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鲸的起源 据美国两个科学家小组日前公布的科学报告称，他们在考古中发现的新化石更进一步证明了鲸祖先与生活在陆地上的食草动物有关，如牛和河马，而不是即将灭绝的食肉类动物。科学家们已经知道，鲸是几百万年前由生活在陆地上的四肢动物演变而来的，然而，鲸究竟是从动物王国中哪一支演变而来的一直是引起争议的问题。20世纪50年代进行的免疫试验和最近进行的DNA试验都表明鲸的进化与食草的偶蹄哺乳动物有关，如猪、牛和河马。此前，这些试验发现的结果一直没有得到化石考古方面的支持，以前发现的化石则更表明鲸与食肉类动物有关。然而，现在两项分别进行的科学研究报告的作者称，他们分别在巴基斯坦不同地区发现的化石，使他们相信这些试验的结果是正确的。美国俄亥俄州东北医学院的汉斯威森说，在发现了这些化石后，他们意识到，显然以前他们在有关鲸起源问题上的主张是错误的。斯威森在巴基斯坦东北部地区旁遮普发现了两种5000万年以前可能是鲸祖先的四肢动物化石。以斯威森主笔，多人合写的有关论文发表在本月20日出版的英国《自然》杂志上。另外一名科学家菲利普金格里奇是美国密歇根大学地质学和古生物学教授。他说，他们一个考古小组在巴基斯坦西南部地区俾路支海岸发现了另外两种大约4700万年以前可能是鲸祖先的化石，其中一架骨骼基本上是完整的。金格里奇说，他们由此发现，进行DNA试验的同行发现的结果可能是正确的，鲸的起源与河

马有关。以金格里奇主笔，多人合写的有关论文即将发表在21日出版的一期美国《科学》杂志上。但他这篇论文公布的日期与《自然》杂志上的那篇论文公布的时间相差无几。这两篇论文的主题都是，他们发现的这种动物化石特殊的耳朵形状与鲸很相似，很可能是鲸的祖先，同时这些动物化石都有四肢和明显的足踝结构，与其它的食草偶蹄哺乳动物相似。假如鲸祖先与食草动物有关，那么现代鲸的饮食习惯如何进化而来还是一个谜。一些有牙的鲸如虎鲸可以吃鱼和其它的海中哺乳动物；而另外一些鲸则有被称为鲸须的嘴部结构，可以从海水中吸滤浮游生物。金格里奇则说，他已读到一些有关现代河马杀死和吃掉水窝中太靠近它们的瞪羚，也许人们有点夸大了这些偶蹄动物的食草性，尽管他们以食草为主。

Whales most likely evolved from four-legged land animals that foraged for food or hunted for fish along ocean shorelines. The ancestors of whales gradually became more dependent on the ocean for food, passing through an amphibian stage before evolving into fully aquatic animals. Recent work with whale fossils indicates that the anklebones of whale ancestors resembled those of artiodactyls, the group of even-toed hoofed mammals that includes pigs, deer, antelopes, and hippopotamuses. Molecular studies comparing the genetic makeup of modern whales to that of other animals indicates that the hippopotamus is the whale's closest genetic match. Based on these studies, scientists now generally agree that whales are most closely related to artiodactyls. The fossil record of whales spans over 50

million years to ancestors such as Pakicetus that lived around the mouths of rivers in what is now Pakistan. Pakicetus was a four-legged, land animal that measured about 2.5 m (about 8 ft) in length. The whale fossil Rodhocetus was discovered in 1993. Dating from about 46.5 million years ago, this fossil came from fully marine sediments. Its legs were smaller than those of Pakicetus and its hind feet were turned into webbed paddles. Rodhocetus was clumsy on land, perhaps like modern sea lions. It probably swam using an up-and-down flexing of the body to power its finlike feet in the manner of otters. Unlike modern whales, it had nostrils instead of a blowhole. Rodhocetus also had a powerful tail, although scientists do not know whether this early whale had begun to evolve tail flukes. A fossil whale known as Basilosaurus dates from 42 million years ago and represents the stage of whale evolution in which the hind legs are very small but still visible. The adult Basilosaurus reached lengths of 15 m (50 ft), but its hind limbs resembled short sticks only 0.5 m (1.6 ft) long. Although all of the pelvic bones, leg bones, kneecaps, feet, and toe bones were present, these legs could not have been used to support such a large animal on land. Modern whales, which first appeared in the fossil record 5 million to 10 million years ago, have no visible hind limbs, although some whale species still have tiny pelvic and leg bones embedded in muscle near the spine.

综上所述：古生物学者paleontologist研究化石，Molecular biologist 研究基因和DNA，分子生物学家从基因分析认为鲸的近亲是河马hippopotamus，古生物学家以前认为鲸的近亲

是一种食肉动物。 100Test 下载频道开通，各类考试题目直接
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