

to the King of Spain in 1752 for £12,000. This latter telescope never reached its destination, however; it was lost in a shipwreck on the way to Spain. During his life, Short gave his backing to a number of scientists. When James Watt first came to London to learn the techniques of instrument making, Short found a teacher for him. It was Short who put before the Royal Society Dolland's work on the achromatic objective, and who supported the watchmaker Harrison in his struggle to obtain the prize money for his development of a method for determining longitude at sea. In all, Short made some 1,360 instruments ranging in price from three guineas for his smallest model of 3 inch focal length to the 12-foot telescope sold to the King of Spain, and his business sense enabled him to amass an estate of £20,000.

BIOSPHERE

Bandwagon for Unesco

UNESCO'S "Biosphere" conference, being held in Paris this week and next, was suggested at about the time the International Biological Programme (IBP) was rumbling into its stride. (The IBP's operational phase is dated officially from July 1967.) The proposal was greeted with considerable reserve—partly because of the duplication of effort but chiefly because the Unesco enterprise would involve the people who were already considered fully committed to IBP affairs. But Unesco argued that the Biosphere meeting would involve governments—which IBP does not—and that these are in a position to vote funds and adopt programmes, which again IBP cannot.

In the event, Unesco and the IBP have reached an accommodation and several leading figures in IBP are taking part in the meeting as consultants or main speakers. These include Dr Stanley A. Cain, assistant secretary for Wildlife and Parks of the US Department of the Interior, Professor F. Bouliere of the Sorbonne and a section convener, together with the scientific director, Dr E. B. Worthington from the IBP Central Office. Altogether, some 300 people from 50 countries are involved, usually in a dual role as specialists in their own fields and as representatives of their governments.

The full title of the meeting—a good example of Unesco language—is the "Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Biosphere". The "biosphere" is defined as "that part of the world in which life can exist", but for the present conference, the terms of reference end at highwater mark. (Another United Nations body already has international responsibility for the seas and oceans and for the life in them.) The underlying theme is the need to conserve rather than conquer the natural world. "Man . . . has suddenly become aware that he cannot go on living beyond his means off natural resources which it has taken aeons to accumulate. And he does not have much time left . . . he must learn to live in harmony with nature, in a dynamic balance that will enable him to survive on what has been called Spaceship Earth."

Four focal topics are being dealt with by representatives of other UN agencies—food needs and opportunities by the new director-general of the FAO, Mr A. H. Boerma, for example. Each participating nation is to report on its own experience and prospects, and the British delegation is taking a notably down-to-earth

approach. Sir William Slater, head of the delegation and until recently chairman of the Agricultural Research Council, hopes for "a thorough exchange of ideas". His implicit assumption is that nobody is going to rush into providing funds for large nebulous schemes, either national or international, and that experience gained in temperate climates cannot in any case be applied directly to the tropical regions where most of the developing countries lie.

The British report dwells particularly on agricultural practice in Britain. The farming pattern has for many years been prompted by the pressures of a large population on a limited amount of land, and the introduction of rotational farming as early as the eighteenth century is a proof of the need to sustain soil productivity for the future while at the same time increasing crop yields per acre. By adopting a rational basis for development, it is estimated that land today is as fertile as it has ever been, and the "buffered" approach has avoided the gross problems of soil impoverishment, pests and disease. The British delegation is urging the value of the soil survey and the newly initiated agricultural land classification maps. The British report is not smug, however. On the management of water resources, it admits that the control of floods in some areas is poor, while densely populated regions elsewhere are rapidly running short of water.

With luck, and if there is not too much rhetoric, the biosphere conference could have real value. The signs are certainly more propitious than for the parallel exercise called by the UN Peaceful Uses of Space Subcommittee which discussed the practical value of space in Vienna last month.

MUSEUMS

Lost Opportunity

from our Special Correspondent

VISITING the London museums is usually, in the summer, made hazardous by the need to avoid fragments of ice cream and hot dogs on the pavement. At weekends the throng of people, predominantly young people, is thicker than ever, which is why it is to be hoped that the provisions made by the Science Museum for catering for children on the recent bank holiday will prove to be the nadir of a somewhat shabby record. For the past 20 years, the children's exhibition has been housed at one end of the basement. This year, more than half the exhibits have been replaced by notices saying that the exhibition will be closed down altogether at the end of September and reopened elsewhere in the museum during 1969. Those familiar with the children's exhibition will no doubt consider that their present deprivation is in a good cause, and that any change is bound to be an improvement; this section of the exhibition is notoriously cramped, ill lit, badly ventilated and poorly set out. There will, however, be less cheering at the news that the Science Museum is proposing to transfer most of the present exhibits to another—though larger—part of the basement. There seems to be no prospect of the thorough re-design of the children's exhibition which would be necessary to give children a sense of how things have changed since Addison invented the diode and since photoelectric cells were first conceived of as means of operating burglar alarms.

The continued defects of the children's exhibition would, of course, be more easily tolerated if the rest of the exhibition were more hospitable. It is understandable though not laudable that the museum has given over its prime floor space to steam engines and transport vehicles, but a little beyond the bounds of credibility that access to such things as the driving cab of the London Transport underground train should be denied on precisely the day when it would have been sought by the greatest number of people. Even where its set pieces are concerned, however, the museum seems to be caught napping by bank holidays. On Monday this week, for example, nobody seemed to know if there would be a demonstration of the museum's great showpiece, the Bolton and Watt engine which can be set turning by concealed electric motors. Normally, there are demonstrations at 4 p.m. on weekdays, 4.15 p.m. on Sundays and 4.30 p.m. on Saturdays. When 4 p.m. had passed this Monday, the helpful man behind the information desk said that "now we must decide whether it's Saturday or Sunday", but even this god-like opportunity was denied him because "the character upstairs is tied up and cannot come to switch it on".

Everybody knows, of course, that there is a genuine and unavoidable conflict between the functions of museums as centres of scholarship and as places of entertainment. Curators can be forgiven for wishing that visitors would let them get on with serious work. In practice, the Science Museum seems to have mastered these yearnings quite successfully, and in the past few months there have been some welcome signs of an anxiety to please—the man behind the information desk is an innovation, for example. Yet there is obviously a long way to go before the museum shoulders wholeheartedly its responsibility for seeing that people, and particularly young people, are provided with a vivid and contemporary vision of what science is like. Even the new children's exhibition will not let the little creatures know about electronic computers, for example. Part of the trouble seems to be the now chronic penury and too great a willingness to rely on

outside organizations for assistance, but there seems also to be a failure to acknowledge the importance of a popular science exhibition in a capital city like London. The reorganization of the children's exhibition might have been an opportunity for change, but time seems very short.

CONSERVATION

Wetland Preserved

ONE new Nature Reserve in Britain, and an extension to an existing reserve, have been announced by the Nature Conservancy. In all, 524 acres have been added to the areas of natural environment being conserved in Britain. The new national Nature Reserve, Stodmarsh, lies in the valley of the River Stour five miles north-east of Canterbury. It covers about 402 acres of shallow pools, reed beds, swamps and damp grazing fields, and has been established partly by purchase and partly by a deed of grant from the National Coal Board. The conservancy will manage the reserve principally to conserve the wildfowl and other birds. Wetlands are becoming increasingly scarce because so many of them have been drained, and Stodmarsh is particularly important because its proximity to the south-east coast attracts several marsh-dwelling birds which are more common on the continent. The Kent River Authority is helping the conservancy to control water levels.

An extension has also been made to the Kingley Vale National Reserve in Sussex. An area along the ridge of Bow Hill between Lavant and Chilgrove brings the total area of the reserve to 352 acres. The main part of the reserve, which is noted for its yew forests, was constituted between 1952 and 1955. The new section is on the east-facing side of the escarpment and it is a well known landmark dominated by yew trees. There are also some small areas of chalk turf and patches of juniper, a species which is becoming rare in southern England.



Stodmarsh national Nature Reserve, Kent.