on the bandwagon for BIG canals and BIG dams, and the wagon is going at a rapid rate, greased by the idea that water flowing downstream is unused water—that it's water wasted because it dumps into an ocean. Nothing could be further from the truth.

In this light there is a need to comment on the Texas Basins Project —a proposed canal to divert waters from the large rivers which normally flow into the bays along the Upper Texas Coast. Such waters would flow through the canal to meet irrigation and other needs in the Lower Rio Grande Valley.

It is well documented that most of the Texas bays serve either as nursery grounds, spawning areas, or permanent habitats for most of the commercially important marine organisms and for most of the fish of importance to sport fishermen along the Texas coast. Most of these bays serve in this capacity because they are estuaries, and they are estuaries because of the inflow of fresh water at various times during each year. This close balance between fresh and marine waters and marine organisms is essential, but it is on the brink of being destroyed in Texas and perhaps elsewhere.

The ecology of the Texas bays has already been changed by the effects of large inland dams, by channelization within and between bay systems, by increased upstream water usage, and by pollution, to name a few. And it is a matter of record that the freshwater flow into bay systems extending from Galveston to Corpus Christi is already deficient for maintaining the status quo. Coupled with this reality the Texas Basins Project can only spell disaster in its present state of planning.

Water that flows downstream is not unused. The bays of Texas are what they are *because* of water inflow, not in spite of it.

It is time for a new bandwagon.

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Malaria Control and Economics

I am very late in commenting on Brain's article "Science and antiscience" (9 April, p. 192) because I am one of the field workers in remote areas who is trying to help the people of Ethiopia eliminate malaria through the use of insecticides and antimalaria drugs.

It is difficult to understand what prompted Brain's statement that antimalaria workers " . . . do not think about the effects of their actions on population growth in relation to food supplies." No worker on the Manhattan Project could have done more soul-searching than many of us engaged in this endeavor.

In late 1958 the people in the potentially rich agricultural highlands of Ethiopia suffered from a malaria epidemic which, by conservative estimates, caused 3 million cases and 150,000 deaths in 2 months. A less disastrous recurrence in 1964 resulted in 2000 to 3000 deaths. Efforts now under way are aimed at eliminating this threat to the rural population of Ethiopia. Considerable extensions of arable land now uninhabitable because of malaria will increase the country's agricultural productivity. Importantly, a number of high government officials and international specialists cooperating with them are not unaware of the demographic factors involved in complexities of national planning.

Fifteen years ago George MacDonald, director of the Ross Institute of the London School of Tropical Medicine and Hygiene, wrote concerning the economic importance of malaria in Africa:

> The policy of all countries which are governed in the interest of the inhabitants is the elimination of all avoidable infectious diseases, and there is no example known to the writer where it has been considered necessary to appraise the economic effects as a preliminary. The bare fact that illness and death are harmful to the social organism is universally accepted both by the humanitarian and the economist. Efforts are made to control disease even though the actual statistical loss is small, as is for instance—that due to pulmonary tuberculosis in England and Wales where it causes an annual mortality of 0.432 per 1000 but is considered to be a material blemish on the community. . . .

As a practical and practicing biologist I expect to continue my exploitation of scientific findings toward elimination of malaria as an individual and collective catastrophe hindering an enlightened social and economic evolution. May my fellow biologists and social and political scientists similarly dedicate themselves to the development and exploitation of tools in their respective fields!

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