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COVER: Plasmids, tiny circular strands of DNA, are more than just information bits. They are fascinating semilife forms. And they are edging their way into new biological definitions and a reserved spot in the everyday language. See pg. 404.

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LETTERS

The Kammerer case

It was with much interest that I read your recent article "The Case of the Suspicious Siphons: 'Ciona' Revisited" (SN: 5/31/75, p. 348), as on April 18 and 19, I presented the results of my own research on the subject (for which I was awarded an Honorable Mention) at the MIT Science Fair.

On March 10, 1975, I amputated the siphons of about 20 *Ciona* specimens (varying in size from 6 to 12 mm) growing attached to the walls of the tank. Both siphons were amputated in some individuals, only the oral siphon in others. As controls, about 11 other comparable individuals were kept under observation.

In none of the specimens was there any abnormal lengthening of the siphons. Furthermore, from the collateral evidence gathered, I uncovered certain inconsistencies which indicate foul play on Kammerer's part. The most outstanding example of this is found in the literature connected with the Kammerer-Fox controversy.

In 1923 H. Munro Fox, at the Biological Institute in Brittany, tried to investigate the claims of siphon-super-regeneration by amputating the oral siphon from 102 *Ciona intestinalis*. His results were clearly negative. Prof. E. W. MacBride, a close colleague and supporter of Kammerer, was quick to point out, however, that Kammerer too had failed to obtain over-regeneration of a siphon when only the oral tube was amputated (NATURE: 11/24/23). Kammerer himself, on the other hand, in his book *The Inheritance of Acquired Characteristics*, offered the hypothesis that perhaps only southern populations of *Ciona*, such as those with which he had worked, had "super-regenerative" abilities. He was by now well aware of Fox's experimental technique.

In view of MacBride's forementioned revelation of Kammerer's negative results with southern *Ciona* in using a technique synonymous with Fox's, Kammerer's proposed explanation for Fox's results can be interpreted as nothing but a subterfuge. One may even speculate that Kammerer emphasized and practiced removal of both siphons in his successful "experiments" (contrary to the techniques used by Mingazzini, his predecessor along these experimental lines) because he had used actual variety "macrospiphonica" *Ciona*—thus the need for removing both siphons to avoid detection of the naturally long tubes.

Jose J. Valdes
Boston, Mass.

Jobs, costs and environment

Your coverage of Patrick Heffernan's position in the argument about jobs, costs and the environment (SN: 5/24/75, p. 338) is incomplete. The issue is more important than one of losing 125,000 industrial jobs due to environmental regulation, and gaining an offsetting 10-fold increase in jobs to build and maintain pollution control systems.

Despite the tendency of too many environmentalists to equate excessive zeal with actual substance, let's assume Heffernan's figures are correct. Many of these "new" jobs are in fact construction jobs. Presumably, workers not engaged in pollution-control projects would be building new factories, so the figures for construction ought to be deleted from the "new jobs" column.

That, however, is a minor matter compared to Heffernan's assurance that industry, now realizing less than five percent earnings on invested capital and unable to attract enough new capital to modernize its aging plants, can afford to spend billions to finance waves of conflicting, confusing and ever-changing environmental standards (many of which promise only marginal improvement) forced on it by well-meaning but technologically and economically ignorant ideologues.

In any case it appears a poor tradeoff to substitute nonproductive environmental-control jobs, which add not one cent to profits, for productive jobs which generate goods and services.

At some point, the disadvantages of cleaning up the environment must outweigh the benefits. Instead of churning out copy extolling the virtues of pure air and water (which all of us desire) the country would be far better served by knowledge which might help industry and government realize a cost-effective way to make the necessary changes and tradeoffs—without wrecking the industrial base which is the source of all wealth and all jobs.

John H. Van Devender
Pittsburgh, Pa.

Alcohol and health

I was amused by your account of HEW's discovery that moderate use of alcohol may be beneficial. I hardly find it strange, however. In light of recent developments it seems quite logical that this be the case. Several current studies (e.g. longitudinal studies of the type reported by Mary Cadwalader in SMITHSONIAN) have indicated a correlation between anxiety and diseases such as cancer, coronaries, mental illness and suicide. The relief of stress might well outweigh the physiological consequences.

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