

PRE-HISTORIC



ANIMALS OF PENNSYLVANIA



Did you know that there are many types of animals (other than dinosaurs) that paleontologists study? Pennsylvania had many diverse and interesting pre-historic animals. Some lived thousands of years ago, but some lived millions of years ago. Check out these pre-historic animals from Pennsylvania's past!

1

Eurypterids



Image Credit: Jaime Chirinos

A relative to our modern-day horseshoe crab, sea scorpions thrived in the oceans, brackish, and freshwater during the Ordovician through Permian Periods with their peak being during the Silurian Period (443.8 million years ago to 419.2 million years ago). They were arthropods, invertebrate animals with a hard exoskeleton, segmented body, and paired jointed appendages. Today's arthropods include not only horseshoe crabs, but also insects, spiders, crabs, and today's land-dwelling scorpions. Most eurypterids

were 8 inches in length or smaller, but varieties up to 8.2 feet long did exist. Most of Pennsylvania's eurypterid fossils are around 1 foot long or less in size. They were some of the largest predators living during their time.

One of the modern shark's early ancestors is xenacanthus which lived in Pennsylvania from the Late Devonian through Triassic Period (400 to 202 million years ago). Xenacanthus lived in freshwater and ranged from 3-6 feet in length. With the possibly venomous head spike giving it its name, the Unicorn Shark's back fin was long and ran down the entire length of the spine. Being cartilaginous (mostly made of soft tissue, like that in your nose and ears), like the modern shark, xenacanthus has been identified from its fossilized teeth and spines.

2

Xenacanthus



Image Credit: Wiki Commons

3

Trilobites

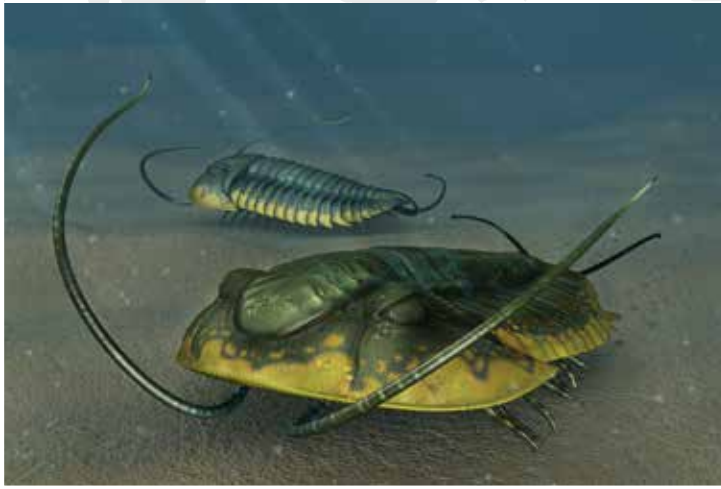


Image Credit: Onikaizer

Existing in the oceans for almost 300 million years from the Cambrian Period to the Permian extinction, Trilobites were one of the most prolific of the early animals. They were found in many geographic locations and ranged in size widely from 28 inches to the size of a ground pepper flake. Trilobites had varied lifestyles. Some crawled the ocean floor as predators, some swam and filter fed on plankton, yet others crawled onto land. The trilobite, *Phacops rana* (now accurately known as *Eldredgeops rana*), was selected as the Pennsylvania state fossil in 1988. *Eldredgeops* could grow to approximately 6 inches long, although most were only an inch or two, with a segmented thorax (mid-body) and had large frog-like eyes.

4

Dunkleosteus

Living in the Late Devonian Period from about 382-358 million years ago, *Dunkleosteus* are one of the largest pre-historic fish. At about 28 feet in length (approximately the length of a school bus) and weighing 4 tons, this carnivore was heavily armored around its head, but the body was cartilaginous, made of soft-tissue, similar to modern sharks. Its hinged jaw was incredibly powerful but had no teeth. Sharp-edged, self-sharpening, bony blades extending from the hinged jaw effectively chomped straight through bone like huge scissors. *Dunkleosteus* had an early version of a spinal cord, called a notochord, and featured pectoral fins.



Image Credit: RJ Palmer

5 Mastodons



Image Credit: Sergio De la Rosa Martinez

This extinct line of proboscideans lived from 22 million to 10,000 years ago and roamed throughout most of North and Central America. Standing at approximately 9 feet at the shoulder, this large, very distant relative of the modern elephant was a browser and grazer eating trees, twigs, and

shrubs. Their teeth could shear and cut vegetation easily. They mostly lived in wetlands, woodlands, and forests. They were mainly browsers and so could live near other ancient elephants like the grassland-dwelling mammoths without fighting over food.

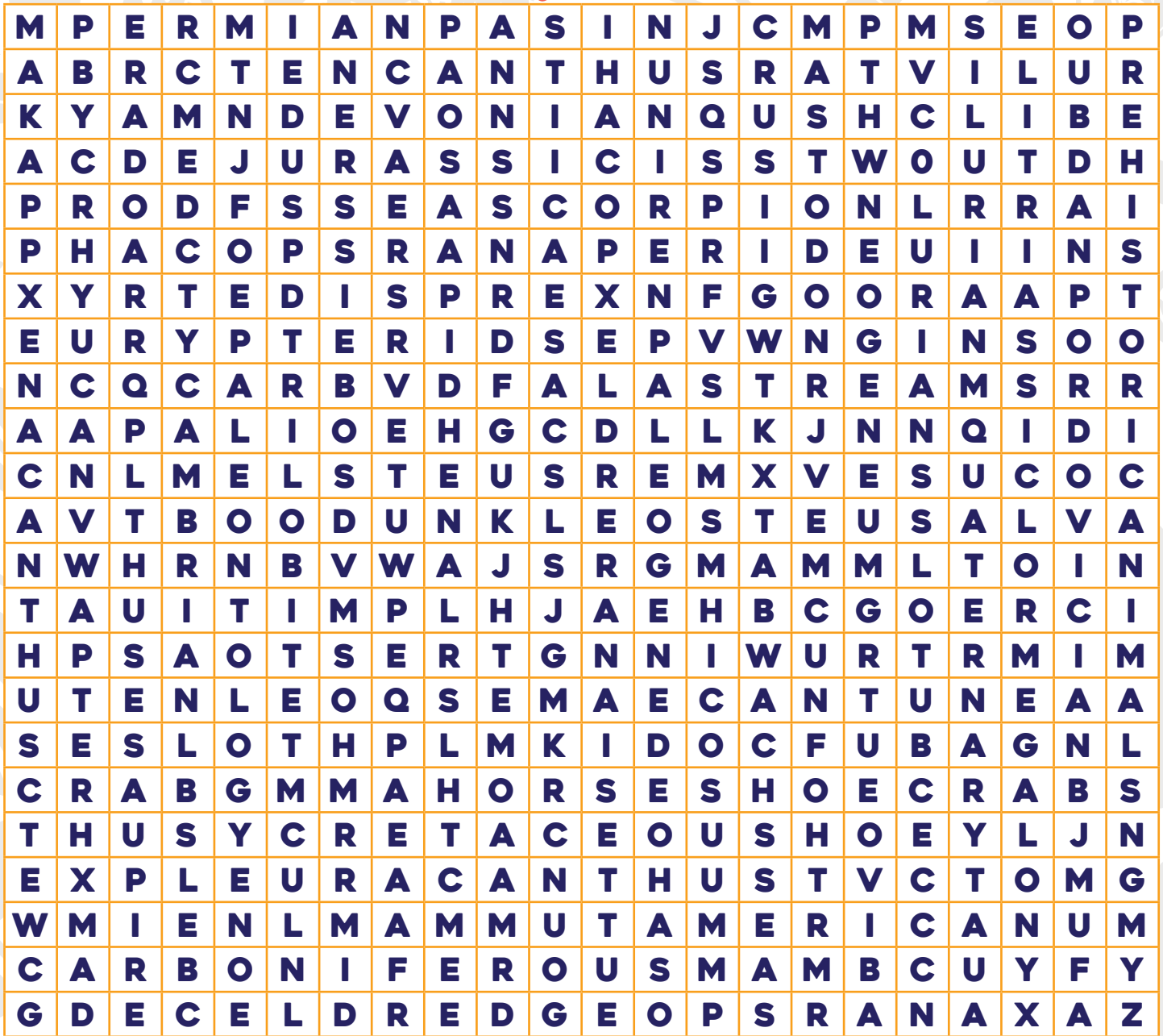
6 Giant Ground Sloths

Although considered mid-sized for a giant ground sloth, *Megalonyx* stood 9.8 feet and weighed up to 2,200 pounds, dwarfing its modern relatives. At this height it could potentially be standing on the ground and look in the second-floor window of a house. Living from 2.4 million ago to 11,000 years ago, *Megalonyx* went extinct in the Quaternary Period. It inhabited most of the continental United States. With a blunt snout, peg-like teeth, and three massive claws on its forelimbs, *Megalonyx* easily stripped trees of limbs and leaves for a meal.



Image Credit: Brian Engh

Paleontology Word Search



CAMBRIAN
 CARBONIFEROUS
 CRETACEOUS
 ELDREDGEOPS RANA
 EURYPTERIDS
 EXPLEURACANTHUS
 CTENCANTHUS
 DEVONIAN
 DUNKLEOSTEUS

HORSESHOE CRAB
 JURASSIC
 MAMMUT AMERICANUM
 MASTODON
 MEGALONYX
 NEOGENE
 ORDOVICIAN
 PALEOGENE
 PALEONTOLOGY

PERMIAN
 PREHISTORIC ANIMALS
 QUATERNARY
 SEA SCORPION
 SILURIAN
 SLOTH
 TRIASSIC
 TRILOBITE
 XENACANTHUS

Word Search Answer Sheet

M	P	E	R	M	I	A	N	P	A	S	I	N	J	C	M	P	M	S	E	O	P
A	B	R	C	T	E	N	C	A	N	T	H	U	S	R	A	T	V	I	L	U	R
K	Y	A	M	N	D	E	V	O	N	I	A	N	Q	U	S	H	C	L	I	B	E
A	C	D	E	J	U	R	A	S	S	I	C	I	S	S	T	W	O	U	T	D	H
P	R	O	D	F	S	S	E	A	S	C	O	R	P	I	O	N	L	R	R	A	I
P	H	A	C	O	P	S	R	A	N	A	P	E	R	I	D	E	U	I	I	N	S
X	Y	R	T	E	D	I	S	P	R	E	X	N	F	G	O	O	R	A	A	P	T
E	U	R	Y	P	T	E	R	I	D	S	E	P	V	W	N	G	I	N	S	O	O
N	C	Q	C	A	R	B	V	D	F	A	L	A	S	T	R	E	A	M	S	R	R
A	A	P	A	L	I	O	E	H	G	C	D	L	L	K	J	N	N	Q	I	D	I
C	N	L	M	E	L	S	T	E	U	S	R	E	M	X	V	E	S	U	C	O	C
A	V	T	B	O	O	D	U	N	K	L	E	O	S	T	E	U	S	A	L	V	A
N	W	H	R	N	B	V	W	A	J	S	R	G	M	A	M	M	L	T	O	I	N
T	A	U	I	T	I	M	P	L	H	J	A	E	H	B	C	G	O	E	R	C	I
H	P	S	A	O	T	S	E	R	T	G	N	N	I	W	U	R	T	R	M	I	M
U	T	E	N	L	E	O	Q	S	E	M	A	E	C	A	N	T	U	N	E	A	A
S	E	S	L	O	T	H	P	L	M	K	I	D	O	C	F	U	B	A	G	N	L
C	R	A	B	G	M	M	A	H	O	R	S	E	S	H	O	E	C	R	A	B	S
T	H	U	S	Y	C	R	E	T	A	C	E	O	U	S	H	O	E	Y	L	J	N
E	X	P	L	E	U	R	A	C	A	N	T	H	U	S	T	V	C	T	O	M	G
W	M	I	E	N	L	M	A	M	M	U	T	A	M	E	R	I	C	A	N	U	M
C	A	R	B	O	N	I	F	E	R	O	U	S	M	A	M	B	C	U	Y	F	Y
G	D	E	C	E	L	D	R	E	D	G	E	O	P	S	R	A	N	A	X	A	Z

CAMBRIAN
 CARBONIFEROUS
 CRETACEOUS
 ELDREDGEOPS RANA
 EURYPTERIDS
 EXPLEURACANTHUS
 CTENCANTHUS
 DEVONIAN
 DUNKLEOSTEUS

HORSESHOE CRAB
 JURASSIC
 MAMMUT AMERICANUM
 MASTODON
 MEGALONYX
 NEOGENE
 ORDOVICIAN
 PALEOGENE
 PALEONTOLOGY

PERMIAN
 PREHISTORIC ANIMALS
 QUATERNARY
 SEA SCORPION
 SILURIAN
 SLOTH
 TRIASSIC
 TRILOBITE
 XENACANTHUS