

Soviet science

A declining influence?

Los Angeles

THE impact of Soviet science is surprisingly small and has markedly decreased in recent years, according to a study by Andrew Sessler, the plasma physicist who led the Lawrence Berkeley Laboratory for six years. Sessler first presented his findings at last year's international conference on Soviet Jewry in Jerusalem. "I wanted a topic where I could get some hard facts", he said.

The study has been based on the citation figures of the *Science Citation Index* published by the Institute of Scientific Information, Philadelphia. Sessler has compared data for 58 leading Soviet journals in 1975 and 1981. Since some Soviet accomplishments are not published in the open literature, the study concentrated on the impact, not the quality of Soviet science. Two measures were determined for each journal under scrutiny — a ranking by the number of original articles published in each periodical (by which test *Nauk Doklady* was ranked third in 1981) and the number of times a journal is cited elsewhere, or its "impact factor".

Between 1975 and 1981, Sessler found, the number of source items in Soviet journals fell by 18.9 per cent. During the same period, there was a worldwide increase of 67 per cent. Sessler says this could be explained if Soviet journals had adopted stricter editorial policies, but the citation rate of Soviet journals fell by 11 per cent between 1975 (86,737) and 1981 (77,130). This reduction, Sessler says, occurred despite a worldwide 12 per cent increase in the citation of all other scientific journals. In specific scientific fields, the *Science Citation Index* rating found that the best Soviet journals were on average 13 times less effective than the leading journals. Sessler concludes that "Soviet science is presently having very little impact on world science".

Why? One possibility is that Soviet science is hindered by its reliance on large block-funded institutes, Sessler said. Or the Soviet system of education may discourage young researchers' initiative. Certainly, he says, the Soviet system faces a crisis in instrumentation caused by revolutionary developments elsewhere.

Nevertheless, Sessler believes that Soviet science is certainly far stronger than is indicated by its measured impact. He guesses that there may be a shift in emphasis from basic to applied sciences, and that if more excellent scientists have been devoting their attention to military science, secrecy would have been increased. But political factors such as discrimination and reduced prestige for scientists could also be at work.

Sandra Blakeslee

UK forestry

Conservationists set to gain

THE British Forestry Commission is expected to make substantial concessions to conservation interests in a discussion document to be published early next month. The commission, which has been under increasing pressure over its *laissez faire* policies on broadleaved woodland, is likely to propose among other things that much stricter conditions should be imposed in future on private landowners seeking grant assistance for operations on ancient semi-natural woodland.

Conservationists attach great importance to the preservation of ancient woodland because it supports a greater diversity of wildlife species than modern stands, some of which are not native to the country. Since 1947, 30–50 per cent of Britain's ancient semi-natural woodland has been lost and the trend appears to be continuing. And the Forestry Commission has become the new bogeyman for conservationists because it has usually ignored the distinction between ancient and modern stands in its grant payments.

There is also disquiet because the commission is at present following government instructions to sell off many of its own woods, some of which have later been destroyed and replanted with fast-growing species. Companies have been established which exploit tax loopholes and take advantage of payments made by conservation bodies to protect ancient woodland. The Forestry Commission accordingly set in train a full policy review, which included consultations with the Nature Conservancy Council (NCC).

NCC has over the past few years been drawing up an inventory of ancient woods in Britain, which is now halfway to completion. The inventory compares present-day stocks with the mapped distribution of woodland earlier this century. The figures are not encouraging, according to NCC scientists. The Forestry Commission now seems ready to accept that the NCC list could be used as the basis for a classification that would be used to provide special protection to ancient woodland in future.

There are still problems, however. Mr John Kennedy, a member of the commission, points out that it is difficult to enforce legal protection for forests that can survive a change of ownership. And there is nervousness about making public the NCC list of woods that could be protected. Owners who want to guard the right to manage their woods as they wish could refuse access to surveyors if they suspected that any regulatory changes might not be to their advantage.

Despite the difficulties, the commission now seems to feel the time has come to clean up its reputation. Conservationists seem cautiously optimistic. One possibility would be to confer on ancient woodland

protection superior to that enjoyed by Sites of Special Scientific Interest, without creating more work for the already hard-pressed Nature Conservancy Council, which is responsible for the protection of such sites.

Tim Beardsley

Herschel's home imperilled

THE museum in the English city of Bath that commemorates the German-born astronomer William Herschel may have to close after the summer. The museum is in the house at 19 New King Street, Bath, where Herschel and his sister Caroline lived when he discovered the planet Uranus in 1781, and is Herschel's only surviving residence. Although Japanese astronomers have been frequent visitors during the four years the museum has been open, too few British visitors have materialized and no corporate sponsors have emerged.

Ironically, the Herschel Museum suffers from being in Bath which, although a tourist mecca, has too many museums. The city council has enough museums of its own to which it needs to attract patrons. The William Herschel Society has even had to pay to have a direction sign put up at the end of the street. The University of Bath, which has problems of its own with the Holburne of Menstrie Museum of Art, is unable to help, while another museum, the Postal Museum, is also under threat.

So, in spite of support from the National Maritime Museum, of which the Herschel Museum is an outpost, the Victoria and Albert Museum, which has lent a 1790 square piano as well as other furniture (Herschel was a musician), and the Bristol Museum, it seems that a unique museum is doomed.

Retired psychiatrists Elizabeth and Leslie Hilliard bought the house for the Herschel Society primarily because of their interest in its Georgian architecture. The garden has been replanted with herbs which Herschel's sister Caroline, an astronomer in her own right and compiler of the *Catalogue of the Stars*, would have used. John Mason, a member of the Herschel Society committee who restored the garden, dug up fused pieces of metal, the result of a recorded accident when Herschel was preparing lenses in his workshop which visitors now see. Enthusiasts of the Herschel Society (now copied in Japan) act as stewards and guides.

As things are, the Herschel Museum runs at a loss of more than £2,000 a year, which is being borne by the Hilliards. "My wife and I cannot carry on indefinitely — we're in our eighties", says Leslie Hilliard.

Laurence Dopson