

PHYSIOLOGY

Leg Transplanted from One Rat to Another With Success

For the First Time, an Entire Leg Has Been Given A Higher Animal Without Loss of Muscle Activity

SUCCESSFUL transplantation of a leg from one white rat to another has been accomplished by Dr. J. V. Schwind of Loyola University School of Medicine, Chicago (*Science*, Oct. 16).

The transplanted leg not only remained healthy in its new position, but can be moved and the toes flexed.

This is, apparently, the first time an entire leg has been transplanted on one of the higher animals without loss of muscle activity. Legs have been successfully transplanted on lower animals such as salamanders, and Dr. Alexis Carrel of the Rockefeller Institute transplanted a leg onto a dog in 1907. This grafted leg healed but the muscles and nerves did not function.

Dr. Schwind transplanted the right hind leg, including all the bones and muscles below the knee joint, from one

white rat to the back of another, giving the second animal a fifth leg. The sciatic nerve of the transplanted leg was joined to a branch of the sciatic nerve in the second animal. This is the great nerve that extends from the lower back down the leg.

The transplanted leg was left partly attached to its first owner until satisfactory blood vessel connections were made with the second animal. Then the final detachment from the first animal was made.

Three months after the transplantation, Dr. Schwind reports, the transplanted leg is still normal. It moves when the animal moves its own right hind leg, either in walking or in response to a stimulus. This is because both legs are controlled by the same sciatic nerve.

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ARCHAEOLOGY

Defy "Haunted" Graveyard; Unearth Clues to Mayas

YOU can't scare archaeologists with ghosts, even prehistoric ghosts.

Defying natives in Honduras—who whispered that souls of the ancients float in blue light over the Beaches of the Dead—explorers for the Smithsonian Institution have dug profitably in the "haunted" graveyard by the Uluva River. Their reward is important evidence showing how America's greatest ancient civilization got an explosively rapid start.

Dr. W. D. Strong led the expedition, which lessens mystery surrounding the rise of the famous Mayan Empire in American tropics before the time of Christ.

By digging down 20 feet near the Uluva River, Dr. Strong's expedition found not only twisted and distorted skeletons of the Beaches of the Dead people, but also floors of houses and pottery they used.

From designs on the pottery, the ar-

chaeologists feel sure they have found a type of culture ancestral to that of the famous Mayas. Whether the people themselves were long-lost ancestors of the Mayas is another question which the damaged skeletons may not be sufficiently preserved to prove. They were, at any rate, in touch with Mayan people at the dawn of that civilization.

Over these remains had accumulated a layer of barren clay over six feet thick, showing a blank era in the history of that region, and above that the archaeologists encountered a layer of burials and pottery which was typically Mayan.

A glimpse into the transition time when the Beaches of the Dead style of clay art shaded into true Mayan style was unearthed, when the expedition dug at a tributary of the Uluva River.

From the early chapters of Mayan history thus emerging in Honduras, the Mayan civilization is seen as bursting into full flower rather suddenly. This

explosive phase is coming to be recognized as a feature of other great civilizations.

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MEDICINE

Sinus Infection May Go To Lungs via Glands

THE NEW discovery that sinus infection can reach the lungs by an insidious path along hidden glands was strikingly demonstrated to physicians at the scientific exhibits of the American Academy of Ophthalmology and Otolaryngology.

Drs. Ralph A. Fenton and Olaf Larzell of the University of Oregon Medical School formally reported their research leading to this discovery. The research was financed by the Academy.

These physicians found that infection from the sinuses may drain first into the lymphatic glands behind the throat and thence down in front of the spine to the blood circulating through the lungs, causing what they termed defensive bronchitis. The infection can reach the lungs by following this devious path even if the more direct route via the throat is blocked by severing the trachea or windpipe, the researchers found.

Another new finding of these physicians is that sinus trouble does not always cause pain in the nose but may induce pain and stiffness of neck and shoulders. This is due to irritation of the glands along which the infection may be traveling to the chest. When such irritation shuts off the proper blood supply to the muscles and skin of neck and shoulders, cramping pain results.

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MYCOLOGY

Insect-Killing Fungi Are Raised Successfully

FUNGI that kill flies, mosquitoes, and other annoying and harmful insects are now raised successfully in mass cultures by a German botanist, Dr. Georg Schweitzer, of Hohenheim. He uses a new method of sterilizing the culture media on which they feed before they are turned loose on their winged victims; it involves the use of chemical vapors instead of the customary heat treatment.

The efficacy of certain fungi against insects has long been known, but technical difficulties attending their culture in large quantities has handicapped their practical use.

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