

Extinct Beasts

Packet by Bruce Arthur

Tossups

1. One theory about this animal's extinction links it to an increase in the sea urchin population, which may have been caused by the over-hunting of otters. This animal's feeding habits caused roots and stem to wash ashore, suggesting that it ate only parts of the kelp plant. This animal was named for the chief naturalist to explorer Vitus Bering, and its closest relative may be the dugong. Apparently unable to submerge or walk on land, it spent its entire life floating. For 10 points, name this extinct relative of the manatee that lived in the Arctic Pacific.

ANSWER: **Stellar's Sea Cow**

2. A remnant of this item that has survived to the present day is called the Barnes Cap. This object may have undergone an oscillation in size that resulted in the "binge-purge" effect that drive the Dansgaard-Oeschger event. This object created the Traverse Gap, which later became the source of the Warren River. To the west, this object was bordered by a similar object called the Cordillerian. King's County, New York is found on a massive terminal moraine left behind by this object, Long Island. For 10 points, name this massive sheet of ice that covered eastern North America during the last Ice Age.

ANSWER: **Laurentide Ice Sheet**

3. In paleoart, the dinosaur Tenontosaurus is almost always depicted in the presence of members of this other group of dinosaurs. Recently discovered members of this group include Rahonavis, and a large Romanian species from this group named Balaur had an extra toe. A member of this dinosaur family was the protagonist of the only novel written by Paleontologist Robert Bakker. The largest dinosaur in this group is named for the state of Utah. All members of this group of dinosaur had feathers, which they may have used for "stability flapping" while climbing onto their prey. For 10 points, name this group of dinosaurs famous for their sickle-shaped toe claws, whose most famous member has a name beginning with "Veloci-".

ANSWER: **raptors** [accept: **Dromaeosaurs** or **Dromaeosauridae**. Prompt on any of the following: Theropods, Coelurosaurs, Maniraptors, Deinonychosaurs]

4. Nicolaus Steno was the first to properly identify the fossilized teeth of this animal, which were previously believed to be the "tongue stones" of snakes or dragons. Bashford Dean became the first scientist to describe this animal in 1909, incorrectly estimating it to be 98 feet long. This animal is largely known from the remains of its teeth, and many museums prominently display models of its massive jaw. This animal may have hunted early whales and is believed to be closely related to the Great White Shark. For 10 points, name this apex marine predator from the Cenozoic Era, a massive shark whose serrated teeth can measure over 7.1 inches in diagonal length.

ANSWER: **Megalodon** [prompt on sharks]

5. One dinosaur discovered in this country was named “strange ankle lizard”, or *Xenotarsosaurus*, and was an abelisaurid predator from the Late Cretaceous. More famous dinosaurs discovered here include *Saltasaurus*, *Mapusaurus*, and *Riojasaurus*. One candidate for the largest dinosaur of all time is a gigantic titanosaur named for this country and may have been preyed upon by *Giganotosaurus*. Another predator discovered in this country is known for its short face and bull-like horns, *Carnotaurus*. Many dinosaurs found in this nation were discovered by Paleontologist Jose Bonaparte. For 10 points, name this nation home to Patagonia.

ANSWER: **Argentina**

6. The *populator* species of this animal was the largest and lived the furthest south, where it displaced a metatherian that had convergently evolved to resemble this creature. Over 27 skeletons of this predator have been recovered from the Talar Tar Seeps of Peru. Recent research suggests that this animal had a very stocky build, likely specialized in hunting larger animals, and may have wrestled its prey to the ground. This animal could open its mouth 130 degrees and it is thought that it killed by slicing the jugular vein. For 10 points, name this extinct big cat that terrorized North America with its massive fangs.

ANSWER: **Smilodon** or **Saber-Tooth Tiger** [accept **Saber-Cats** from Canadians]

7. This dinosaur was first studied by Evgeny Maleev, who mistook it for a giant turtle. Smaller relatives of this coelurosaur dinosaur, classified as part of its namesake family, include Beipiaosaurus, Nothronychus, and Segnosaurus. Many recent dinosaur documentaries depict this Late Cretaceous dinosaur battling with the predator Tarbosaurus. This dinosaur likely had a large potbelly it used for fermenting the plant matter it ate, despite the fact that it evolved from meat eaters. For 10 points, name this herbivorous theropod dinosaur that most likely used its 3.5 foot claws for gathering plants.

ANSWER: **Therizinosaurus**

8. Ancient Polynesians bred a now-extinct variant of this animal called the Kuri. The Salish Indians of the Pacific Northwest bred a type of this animal for wool used to make blankets. Many modern variants of this animal are descended from a now-extinct kind found in Ancient Greece called the Molossus. Attempts by the Soviet Union to breed these animals resulted in the abandoned “Moscow Water” variety. One extinct variant of this animal, the Cubano, was bred by the Spanish to track escaped slaves. Extant varieties of this animal include the Kuvasz, the Spitz, and the Shiba Inu. For 10 points, name this domesticated carnivore, who according to a popular children’s toy says “woof”.

ANSWER: **Dog** or *Canis lupus familiaris*

9. Thomas Jefferson nicknamed a wheel of cheese given to him in 1802 after this animal. The pygmy versions of this animal, found on the outer Channel Islands of California, likely owe their extinction, in part, to rising sea levels. Cave drawings confirmed that these animals had a domed hump on top of their heads, which grew as they aged. Intact food was discovered in the stomach of one of these animals named Lyuba. Mummified remains of this animal are frequently discovered in Siberia, leading to the hope that they may soon be cloned. For 10 points, name this Ice Age giant elephant-like creature.

ANSWER: (Woolly) **Mammoth**

10. This animal was so common in the Maastrichtian that 47 complete or partial skulls were found in the Hell Creek Formation from 2000-2010. This ornithischian is the state fossil of South Dakota and the official dinosaur of Wyoming. This dinosaur is more closely related to Centrosaurus than to Chasmosaurus, and it comes in *horridus* and *prosus* species. This herbivore was one of the last to evolve during the Late Cretaceous. Scannella and Horner recently proposed that this dinosaur was the juvenile stage of *Torvosaurus*, leading to inaccurate media reports that ceratopsian never existed. For 10 points, name this dinosaur with three horns.

ANSWER: **Triceratops**

11. Eugene Dubois discovered one famous specimen of this hominid, while another famous specimen was discovered by the Swede Johan Andersson, after he allegedly told his workers “here is primitive man, now all we have to do is find him!”. It is increasingly accepted that *Homo ergaster* was a sub-population of this hominid, which would make this hominid the first to use Acheulean tools. *Homo floresiensis* likely evolved as a dwarf version of this hominid, which in various parts of the world is called Turkana boy, Java man and Peking man. For 10 points, name this human ancestor whose name translates as “upright man”.

ANSWER: **Homo erectus**

12. Johannes Reinhardt was the first naturalist to correctly classify this animal, on the basis that it lacked the vomer and septum bones in its nose. This member of the subfamily Raphinae shared its habitat with the smaller Red Rail, with which it is sometimes confused. A famous painting of this animal is named for George Edwards. This animal was nicknamed the “walghvogel” by the Dutch and its closest relative is the Rodrigues Solitaire. Today, scientists believe that this animal was a member of the pigeon family. Known for its tender meat and its alleged lack of fear of humans, for 10 points name this famous extinct flightless bird from Mauritius.

ANSWER: **Dodo**

13. An etching of a fossil of this animal was featured in Rev. Edward Lhwyd's The Philosophical Transactions of the Royal Society in 1698. Fossils of this animal were called "pachavee" by the Ute Native Americans and worn on strings as amulets to protect against disease and bullets. The largest of these animals is the *Isotelus rex*, discovered in 1998 in Ordovician rocks. The last order of these animals, called Proetida, went extinct during the Permian extinction. Though some of these animals only had a single eye, even the earliest had complex eyes, notably unusual for their lenses made of crystallographically oriented, clear calcite crystals. For 10 points, name these extinct arthropods whose Greek name means “Three Lobes”.

ANSWER: **Trilobites**

14. Controversy exists over whether a skeleton discovered in Algeria and named *Lavocatavis* belonged to this group – if confirmed, it would be the first discovered in Africa. The largest animal in this group was Kelenken. The closest living relative of these

creatures is the Seriema. Titanis was the only one of these creatures known in North America. In paleoart, these creatures are often depicted devouring miniature horses. These animals were flightless and their wings may have devolved into stubby arms tipped with claws. For 10 points, name these gigantic extinct birds, which from 60 to 2 million years ago were the dominant land predators in South America.

ANSWER: **terror birds** [accept: **Phorushacids**; **Phorusrhacidae**]

15. This animal was incorrectly placed in the genus Didelphus when it was first described by scientists in 1808. The males of this animal had protective sheaths designed to protect their two-pronged reproductive organs. Aside from having scrotum sacs, this animal had five toes on its front feet and four toes on its hind feet. A staged picture of this animal holding a chicken in its jaw contributed to its decline, and “Benjamin”, the last known member of this species, died in 1936 at the Hobart Zoo. For 10 points, name this predator, a marsupial from Australia.

ANSWER: **Thylacine** [or **Tasmanian Tiger**]

16. This character was originally voiced by Gabriel Damon. In one film, this character is saved from certain death by his adopted brother, Chomper. This character’s favorite food is the tree star. He receives instructions to follow the bright circle past the great rock and the mountains that burn. Shadows against a cliff are used to depict the fatal wounding of this character’s mother, after which he must find the Great Valley while pursued by Sharptooth. For 10 points, name this long-necked protagonist of the *Land Before Time* movies.

ANSWER: **Littlefoot**

17. The Kellwassser and Hangenberg mass extinctions occurred during this geologic time period. A fossil from this geologic time period depicts the earliest known live birth. This period was also known as the "Old Red Age" in nineteenth century texts and it saw the creation of the first stable soils. Tiktaalik evolved during this period. Top predators of this period included Dunkleosteus, a placoderm, and it saw the evolution of the first amphibians. For 10 points, name this geologic period known as the “Age of the Fishes”.

ANSWER: **Devonian**

18. A museum in Gothenburg, Sweden has the only taxidermically preserved specimen of this animal. This animal was first called the Sibbald’s Rorqual, after the naturalist who first described it, Robert Sibbald. In *Moby-Dick*, Herman Melville calls this creature the sulphur-bottom, referring to the discoloration of its underside by diatoms. This baleen whale has a pygmy variety that lives in the Southern Ocean and it is believed that it can produce offspring with the closely related fin whale. Around 5,000 of these animals remain, and they can weigh up to 190 tons. For 10 points, name this largest animal of all time, which shares its name with the color of Vishnu.

ANSWER: **Blue Whale**

19. This creature was the subject of a 2011 British documentary directed by James Marsh, and based on a biography of this animal by Elizabeth Hess. Laura-Ann Petitto, who helped care for this animal, later said that his achievements were greatly

exaggerated, and Thomas Sebeok called the experiments involving this animal the only honest ones of their kind. This creature was intended to follow-up on the apparent success of Project Washoe. However, this creature's keeper, Herbert Terrace, ended up admitting that this creature's statements lacked grammatical complexity. This creature's longest sentence was a 16-word screed demanding an orange. For 10 points, name this chimpanzee used for a language acquisition experiment at Columbia University, whose name refers to the MIT linguist whom he failed to disprove.

ANSWER: **Nim Chimpsky**

20. In 1996, Dr. Frank Kyte of UCLA discovered a possible piece of this object at the bottom of the Pacific Ocean. Sites at Boltysh and Silverpit suggest that this object may have broken into several chunks. The effects attributed to this object may also have been caused by the eruption of the Deccan Flats. Walter and Luis Alvarez first hypothesized the existence of this object after they noticed high iridium levels in sediment. This object created the Chicxulub [cheek-shoe-lube] Crater on the Yucatan peninsula. For 10 points, name this object which struck the Earth 65 million years ago and led to a certain mass extinction.

ANSWER: **K-T Impactor** or **K-T Bolide** [accept "asteroid that killed the dinosaurs" or any clear-knowledge equivalent]

Bonuses

1. This event was an abrupt change from the warming of the Bolling-Allerod interstadial. FTPE,

[10] Name this mysterious cold snap that hit the Earth from roughly 12,800 to 11,500 thousand years ago.

ANSWER: **Younger Dryas**

[10] The most widely accepted cause of the Younger Dryas cooling is that glacial melt water shut down this cycle in the North Atlantic. Also known as the global conveyor belt, it carries warm water to the north and may be shut down again by global warming.

ANSWER: **thermohaline** circulation or **THC**

[10] This phenomenon, driven by wind, causes cool, nutrient rich water to rise to the surface of the ocean.

ANSWER: **upwelling**

2. This group of dinosaurs was notable for their massive dental batteries, which made them the only kind of dinosaur capable of chewing. FTPE,

[10] Name this group of plant eating dinosaurs, including Parasaurolophus and Edmontosaurus, notable for their flat snouts.

ANSWER: **Hadrosaurs** or **Duck-Billed** Dinosaurs

[10] This Hadrosaur, whose name translates as "good mother", is famous for its large fossilized nesting grounds discovered in Montana.

ANSWER: **Maiasaura**

[10] This Chinese hadrosaur is the largest known to science, and is named for a peninsula that was once controlled by Germany.

ANSWER: **Shantungosaurus**

3. In one episode, it is revealed that Dr. Fraiser Crane wanted to give this creature a Shakespearean name such as “Puck”, but his suggestion was rejected. FTPE,
[10] Name this Jack Russell Terrier, the pet of Fraiser’s dad on the TV show Fraiser.

ANSWER: **Eddie**

[10] This Golden Retriever was the family pet on Full House.

ANSWER: **Comet**

[10] In an episode of *3rd Rock from the Sun*, Harry, played by French Stewart, is visited by this pet from his home planet, who takes a human body but acts much like a dog.

ANSWER: **Pickles**

4. The titular conveyance of this TV series is operated by Troodons, who constantly point out that they are the smartest dinosaurs. FTPE,

[10] Name this PBS Kids series about dinosaurs traveling through time.

ANSWER: **Dinosaur Train**

[10] The main character of Dinosaur Train is Buddy, a T-Rex who has been adopted by a family of these flying reptiles, who live on the Western Interior Seaway.

ANSWER: **Pteranodons** [prompt on Pterosaurs]

[10] In the Triassic and Cretaceous periods, at both ends of the Dinosaur Train, one can find these structures, which are used to turn a train around.

ANSWER: **roundhouse**

5. The best known African dinosaur from this group is Kentrosaurus. FTPE,

[10] Name this group of Jurassic dinosaurs known for their spiky tails and giant vertical plates on their back. Their most famous namesake lived in North America and fought Allosaurus.

ANSWER: **stegosaurs**

[10] The spiky tail on a stegosaur has been given this nickname, which first appeared in a Far Side cartoon.

ANSWER: **thagomizer**

[10] Stegosaurus may have been preyed upon by this dinosaur, which had a single horn on its nose. It may have been ancestral to the Abelisaurus.

ANSWER: **Creatosaurus**

6. Fewer than 3,000 of these creatures remain alive, which is still good enough to make them the most numerous species of their kind. FTPE,

[10] Name this big cat, once the apex predator on the Indian subcontinent.

ANSWER: **Bengal** Tiger [prompt on Tiger]

[10] Tigers have gone completely extinct from this island, despite the fact that they may have evolved here. The Sunda Kingdom and the Mataram Sultanate were based on this island.

ANSWER: **Java**

[10] This Detroit Tiger, originally from Venezuela, announced his retirement in 2012. He won the 2007 AL batting title and previously played for the Chicago White Sox.

ANSWER: Magglio **Ordonez**

7. This group of animals get their scientific name from the fact that they only have one skull opening behind each eye. FTPE,

[10] Name this group of animals that dominated Earth before the dinosaurs and were nearly wiped out by the Permian Mass Extinction.

ANSWER: **synapsids** or **Mammal-Like Reptiles**

[10] The most famous mammal-like reptile may be this predator with a sail on its back. This quadruped is often mistakenly considered a dinosaur.

ANSWER: **Dimetrodon**

[10] Sporting a pair of tusk-like canine teeth and a horny beak, this synapsid herbivore survived the Permian Mass Extinction was the most prolific terrestrial vertebrate of the Early Triassic.

ANSWER: **Lystrosaurus**

8. Around 542 million years ago, most major animal phyla appeared and diversified suddenly and rapidly during this evolutionary event. FTPE,

[10] Name this prehistoric event, cited by Darwin as a possible counterpoint to his theory of evolution by natural selection.

ANSWER: **Cambrian Explosion**

[10] Prior to the Cambrian Explosion, Earth was home to this mysterious group of animals, whose relation to modern life is still debated.

ANSWER: **Edicarian** biota or **Ediacara** biota

[10] Much fauna of the Cambrian explosion can be seen in this Canadian region, whose rich and immaculately-preserved fossils were discovered in 1909.

ANSWER: **Burgess Shale**

9. According to popular legend, one of these creatures still lives in Loch Ness in Scotland. FTPE.

[10] Name these prehistoric marine reptiles, famous for their long necks.

ANSWER: **plesiosaurs**

[10] Often cited as an example of convergent evolution, these marine reptiles, most abundant during the Jurassic, greatly resembled modern dolphins.

ANSWER: **Ichthyosaurs**

[10] Due to the extinction of ichthyosaurs and the decline of plesiosaurs, these marine reptiles, related to modern monitor lizards, evolved to become the dominant predators of the last 20 million years of the Cretaceous.

ANSWER: **Mosasaurus**

10. Answer the following about Australian animals not currently alive FTPE.

[10] Muttaborrasaurus, probably the most famous dinosaur from Australia, closely resembles this British dinosaur, famous for its thumb spike and for being the first dinosaur discovered.

ANSWER: **Iguanodon**

[10] This giant monitor lizard, larger than a Komodo Dragon, lived in Australia until 40,000 years ago, coincidentally close to when humans first arrived.

ANSWER: **Megalania**

[10] Australian urban legend speaks of these animals, carnivorous marsupials that live in treetops and pounce on their prey. They appear to be some kind of inside joke among Australians, similar to the Jackalope in the United States.

ANSWER: **drop bears**

11. Heck Cattle represent one attempt to re-create this animal, which is frequently depicted in cave paintings. FTPE,

[10] Name this extinct bovine that once lived in Europe, thought to be the ancestor of domestic cattle.

ANSWER: **Aurochs**

[10] Those wishing to see large wild bovines in Europe today must content themselves with this European bison, found in Poland and Belarus. If it helps, King Bela I of Hungary was nicknamed for this animal.

ANSWER: **wisent** or **zubr**

[10] According to legend, this eastern European state was founded when a man followed an aurochs there, explaining why there is an aurochs on its crest. It won the battle of Vaslui against the Ottoman Empire before merging into modern-day Romania.

ANSWER: **Moldavia** [do not accept Moldova]

12. As bad as ocean dolphins have it today, river dolphins have it even worse. FTPE,

[10] This river dolphin, once found in the Yangtze river, has probably been extinct since 2002, the victim of pollution and being denounced by Mao in the Great Leap Forward.

ANSWER: **baiji**

[10] This group of river dolphin of the Amazon and Orinoco river systems, who have a Portuguese name, are better off than their Chinese cousins, but still endangered.

ANSWER: **botos**

[5,5] For five points each, name the other two rivers with major river dolphin populations. One is located in India, the other in Pakistan.

ANSWER: **Indus** and **Ganges**

13. This phenomenon was first noted by the Hungarian paleontologist Franz Nopcsa, who noticed it in the dinosaurs of Transylvania. FTPE,

[10] Name this biologic phenomenon, where animals reduce their size to deal with limited resources.

ANSWER: (island) **dwarfism** [or phyletic **dwarfism**]

[10] Island dwarfism is seen in Europasaurus and Magyarosaurus, members of this group of dinosaurs known for their long necks and large bodies.

ANSWER: **sauropods**

[10] This sauropod from Madagascar, part of the Titanosaur family, is known only from a small juvenile skeleton, which can be seen in the Field Museum of Natural History in Chicago.

ANSWER: **Rapetosaurus**

14. One of these animals named Reggie can be found in the apartment of Sterling Archer, where it has been known to get into the pudding and bite prostitutes. FTPE,

[10] Name these animals, whose ring-tailed variety can be found in Madagascar.

ANSWER: **lemurs**

[10] This gigantic lemur, the size of a gorilla, lived on Madagascar and did not become extinct until around 350 BC.

ANSWER: **Archaeoindris**

[10] Other unique wildlife of Madagascar includes this cat-like carnivore, which is actually a member of the weasel family that has convergently evolved to resemble a big cat.

ANSWER: **Fossa**

15. Name these mammals, all of whom lived in the Eocene FTPE.

[10] This mammal, known from a giant skull found in Mongolia, may have been a massive carnivorous pig the size of a polar bear.

ANSWER: **Andrewsarchus**

[10] This mammal, named for an Urdu-speaking nation, lived on land but was actually a primitive whale and may have been semiaquatic.

ANSWER: **Pakicetus**

[10] Many Eocene mammals belonged to this group, who today are split into odd-toed and even-toed variety, and are notable for their hooves.

ANSWER: **Ungulates**

16. This hominid gets its common and scientific names from a valley in Germany. FTPE,

[10] Name this close relative of modern humans, who lived in Europe before being displaced by Cro-Magnon man.

ANSWER: **Neanderthals**

[10] It is now known that Neanderthals interbred with modern humans. The European region with the highest percentage of Neanderthal DNA is this part of central Italy.

ANSWER: **Tuscany**

[10] Modern humans also interbred with this more obscure hominid, known only from a finger fragment discovered in a cave in Russia. Melanesians and Australian Aborigines derive up to 6% of their DNA from these hominids.

ANSWER: **Denisovans**

17. Name some giant birds that have gone extinct in recent times, FTPE.

[10] This 2.5 foot tall flightless bird once lived in the North Atlantic, but went extinct sometime between 1844 and 1852 because of overhunting.

ANSWER: **Great Auk**

[10] This other giant flightless bird once lived in New Zealand, and was likely driven into extinction by the Maori in the 1300's.

ANSWER: **Moa**

[10] Although the Moa was twice as tall as a human being, it was still hunted by this giant eagle, which went extinct when its prey disappeared.

ANSWER: **Haast's** Eagle

18. Name some extinct mammals that once roamed South America FTPE.

[10] Megatherium was a 4-ton giant version of this modern animal, which currently comes in two-toed and three-toed varieties.

ANSWER: **sloths**

[10] This animal, related to modern armadillos, was a heavily armored mammal that superficially resembles an Ankylosaurus or a turtle.

ANSWER: **Glyptodon**

[10] Glyptodon moved north during this event, which is used by scientists to refer to the migration of animal species after North and South America became joined by land three million years ago.

ANSWER: **Great American Interchange**

19. Smaller relatives of this dinosaur include Albertosaurus and Daspletosaurus. FTPE,

[10] Name this apex predator of Late Cretaceous North America, which had one of the most powerful bite forces in the history of the world despite its tiny arms.

ANSWER: **Tyrannosaurus** rex

[10] T-Rex's closest relative is Tarbosaurus, which was discovered in this country, also home to the first dinosaur eggs ever discovered.

ANSWER: **Mongolia**

[10] This more primitive relative of T-Rex, discovered in New Jersey in the 19th century, was smaller and had three fingers on each arm. Its original name came from a dog from Greek mythology that always caught its quarry.

ANSWER: **Dryptosaurus** [or **Laelaps**]

20. DNA analysis reveals that this creature's closest living relative dwells in Sumatra.

FTPE,

[10] Name this animal that ranged over northern Europe and Asia during the ice age, fighting off predators with its massive horn and the cold with its namesake covering.

ANSWER: **Woolly Rhinoceros**

[10] The best preserved Woolly Rhinoceros specimen was discovered in this European country, which during the Triassic was home to Silesasaurs, close relatives of the dinosaurs named for its region of Silesia.

ANSWER: **Poland**

[10] While the Woolly Rhinoceros lived in glacial Europe, Ice Age North America was home to this now-extinct North American tapir, named for a US state.

ANSWER: **California Tapir**