

able evidence tending to show that transpiration very frequently results in considerable harm and rarely if ever has any appreciably beneficial influence. When the water supply is adequate and transpiration is not excessive it probably has little influence on the life processes, but as is so very frequently the case the water in the soil is deficient or transpiration is excessive.

The question may naturally be raised as to why, if transpiration is harmful, natural selection has not eliminated it. This might be answered by saying that many types of modifications do occur tending distinctly to reduce transpiration, and that in many regions plants could not exist without these modifications, but that green land plants could not entirely eliminate transpiration and continue to carry on the essential process of photosynthesis, because for photosynthesis moist cell surfaces must be exposed to the atmosphere to allow for the absorption of CO_2 and the elimination of O_2 and wherever moist cell surfaces are exposed to the atmosphere transpiration must necessarily occur.

I do not advocate that teachers and text-books should dogmatically state that transpiration is primarily harmful and rarely if ever beneficial. I merely wish to point out the fact that statements to the contrary are frequently made and, though many teachers and text-books state that transpiration is probably a necessary evil rather than an advantage, my experience has shown that a large majority of students from many different institutions have the idea that transpiration is essential and primarily beneficial. Usually, however, they can offer but few reasons to uphold their conclusions. Transpiration is one of the most obvious and easily demonstrated processes, and it seems that usually, especially in courses in general botany, more experiments are performed and more discussion is taken up with various phases of transpiration than with any other one process. Often, however, little attention is given to its significance and because of such study the student without giving much thought to it is led to assume that transpiration is a primary function of plants, as is photosynthesis or respiration. That various other physiological processes, especially respiration, are sometimes studied with almost as little thought with respect to their possible functions or significance is also evident.

OTIS F. CURTIS

LABORATORY OF PLANT PHYSIOLOGY,
CORNELL UNIVERSITY

THE NAPLES ZOOLOGICAL STATION¹

RECENT reports from the Naples Zoological Station indicate great progress in the development of its

¹ An article on the reorganization of the zoological station was published two years ago in this journal, Vol. LIX, No. 152, February 22, 1924.

work since the reorganization in 1923-24. At the time Dr. Reinhard Dohrn resumed the directorship, after the inter-regnum caused by the war, most of the subscriptions for working-tables made by foreign countries had lapsed, the only tables still maintained being those of Italy, Belgium and England. Since then eight additional countries have resumed their ante-bellum subscriptions, namely, Russia, Japan, Austria, Hungary, Poland, Switzerland, Germany and the United States. The total number of tables has thus increased from 18 to 45, and a further increase is probable this year by subscriptions from other countries. During 1925 more than 100 biologists worked at the laboratory, nine of them Americans of whom several are now in residence at the station, while other applications have been received. An important factor in the recent development of the work at Naples has been a considerable grant from the international education board, used in part to establish traveling scholarships for the benefit of investigators from various countries who without such aid would have been unable to work at the laboratory. Information from various sources, including Dr. Dohrn himself, agree in showing that research at the laboratory is now progressing satisfactorily and that the station has gone far towards becoming once more a truly international center as it was before the war.

This encouraging situation emphasizes the importance of maintaining American support of the station. The extraordinary richness and variety of marine life in the Bay of Naples, together with the excellent equipment and service of the laboratory and library, offers unsurpassed advantages for biological investigation in many of its branches, above all, perhaps, in experimental work; and at least equally important is the unique opportunity offered by residence at the station for personal association with investigators of many nationalities representing the most varied interests. The United States is now maintaining three tables at Naples, one supported by the American Association for the Advancement of Science; one by the Rockefeller Institute for Medical Research, New York, in memory of Jacques Loeb; and one by the Association to Aid Scientific Research by Women. At the present moment all these tables are occupied, but vacancies will arise in the near future and it is also hoped that arrangements may be made whereby temporary overlapping of periods of occupancy by different workers may be provided for, so as to facilitate use of the American tables. Applications for use of the American Association for the Advancement of Science table may be made to Secretary Burton E. Livingston, Smithsonian Institution, Washington, D. C.; for the Jacques Loeb table to Dr. Simon Flexner, Rockefeller Institute, New York City; and for the Women's table to Mrs. Samuel F. Clark, Williamstown, Massachusetts. E. B. W.