In order to communicate scientific !information clearly (*1*), could the editor persuade the author to tell what ! means so those not schooled in exotic!languages may see the light?!

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The exclamation points refer to alveolar-palatal clicks, which are characteristic of the !Kung language. Such a click is made by pressing the tip of the tongue against the roof of the mouth and then drawing it sharply away, producing a hollow, popping sound.

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Guinea Worm Disease

As the International Drinking Water Supply and Sanitation Decade begins, estimated expenditures of $20 billion to $30 billion per year will be necessary to achieve the target of providing clean water for all by 1990 (*1*). It is therefore important to seize every opportunity to maximize the benefits of that effort. By giving priority to areas where guinea worm disease is endemic for development of a fraction of the new, safe water supplies needed during the Decade, substantial additional benefits could be achieved at virtually no additional cost.

Guinea worm disease (dracunculiasis) is still a serious impediment to development in some rural areas of Africa, India, and the Middle East (*2*). Sporadic in distribution, it is transmitted by drinking water contaminated with a small crustacean (*Cyclops*) which serves as intermediate host for the parasite *Dracunculus medinensis*. Emergence of the worm through the skin (usually on the lower leg) after a 1-year incubation period causes severe local pain, and sometimes arthritis. This disease has been shown to incapacitate from 30 to 40 percent or more of farmers and other villagers for periods averaging from 1 to 3 months during the annual planting or harvest season (*3*). About 0.5 percent of infected persons are permanently disabled. In Upper Volta, one study found that almost 7 percent of villagers with guinea worm disease died of secondary tetanus (*4*). An estimated 10 million to 48 million persons are affected annually (*5*).

Guinea worm is the only disease which is entirely eliminated by substitution of safe drinking water for bad (*6*), since no other mode of transmission exists. Within a year after introduction of safe drinking water, recurrent seasonal infections disappear (*7*). Other strategies for preventing or treating guinea worm disease are unsuitable for mass application (*2*).

If the Decade succeeds in extending drinking water supplies to all who now lack them by 1990, guinea worm disease will disappear by then. Even so, relieving villages of the burden of guinea worm disease early in the Decade could provide a visible, measurable "health benefit" as an early indicator of progress of the Decade. In addition to eliminating a crippling disease, improving agricultural output in formerly affected areas, and possibly improving nutrition of young children in these poor, rural areas, prevention of guinea worm disease would be a tangible stimulus for villagers to help build and maintain safe water sources.

Since the rural population still unserved by safe drinking water in the relevant World Health Organization regions of Africa, Eastern Mediterranean countries, and Southeast Asia is about 786 million (*7*), only about 1.3 to 6.2 percent of the unserved rural populations of those regions need to be reached with safe drinking water in order to eliminate guinea worm disease.

To implement the strategy proposed here, countries need to determine which villages are now affected by guinea worm disease (surveillance of this problem is easier than for many other diseases), and those areas affected by guinea worm disease need to be given priority for provision of safe water. At a minimum, guinea worm disease should be an obligatory consideration for funding of water development projects and for evaluating the success of the Decade. "Health for All" cannot be said to exist so long as this eminently preventable scourge persists.

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