

sian River. Should a part of the upper course of a tributary have been transferred from one system to the other, it would have carried with it only such forms as it harbored, thus introducing to the recipient basin a comparatively limited fauna. This condition is apparently what we find in the Russian River system. Its fauna is like that of the upper courses of the streams tributary to the Sacramento which flow from the western side of the great valley, the channel forms common to the main river being absent.

It is fair to conclude that the fish fauna of the Russian River was probably derived from the Sacramento system, and a study of the species offers the suggestion that the intermingling of their waters, by which the species were introduced, was not affected by a main-channel connection, but rather by a process of stream-robbing something like that described by Holway, only that the transfer was in the opposite direction. J. O. SNYDER

THE MOTH-PROOFING OF WOOLENS

WHEN living in Swatow, China, my house, like all dwellings within the tropics, was infested with various kinds of insects. In experimenting with diverse substances with a view to self-protection against insect pests, I found that alum was a perfect preventive of the ravages of moths among woolens.

It is well known that the female clothes-moth deposits her eggs in woolen goods, and that the worm-like larvæ hatched from these eggs subsist upon the wool until they attain the general form of the adult moth. The Chinese, who are the great practical economists of the world, do not ordinarily wear woolen garments. They are well protected from cold by an interlayer of raw cotton between the lining and the surface fabric of their winter apparel, which is often made from very light-weight silk or linen. Nevertheless, the clothes-moth is ubiquitous in China, and undisturbed woolens are soon riddled by its developing progeny.

I gave the alum a severe test by immersing picture-cords made wholly of wool, in a saturated solution for several hours, and after-

ward using the cords to suspend framed pictures. These cords, numbering a score or more, sustained heavy pictures for over three years, without showing sign of weakness.

A basket of soft worsteds, that I had used in testing the Chinese for color-blindness by the Seebeck and Holmgren method, were likewise treated with alum, and left uncovered and undisturbed for more than a year without attack from moths. The colors of these worsteds, although diverse and delicate, were not altered by the soaking in alum water.

Woolen shawls and other articles were fortified against moths in the same way, and remained intact for several years.

The alum does not evaporate, and is therefore permanently effective in unwashed fabrics.

There is apparently no reason why wools used in manufacturing cloth, rugs and carpets should not be so treated with alum as to become moth-proof. Crude alum is inexpensive and probably one pound of it in four quarts of water would make a solution of sufficient strength for the practical result aimed at. The commercial value of woolen goods would be enhanced by this process, and "the house beautiful" would be more easily kept.

Holland, writing of these troublesome immigrants from the old world, says ("Moths," p. 426) that the depredations of clothes-moths cost the citizens of the United States annually a sum of money which is enough in amount at the present time to pay the interest on the national debt. ADELE M. FIELDE

SEATTLE, WASH.,

November 22, 1907

PINK KATYDIDS.

TO THE EDITOR OF SCIENCE: Referring to your page 639 (Vol. XXVI.), I have captured pink katydids at East Hampton, L. I., probably on four to six different occasions in the last twenty years. One year—I should say in the seventies—I had three at one time. No one there had ever seen any—although no professional entomologist was in town. I also found one at South Lyme, Conn., in the summer of 1906. All that I have ever found were a bright shell pink. I did not note the sex of any of my specimens, which were all