natural enemies has become an important technique during the last generation. But if competent observers are to be trusted, the southern Arabs employed the same method more than 150 years ago, in the culture of the date-palm.

In his "Relation d'un Voyage dans l'Yemen" (Paris, 1880, p. 155), P.-E. Botta says:

> I was able to verify the singlar fact previously observed by Forskål, that the date-palms in Yemen are attacked by a species of ant which would cause them to perish, if each year the growers did not bring from the mountains and fasten in the tops of the palms branches of a tree that I did not recognize, which contain the nests of another species of ant which destroys that of the date-palm.

P. Forskål was the naturalist of C. Niebuhr's expedition; his work was published posthumously in 1775. I have not seen his account to which Botta refers.

It would be interesting to know whether the history of economic entomology furnishes any earlier record of the "biological method" of pest control.

Paul Popenoe

Thermal, Calif.,
April 24, 1921

A LONGLIVED WOODBORER

From its burrow in the top piece of an old birch book-case at Mt. Pleasant, Iowa, a soft white wood-boring grub was shaken recently, when the owner discovered the newly made opening and conical pile of wood chewings that had been thrust out. There is nothing unusual about finding grubs in wood, but this particular wood-boring larva has a strange history.

The matured larva was given to the writer and placed in a box to complete its development. It pupated in about two weeks and in a few days the adult beetle emerged. It was *Eburia quadrigeminate* Say, a longicorn commonly known as the honey-locust borer, and is recorded as developing in hickory, ash and honey locust.

Mrs. Doe, who owns the book-case, is certain that the board in which the grub fed and grew from egg to a matured larva is no less than forty years old, as the book-case has been in the possession of the Does for at least that many years.

Just how and why this creature should have spent so many years in this humdrum life between the narrow walls of a thoroughly seasoned birch board only five eighths of an inch thick, and never once coming out for air or water seems remarkable indeed.

Mr. J. McNeil, writing in the *American Naturalist*,[1] tells of two longicorns of this same species emerging from an ash door-sill that had been in place nineteen years. In that case the relation of the tunnels to the solid brick wall on which the door-sill rested seems to have made it certain that the eggs were laid in the wood before the house was built. This case seems to outstrip any known insect record in point of longevity.

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QUOTATIONS

THE COST OF PRINTING SCIENTIFIC WORKS IN ENGLAND

Officers of learned societies and librarians have made public a memorandum planned to impress on the printing and publishing firms of the United Kingdom the danger which they are incurring by enforcing the recent enormous increase in the price of books, more especially books of the more serious and specialized sort. They say:

> It is not only to the public detriment, but clearly also to the detriment of the printing and publishing trades, that learned societies should be forced to cut down or suspend altogether their output of proceedings and monographs, and that libraries should have to reduce to a minimum the number of books which they purchase. It is obvious that if books are bought in ever-decreasing numbers, publishers will find it useless to print anything, however valuable, which does not appeal to the unlearned public. And if societies are

[1] Vol. XX., p. 1055.

unable to continue their series of publications there will be less work for printers. More money can not be raised either by societies, whose members mainly come from those professional classes which the war has hit most hardly, or by libraries which depend on private funds drawn from those same classes.

We are aware that material costs more, and that printers' labor is now remunerated on a scale which has forced publishers to raise all prices. But the general economic conditions which led to these phenomena are beginning to change. The existing scale of book prices means the cessation of book-buying. Unless novels and school books are to be the only output of the future, the present state of things must come to an end. The remedy lies with the trade; the buying public has come to the end of its resources, and refuses to be exploited any longer.

To this statement Mr. Geoffrey S. Williams, president of the Publishers' Association of Great Britain and Ireland, makes reply in the *Times*, saying:

It is unfortunate that the signatories of the manifesto about the cost of printing should have included publishers in their indictment, for publishers are fellow-sufferers with the signatories. They are dependent on the printing, binding, and paper-making trades, and until the charges made by these trades are materially reduced it is quite impossible for publishers to issue books at lower prices. On the whole, prices of books have not advanced to anything like the extent that would have been justified by the increases in the costs of production.

It is not easy to quote figures, for books, like human beings, have distinct individualities, especially from the publisher's point of view; hardly any two of them are exactly alike, though they wear the same clothes; but from calculations that have recently been before me, and give, I believe, a very fair comparison of the prices ruling in 1914 and now, it appears that the cost of printing is approximately two and three-quarter times what it was in 1914, paper (of an inferior quality) costs over double what it did in 1914, binding (also of an inferior quality) costs rather more than three times what it did in 1914, while the total cost of a large edition of a small book works out at about 180 per cent. above the 1914 figure, and publishers' establishment charges and the cost of advertising have kept pace with other items in their upward course.

SPECIAL ARTICLES

A BACTERIAL DISEASE OF GLADIOLUS

AN undescribed bacterial disease of *Gladiolus* has been under observation in this laboratory for a number of years, and recently a more intensive study has been undertaken. The following brief description is offered as preliminary to the publication of the complete study.

The organism has been isolated repeatedly and its pathogenicity proved by inoculation of healthy plants. The parasite is briefly characterized as follows:

Bacterium marginatum n. sp.

A cylindrical rod varying considerably in length, 1–3.5 x 0.5–0.8 μ, frequently in pairs and forming chains in beef bouillon; motile by means of 1–2 polar flagella; aerobic, no spores, capsules present.

Superficial colonies in peptone-beef agar plates are very characteristic; circular, smooth, slightly elevated centers surrounded by a wide thin border more or less irregular at the margin. Width and character of the border vary slightly under different conditions. Growth is white and extremely viscid.

Liquefies gelatin; liquefies blood serum; does not reduce nitrates; produces slight acidity in milk; digests casein; produces acid in cultures with various sugars. Grows well in Cohn, Fermi and Uschinsky's solutions. Produces moderate amounts of indol and ammonia. No gas is formed.

Temperatures for growth, maximum 40° C., minimum 8–9° C., optimum 28–30° C. Thermal death point about 52° C. Does not grow at temperatures below 8° C., but remains alive for at least 8 weeks at 1–2° C.

Gram negative. Group number: 211.2222022.

Pathogenic in leaves of gladiolus forming circular to elliptical lesions rusty red in color becoming dull brown or purplish. These spots may occur on all parts of the foliage but are often confined to the lower leaves. Observation and experiment indicate that the disease makes rapid and dangerous progress only in warm and moist weather when the rot spreads