

himself lifting heavy timbers, and two consecutive treatments of acupuncture, one by a needle "passed to the depth of an inch on either side of the spine", relieved the pain.

In addition, Churchill was aware that "acupuncture" was practised elsewhere and cites several French doctors as having reported success with acupuncture. Also, a Dr Bretonneau, "physician to the 'Hospital General' of Paris, has made a number of experiments on puppies". These prove that "the Cerebrum, the Cerebellum, the Heart, the Lungs, the Stomach, &c. may be penetrated without occasioning the least pain or inconvenience".

Ranging further afield, Churchill also reports a practice among American Indians in which a number of specially constructed arrows (i.e., for shallow penetration) are shot into the patient who is standing in a river. However, he concludes that this is not acupuncture, a bloodless procedure, but is actually a form of bloodletting.

Churchill also discusses the two kinds of special gold or silver needles which the Japanese used for acupuncture. These were made only by expert artists specially licensed by the Emperor. Depending upon their design, the needles were either twisted into the flesh by hand or were driven in by a special leather-covered hammer.

The unknown reviewer, with tongue-in-cheek, suggests that such medical advances might cure the ills of the literary world. He recommends "regular quarantine fumigation" for Lord Byron and Carlisle, shampooing for Mr Wilberforce and "the secondary Scotch novelists", and acupuncture for Joseph Hume and Henry Brougham.

Evidently, mention of or allusions to acupuncture does not appear in early or mid 19th-century popular writing. Certainly it would have been mentioned had it become at all fashionable. Churchill recommends it (as it is touted by some today) as a cure for many ills. Although a surgeon, he seems to have missed its possible use as an anaesthetic during surgery. One wonders why, if it was indeed so effective, acupuncture was not accepted in England or France and retained by the Japanese?

Yours faithfully,

MAUREEN LIPPERT

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Anglo-Soviet Exchange

SIR,—Your leader entitled "Anglo-Soviet Science — Hopes Revived" (*Nature*, 239, 482; 1972) expresses the hope that the plans for cooperation in

science and technology between the UK and the USSR will be revitalized following the recent visit of a delegation from the Soviet State Committee for Science and Technology. You contrast the failure to implement article 3 of the 1968 agreement which provides for exchange visits by applied scientists and technologists with the success of the Royal Society/Soviet Academy of Sciences arrangement. May I draw your attention to the Agreement on Relations in the Scientific, Educational and Cultural Fields which, in addition to embracing the Royal Society's Agreement, includes provision for exchanges in science and technology with Academy and non-Academy Institutes and Universities. These are administered by the British Council and represent a substantial inter-movement of scientists, both for short-term "familiarization" visits and for longer-term attachments for postgraduate study and research. Sixty-seven Soviet scientists came to the UK in 1971 (56 in 1970), while seventeen British scientists visited the USSR (twenty-four in 1970). The reason for the apparent imbalance is that younger Soviet scientists are particularly keen to pursue postgraduate studies here, whereas the attraction for British postgraduates is greater in fields other than science. Both countries contribute to the cost of the exchanges which provide an opportunity for scientists in a wide range of disciplines to meet and gain research experience.

Yours faithfully,

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Algae and Protozoa

SIR,—A sample survey of the literature on algae and protozoa has confirmed the impression that authors do not always give adequate reference to the strains used in work involving cultures.

The sample used was the 1971 issues of fourteen journals taken at this establishment which publish original work on algae and protozoa. Papers dealing with fossils, larger seaweeds and organisms not so far cultured were excluded.

Minimum adequate reference is considered to be the designation of the culture together with, where appropriate, indication of the source collection, for example, CCAP 211/8d or Göttingen 11/6. A more complete reference would give also the name of the isolator and the date of isolation, but this information is usually available in the list published by the collection.

The survey shows that over three-

quarters (153 out of 204) of the authors used cultures when this was possible. It also shows that well over half of the users (eighty-nine out of 153) gave inadequate or no reference to the cultures used. This is most unsatisfactory, especially when one considers the rigid insistence by authors and editors on proper bibliographic references.

References to specific names and a collection, for example, "*Chlamydomonas globosa* from CCAP" are not satisfactory as there may be now, or in the future, more than one strain fitting that description. Also, taxonomic names are liable to revision while strain designation should be immutable. References such as "*Tetrahymena pyriformis* 'W' Strain" are inadequate without mention of the source. It has recently been shown by isozymal tests that strains of this species from different sources but with the same designation may differ, while differently designated strains may be identical. The cause of this confusion presumably lies in mislabelling and failure to record the origin of stocks used. In one paper there was a serious orthographic error in a strain designation.

Among the advantages of using properly documented strains are (a) that the work can be repeated or compared with other work on the same strain, and (b) that comparison of different strains of a species or of different species of a genus enables the significance of the particular characters to be assessed. Too often one sees a general statement about a species made from evidence derived from only one strain.

Wherever possible, cultures of new taxa or new strains used in important research should be deposited in at least one major collection. It is also of great value to a culture collection to receive reprints of work done with its cultures.

Yours faithfully,

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Potato Blight Teratogen

SIR,—The most recent and dramatic hypothesis to be pronounced about the aetiology of the neural tube malformations, anencephaly and spina bifida cystica, is that published earlier this year by Renwick (*Brit. J. Prev. Soc. Med.*, 26, 67; 1972), where it is suggested that the damaged or diseased and especially the blight-diseased or even blight-resistant potato is in some way related. Renwick cites the time/space relationship between secular changes in malformation rates and the severity of blight in West Scotland, the