N. Y. Use 1st & 3rd lines

Notebook 11.

Middle Appalachian Sections, Revised.

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INDEX.

a folio:
list of formations adopted in, applicable in Arbuckle
Arbuckle, Sylvan, Viola, and Hunton shales and lime-
Arbuckle Mt. section at NW. end

front cover
6-10
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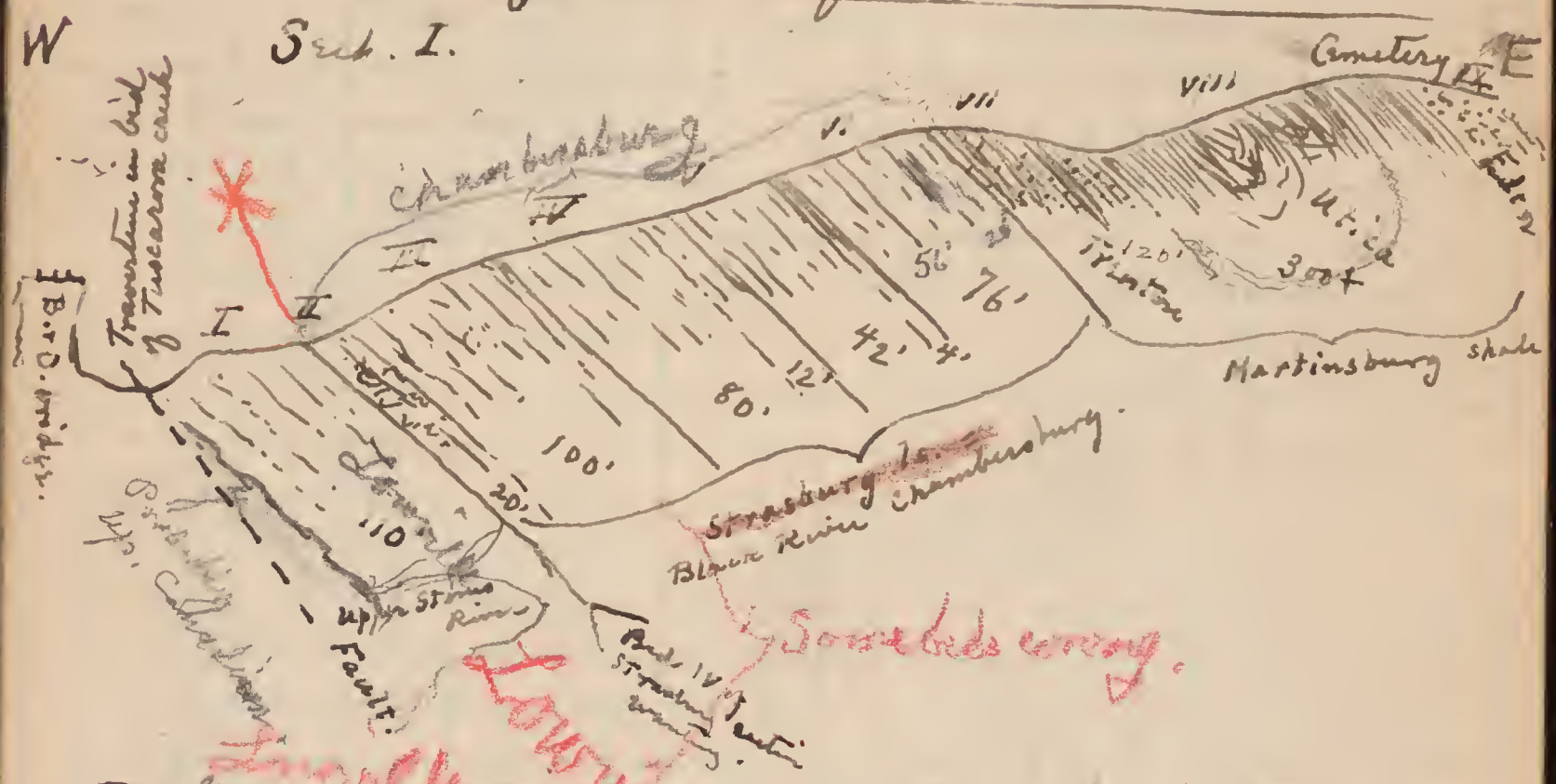
In the typical form of Z. williamsi

Utica sh.:

Observations at and in vicinity of
Martinsburg, W. Va.

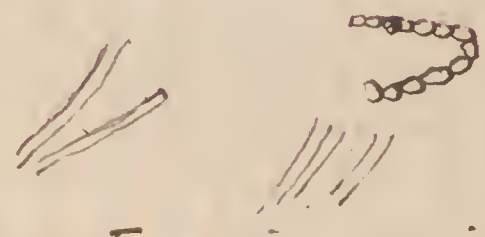
Section along Burke st. Martinsburg, W. Va., between Tuscarora Creek fault, just east of B. & O. R.R. depot and tracks and cemetery at top of hill east.



I. Upper Stones River. Not well exposed here. Better shown on street 2 blocks south; where something like 100 ft. comes to surface on east side of fault. Excellently shown in quarries south of town, where the upper 50'-200' have been extensively quarried and consists of very compact, lithographic, conchs. fracturing light-drab or brown ls. The upper 100 ft. poorer than the lower 100', the latter including some less dense and apparently slightly magnesian layers. % of magnesia seems to increase downward, the rock taking on a dull sheen due to included small crystals of dolomite. None of the layers are conspicuously banded, which character distinguishes this part of the section from the upper ⅔ of the lower division of the Stones River. From the basal St. Riv. quarry beds this upper St. Riv. is distinguished by the greater proportion of the dense variety of ls. and the average lighter color of the beds constituting the upper Stones River. The Middle Stones River in this area contains considerable dolomitic rock and a small amount of chert. →

T. cellulosum

Common in lower Chambersburg ls.



T. spongoporoides

Common in Middle and upper Stones River
Rare or wanting in lower " "

I cont.

Fossils of bed I are very rare. 100 - 200 ft. beneath the top however contains at least one species rather abundantly, here as elsewhere. This is the Tetradium spongoporoides, a form distinguished from T. cellulosum, which seems to be restricted to the lower Chambersburg, in having the tubes generally arranged singly and irregularly scattered or more rarely in series resembling Halysites, instead of in fascicles of 3 - 6. (See sketches). Other fossils of this bed are Girvanella ? and large Ostracoda, apparently of both Leperditia and Isochilina. Both the Girvanella and the ostracoda are abundant enough when they occur at all.

Chambersburg ls.

II Not well exposed on Burke St. as seen south of town above quarries it consists of subgranular, dark ls. with irregular thin seams of earthy matter, the whole appearing rather solid in fresh cuts but breaking up into thin layers under weather. It is sharply distinguished both by color and lithologic character from the top of the underlying light drab quarry rock.

Rather highly fossiliferous, the principal fossil being Echinosphaerites. Nidulites occurs ~~at~~ in the upper half. Other fossils are bryozoa of several species, Illaenus Dimerella pectinella? and other orthids.

III. Rather dark gray, moderately compact ls., most of it cobbly after weathering. Fossils few, same types as in bed IV.

IV. 92', top 12' not exposed. Light and Dark gray to black fs., texture compact, without luster in fresh fractures, cobbly. Fossils not uncommon: Nidulites, Streptilasma cf. profundum, Dalmanella subaequata? Thaleops, Monobryppa etc.

V. Cobbly, dark gray to black, compact or subgranular, the lower part less thin bedded and more prevailingly compact in texture. Fossils rather scarce, about 20 ft above base secured Pachydictya acuta? and Escharopora recta? At top a 4 ft. bed of yellow clay shale.

VI. Dark gray to black subgranular ls., weathering cobbly, with 2 or 3 thin layers of shale. Fossils few, but not favorably found. Nidulites abundant 20 ft. beneath top.

VII More or less ~~shaly~~ calc. gray to black shale interbedded with impure (argill.) slaty dark limestone. Graptolites (Diplograptus and Corynoides) and Leptobolus insignis ~~[illegible]~~ occur apparently throughout but are abundant only in lower 10 feet. Corresponds to bed VIII of Strasburg section; and is of Trenton age.

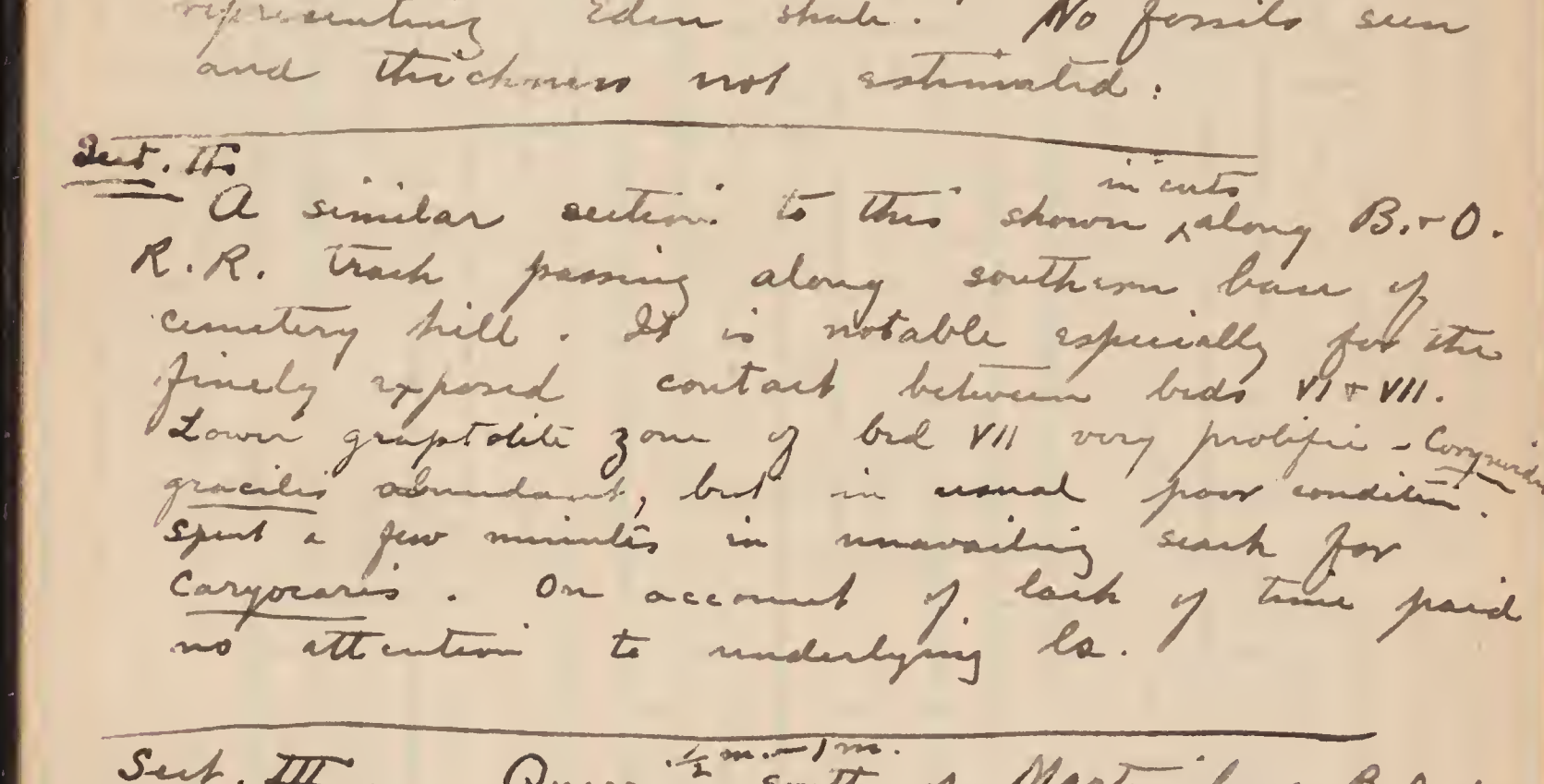
VIII. Black or dark gray, slightly fissile Utica shale, weathering light to dark gray and into "shoe pegs". As usual fossils are few - Graptolites only seen.

IX. Greenish-yellow, calc. or sandy shales regarded as representing Eden shale. No fossils seen and thickness not estimated.

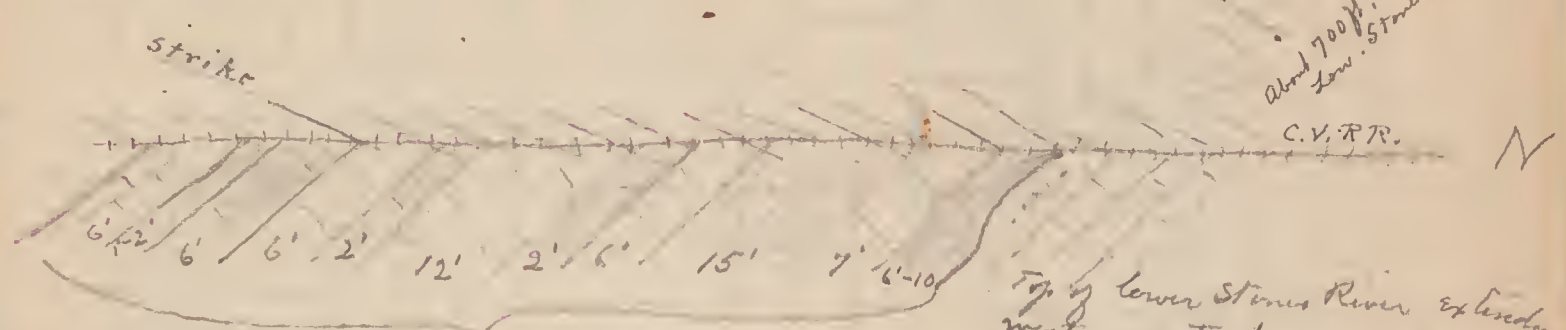
Sect. II.

A similar section to this shown in cuts along B. & O. R.R. track passing along southern base of cemetery hill. It is notable especially for the finely exposed contact between beds VI & VII. Lower graptolite zone of bed VII very prolific - Corynoides gracilis abundant, but in usual poor condition. Spent a few minutes in unavailing search for Caryocaris. On account of lack of time paid no attention to underlying ls.

Sect. III. Quarries ½ m. - 1 m. south of Martinsburg B. & O. depot.



Sect. IV. Cuts along Cumberland Valley R.R. between depot at Martinsburg and 2½ blocks north.



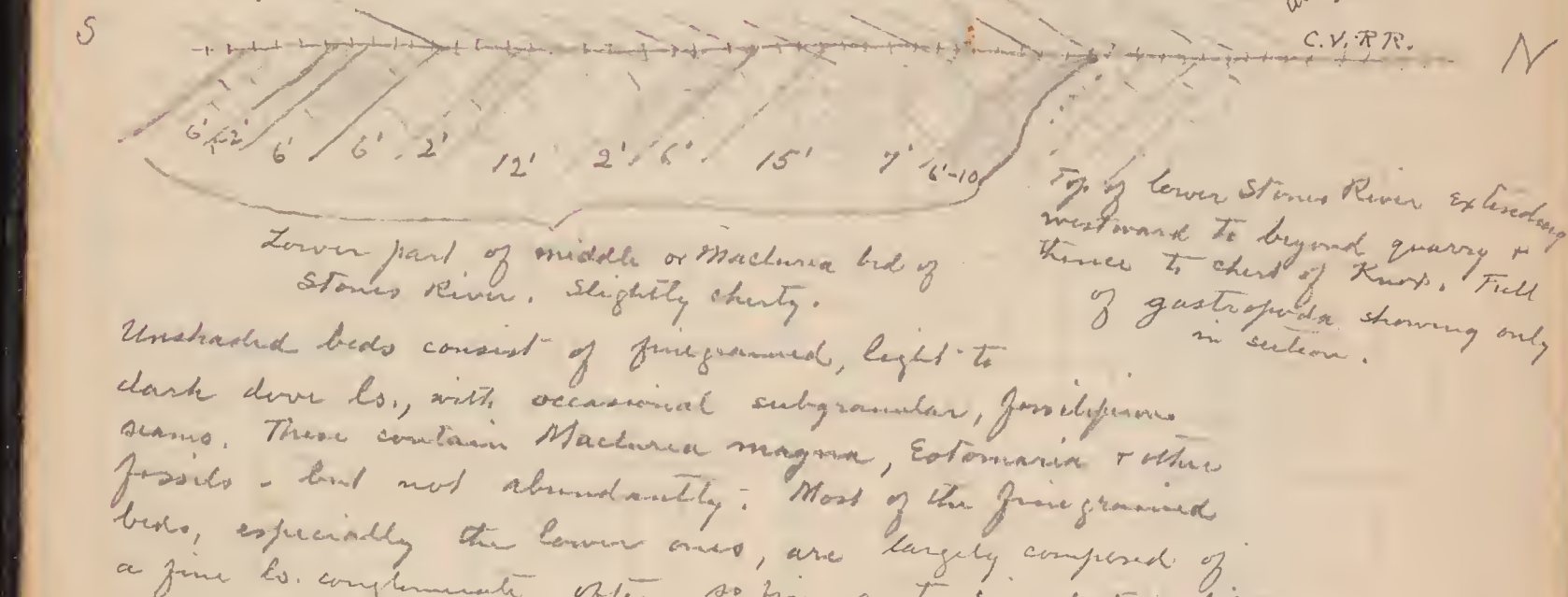
Lower part of middle or Maclurea bed of Stones River. Slightly cherty.

Top of lower Stones River extending westward to beyond quarry × thence to chert of Knox. Full of gastropoda showing only in section.

Unshaded beds consist of fine grained, light to dark drab ls., with occasional subgranular, fossiliferous seams. These contain Maclurea magna, Eotomaria & other fossils - but not abundantly. Most of the fine grained beds, especially the lower ones, are largely composed of a fine ls. conglomerate, often so fine as to simulate oolite.

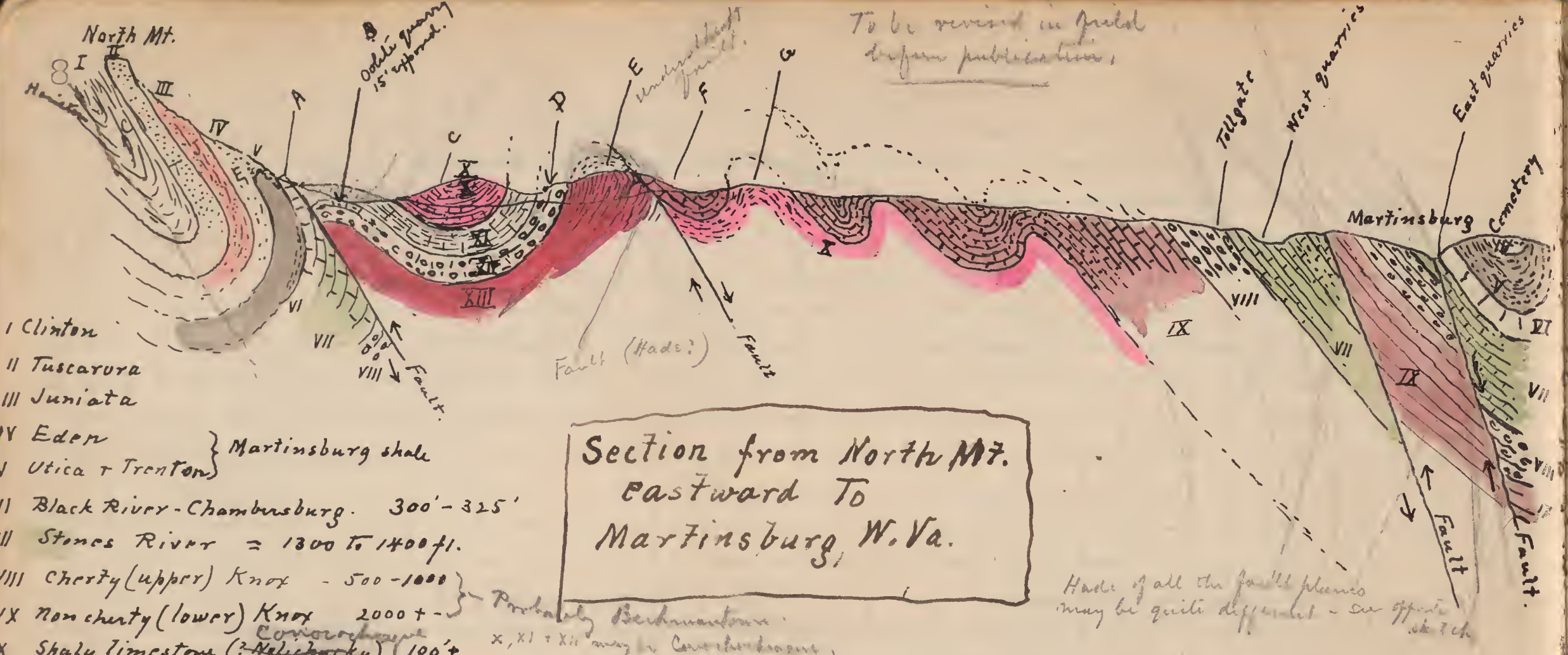
The shaded beds consist of finely laminar, yellowish ~~dolomite~~ mag. ls. No fossils.

Section V. shows on west side of Martinsburg, (Includes Section IV and extends westward to Knox and east of railroad to Martinsburg fault).



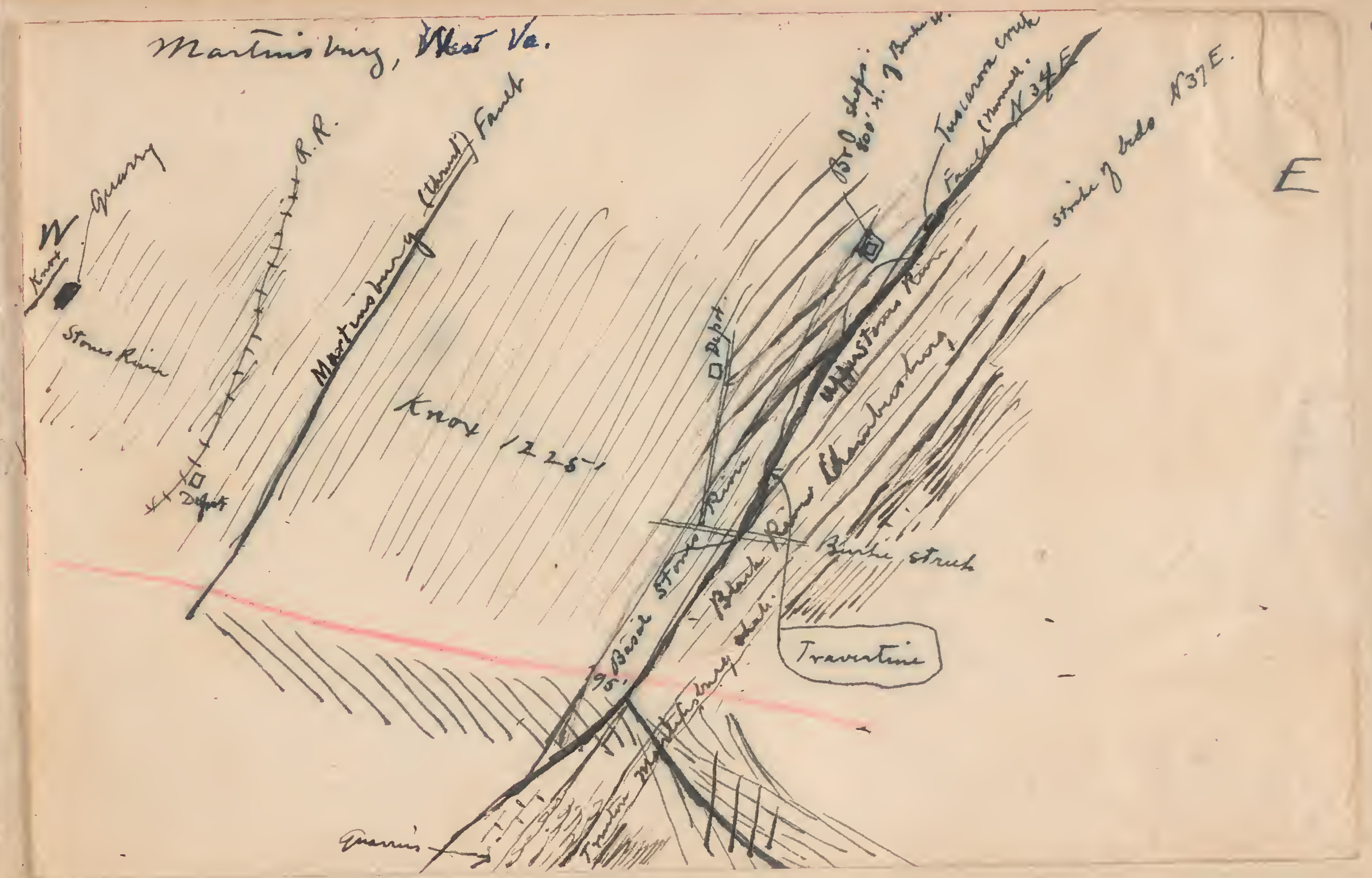
Fossils occur in bands throughout Stones River. Except at the two points marked and Lepidodetia they occur solely as sections in the rock, and consist chiefly of gastropoda, with fewer pelecypoda, cephalopods and trilobites. Brachs. not observed.

At × A, = 125 ft. above base, a heavy ls., that on decomposition becomes thickly coated with a chalky substance (common occurrence for fossiliferous Stones Riv. beds) proved to be filled with a small but comparatively large tabed Solenopora and fairly good mollusca. Resemblds of and fossils should be compared with Clinton, Tenn. Lower Stones River horizon.

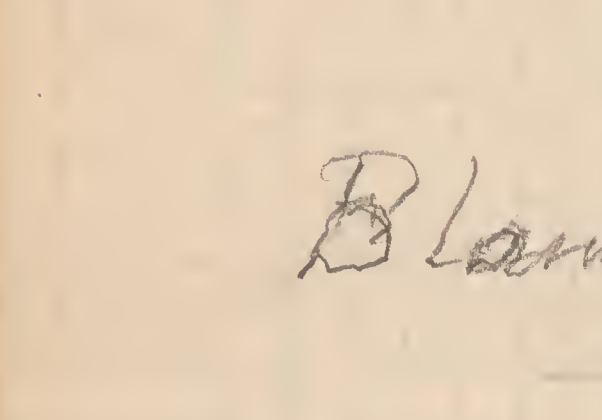


I Clinton
II Tuscarora
III Juniata
IV Eden } Martinsburg shale
V Utica + Trenton }
VI Black River - Chambersburg. 300'-325'
VII Stones River = 1300 to 1400 ft.
VIII Cherty (upper) Knox - 500-1000 } Probably Beekmantown.
IX Non cherty (lower) Knox 2000 + - Conococheague
X Shaly limestone (?Nolichucky) 100'+ X, XI + XII may be Conococheague.
XI Irregularly interbanded, fine grained, pure, dove ls. and yellowish dolomite 50'+ "4"-10"
XII Cherty ls., with at least 15' rather pure lime oolite at Top. Chert generally in rounded masses and abundant. Chert covers considerable surface on west side of Apple Pie Ridge (south of Dry Run road) so that bed cannot be less than 50 ft. thick.
XIII Yellowish shaly beds forming long ridge known as Apple Pie Ridge. 400'+ Beekmantown

A. Exposure of sheared, veined and brecciated, nearly pure bluish ls. with poor but undeniably Mohawkian gastropoda. Probably on west side of fault not far beneath Martinsburg sh. which at this point seems covered by downslidden Eden.
B. 15' oolite shown in small quarry in summit of "roll". Regarded as Top of chert bed. Beds XI and X overlie it. Data shown too thick in sketch at C.
D. Chert of this bed well shown in road along N.W.S. road connecting Dry Run road with Tuscarora pike. | E. Shales making Apple Pie Ridge.
F. Rather pure, finely laminated lower Knox ls. That this is separated from Apple Pie Ridge shale by faults is further indicated by numerous large springs along contact. Water works spring. | G. Shaly ls. as at C. | There may be other faults between E and tollgate but main part of structure seems to consist of close folding.



Loc. H.
Section along Sou. Pa. Br. of C.V. RR. between crossing of Chambersburg - Greencastle pike (4 m. N of Greencastle) and Conococheague Creek.



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