Further details of this work are to be published in the *Canadian Journal of Research* in the near future.

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A PROMISING CONTROL FOR PSYLLID YELLOWS OF POTATOES

THE feeding of the psyllid, *Paratrioza cockerelli* Sulc., causes a very serious disease condition in potatoes and tomatoes, known as psyllid yellows. It is the most serious problem for the potato growers of many western sections, and tomatoes are often very seriously injured. It has been estimated that the condition reduced the 1932 potato crop in Colorado as much as 8 million bushels.

Practically all sections of the state were infested, with some suffering a total crop loss. Production has become so uncertain in some important sections that the acreage has been very materially reduced. Reports indicated that the loss has been equally heavy in other western states.

The condition is characterized by an upward rolling of the basal portion of the terminal leaves, which may be somewhat smaller than normal and stand more or less upright. They early take on a chlorotic appearance that may develop to a distinct yellow and in extreme cases an early dropping of the leaves. The nodes become enlarged and all buds are abnormally active. The effect upon the tubers is just as pronounced. If the set has taken place the growth is checked. When the tubers are not definitely formed, numerous stolons are thrown out with small tubers forming into a chain effect. Such tubers frequently give rise to sprouts. In advanced cases aerial tubers are characteristic.

Considerable work has been done to determine the exact cause of this abnormal development, without evidence that it is of bacterial or virus origin. The best evidence supports the theory that it is of the nature of a toxin injected into the plant by the insect. This theory is strongly supported by the rather remarkable recovery shown by plants upon removal of the insect parasites.

Numerous tests are under way with a large series of possible controls with outstanding early results being shown from lime-sulfur applied as a spray. It shows a very definite lethal effect upon the insects and apparently has a positive residual effect in preventing the location of the small scale-like nymphs. Plants showing distinct psyllid yellow symptoms have after spraying shown almost complete recovery, as evidenced by a normal top growth and good tuber production. In an early field of the Irish Cobbler variety the checks produced at the rate of 51 bushels of marketable potatoes while a block receiving only one application of lime-sulfur, testing 33 degrees Baume, used at the rate of one gallon to 40 gallons of water, produced at the rate of 209 bushels of much better quality and size. In another field the check produced at the rate of 128.9 bushels and the sprayed portion 378.5.

Extensive tests are being carried on in the late-producing areas and several hundred acres have been sprayed by commercial producers. The early indications of results are promising. A more complete report will be made after the harvest.

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WHERE DID THIS REALLY HAPPEN?

RECENTLY, in rereading Darwin's account of his journey around the world in the *Beagle,* I read in Chapter VII of an attack by a jaguar on priests in a church at Santa Fé, in the Argentine, a few years previous to his visit in October, 1833. Two priests were killed by the animal. When I read this I at once recalled that Seton, in "Lives of Game Animals" (Vol. I, pp. 28–29), quotes from Baird's "Mammals of the Mexican Boundary Survey" an account of a jaguar attacking and killing four people in the church of the convent of San Francisco, which it seems was situated on the Rio Grande 18 miles from Santa Fé! Seemingly, this convent is no longer in existence. This attack was on the tenth of April, 1825. I have looked up this account in Baird, and he apparently copied it from Kennerly's notes.

Knowing that Dr. Alexander Wetmore had been at the South American Santa Fé, I wrote to him, asking if he could tell me if there was a convent of San Francisco there, and he apparently took the trouble to ascertain for me that there is both a church and a convent of the San Franciscan Order at that place. A few years previous to 1833, the time of Darwin's visit to Santa Fé, could very well be 1825.

Baird's account is an abridged translation from the Spanish, and is prefaced by the following remarks:

> Many stories about the ferocity of this animal are told among the inhabitants of the western regions, but none substantiating the fact that a jaguar unprovoked will attack man. In the annals of the Convent of San Francisco, in Santa Fé, a bloody occurrence is recorded which contains some indication of the jaguar's nature.

Then follows the account.

Where did this attack actually take place? It would be strange, indeed, if two such attacks occurred at about the same time at places of the same name so widely separated as these two Santa Fés. Therefore,