### A NEW GUINEA EEL-FAIR

THE ascent of fresh-water streams by vast swarms of elvers or young eels, long known as "eel-fairs" in England, is a phenomenon of great interest. The migrations of the Atlantic eels are now well known, thanks to the studies of a long line of naturalists, culminating in the epochal researches of Johannes Schmidt.

As yet little is known of the life histories of the numerous species of Anguilla found in the Indo-Pacific waters. It is therefore of interest to note that on May 24, 1928, we found an incredible number of young eels ascending the great Sepik River at Marienberg, New Guinea, which is about forty miles inland from the north coast. This is in former German New Guinea.

I measured 262 specimens, varying from 104 to 210 mm in length. Most of the eels observed were from 125 to 150 mm long, and quite slender. A moderate increase in length was accompanied by a very great increase in bulk.

The eels occurred in such numbers that the natives, men, women and children, scooped them up out of the river by basketsfull on both sides of the river. The Sepik at Marienberg is half a mile wide and fifteen to twenty-five feet deep at the bank; our ship, drawing thirteen feet of water, tied up to the shore.

Two days later only a few individuals were found in seining the tributary brooks where the young eels had occurred in myriads before.

This is the second eel-fair observed in New Guinea, the first seen being on February 22, 1922, in the Mamberamo River, Dutch New Guinea. This was inland a considerable distance from the north coast.

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## SCIENTIFIC APPARATUS AND LABORATORY METHODS

### MORE ABOUT LACTOPHENOL

IN two late numbers of SCIENCE[1] two contributors have called attention to lactophenol and its use. Lactophenol and lactophenol gum have been used for nearly eight years by the writer, his coworkers and students in the department of botany. This solution has been found an excellent medium for killing, staining and mounting microscopic materials, for these three processes may be accomplished in one process with green lactophenol.

However, for staining nuclei and differentiating hyphae in plant tissues, as wood and parenchyma, the sections were first submerged for ten minutes in lactophenol to which two parts of distilled water had been added; after this liquid was drained or blotted from the sections they were covered with deep acid green lactophenol and stored overnight in the open air. The liquid was again removed, the sections washed by floating clear lactophenol over them and then mounted in clear lactophenol or lactophenol gum. Hyphae in cells of fruit, wood and from germinating conidia were nicely differentiated by this method.

As investigators continue to employ this solution in zoological and botanical work, greater possibilities for a more extensive use may be forthcoming. If such be the case, they should be published for the benefit of all.

Details for the preparation of lactophenol and lactophenol gum together with references may be found in an article by W. H. Davis, "Lactophenol."[2]

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## SPECIAL ARTICLES

### A NEMATODE PARASITE OF THE JAPANESE BEETLE (POPILLIA JAPONICA NEWM.)

ON May 29, 1929, at the Tavistock Golf Course, Haddonfield, New Jersey, in a plot of ground two feet square the writers found fourteen dead, fully grown Japanese beetle grubs. These grubs were flaccid and of an ocherous brown tint. On dissecting the cadavers each one was found infected with numerous nematodes. Among these nematodes ovoviviparous females, males and larval forms were observed. On May 31, in the identical locality, nine more dead Japanese beetle grubs were found. These grubs had the same external appearance as the previous ones and were also heavily infested with the parasite.

On each of the two days following this observation eight fully grown Japanese beetle grubs from healthy stock were experimentally infected with worms derived from the parasitized grubs. One grub was placed in each of eight sterile tin salve cans containing soil which had been previously baked. The surface of the soil in each can was dampened with five drops of a heavy salt solution suspension of the nemas. An equal number of uninfected controls were held. Within five to seven days fifteen of the sixteen infected grubs

[1] SCIENCE, 70: 430, November 1, 1929; 70: 455, November 8, 1929.

[2] *Botanical Gazette*, 77: 343–344, 1924.