study time

Date.: 28/7/2020

MON TUE WED THR FRI SAT SUN

Dr. Rajesh Verma, Assistant professor and Head, U.G. Department of zoology, D.K. college Dumraon (Buxar), B.Sc part 3rd, paper VII.

Q:- Write Notes on Fossil History of Horse.

Ans:- The evolution of the horse a mammal of the family Equidae, occurred over a geologic time scale of 50 million years, transforming the small, dog-sized, forest-dwelling Eohippus into the modern horse. Much of this evolution took place in North America, where horses originated but became extinct about 10,000 years ago.

Evolution of the horse:-

The evolution of the horse, a mammal of the family Equidae, occurred

over a geologic time scale of 50 million years, transforming the small, dog-sized, forest-dwelling eohippus into the modern horse. Paleozoologists have been able to piece together a more complete outline of the evolutionary lineage of the modern horse than of any other animal. Much of this evolution took place in North America where horses originated but became extinct about 10,000 years ago.

The horse belongs to the order Perissodactyla (odd-toed ungulates), the members of which all share hooved feet and an odd number of toes on each foot as well as mobile upper lips and a similar tooth structure. This means that horses share a common ancestry with tapirs and rhinoceroses. The perissodactyls arose in the late Paleocene, less than 10 million years after the Cretaceous-Paleogene

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extinction event. This group of animals appears to have been originally specialized for life in tropical forests. but whereas tapirs and, to some extent, rhinoceroses, retained their jungle specializations. modern horses are adapted to life on drier land, in the much harsher climatic conditions of the steppes. Other species of equus are adapted to a variety of intermediate conditi

History of research :-

Wild horses were known since prehistory from central Asia to Europe, with domestic horses and other equids being distributed more widely in the old world. but no horses or equids of any type were found in the New World when European explorers reached the Americas. Whe

the spanish colonists brought domestic horses from Europe, begining in 1493, escaped horses quickly established large feral herds. In the 1760's, the early naturalist Buffon suggested this was an indicator of inferiority of the New world fauna, but later reconsid-ered this idea. William Clark's 1807 expedition to Big Bone Lick found "leg and foot bones of the Horses" which were included with other fossils sent to Thomas Jefferson and evaluated by the anatomist Caspar Wistar, But neither commented on the signifi-cance of this find.

Miocene and Pliocene: true equines

Kalobatippus :-

The forest-suited form was kalobatippus (or Miohip-pus intermedius, depending on whether it was a new genus or species), whose second and

fourth front toes were long, well-suited travel on the soft forest floors. Kalobatippus probably gave rise to Anchitherium, which travelled to Asia via the Bering strait land bridge, and from there to Europe. In both North America and Eurasia, larger bodied genera evolved from Anchitherium: Sinohippus in Eurasia and Hypohippus and Megahippus in North America. Hypohippus became extinct by the late Miocene.

Merychippus :-

In the middle of the Miocene epoch, the grazer Merychippus flourished. It had wider molars than its predecessors, which are believed to have been used for crunching the hard grasses of the steppes.