

eral years and that one or two families there had many children.

I was astonished at the appearance of Typee Valley; for, from reading "White Shadows" and from Church's story, and from Mrs. Handy's article in the *Yale Review* for July, 1922, I expected to see a valley of desolation and ruin, with perhaps a dozen decrepit old people, green from long drinking of kava—worthless wretches in a huddle of huts on the shore. What I did see was an enormous valley, over a mile wide and ten miles long, beautifully green, with Melville's storied waterfall still showing as a silver thread amongst the verdure at the head of the valley. But the most astonishing revelations were the (few to be sure) large and luxuriant plantations of cocoanut palm, bananas and some breadfruit which checkered the lower part. As I stood on the ridge between Happer Valley and Typee and looked down into the latter, I was not only amazed at seeing evidence of comparative prosperity, though in a limited area, where I expected utter desolation, but I was deeply impressed with the agricultural possibilities of this historic region.

Finally, I believe the most significant factor in this matter of the preservation of breadfruit, both in the Marquesas and Society Islands, is the presence in the latter group of enormous and ever-increasing numbers of Chinese or half-Chinese who are as industrious and thrifty as the native is lazy and profligate. It looks as if they will very shortly own the islands in the eastern Pacific commercially. I will venture to say that in ten years Tahiti, picturesque and romantic for so long a time, will have lost its charm because of the presence of hordes of low-caste Chinese and half-bloods. However unattractive this may be from the standpoint of the tourist and sentimentalist, there is no contradicting the fact that they will make these islands a thousand times more productive than would the pure-blooded native, and their skill and habits of application will undoubtedly extend to the preservation of the breadfruit. The Chinese and half-blood Chinese are on all the Marquesan islands which are inhabited, and it will be to their financial interest as well as to the interest of their personal food supply, to preserve the breadfruit there as well as in the Societies.

It is notable that the cocoanut and banana plantations and papaye (papaw) groves in Typee at the time of my visit, were either owned or worked by Chinese or half-bloods (Chinese + Tahitian or Chinese + Marquesan).

Referring to the last paragraph in Mr. Wester's communication—It would appear that if one is dependent, as was the writer, upon trading schooners to get from Tahiti to the Marquesas, then amongst these islands and return to Tahiti, his program for

work in these two groups would take more than a year and his estimate of expense might, in consequence, be exceeded. Sometimes one is obliged to wait from one month to three to get the opportunity to move from one island in the Marquesas to another forty or fifty or eighty miles away, so rare and uncertain are the visits of these schooners. Further, in the absence of any regular means of communication, one has to seize any chance opportunity of transportation or run the risk of being marooned for a long period. On the other hand, if a schooner were chartered, which is the best possible way of visiting and working among the South Sea Islands, schooner, captain, crew and provisions would cost about \$1,000 per month (this figure was obtained from an authoritative source) and a year on shipboard might not be needed. Under such conditions Mr. Wester's calculation of \$8,500 for a year's work in the Marquesas and Societies may not be far out of the way.

F. L. WASHBURN

UNIVERSITY OF MINNESOTA

WHAT IS A WEED?

PROFESSOR CAMPBELL's comments upon this subject (July 20 issue, p. 50) are well put, but he undertakes to define what should be meant by the term rather than what is in common usage. Perhaps this word, like many others (botanist, for example), now does not serve its purpose as well as formerly. In that case it might be better to devise new terms rather than to modify the application of the old one. Such improvements are none too popular with either layman or scientist, but are adopted if well chosen and if such a need is apparent.

There are many plants commonly called "weeds" which do not fall within the proposed definition. Dodders and other parasitic seed plants have occupied such a prominent place in weed literature that it seems questionable whether they could be removed readily or whether placing them with parasitic fungi would be an improvement. Parasitic plants differ somewhat from independent ones in their habits, but is this not a minor difference? They still are in competition for food. We would make no distinction between a thief who steals flour and one who steals bread. Plants of rye in a wheat field, trees or bushes in or beside a field certainly are in active competition with the crop for food materials. If we do not think of fungi as weeds, is it not because of the invisibility of the plant body to the eye rather than their parasitic nature? One character commonly assigned to weeds is that they harbor fungus and insect pests. The writer has pointed out¹ that the common barberry is regarded as a weed, although it has no other attribute of the group.

¹ *Scientific Monthly*, August, 1923.

"Persistently obnoxious on cultivation areas" may cover the most common use of the term, but it does not cover the majority of species. It fails to account for two large groups: (1) Coarse unsightly plants, and (2) those of pastures, lawns, etc. Still other exceptions might be mentioned, water hyacinth, for instance. If these are not to be called weeds, we shall need some other name for them.

An attempt to arrange the different species of weeds in order of their importance shows an intergrading series which terminates indefinitely among such plants as goldenrods, wormwoods and numerous other native and introduced plants of minor importance. It would be no easier to decide which ones should be classed as persistently obnoxious than it is to locate the dividing line between weeds as commonly understood and other plants of less importance.

The writer's list of weeds of his state includes over twenty per cent. of the species of seed plants found in the state, and probably not over one third of them could be called persistently obnoxious on cultivated areas. Among the specimens received during a single season were fourteen species not included in this list and others are continually being added. Thus it appears that there are few wild plants which are not at least likely to be suspected of being weeds. The word seems to serve a purpose in common use and might be said to refer to a plant which is detrimental to man's interests, displeasing to the eye or of no evident value.

O. A. STEVENS

AGRICULTURAL COLLEGE,
NORTH DAKOTA

QUOTATIONS

THE NAPLES ZOOLOGICAL STATION

BIOLOGISTS all over the world will be interested in the news, of which we have just received official confirmation, that Dr. Reinhard Dohrn, the son of the founder of the Zoological Station at Naples, has once more taken up the post of director. As Dr. Dohrn is a German subject (although half-Russian by birth and Italian by upbringing), he was forced to leave Italy when it became clear that she was going to enter the war on the side of the Allies. During and since the war the Naples Station was under the Italian government and the Municipality of Naples, with Professor Monticelli, head of the Department of Zoology in the University of Naples, as director.

After the war a number of questions arose, and the legal status of the station under the peace-treaty was gone into at the instance of Dr. Dohrn. He claimed that it was for many reasons not liable to sequestration, while the Naples Municipality asserted it to have been private property, and therefore to have

passed legally to them as landlords. These points and many others were decided in the courts, the case eventually going to the highest court of appeal. On all the essential counts Dr. Dohrn gained his point. Finally, government decrees were issued establishing the status of the station and defining its organization. Briefly, we may say that, while Dr. Dohrn goes back as director, the control is vested in a board of seven members, all except the director Italians; further, the heads of the separate departments of the station (at present two—zoological and physiological) are to be Italians. The position is therefore not the *status quo ante*, but this modified by a measure of Italian control and Italian share in the internal administration.

From being private property, the station has become a special form of public corporation known in Italy as an *ente morale*. The board is of seven members. The Mayor of Naples is *ipso facto* its president, while the other members are nominated quinquennially by the Minister of Public Instruction. The detailed direction and administration is reserved to Dr. Dohrn.

Plans for the future of the station will, of course, be determined by financial considerations. Several foreign governments and institutions have rented or have promised to rent "tables." The income under this head, however, will for the present not be so great as before the war. The income from the public aquarium is considerable, and grants are also to be made from the Naples Municipality and the Italian government. Finally, a certain amount of Dr. Dohrn's private property, which was sequestered during the war, is to be applied to the use of the station. With these funds the new director hopes to be able to make an immediate start on a sound footing. He intends to appoint, besides the Italian *chefs de laboratoire*, several assistants of various nationalities on the staff.

* * * *

The Naples Station, we may be sure, will have as important results to its credit in the future as it has had in the past. Once alone in its field, it has become the parent, or at least the prototype, of a whole crop of similar institutions elsewhere. Many of these are now flourishing and well organized; and some, like Plymouth and Woods Hole, rival their original. Nevertheless, we sincerely hope that both financial support and a stream of biological workers will flow to the reorganized "Stazione" at Naples. In the past, as all who have worked within its precincts will testify, the full international spirit of scientific cooperation has always reigned. Under Dr. Dohrn we are sure that it will continue to do so in the future; and that spirit, in these difficult days, is worthy of all encouragement.—*Nature*.