

## Incas' Sickness Traced

Pathology

Modern science has taken the final step in the conquest of a disease that afflicted the old Incas before the Spanish invaded Peru and that has persisted in that country until our time. The final work was done according to plans arranged by the late Dr. Hideyo Noguchi just before he sailed for Africa, where he died last spring, a victim of yellow fever which he was studying.

The ancient disease, known as Oroya fever or verruga, is caused by a germ and is transmitted by a blood-sucking gnat peculiar to the locality where the disease exists, scientists from the Rockefeller Institute report in *Science*. These investigators who have established the final link in the chain by proving that the disease is spread by the gnat are the late Dr. Noguchi, Raymond C. Shannon, Evelyn B. Tilden and Joseph R. Tyler.

The disease is characterized by numerous warts, which vary in size from small red prominences to masses as large as eggs. The old name for it, verruga, refers particularly to these warts. The ailment is also often accompanied by a severe fever and anemia and it is often fatal.

Its occurrence is confined to cer-

### "Maya Bible" Translated

Archæology

A new translation has appeared of the "Maya Bible," the Popol Buj, as it was called by the Indian convert to Christianity who wrote it down a few years after the Spanish conquest of his country in 1524.

The original, in a dialect of the Mayan language, expressed phonetically in Latin characters, was written by Diego Reynoso, it is believed, early in the sixteenth century. It was lost and was only rediscovered at the end of the seventeenth century.

The "Popol Buj", which means "collection of written pages", is divided into a preamble and eleven "traditions," that begin with the creation of the world and end with the Spanish Conquest.

The first tradition explains the creation of the world and of living creatures, and their final destruction in great cataclysms. The second and third tell of the first arrival of the "Toltecs" in the tropical lands of what is now Guatemala, and their battles for the right to stay, while the fourth embodies a delightful legend symbolizing union between the races.

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tain narrow clefts in the mountains of Peru. During the construction of a railway through the mountains in 1870 thousands of the workers died of the disease. It was noticed that only those who stayed in the mountain clefts overnight fell sick. This led scientific investigators to suspect that an insect was carrying it, particularly an insect that bites by night alone.

An American entomologist, Charles H. T. Townsend, found that a gnat called *Phlebotomus* is the guilty transmitter. The Rockefeller investigators later found two other species of phlebotomi that are capable of carrying the germs.

During the last century scientists were not sure that the two diseases, Oroya fever and verruga, were the same, because some patients had warts with mild fever, some severe fever with no warts. To settle the question, a medical student, David Carrion, inoculated himself on both arms with tissue juice taken from the warts of verruga. He developed Oroya fever and died, another of the martyrs of science.

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### Bean Disease in West

Phytopathology

Large acreages of beans have been destroyed by a bacterial disease known as "halo spot" in Montana, Wyoming and Colorado.

Reports of the damage caused by this relatively new disease have been made to the U. S. Department of Agriculture by Miss Florence Hedges, as the result of a field trip this summer. *Bacterium medicaginis phaseolicola* is believed to be the cause of halo blight, which may be introduced into new fields through infected seed although the amount of loss resulting is dependent upon a number of factors among which are unfavorable weather conditions. The disease has also been found in the trucking sections of Florida, southwestern Georgia and South Carolina. All of the most popular canning varieties of beans, with the exception of the Refugees, are very susceptible to halo blight, but the fact that the Refugees are quite resistant to this disease, gives the agricultural experts hope that it will be possible to combat this disease invasion of the bean crop by breeding new resistant varieties.

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## NATURE RAMBLINGS

By FRANK THONE

Natural History



### A Roughneck in Fine Feathers

With the summer birds pretty completely gone, we are turning to the permanent, year-round boarders for such consolation as they can give us. It takes a hardy bird to stand a northern winter; no wonder then if some of these hardy fellows turn out to be a bit tough.

Of such is the tribe of the bluejay. He is a roughneck in fine feathers, a roystering, blustering, obstreperous gangster in clothes that are well-tailored but "swell" rather than elegant. You can't help liking the fellow after a fashion, just as you can't help admitting that some of our modern city bandits have a picturesque and even a rather engaging side to their lamentably shady characters.

But it can never be forgotten that for all his fine feathers the bluejay is a roughneck still, a robber and a thug with innocent blood on his beak. The same bird that flashes brilliantly around your charitable lump of suet during the coming winter, last summer got his animal food partly by raiding the nests of smaller birds and spearing their eggs and swallowing their unfledged offspring. Not so attractive a picture, that. It is for this reason that in many places the protection of the law is withheld from the jay, and it is accounted something of an act of virtue to waylay and kill him.

Yet, even in performing such an act of justice, we must be assailed with doubts. When we think of him in connection with other birds we must condemn him as a murderer, but when we think of him in connection with grasshoppers he almost appears as a policeman. But no sooner does he begin to acquire a little virtue in this way than we catch him in an orchard as a thief. Most truly, a person of a very complex character is the bluejay.

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