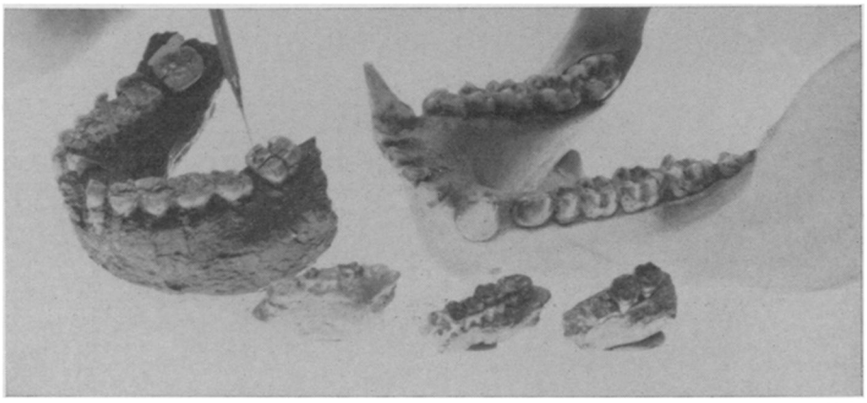
Challenging Kenyapithecus



Yale

Ramapithecus (front): Closer to Australopithecus (left) than to a gorilla.

The date when man separated from the apes on the evolutionary scale has been a bone of contention among physical anthropologists for many years. It was roughly estimated to be about 14 million years ago, but that depended upon whether one believed that the *Ramapithecus*—the name given to a creature that roamed the world some 8 million to 15 million years ago—was more man-like than ape-like. Then in 1967 Dr. Louis S. B. Leakey discovered 20-million-year-old jawbone fossils (SN: 1/28/67, p. 83). He labeled them *Kenyapithecus,* and said they were hominid —man-like—and so the date of the emergence of man was pushed back 6 million years.

Now two Yale scientists say that Dr. Leakey's specimens were not man-like at all, but definitely ape-like. And their reexamination of jawbones originally found in the 1920's and 1930's has moved the date of man's controversial emergence forward once again to 14 million years ago.

Drs. Elwyn L. Simons and David R. Pilbeam of Yale University have discovered that a jawbone from the Calcutta Museum that was originally found by members of the Geological Survey of India in the northern state of Himachal Pradesh around 1928, and a jawbone from the British Museum unearthed in the 1930's south of Rawalpindi, West Pakistan, both belong to the *Ramapithecus.*

Whether the *Ramapithecus* was actually an ape-like creature or a man-like creature has long been debated. Dr. Simons says after his studies: *"Ramapithecus* was a hominid."

Ramapithecus is the oldest creature structurally like man. The next ancestor of man that appeared was the *Australopithecus,* whose age has now been dated back 4 million years (SN: 5/17, p. 469). "The two specimens which we have identified this year," says Dr. Simons, "show functional resemblances to *Australopithecus* which are so extensive that there is little possibility of their having been more closely related to apes."

From a fragment of a jawbone scientists can reestablish the eating habits and the behavior of man's distant ancestors. Teeth preserve well, and dental characters are easily identifiable.

The two jawbones examined by Drs. Simons and Pilbeam show much more of the jaw of the *Ramapithecus* than ever before. The British Museum's fossil is the most complete of any so far recognized. There is a part of the lower jaw including roots of some of the front teeth. Features of the front of the jaw and of tooth-wear are evident and this is critically important to understanding what sort of animal they represent.

Apes had large slashing canine teeth assumed to be used for weapons of defense and for ripping their food. Although it is difficult to tell what was eaten millions of years ago, says Dr. Simons, it is apparent that apes ate soft foods, chiefly fruits, berries and other soft vegetation. Their teeth were not constructed for much of an up-and-down chomping motion—the long canines limited their lateral movement. Gaps appear in the row of teeth to provide room for their overlapping canines.

The probable first ancestor of man, *Ramapithecus,* on the other hand, had reduced canines, and their teeth were broader from side to side. The teeth were shortened by rubbing against one another, evidence that there was a chomping motion. From these newly recognized specimens, Dr. Simons believes there is enough evidence to show that the *Ramapithecus* took up a different kind of feeding—roots, berries, nuts, grains and seeds. "Construction of both upper and lower jaws," says Dr. Simons, "suggest strongly that they should be in the same line as man because they further add to a long list of similarities between the two in chewing function."

A dental mechanism characteristic of modern man is the staggered eruption of the second and third molars. This is apparent in fossils of the *Australopithecus.* In the Calcutta Museum's *Ramapithecus* jawbone there is evidence of decreasing molar wear to the back suggesting the very same mechanism. This implies that the *Ramapithecus,* like later hominids, had a long adolescence, indicating the possibility of greater individual learning. In monkeys and apes the molars come in much closer together in time. African apes reach maturity at the time the last molars come in.

Dr. Leakey's 1967 specimens, says Dr. Simons, do not show the same small vertical implaced front teeth found in the proto-human species. Dr. Simons has no doubt that Dr. Leakey's fossils are not hominid.

But the question is by no means settled, says Dr. T. Dale Stewart of the Smithsonian Institution. "Evidence for either side," he says, "is slender."

MEDICAID

Granting a reprieve

State governments, breaking under the heavy burden of Medicaid, have won a breathing spell from Congress. Pressured by soaring health bills that far outstripped anticipated costs and forced, by law, to expand services constantly and thus accept new financial commitments that could not be met, states have been seeking some relief in their responsibilities to provide medical services to all needy persons. Some states, New Mexico among them, have even threatened to abandon their Medicaid programs altogether (SN: 5/24, p. 497).

Last week, Congress somewhat reluctantly took a realistic look at the expensive program that the Nixon Administration calls "badly conceived and badly organized" and that everyone agrees is too high priced, and granted states authority to slow down.

Under original amendments to the Social Security Act, title XIX, which took effect Jan. 1, 1966, the Federal Government could share the burden of Medicaid costs only with those states that were moving toward the goal of expanding their services and opening their eligibility requirements so that every medically indigent person in the state would be covered by July 1, 1975. Continued expansion has proved impossible for most states.

Responding to New Mexico's predicament—it ran out of funds three-quarters