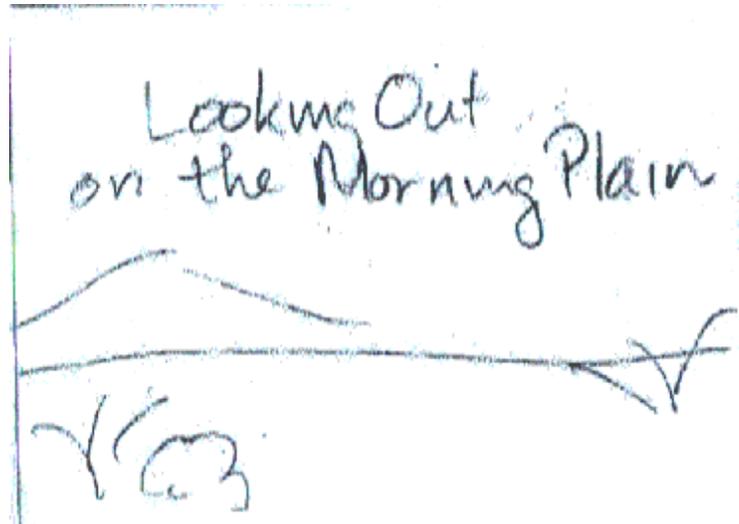


The Anza-Borrego Pleistocene Storyboard
Segment 1: Looking Out on the Morning Plain

EDTECH 561

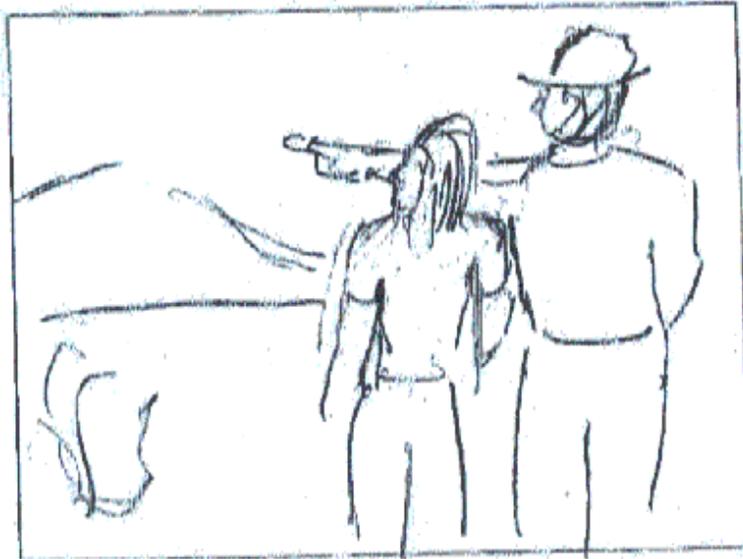
By Gerald Marino and Susan Connell



Scene 1 Shot 1

XLS of Borrego Valley
from the Park
Headquarters

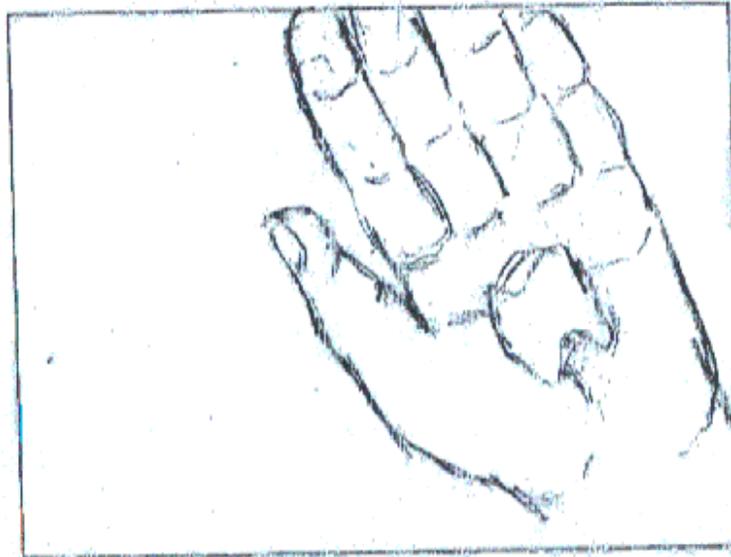
Music ("You make me feel like a Pleistocene
Mammoth" sung to the tune of "You make
me feel like a natural woman"just
kidding.



Scene 1 Shot 2

Camera backs up and we look over the shoulder of the Ranger and Student in the foreground, their backs to us

Music fades

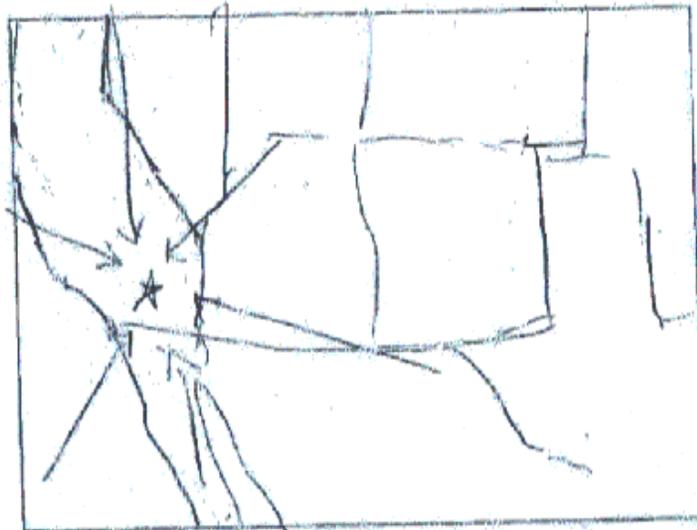


Scene 1 Shot 3

TRANSITION TO
EITHER AN OVER THE
SHOULDER SHOT OR
AN XCU OF THE
RANGER'S HAND
HOLDING A
MAMMOTH TOOTH
AND POINTING TO IT

STUDENT: So this is that mammoth tooth you've
told me about?

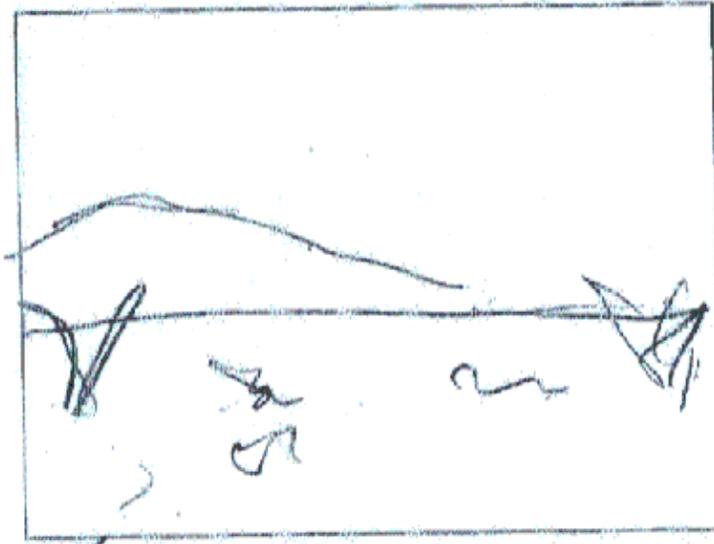
RANGER: Yes Jenny, this mammoth tooth was
excavated just recently. Its "owner" lived
here over one million years ago. As a
matter of fact we've discovered over
XXX mammoth locations here.



Scene 1 Shot 4

DISSOLVE TO A MAP OF
WESTERN NORTH
AMERICA AND ZOOM
IN TO A-B

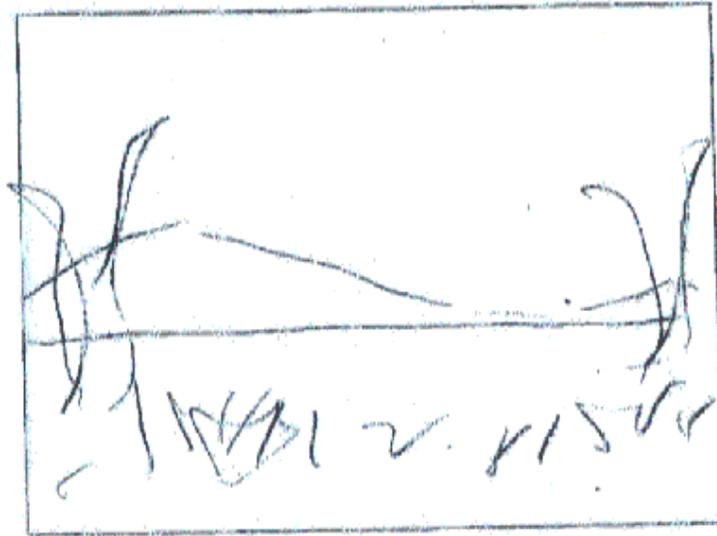
STUDENT: But how is that possible? How could
they live in such a desert? I thought mammoths
lived in cold climates?



Scene 1 Shot 5

TRANSITION TO XLS OF
CURRENT PARK
PANORAMA

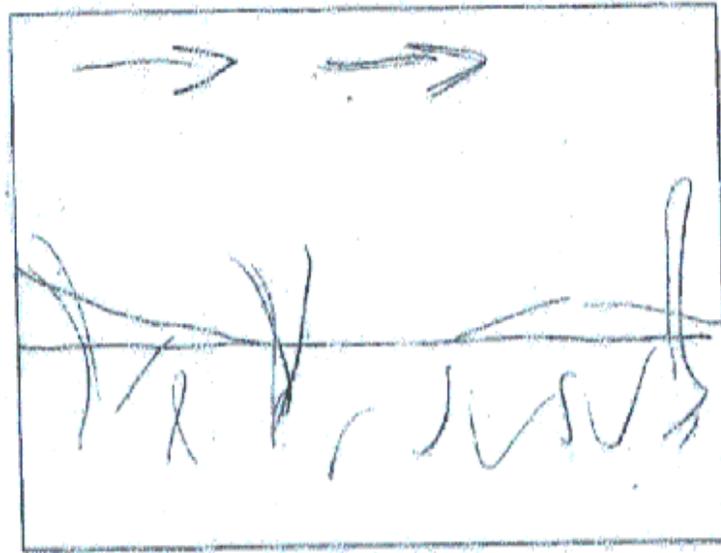
NARR: It's true that today the Anza-Borrego
landscape is a desert badlands...but it
wasn't always this way.



Scene 2 Shot 1

DISSOLVE TO
PANORAMA OF
PLEISTOCENE
LANDSCAPE WITH NO
ANIMALS

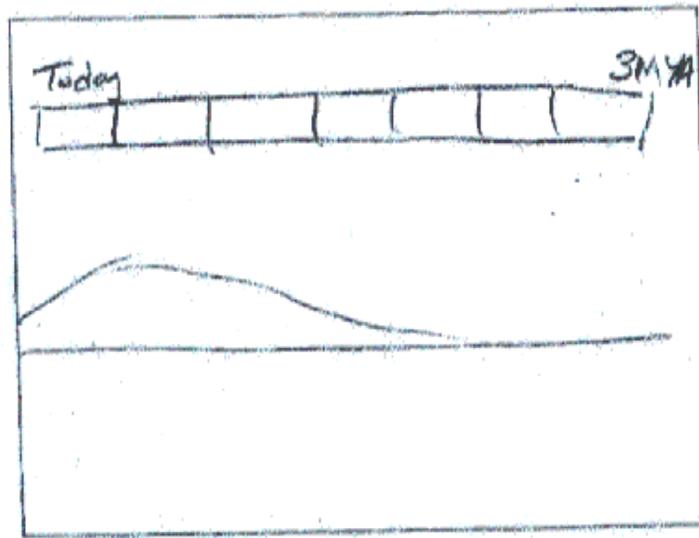
NARR: This was once a lush landscape.



Scene 2 Shot 2

CAMERA PANS THE
MURAL AND
HIGHLIGHTS AREAS
FROM THE
NARRATION.

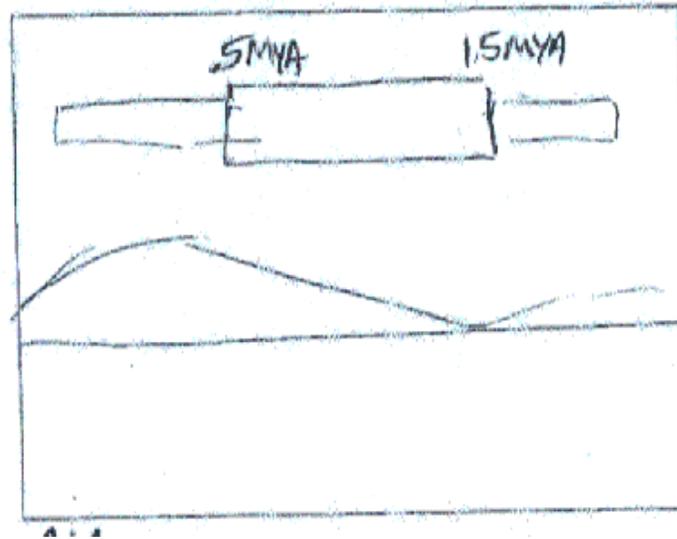
NARR: An environment made up of rivers and
streams...lakes... forest and savannah.



Scene 2 Shot 3

FX SUPERIMPOSE
TIMELINE EXPANDING
BACK FROM THE
PRESENT TO 2 MILLION
YEARS AGO (MYA)

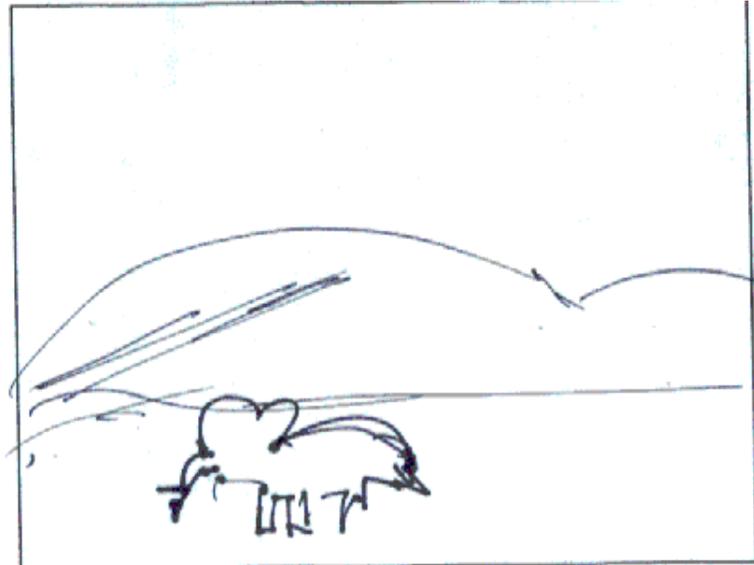
NARR: At that time mammoths lived all over the
northern hemisphere and many mammoth
fossils have been found here. Some go
back almost 2 million years ago.



Scene 2 Shot 4

SUPER OF TIME LINE
HIGHLIGHTED FROM .5
TO 1.5 MYA

NARR: But most of the mammoth finds in the park show that here they occupied the late Pleistocene time period, from half a million to 1 and a half million years ago. Throughout most of North America they lived up to 10,000 years ago, we just don't have fossil beds that young in the Park.



Scene 2 Shot 5

FADE MAMMOTHS
INTO LANDSCAPE

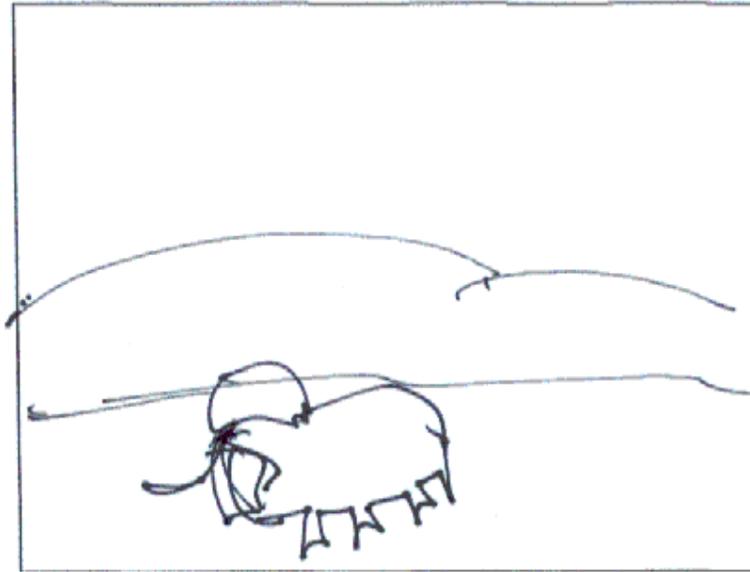
NARR: Two types of mammoths existed over that
time



Scene 2 Shot 6

SUPER THE MAMMOTH
IMAGES OVER THE
MAMMOTHS IN THE
LANDSCAPE

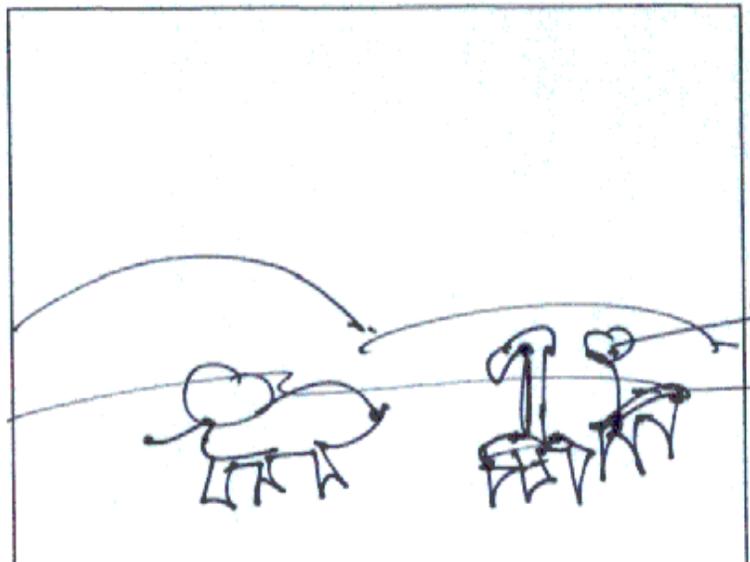
NARR: The Southern Mammoth and the
Columbian Mammoth.....



Scene 2 Shot 7

SUPER MAMMOTH
IMAGES FADE AND
ONLY MAMMOTHS IN
THE LANDSCAPE ARE
SEEN

NARR: But mammoths weren't the only animals
we'd find if we roamed the Anza-Borrego
Pleistocene landscape.



Scene 2 Shot 8

DISSOLVE IN CAMELS
FROM LEFT

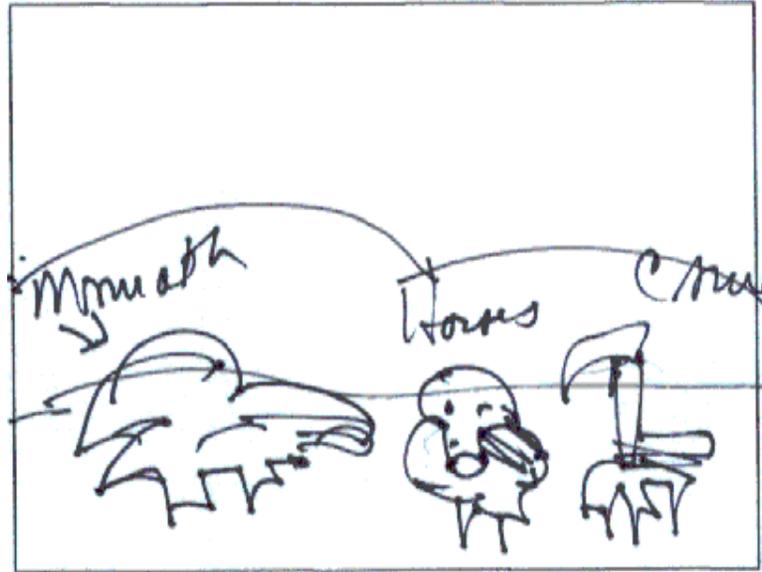
NARR: This landscape was the original home for two families of camels... the Lamini, now the llamas of South America, and the camels, Camelini, only found today in the Old World—Africa and Asia.

CONTINUE TO
DISSOLVE IN CAMELS
TO INCLUDE THE
ENTIRE GROUP.

NARR: We know this because Anza-Borrego has an exceptional and diverse fossil record that spans millions of years. Not only are plants, shells or bones and teeth preserved, but in some places, also animal tracks.

NARR: An in the case of camels there have been nine different camelids discovered in Anza-Borrego....more than from any other area in North America!

NARR: The other large mammals found in the Pleistocene Anza-Borrego landscape...

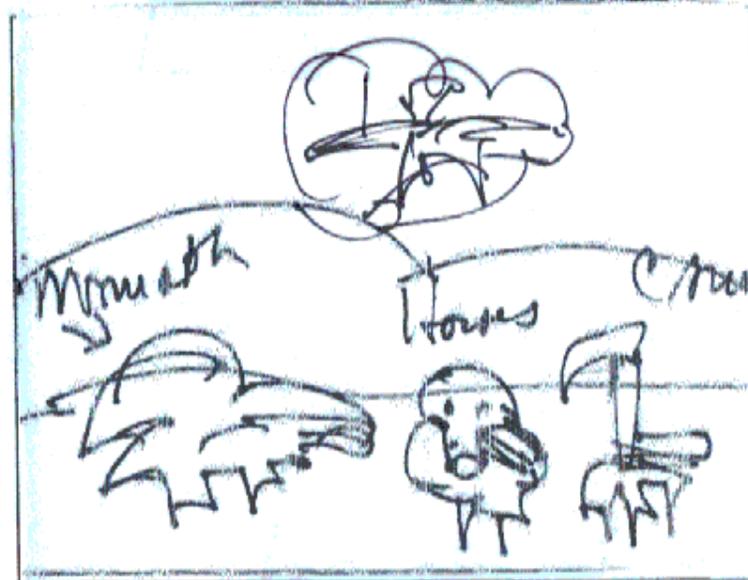


Scene 2 Shot 9

DISSOLVE IN HORSES

NARR: are horses. [We need to add some horse info here.]

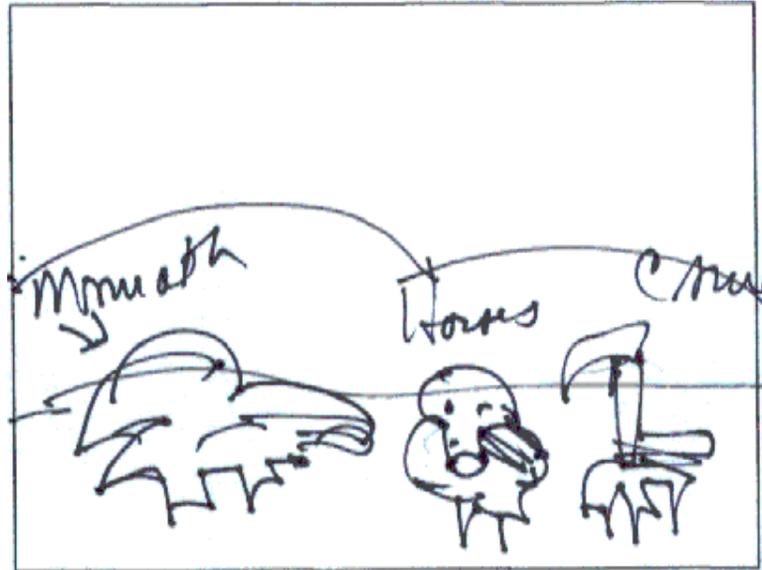
NARR: But, if we walked this area during the Pleistocene we'd also see birds, reptiles, amphibians and carnivores like wolves or possibly saber-toothed cats.



Scene 2 Shot 10

SUPER BIRD FOSSIL OR BONES.

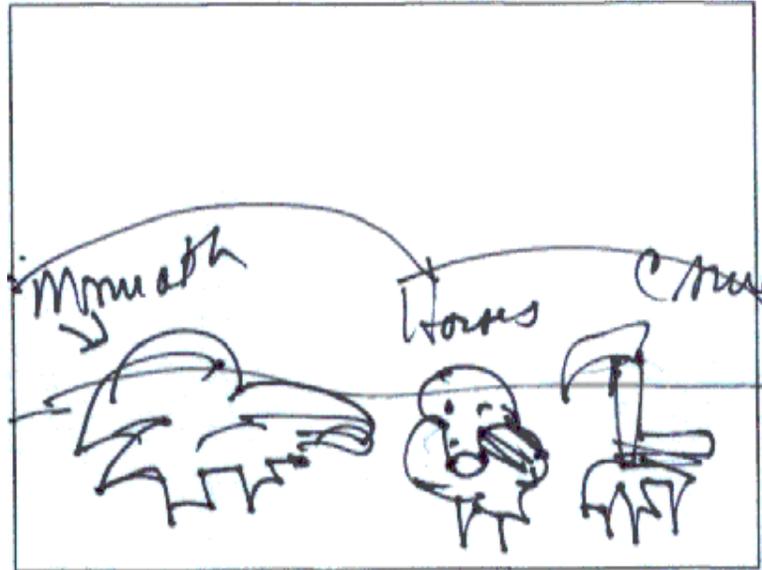
NARR: In general, bird fossils are very rare. Their bones are hollow with thin walls and are fragile. This reduces their weight and is an adaptation for flight. But they get crushed when sediments are deposited on top of them in rivers or streams. And they usually disintegrate with minimal water flow and movement.



Scene 2 Shot 10

SUPER BIRD FOSSIL OR BONES.

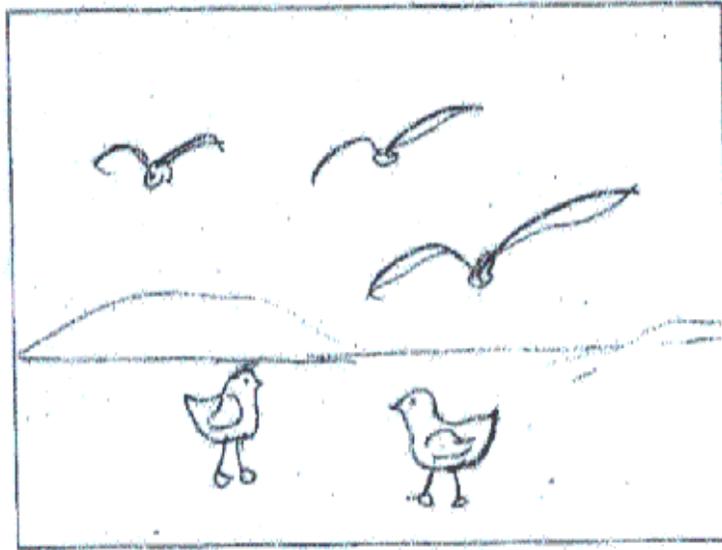
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Scene 2 Shot 11

TAKE AWAY BONES TO
SHOW LANDSCAPE.

NARR: But over 300 bird fossils have been
recovered from Anza-Borrego Desert State
Park®.



Scene 2 Shot 12

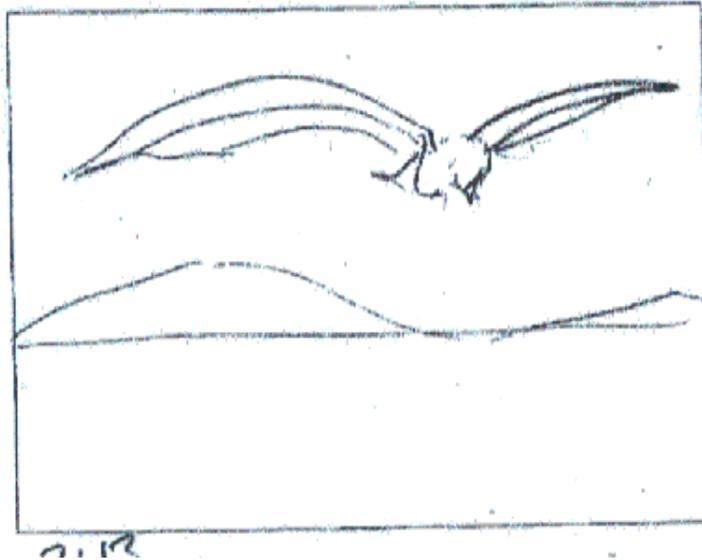
DISSOLVE IN BIRDS AS
THEY ARE MENTIONED

NARR: Water birds are the most common found here. These include ducks, geese and swans, a pelican and an extinct flamingo.

NARR: Like their modern relatives they were migratory and have been found near the locations of rivers and lakes.

NARR: The ground dwelling and nesting birds found here include the extinct Anza turkey, and two species of quail. The abundance and nesting habitats of such ground dwelling birds leads us to believe there were abundant brushland habitats.

NARR: There were raptors, eagles and hawks that also flew over this landscape, but the most amazing bird has a name that translated to the "incredible wind god bird".



Scene 2 Shot 13

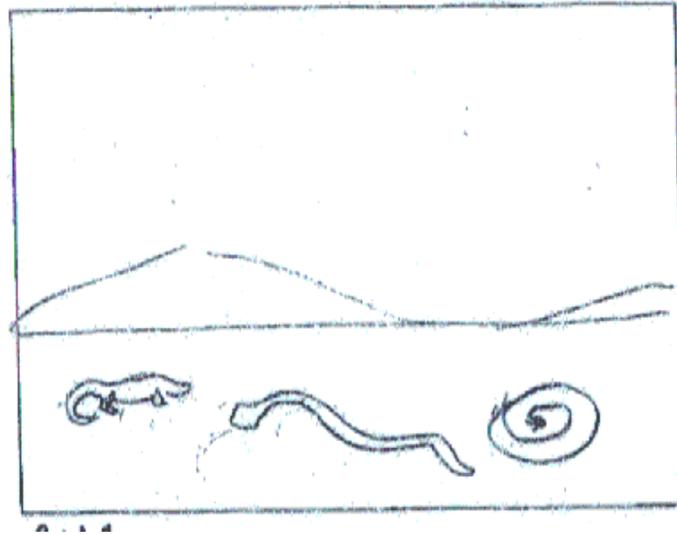
DISSOLVE IN FLYING
RAPTOR ABOVE
LANDSCAPE

THIS IS NOT
REPRESENTED IN THE
MURAL SO WE WILL
HAVE TO BRING IT IN
FROM ANOTHER
SOURCE AND LAY IT
INTO THE LANDSCAPE

This may be a hard image
to find.

NARR: This bird, *Aiolornis incredibilis*, stood four feet tall and probably had a wing span of between 16 and 17 feet. IT WAS THE LARGEST BIRD EVER TO SOAR THE SKIES OF THE NORTHERN HEMISPHERE. *Aiolornis* must have been an impressive sight as it stalked its prey on the ground.

NARR: Possibly some of the prey *Aiolornis* hunted were the many different reptiles found here.

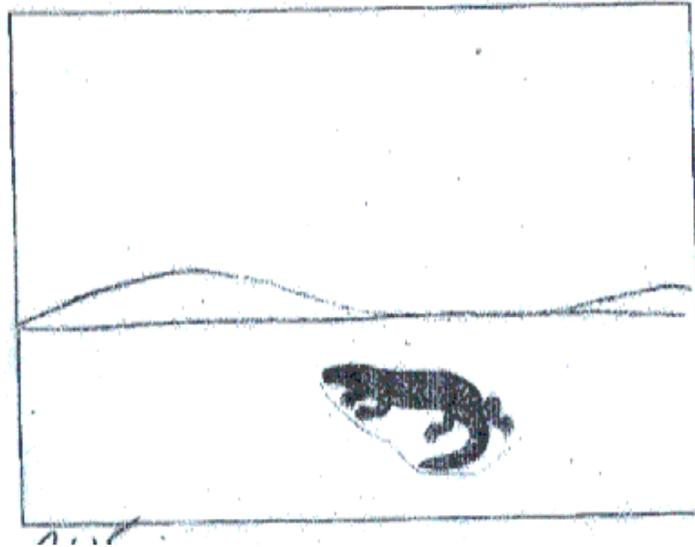


Scene 2 Shot 14

DISSOLVE REPTILES
INTO LANDSCAPE AS
THEY ARE DISCUSSED.
MAY NEED TO
HIGHLIGHT THEM
BECAUSE THEY ARE
SMALL IN THE IMAGE

NARR: Twelve fossil lizard groups and five types
of fossil snakes have been found in Anza-
Borrego

NARR: There is a diverse and rich collection of
lizards. In comparison to other North
America sites of similar age, over twice as
many genera are known from Anza-
Borrego. Many seem to represent sub-
tropical habitats, like the iguana.



Scene 2 Shot 15

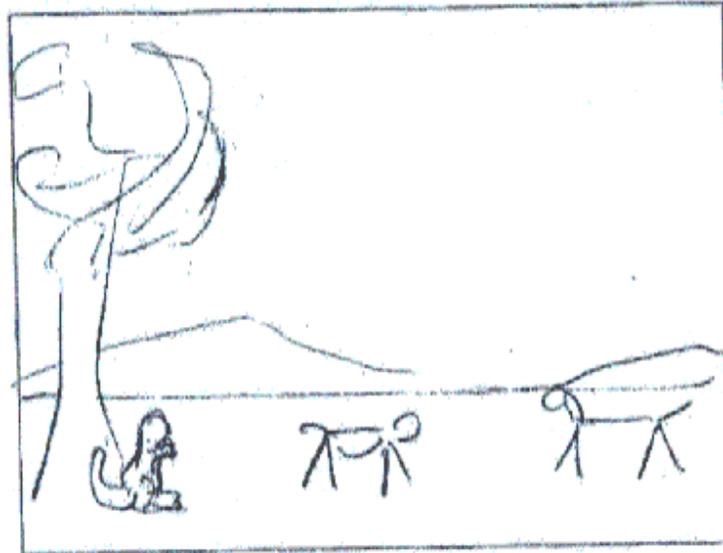
SUPER *HELODERMA* IF
AVAILABLE. IMAGE OR
FOSSIL IF AVAILABLE

NARR: Some lizards, like *Heloderma*, the Gila Monster, have only been found here and no where else in California.

NARR: But of the five varieties of snakes all but one, a garter snake, can be found on the desert floor today.

NARR: Unlike the fossil mammals from Anza-Borrego, most of the fossil lizards and snakes belong to the same genera as those now present in the region. This suggests that the desert reptiles developed in this general area rather than through immigration from outside of the region.

NARR: And rounding out the animals we would see on the plains are the small carnivores.



Scene 2 Shot 16

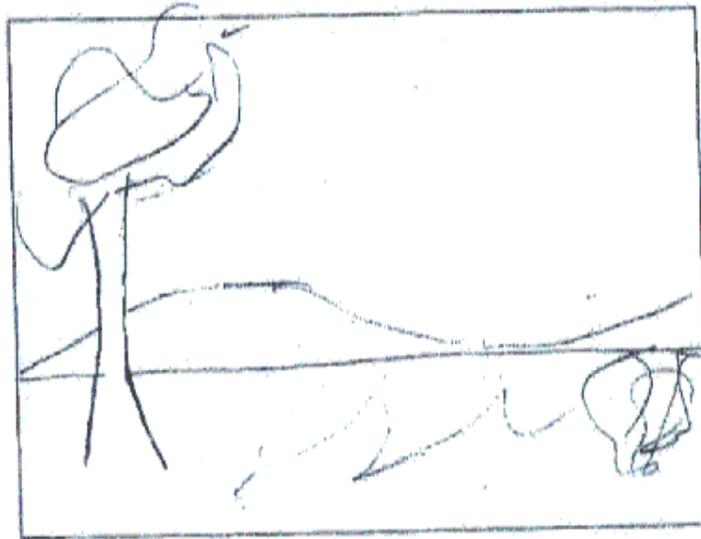
DISSOLVE IN

COYOTES ARE HIDING
IN THE BRUSH SO WE
MAY NEED TO SUPER
IMAGES ABOVE OR
HIGHLIGHT THEM.

HIGHLIGHT THE RIVER
ON THE LEFT AND THE
LAKE IN THE
BACKGROUND AND
THE FOREST ON THE
RIGHT.

NARR: Coyotes, their ancestors, small wolves and extinct cats are the most abundant small carnivores discovered here.

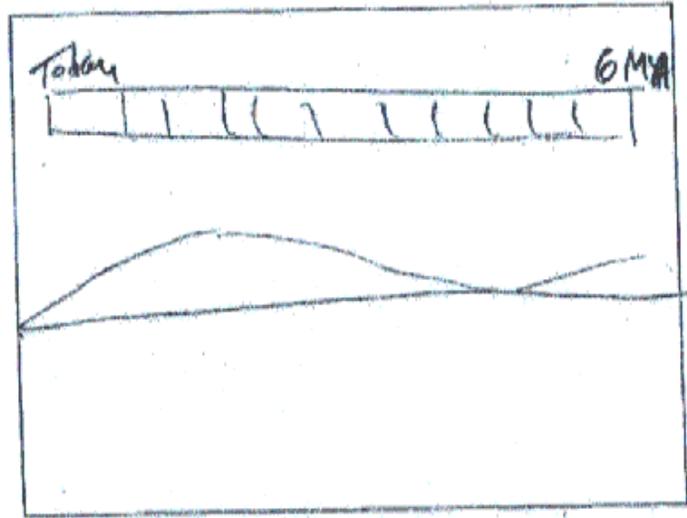
NARR: But if we were to look into the rivers, streams and forests we'd find different animals: bobcats, gray foxes, spotted skunks, weasels, otters, grisons, badgers, ringtails, coatis, raccoons and several types of bears.



Scene 2 Shot 17

FULL PLEISTOCENE
LANDSCAPE

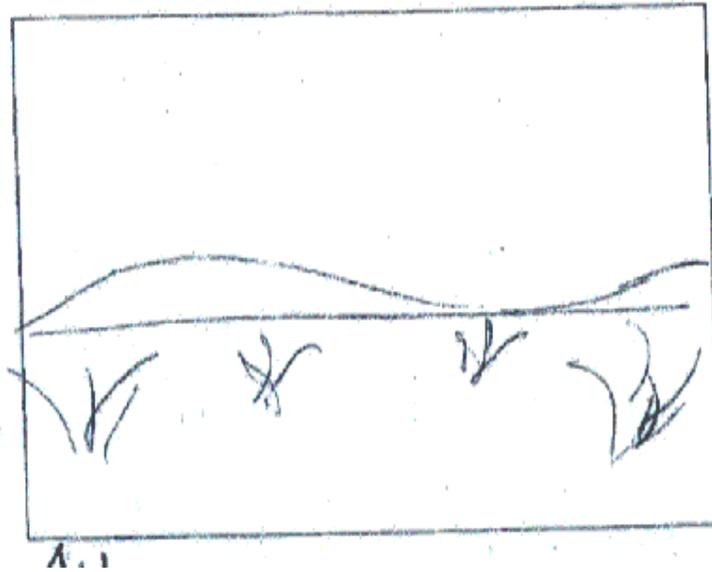
NARR: As we look over the Pleistocene Anza-Borrego landscape we can see that it has given up its record of ancient life and shows us that it is one of the richest records of ancient life found in North America, or anywhere in the world.



Scene 3 Shot 1

SUPER GRAPHIC
EXTENDING TIME LINE
TO 6 MILLION YEARS
AGO

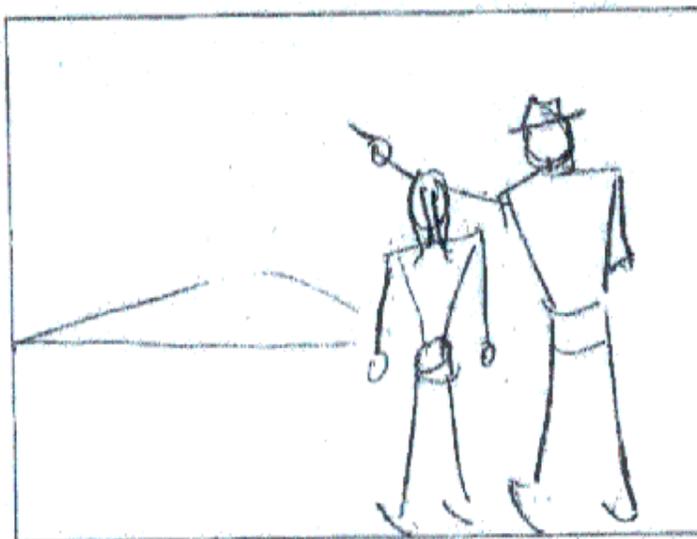
NARR: In fact, here we have a continuous record of
life that starts about _ million years ago
and continues into the past another 5 _
million years, when there was an inland
sea in the valley.



Scene 4 Shot 1

TRANSITION TO
CURRENT DESERT
LANDSCAPE

NARR: Paleontological research and discoveries
over the past 150 or years have shown us
this and much more.



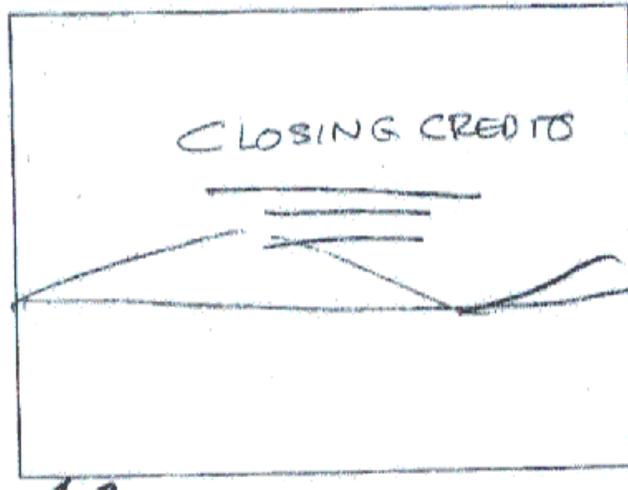
Scene 4 Shot 2

CAMERA DRAWS BACK SO WE SEE THE RANGER AND STUDENT LOOKING OUT OVER THE LANDSCAPE AND HEAR THEM TALKING. RANGER POINTS INTO THE DISTANCE.

RANGER: There was a rich variety of life that lived on the plain. But on the far side of the valley, straight ahead, there was a lake and to the left a river and streams.

STUDENT: And what kinds of animals lived there?

RANGER: Come back tomorrow and we'll talk about the plants and animals that have been discovered in those locations.



Scene 4 Shot 3

CLOSE UP TO
LANDSCAPE AND FADE
TO BLACK.

Music