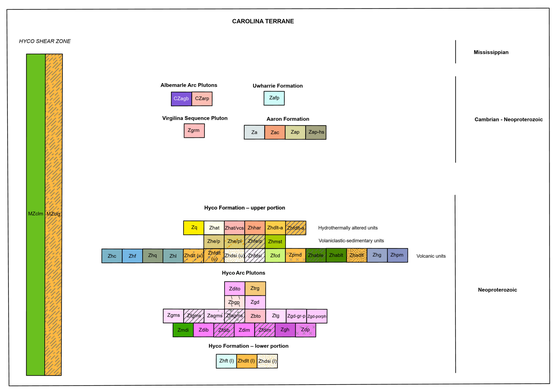
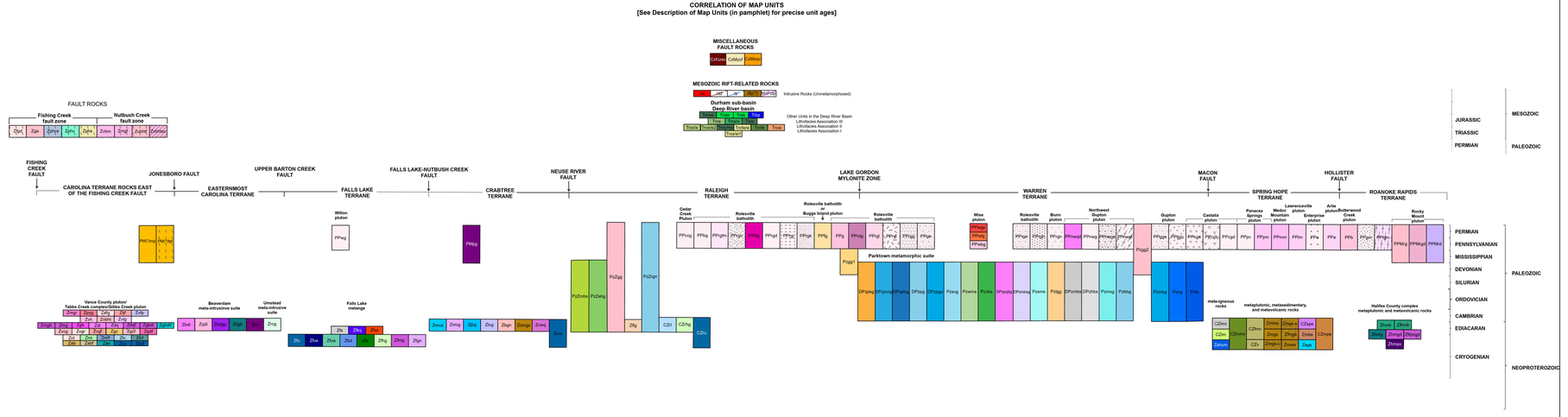
North Carolina Department of Environmental Quality
Division of Energy, Mineral and Land Resources
William E. Toby Vinson, Jr., Director
Dwain M. Veach, State Geologist and Section Chief, NC Geological Survey

LIST AND SCHEMATIC DISTRIBUTION OF TERRANES AND MAP UNITS
See Description of Map Units (In Pamphlet) for Complete Unit Descriptions

North Carolina Geological Survey
Open File Report 2025-04

Plate 2





DESCRIPTION OF MAP UNITS

LATEST PERMIAN TO EARLY CENOZOIC ROCKS

FAULT ROCKS

- CzFcsz — Silicified cataclasite
- CzFccf — Cataclastic fault zone
- CzFvq — Vein quartz and quartz breccia

INTRUSIVE ROCKS (Unmetamorphosed)

- JTRd — Diabase
- JTRd — Two-pyroxene diabase
- JTRd — Rhyolite porphyry
- JTRd — Felsic porphyry
- JTRd — Lamprophyre dike

TRIASSIC SEDIMENTARY ROCKS OF THE NEWARK SUPERGROUP

DEEP RIVER BASIN

DURHAM SUB-BASIN

OTHER UNITS OF THE DURHAM SUB-BASIN

- TRscg — Conglomerate of the Chatham Group - western border
- TRscs — Sandstone and mudstone breccia
- TRsbr — Silicified breccia
- TRsc — Contact metamorphosed Triassic sedimentary rock

LITHOFACIES ASSOCIATION III

- TRsa — Interbedded sandstone and pebbly sandstone of the Chatham Group
- TRscg — Sandstone with interbedded conglomerate
- TRscc — Conglomerate

LITHOFACIES ASSOCIATION II

- TRscm — Conglomerate, sandstone, and mudstone of the Chatham Group
- TRsfa2 — Sandstone with interbedded siltstone
- TRscm — Conglomerate and muddy sandstone of the Chatham Group
- TRfae — Feldspathic arenite and siltstone undivided
- TRfa — Feldspathic arenite
- TRsi — Siltstone and minor pebbly sandstone

LITHOFACIES ASSOCIATION I

- TRsfa1 — Sandstone with interbedded siltstone of the Chatham Group

PERMIAN TO MISSISSIPPIAN INTRUSIVE ROCKS

- PMzYpg — Ruin Creek gneiss
- MzTRpgf — Foliated felsic gneiss
- PMzg — Pegmatitic granite

WILTON PLUTON

- PPwg — Granite of the Wilton pluton

CEDAR CREEK PLUTON

- PPmcg — Granite of the Cedar Creek pluton

ROLESVILLE BATHOLITH

Horton and Stern (1994) reported TIMS 207Pb/206Pb ages of bulk zircon splits for several granitoids within the Rolesville batholith: ca. 312 Ma for the Lassiter granitoid; ca. 298 Ma for the Mitchell granitoid, and ca. 286 Ma for what may be the Rolesville main granitoid at the northernmost tip of the batholith. Schetzer and Samson (2001) reported a TIMS $^{206}Pb/^{238}U$ zircon age of 302.5 ± 0.4 Ma for the Rolesville main granitoid near the center of the batholith, respectively. Monazite 207Pb/206U ages were ca. 298 Ma and 294.8 ± 1.0 Ma, respectively, for these plutons. Kish and Fullagar (1978) obtained a 313 ± 8 Ma Rb/Sr age for the syn-kinematic Buggs Island granite.

- PPRg — Biotite granite
- PPrgfo — Foliated to mylonitic granite and granitoid orthogneiss
- PPRgc — Averette granitoid (Speer, 1994)
- PPRdg — Diorite-gabbro of the Rolesville batholith
- PPrgd — Granitoid facies d
- PPrgc — Granitoid facies c
- PPrgk — Granitoid facies k
- PPrg — Unnamed granite
- PPRdg — Diorite-gabbro
- PPrgf — Granitoid facies f
- PPrgf — Granitoid facies i
- PPrgg — Granitoid facies g
- PPrgel — Leucogranite
- PPrge — Granitoid facies e
- PPrgs — Granitoid facies h

ROLESVILLE BATHOLITH OR BUGGS ISLAND PLUTON (?)

- PPRg — Foliated granitic rocks

WISE PLUTON

- DPRwgf — Wise pegmatitic granite
- PPwg — Wise leucogranite
- PPwg — Wise biotite granite

BUNN PLUTON

- PPrgm — Bunn granitoid

NORTHWEST GUPTON PLUTON

- PPnwgd — NW Gupton quartz diorite
- PPnwg — NW Gupton granite
- PPnwgf — NW Gupton granitoid facies e
- PPnwgf — NW Gupton high-strain zone

GUPTON PLUTON

- PPgge — Gupton granitoid facies e
- PPgge — Granitoid facies c

CASTALIA PLUTON

- PPcgge — Granitoid facies e
- PPcgs — Granitoid facies b
- PPcgd — Granite to granodiorite

PANACEA SPRINGS PLUTON

- PPps — Panacea Springs granite
- PPpm — Panacea Springs monzogranite to quartz monzonite

OTHER PLUTONIC ROCKS

The Buttermood Creek and Castalia and Sims granites in the Raleigh 100K sheet have Rb/Sr ages that are ca. 293 Ma, 313 ± 13 Ma, and 287 ± 9 Ma, respectively (Fullagar and Butler, 1979; Fullagar and Nelson, 1980; Rueter et al., 1981). The Lawrenceville granite has a TIMS $^{207}Pb/^{206}U$ zircon age of 302.5 ± 0.4 Ma (Dorfler et al., 2009).

- PPlwn — Medoc Mountain granite
- PPlwc — Lawrenceville granite
- PPef — Enterprise granite
- PPla — Arlie granite
- PPbc — Buttermood Creek granite
- PPgm — Granitoid rocks and metamorphosed and foliated granitoid rocks
- PPmgd — Mylonitic granitoid rocks

ROCKY MOUNT PLUTON

- PPRdg — Granite and leucogranite
- PPRgd — Granodiorite
- PPRdd — Diorite, quartz diorite and tonalite

COUNTRY LINE CREEK COMPLEX IN THE HYCO SHEAR ZONE

- ZqSdg — Unseparated biotite granite orthogneiss
- MZum — Neoproterozoic mafic gneiss and amphibolite interlayered with Mississippian pegmatite and orthogneiss

CAROLINA TERRANE

ALBEMARLE ARC

ALBEMARLE ARC PLUTONS

Wortman et al. (2000) reported TIMS $^{207}Pb/^{206}Pb$ ages of 546.5+3.0/-2.4 Ma (MSWD = 0.45) for the Rocky Ford pluton.

- CZgab — Goshen gabbro
- CZqrp — Rocky Ford Pluton

UWHARRIE FORMATION

- ZaEp — Felsic porphyry

VIRGILINA SEQUENCE

- Zgtm — Porphyritic meta-andesite

VIRGILINA SEQUENCE PLUTON

- Zgtm — Metagranite

AARON FORMATION

Samson et al. (2001) reported a youngest (SHRIMP-II) detrital zircon $^{206}Pb/^{238}Pb$ date of ca. 578 Ma collected from the southern portion of the South Boston 100K. Pollock et al. (2010) reported a youngest LA-ICP-MS U-Pb zircon age of 588 ± 11 Ma for the unit in the Chapel Hill 100K.

NOTE: Recent preliminary LA-ICP-MS U-Pb zircon analyses from a meta-sandstone on the eastern limb of the Virgilina synclinorium within the Aaron Formation indicates all Neoproterozoic Depositional Ages (MDA) are between ca. 545 Ma and ca. 545 Ma (T. LaMaskin, proposal communication, 2025). As such the Aaron Formation stratigraphic placement is in question.

- Za — Aaron Formation
- Zac — Metaconglomerate and metasandstone of the Aaron Formation
- Zap — Phyllitic metasiltstone of the Aaron Formation
- Zapfa — High-strain zone of phyllonite metasiltstone of the Aaron Formation
- Zav — Virgilina member of the Aaron Formation

HYCO ARC

HYCO FORMATION - UPPER PORTION

Wortman et al. (2000) reported TIMS $^{207}Pb/^{206}Pb$ ages of 615.7+3.7/-1.9 Ma (MSWD = 0.44) from a metamorphosed tuff from unit ZhzB (ss). Bowman (2010) reported a CA-TIMS $^{207}Pb/^{206}Pb$ ages of 616.5+/-1.2 Ma (MSWD = 0.027) from unit ZhFm the southern portion of the South Boston 100K.

HYDROTHERMALLY ALTERED UNITS

Wortman et al. (2000) reported TIMS $^{207}Pb/^{206}Pb$ ages of 613.4+2.8/-2.0 Ma (MSWD = 0.034) for a granite and 613.9+1.6/-1.5 Ma (MSWD = 0.36) for a diorite in unit Zgma.

- Zq — Quartz bodies
- Zhal — Altered tuffs of the lower portion of the Hyco Formation
- Zhahva — Altered tuffs and volcaniclastic sedimentary rocks
- Zhhar — Hydrothermally altered rocks
- Zhdha — Altered dacitic lavas and tuffs
- Zhfdl — Foliated altered dacitic lavas and tuffs

VOLCANICLASTIC–SEDIMENTARY UNITS

- Zhscp — Mixed epiclastic-pyroclastic rocks
- Zhsrcf — Mixed epiclastic-pyroclastic rocks with interlayered dacitic lavas
- Zhsrcl — Foliated mixed volcanogenic sedimentary and pyroclastic rocks
- Zhsmr — Matrix supported tuffs

FELSIC TO INTERMEDIATE VOLCANIC UNITS

- Zhc — Felsic crystal metatuff
- Zhf — Fissile felsic metatuff
- Zhq — Quartz metaporphyry
- Zhl — Coarse-grained felsic metatuff
- ZhdfLpt — Dacitic lavas and tuffs
- ZhfdLpt — Foliated dacitic lavas and tuffs
- ZhdsLcu — Dacitic shallow intrusive of the upper portion of the Hyco Formation
- ZhfdsLcu — Foliated dacitic shallow intrusions
- Zhcf — Fragmental/clastic dacite
- Zhpmd — Porphyritic metadacite

INTERMEDIATE TO MAFIC VOLCANIC UNITS

- Zhaadc — Andesitic to basaltic lavas with interlayered epiclastic rocks
- Zhaadl — Andesitic to basaltic lavas and tuffs
- ZhaaRt — Andesitic to dacitic lavas and tuffs
- Zhg — Greenstone
- Zhgsm — Fine-crystalline porphyritic metabasalt

HYCO ARC PLUTONS

- Zdtb — Metadiorite-metatonalite
- Zhg — Trondhjemite and granodiorite
- Zgaf — Coarse-crystalline biotite metagranite porphyry
- Zgf — Metagranodiorite
- Zgma — Granodiorite tonalite of the Stem and Moriah plutons
- ZgmaS — High-strain zones granodiorite tonalite of the Stem and Moriah plutons
- ZgmfA — Altered granodiorite and granite of the Stem and Moriah pluton
- ZgmfL — Foliated granodiorite and granite of the Moriah pluton
- Zhb — Hornblende-bearing biotite tonalite
- Zq — Unfoliated biotite metatonalite and minor metagranodiorite
- Zgdg-p — Granodiorite to granite of Piney Mountain Creek area
- Zgd-porph — Porphyritic granodiorite
- Zmm — Microdiorite
- Zdfb — Diorite of the Bulner pluton
- ZdfbL — Foliated diorite of the Bulner pluton
- Zdms — Diorite of the Moriah pluton
- ZdmsL — Foliated diorite of the Moriah pluton
- Zgb — Hornblende gabbro
- Zmg — Metadiorite porphyry

HYCO FORMATION - LOWER PORTION

FELSIC TO INTERMEDIATE VOLCANIC UNITS

Wortman et al. (2000) reported TIMS $^{207}Pb/^{206}Pb$ ages of 633+2.0/-1.5 Ma (MSWD = 0.57) and 632.9+2.6/-1.9 Ma (MSWD = 0.87) from a granite and flow banded rhyolite (dacite), respectively, associated with the Hyco Formation in the Chapel Hill 100K. Bradley and Andronikov (2012) dated a 617 Ma age for Zhdcn-1 dacite and the 2-σ uncertainty of a dacitic tuff and dacite, respectively, from southern Orange County in the Chapel Hill 100K.

- ZhfLC — Felsic tuffs
- ZhdfLC — Dacitic lavas and tuffs of the lower portion of the Hyco Formation
- ZhdsLC — Dacitic shallow intrusive of the lower portion of the Hyco Formation

CAROLINA TERRANE ROCKS EAST OF THE FISHING CREEK FAULT ZONE

VIRGILINA SEQUENCE PLUTONS

Various veins and dikes in the Vance County pluton vicinity (from Parker, 1963 – best viewed in the GeMS database due to small size of lines at 100K-scale)

- Ap — Aplite
- Zpz — Phyllite zones
- Zpzqt — Quartz veins (quartz-apecuelarite-tourmaline)
- Zpzqt — Quartz veins (quartz-tourmaline)
- Zpzqt — Quartz veins (quartz-huebnerite)
- Zpzqt — Quartz veins (barren)
- Zpzsb — Siliceous belts
- Zpzhd — Hypersthene tonalite

PLUTONIC ROCKS ASSOCIATED WITH THE VANCE COUNTY PLUTON

LeHuray (1989) reported $^{207}Pb/^{206}Pb$ ages for three discordant zircons with an upper intercept of 571±17 Ma for the Vance County pluton in the southern portion of the South Boston 100K.

- Zvh — Metamorphosed hornblende granodiorite to quartz diorite to quartz monzonite
- Zvbt — Biotite metatonalite and metagranodiorite of the intermediate Vance County
- Zvtg — Metatonalite and metagranodiorite
- Zvcg — Granitoid of the Vance County pluton (?)
- Zvgr — Felsic meta-intrusive suite
- ZvgF — Foliated equivalent of felsic meta-intrusive suite

TABBS CREEK META-INTRUSIVE SUITE

- Zto — Tabbs Creek meta-intrusive suite
- ZtoF — Foliated Tabbs Creek meta-intrusive suite
- ZgtF — Foliated Tabbs Creek metagranodiorite

GIBBS CREEK PLUTON

- Zgc — Gibbs Creek pluton
- ZgcF — Foliated Gibbs Creek pluton

MISCELLANEOUS YOUNGER PLUTONIC ROCKS

- Zmgr — Metagranite/metagranodiorite/metatrondhjemite
- Zpcg — Porphyritic metagranite
- ZgAg — Alkali feldspar granite
- Zgt — Metatrondhjemite
- Zcfp — Felsic porphyry
- Zmgb — Metagabbro
- Zmg — Metagabbro
- Zgb — Metagabbro
- Zut — Metadiorite
- Zhq — Quartz metadiorite
- Zqf — Foliated quartz metadiorite
- Zgbdi — Hornblende metagabbro-metadiorite
- ZgbdF — Foliated equivalent of hornblende metadiorite-metagabbro

MISCELLANEOUS OLDER PLUTONIC AND VOLCANIC ROCKS

- Zct — Carolina terrane metagrantoid
- Zm — Mixed suite of meta-igneous rocks
- ZmF — Foliated mixed suite of meta-igneous rocks
- Zab — Meta-andesite and metabasalt
- ZabF — Foliated equivalent of meta-andesite and metabasalt
- Zam — Quartz meta-andesite and metatrondhjemite
- Zuc — Meta-ultramafic rocks undivided
- ZucF — Foliated ultramafic rocks (undivided)

HIGH-STRAIN ROCKS IN THE FISHING CREEK FAULT ZONE

- ZgF — Foliated biotite granodiorite
- ZgF — Deformed equivalent of Zgm
- ZgAg — Sericite chlorite schist and phyllonite
- ZgAc — Chlorite schist and phyllonite
- ZgAq — Sericite quartz schist and phyllonite

HIGH-STRAIN ROCKS IN THE NUTBUSH CREEK FAULT ZONE

- ZvbH — Chlorite biotite phyllonite and mylonite
- ZmgE — Foliated biotite metagranitoid
- ZmgC — Foliated to mylonitic metamorphosed biotite tonalite and granodiorite of the intermediate Vance County pluton
- ZdfbSc — Silicified cataclasite in Zvbtrt

EASTERNMOST CAROLINA TERRANE

A sample from CZbr1 in the Raleigh 100K sheet contains discordant zircon fractions that yield TIMS $^{207}Pb/^{206}Pb$ crystallization ages of ca. 379-373 Ma and an upper intercept age of 375 ± 12 Ma (Goldberg, 1994).

BEAVERDAM META-INTRUSIVE SUITE

- Zvd — Beaverdam metadiorite
- Zvbt — Beaverdam blue quartz metadiorite
- Zvmgr — Beaverdam metagabbro and metagranite
- ZvgB — Beaverdam metagabbro and metapyroxenite
- Zvm — Beaverdam metapyroxenite

UMSTEAD META-INTRUSIVE SUITE

- Zmg — Reedy Creek metagranodiorite

FALLS LAKE TERRANE

For the Falls Lake Schist: U/Pb data for five zircon fractions of the dominant population yield 207Pb/206Pb ages ranging from 1117 to 1359 Ma, but plot near a lower discordia intercept of 590 Ma (Goldberg, 1994)

- Zfs — Falls Lake schist
- Zfsc — Kyanite quc/Cu
- Zfqz — Quartzite
- Zfu — Meta-ultramafic rocks (undivided)
- Zfsh — Serpentinite
- Zfsa — Actinolite rock and actinolite-chlorite schist
- Zfsf — Talc schist
- Zfa — Amphibolite
- Zfhg — Hornblende gneiss
- Zmg — Metagabbro
- Zfgn — Felsic gneiss

CRABTREE TERRANE

The CZcog in the Raleigh 100K sheet yields TIMS U-Pb zircon ages of ca. 566-554 Ma (Goldberg, 1994). Horton and Stern (1994) reported TIMS $^{207}Pb/^{206}Pb$ ages of ca. 542 Ma for CZcog. A sample of Zmca yields ca. 554 Ma (Fetter et al., 2021). Zmca, Zmcb, Zmcc, Zmcd, Zmce, Zmcf, and Zmcg all yield a unimodal population of monazite U-Pb concordia ages ca. 530 Ma; rutile ages are ca. 325 Ma and 263 Ma (lower intercept isochron ages; Burgess et al., 2024). Two additional samples of Zhcs produce an LA-ICP-MS zircon lower concordia intercept metamorphic age of 267.09 ± 1.39 Ma, and a muscovite 40Ar/39Ar cooling age of 251.45 ± 1.6 Ma, respectively (Blake et al., 2021).

- Zmcg — Middle Creek amphibolite
- Zmcg — Middle Creek gneiss
- Zjhg — Jues Branch Gneiss
- Zlcg — Little Creek Gneiss
- Zhgn — Biotite layered gneiss
- Zcmgn — Mixed gneiss and schist
- Zcwq — White mica-rich and quartz-rich schist
- Zum — Meta-ultramafic rock

RALEIGH TERRANE

Lithologies grouped as CZcgn in the Raleigh 100K sheet yield discordant TIMS U-Pb zircon ages ca. 544–481 Ma (Goldberg, 1994; Horton and Stern, 1994). Horton and Stern (1994) obtained multigrain U-Pb zircon TIMS upper-intercept ages of ca. 491 Ma and and Casilli et al. (2001) reported a TIMS $^{207}Pb/^{206}Pb$ zircon age of 544 ± 1 Ma for a metamorphosed felsic tuff. Fetter et al. (2024) obtained LA-ICP-MS U-Pb zircon crystallization ages for multiple lithologies in CZcgn that range between 580 ± 14 Ma to 493 ± 15 Ma for four mafic gneiss samples, and 314.5 ± 2.1 Ma for a granitic gneiss sample. A PzZpg sample from the Henderson 100K sheet yields a 293.7 ± 3.4 Ma crystallization age.

- PzZmbs — Muscovite-biotite schist
- PzZmhg — Amphibolite and hornblende gneiss
- PzZgg — Gneissic biotite granitoid
- ZRg — Felsic leucogneiss
- PzZgn — Raleigh gneiss
- CZcl — Leucocratic gneiss
- CZhg — Hornblende gneiss
- CZfu — Meta-ultramafic rocks

WARREN TERRANE

LA-ICP-MS U-Pb zircon analyses from schist and gneiss lithodemes in the Henderson 100K sheet bear Cambrian to Early Devonian metasedimentary ages (Finnerty, 2020; Nolan, 2020; Finnerty et al., 2021; LaMaskin et al., 2021). Two samples from PZscg yield dominant ages ca. 2.0-1.0 Ma and ca. 2.0-1.0 Ma with minor populations at ca. 1.0-0.9 Ma and ca. 0.9-0.8 Ma (Finnerty et al., 2021). A sample of PZmbsg yield an MDA of ca. 409 Ma in zoisite ca. 414 Ma (Finnerty et al., 2021; LaMaskin et al., 2021). PZmbs has dominant zircon ages of ca. 590-515 Ma and ca. 430-410 Ma and have MDA of ca. 409-407 Ma. DPzpg and DPzpmg produce ca. 450-350 Ma ages with modes ca. 410 Ma. Three MDAs are ca. 407 to ca. 405 Ma. A sample of Mbg bears LA ICP-MS U/Pb zircon ages ca. 2108 to 450 Ma, prominent peaks at ca. 680, 565, and 450 Ma, and ca. 350-316 Ma metamorphic zircon ages (Finnerty, 2020).

INTRUSIVE ROCKS (METAMORPHOSED)

- PzIgd1 — Granitoid gneiss
- PzIgp — Liberia monzogranite gneiss
- PzIgd2 — Granitic gneiss

PARKTOWN GNEISS SUITE UNITS

- DPzpdg — Parktown porphyroclastic gneiss
- DPzpcg — Parktown coarse-crystalline gneiss
- DPzpfg — Parktown fine-crystalline gneiss
- DPzpg — Parktown gneiss
- DPzpgu — Parktown gneiss undifferentiated

LITHODEMIC UNITS

- PZsog — Sour City gneiss
- PZwms — White mica schist
- PZscbs — Calvin Branch schist
- PZqsbg — Pressuroquartar biotite gneiss
- PZgmbg — Garnet-rich muscovite biotite schist
- PZsms — Sillimanite-muscovite schist
- DPzmbs — Mill Branch schist
- DPzbhs — Hobquarter Creek schist
- PZmxg — Mixed gneiss
- PZbbg — Big Branch biotite gneiss
- PZmbg — Mylonitic biotite gneiss
- PZhg — Hornblende gneiss
- PZts — Actinolite-bearing talc schist

SPRING HOPE TERRANE

Goldberg (1994) obtained a concordant TIMS $^{207}Pb/^{206}Pb$ zircon age of 619 ± 1.3 Ma for the Mill Creek gneiss in the Raleigh 100K map, while two discordant zircon fractions from metamorphosed dacitic crystal tuff yielded zircon ages of ca. 590 and ca. 589 Ma. Horton and Stern (1994) obtained a TIMS $^{207}Pb/^{206}Pb$ zircon age ca. 544 for a metamorphosed dacitic tuff. Shoblard and Miller (2011) analyzed a metadacite tuff in CZmgs that yielded a nearly concordant Ca-TIMS U-Pb zircon age of 629 ± 17 Ma; crystal-lithic dacite tuff ("Blueskiner") in CZlmc yielded a concordant Ca-TIMS U-Pb zircon age of 619 ± 2 Ma; and a tuff in CZlmc yielded a 619 Ma age. Blake et al. (2018) bear Maximum Depositional Ages that range from ca. 647 to 629 Ma (Blake et al., 2024). Fetter et al. (2024) report new LA-ICP-MS U-Pb zircon analyses of two metagranodiorite (SH) that return 539 ± 12 Ma and 508 ± 13 Ma crystallization ages in the Raleigh 100K map.

- CZmc — Intermediate metavolcanic and metaplutonic rocks
- CZm — Intermediate-mafic metaplutonic rocks
- CZmm — Mafic metavolcanic rocks
- CZmv — Felsic metavolcanic rocks
- CZv — Metavolcanic rocks undivided
- Zmms — Metamorphosed mudstone and siltstone
- CZms — Muscovite phyllite and tuff
- CZmm — Maple Branch muscovite-garnet schist
- Zmgs — Metasedimentary rocks
- Zmgs-s — Metasedimentary rocks - schistose
- Zmgs-h — Metasedimentary high-strain rocks
- Zmbs — Muscovite-biotite schist and semi-schist
- Zmgs-c — Metamorphosed conglomerate
- Zmss — Metamorphosed quartz wacke
- Zegn — Enclaves of gneiss and schist
- Zshum — Meta-ultramafic rocks

ROANOKE RAPIDS TERRANE

Meta-igneous rocks in the Roanoke Rapids 100K sheet yield TIMS $^{207}Pb/^{206}Pb$ zircon crystallization ages as young as the late Neoproterozoic Era. Horton and Stern (1994) reported ages of ca. 668 Ma and ca. 608 Ma for two metatonalite samples and ca. 377 Ma for a biotite granodiorite. Coler and Samson (2000) obtained ca. 667 Ma, ca. 633 Ma, and ca. 620 Ma ages for three metagranodiorite samples and a metagabbro. Owens and Hamilton (2010) described LA-ITIMS zircon ages for meta-igneous rocks including ca. 673 Ma (felsic metavolcanic rock), 628.6 ± 3.6 Ma and 625 ± 0.6 Ma (metagranitoids), 613.6 ± 0.9 Ma (metatonalite), and 609.5 ± 8.8 Ma (metagabbro). Carter et al. (2024) report new SHRIMP dates of 675 ± 5 Ma, 623 ± 5 to 611 ± 5 Ma, and 600 ± 5 Ma for metagranitoids, and dominant age ca. 1014 Ma, ca. 676 Ma peak age mode, and minor ca. 1.8 Ga, ca. 1.4 Ga, and ca. 1.2 Ga ages for a metatonalite. Metagabbro gneisses are young as ca. 520 Ma for two metadiorite samples, respectively. LA-ICP-MS analyses of metaconglomerate by Pollock et al. (2010) yield an MDA of less than ca. 615 Ma and a single grain ca. 480 Ma.

HALIFAX COUNTY COMPLEX

- Zvom — Metabasalt
- Zfmb — Deformed metabasalt
- Zmhg — Metagabbro
- Zhmgd — Metagabbro/metadiorite and metabasalt/microdiorite
- Zhmgd — Deformed metagabbro/metadiorite and metabasalt/microdiorite
- Zmpgs — Metapyroxenite cumulate