



What Is a Shamrock?

► IRELAND'S SHAMROCK, probably the most-disputed plant in all botanic history, is really a yellow-flowered species of clover, Rev. Hugh O'Neill, professor of botany at the Catholic University of America, has decided after a careful re-examination of all available linguistic evidence. It is not, as frequently asserted, either the oxalis or the common white clover.

The notion that the shamrock was an oxalis apparently got started by Renaissance English writers. In Campion's History of Ireland, written in 1571, the shamrock is described as a three-leaved plant, sour-flavored, that grew along with watercress in woody places and was used as food. Only one plant fits that description, the wood-sorrel or oxalis (*Oxalis Acetosella*). This plant is also common in the United States.

The proper Gaelic name for the oxalis, Father O'Neill found on further searching, is not *seamrog* (pronounced "shamrock") but *seamsog*. The confusion may have arisen from the fact that in the Gaelic alphabet the characters for "r" and "sh" look very much alike. This very natural mistake, apparently made by an early English writer, was perpetuated for a long time, so that the oxalis became entrenched in English literature as the shamrock.

In Irish literature, Father O'Neill states, *seamrog* always means clover; the words for oxalis are *seamar coille* and *seamar gear*. A very early Celtic clover-word was *seamar*—the *-og* ending was picked up later.

Two kinds of clover that grow in Ireland have been contenders for the honor of being the true shamrock: the common white clover (*Trifolium repens*) and a yellow-flowered species known to botanists as *Trifolium dubium* v. *minus*. The overwhelming majority of Irish people, Father O'Neill states, favor the yellow-

flowered plant, though the other species still retains its champions.

As independent confirmation, Father O'Neill cites an investigation made only a few years ago by a Benedictine scholar in the Glengarry region in Scotland where a few old people still speak the "old language". These elderly Gaelic-speaking Scots, born before 1850, all knew clover, and only clover, as *seamrog*, or shamrock.

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is quite concerned about its place in the furthering of science. There are for example two bills to be brought out in the Senate—one to create an ambitious science research foundation under Federal auspices and another to set up a Federal atomic energy research program. There seems every evidence that we are alert to expanding our physical facilities and providing the necessary funds.

With regard to scientific manpower, the story is different. There is, and will be for some time, a shortage of such personnel. Throughout the war we began cutting down on training in some fields as early as 1940. From then on progressively the flow of trained manpower in the sciences was reduced. The resulting deficit is large and will be costly. That, of course, is past history and is well known.

The unfortunate aspect of the situation is that no positive recovery measures have been adopted.

The general attitude is that the present great flood of veteran students now on the campuses and about to return to them will quickly fill up the ranks of trainees in the sciences. There are, however, some very obvious limitations here. In the sciences the number of students who can register for advanced work is limited to those who have finished the preparatory work. The seniors who are now enrolling must once have been juniors, and the graduate students must once have been seniors. At present in the science graduate schools and in the sophomore, junior and senior classes in the sciences, the enrollments must be limited to those who left college for the services with unfinished courses, and in view of selective service history which began the pinch on enrollments at the freshman class and progressively rose through the years, there are not as large a number of returnees as is generally supposed. Information in my hands is incomplete, but it indicates that the graduate schools by and large are not

full in most sciences in spite of scholarship programs and the release for advanced study of wartime research workers.

In a sampling of 57 universities, for example, the graduate enrollment in chemistry in the first semester was about 50% of the average for the immediate prewar years. Even with an additional 7% increase due to veteran enrollment, only 57% of the prewar average is indicated in the second semester. In the fields such as physics, mathematics and geology the graduate schools are similarly not crowded with G.I.'s to judge by returns from a sampling of institutions immediately preceding the end of the first semester. Results showed enrollments in physics as 16%, geology as 30% and mathematics as 12% of a normal prewar graduate enrollment. The non-veteran enrollment in these graduate schools in these fields was considerably greater, being in physics 83%, in geology 30% and in mathematics 100% of prewar norms. These higher enrollments are in large part made up of those students who were on war research and are now deferred to finish their training. In the undergraduate classes where no deferments are now granted in general to non-veterans and where the enrollments are therefore confined to veterans and physically disqualified students the enrollments are very low as is indicated by data collected. A sampling of enrollments of seniors in about 60 institutions at the end of the first semester gives in percentages of normal prewar enrollments, the following figures: in physics, veterans 9%, non-veterans 28%; in geology, veterans 10%, non-veterans 20%; in mathematics, veterans 11%, non-veterans 18%. The corresponding junior enrollments are in physics, veterans 12%, non-veterans 36%; in geology, veterans 25%, non-veterans 21%; and in mathematics, veterans 13%, non-veterans 18%. More complete canvasses are needed and will be obtained for the second semester as soon as possible. But the results quoted indicate quite definitely that there is not yet any sufficient flow of science students in the colleges to even approach the prewar numbers. And the existence of war time deficits should call for even much increased numbers.

To achieve a full program of training in the sciences so as to meet the great unfolding challenge of the future, to provide for our welfare and security and to lead the world to a higher level of comfort and stability through a higher technological standard of living, we should have a program as full and carefully