

PALEOPARADOXIA EARLIEST SITE VISITOR

ONE OF THE FIRST SCIENTIFIC DISCOVERIES made at SLAC was neither planned nor did it pertain to physics. A fossil skeleton was unearthed during the construction of the accelerator in 1964; it turned out to belong to an amphibious mammal that had lived 14 million years ago.

Known as the *Paleoparadoxia*, this marine mammal roamed the northern shores of the Pacific 10–20 million years ago. Large and heavy set, it was comparable in size and proportion to a present-day hippopotamus. Not adapted for deep water swimming, it stayed close to the coast and fed off the aquatic vegetation. At the time of the *Paleoparadoxia*, San Francisco bay was considerably larger than it is now. Its warm, shallow water would have covered Petaluma, Napa, Livermore, and San Jose. The peninsula was a long, skinny island still disconnected from the mainland. The lifting of the high Sierra drained the bay and reduced it in size. The action of the San Andreas fault as well as the Sierra was crucial in burying animal bodies and plants and in doing so preserved them.

So far only two other *Paleoparadoxia* skeletons have been found—in Japan and in Northern California. Both of these specimens are more primitive and juvenile than the one at SLAC. The skeleton here is the most complete as well as the most mature—the arthritic development on some of its bones is seen as a certain sign of adulthood.

When the *Paleoparadoxia* was first discovered, its skeleton was given to the Museum of Paleontology at Berkeley in exchange for a plaster cast replica. Since 1969 Adele Panofsky has been working with a great deal of ingenuity and dedication to assemble the plaster skeleton. The replica is an impressive reconstruction of the fossilized skeleton and, once completed, will be on permanent display.



Adele Panofsky has reconstructed the missing bones of the Paleoparadoxia and assembled the entire plaster skeleton. The skeleton is held together by an intricate system of metal rods that have been submerged into the individual bones. Adele is now painting the plaster cast replica so it will resemble the original fossil. The new bones are painted a slightly different color to distinguish them from the fossilized ones.

The effect of the 10-foot skeleton can only be hinted at in writing. The *Paleoparadoxia* should really be encountered in person. Adele's workshop is always open to the interested public, and a visit there is certain to be both delightful and informative.

Adele works on the *Paleoparadoxia* every Monday, Wednesday, and Friday in the basement of building 003, located north of the accelerator just before Highway 280.

—Annette Cords