additional hundreds of feet of material that have been eroded off from the present top of the canyon wall. So the length of time required for the deep canyon to form was obviously stupendous."

The level at which the fossil plants and reptiles have been located belongs to the later part of the carboniferous period, or the time when the great coal beds of the world were being formed, and was a few million years before the famous reign of the dinosaurs.

One specimen brought back by Mr. Gilmore shows a row of tracks very much like mouse tracks impressed in a small slab of red stone, and in among the tiny footprints is a wavy line which represents the track of the animal's tail. Other exhibits show prints larger than a man's hand, indicating that some of the reptilian creatures of this age may have become as large as crocodiles. No bones of these creatures have been found in the Grand Canyon, though some bones of reptiles making similar tracks have been found elsewhere.

The plant specimens have not yet been studied by a museum specialist, but some of them are fern-like plants, the prints of which are several feet tall.

ITALIAN SURGEONS PERFORM UNIQUE GLAND GRAFT

People whose hopes of eternal youth were dashed by the failure of the rejuvenating effects of gland transplantation to persist may yet take heart. Two physicians of Florence have performed an operation which bolsters up the failing hope that gland grafting had put a new weapon in the hands of the medical profession for subduing hitherto unconquerable disease.

Drs. Cesare Frugoni and Vittorio Scimone have just announced through the Presse Medicale the results of treating a case of tetany, a chronic disease resembling lockjaw, with a graft of human parathyroid, one of the small glands placed around the better known thyroid in the neck. The technique followed was that of Dr. Serge Voronoff, one of the original experimenters in transferring glands from apes to humans.

The results were almost instantaneous, according to the authors. The patient, released from the terrific pain suffered during six or seven long attacks every day, picked up amasingly. Tests made some time later still showed a slight parathyroid deficiency but the ingrafted piece was still firmly attached under the skin five months after the operation.

The question of greatest concern to physicians with respect to the case is how long the gland will persist, for the laws that govern a graft's chance of survival comprise one of the subjects on which the medical profession is still in the dark.

Editorial comment apropos this aspect in the Lancet says: "Much of the interest of the case depends on how long the graft will survive, but it has served to prove the

connection between chronic tetany and parathyroid deficiency and to demonstrate the advantage of Voronoff's innovation. Even if the hopes of the authors are destroyed by the ultimate disappearance of this, as of most grafts, they have at any rate made a substantial contribution to the resources of gland therapy."

OILED FEATHERS FORM INSULATING AIR MATTRESS

The feathers of aquatic birds serve both as an air cushion and as a heat insulator. Prof. Joseph Barcroft of King's College, Cambridge, in a Royal Institution lecture recently said that the reason waterfowl do not sink like other ordinary vertebrates in water is on account of the air retained in their feathers. The water does not work into the interstices between the frills of the feathers because they are so completely oiled that they never get wet even on the surface.

The air imprisoned in the feathers also serves to keep the bird warm. The hardihood of water birds in this respect is fairly manifested by the familiar sight of ducks swimming in the ice-bound spaces of lakes and rivers, apparently enjoying themselves.

"It is not that the separation of a surface of cold water by an inch or so of air from the body of the bird would keep it warm," said Prof. Barcroft, "but convection currents would be set up which would rapidly cool the bird". Caught up, however, in the fine mesh work of feathers the air is almost motionless and being a very poor conductor the body warmth is all retained.

AUSTRALIA SEEKS CACTUS ENEMIES

The prickly pear cactus is advancing in Australia at the rate of a million acres a year. Leith F. Hitchcock of the Australian Commonwealth Prickly Pear Board estimates that already 60,000,000 acres of East Australia alone are infected with this spiny pest.

Mr. Hitchcock has just arrived at the field station of the U. S. Bureau of Entomology at Uvalde, Texas,to take charge of the North American phase of Australia's war on the prickly plant. So kindly has the cactus taken to the climate of the isolated continent that it occupies more than twice as much landas all the other crops put together, and so desperate have the inhabitants become that every sort of enemy that the cactus ever had in any part of the world is being drafted into service in the wild hope that it will help check its spread.

For that purpose the Australian Prickly Pear Board has sent out men to the arid regions of the Southwest to collect specimens of the various types of insects that prey on the prickly pear. Thus far, according to Mr. Hitchcock, different species of the mealy bugs or cochineal insects have been found most successful. The insects are grown in cages at the entomological station here and the most vicious attackers of the cactus are shipped to Australia. There the authorities, taking warning from