COLUMNAR SECTION SHEET 1

GENERALIZED SECTION FOR THE AUSTIN QUADRANGLE.
SCALE: 1 INCH = 200 FEET.

Period.	Formation Name.	Symbol.	Columnar Section.	Thickness in Feet.	Character of Rocks.	Character of Topography and Soil.
PLEIS.	Alluvium.	Pal		0–40	Mostly silt.	Wide flats along the larger streams, heavily forested with hard wood, such as pecan.
PLEIS.	Terrace gravels.	Pt		0–50	Gravel and sand, chiefly granitic, and calcareous marl.	Lower terraces along Colorado River and Onion Creek, heavily forested with post oak and black-jack.
NEOCENE	Uvalde formation.	Nu	Nu	0–70	Gravel, chiefly flints from the Edwards limestone.	Caps the higher hills east of the Balcones escarpment.
EOCENE	Lytton formation.	El	Pt / Pal	300+	Clay, laminated sand and clay, and sandstone, the latter often cross bedded. Excepting some hard sandstone beds, the rocks are unconsolidated.	Undulating surface with low hills. Sandy soil bearing a growth of oak timber, bordered on the west by dense mesquite thicket with opuntias.
CRETACEOUS — GULF SERIES	Webberville formation.	Kwv		400±	Black, shaly, bituminous clay with occasional arenaceous and harder layers. Distinguishable from the Taylor marl by the presence of greensand or glauconite and by its fossils.	Rolling prairie. Fertile, black, sticky soil with scattered growth of mesquite trees.
CRETACEOUS — GULF SERIES	Taylor marl.	Kt		540±	Bluish, unctuous, marly clay ("joint clay") which weathers into yellow laminated subsoil and black surface soil.	Rolling prairie. Fertile, black, sticky soil.
CRETACEOUS — GULF SERIES	Austin chalk.	Ka		410±	White chalk with conchoidal fracture. Marly in the upper portion.	Rolling prairie, broken in places by growth of live oak and juniper. Fertile, black, argillaceous soil.
CRETACEOUS — GULF SERIES	Eagle Ford formation.	Kef		30±	Laminated blue clay and flaggy limestone, containing fish bones and teeth.	Prairie with fertile, stiff, argillaceous soil, and elm and hackberry growth in places.
CRETACEOUS — COMANCHE SERIES	Buda limestone.	Kbd		45	Massive thick-bedded pinkish-yellow limestone with nodular fracture.	Stony surface with shallow soil and live-oak growth.
CRETACEOUS — COMANCHE SERIES	Del Rio clay.	Kdr		80	Unctuous greenish clay weathering light blue or yellowish. Contains numerous specimens of *Exogyra arietina*.	"Hog-wallow" prairies. Stiff, argillaceous soil covered by thin growth of mesquite bushes.
CRETACEOUS — COMANCHE SERIES	Georgetown limestone.	Kg		80	White limestone with irregular fracture, slightly arenaceous and frequently containing marly beds.	Stony prairie. Inferior shallow soil with juniper and live-oak growth.
CRETACEOUS — COMANCHE SERIES	Edwards limestone.	Ke		300±	Massive white limestone with beds of flints.	Rocky summits and highlands with cliffs and canyon walls. Shallow black and chocolate-colored soil covered with live oak and scrub oak.
CRETACEOUS — COMANCHE SERIES	Comanche Peak limestone.	Kcp		40	White chalky limestone.	Usually barren chalky slopes.
CRETACEOUS — COMANCHE SERIES	Walnut clay.	Kw		15	Yellow clay, containing many specimens of *Exogyra texana*.	Steep slopes with sterile clay soil.
CRETACEOUS — COMANCHE SERIES	Glen Rose formation.	Kgr		450	White and yellowish limestone in bands of various thickness, flaggy and marly in places, and sandy toward the top and base.	Slopes, terraced by harder beds, with vertical cliffs along stream bluffs. Prairie, in places covered with juniper and sumac growth.
CRETACEOUS — COMANCHE SERIES	Travis Peak formation.	Ktp		100+	Conglomerate, grit, sand, clay, and calcareous beds.	Lower slope and bottom of Colorado Canyon.

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Geologists.

COLUMNAR SECTION SHEET 2

SUCCESSIVE DETAILED COLUMNAR SECTIONS OF THE CRETACEOUS FORMATIONS EXPOSED IN THE AUSTIN QUADRANGLE AND VICINITY.

SCALE: 1 INCH = 100 FEET.

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Geologists.

ILLUSTRATION SHEET

FIG. 4.—TERRACE OF OLD ALLUVIUM UPON UPPER BEDS OF THE EDWARDS LIMESTONE, COLORADO VALLEY, WEST AUSTIN.
Showing previously eroded surface or the limestone.

FIG. 5.—RESIDUAL GRAVEL OF THE UVALDE FORMATION IN THE BLACK PRAIRIE REGION.
Composed of flint nodules derived from the Edwards limestone in the region of the Edwards Plateau.

FIG. 6.—MINOR BLOCK FAULTING IN THE EDWARDS LIMESTONE, BARTON CREEK.
Showing the type of faulting in the Balcones fault zone.

FIG. 7.—TYPICAL EXPOSURE OF TAYLOR MARL, BLUE BLUFF, COLORADO RIVER.
Remnant of a gravel terrace caps the bluff at the right.

FIG. 8.—CLIFF OF AUSTIN CHALK, ONION CREEK.
Interbedded volcanic tuff at the base of the exposure.

FIG. 9.—GLEN ROSE FORMATION, FORMING WEST BLUFF OF MOUNT BONNEL.
Old alluvial plain of the Colorado River, cut in the Edwards Plateau, is shown in the valley on the left.

ILLUSTRATION SHEET

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

TEXAS
AUSTIN QUADRANGLE

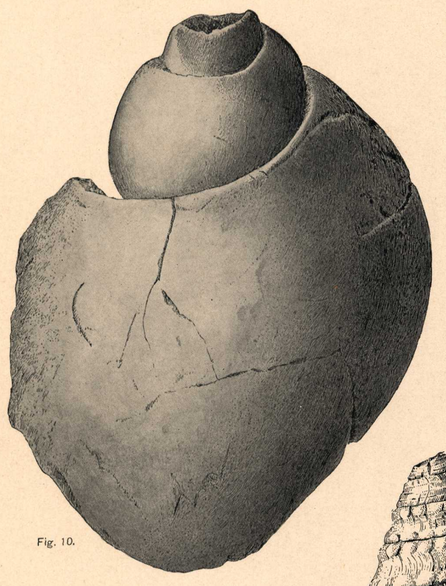


Fig. 10.

Fig. 11.

Fig. 12.

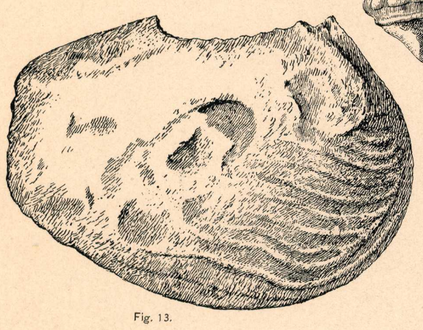


Fig. 13.

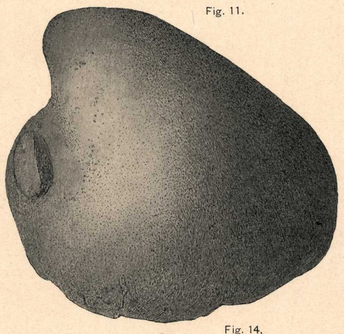


Fig. 14.

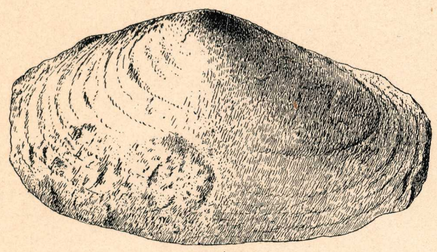


Fig. 15.

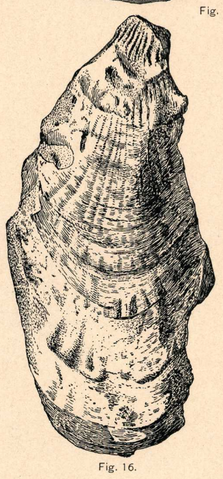


Fig. 16.

CHARACTERISTIC FOSSILS OF THE TRAVIS PEAK AND GLEN ROSE FORMATIONS.

Fig. 10. Lunatia (Tylostoma) pedernalis Roemer.
Fig. 11. Ammonites justinæ Hill.
Fig. 12. Glauconia branneri Hill.
Fig. 13. Trigonia lerchii Hill.
Fig. 14. Cyprina? mediale Conrad.
Fig. 15. Pholadomya henselii Hill.
Fig. 16. Ostrea ragsdalei Hill.

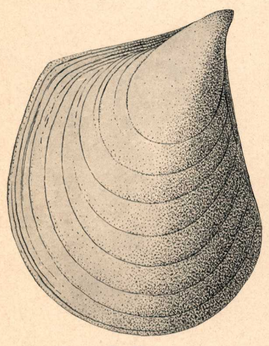


Fig. 37.

Fig. 38.

Fig. 39.

Fig. 40.

Fig. 41.

CHARACTERISTIC FOSSILS OF THE EAGLE FORD FORMATION.

Fig. 37. Inoceramus fragilis Hall and Meek.
Figs. 38, 39, 40, 41. Shark teeth.

Fig. 17.

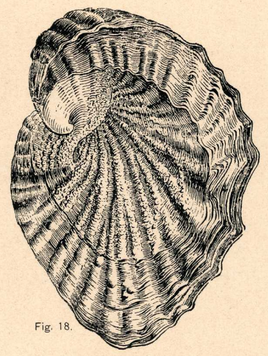


Fig. 18.

Fig. 19.

Fig. 20.

Fig. 21.

CHARACTERISTIC FOSSILS OF THE WALNUT CLAY AND COMANCHE PEAK LIMESTONE.

Figs. 17, 18. Exogyra texana Roemer.
Fig. 19. Gryphæa marcoui Hill and Vaughan.
Fig. 20. Pseudodiadema texanum Roemer.
Fig. 21. Enallaster texanus Roemer.

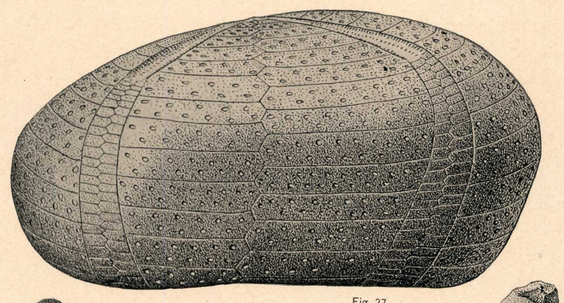
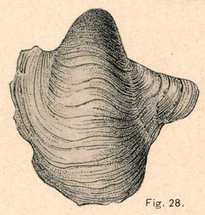


Fig. 27.



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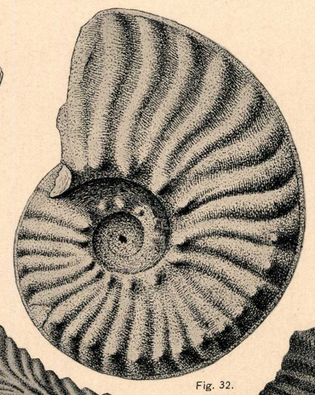

Fig. 32.

Fig. 29.

Fig. 30.

Fig 31.

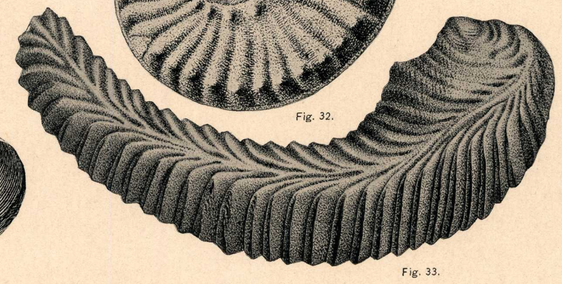

Fig. 33.

CHARACTERISTIC FOSSILS OF THE GEORGETOWN LIMESTONE.

Fig. 27. Epiaster elegans Shumard.
Fig. 28. Gryphæa washitaensis Hill.
Fig. 29. Turrilites brazoensis Roemer.
Figs. 30, 31. Terebratula (Kingena) wacoensis Roemer.
Fig. 32. Ammonites (Schloenbachia) leonensis Conrad.
Fig. 33. Ostrea (*Alectryonia*) *carinata* Lamarck.

Fig. 22.

Fig. 26.

Fig. 23.

Fig. 24.

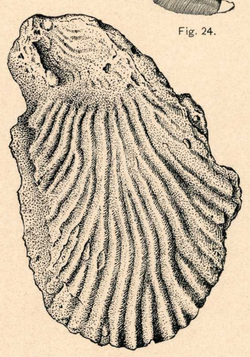

Fig. 25.

CHARACTERISTIC FOSSILS OF THE EDWARDS LIMESTONE.

Fig. 22. Monopleura pinguiscula White.
Fig. 23. Requienia patigiata White.
Fig. 24. Monopleura marcida White.
Fig. 25. Chondrodonta (small specimen).
Fig. 26. Radiolites davidsoni Hill.

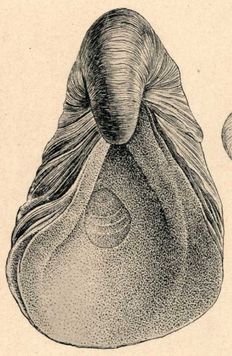

Fig. 34.

Fig. 35

Fig. 36.

CHARACTERISTIC FOSSILS OF THE DEL RIO CLAY.

Fig. 34. Gryphæa mucronata Roemer.
Figs. 35, 36. Exogyra arietina Roemer

Fig. 47.

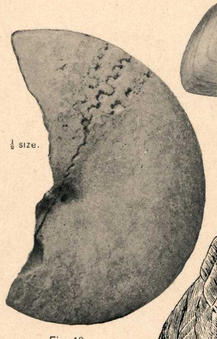

Fig 48.

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Fig. 49.

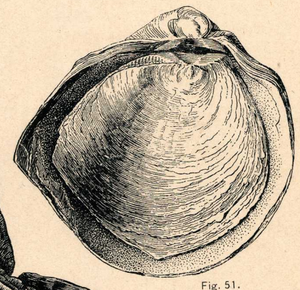

Fig. 51.

Fig 52.

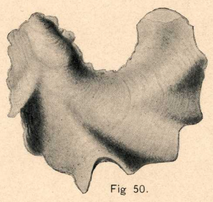

Fig 50.

CHARACTERISTIC FOSSILS OF THE TAYLOR MARL AND WEBBERVILLE FORMATION.

Fig. 47. Turritella trilineata Conrad.
Fig. 48. Sphenodiscus lenticularis? Meek.
Fig. 49. Veniella lineata Shumard.
Fig. 50. Ostrea larva Lamarck.
Fig 51. Gryphæa vesicularis Lamarck.
Fig. 52. Exogyra costata Say.

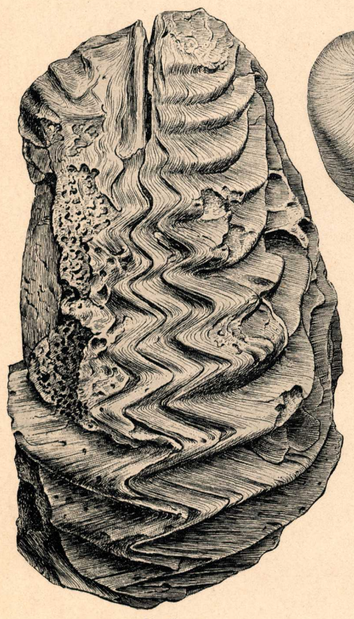

Fig. 42.

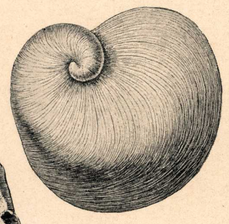

Fig. 43

Fig. 44.

Fig. 45.

CHARACTERISTIC FOSSILS OF THE AUSTIN CHALK.

Fig. 42. Ostrea (Alectryonia) diluviana Lamarck.
Fig. 43. Exogyra lævisculа Roemer.
Fig. 44. Gryphæa aucella Roemer.
Fig. 45. Hemiaster texanus Roemer.
Fig. 46. Exogyra ponderosa Roemer.

½ size.

Fig. 46