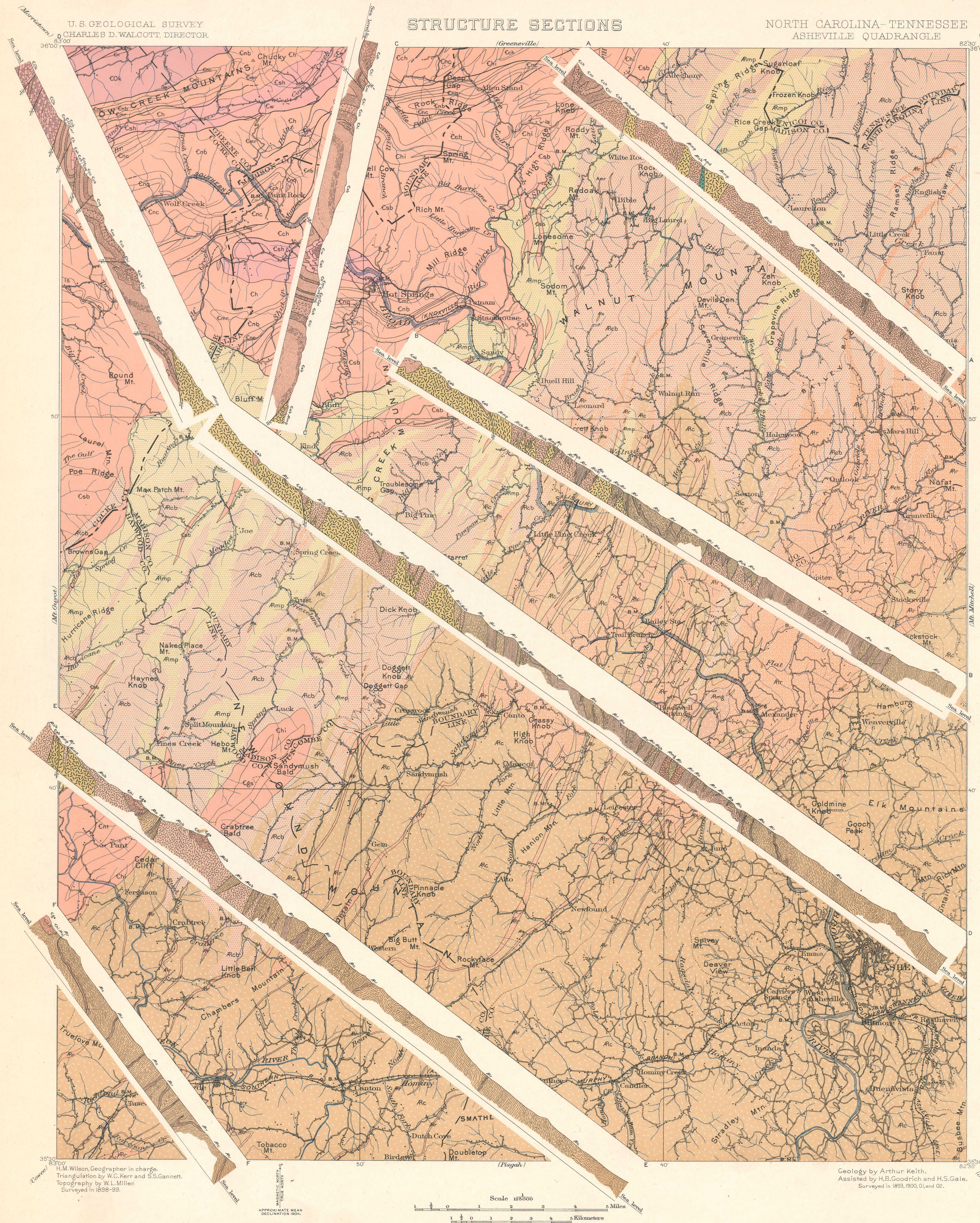
U. S. GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

STRUCTURE SECTIONS

NORTH CAROLINA-TENNESSEE
ASHEVILLE QUADRANGLE



H. M. Wilson, Geographer in charge.
Triangulation by W. C. Kerr and S. S. Gannett.
Topography by W. L. Miller.
Surveyed in 1898-99.

Scale $\frac{1}{125000}$

Miles 1 ½ 0 1 2 3 4 5
Kilometers 1 ½ 0 1 2 3 4 5

Edition of Nov. 1904.

Geology by Arthur Keith.
Assisted by H. B. Goodrich and H. S. Gale.
Surveyed in 1893, 1900, 01, and 02.

LEGEND

SEDIMENTARY ROCKS

SHEET SYMBOL / SECTION SYMBOL

ORDOVICIAN

Oa — Athens shale (*blue and black calcareous shale*)

€Ok — Knox dolomite (*light and dark magnesian limestone with chert nodules*)

CAMBRIAN

€n — Nolichucky shale (*variegated calcareous shales and thin limestones*)

€hk — Honaker limestone (*blue and gray limestone*)

€w — Watauga shale (*purple, reddish, and yellow shales and sandy shale*)

€sh — Shady limestone (*gray and blue cherty limestone, with beds of marble near the base*)

€h — Hesse quartzite (*chiefly white quartzite*)

€mr — Murray slate (*grayish slate and shale, with sandy layers*)

€nb — Nebo quartzite (*chiefly white quartzite*)

€nc — Nichols slate (*grayish slate and shale, with sandy layers*)

€nt — Nantahala slate (*dark slate and mica-schist, with banded ottrelite-schist*)

€nq — Quartzite lentil in Nichols slate (*chiefly white quartzite*)

€ch — Cochran conglomerate (*gray conglomerate, with beds of slate*)

€gs — Great Smoky conglomerate (*chiefly graywacke and conglomerate, with beds of schist*)

ls €hi — Hiwassee slate (*chiefly dark banded slate and schist, with layers of limestone, ls, and sandy beds*)

€sb — Snowbird formation (*chiefly light-colored quartzite and sandstone; includes beds of slate, conglomerate, and arkose*)

IGNEOUS ROCKS

SHEET SYMBOL / SECTION SYMBOL

ALGONKIAN?

Amr — Metarhyolite (*gray and black rhyolite, much altered and schistose*)

Amd — Metadiabase (*altered greenish diabase and gabbro*)

ARCHEAN

Ʀmp — Max Patch granite (*coarse or porphyritic granite, light gray or red*)

Ʀcb — Cranberry granite (*mainly granite and granite-gneiss*)

Ʀs — Soapstone, dunite, and serpentine

Ʀmg — Metagabbro (*altered black and dark gabbro*)

Ʀr — Roan gneiss (*chiefly hornblende-gneiss and diorite*)

METAMORPHIC ROCKS OF UNKNOWN ORIGIN

SHEET SYMBOL / SECTION SYMBOL

ARCHEAN

Ʀc — Carolina gneiss (*chiefly mica-gneiss and mica-schist; includes other gneisses, granites, and diorites, and small lenses of marble*)

Faults