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THE UNIVERSITY OF TEXAS
Bureau of Economic Geology

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THE FIFTH QUARTERLY REPORT
Covering the Quarter Ending June 30, 1940

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For

THE STATE-WIDE PALEONTOLOGIC-MINERALOGIC SURVEY

OP-70-665-66-3-233-

In Texas

State Series No. 300-88

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A FEDERAL WORKS AGENCY
WORK PROJECTS ADMINISTRATION PROJECT
1940

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FIFTH QUARTERLY REPORT FOR THE
STATE-WIDE PALEONTOLOGIC-MINERALOGIC SURVEY
COVERING THE MONTHS OF APRIL, MAY, AND JUNE

This report covers the activities of the Paleontologic-Mineralogic Survey of Texas for the second quarter of 1940. The results of the project as a whole were very encouraging and a very large amount of fossil specimens were brought in. Most of the field units which operated during this quarter have been operating for some considerable time and preliminary work has been completed. The scouting and exploratory work which has taken up a large part of the time of these older units has been replaced by work in the better localities that have been discovered, consequently the number of fossils is increasing in proportion to the man hours spent.

Heavy rains and other inclement weather which has been prevalent over a large part of the state during the first two months of this quarter has caused a considerable loss of work time on most of the units.

During this period the unit which had been operating in Navarro County was suspended, and the unit in Bandera County operated only six days. Two additional units in Freestone and Somervell counties were started.

WORK PROJECT NO. 12510

During the period of April, May, and June this field unit operated with an average of 15 certified and 1 non-certified workers. The project base is still in Beeville, Bee County, Texas.

The Bee County field unit is still working along the Blanco and Medco creeks in the eastern and southeastern portion of the county. During this quarter no work was done on the Pliocene localities which yielded so abundantly during the earlier days of the project. The Pliocene locality at Site 1 on the Buckner Ranch has been abandoned since the Sponsors consider that they have a complete and representative fauna from that horizon, and that further work in the same place would in all probability merely result in obtaining duplicates of the fossils already recovered. It is considered that the most important problem remaining to be completed by the Bee County unit has to do with the Pleistocene stream terrace from which a considerable collection of fossils and associated man-made artifacts have already been obtained. The work of mapping this deposit by the Sponsor's representatives during this quarter has been completed and the stratigraphic position of the terrace is now well established. A fauna from any given formation or geological unit becomes much more important when a thorough understanding of the position of that formation or unit has been determined. There is every reason to believe that continued work by the Bee County unit will ultimately produce a complete or nearly complete fauna of the period during which the terrace was deposited. With this fauna a double check can be made on the age and the significance of the stream terraces and equivalent deposits.

During the second quarter of this year most of the work done in Bee County consisted of excavating one locality known as Site 6 on the O'Brien Ranch about 2 miles south of Berclair. This site produced fossils of glyptodon, equus, elephas, mastodon, turtle, wolf, peccary, camel, deer,

bison, rodent, and bird. During the two months spent in excavating this site some small amount of reconnaissance was also done. In the remaining one month of the period some minor excavations were made at previously discovered fossil-bearing localities. At one of these sites, which is also on Blanco Creek about one mile downstream from Site 6, the first complete skull of Equus complicatus was discovered from the Blanco terrace deposits.

Up to this time the Bee County field unit has spent by far the greater part of its time on Blanco Creek where a few localities remain to be excavated, but Medio Creek, which is a stream of approximately the same size and which has a well developed terrace belonging to the same period of deposition as the Blanco terrace, should also be investigated in the future. It is difficult to estimate the time necessary to complete the work in Bee County, since scouting continues to bring to light new places that should be worked out, but in all probability this unit can operate profitably from its present base throughout all or most of the remainder of this year.

WORK PROJECT NO. 12592

This unit has its project base at Aransas Pass, county seat of San Patricio County, Texas. It employed an average of 14 certified and 1 non-certified workers during the period covered by this report.

The field unit continued to work throughout the quarter year at the Tedford caliche pit one mile east of Inglesides. The pit has been extended from the original workings, but is still in the same fossil horizon. During this period the largest and most valuable collection yet made from the Tedford pit has been recovered. Perhaps the single most valuable specimen collected during this period was a large part of a glyptodon, which is one of the rarest Pleistocene vertebrate forms to be found in North America. After an extensive search through the literature, it becomes almost certain that this specimen is one of the 2 or 3 nearly complete glyptodonts ever collected on our continent. Among the other important fossils was a complete bison skull, a complete connected pelvis of elephant, two elephant tusks more than 10 feet long, and a large collection of teeth and skeletal elements of carnivores and ruminants. Also a large complete turtle carapace was found and collected. This is the first complete carapace of the large turtle which is so abundantly represented by fragments of carapace and plastron to be found in the pit. Numerous small turtles have been collected complete, but the larger individuals are generally badly broken, probably because their size prevented them from being completely covered and protected by the sediments.

It is not yet known how extensive this fossil horizon will prove to be, but if one may judge accurately from the surface expression of the old Pleistocene pond in which the fossils are embedded, it may require the remainder of this year to properly work out this pit alone.

Some reconnaissance has been carried on in San Patricio County, but no excavations of importance have been made other than at the Tedford pit, because the large number of fossils found there have kept the workers constantly employed in excavating and collecting. It is to be hoped, however, that before the project has been completed and extensive search can be made throughout the rest of the county to determine if other richly fossiliferous deposits are present.

WORK PROJECT NO. 13107

This field unit employed an average of 16 certified and 1 non-certified workers during the second quarter of 1940. The project base remains at Abilene, Taylor County, Texas. During this quarter practically all the work was carried on at the two Permian sites which have been worked continuously for more than six months.

At Site 7 on the Sid McAdams lease, the excavations were extended north and west along the strike of the fossil-bearing bed. Numerous additional reptile bones were discovered and collected in blocks of matrix. From field identifications which are necessarily inadequate it appears that no new forms other than those previously discovered at this site were found. However, the additional material is useful and important in that it will offer a larger selection for any mount that may be made of the reptiles collected in this deposit. These Permian fossils are all badly broken and some are distorted to such an extent that they cannot be reconstructed to their original shape. Consequently, it is necessary to have numerous duplicate fossils in order to find a few that are comparatively free of distortion.

In addition to the vertebrates collected at Site 7, some plant fossils were also recovered. Some of these plants are beautifully preserved in the blue shale, but in general they are much less abundant than at Site 9. This quarter concludes the work on the Sid McAdams lease since it now seems that a representative fauna has been obtained, and that a sufficient number of duplicate fossils have been recovered from this particular place.

Site 9 on the John Guitar estate, located one mile east and one-half mile south of the Abilene airport, was worked for some time in order to obtain a larger collection of the excellent Permian plants found at this locality. Several hundred of these fossil plants were recovered and delivered

to the headquarters project in Austin. In addition to the plant fossils, some Pelecosaur material was also collected. These reptile bones are in general more fragmentary and much less abundant than those found at the Sid McAdams lease discussed in the preceding paragraphs. It is doubtful whether this site is worth any extended working except for the plant fossils of which a large collection has already been made.

In addition to the work on the two Permian localities, some reconnaissance has been done, particularly on Elm Creek, for the purpose of locating new Pleistocene fossil beds which may be present along the drainage of that stream. Elm Creek is a fork of the Brazos River and like many of the other streams in West Texas, it has a broad and relatively thick valley fill deposit. As yet, insufficient work has been done on these fluvatile deposits to determine their geologic age. It is supposed that these deposits belong to the late Pleistocene or the early Recent, but since no good fossil collections have been made and since no stratigraphic correlation seems possible some uncertainty must exist unless diagnostic fossils can be found in place within these deposits. The reconnaissance that has been done to date has been unsuccessful from the standpoint of fossil recovery, but the problem seems sufficiently important to warrant some continued work in order to exhaust any possibility of recovering worthwhile material from these beds.

WORK PROJECT NO. 13129

This unit with headquarters at Corsicana, Texas, employed an average of 10 certified and 1 non-certified workers through the second quarter of this year.

The Navarro County unit operated for only one and one-half months during this quarter. The Crawford pit where excavations were begun during the first quarter of this year was completely worked out without any important fossil recoveries having been made. Some fragmentary fossils including those of elephant, horse, deer, and bison were collected from the Crawford pit. This material was widely scattered through the gravel deposit and was in such fragmentary condition that it was not considered worth the trouble of more excavation. When reconnaissance work in Navarro County carried on by the unit supervisor failed to disclose any potential fossil sites, the unit was shut down.

WORK PROJECT NO. 13130

This field unit was started on May 17. The project base is at Fairfield, Freestone County. An average of 9 certified and 1 non-certified workers was employed. The purpose of this field unit was to excavate at three localities which either were known to contain fossils or which appeared to be promising localities worthy of exploratory work.

The first site to be excavated was a cave deposit about 8 miles north of Burlington in the east-central portion of the county. Some two weeks of work was spent at this site and several hundred cubic yards of earth were moved in cutting through the cave fill to the underlying bedrock. This deposit proved to be too recent to contain fossils, and was abandoned after a determination of the thickness and the extent of the deposit had been made.

Most of the operating time of the Freestone County field unit was spent in working in a gravel pit in the extreme northeast part of the county in the vicinity of Rural Shade. This deposit is in the third terrace of the Trinity River and is of Pleistocene age. The fossils recovered were numerous, including teeth of horse, camel, bison, and other typical Pleistocene forms. The material, however, was broken and much of it was waterworn, indicating that it had been transported for some distance before finally becoming lodged in the gravel bars. No complete or articulated material was found in the pit, and the specimens which were recovered were not of any great importance because they were duplicates of similar and better material which had been collected by other units. It is possible that future work at this place will uncover some important material, but the chances are not good enough to warrant more than a limited amount of additional work.

The third site is in the bed of the Trinity River about 4 miles

upstream from the crossing of Highway 79, and is known to contain some very good mastodon bones. During the second quarter of 1940 the Trinity River was seldom low enough so that the site could be seen and never became sufficiently dry to permit actual working. The low water level of Trinity River is only about $1\frac{1}{2}$ feet below the level of the mastodon bones; consequently, there seems little probability that this site can be worked until dry weather prevails for an extended period, probably in the latter days of the summer.

Some reconnaissance has been done in Freestone County with the hope of locating some earlier fossils and of locating additional Pleistocene fossil localities. As yet, no promising results have developed as a result of the reconnaissance, and unless some new site is discovered within the next few weeks, it is believed that it will be necessary to close the Freestone County unit.

WORK PROJECT NO. 13352

During the quarterly period covering the months of April, May, and June there has been an average of 16.18 certified workers and one non-certified worker on this unit. The project base remains at Big Spring, Howard County, Texas. Work has been carried on in three different quarries this quarter and each appears to represent a distinct facies of the fauna. A great many specimens have been recovered from two of the quarries, and from the third a large amount of associated material has been collected, as well as isolated bones.

Quarry No. 1 is situated four miles north and east of Otis Chalk, Howard County, Texas, in the northeast corner of the four-section west pasture of the ranch of Mrs. Robert Hyman. By road it is 30 miles southeast of Big Spring. The quarry is in the Dockum formation of the upper Triassic, a hard red and brown clay with occasional interfingerings of streaks and lentils of turquoise-colored clay. This is the same quarry that was worked continuously during the preceding quarter; it was worked for the first half of this quarter. On the east end of the quarry, the excavation has been carried to the edge of the fossil bed, but to the west the limits are not yet known. There appears to be no diminution of bones as work is carried into the quarry, although a slightly greater concentration may be noted in the central part where overhead is the heaviest. Most of the work was done on the eastern side of the quarry, where overhead is slighter.

The most important find in this quarry was the greater part of a skeleton, mostly in articulation, of the small unidentified reptile. The skull and jaws were in articulation with the vertebral column, and the leg bones were more or less in position. The skull and jaws were removed as soon as possible, and the rest of the skeleton was taken out in a plaster

block. Several good mandibles and a number of jaws were collected. Several hundred skeletal parts such as scapulae, pelvi, humeri, femora, radii, ulnae, tibiae, fibulae, ribs and vertebrae were collected.

The most common faunal element is that represented by the skull and numerous jaws. It was described by Case as Trilophosaurus buettneri, and referred to the Cotylosaurs, but the discovery of the skull has shown this reference to be incorrect.

In quarry No. 2, work was carried on during the first part of this quarter. It is situated about 100 yards east of quarry No. 1, and is geologically and lithologically the same as quarry No. 1, although it is about 20 feet lower stratigraphically. A perfect small Amphibian skull was found here. A large amount of skeletal material was associated with the skull, but it was not determined whether this was amphibian or reptile. Three other plastered blocks of skeletal material were collected and a large number of unassociated bones.

The last half of the quarter was spent in quarry No. 3, situated one mile south of quarry No. 1. It appears to be at the same horizon as quarry No. 1; the bone layer is but a few inches above a hard gray sandstone. The overhead at this quarry is at present slight and varies from a few inches to two feet.

The material in this quarry seems to be concentrated in definite areas. There are at least three fairly distinct "areas" in the quarry, one predominantly yielding Phytosaur material, one chiefly Desmatosuchus, and the third largely Amphibian. At the Phytosaur pit a partially articulated Phytosaur skeleton was collected. This included the skull, jaw, some leg bones, and most of the vertebrae plus some ribs and plates. A Phytosaur mandible, with associated material was also collected here. In all, five

slabs of Phytosaur material were recovered in this spot. In the Desmotosuchus pit a large number of skeletal parts have been removed, including the posterior half of a skull. Although not complete it represents the second skull in existence. A partial jaw or maxillary was also found. If this proves to be a partial jaw, it will be the first known. Also a number of leg bones have been found which probably are Desmotosuchus, but this cannot be determined at present because most of the leg bones of this genus are unknown.

In the Bustneria pit a large amount of skeletal material has been collected including a number of casts. One perfect skull of the large amphibian was found, one partial skull, and several partial jaws. Skeletal material includes leg bones, vertebrae, ribs, etc.

Some reconnaissance was done during the first part of the quarter, and while a number of isolated bones were recovered, no quarries were discovered. There still remains a large area of unexplored territory to the south and to the northeast of where we are working.

It is doubtful if any of the three quarries can be exhausted before they will have yielded all the material desired. They now appear to be extensive enough that work could profitably be conducted in them for two or three years.

WORK PROJECT NO. 13602

This camping unit is located at the crater site 9 miles west of Odessa, Texas. The unit has employed an average of 44.5 certified and 1 non-certified workers. The substantial increase in workers has facilitated the progress being made in excavating the meteorite crater. Work during the past quarter year at the Odessa crater has brought about the completion of approximately 4/5 of the total work necessary to expose the rim rock surrounding the crater. Also, the drill holes in the center of the crater have been completed with the exception of some core drilling contemplated at a later date for the purpose of discovering and outlining the main mass of the meteor which is presumed to be resting at the bottom of the filled crater.

In addition to the work of exposing the crater's rim and completing the drill holes, the lateral trenches through the crater rim which were made in the early days of the project have been deepened and extended in length. Also, some test pits have been dug outside of the crater for the purpose of determining the depth of a pond fill deposit which lies adjacent to the crater. These test pits show that the sediment which has accumulated in the pond depressions is quite thick and is of the same character as the sediments lying within the crater.

The remaining work to be done consists of completing the exposures of the rim rock, of locating and sinking a shaft to the main meteorite mass, of both locating and collecting the scattered meteorite fragments in the area surrounding the crater proper, and of making a detailed topographic map of the area and detailed maps of the structures produced by the impact. It is hoped that this work can be completed during the early winter months.

WORK PROJECT NO. 13815

This field unit has employed an average of 11 certified and 1 non-certified workers through the quarter covered by this report. The project base remains at Aspermont, county seat of Stonewall County. During this quarter year a total of 170 specimens has been removed in plaster casts, in addition to a considerable number of teeth and small bones which were collected without the use of plaster jackets.

Site 8, $7\frac{1}{2}$ miles north of Swenson in a Pleistocene terrace deposit, was worked most of this quarter. Material recovered from this site is generally in very good condition and includes a good fauna such as elephant, horse, bison, camel, and sloth. Much of this material is excellent for study purposes and some of it is so complete and so well preserved that it will be used for exhibit purposes in the Texas Memorial Museum. The bones occur mostly in a greenish lens in a terrace of the Brazos River. This terrace is some 40 feet thick and lies about 70 to 80 feet above the present bed of the river. Due to the considerable thickness of the deposit, it is practicable to work only along the face of the outcrop where weathering has removed most or all of the overburden from the fossil horizon.

In addition to the work done at Site 8, Sites 11 and 12 which lie 8 and $7\frac{1}{2}$ miles respectively northwest of Swenson, were worked for about 2 or 3 weeks. These sites are in the same deposit as Site 8, and the mode of occurrence of the fossil bed is altogether similar. Sufficient work has not been done to determine the real worth of either of these two deposits. The results obtained thus far, however, indicate that neither site will be as prolific as Site 8, although they have yielded similar material including the elephant, horse, bison, and sloth. These two sites are sufficiently

promising to warrant further exploratory digging, and either of them may prove of considerable value.

A few days of work were also spent in collecting at Site 13, which is 12 miles west and 1 mile north of Swenson. The deposit is in an old filled pond resting on terrace material. It is probably of the same age as Sites 8, 11, and 12. Twenty-four specimens have been recovered from this locality, most of which were in bad condition, but several well preserved teeth of horse and camel were collected. The overburden is so thin as to be negligible so the fossil bed can be worked rapidly to completion. In addition to the excavations and collections described above, reconnaissance work was done mostly in the southwestern part of the county. Several potential fossil localities were discovered by future excavations will have to be made in order to determine the worth of these new localities.

WORK PROJECT NO. 15348

During the quarter ending June 31, 1940, an average of 10 certified and 1 non-certified workers was employed on the Fannin County unit of the State-Wide Paleontological Survey. The base of operations has been located in Bonham, Texas, the county seat and approximate geographical center of the county. The initial site, the Savoy rock pit, has been the only one worked to date.

The Savoy pit is located 4.3 miles south and eight degrees east of Savoy, Texas, in the south western part of Fannin County. The field unit is collecting out of a rock quarry in or near the base of the Austin Chalk. At this location the chalk is near its change of facies into the Bonham Clay and has lost much of its limestone character. The formation here is a marl with enough lime content to hold it together until exposed to the weather a few days. After exposure the rock disintegrates readily. The floor of the quarry may represent the top of the Eagle Ford formation which has a calcareous shale strata about one foot thick at the top and then passes downward into clay with sandy lenses.

The majority of the fossils collected have been found in zones, --a shaly strata two and one half feet above the floor of the pit and the other a harder stratum approximately ten feet above the pit floor.

Thirty-five fish have been collected, of which number ten were complete or nearly so. Of the fish collected, the most striking and valuable specimen was one which measured fifteen feet in length. This fish was taken out in blocks, and three weeks were required to collect it. Only the bony structure of this fish was preserved, as is the case with most or all of the larger fossil fish. However, most of the specimens collected were small fish which were more completely preserved, having their scales,

gill slits, etc., still in evidence. In addition to the fish, two crabs, some bones of mosasaur, a block containing the articulated limb bones of a small dinosaur or bird, and numerous teeth of sharks, rays, fish, and reptiles have been collected. One Plesiosaur tooth was also found.

The fossil evidence at this location indicates that this material was laid down as a shallow water, near-shore deposit. The most abundant forms of life are the fish, sharks, crabs, various types of Innocerami shells, Gryphea, and other shallow water forms.

In addition to the collecting at the Savoy pit, some reconnaissance was done in various parts of the county. No additional sites have been found which are promising enough to justify excavation. The Savoy pit is yielding good fossils, and is worth working throughout most or all of the next quarter year.

WORK PROJECT NO. 15446

This field unit started on April 8, and is still in operation at the close of the second quarter of 1940. This unit employed an average of 9 certified and 1 non-certified workers. Project base is in Glen Rose, Somervell County, Texas

Fossil footprints, made by large sauropod dinosaurs, were discovered in Somervell County in the fall of 1938. It has been the purpose of this project to collect specimens of these new and spectacular tracks for The University of Texas, the American Museum of Natural History, and other institutions willing to bear the crating and transportation expense. The tracks occur in lower cretaceous limestone rocks in the Glen Rose formation. These sauropod tracks are very well preserved, except where they have been exposed for a long time to erosion and where they have been occasionally disfigured by superimposed tracks of carnivorous dinosaurs.

The project site is located on the Paluxy River about four and one-half miles upstream from the project base. A large area was first diked off by sandbags in the bed of the river and drained of mud and water. Forty-two steps of one trail, partly waterworn, were uncovered in this procedure. As the work progressed still other trails were brought to light. The final excavation, including a portion from which a three to four foot overburden was stripped, covered an area of about 210 feet long by 40 feet wide. From the material now exposed a section of a large 28 x 8 foot slab has been partly removed for the American Museum of Natural History, and a similar 21 x 8 foot slab quarried in outline for The University of Texas. A special mount of these tracks is to be set up at The Texas Memorial Museum. A portion of the trail of one large sauropod on which two or more carnivore tracks are superimposed will be reassembled in its natural position. The American Museum plans to mount the trail segment behind a large skeletal mount of a

Brontosaurus.

One of the major problems in this work has been rain and high water which have delayed and hampered operations several times during the months of May and June. The tracks occur in the river bed, and are easily inundated by high water. The final acquisition of these fine slabs and additional specimens for other institutions will successfully conclude this project.

WORK PROJECT NO. 13419

THE LABORATORY UNIT

The Laboratory Unit of the Paleontologic-Mineralogic Project, stationed at the Bureau of Economic Geology in Austin, employed an average of 27 certified and 2 non-certified workers during the second quarter of 1940. During this quarter year the work of cleaning, preparing, and restoring fossils brought in from the various field units was continued. The quality and amount of work produced in the laboratory is showing considerable improvement. This improvement can be attributed to two principal causes: the increased experience and dexterity of the workmen, and the improved and enlarged facilities for working that are being added to the laboratory from time to time.

The lower jaws of a shovel-jawed mastodon, Amebelodon fricki, were placed on exhibit in the Texas Memorial Museum during this period. Other specimens which are ready to be exhibited include a camel skull, a rhinoceros skull, two sloth skulls, and a mosasaur skull. Specimens begun in this period or in a previous period and are still in the process of preparation include a bison skull, a phytosaur skull, a horse skull, and a pair of large elephant tusks.

A nearly complete skeleton of a giant ground sloth has been prepared in the laboratory but before this animal can be mounted it is necessary to check each bone and restore missing processes. This restoration work was begun during this period and several limb bones and vertebrae were restored.

Reconnaissance trips were made by the Mobile Unit to Grayson County and through several counties in South Texas during this period. Excavation of a site on Onion Creek, 12 miles southeast of Austin, was begun and about 10 cubic yards of dirt has been removed to date. A nearly complete Mosasaur

skeleton was taken from this site in 1936 and it is our hope that the remainder of this excellent skeleton may be found. The skull of this animal was placed on exhibit in the Texas Memorial Museum during this period.

Two sections of drawers, in which will be stored small fossils, were built during the period. Fossils from those sites at which operations have been completed are now being rearranged and grouped according to their classification, and stored in drawers for future study.

The work in the laboratory is being concentrated on the preparation of elephant and ground sloth bones, since it is the desire of the sponsor to exhibit a mounted skeleton of each of these animals in the near future.

Three well preserved skulls of animals once living in Texas, but now extinct, were placed on exhibit in the Texas Memorial Museum during this period. These included two ground sloth skulls and one rhinoceros skull. One of the sloth skulls is to be temporarily exhibited as an individual specimen and will be used later with a complete skeleton now being assembled in the laboratory.

The greater part of the fossils prepared are carefully identified and catalogued for the study collection. This valuable collection will be available to the vertebrate paleontologists for study. Three widely separated localities of Pleistocene age are furnishing a wonderful and varied collection of Pleistocene forms. The most productive of these is the Ingleside pit in San Patricio County from which has come an abundance of excellent material. A similar fauna is being collected from a site in Stonewall County. At the present time a huge elephant skull from the Stonewall County site is being prepared. A great variety of Pleistocene fossils were found associated with human artifacts at several different sites in Bee County. This association of extinct animals with evidence

of human habitation is of great value in dating the antiquity of man. Dr. E. H. Sellards who has long been interested in ancient man has just completed a scientific paper in which this association is discussed. Pleistocene fossils occur over the entire state but such productive localities as these mentioned above are rare.

One of the most interesting specimens prepared in the laboratory to date is an unusually large and well-preserved Bison skull from Stonewall County. This skull is nearly twice as large as that of a Recent Bison. The circumference of each horn core at its base is more than 18 inches and the distance between the tips of the horn cores is 44 inches. This specimen together with two other Bison skulls from the Ingleside pit will be prepared as an exhibit for the Museum.

A great quantity of mastodon material from a formation of Pliocene Age in Bee County has been prepared in the laboratory. Included in this material are several skulls, two of which are now being mounted in a plaque for exhibition. After studying this mastodon material thoroughly, Dr. Sellards found that it represented a new species of mastodon which he named Gnathylodon buckneri. A description of this new species will be published in the paper mentioned above.

Following is a list of fossils prepared in the
Laboratory during this quarter year

Equidae (Horse)

1 skull
87 teeth
3 radii
2 pelvic elements
7 lower jaws
10 vertebrae
2 scapulae
23 metapodials
2 femora
1 cannon bone
14 phalanges
1 astragalus

Camelops (Camel)

1 skull
28 teeth
9 lower jaws
14 carpals and tarsals
1 humerus
2 femora
2 vertebrae
1 astragalus
1 radius
1 metapodial

Tanupolama

40 teeth
2 lower jaws
1 phalanx

Ursidae (Bear)

1 tooth

Proboscidea

Mastodon

4 skulls
1 carpal
3 tusks
13 teeth
1 patella
4 ribs

Elephas (Elephant)

13 teeth
13 vertebrae
1 rib
1 metapodial
8 carpals and tarsals
1 calcaneum
2 tusks
1 femur
2 lower jaws
2 astragali

Canidae (Dogs or Wolves)

11 teeth
7 metapodials
7 phalanges
1 calcaneum
1 maxillary
4 vertebrae
1 lower jaw

Felidae (Cats)

4 teeth
2 vertebrae
1 lower jaw
3 metapodials
3 phalanges

Tapirus (Tapir)

3 teeth
3 vertebrae
2 maxillaries
3 lower jaws
1 tibia
1 radius
1 metapodial
1 femur
1 humerus

Bison

2 skulls
75 teeth
6 lower jaws
27 vertebrae
2 scapulae
1 cannon bone
2 humeri
5 tibiae
21 carpals and tarsals
8 ribs
3 phalanges
1 femur
1 pelvic element
4 metapodials

Cervidae ()

Deer

8 teeth
2 lower jaws
3 antler prongs
3 astragali
1 calcaneum
5 phalanges
1 pelvic element
1 radius
9 carpals and tarsals

Antilocapridae (Antelope)

6 teeth

Milodon (Ground Sloth)

1 skull
28 teeth
14 vertebrae
17 ribs
19 carpals and tarsals
2 pelves
6 ulnae
2 scapulae
1 metapodial
3 lower jaws
1 maxillary
numerous dermal ossicles
7 phalanges
1 chevron bone
2 tibiae
1 sternabrae
1 clavicle
1 pelvic element
2 humeri

Holmesina (Armadillo)

2 humeri
1 tibia
8 vertebrae
numerous dermal scutes
1 lower jaw fragment
3 ribs
1 tooth

Dimetrodon

2 humeri
2 femora
2 radii
2 fibulae
3 ulnae
1 pelvic element
2 interclavicles
3 scapulae
8 vertebrae
numerous rib and spine
fragments
1 maxillary
1 tooth

Cynomys (Prairie Dog)

16 lower jaws
8 humeri
15 ulnae
5 femora
2 skulls
4 radii
6 tibiae
3 fibulae
25 vertebrae
1 scapula
numerous foot elements

Peccary

3 teeth
4 vertebrae
1 carpal

Rodent (Misc.)

10 lower jaws
8 femora
1 tibia
1 humerus
1 scapula

Turtle

27 phalanges
6 tibiae
18 humeri
8 vertebrae
1 partial skull
2 pelves
2 scapulae
2 ulnae
5 femora
1 small carapace
numerous fragments of
carapaces and plastrons

Ophidia (Snake)

several vertebrae

Crocodile

several teeth

Aves (Bird)

2 limb bones
several unidentified bones

Fish

2 complete specimens
1 lower jaw
1 vertebra

Ray

2 teeth

Shark

2 teeth

Glyptodon

1 lower jaw
2 teeth
several scutes

Rhinoceros

1 skull
several teeth fragments

Beaver

2 teeth