

MICHAEL L. JONES

Tennessee Department of Conservation  
Division of Geology  
Nashville, Tennessee 37219

**AN INDEX TO GEOLOGICAL MAPPING ASSOCIATED WITH THESES AND DISSERTATIONS AT THE UNIVERSITY OF TENNESSEE, KNOXVILLE (THROUGH 1975)**

**ABSTRACT**

Thesis and dissertation geologic mapping of Tennessee quadrangles at the University is indexed for the period 1942-1975. Mapping is indexed by quadrangle and citations note which portions of the quadrangle contain mapping data.

**INTRODUCTION**

During the period from 1942-1973 some 95 theses and 13 dissertations at the University of Tennessee, Knoxville dealt at least in part with geologic mapping. These documents contain a wealth of unpublished outcrop data within our state. Even where subsequent published mapping has covered a thesis area, earlier outcrop data may not be retrievable (not represented in the published form or not in existence during the subsequent mapping) from the published work.

Unfortunately there are only a few copies of any one thesis in existence. Also in many cases it is difficult or impossible to tell from thesis titles and annotations if mapping covers an area of specific interest. University of Tennessee theses may be obtained by (1) using inter-library loan, which may require several weeks, (2) visiting the main library at U.T., (3) visiting the Geology Department library, or (4) acquiring a copy from the author or some other person.

In view of the large body of information available and the relative difficulty in obtaining this data, the author has indexed all known geologic mapping (1942-1975) so that the reader will know which 7½-minute quadrangles have been mapped and an estimate of the percentage (estimated to nearest 10%) of smaller 2½-minute rectangles that are covered by mapping. Thus the following index will (1) assure the researcher that all U.T.K. thesis mapping within a quadrangle has come to his attention and (2) inform him of the portions of each quadrangle containing geologic data.

**MATERIALS AND METHODS**

Within any quadrangle thesis mapping may overlap or extend mapped areas. Several quadrangles are almost entirely mapped by a "crazy quilt" of continuous and overlapping map areas. The quadrangle index to mapping indicates this situation for several quadrangles, e.g., Big Ridge Park or Clinton.

As an example of the use of this index refer to the Greenville quadrangle or to Byerly, Don W. (1966) which is dissertation D6, *Structural geology along a segment of the Saltville Fault*, <sup>1</sup>Numerical designations following the parenthetical quadrangle numbers in this list refer to applicable theses and dissertations in the Chronological Index. Dissertations are identified by the prefix D.

Greene County, Tennessee: scale of mapping is 1:24,000, strikes and dips indicate outcrops and lithic information is given by colors or symbols. Areas mapped are in the Greeneville quadrangle (Fig. 1), all the NW 2½-minutes (1), all the NC 2½-minutes (2), .5 of the NE 2½-minutes (3), all the WC 2½-minutes (4), .5 of the C 2½-minutes (5), .5 of the SW 2½-minutes (6) and in a similar fashion for the Baileyton quad. angle (180-SE). Thus each tenth of a 2½-minute rectangle represents approximately three-fourths of a square mile (approximately two square kilometers). With a single exception (number 92), each thesis mapping area is discrete.

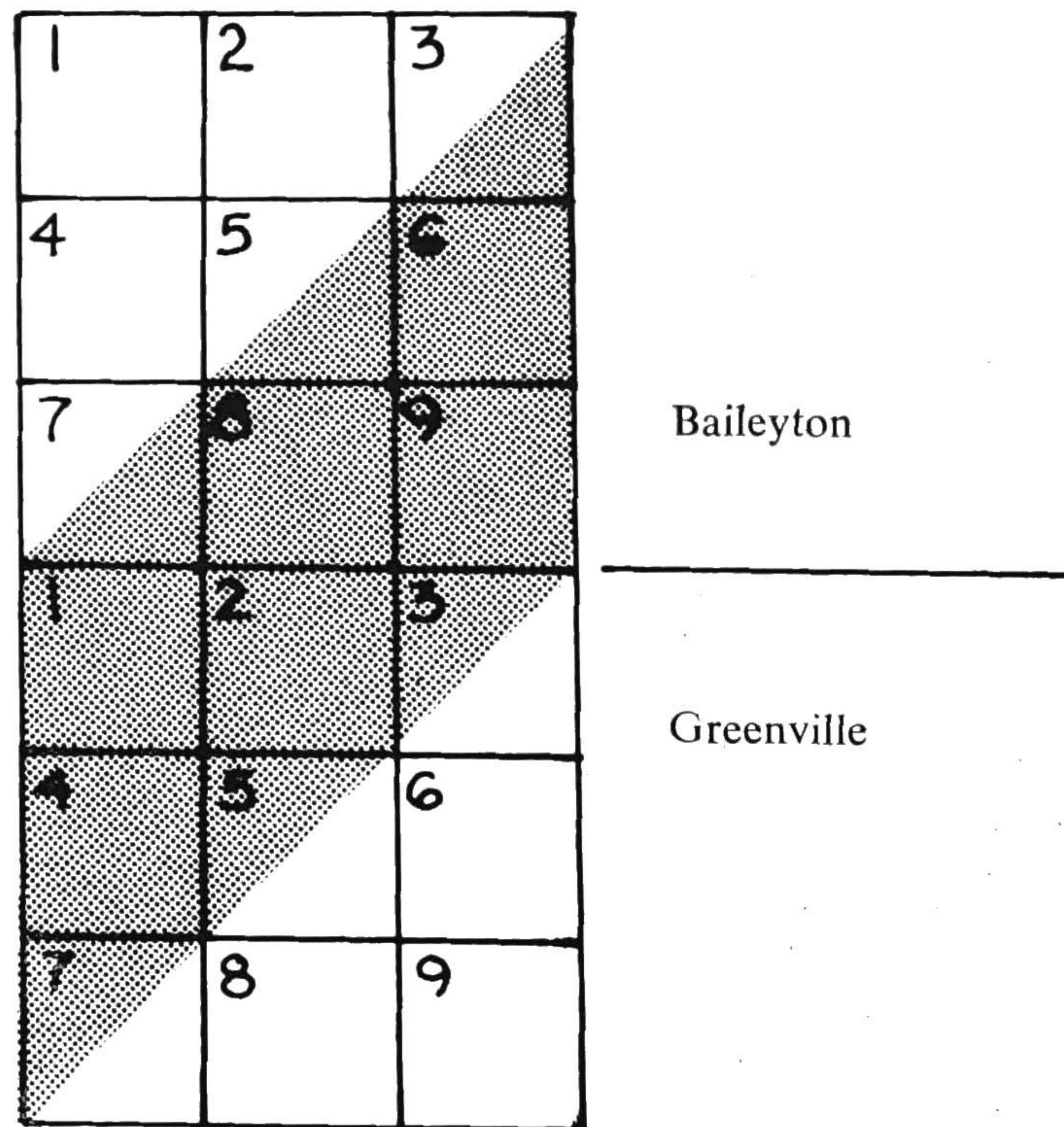


FIG. 1: Baileyton (180S.E.), 3.5, 5.5, 6, 7.5, 8, 9.  
Greenville (181N.E.), 1, 2, 3.5, 4, 5.5, 7.5.

Estimates of the tenths of 2½-minute sections are just that, estimates. They are intended to indicate the limits of outcrop control. For some mapping, outcrop control is sparse at the boundaries; for others control may be dense throughout.

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A few individuals gave samples on several different days. It was noted that nitrite levels rose after a meal including mixed salad greens. Marked increases were observed after eating spinach grown in Arkansas, mixed turnip and mustard greens grown in Greene County, Tennessee, and wild poke salad greens grown in Oklahoma, while a smaller increase followed eating green beans grown on the Cumberland Plateau.

Table 2 records effects of a meal including mixed turnip and mustard greens. The participants in this group

were all Carson-Newman College students, about 18 years of age. All ate an evening meal including fried chicken, potatoes, ice cream and milk, water or tea. The two controls, DB and MG, ate rice while the other ten ate the mixed greens. Maximum nitrite levels in saliva were attained one to two hours after the meal, with the median maximum about seven times the pre-meal level. Nitrite levels continued to be elevated even three hours after the meal when the median was 3.6 times the base level.

TABLE 2: Saliva nitrite levels before and after a meal including mixed turnip and mustard greens.

TIME	MALE											
	J.C.		T.M.		B.M.		D.T.		*D.B.		*M.G.	
0 min.	5.4 ppm	1.0	3.7 ppm	1.0	2.9 ppm	1.0	2.2 ppm	1.0	1.7 ppm	1.0	3.5 ppm	2.9
50	8	1.6	5	1.3	4	1.2	3	1.3	2	1.2	10	1.0
70	8	1.5	7	1.9	8	2.8	4	2.0	1	0.8	5	0.7
90	10	2.3	15	4.0	11	3.8	10	4.4	1	0.8	2	0.4
110	16	2.9	14	3.9	34	11.6	6	2.6	2	1.4	4	1.4
130	18	2.3	31	8.3	10	3.5	9	4.3	2	1.3	6	0.7
150	11	2.1	10	2.7	11	3.9	15	6.8	2	1.1	7	1.0
170	13	2.3	27	7.4	8	2.8	20	4.5	2	1.1	3	1.7
190	14	1.2	29	7.9	15	5.1	12	5.2	2	1.2	2	1.9
210	14	2.6	13	3.6	11	3.6	9	4.3	2	1.1	2	0.7

TIME	FEMALE											
	M.S.		P.S.		L.S.		R.Z.		V.A.		D.D.	
0 min.	7.0 ppm	1.0	4.1 ppm	1.0	1.9 ppm	1.0	3.6 ppm	1.0	43 ppm	1.0	3.0 ppm	1.0
50	2	0.3	5	1.3	2	1.0	12	3.3	32	0.7	7	2.3
70	9	1.3	17	4.1	5	2.4	25	7.0	32	0.7	9	3.1
90	9	1.3	25	6.1	8	4.4	34	8.5	71	1.7	18	5.9
110	13	1.9	63	15.4	10	5.4	24	6.1	40	0.9	16	5.3
130	11	1.5	31	7.6	14	7.2	12	3.3	84	1.9	35	11.6
150	9	1.3	32	7.8	16	8.3	16	4.4	92	2.1	30	10.1
170	7	1.0	25	6.1	9	4.7	14	3.9	41	1.0	15	4.9
190	7	1.0	24	5.7	12	6.2	13	3.7	56	1.3	19	6.3
210	10	1.4	31	7.5	12	6.1	13	3.6	40	0.9	9	3.0

For each individual the first column shows saliva nitrite levels calculated as parts per million of NaNO<sub>2</sub>, while the second column shows the ratio of nitrite concentration to the base level measured at T<sub>0</sub> just before the meal. D.B. and M.G. were controls who did not eat greens.

Tannenbaum has demonstrated somewhat similar results following administration of celery juice, and Ishiwata, Boribon, Nakamura, Harada, Tanimura and Ishidate (1975) found very high nitrite levels in individuals who eaten 200 g of salted Chinese cabbage.

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## DISSERTATIONS

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- D2. Milici, Robert C., 1960, The geology of the Sequatchie Valley overthrust block, Sequatchie Valley, Tennessee: (1:24000), Strikes and dips: 101-NW (Bridgeport), 1.1, 2.3, 3.2; 100-SW (South Pittsburg), 6.5, 7.1, 8.6, 9; 100-SE (Sequatchie), 1.5, 2, 3.5, 4.9, 5.5, 6.1, 7.4; 105-SW (Wauhatchie), 1.1; 100-NE (Whitwell), 3.3, 5.1, 6.7, 7.1, 8.6, 9; 105-NW (Ketner Gap), 1.9, 2.8, 3.1, 4.9, 5.4, 7.6; 104-SW (Daus), 2.1, 3.8, 5.6, 6, 7.3, 8, 9.8; 104-SE (Henson Gap), 1.9, 2.3, 4.4, 7.1; 104-NW (Savage Point), 9.2; 104-NE (Mt. Airy), 1.1, 2.6, 3, 4, 5, 6.6, 7.9, 8.8, 9.2; 103-SE (Brockdell), 6.4, 8.1, 9.8; 111-NW (Brayton), 1.3; 110-SW (Pikeville), 1.5, 2, 3.8, 4, 5.9, 6.2, 7.9, 8.6; 110-SE (Morgan Springs), 1.1; 110-NW (Billingsley Gap), 6.3, 7.1, 8.4, 9.9; 110-NE (Melvine), 1.4, 2, 3.8, 4.9, 5.7, 6.2, 7.6, 8.3; 118-NW (Pennine), 1.3; 109-SE (Vandever), 6.2, 8.3, 9.8; 117-SW (Grassy Cove), 4.3, 7.6.
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