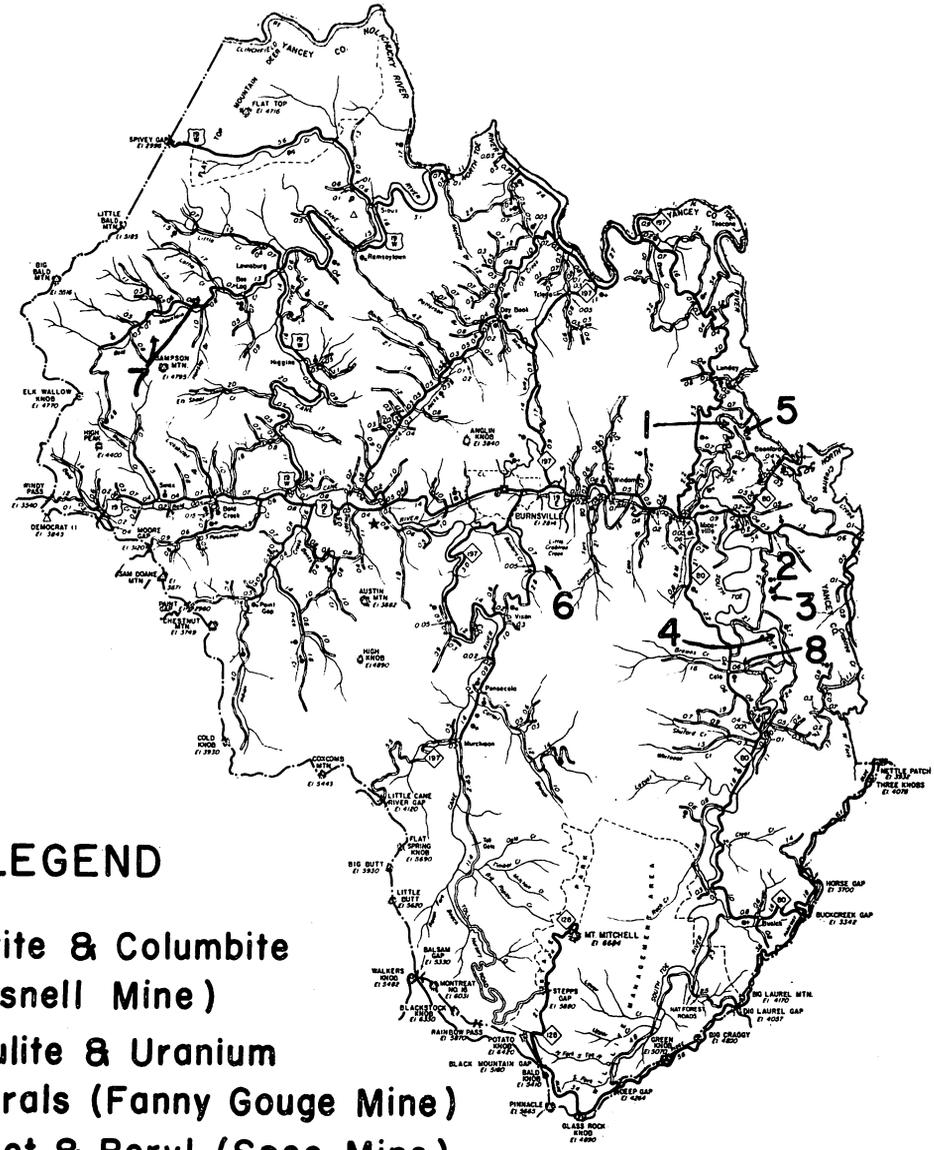
Pyrrhotite, Pyrite and Chalcopyrite: An area near Trap Hill in the northeastern part of the county, on the east side of Bryan's Knob contains quartz veins carrying pyrrhotite, pyrite and chalcopyrite (Kerr and Hanna, 1887, p. 231).

Galena: Argentiferous galena occurs in veins on the Laurel Spur of Flint Knob. This area is located in the western part of the county, six miles east of Deep Gap (Kerr and Hanna, 1887, p. 202).

#### Yancey County

Pegmatite Minerals: The Spruce Pine Pegmatite District crosses eastern Yancey County east of Bakersville. Some of the many mines of this district which lie within the boundary of Yancey County are the Presnell mine, the Old Charles mine, and the Ray mine. The Presnell mine, located on the Toe River, two miles north of Micaville (see Map 20, Locality 1) contains the minerals quartz, mica in crystals, feldspar, almandite, apatite, and columbite. The Fanny Gouge mine, located 2.7 miles southeast of Micaville (see Map 20, Locality 2) contains the minerals quartz, mica, feldspar, thulite, pitchblende, and uranium

# YANCEY COUNTY



## LEGEND

- 1. Apatite & Columbite  
(Presnell Mine)
- 2. Thouelite & Uranium  
minerals (Fanny Gouge Mine)
- 3. Garnet & Beryl (Spec Mine)
- 4. Clear oligoclase (Little Gibbs Mine)
- 5. Thouelite & Apatite (Old Charles Mine)
- 6. Beryl & Apatite (Ray Mica Mine)
- 7. Corundum
- 8. Corundum

alteration minerals. The Spec mine, which lies on a mountain ridge several hundred yards south of the Fanny Gouge mine (see Map 20, Locality 3) contains in addition to quartz, mica, and feldspar; the minerals almandite and aquamarine beryl. The Little Gibbs mine on the South Toe River, 1.5 miles northeast of Celo (see Map 20, Locality 4) contains a glass clear oligoclase feldspar which can be cut into faceted gem stones (Mr. Floyd Wilson, Micaville, Personal Communication). The Old Charles mine which lies 3.5 miles southeast of Micaville (see Map 20, Locality 5) contains thulite and blue apatite crystals. The Ray mica mine on Hurricane Mountain, 2.5 miles south-southeast of Burnsville (see Map 20, Locality 6) contains golden and aquamarine beryl, apatite crystals, clear oligoclase, amazonstone, and thulite. Genth and Kerr (1885, p. 127) stated that the minerals flourite in pseudomorphs after apatite, yttrocerite, garnet, zircon, rutile, tourmaline, columbite, monazite, autunite, kyanite, and smoky quartz were found at this mine.

Corundum: Corundum has been mined at the Hayes (Egypt) mine on the western slopes of Sampson Mountain, ten miles northwest of Bakersville (see Map 20, Locality 7). The corundum at this locality varies from white to mottled blue in color and usually is found as well formed crystals. Corundum crystals are sometimes found in a weathered gneiss on Celo Ridge, near the South Toe River, east of the village of Celo (see Map 20, Locality 8). (Pratt and Lewis, 1905, p. 259).

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APPENDIX

MINERALS OF NORTH CAROLINA

The minerals known to be found in North Carolina are listed alphabetically in the following catalogue. Out of more than 300 minerals there are 70 that have at present a definite economic value. More than half of the valuable minerals are known to occur in commercial quantities.

Actinolite	Biotite	Crytolite	Grunerite
Aeschynite	Bismite		Gummite
Aikinite	Bismuthinite	Damourite	Gymmite
Albite	Bismutite	Deweylite	Gymnite
Allanite	Bornite	Diamond	Gypsum
Alleghanyite	Boulangerite	Diallage	
Almandite	Braunite	Diaspore	Halite
Altaite	Breunnerite	Dichroite	Halloysite
Alunite	Bronzite	Diopside	Halotrichite
Alunogen	Brookite	Disthene (Kyanite)	Hatchettolite **
Amber		Dolomite	Hausmannite
Amblygonite	Calamine	Dudleyite	Hematite
Amianthus	Calcite	Dufrenite	Hercynite
Amphibole *	Cassiterite	Dumortierite	Hiddenite **
Anatase	Cerargyrite		Holmquistite
Andalusite	Cerolite	Edenite	Hornblende
Andesine	Cerussite	Edwardsite	Hielmite
Andradite	Chabazite	Emerald	Huebnerite
Anglesite	Chalcanthite	Emery	Hydrofergusonite
Annabergite	Chalcocite	Enstatite	Hydrozincite
Annerodite	Chalcopyrite	Epidote	Hypersthene
Anorthite	Chalcotrichite	Erinite	
Anthophyllite	Chlorite	Essonite	Ilmenite
Antimony *	Chloritoid	Euclase	Indianite
Apatite	Chromite	Euxenite	Iolite
Aquamarine	Chrysocolla		Iron
Aragonite	Chrysolite	Feldspar *	
Arfvedsonite	Chrysotile	Fergusonite	Jefferisite
Argentite	Chrysoprase	Fuchsite	
Arsenopyrite	Clarkeite	Fluorite	Kanmererite
Asbestos	Clinochlore		Kaolinite
Asbolite	Coccolite	Gadolinite	Kerrite **
Auerlite **	Columbite	Gahnite	Knebelite
Augite	Columite	Galaxite	Kokscharoffite
Automolite	Copper	Galena	Kreittonite
Autunite	Cordierite	Garnet *	
Azurite	Corundophillite	Garnierite	Kunzite
	Corundum	Gedrite	Kyanite
Baltimorite	Covellite	Genthite	Labradorite
Barnhardtite **	Chrocidolite	Glauconite	Lazulite
Barite	Crocoite	Gold	Lead
Basanite	Culsageeite **	Goslarite	Lepidolite
Bastite	Cumingtonite	Goethite	Leucopyrite
Bauxite	Cuprite	Gramatite	Liebigite
Bemenite	Cuproscheelite	Graphite	Limonite
Beryl	Cuprontungstite	Grossularite	Lithiophyllite

Lucasite **	Perovskite	Rhodochrosite	Tin
	Pharmacosiderite	Rhodolite **	Thorite
Maconite	Phlogopite	Rhodonite	Thulite
Magnesite	Phosphocerite	Rhaetizite	Topaz
Magnetite	Phosphuranylite **	Ripidolite	Torbernite
Malachite	Picotite	Rogersite **	Tourmaline
Marcasite	Picrolitic	Rubellite	Tremolite
Margarite	Pitchblende	Ruby	Troilite
Margarodite	Plagioclase **	Ruby Spinel	Tungstite
Marmolite	Platinum	Rutherfordite	Turnerite
Martite	Pleonaste	Rutile	
Meerschaum	Polycrase		Uranite
Meionite	Prochlorite	Samarskite	Uraninite
Melaconite	Proustite	Saponite	Uraconite
Mellanterite	Pseudomalachite	Sapphire	Uranophane
Menacconite	Psilomelane	Scheelite	Uranotile
Mengite	Purpurite	Schreibersite	Uvarovite
Mica *	Pycnite	Scorodite	
Microlite	Pyrargyrite	Sepiolite	Vanadinite
Mitchellite **	Pyrite	Sericite	Vermiculite *
Molybdenite	Pyrochlore	Serpentine	Villarsite
Molybdite	Pyroclusite	Siderite	Vivianite
Monazite	Pyromelane	Silver	Voglite
Montanite	Pyromorphite	Sillimanite	
Montomorillinite	Pyrope	Smaragdite	Wad *
Muscovite	Pyrophyllite	Sperrylite	Wavellite
	Pyrrhotite	Spessartite	Wellsite
	Pyroxene	Sphalerite	Willcoxite
Nagyagite		Sphene	Williamsite
Neotocite	Quartz	Spinel *	Willemite
Niccolite	Agate	Spodumene	
Niter	Amethyst	Staurolite	Xenotime
	Carnelian	Steatite	
Octahedrite	Calcedony	Stibnite	Yttrocerite
Oligoclase	Chert	Stilbite	
Olivinite	Flint	Stolzite	Zinc
Olivine	Hyalite	Succinite	Zippeite
Orthoclase	Jasper	Sulphur	Zircon
Orthite	Milky quartz		Zoisite
Ottrelite	Opal	Talc	
		Tantalite	
Paranthite	Rock crystals	Tellerium	
Paragonite	Rose quartz	Tenorite	
Pargasite	Smoky quartz	Tephroite	
Pearl	Sagenite quartz	Tetradymite	
Penninite		Tetrahedrite	
Peridot	Rensselaerite		

\* Group names

\*\* First identified in North Carolina

(Compiled by the Department of Conservation and Development and revised by the Author).

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