Research News

European Prehistory Gets Even Older

French researchers argue on the basis of ancient putative stone tools that human ancestors arrived in Europe as much as 2.5 million years ago; some skeptics are half persuaded

"I HAD ASSUMED THAT BREAKING the million-year barrier for the first appearance of human ancestors in Europe would be difficult," says Berkeley anthropologist F. Clark Howell. "But now I am wavering."

Until recently, Howell, like most anthropologists, went along with the conventional wisdom that human ancestors left Africa about a million years ago and first set foot in Europe some time later. Then Howell went to Paris earlier this year to take part in a gathering of archeologists and paleontologists, many of them seeking to give the convention a good jolt. He was impressed: "I think now that somewhere in the range of 1 to 1.5 million years ago there were human ancestors in Europe for sure."

Among the evidence inviting Howell—and many others—to reconsider their views was Eugène Bonifay's arresting report of simple quartz tools from the site of Saint-Eble, at the foot of Mont Coupet in south-central France. Bonifay, an archeologist at the National Center for Scientific Research in Marseilles and a co-organizer of the Paris meeting, caught people's attention so sharply because of the date he put on the artifacts: a record-breaking—for Europe—2.2 to 2.5 million years ago.

This date for the quartz fragments is fairly secure, because in the layer cake of sediments at the site the fragments are overlain by animal fossils known to be about 2 million years old and by debris from the volcano of Mont Coupet, which formed about 2 million years ago. The remaining crucial uncertainty about Bonifay's quartz fragments is whether they were made by human hand or are simply broken rocks. University of Liverpool paleontologist Alan Turner says, "Saint-Eble has flakes and what look like pebble tools of an early lithic industry. The point is, were these manufactured, or did they occur naturally?" (see box).

As Eric Delson of the Lehman College, City University of New York, suggests, the evidence in a case like this has to be especially good to be persuasive. "Finding something that is many times older than expected, and that will force people to change all their ideas, is not like finding yet another sidescraper in a Mousterian context. It requires exhaustive evidence. After all, you don't want to convince the fans, you want to convince the skeptics."

For many people there is still sufficient uncertainty about the claims made for the Saint-Eble artifacts that they prefer to hedge their bets. This is why Howell and others are prepared to shift the date for the entry of human ancestors into Europe from something less than 1 million years ago to something in excess of 1 million years. Going all the way to a date of 2.5 million years ago is, however, just too much to swallow at present.

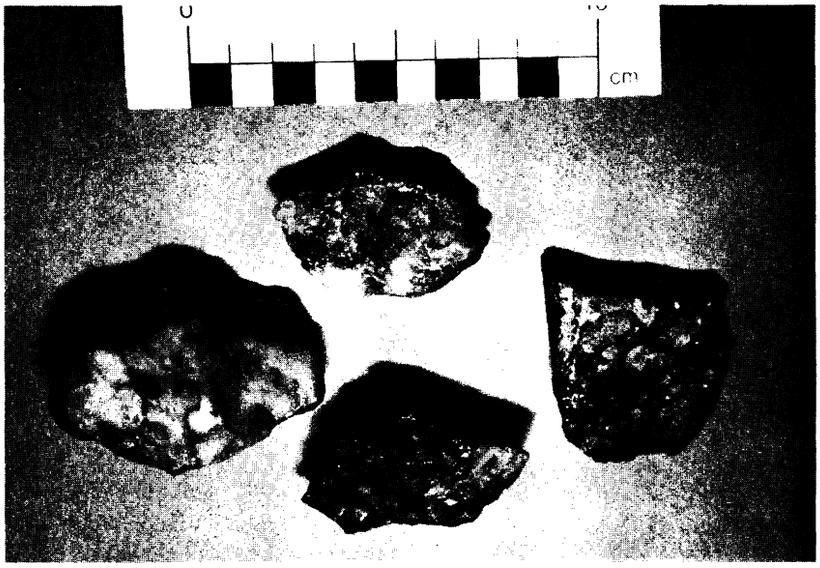
But if Bonifay is correct in his conclusions about Saint-Eble, then a lot of anthropologists will have to change their views even more about a crucial period in human prehistory. "In broad terms, it is agreed that hominids migrated out of Africa between 1 and 1.5 million years ago," says Alan Turner of the University of Liverpool, speaking for the great majority of paleontologists. "There

Lewin Leaving

After 9 years on the news staff, Roger Lewin is departing *Science* to devote full-time to book-writing and other freelance activities. His first project will be a new book to be coauthored with Richard Leakey. Lewin not only by-lined the many articles for which readers will remember him, but also edited the Research News section for 8 years.

S. Ackerman

Roadside geology. *Eugène Bonifay explains the stratigraphy of the Saint-Eble site.*



E. Delson

Ancient tools or just rocks? *At 2.5 million years old, these four putative tools from the site of Saint-Eble would revolutionize European prehistory.*