

environmental sounds, traffic noise and vibration, winds, thunderstorms, ringing the bells and even playing the organ. There are seismographs on the ground and accelerometers on the windows. From the measurements, the structural transform function of the buildings can be calculated, and the RAE hopes to establish a relationship between this and differences in maintenance costs of cathedrals in quiet and noisy sites. The transform functions will also be used to test predictive mathematical models of the effects of sonic bangs on buildings, which have been derived from model experiments at Farnborough and elsewhere.

The ministry and the RAE say they have chosen cathedrals for the tests because their complexity provides an exacting test of the theoretical models, because the history of cathedral buildings is well documented and because their longevity is in some sense a guarantee of immunity from damage. The RAE insists that the tests in no way imply that cathedrals are likely to be particularly susceptible to sonic boom damage and, in fact, the RAE is claiming that the cumulative effect of sonic booms would only increase the maintenance costs by a fraction of one per cent. Although some alarm has been caused by the mention of using small explosive charges in some of the tests, this seems to be a red herring. Apparently the charges are no greater than many of the fireworks which will be let off on Guy Fawkes night, and Mr D. R. B. Webb of the RAE says that the noises in Canterbury Cathedral on bonfire night will be greater than that of the charge which was used in the test there. Judging, however, from the reluctance of some of the cathedral authorities to allow tests involving explosions, Mr Webb's confidence is not everywhere shared.

Each cathedral will be tested for between two and

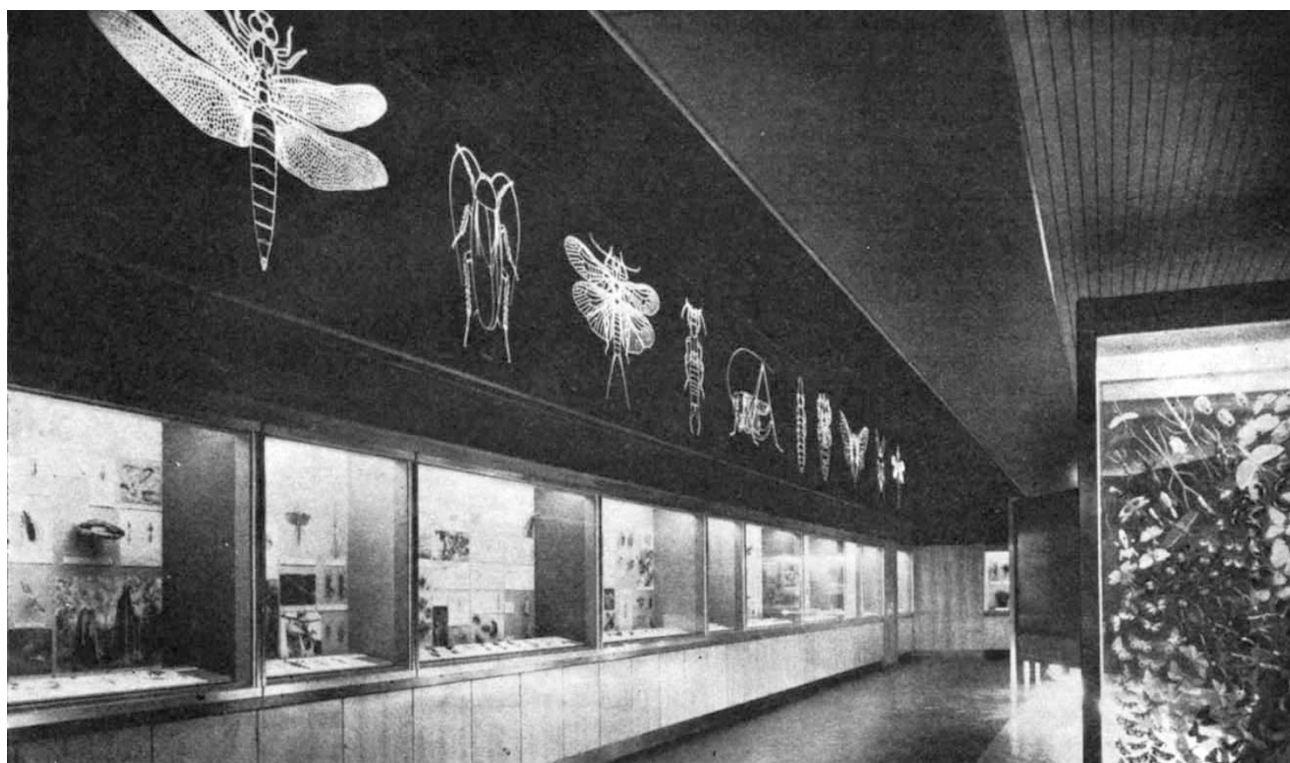
seven days; the whole survey is due to be completed by November 18.

The whole operation is costing several thousand pounds, but Professor Clarkson of Southampton said on the telephone last week that, even if he knew the exact amount, he would probably not be prepared to say what it is.

EXHIBITIONS

Insects on Show

A COMPLETE break from the traditional and rather musty displays of insects in natural history museums has been made by the new insect gallery, opened to the public last Tuesday in the British Museum (Natural History) in South Kensington. The new gallery occupies part of the old Shell Gallery which was damaged during the Second World War. This has since been repaired and completely re-equipped. A riveting vertical panel of butterflies, moths and large colourful beetles stands at the entrance to the gallery. Around the sides are attractive and well chosen displays illustrating the different types of insects, their structure and distribution and the various adaptations which make insects such a diverse and fascinating group. In the middle of the room other cases are temporarily filled with photographs but will eventually contain displays of insects in relation to man—carriers of disease, agricultural pests and so on. Daylight has been completely excluded from the gallery and light in the display cases provides the only illumination. Round the dark upper part of the gallery is a striking frieze of large line engravings on glass illuminated from behind illustrating the diversity of insect form.



The new insect gallery at the British Museum (Natural History).

The planning and arrangement of the displays have been carried out by members of the Department of Entomology and the Exhibition Section of the museum. Part of the gallery's success lies in the use of a variety of display tools—three-dimensional models, paintings, diagrams and drawings, and specimens of insects themselves selected from the store of about 20 million in the museum. The lettering of what little text there is is large and clear, and there is a welcome lack of the lengthier Latin names and strange technical terms. It will be interesting to see how quickly the designers of the gallery discover that an exhibition intended for non-specialists is thronged with specialists for much of the time.

ENVIRONMENT

All Change for the Biosphere

A PROPOSAL for a UN conference on man and his environment is to come up before the current session of the United Nations General Assembly. (The proposal was originally made by the Swedes and was taken up and endorsed recently by the Economic and Social Council during its forty-fifth meeting.) The September "Biosphere" conference sponsored by Unesco in Paris is now seen to have been a kind of curtain raiser to the larger UN congress. Representatives of about sixty nations took part in Unesco's deliberations, but it would be expected that all UN member countries join in the proposed conference. The twenty-odd resolutions finally adopted at the Paris meeting are considered a suitable scientific basis for the big UN meeting.

The resolutions were divided into three categories relating to the three working commissions from which they emanated—research, education and policy and structures. Eight resolutions were concerned with research, the most interesting relating to environmental pollution and the preservation of "gene pools", especially of the variants of domesticated species such as cereals and cattle. The five education and training recommendations included one urging that "ecological thinking" be introduced into curricula throughout the world, starting in the primary school.

The most substantial recommendations were in the last category—policy and structures. An "umbrella" resolution called for national governments to develop comprehensive and integrated policies for the management of the environment and for international aspects to be considered in the formulation of such policies. Nine objectives for such policies were listed, of which perhaps the most significant is the aim of "optimal productivity consistent with continued usage of the biosphere into the long-term future". It was also pointed out that there is already a large body of knowledge about how to get the best out of natural resources without exhausting them; what is lacking is the mechanism for implementing this knowledge. The resolution suggested that governments should bring in a wider range of experts (including sociologists) when drawing up policies for land use and other development.

The International Biological Programme (IBP) now seems set for a run of at least a decade. It is already engaged in most of the background research

called for and so it was patted on the back and a resolution adopted urging follow-up and extension of the IBP after the statutory five years (due to end in 1972). In parallel a plan for an "international and interdisciplinary" programme on the rational use and conservation of the biosphere was called for, this to be carried out on an intergovernmental basis (with some cooperation from non-government organizations). Unesco was charged with drawing up this plan during the 1969-70 biennium—all its funds are committed until then. The programme itself could then start at about the time that the initial IBP comes to an end, during 1972. The big UN conference on man and his environment is expected to be some time between now and then.

BRITISH FLOODS

Who is to Blame?

Now that the first impact of the flooding in southern England has subsided, and with it the spirit of neighbourliness it engendered, recriminations and analyses have begun. Praise for the volunteer and local organizations has been lavish, but it is debatable whether the police, fire brigades and the army were called in soon enough and whether they should in any case be expected to cope with disasters on this scale. So should there be a standing organization quickly and effectively to mount rescue operations, as Lord Robens suggested



Swirling floodwater on a Surrey road.