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Evolution of the horse worksheet answers

by Mats Molén The horse series has long been a showcase of evolution. But in reality, this series is the best argument that can be presented against the evolution of the fossil record.1 Creationists have several opinions on whether the horse series is in fact made up of different types created. This article addresses some of the current problems, and concludes that the horse series probably comprises three different created types, not including all animals that have been labeled Hyracotherium. Hyracotherium itself appears to contain several different created types, such as tapir-like animals. Horse fossils have been found in sedimentary strata at the beginning of the tertiary period over a period of time called the Eocene (approximately 50 million years ago, according to uniform dating). They are usually labeled2 Eohippus or Hyracotherium (see Figure 1). Illustration by Jan Nord Figure 1. The evolutionary horse tree built by George Gaylord Simpson in 1951. The tree was later simplified5, but has recently become even more branched and confusing with the addition of more members as a result of new fossil finds (see reference 2). Possible evolutionary gaps are marked here with a question mark. Equus - modern horse. See larger picture According to the theory of evolution, it is possible to follow the evolution of the horse over millions of years: how the horse got bigger and stronger (Figure 1), lost many of his fingers to fingers fingers fingers (Figure 2), and how his dental structure changed when he went from a plant diet , broad-leafed shrubs and trees (navigation) to eat hard, dried grass (grass) (Figure 3).4 It is believed that the evolution of the horse was driven by a climate of cooling and drying. The first horses supposedly lived in wet forests full of foliage-rich plants. Their toes, four at the front and three at the back, spread at different angles that helped them sink into the swampy ground. As the weather got drier, the foliage plants disappeared and huge fields of grass formed. This forced the shepherds to become better runners in order to escape their predators. All horses look so similar that they have been classified into the same family: Equidae. Because of this close similarity, therefore, it can often be difficult to discern any difference through the study of fossil skeletons alone. Another precaution in identifying vertebrate fossils is that variation in structures even within a genus of living animals can often be so large that it overlaps with variation in other groups; for example, there is a lot of in the dental structure between different carnivores, even when animals are not classified in the same genus (or sometimes not even the same family). The most important diagnostic differences between different groups of animals are often in the construction of soft parts. Many fossil horse finds also consist only of teeth or parts of jaws. The most important diagnostic differences between different groups of animals are often in the construction of soft parts. Horse groups In the horse series, it is possible to discern certain animals that could represent created types, even though we only have access to fossil skeletons. The following facts seem to support such an interpretation. In the horse series there are at least two evolutionary lagoons a) The first gap occurs in Epihippus8 Only scattered fossil pieces of this animal have been found, and resemble the previous Orohippus, Eohippus and other previously identified hiracotérid species.9(b) The second gap occurs in or just after the Parahippus10 group The first species of Parahippus are supposed to resemble Miohippus and Mesohippus while the latter are supposed to resemble Merychippus; this is only partially supported by fossil findings.11 In addition, the fossil material of Parahippus is incomplete.12 It would probably be possible to classify the different parts of Parahippus as belonging to two different animals: Miohippus (Figure 4) and Merychippus.13 The latter result may also be inferred by the work of Cavanaugh et al.,14 as Parahippus showed similarities with 14 of 18 species of horses. Therefore, the Parahippus pass in the horse series appears to be a mixed group of unrelated fossils. Illustration by Jan Nord Figure 2. The legs of the horses, which are taken as support for evolution. The left leg on each pair of the image is from the front, and the right leg is from the back.6 Since 1989, Hyracotherium's monofilosity has been challenged 9 in 1992, the genus Hyracotherium was reclassified as five animals belonging to different families of which only one group was considered to have anything to do with horses.15 More recent research has reclassified these animals into ten different genera and at least three families, of which many are not supposed to have anything to do with the horse series are similar to for example. tapirs (family Tapiromorpha).9 A species of Hyracotherium (angustidens) has been renamed Eohippus, and all but one other Hyracotherium species have received new genus names. The only animal that still retains the name Hyracotherium (leporinum) is no longer in the horse series, but is considered to belong alongside the Palaeotheriidae, which resemble tapirs and rhinos. Early horses have been preserved in strata of the same evolutionary age as several later horses Hyracotherium/Eohippus and Orohippus, for example, appear in the fossil record at the same time as Epihippus. Mesohippus and Miohippus appear along with Merychippus and Parahippus. Almost all other horses one or two possible exceptions—Parahippus, Merychippus, Pliohippus, Equus, and possibly also Miohippus—are represented at the same time for much of the period they have been found as fossils.16 (But especially in newer evolutionary schemes, very similar animals have been given different names, giving the appearance of evolution, in addition to providing fame to their discoverers; see examples in Froehlich 20029 and MacFadden 20054). Fossils of Hyracotherium (sic) have also been found very high in strata (Pliocene), but these findings have been rejected as reworked (i.e. eroded and deposited in later strata) despite the fact that geological observations show no signs of disturbance.17 Therefore, the fact that most horses lived almost at the same time undermines their proposed evolution. Transient shapes between horses with teeth designed for navigation (Parahippus) and those with grazing teeth (Merychippus) are rare13 Illustration by Jan Nord Figure 3. Construction of teeth in horses that eat leaves (both on the left) and horses that eat grass (both on the right).7 Teeth when sailing (eating leaves) horses have closed, very narrow roots with small holes for their blood supply and nerves; that is, these are teeth that wear out as the animal ages. The teeth in grazing horses (eating grass) have an open root with many blood vessels that supply the teeth with a lot of nutrients so that they can continue to grow throughout the life of the animal; this is called hypsodonty, which means high-crowned teeth. This change from the dental structure of bunodont (low crown with rounded cusps) to hypsodont (high crown) is not only assumed microevolution, but a complete change in design, although it does not appear to be something new for those who are not familiar with the construction of teeth.18 There is no evidence of any change from one dental structure to another, although it has been suggested by some authors.19 Some animals ate both grass and foliage. ,3.4 but this does not help explain the transformation from one type of teeth to the other. Three completely different animals Animals that have been interpreted as different horses are therefore, with the facts before hand, easily identified as belonging to three completely different types of animals, rather than several intermediate horses that supposedly evolved from the same original ancestor. The types created, not counting all Hyracotherium members who have been eliminated to new families, should therefore correspond more or less to the following three groups (note that not all newly named horses and not all members of the secondary groups are mentioned below): Eohippus (and many fossils that were previously labeled Hyracotherium , are classified into the family Equidae with new genus names9), Orohippus and Epihippus. Mesohippus, Miohippus, certain Parahippus and probably most of the horses that branch out of these three groups. (The horse series has been reorganized and many new genera have been added; for example, neohipparion, nannippus and Hipparion clades have moved near Parahippus and away from Merychippus,4 in contrast to Figure 1, so we can't be sure if the classification/grouping of all fossils is correct. But the horses coming out of Merychippus in Figure 1 are still classified in the subfamily Equinae, and are therefore combined into group three, below. But all these details cannot be covered in this article). Figure 4. Two 'horses', Neohipparion (right) and Miohippus (left) of the Natural History Museum of Los Angeles. Merychippus and the horses leaving this group, including Pliohippus and all subsequent horses (including hipparion clades). (Note that in recent reviews of horse evolution there are two different genera with the name Merychippus: I and II. Therefore, Merychippus is believed to be polyphyletic, i.e. it is believed to have evolved twice. These two genera have been placed in different evolutionary lines. Gender I is in the original place leading to Equus, as seen in most horse evolution diagrams. Gender II has moved away from the line leading to Equus—it is contemporary with Parahippus for most of its extension over time —and is believed to be an ancestor of the Hipparion clades described by MacFadden 2005.4) Group 3 animals are classified in the same subfamily,Equinae.20 Although, Cavanaugh et al.10 discovered that fossil animals could be classified into subfamilies, ignored this find, and instead built their own horse evolution tree. It would not be difficult to create a similar tree simply by organizing any number of unrelated live animals into a small to large series (Figure 5). No Evolution of the Horse The Cavanaugh hypothesis, Wood and Wise,14 that the horse series (including the genus Hyracotherium) shows real (post-flood) microevolution (or linear/progressive variation) is, based on the above results, unsustainable since there is no progression in horse evolution (except perhaps locally) and the data show a mixture of several horse-like animals. In addition, cavanaugh and document14 were mainly based on statistical data from a 1989 source (and some more recent creationist magazine discussions), and did not rate Hyracotherium's different findings. In addition, the article De Froehlich9, which reclassified all species of Hyracotherium, it was published in February 2002, approximately one year before the 2003 Cavanaugh newspaper deadline and others.14 This lack of clarity regarding Hyracotherium's findings has also not been addressed in a Wood article in 2008.21 even though Wood referred to a 1992 macFadden22 book that claimed Hyracotherium was not a single animal, but several genera belonging to different families. Whitmore and Wise in 2008 even used Hyracotherium to set an early date after the flood, and this non-horse animal is mentioned as the first member in the series.23 Illustration by Jonathan Chong Figure 5. From left to right, Eland, Gnu, Bushbuck, Gazelle and Dik-dik. Even living animals today can be organized into a hypothetical evolutionary series, as variations in the skeleton within a group of animals often overlap with variation in other groups within the same family. This does not, however, demonstrate that no individual animal has evolved into another. Froehlich,9 which completely renamed most Hyracotherium species and placed them in different genera and families, used statistics, but also provided criticism of how statistics can be misused in this case. But, in any case, you cannot use statistics on the design or on a limited amount of data (which in these cases are mostly teeth and jaws) to find out how the evolution occurred supposedly, as the previous authors have done.9,14 Statistical analysis in this case does not take into account the function or completed/designed living entities, but can only compare small differences (see also more critical points in Froehlich9). In this case, most of the statistical analysis has been carried out on the small differences in tooth enamel/structure and jaws, and very little work has been done on other parts of the body. This follows the interpretation of the data in a similar way as if, for example, we would carry out statistics on 75 differences in the outside appearance of the eyes of octopuses and humans, the analysis would probably show that we evolved from octopuses. A study of fossil horses reveals at least three groups of animals within the Equidae family of horses, in addition to some unrelated animals such as tapirs. Although it is easy to discuss and criticize individual findings, or a single place where fossils have been found, according to all available data there appear to be three groups of animals that closely correspond to the subfamily groups of Equidae, and only the subfamily Equinae seems to represent horses. Discussion of post-flood and flood criteria, based on horse evolution such as Cavanaugh et al. 200314 and Wood 200821, should be based on criteria other than the supposed post-flood microevolution of the horse resulting from a changing environment, as proposed by the common evolutionary history (see other criteria for flooding in Oard 200724). Nor were there real environments where these animals could have lived, only large deserts, most fossils are found in sedimentary deposits showing evidence of being from the Flood, but there is no evidence of a plant cover that could feed large herds of and there is no suitable land.25 There is also no support for changes in the environment, as evolutionists and Cavanaugh et al.14 and Wood21 insist on relying on speculative interpretations. In the case of the horse, it could be the size of the body that ruled how quickly the animals sank, were transported and buried, and then eroded and redeposed, during the Flood or in the narrow aftermath of the Flood. This would have been before the continental environment had become habitable again and the living animals repopulated it. Small animals with a similar construction commonly disintegrate and sink faster than large animals, and smaller bones are also easier to transport by streams after they have reached the bottom. In addition, during post-flood disasters, live animals could have been buried along with reworked, dead, non-fossilized or partially fossilized animal remains buried during the Flood. Conclusion A study of fossil horses reveals at least three groups of animals within the Equidae family of horses, in addition to some unrelated animals such as tapirs. The three groups of equidos correspond closely to different equido subfamilies, and could be considered three separate created types. Most of these different types lived (or actually, were buried!) at about the same time and do not show much progressive change in terms of the evolution of the horse, only an overall increase in size. No one has explained how new specialized types of teeth might have evolved supposedly, and it seems more like a smart design case rather than microevolution (variation within one type, as suggested by several creationists) or macroevolution (new types of organisms, as evolutionaryists suggest). (2003)14 hypothesis of intra-scientific variation of all animals belonging to Equidae (or animals they put in Equidae, even if evolutionists put some of them in different families) is not well supported by the available evidence and must therefore be abandoned. Addendum According to Julian Huxley (possibly one of the most prominent evolutionists of the last century) it took at least a million positive mutations for the modern horse to evolve. I thought there was a maximum of one positive mutation in a total of 1,000 mutations. With the help of these values Huxley calculated the probability that the horse had evolved from a single single cell organism was 1 in 103,000,000. However, he believed that natural selection would be able to solve this problem26, but this finding did not help him in the end, nor will it help any other evolutionist, since this calculation is based on the origin of positive mutations, even before natural selection began to work. If all electrons in the universe (around 1080) had participated in 1012 reactions every second, during the 30 billion years evolutionists have set as the upper age limit of the universe, there would still have been no more than c. 10110 interactions, still a long way from Huxley's calculation.1 References This article is based in part on an English translation (by Rudi Arbella) of Molén, M., Várt ursprung? (Our Origin), XP-media, Haninge, Haninge, Return to the text. The name Hyracotherium is no longer in use for any member of the Equidae family, but fossils of this genus that are still classified in equidae have received seven new genus names: Sifrhippus, Minippus, Arenahippus, Xenicohippus, Eohippus, Plilolophus and Protorohippus. Return to the text. Some horses with teeth designed to eat grass probably ate mainly leaves and other parts of soft plants. See: Morell, V., Dietary Data Directly from the Horse's Mouth, Science 283:773, 1999; and MacFadden, B.J. et al., Ancient Diets, Ecology, and Extinction of 5-Million-Year-Old Horses from Florida, Science 283:824–827, 1999. Return to the text. MacFadden, B.J., Fossil horses—evidence for evolution, Science 307:824–827, 2005. Return to the text. Simpson, G.G., Horses, Oxford University Press, New York 1951. Return to the text. The image is based on drawings by: Steinmann, G. and D'derlein, L., Elemente der Pal-ontologie (Elements of Paleontology), Wilhelm Eng-elmann Publishing, Leipzig, 1890; Osborn, ref. 11; and Scott, ref. 12. Return to the text. The image is based on drawings by: Steinmann and D'derlein, ref. 6; Osborn, ref. 11; Mutvei, H. and Stuenes, S., Paleontologi: Kompendium f'r grundkurs i paleontologi (Paleontology: Compendium for Fundamentals in Paleontology), Uppsala University, Institute of Paleontology, Uppsala, 1983; and Granger, W., A revision of American Eocene horses, Bulletin of the American Museum of Natural History 24:221–264, 1908. Return to the text. MacFadden, B.J., Cladistic Analysis of Primitive Equidae, with Notes on Other Perissodactyls, Systematic Zoology 25:1–14, March 1976; and Simpson, G.G., Horses, Oxford University Press, New York, 122-123, 203, 1951. Return to the text. Froehlich, D.J., Quo vadis eohippus? The systematics and taxonomy of the first equides of the Eocene (Perissodactyla), Zoological Journal of the Linnean Society 134:141–256, February 2002. Return to the text. Abel, O., Pal-obiologie und Stammesgeschichte (Paleobiology and History of Phylogeny), Gustav Fisher Publishing, Jena, 284–290, 1929; and MacFadden, B.J. et al., Sr-isotopic, paleomagnetic, and biostratigraphic calibration of horse evolution: evidence from the Miocene of Florida, Geology 19:242–245, 1991. Return to the text. Osborn, H.F., Oligocene Equidae, Miocene and Pliocene of North America: iconographic review, Memoirs of the American Museum of Natural History 2:74–75, 1918. An example is that one of the most primitive horses, Para-hippus cognatus, supposedly evolved as one of the last species, while one of the less primitive ones —P. coloradensis— evolved at the same time as the first species of Parahippus. Return to the text. Scott, W.B., A History of Land Mammals in the Western Hemisphere, 2nd ed., Macmillan Publ. Co., NY, 409, 1937. Go back to the In the Parahippus group there are some findings that are assumed by some intermediate forms between Parahippus and Merychippus (e.g. with reference to the images in Osborn, ref. 11, where some of the less evolved horses originated among the last horses; see pp. 74–75). These findings consist only of teeth and parts of jaws that can be difficult to tie to a certain skeleton. Therefore, these teeth and jaws could be classified into Parahippus and Merychippus, rather than any intermediate form between these two animals. Return to the text. Cavanaugh, D.P., Wood, T. and Wise, K.P., Fossil equidae: a monobaramonic, stratomorphic series; at: Walsh, R.E. (Ed.), Proceedings of the Fifth International Conference on Creationism, Creation Science Fellowship, Pittsburgh, PA, p. 143–149, 2003. Return to the text. MacFadden, B.J., Fossil Horses, Cambridge University Press, Cambridge, pp. 92–103, 1992. See also Scheven, J., Mega-Sukzessionen und Klimax im Terti'r: Katastrophen zwischen Sintflut und Eiszeit (Megasuccessions and Climax in the Tertiary: Catastrophes Between the Flood and the Ice Age.), Wort und Wissen, Neuhausen, 1988. Return to the text. Scott, ref. 12, p. 408 and Osborn, ref. 11, p. 74; Barnhart, W.R. A Critical Assessment of Horse Phylogeny, ICR, 1987; MacFadden, ref. 15, 255–257; Storer, J.E. and Bryant, H.N., Biostratigraphy of the Cypress Hills Formation (Eocene to Miocene), Saskatchewan, Journal of Paleontology 67:660–669, 1993; Gould, S.J. and Eldredge, N., The Scored Balance Comes of Age, Nature 366:223–227, 1993; and Scheven, ref. 15. Return to the text. Barnhart, ref. 16, 140–143. Return to the text. Personal communication with Dr. Jack Cuozzo. Return to the text. Sarfati, J., The non-evolution of the horse, Creation 21(3):28–31, 1999. Return to the text. Gromova, V.I., Mammals in: Fundamentals of Paleontology: A Manual for Paleontologists and Geologists of the USSR, vol. 13, Orlov, Y.A. (Ed.), Jerusalem, English translation, Israel Program for Scientific Translations, p. 396, 1968. Return to the text. Wood, T., Horse Fossils and the Nature of Science, 2008; answersingenesis.org/articles/am/v3/n4/horse-fossils. Return to the text. MacFadden, ref. 15, 92–103. Return to the text. Whitmore, J.H. and Wise, K.P., Rapid and early post-Floodiand diversification evidenced in the Green River Formation; at: Walsh, R.E. (Ed.), Proceedings of the Sixth International Conference on Creationism, Creation Science Fellowship, Pittsburgh, PA, pp. 449–457, 2008. Return to the text. Oard, M.J., Definition of flood/post-flood limit in sedimentary rocks, Journal of Creation 21(1):98–110, 2007. Return to the text. Molén, M., Mountain construction and continental drift; at: Walsh, R.E. (Ed.), Proceedings of the Third International Conference on Creationism, Creation Science Fellowship, Pittsburgh, PA, pp. 353–367, 1994. al texto. Huxley, J., Evolution in Action, Chatto y Windus, Londres, pp. pp. 1953. Back to the text. Text message.