

E X P L A N A T I O N

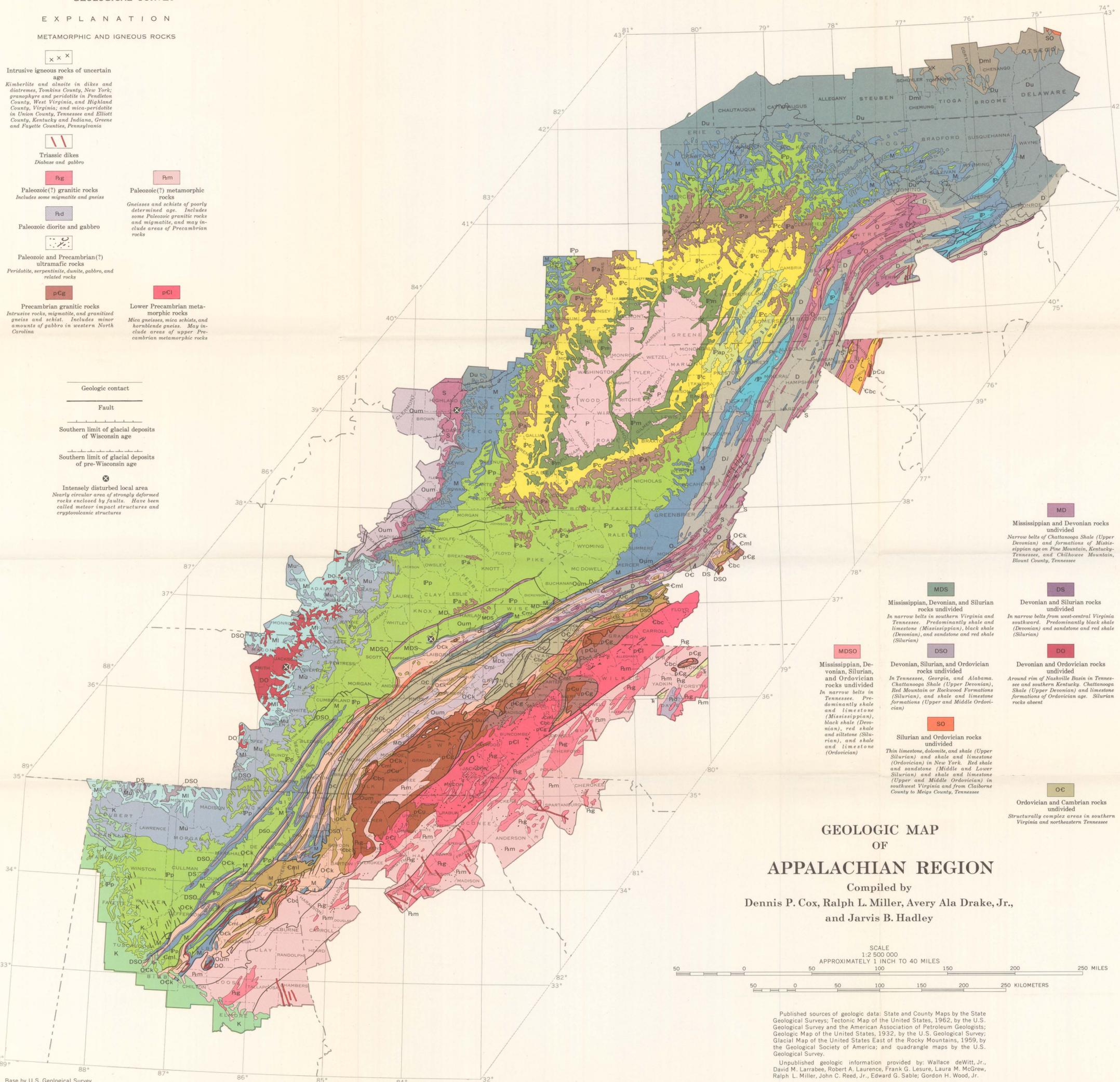
METAMORPHIC AND IGNEOUS ROCKS

- x x
Intrusive igneous rocks of uncertain age
Kimberlite and alnoite in dikes and diatremes, Tomkins County, New York; granophyre and peridotite in Pendleton County, West Virginia, and Highland County, Virginia; and mica-peridotite in Union County, Tennessee and Elliott County, Kentucky and Indiana, Greene and Fayette Counties, Pennsylvania
- //
Triassic dikes
Diabase and gabbro
- Pp
Paleozoic(?) granitic rocks
Includes some migmatite and gneiss
- Pd
Paleozoic diorite and gabbro
- PpCg
Paleozoic and Precambrian(?) ultramafic rocks
Peridotite, serpentinite, dunite, gabbro, and related rocks
- pCg
Precambrian granitic rocks
Intrusive rocks, migmatite, and granitized gneiss and schist. Includes minor amounts of gabbro in western North Carolina
- pCl
Lower Precambrian metamorphic rocks
Mica gneisses, mica schists, and hornblende gneiss. May include areas of upper Precambrian metamorphic rocks
- Geologic contact
- Fault
- Southern limit of glacial deposits of Wisconsin age
- Southern limit of glacial deposits of pre-Wisconsin age
- Intensely disturbed local area
Nearly circular area of strongly deformed rocks enclosed by faults. Have been called meteor impact structures and cryptovolcanic structures

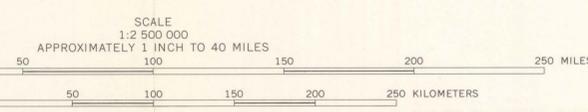
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SEDIMENTARY AND VOLCANIC ROCKS

- K
Cretaceous rocks undivided
Tuscaloosa and Etowah Formations in Alabama. Sandstone, clay, and basal gravels of Late Cretaceous age
- T
Triassic rocks undivided
Conglomerate, sandstone, shale, and thin beds of coal in Dan River Basin, North Carolina; Late Triassic in age
- P
Permian rocks undivided
Dunkard Group in Pennsylvania, West Virginia, Ohio, and Maryland. Sandstone, siltstone, shale, limestone, and coal
- Pm
Monongahela Group (Upper Pennsylvanian)
In Pennsylvania, Ohio, and West Virginia. Sandstone, siltstone, shale, limestone, and coal. Pittsburgh coal at base
- Pc
Conemaugh Formation (Upper Pennsylvanian)
In Pennsylvania, Ohio, Maryland, and West Virginia. Sandstone, siltstone, shale, limestone, and coal. Upper Freeport coal at base
- Pa
Allegheny Group (Middle Pennsylvanian)
In Pennsylvania, Ohio, West Virginia, and Kentucky. Sandstone, siltstone, shale, limestone, and coal
- Pp
Pottsville Group (Lower and Middle Pennsylvanian)
In Appalachian Plateau from Pennsylvania to Alabama. Conglomerate, sandstone, siltstone, shale, and coal
- Mu
Upper Mississippian rocks
In Cumberland Plateau of Kentucky, Tennessee, and Alabama. Limestone (Newman Limestone and equivalent) in lower part but including sandstone units in Alabama and Georgia. Shale, siltstone, and sandstone (Flemington Formation) in upper part
- MI
Lower Mississippian rocks
In Cumberland Plateau of Kentucky, Tennessee, and Alabama. Fort Payne Chert and Maury Formation
- Du
Upper Devonian rocks
In New York, northern Pennsylvania, and Ohio. Conglomerate and sandstone of Catskill delta grading westward into black shale, siltstone, and sandstone
- DmI
Middle and Lower Devonian rocks
Predominantly shale (Hamilton Group) in upper part, and shale, limestone, and sandstone in lower part
- S
Silurian rocks undivided
Predominantly limestone and dolomite in upper part; sandstone and red shale including thin beds of iron ore (Clinton) in middle part. Ridge-forming sandstone and conglomerate (Piscataway and Clinch Sandstones) present in lower part from northern Tennessee northward
- Oum
Upper and Middle Ordovician rocks
In Ohio and Kentucky. Post-Knox Ordovician formations from central Virginia southward. Predominantly limestone; some shale in upper part. Clastic formations dominant in east Tennessee (Boys, Sevier, and Tellico Formations)
- Ock
Knox Group (Lower Ordovician and Upper Cambrian)
From central Virginia southward. Massive bedded, carbonate formations of Early Ordovician and Late Cambrian age; predominantly dolomite on western side of Valley and Ridge province, limestone on eastern side
- Cml
Middle and Lower Cambrian rocks undivided
From central Virginia southward. Principally of Middle and Early Cambrian age, but includes units of early Late Cambrian age at top, and excludes basal Cambrian clastic rocks. Sandstone, shale, dolomite, and limestone, glauconitic in many places
- Cbc
Basal Cambrian clastic rocks
Chilhowee Group and equivalent rocks. Locally includes basalt flows in lower part. In places includes narrow belts of overlying Shady Dolomite
- pCu
Upper Precambrian sedimentary and volcanic rocks
In Tennessee, North Carolina, and Georgia: variably metamorphosed sandstone and associated rocks of the Ocoee Series and Grandfather Mountain Formation. In southern Virginia and adjacent areas: clastic sedimentary rocks and rhyolite of Mount Rogers Volcanic Group. In Maryland: Catoclin Greenstone (Precambrian)



GEOLOGIC MAP
OF
APPALACHIAN REGION
Compiled by
Dennis P. Cox, Ralph L. Miller, Avery Ala. Drake, Jr.,
and Jarvis B. Hadley



Published sources of geologic data: State and County Maps by the State Geological Surveys; Tectonic Map of the United States, 1962, by the U.S. Geological Survey and the American Association of Petroleum Geologists; Geologic Map of the United States, 1932, by the U.S. Geological Survey; Glacial Map of the United States East of the Rocky Mountains, 1959, by the Geological Society of America; and quadrangle maps by the U.S. Geological Survey.
Unpublished geologic information provided by: Wallace deWitt, Jr., David M. Larrabee, Robert A. Lawrence, Frank G. Lesure, Laura M. McGrew, Ralph L. Miller, John C. Reed, Jr., Edward G. Sable, Gordon H. Wood, Jr.