

fects to healthy trees when the beetle feeds on the young shoots. The manner in which the fungus kills the branches or the entire tree is macabre. Fungal spores find their way into the conducting tissue of the tree and are carried along in the vascular stream. The tree reacts to the presence of these foreign particles by manufacturing gums and resins. It is the accumulation of these substances in the wood which form a kind of embolism, eventually blocking the transport system and killing the tree. In addition, the fungal mycelium produces a toxin to which the elm is susceptible.

It is difficult to assess how much the present epidemic has cost, for elm is rarely grown on a commercial scale. Nevertheless it is an important landscape tree, especially in areas which have been badly devastated, such as the Severn valley and the Thames estuary. Furthermore, elm is a native hardwood of some quality, and recently has been assuming considerable importance in the manufacture of furniture.

There is at present no sure way of eradicating the disease, but research has been developing along three main lines. In America, where the native elm is much more susceptible to the disease than the British species, some success has been obtained by attacking the elm beetle directly and destroying its breeding ground. This has been achieved by clearing infected trees, and spraying healthy trees with DDT in the early part of the season before bud break. In the present climate of conservation, however, this latter practice is causing some embarrassment. In Britain, systemic fungicides are currently being tested, but perhaps the greatest chance of control lies in the development, in Holland, of a strain of elm with genetic resistance to the disease. This is a fast growing species called the Commelin elm, but development has not yet advanced to the stage where the quality of the wood can be assessed.

If these measures prove unsuccessful in combating the spread of the disease, it seems all too certain that within a few years the elm in Britain may be but a verdant memory.

WATER QUALITY

Changes in Moskva River

by our Soviet Correspondent

THE recently published data from the spring scouring of the Moskva River in the Moscow city area reveal some interesting changes in the quality of the river water (*Privoda*, No. 9; 1970). Since the building of the Perervinskaya dam below Moscow in 1937, and the later building of dams on the headwaters of the Moskva and its upper tributaries, the water regime of the Moscow reaches of the Moskva has changed considerably. To avoid stagnation, an annual scouring of these reaches is carried out. A massive discharge of water from the reservoirs is timed to coincide with the natural spring floods on the Moskva. The water coming downstream to the "reservoir" of the Moscow reaches during scouring (estimated at 650 million cubic metres this year, with a peak flow of 500 cubic metres per second) considerably exceeds the capacity of the "reservoir" reaches, and so scouring is effected rapidly. Scouring usually takes place in mid-April, and samples of the river water are analysed one calendar month later. The figures for 1970 include

transparency of the water (compared with standard alcohol), 30; content of carbon dioxide, 6.6 mg/l.; total mineral salt ions, 245 mg/l. and oxidizing power against bichromate 12.3 mg of oxygen/l. Compared with pre-scouring figures, the transparency increased seven-fold, the carbon dioxide decreased four-fold, and the amount of organic admixtures decreased considerably because of the increase in oxidizing power. On the whole these measurements follow the pattern of previous years; it is interesting, however, that the phosphate content of the water, which was 0.044 mg/l. in 1965 and 0.004 mg/l. in 1966, has now declined to zero.

JOURNALS

Goodbye *Science Journal*

THE proposed merger between *Science Journal* and *New Scientist*, which was announced last week, will not only create a gap in the field of scientific publishing, but it is also likely to leave in its wake considerable ill-feeling among the editorial staff of both magazines. The proposal means that most of the staff of *Science Journal* will be transferred to the weekly *New Scientist* and it seems likely that *New Scientist* will be expanded to include special features articles. This means in effect that when the final issue of *Science Journal* is published next January, there will no longer be a monthly general science journal published in Britain.

The driving force behind the merger is clearly the poor financial position in which *Science Journal* now finds itself. Mr Walter Williams, group director of IPC Science and Technology Publications, which publishes *Science Journal*, said for example that the accumulated losses of the magazine during its five year lifetime indicate that it will never be financially viable. Moreover, Mr Williams pointed out that there has been an absolute decline in the advertising space sold in *Science Journal*, and that its sales have deteriorated during the past year or so.

This, however, has not deterred a few publishing companies from sounding out the possibilities of taking over *Science Journal*, and the *Financial Times* even put in a firm offer to buy the magazine. By rejecting the offer, and deciding to merge the two magazines, IPC is clearly hoping that the new-style science magazine will be able to pick up most of *Science Journal's* advertising revenue and readers—especially foreign readers. An added advantage, from IPC's point of view, is that the company will be able to retain most of the editorial expertise which has been built up in *Science Journal*.

Although *Science Journal's* editorial staff accept that the magazine has lost money, their general feeling is that in the past few months there has been considerable improvement and that the financial prospects are far from gloomy. The magazine's chapel of the National Union of Journalists therefore immediately invoked the disputes clause in the editorial staff contract, because it is not convinced of the viability of the merger plans. The chapel's attitude at the moment is that *Science Journal* should be kept going as an independent publication. Redundancy is not yet a chief point of concern because all the writing staff, with the exception of editor Robin Clarke have been offered appointments on the new magazine.