

Correspondence

American Scientists and Public Policy

SIR,—Your editorial "The Other American Election" (*Nature*, 220, 1; 1968) deserves comment. It is true that the coming election of a president of the National Academy of Sciences in the United States could be significant for the shaping of American science policy in the seventies. As you say, "In the next few years, a talent for dispassionate advice is probably less important than an ability to cajole, shame and even frighten the Government into sensible policies on the allocation of resources". What troubles is the fact that American scientists, among others, have not been very successful recently in cajoling, shaming or frightening their Government into sensible policies as witnessed by the drastic cutback in funds for education and research in science, medicine and social science, by the emphasis on reaching the Moon to the detriment of other projects, by the continuing chemical warfare in Vietnam. In the face of the Vietnam war and the related economic problems, it remains to be seen whether the National Academy of Sciences under new leadership can do very much to change its Government's priorities and policies in science and public welfare. The scientific community of a nation, if it so desired, could be a powerful force working towards good social ends, but as long as the majority of scientists refuse to see themselves in that role their influence will be limited.

Yours faithfully,
H. FRUCHTBAUM

Clare Hall,
Cambridge.

Mussels not for Eating

SIR,—In the article published on October 5 under the heading "Mussels not for Eating" (*Nature*, 220, 13; 1968) you say "the laboratories concerned were caught unprepared, principally because they had no previous experience in Britain to fall back on", and "the event may have caught everyone off guard . . .". These statements are not consistent with the facts, which clearly show that, although the laboratories had no previous practical experience of this type of shellfish poisoning, they were well acquainted with North American experience and were therefore able to demonstrate very quickly the presence of high concentrations of toxin in shellfish involved in the incident and in shellfish taken from a large area of the coast.

The first patient was examined at the Royal Victoria Infirmary, Newcastle, at 2345 h on May 30, and early the next morning shellfish were received for examination at the Newcastle Public Health Laboratory. Because the laboratory had no previous experience of the unusual method of bio-assay required to identify the toxin, it consulted the Central Public Health Laboratory, Colindale, and the Ministry of Agriculture, Fisheries and Food, Fisheries Laboratory, Burnham-on-Crouch, which had used the method earlier in the year during a research project. By 1600 h on May 31 the Public Health Laboratory was able to show conclusively the presence of high concentrations of toxin. During the next day (June 1) the staff of the coastal health authorities and the MAFF collected samples of shellfish along the whole of the Northumberland coast, and obtained control material from the west coast. These samples were examined later the same day and revealed that highly toxic shellfish were distributed over the whole of the east coast area sampled. With the cooperation of the Department of Agriculture and Fisheries for Scotland the sampling programme was

immediately extended, and by June 14 shellfish from the east coast between the Moray Firth and the Thames estuary and from the west coast of Scotland had been examined by the Public Health Laboratories at Newcastle, Leeds and Chelmsford, and the Torry Research Station at Aberdeen.

Investigations into bird mortalities had started soon after May 14, and other biological observations were made towards the end of the month. At that time there was no evidence to suggest that toxic dinoflagellates were the cause, for the first signs were not typical of North American outbreaks. Even when plankton collected from the area on May 28 was examined, there was no evidence of bloom conditions; we now know, from the results of the continuous plankton recorder, that the bloom reached its peak in the middle of May, but had disappeared by the end of the month.

It might have been possible to detect the early stages of mussel toxicity by a programme of regular toxicity testing, but this was scarcely justified prior to the May incident, for no comparable outbreak had occurred in Britain for over 60 years. In the circumstances, it is difficult to see what further preparation could have been made to deal with the outbreak.

Yours faithfully,
H. R. INGHAM

Public Health Laboratory,
General Hospital,
Westgate Road,
Newcastle upon Tyne.

JAMES MASON
Department of Agriculture and Fisheries for Scotland,
Marine Laboratory,
Torry, Aberdeen.

P. C. WOOD
Ministry of Agriculture, Fisheries and Food,
Fisheries Laboratory,
Remembrance Avenue,
Burnham-on-Crouch, Essex.

Corollary Discharge?

SIR,—On the neurophysiological mechanisms of perceptual stability during eye movements (*Nature*, 220, 18; 1968), we have made a direct attack on the problem by experiments with the optic lobe of fish brains. Certain periodic scanning movements of fish eyes continue unchanged after complete removal of the optic lobes. Yet in the intact fish one can record from the optic lobes periodic bursts of impulses that precede each saccadic eye movement by a few ms. Reafferent activity coming up the optic nerve arrives about 20 ms after the eye movement begins. We have suggested (*Austral. J. Exp. Biol. Med. Sci.*, 46, Part 4, 10; 1968) that the neurones discharging before each movement might carry corollary discharge or efference copy information.

Further behavioural experiments indicate that the most likely mechanism of action of these discharges is a simple blanking or suppression of response to the optic nerve discharge generated by each eye movement.

Yours faithfully,
R. F. MARK
J. R. JOHNSTONE

Department of Physiology,
Monash University,
Clayton, Victoria, Australia.

ERRATUM. In the News and Views note "Saving the Lost Tin" (*Nature*, 220, 215; 1968) we referred to a mineral concentrator as the "Mozley-Burch concentrator". Dr Burch has written to say the invention was solely the work of Mr Mozley.