

Fig. 5. Sketch map of a portion of Grayson County showing the locations of stations T-49-7, T-49-8, T-49-10, and T-49-16.

GRAYSON COUNTY (91-T-)

Sta. T-49-7 (Fig. 5).—Walnut exposure of 6 feet of blue sandy clay just north of small bridge over a tributary of Little Mineral Creek on Fink-Preston road, 4.15 miles north of Fink. Massive Goodland limestone outcrops in the road on both sides of the creek.

Sta. T-49-8 (Fig. 5).—Walnut exposure of blue-brown sandy clay 6 feet in thickness immediately below massive Goodland limestone at crest of hill in highway cut 1.5 miles west of Preston and 0.4 miles west of junction of main road west from Preston and main road north from Fink.

Sta. T-49-10 (Fig. 5).—Kiamichi exposure of about 36 feet of dark blue to light gray shales, hard gray limestones, and shell aggregates along the north bank of Shawnee Creek, immediately below the spillway of Randell Lake, 4.9 miles northwest of Denison, measured from the junction of US 75 and Texas 91 in the city. Five samples of the shale in the section (described in Okla. Geol. Surv. Bull. 47:25-26) were collected. The hypotype of *Marginulina tenuissima* Reuss is from this outcrop.

Sta. T-49-16 (Fig. 5).—Entire exposure of the Kiamichi formation, about 50 feet of black fissile shale with thin white limestone ledges in the lower portion and thick gray-brown shell limestone ledges in the upper portion, at the site of the new dam across Red River about 5 miles north of Denison. The fauna of the Kiamichi and Duck Creek of this exposure is treated in some detail in a recent paper by the writer (1943).

Weno fm.

Station 29. (Grayson County.)—The dark-blue shales of the lower and middle Weno are well exposed in "Blue Cut," a deep railroad cut on the Missouri, Kansas & Texas Railroad, about 1 mile northeast of Denison. Concentrates of samples from this locality contain considerable sand and are only moderately fossiliferous. This is the type locality for Cytheropteron bilobatum n. sp.

91-T-1
(Grayson County)

(U.T. Bull. 2907)

= upper part of 91-T-13 (?)

Type locality for--

× Cytheropteron bilobatum Alexander, U.T. Bull. 2907, p. 104, 1929; SUBGENOTYPE
for Eocytheropteron Alexander (J.P., vol. 7, p. 195, 1933.)

pt. 10, fig. 7

Austin group

323. Middle part. Argillaceous chalk on east bank of small stream at south end of bridge on Van Alstyne-Gunther road 2.3 miles west of Van Alstyne, Grayson County, Tex. C. I. Alexander.

(P.P. 206)

91-T-2

(Grayson County)



East Prong
White's Creek

Type locality for--

* Rectogumbelina texana Cushman (C.C., vol.8, p.6, pl.1, figs.8-10, 1932)

Type locality for --
Rectogumbelina texana Cushman (C.C., vol.8, p.6)

Austin group
Bonham Marl

328. Road ditch on east side of road 7.8 miles south of Sherman,
Grayson County, Tex. J. A. Cushman and J. A.
Waters. No. 21.

(P.P. 206)

91-T-3
(Grayson County)



Type locality for--

7-11, 12 '33 x Pleurostomella watersi Cushman (C.C., vol. 9, p. 63)

Type locality for--
Pleurostomella watersi Cushman (C.C., vol. 9, p. 63)

Austin group
Ector Tongue

332. Cut in east bank of road 2.3 miles south of Sherman, Grayson County, Tex. J. A. Cushman and J. A. Waters. No. 17, No. 19.

(P.P. 206)

Q1-T-4
(Grayson County)



Type locality for--

Neobulimina irregularis Cushman & Parker (C.C., vol.12, p.9)

Type locality for --
Neobulimina irregularis (C. & P.) (C.C. vol. 12, p. 9, 36)

Austin group

334. Basal part. Ditch on west side of Sherman-Denison Highway 3 miles north of Sherman, Grayson County, Tex. C. I. Alexander. No. 2405.

(P.P. 206)

91-T-5
(Grayson County)

Type locality for--

x Gumbelina reussi Cushman (C.C., vol.14, p.11, pl.2, figs.6-9, 1938)

Type locality for --
Gumbelina reussi Cushman (C.C., vol. 14, p. 11, '38)

Austin group

335. Lower part. East slope of road cut between two Railroad underpasses near north edge of town of Howe, Grayson County, Tex. C. I. Alexander.—No. 24141.

(P.P. 206)

91-T-6
(Grayson County)

Type locality for--

7-13, '33 x Pleurostomella austinana Cushman (C.C., vol.9, p.64)

Type locality for--

Pleurostomella austinana Cushman (C.C., vol. 9, p. 64, '33)
Stalactiprionella alata Cushman (C.C., vol. 7, p. 87, '31)
" " " " (C.C., vol. 7, p. 86, '31)

Austin group

290. Chalk on road 0.7 mile north of Whitewright, north-facing slope of branch valley, Grayson County, Tex.

(P.F. 206)

91-T-7

(Grayson County)



Type locality for--

x Dentalina involvens Cushman (C.C., vol.14, p.37, pl.6, fig.3, 1938)

Type locality for --
Dentalina involvens Cushman (C.C. vol. 14, p. 37)

Fort Worth fm.

91-T-8
(Grayson County)

Road cut on northwest side of a short southwest-northeast stretch of the old Hy. 75 (which lay a stone's throw east of the present highway), at a point from 1/8 to 1/4 of a mile south of the present crossing of Duck Creek.

.Correspondence with Lalicker has clarified the position of this exposure, which may no longer be available. (See sketches in accompanying envelope on card.)

Type locality for--

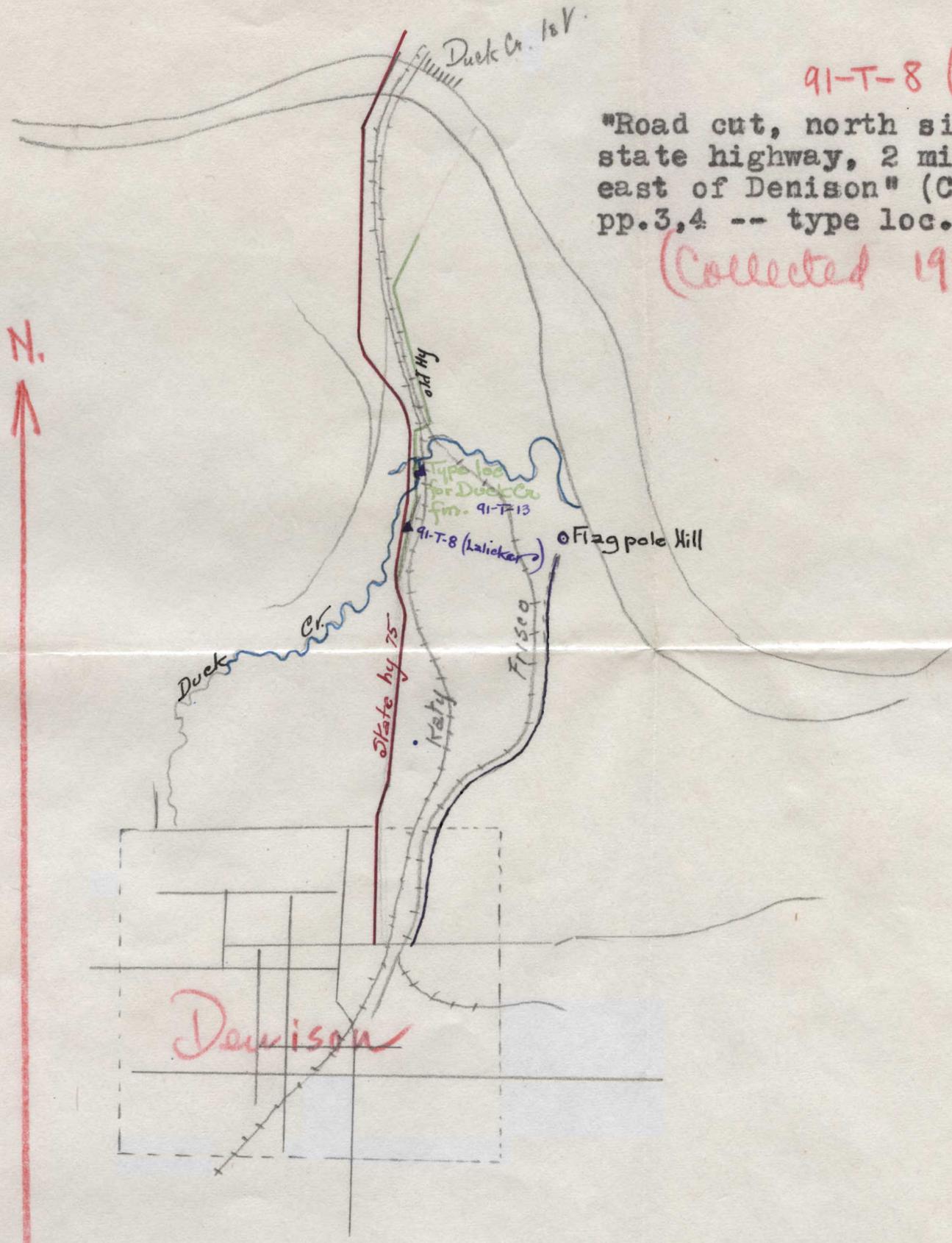
- x Spiroplectammna longa Lalicker (C.C., vol.11, p.3, pl.1, figs.3,4, 1935)
- x Spiroplectammna nuda Lalicker (idem, p.4, pl.1, figs.6,7)

from Haliouka
Oct '50

in 1932 he
used the map
in Bullard's
U.T. Bull. 3125



collecting
locality
(state
Hwy.
in 1932)



91-T-8 (Haliouka)

"Road cut, north side of
state highway, 2 miles north-
east of Denison" (C.C., vol.11,
pp.3,4 -- type loc. for 2 spp)

(Collected 1932)

④ Duck Creek fm.

91-T-9
(Grapon County)

About 2 miles north of Denison,
(Presumably on the state highway north; maybe the
type loc for Duck Cr. fm. on Duck Cr., 91-T-13; maybe = 91-T-8

Type locality for —

x Zigammina wintoni Cushman & Alexander (C.C., vol. 6, p. 9, '30)
pl. 2, fig. 15

Duck Cr. fm.

91-T-10
(Graison Co.)

Limestone @ road in S. bank of small creek,
about 15' N. of road leading eastward from
Fink @ about ^{0.9 of a mile} 1 mi. from that town. (Tappan
Loc. HTL-60, J. Pal., vol. 17, p. 478, '43) (Rd-creek
are clearly shown on map, Am. Mid Nat., vol. 31, p. 524, fig 5, 1944)

Type loc. for -

- x Habellamina rugosa Alexander & Smith (J.P., vol. 6, p. 302) ^{45-figs. 6-9, text fig. 1}
- 47-1,6 x Frankina acutocarinata " " " " p. 307
- 47-2,3 x Frankina usolita " " " " p. 308
- 82-5,6 x Discobis minutissima Tappan (J.P., vol. 17, p. 511, '43)
- 81-17,18 x Virgelina cronzei Tappan (J.P., vol. 17, p. 508, '43)

Taylor group
(Upper part)

(Travis County)

Fustia Gr.
Gobur Sw.

91-T-12
(Grayson County)

Ditch on N. side of road heading eastward
from Van Alstyne @ 3.7 mi. from the town.

Type locality for—

x Mouoceralina nitida Alexander (T. Pal., vol. 8, p. 63, 1934)⁸⁻⁴

Duck Cr. fm.

Same as 91-T-13?

91-T-14
(Grayson County)

Duck Creek, in east bank @ in cut of
M. K. & T. R.R., which is above @ to
the west of the creek bank, west of Hy. 75,
2 3/4 mi. N. of Denison. (Tappan loc. HTL-27,
J. Pal., vol. 17, p. 477, 1943.)

Type locality for —

- 78-10 Textularia duckcreekensis Tappan (J. Pal., vol. 17, p. 486, '43)
78-11 Diphloretularia subcretacea Tappan (J. Pal., vol. 17, p. 486, '43)
78-31,32 Gaudryinella irregularis Tappan (J. Pal., vol. 17, p. 490, '43)
79-11 Placopsitua upausa Tappan (J. Pal., vol. 17, p. 493, '43)
83-9,10 Stictocibicides subcretacea Tappan (J. P., vol. 17, p. 514, '43)

(Woodbine fm)
Washita - Lozo

^{or upper Washita}
Basal Woodbine clay below red strata, in
ditch on west side of S. Lamar St., 800 block,
just N. of E. Munson Ave., SE. part of
Dunison. (Exposure now obliterated.)

91-T-15
(Grayson county)

Type locality for —

Prophax woodbinensis Vappau (T.P., vol. 15, p. 359, 1941)

Stellamma trachylocula Vappau (T.P., vol. 15, p. 360, '41)

Stellamma dunisonensis Vappau (T.P., vol. 15, p. 360, '41)

Main St. ju.

In west bank of headwater branch of
Paw Paw Creek, beneath bridge, S. of
road, between two RR. viaducts in the
100 block Owen St., S.E. part of Demison.
(Loblich & Tappan loc. HTL-4, Bull. Amer.
Pal., #99, p. 4, 1941)

91-T-16
(Grayson County)

x Type locality for Palmyra decolata Loblich & Tappan (Bull. A. Pal. ^{#99} p. 8, ^{pl. 1, fig. 5} 1941)

Dunkov fm

91-T-17
(Grayson County)

"Flagpole Hill", 3 1/2 miles NE. of
Dunison, on Riverside Park
road. (Vieaux, loc. A, J. Pal.,
vol. 15, p. 624, 1941)

Type locality for —

Nodosaria barleri Vieaux (J. Pal., vol. 15, p. 626, 1941)

Dentalinopsis quadrata Vieaux (J. Pal., vol. 15, p. 626, 1941)

~~Distance from~~
~~probably Duck Cr.~~

91-T-18
(Grayson County)

Distance - Wrens contact in cut of St. L. & San J.
R.R., just W. of Riverside Park road, about
1/2 miles NE. of Danison, at milepost 633.1
on R.R. (Viraux Loc. B, T. Pal., vol. 15, p. 624,
1941.)

Type locality for -

Troudicularia paliskeni Viraux (T. Pal., vol. 15, p. 626, 1941.)

Quelalioopsis gigantea Viraux (T. Pal., vol. 15, p. 626, 1941)

Discorbis minima Viraux (T. Pal., vol. 15, p. 627, 1941)

Creek bank in Munson Park, west of
U.S. highway 75 and just north of
exit from park, 1 mile north of Deni-
son. (Locality F, Don Vieaux, J.P.,
vol.15, no.6, p.624, 1941) *Loeblich & Yappau*
Loc. HTL-25, Bull. Amer. Pal., #99, p.5, 1941.

Type locality for

Reophax eckernex Vieaux (J.P., vol.15, p.625, 1941)

Marginulina cyprina Vieaux (idem, p.625)

Nodosaria harrisi Vieaux (idem, p.625) ** Name preoccupied by Cole

x Palmula dentonensis Loeblich & Yappau (Bull. Amer. Pal., #99, p.7,
pl. 2, fig. 1, 1941)

Woodbine fm. (upper)

Templeton mbr.

Eroded hillside along old highway, about 2½ miles east of Whitesboro. Dark-grey shale about 55' below base of Eagle Ford formation. (Oil & Gas Invest., Prelim map 98, sheet 1, Loc. F-15)

91-T-20
(Grayson County)

Type locality for--

- 13-4,5 x Ammobaculites berquisti Cushman & Applin (C.C., vol.22, p.73, 1946)
13-9 x Trochammina rainwateri Cushman & Applin (C.C., vol.22, p.75, 1946)
13-4 x Ammobaculites gratus Cushman & Applin (C.C., vol.23, p.54, 1947)

Woodbine fm. (upper)

Templeton mbr.

91-T-21

(Grayson County)

Hillside above small pond, 0.9 mile SW of center of Loy State Park, ~~4~~^{4 1/2} miles south of Denison. Dark-grey, calcareous shale overlying a 1-foot bed of tuffaceous sandstone.
(Oil + Gas Invest., Prelim. map. 98, sheet 1, Loc. F-16)

Type locality for--

- 13-3 x Ammobaculites comprimatus Cushman & Applin (C.C., vol.22, p.73, 1946)
13-8 x Trochammina exigua Cushman & Applin (C.C., vol.22, p.75, 1946)

Woodbine fm.

Templeton fm.

91-T-22

3½ miles southeast of Gordonville. (Oil & Gas
Invest, Prelim. map #98, sheet 1, Loc. F-23.)

Type locality for--

13-1 x *Ammobaculites adventus* Cushman & Applin (C.C., vol.23, p.53, 1947)

Paw Paw formation
Main St.

91-T-23
(Grayson County)

In the top of the
heavy ledge of the
mudstone about 8' of dark
silty Paw Paw shales that
are somewhat calc in the
upper 6"
36-2
text fig 2

Bank of Little Mineral Creek, 500' south
of bridge on Locust road, about 1/2 mile
southeast of Fink, northeastern Grayson
County. (HTL-32, J.P., vol.20, p.239,
1946); road crossing on this creek is shown by Lozo
on map, Amer. Wildl. Nat., vol.31, p.524, fig.5, 1944.)

Type locality for --

GENOTYPE

Polychasmina pawpawensis Loeblich & Tappan (J.P., vol.20, p.242, 1946)
from uppermost 6" of the Paw Paw unmed. below ledge of Main St. lvt.

Steep, north-facing, 12-foot bank on east-flowing stream, a branch of Mineral Creek, about 1 mile south of Fink, just west of bridge. (Main Street 1st. outcrops in ditch along west side of north-south road and just north of the creek; creek and King shown on maps)

Quar. Midl Nat., vol. 31, p. 524, fig. 5, 1944

Type locality for--

Roveacrinus multisinuatus Peck, J.P., vol.17, p.467, pl.72, figs.8, 14-17, 1943.

Roveacrinus pentagonus Peck, J.P., vol.17, p.467, pl.72, fig.12, pl.73, figs.1-5, 7, 1943.

L. Cretaceous
Denton fm. (??)

Bank of Messer's Creek, about 0.4 of a mile west of "Flag Pole hill", $3\frac{1}{4}$ miles northeast of Denison. (Alexander, J.P., vol.7, p.191, 1933.)

91-T-28
(Grayson County)

(This locality should probably be north of Denison, and the clay is likely to be in the Fort Worth or Duck Creek formation.)

Type locality for--

- x Cytheropteron (Cytheropteron) israelskyi Alexander, J.P., vol.7, p.191, pl.27, fig.1, 1933.
- x Cytheropteron (Eocytheropteron) jugosum Alexander, J.P., vol.7, p. 198, pl.27, fig.12, 1933.

Walnut fm

91-T-29
(Grayson County)

Large square pit at site of Denison Dam,
N. of Denison, Grayson Co. (Section
measured by the Loeblich in 1940; see J.P.,
vol. 23, p. 246, 1949) (Loc. HTL-105)

Type loc. for —

x Ammomarginulina loricata Loeblich & Tappan, J.P., vol. 23, p. 249,
pl. 46, fig. 15, 1949.

x ~~Ammobaculites obliquus Loeblich & Tappan, Jour. Washington Acad. Sci.,
vol. , p. 90, 1949; J.P., vol. 23, p. 250, pl. 46, figs. 4, 5, 1949.~~

x Ammobaculites torosus Loeblich & Tappan, J.P., vol. 23, p. 251, pl. 46,
fig. 6, 7, 1949.

x Ammobaculites viriosus Loeblich & Tappan, Idem, p. 251, pl. 47, fig. 1