



BLACK FOREST NEWS

&

PALMER DIVIDE PIONEER



Black Forest's Community Newspaper since 1960

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Severe weather Awareness Week April 13 - 19

(Just in time for April snow!)

National Weather Service
Governor Bill Ritter has proclaimed April 13 through 19 as **SEVERE WEATHER AWARENESS WEEK** in Colorado.

Severe weather communication tests will be conducted

On Tuesday morning, April 15th, from NOAA National Weather Service offices across the state.

All across Colorado, local Emergency Managers/Coordinators, the print and electronic media, schools, hospitals, nursing homes, businesses, and citizens of Colorado are encouraged to take part in their own drills to become fully prepared for the severe weather season.

You are encouraged to help to get the word out regarding severe thunderstorms, and the accompanying dangerous and potentially deadly

lightning, hail, heavy rain, and tornados. During the test times, or anytime during the week, everyone should go through the motions of going to appropriate shelter as if there was a real weather emergency.

This will test the readiness of

all in dealing with the dangers of severe weather.

In 2007, 55 tornados were reported to officials across the state.

Last year we had a sobering reminder with a quick hitting, deadly tornado in Holly, Colorado in Prowers County.

In addition, scores of thunderstorms will bring potentially deadly lightning, high winds, large hail and flooding rain. NOAA's National Weather Service in Pueblo uses NOAA

All Hazards Weather Radio to provide up-to-the-minute warning information for 19 of our 22 Southern and central Colorado counties.

Also, NOAA's National Weather Service in Pueblo has a Web site: <http://weather.gov/pueblo>

Public phone numbers for the National Weather Service in Pueblo are:

- if in or near Colorado Springs
719-573-6846
- if in or near Pueblo
719-948-3371
- if in or near Alamosa
719-589-3232



Black Forest Fire and Rescue Staff and Volunteers raised funds for St. Baldrick's Childhood Cancer Assistance program. Over \$1500 was garnered and EMT Jamie Haney, Chief Ury, Deputy Chief Payne and Volunteer Trevor Reeves had their heads shaved in support of cancer-stricken kids. Mikel Gabriel and Scotty Yeldell helped organize the event. See back page for more photos. *Photos by Judy von Ahlfeldt.*

12,000 acres on Middle Bijou Creek Ranch protected by Conservation Easement

True partnership and commitment to land stewardship was the driving force behind three local organizations, one local unit of government, and one federal agency coming together to preserve more than 12,000 acres of some of Colorado's most desirable agricultural and majestic landscapes.

Recently, the Trust for Public Land (TPL), Great Outdoors Colorado (GOCO), Colorado Cattlemen's Agriculture Land Trust (CCALT), Arapahoe County, and the Natural Resources Conservation Service (NRCS) purchased a conservation easement that would protect the wildlife habitat and grand views encompassed on the Middle Bijou Creek Ranch.

This project is the largest easement ever funded through the NRCS' Farm and Ranch Land Protection Program (FRPP).

NRCS' Farm and Ranch lands Protection Program pro-

vides matching funds to help purchase development rights to keep working farms and ranch lands in agricultural use. "It's an important program," Finstad goes on to say. "It's probably one of the most important we have here in Colorado because Colorado is one of the fastest growing states population wise as numerous cities continue to be sited within the top 10 places to live in the US.

Many of those cities are along the Front Range which contains prime agricultural lands.

Statistics have shown that agricultural lands were being converted at a rate of more than 120,000 acres per year and that was more than 10 years ago."

The Middle Bijou Creek Ranch contains 20 square miles of rural open space and provides habitat for numerous plant communities including 93 native plant species, countless wildlife like the endangered western burrowing owl, and is also an important habitat for the

northern leopard frog.

According to a recently published article about this project, Chris West, Executive Director of the CCALT said, "This is what conservation should look like."

The Natural Resources Conservation Service is the primary federal source of technical and financial assistance to private landowners for natural resources conservation.

The Agency's mission is to help people help the land and with more than \$200,000,000 invested in the conservation of Colorado's natural resources and countless hours of hands on technical assistance provided to Colorado landowners and producers over the past five years, the Agency continues to realize its vision of ensuring productive lands and a healthy environment.

For additional information about NRCS or the Farm and Ranchland Protection Program, please visit www.co.nrcs.usda.gov.

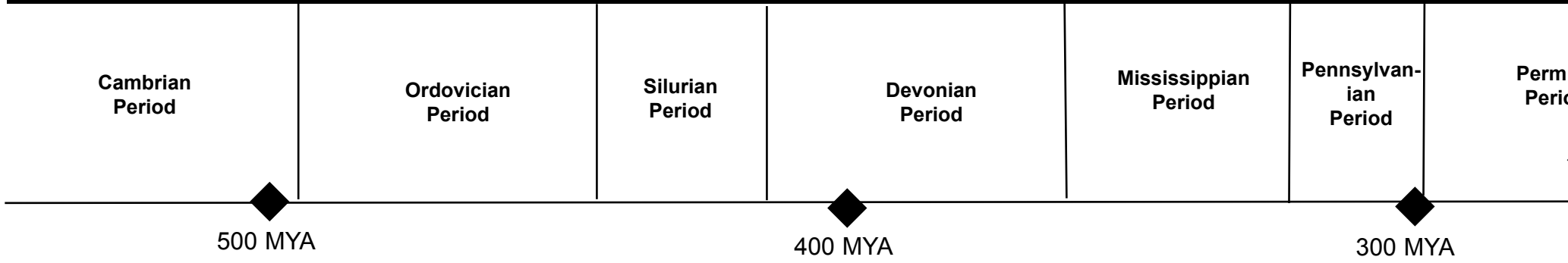
Corral Bluffs OHV Park Planning

The second of three meetings on Corral Bluffs OHV Park to be held Tues., April 15th, 7 p.m. but location was uncertain as of deadline April 8. It may be in Falcon per information given to the Parks Advisory Board on April 7- originally scheduled for Commissioners' hearing room at 27 E. Vermijo.

Contact Tim Wolken, Director of El Paso County Parks, for updated information: timwolken@elpasoco.com or call 520-6981.

Corral Bluffs and the K-T Boundary

PALEOZOIC ERA



(Geologic Time Line adapted from "Ancient Denvers"- Website of Denver Museum of Nature and Science. www.dmns.org)

Thanks to Kirk Johnson and Beth Ellis of the Denver Museum of Nature and Science for technical assistance for this Special Section.

by Judith P. von Ahlefeldt
Black Forest News

Fossils happen - but not very often. The can be formed in water and discovered eons later in limestone, the famous Florissant Fossil beds are the result of ancient volcanic ash falls, tar pits, and amber, trapped ancient creatures and preserved them for modern scientists to discover - pieces in the puzzle of Earth's life history.

Throughout the American West fossils formed in swamps and rivers along coasts of the receding inland sea, as the Cretaceous Period drew to a close, mass extinctions took place, and flowering plants and mammals strengthened their tenure on Earth.

Early Tertiary Period rocks are rare along the Front Range - massive erosion by the Platte and Arkansas Rivers, creating huge valleys home to Pueblo, Colorado Springs, and Denver stripped off Tertiary rocks, if they were deposited at all.

The Raton area, Palmer Divide, and Cheyenne Ridge (the Gangplank), all divides separating modern rivers, are where Tertiary rocks are found now.

The Denver Basin is a massive sag in the earth's crust filled with sediments deposited at the edge of the great inland sea that covered what we now call the Great Plains.

Sediment from eroding mountains to the southwest were layered in the Denver Basin during the Late Cretaceous and early Tertiary Periods, forming water-bearing rock layers of the Denver Basin east of the Front Range.

From the 1950s through 1980s, as the USGS mapped Front Range Quadrangles, and the State of Colorado developed ground-water rules, the Denver Basin strata were named the Laramie-Fox Hills, Arapahoe, Denver, and Dawson - nomenclature which generally characterized the aquifer layers based on what was known at the time.

Since the early 1990s, the Denver Museum of Natural History, with other partners, has been studying the Denver Basin, and a rich fossil history and fine-tuning of geologic structure is emerging.

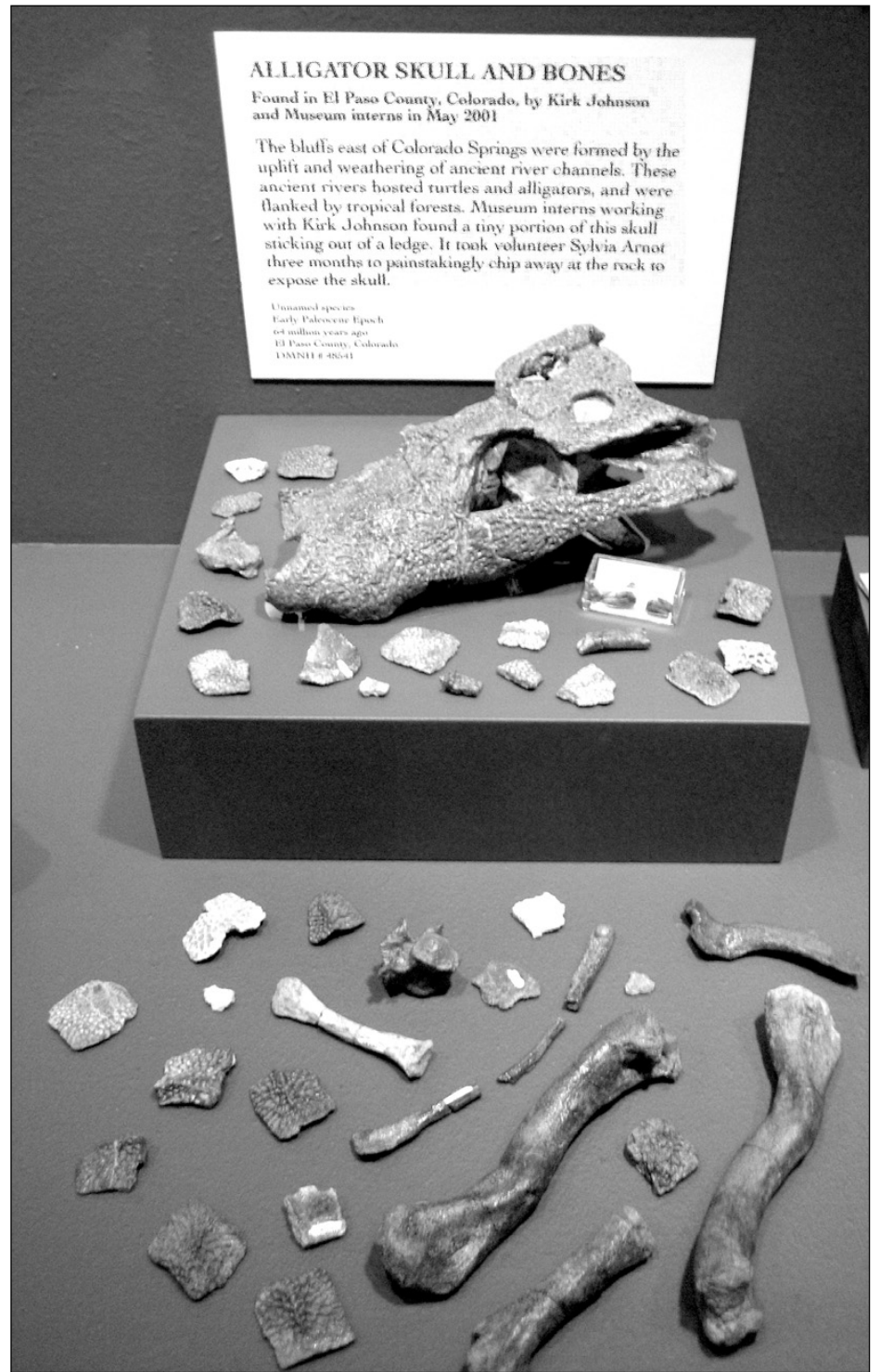
Denver Basin rocks are relatively young (as geologic time goes), and were laid down during a fairly short period spanning the K-T boundary - a time of major extinction between the Mesozoic and Cenozoic Eras (see table above).

Corral Bluffs is one of only 104 sites in the world where the K-T Boundary, and associated rocks are accessible. It is one of the three best K-T boundary sites in Colorado.

Studies began about a decade ago under



An alligator skull from Corral Bluffs, Jimmy Camp reservoir area, (lower right) was found by Denver Museum workers in a dig a few years ago. Photo courtesy of Dr. Kirk Johnson, Palentologist, Chief Curator of Special Collections, Denver Museum of Nature and Science.

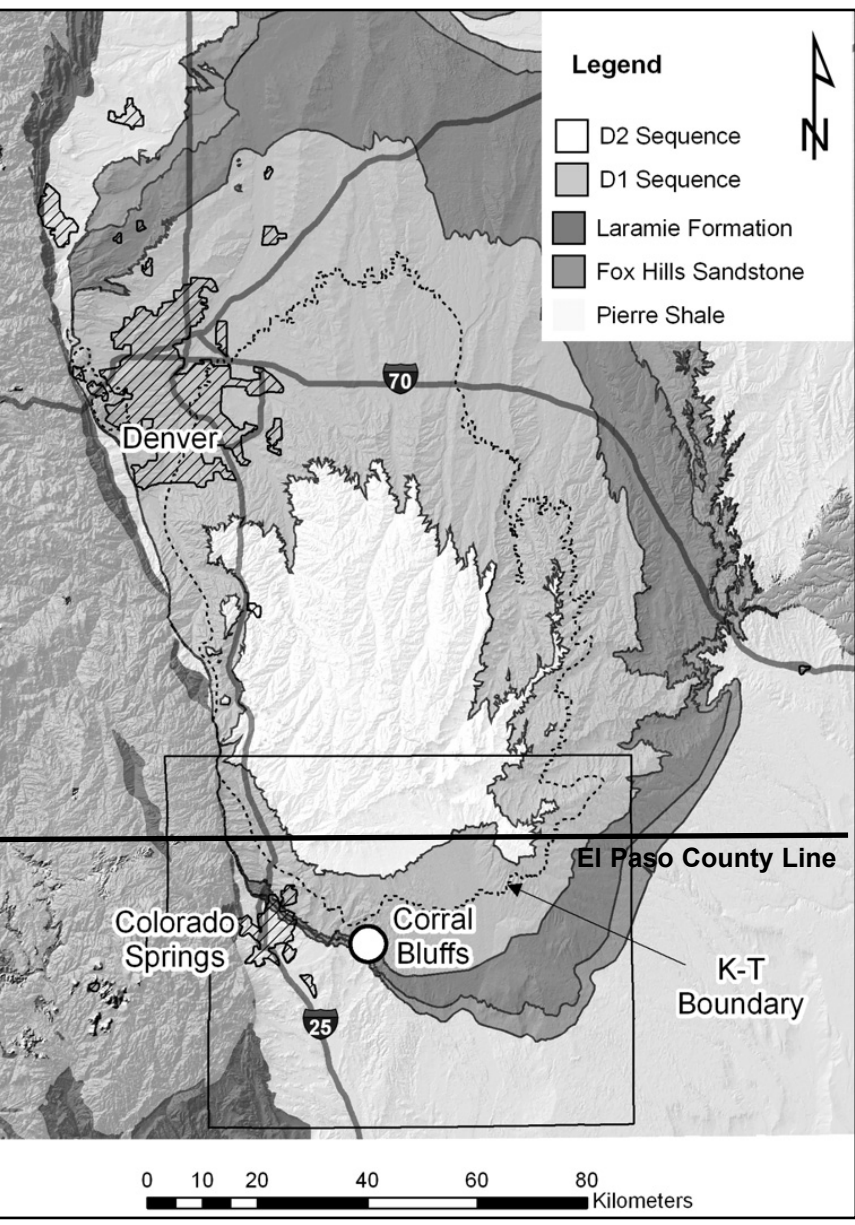
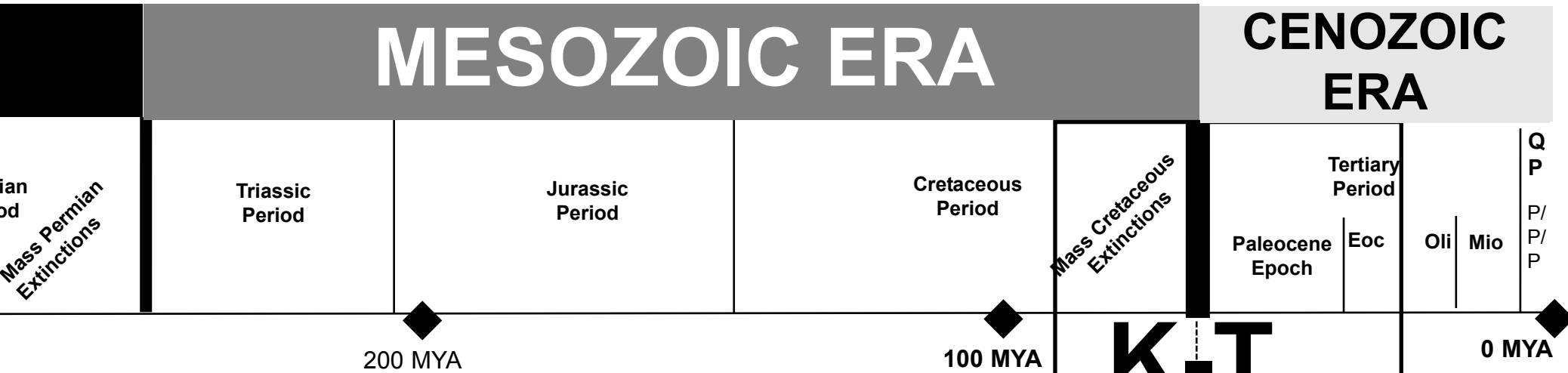


An alligator skull and partial skeletons were found at the Jimmy Camp site at Corral Bluffs by Dr. Kirk Johnson and students and staff from the University of Colorado in 1999-2000. Johnson has worked on Denver Basin paleontology for 17 years and served as the team member from the Denver Museum in the Denver Basin Project, a multidisciplinary research effort by many cooperating agencies, since 1996.

Fossils found in the main rock units of Corral Bluffs and Jimmy Camp Creek Valley are of terrestrial plants and animals of the Late Cretaceous Period and early Paleocene Epoch and were deposited under terrestrial conditions. Fossils include leaf compressions, petrified and carbonized wood, bones and teeth of mammals and reptiles. New fossils are continually being exposed by erosion and Johnson argues that it is "not sufficient to simply sweep the area once and consider the work done."

Photo courtesy of Dr. Kirk Johnson, Paleontologist and, Chief Curator of Special Collections, Denver Museum of Nature and Science.

... - a Needle in the Haystack of Time



The Tertiary Period includes the Paleocene, Eocene, Oligocene, and Miocene Epochs which account for all but about 1.8 million years of the 65.5 million years of Tertiary time.

K-T
65.5 MYA

Denver Basin rocks

QP means Quaternary Period which includes the Pliocene & Pleistocene Epochs and the Present

Fox Hills Sandstone
Laramie Formation
(mainly below the valley floor)

Dawson Formation
Denver Formation
Arapahoe Conglomerate
(exposed in the cliffs)



This map shows the geology of the Denver Basin, stretching from Fort Collins to Colorado Springs, and from the Front Range to Limon. Sedimentary rocks in the Denver Basin are stacked from oldest to youngest. This map details layers deposited between about 20 and 55 million years ago.

The Pierre Shale (light shaded area), beneath and around the edge of the Denver Basin, was deposited when Colorado was under an inland Cretaceous sea and the landscape was flat.

Above the Pierre Shale is the Fox Hills Sandstone, formed by the sandy beach along the receding sea. The beach was replaced by a swamp, today's Laramie formation, which contains a lot of coal.

Next in the stack is the D1 Sequence, which is a combination of the Arapahoe conglomerate, the Denver Formation and the Dawson Arkose.

These rocks were deposited as the modern Rocky Mountains uplifted. The light colored area in the very center of the basin are the D2 Sequence, also called the Dawson Arkose, which today is covered by trees in the Black Forest.

The dotted line in the center of the D1 sequence is a model of where the K-T boundary would appear if it were on the surface. The K-T boundary is the point in time when the dinosaurs went extinct. Although the map gives clues about where to look for the K-T boundary, only four accessible sites have been found in the Denver Basin.

One of these extremely significant sites is along Jimmy Camp Creek in Corral Bluffs. The K-T boundary is important because it is the only point in time in the history of the earth that can be located on every continent. It holds many clues that show how ecosystems react to catastrophic events, and help us better understand our planet.

This map is from the article "Earth History along Colorado's Front Range: Salvaging geologic data in the suburbs and sharing it with the citizens," authored by Robert G. Reynolds, Kirk R. Johnson, Beth Ellis, Marieke Dechesne, and Ian M. Miller, all of the Denver Museum of Nature & Science. It was published in the December 2007 issue of GSA Today, published by the Geological Society of America.

the direction of Dr. Kirk Johnson of the Denver Museum and have been mostly in the area of the planned Jimmy Camp Reservoir, which will flood the strata above the K-T boundary.

Johnson wrote to the City of Colorado Springs and Bureau of Reclamation in 2007 asking them to consider alternate sites for the reservoir because of the unique paleontological resources. And it is unique.

The Denver Basin contains Tertiary rocks which are rare along the Front Range to begin with. The Corral Bluffs escarpment, with its exceptional exposures of early Paleocene rocks 65.5-64 million years old is one of a kind in the County, and in the Denver Basin. According to Kirk Johnson, sites with good exposures of the K-T boundary are extremely rare worldwide.

Ecologically Corral Bluffs is known as a "scarp woodland" - examples of which are found sparsely throughout the Great Plains, with woody vegetation ranging from limber pine, to ponderosa pine, to pinyon pine and juniper, depending on the location.

Scarp woodlands are especially interesting for modern botanists because they often contain relictual vegetation which has persisted though climate change of the past 5000-7000 years and escaped the ravages of fires which removed woody vegetation from middle of the continent in the past 9,000 years.

Scarp woodlands occur on "badland" outcrops, such as Corral Bluffs, and many of the larger ones are protected such as Theodore

Roosevelt National Monument in North Dakota, the Missouri Breaks in Montana, Pawnee Buttes, and similar topography on the Cimarron and Comanche National Grasslands.

Corral Bluffs is, and has always been, in private ownership. The bluffs are not near main roads, and have received little study by paleontologists, archaeologists, or botanists. The steep topography and harsh, dry environment, is home to adapted plants and animals in modern times.

For over 20 years, the portion of Corral Bluffs intersected by County Road 94 has been used as a landfill.

At the time the landfill use was approved by the County, little was known about the geology, archaeology or paleontology of the area and the steep relief and soft rocks were useful for a landfill operation.

Much more remains to be learned about earth's history, and smaller, less well-known sites often contain valuable information.

The dearth of information about Corral Bluffs' archaeology, paleontology, and ecology, as well as its role in biodiversity of El Paso County and questions as to appropriate land uses have come into sharp focus with the recent fast-track efforts of El Paso County to develop an Off-Highway Vehicle (OHV) Park on over 500 acres of prime K-T boundary site.

For more information on the land use issues see elpasoco.com and savecorralbluffs.com.